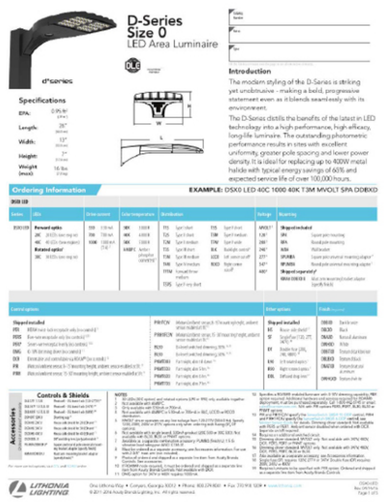
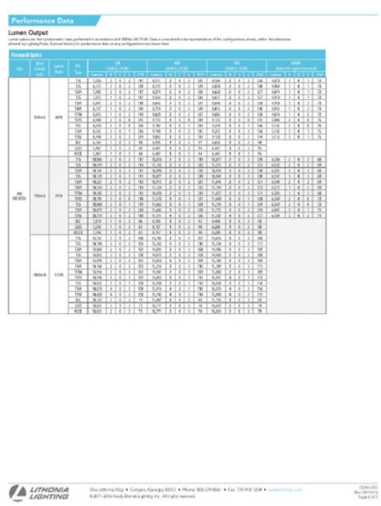
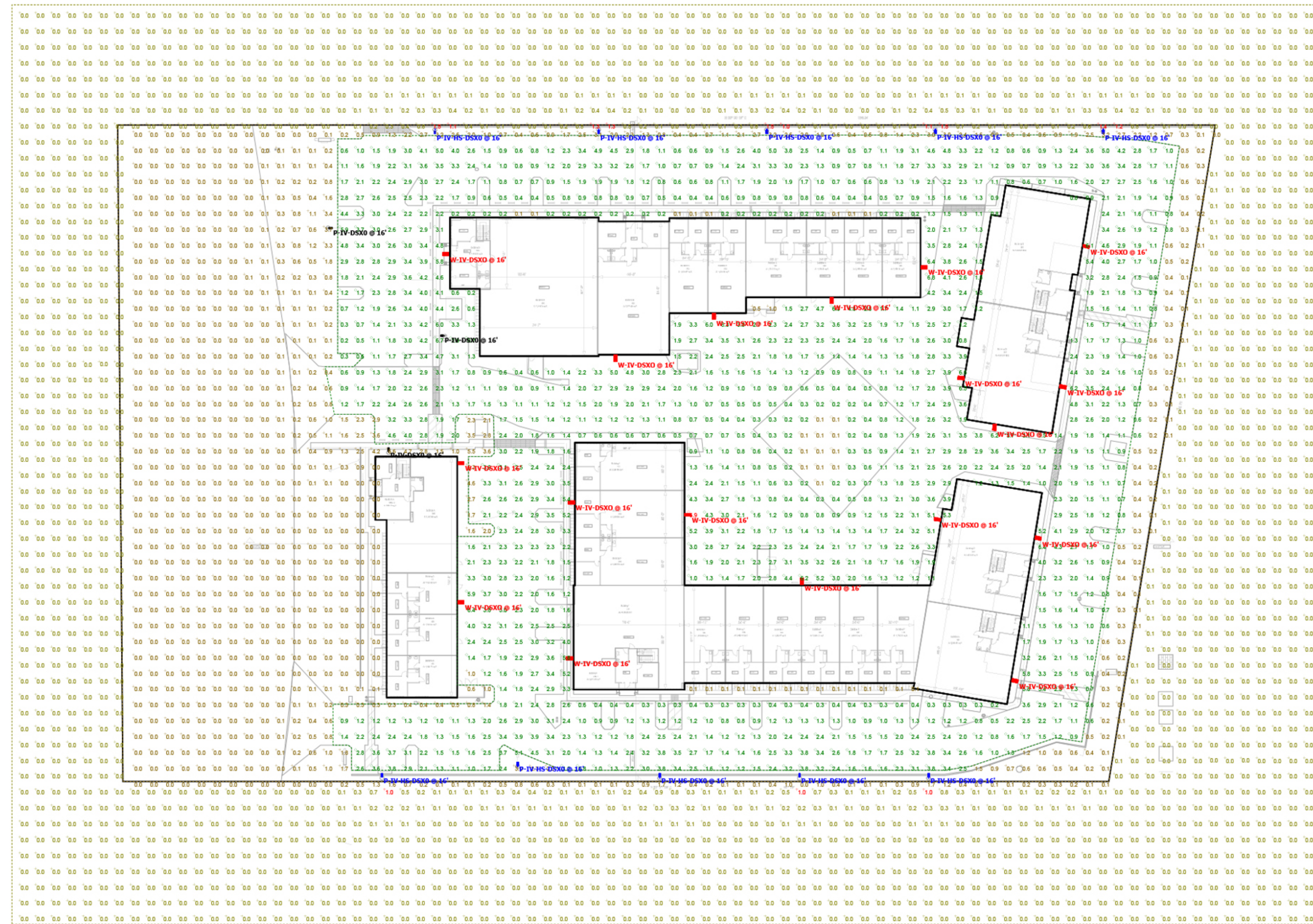
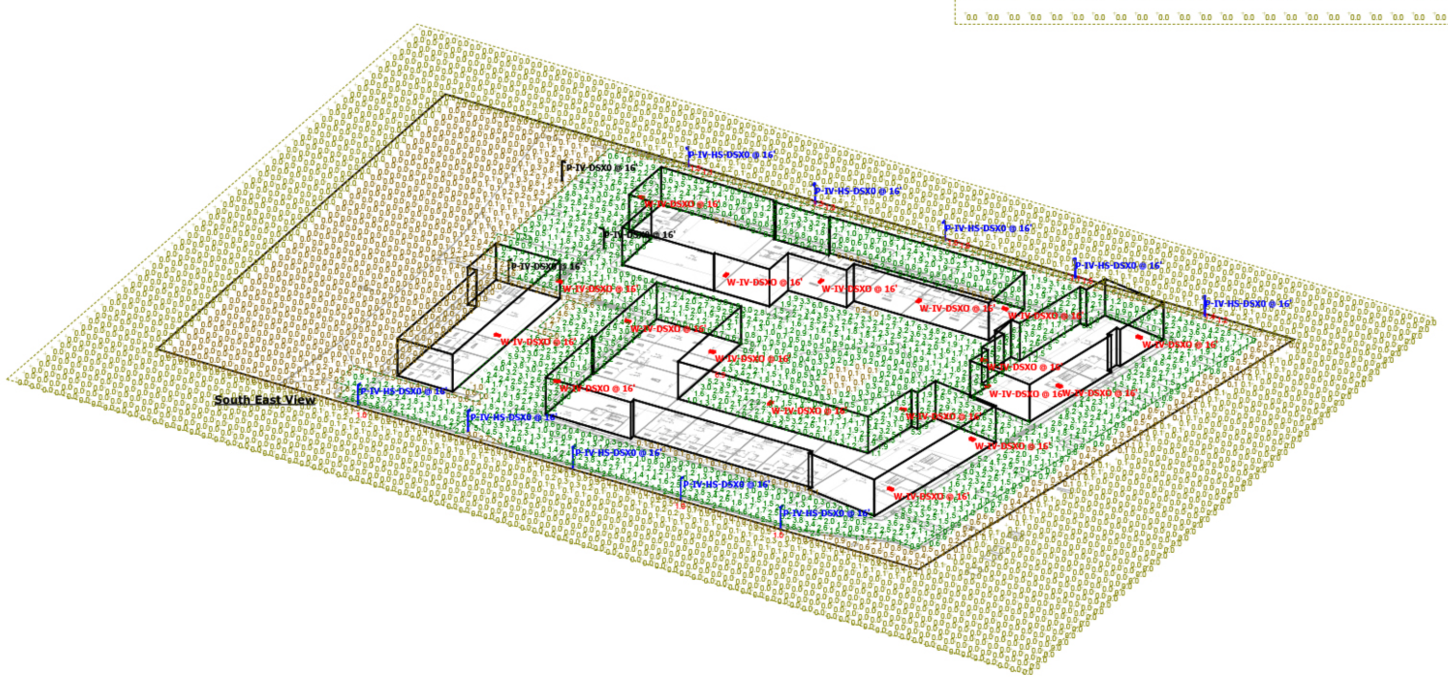






Plan View
Scale - 1" = 40'



Statistics

Description	Symbol	Avg	Max	Min	Avg/Max	Max/Min	Avg/Min
Overspill - Ground @ 0'AFF	+	0.0 fc	1.5 fc	0.0 fc	0.0:1	N/A	N/A
Parking - Ground @ 0'AFG	◇	1.9 fc	6.9 fc	0.1 fc	0.3:1	69.0:1	19.0:1
Site - Ground @ 0'AFG	+	1.3 fc	6.9 fc	0.0 fc	0.2:1	N/A	N/A

Note

1. Reflectances: Site n/a (direct component only)
2. Building Height: 30'AFF (estimated)
3. Fixture Mounting Height: As Noted on Plan (Mounting Height = Pole + Base)
4. Calculation points are 10' x 10' on center spacing at height indicated in Statistics
5. Landscaping, Trees, canopies, architectural features, handrails, stairs, slope and other obstructions are not included in the calculation results.
6. Luminaire data is obtained according to IES procedures under laboratory conditions. Field results may differ from computer model due to many factors, including, but not limited to, ambient temperature, line voltage variations, installation, reflectances, and other site specific conditions.
7. The model numbers in the Luminaire Schedule below may vary from the Architectural/Engineering Fixture Schedule due to the availabilty of IES files. Refer to Architectural/Engineering Fixture Schedule for the complete specification and model number.
8. These lighting photometrics are not a substitute for independent engineering analysis and co-ordination of lighting system suitability and safety.

Luminaire Schedule

Symbol	Label	Quantity	Manufacturer	Catalog Number	Description	Lamp	Number Lamps	Filename	Lumens Per Lamp	Light Loss Factor	Wattage
	P-IV-DSX0	3	Lithonia Lighting	DSX0 LED 40C 1000 40K T4M MVOLT	DSX0 LED WITH (2) 20 LED LIGHT ENGINES, TYPE T4M OPTIC, 4000K, @ 1000mA	LED	1	DSX0_LED_40C_1000_40K_T4M_MVOLT.ies	13198	0.9	137.49
	P-IV-HS-DSX0	10	Lithonia Lighting	DSX0 LED 40C 1000 40K T4M MVOLT HS	DSX0 LED WITH (2) 20 LED LIGHT ENGINES, TYPE T4M OPTIC, 4000K, @ 1000mA WITH HOUSE SIDE SHIELD	LED	1	DSX0_LED_40C_1000_40K_T4M_MVOLT_HS.ies	9440	0.9	137.17
	W-IV-DSXO	18	Lithonia Lighting	DSX0 LED 40C 1000 40K T4M MVOLT WBA	DSX0 LED WITH (2) 20 LED LIGHT ENGINES, TYPE T4M OPTIC, 4000K, @ 1000mA	LED	1	DSX0_LED_40C_1000_40K_T4M_MVOLT.ies	13198	0.9	137.49

VISUAL

Agoura Landmark
Site Lighting

Designer
JS for NH
Date
05-26-2016
Scale
Not to Scale
Drawing No.

Summary

Air Quality/Greenhouse Gas CalEEMod Output Data

APPENDIX C

Agoura Landmark Project

South Coast Air Basin, Summer

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Office Park	21.32	1000sqft	0.85	21,320.00	0
Unrefrigerated Warehouse-No Rail	48.53	1000sqft	1.75	48,530.00	0
Parking Lot	161.00	Space	2.57	64,400.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	31
Climate Zone	8			**Operational Year**	2018
Utility Company	Southern California Edison				
CO2 Intensity (lb/MWhr)	630.89	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - Parking lot is 2.57 ac. per site plan. Total Lot acreage is 5.17.

Construction Phase - No demolition
30 days coating

Off-road Equipment -

Off-road Equipment -

Off-road Equipment - No demolition

Off-road Equipment -

Off-road Equipment -

Off-road Equipment -

Trips and VMT - no demolition

Grading -

Architectural Coating -

Vehicle Trips - Trips adjusted per traffic report.

Area Coating -

Construction Off-road Equipment Mitigation -

Area Mitigation -

Table Name	Column Name	Default Value	New Value
tblConstructionPhase	NumDays	20.00	30.00
tblConstructionPhase	NumDays	20.00	0.00
tblConstructionPhase	PhaseEndDate	1/13/2017	2/10/2017
tblConstructionPhase	PhaseStartDate	12/31/2016	1/28/2017
tblGrading	MaterialExported	0.00	5,198.00
tblLandUse	LotAcreage	0.49	0.85
tblLandUse	LotAcreage	1.11	1.75
tblLandUse	LotAcreage	1.45	2.57
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblProjectCharacteristics	OperationalYear	2014	2018
tblVehicleTrips	WD_TR	11.42	11.07
tblVehicleTrips	WD_TR	2.59	3.57

2.0 Emissions Summary

2.1 Overall Construction (Maximum Daily Emission)

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	lb/day										lb/day					
2017	4.9056	51.8381	40.4537	0.0558	18.2675	2.7558	21.0233	9.9840	2.5354	12.5194	0.0000	5,593.8104	5,593.8104	1.2367	0.0000	5,619.7804
2018	55.7873	25.0887	22.3792	0.0392	0.7411	1.5251	2.2662	0.1993	1.4332	1.6324	0.0000	3,669.0905	3,669.0905	0.7068	0.0000	3,683.9337
Total	**60.6929**	**76.9268**	**62.8329**	**0.0950**	**19.0086**	**4.2809**	**23.2895**	**10.1833**	**3.9685**	**14.1518**	**0.0000**	**9,262.9008**	**9,262.9008**	**1.9435**	**0.0000**	**9,303.7141**

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	lb/day										lb/day					
2017	4.9056	51.8381	40.4537	0.0558	18.2675	2.7558	21.0233	9.9840	2.5354	12.5194	0.0000	5,593.8104	5,593.8104	1.2367	0.0000	5,619.7804
2018	55.7873	25.0887	22.3792	0.0392	0.7411	1.5251	2.2662	0.1993	1.4332	1.6324	0.0000	3,669.0905	3,669.0905	0.7068	0.0000	3,683.9337
Total	**60.6929**	**76.9268**	**62.8329**	**0.0950**	**19.0086**	**4.2809**	**23.2895**	**10.1833**	**3.9685**	**14.1518**	**0.0000**	**9,262.9008**	**9,262.9008**	**1.9435**	**0.0000**	**9,303.7141**

	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**	**0.00**	**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	lb/day										lb/day					
Area	3.1162	2.2000e-004	0.0239	0.0000		9.0000e-005	9.0000e-005		9.0000e-005	9.0000e-005		0.0505	0.0505	1.4000e-004		0.0534
Energy	0.0134	0.1222	0.1026	7.3000e-004		9.2800e-003	9.2800e-003		9.2800e-003	9.2800e-003		146.5839	146.5839	2.8100e-003	2.6900e-003	147.4760
Mobile	1.3906	4.2498	17.0906	0.0487	3.2658	0.0657	3.3316	0.8726	0.0606	0.9332		4,017.2762	4,017.2762	0.1450		4,020.3206
Total	**4.5202**	**4.3722**	**17.2172**	**0.0494**	**3.2658**	**0.0751**	**3.3409**	**0.8726**	**0.0699**	**0.9425**		**4,163.9106**	**4,163.9106**	**0.1479**	**2.6900e-003**	**4,167.8500**

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	lb/day										lb/day					
Area	3.1162	2.2000e-004	0.0239	0.0000		9.0000e-005	9.0000e-005		9.0000e-005	9.0000e-005		0.0505	0.0505	1.4000e-004		0.0534
Energy	0.0134	0.1222	0.1026	7.3000e-004		9.2800e-003	9.2800e-003		9.2800e-003	9.2800e-003		146.5839	146.5839	2.8100e-003	2.6900e-003	147.4760
Mobile	1.3906	4.2498	17.0906	0.0487	3.2658	0.0657	3.3316	0.8726	0.0606	0.9332		4,017.2762	4,017.2762	0.1450		4,020.3206
Total	**4.5202**	**4.3722**	**17.2172**	**0.0494**	**3.2658**	**0.0751**	**3.3409**	**0.8726**	**0.0699**	**0.9425**		**4,163.9106**	**4,163.9106**	**0.1479**	**2.6900e-003**	**4,167.8500**

	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	0.00	0.00	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	1/1/2017	12/30/2016	5	0	
2	Site Preparation	Site Preparation	1/28/2017	2/10/2017	5	10	
3	Grading	Grading	2/11/2017	3/10/2017	5	20	
4	Building Construction	Building Construction	3/11/2017	1/26/2018	5	230	
5	Paving	Paving	1/27/2018	2/23/2018	5	20	
6	Architectural Coating	Architectural Coating	2/24/2018	4/6/2018	5	30	

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: 107,673; Non-Residential Outdoor: 35,891 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition	Concrete/Industrial Saws	0	8.00	81	0.73
Demolition	Excavators	0	8.00	162	0.38
Demolition	Rubber Tired Dozers	0	8.00	255	0.40
Site Preparation	Rubber Tired Dozers	3	8.00	255	0.40
Site Preparation	Tractors/Loaders/Backhoes	4	8.00	97	0.37
Grading	Excavators	1	8.00	162	0.38
Grading	Graders	1	8.00	174	0.41
Grading	Rubber Tired Dozers	1	8.00	255	0.40
Grading	Tractors/Loaders/Backhoes	3	8.00	97	0.37
Building Construction	Cranes	1	7.00	226	0.29
Building Construction	Forklifts	3	8.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes	3	7.00	97	0.37
Building Construction	Welders	1	8.00	46	0.45
Paving	Pavers	2	8.00	125	0.42
Paving	Paving Equipment	2	8.00	130	0.36
Paving	Rollers	2	8.00	80	0.38
Architectural Coating	Air Compressors	1	6.00	78	0.48

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	0	0.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Site Preparation	7	18.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Grading	6	15.00	0.00	650.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	9	54.00	22.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Paving	6	15.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	11.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Clean Paved Roads

3.3 Site Preparation - 2017

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	lb/day										lb/day					
Fugitive Dust					18.0663	0.0000	18.0663	9.9307	0.0000	9.9307			0.0000			0.0000
Off-Road	4.8382	51.7535	39.3970	0.0391		2.7542	2.7542		2.5339	2.5339		4,003.0859	4,003.0859	1.2265		4,028.8432
Total	**4.8382**	**51.7535**	**39.3970**	**0.0391**	**18.0663**	**2.7542**	**20.8205**	**9.9307**	**2.5339**	**12.4646**		**4,003.0859**	**4,003.0859**	**1.2265**		**4,028.8432**

3.3 Site Preparation - 2017

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	lb/day										lb/day					
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
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
Worker	0.0674	0.0846	1.0567	2.5500e-003	0.2012	1.6200e-003	0.2028	0.0534	1.4900e-003	0.0549		205.9304	205.9304	0.0101		206.1431
Total	**0.0674**	**0.0846**	**1.0567**	**2.5500e-003**	**0.2012**	**1.6200e-003**	**0.2028**	**0.0534**	**1.4900e-003**	**0.0549**		**205.9304**	**205.9304**	**0.0101**		**206.1431**

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	lb/day										lb/day					
Fugitive Dust					18.0663	0.0000	18.0663	9.9307	0.0000	9.9307			0.0000			0.0000
Off-Road	4.8382	51.7535	39.3970	0.0391		2.7542	2.7542		2.5339	2.5339	0.0000	4,003.0859	4,003.0859	1.2265		4,028.8432
Total	**4.8382**	**51.7535**	**39.3970**	**0.0391**	**18.0663**	**2.7542**	**20.8205**	**9.9307**	**2.5339**	**12.4646**	**0.0000**	**4,003.0859**	**4,003.0859**	**1.2265**		**4,028.8432**

3.3 Site Preparation - 2017

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	lb/day										lb/day					
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
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
Worker	0.0674	0.0846	1.0567	2.5500e-003	0.2012	1.6200e-003	0.2028	0.0534	1.4900e-003	0.0549		205.9304	205.9304	0.0101		206.1431
Total	**0.0674**	**0.0846**	**1.0567**	**2.5500e-003**	**0.2012**	**1.6200e-003**	**0.2028**	**0.0534**	**1.4900e-003**	**0.0549**		**205.9304**	**205.9304**	**0.0101**		**206.1431**

3.4 Grading - 2017

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	lb/day										lb/day					
Fugitive Dust					6.5817	0.0000	6.5817	3.3719	0.0000	3.3719			0.0000			0.0000
Off-Road	3.4555	35.9825	25.3812	0.0297		2.0388	2.0388		1.8757	1.8757		3,043.6667	3,043.6667	0.9326		3,063.2507
Total	**3.4555**	**35.9825**	**25.3812**	**0.0297**	**6.5817**	**2.0388**	**8.6205**	**3.3719**	**1.8757**	**5.2476**		**3,043.6667**	**3,043.6667**	**0.9326**		**3,063.2507**

3.4 Grading - 2017

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	lb/day										lb/day					
Hauling	0.5297	8.2545	6.0659	0.0240	0.5663	0.1274	0.6936	0.1551	0.1172	0.2722		2,378.5351	2,378.5351	0.0170		2,378.8918
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
Worker	0.0561	0.0705	0.8806	2.1200e-003	0.1677	1.3500e-003	0.1690	0.0445	1.2400e-003	0.0457		171.6086	171.6086	8.4400e-003		171.7859
Total	**0.5858**	**8.3251**	**6.9465**	**0.0261**	**0.7339**	**0.1287**	**0.8626**	**0.1995**	**0.1184**	**0.3179**		**2,550.1437**	**2,550.1437**	**0.0254**		**2,550.6777**

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	lb/day										lb/day					
Fugitive Dust					6.5817	0.0000	6.5817	3.3719	0.0000	3.3719			0.0000			0.0000
Off-Road	3.4555	35.9825	25.3812	0.0297		2.0388	2.0388		1.8757	1.8757	0.0000	3,043.6667	3,043.6667	0.9326		3,063.2507
Total	**3.4555**	**35.9825**	**25.3812**	**0.0297**	**6.5817**	**2.0388**	**8.6205**	**3.3719**	**1.8757**	**5.2476**	**0.0000**	**3,043.6667**	**3,043.6667**	**0.9326**		**3,063.2507**

3.4 Grading - 2017

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	lb/day										lb/day					
Hauling	0.5297	8.2545	6.0659	0.0240	0.5663	0.1274	0.6936	0.1551	0.1172	0.2722		2,378.5351	2,378.5351	0.0170		2,378.8918
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
Worker	0.0561	0.0705	0.8806	2.1200e-003	0.1677	1.3500e-003	0.1690	0.0445	1.2400e-003	0.0457		171.6086	171.6086	8.4400e-003		171.7859
Total	**0.5858**	**8.3251**	**6.9465**	**0.0261**	**0.7339**	**0.1287**	**0.8626**	**0.1995**	**0.1184**	**0.3179**		**2,550.1437**	**2,550.1437**	**0.0254**		**2,550.6777**

3.5 Building Construction - 2017

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	lb/day										lb/day					
Off-Road	3.1024	26.4057	18.1291	0.0268		1.7812	1.7812		1.6730	1.6730		2,639.8053	2,639.8053	0.6497		2,653.4490
Total	**3.1024**	**26.4057**	**18.1291**	**0.0268**		**1.7812**	**1.7812**		**1.6730**	**1.6730**		**2,639.8053**	**2,639.8053**	**0.6497**		**2,653.4490**

3.5 Building Construction - 2017

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	lb/day										lb/day					
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
Vendor	0.1685	1.7397	2.0638	4.7800e-003	0.1375	0.0277	0.1652	0.0392	0.0255	0.0646		472.2678	472.2678	3.3300e-003		472.3377
Worker	0.2021	0.2539	3.1700	7.6400e-003	0.6036	4.8500e-003	0.6085	0.1601	4.4800e-003	0.1646		617.7911	617.7911	0.0304		618.4293
Total	**0.3706**	**1.9936**	**5.2338**	**0.0124**	**0.7411**	**0.0325**	**0.7737**	**0.1993**	**0.0299**	**0.2292**		**1,090.0588**	**1,090.0588**	**0.0337**		**1,090.7670**

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	lb/day										lb/day					
Off-Road	3.1024	26.4057	18.1291	0.0268		1.7812	1.7812		1.6730	1.6730	0.0000	2,639.8053	2,639.8053	0.6497		2,653.4490
Total	**3.1024**	**26.4057**	**18.1291**	**0.0268**		**1.7812**	**1.7812**		**1.6730**	**1.6730**	**0.0000**	**2,639.8053**	**2,639.8053**	**0.6497**		**2,653.4490**

3.5 Building Construction - 2017

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	lb/day										lb/day					
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
Vendor	0.1685	1.7397	2.0638	4.7800e-003	0.1375	0.0277	0.1652	0.0392	0.0255	0.0646		472.2678	472.2678	3.3300e-003		472.3377
Worker	0.2021	0.2539	3.1700	7.6400e-003	0.6036	4.8500e-003	0.6085	0.1601	4.4800e-003	0.1646		617.7911	617.7911	0.0304		618.4293
Total	**0.3706**	**1.9936**	**5.2338**	**0.0124**	**0.7411**	**0.0325**	**0.7737**	**0.1993**	**0.0299**	**0.2292**		**1,090.0588**	**1,090.0588**	**0.0337**		**1,090.7670**

3.5 Building Construction - 2018

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	lb/day										lb/day					
Off-Road	2.6687	23.2608	17.5327	0.0268		1.4943	1.4943		1.4048	1.4048		2,609.9390	2,609.9390	0.6387		2,623.3517
Total	**2.6687**	**23.2608**	**17.5327**	**0.0268**		**1.4943**	**1.4943**		**1.4048**	**1.4048**		**2,609.9390**	**2,609.9390**	**0.6387**		**2,623.3517**

3.5 Building Construction - 2018

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	lb/day										lb/day					
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
Vendor	0.1580	1.5976	1.9663	4.7800e-003	0.1375	0.0261	0.1636	0.0392	0.0240	0.0632		464.3482	464.3482	3.3100e-003		464.4178
Worker	0.1822	0.2303	2.8802	7.6400e-003	0.6036	4.7300e-003	0.6083	0.1601	4.3700e-003	0.1645		594.8033	594.8033	0.0282		595.3957
Total	**0.3402**	**1.8279**	**4.8465**	**0.0124**	**0.7411**	**0.0308**	**0.7720**	**0.1993**	**0.0284**	**0.2276**		**1,059.1515**	**1,059.1515**	**0.0315**		**1,059.8134**

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	lb/day										lb/day					
Off-Road	2.6687	23.2608	17.5327	0.0268		1.4943	1.4943		1.4048	1.4048	0.0000	2,609.9389	2,609.9389	0.6387		2,623.3517
Total	**2.6687**	**23.2608**	**17.5327**	**0.0268**		**1.4943**	**1.4943**		**1.4048**	**1.4048**	**0.0000**	**2,609.9389**	**2,609.9389**	**0.6387**		**2,623.3517**

3.5 Building Construction - 2018

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	lb/day										lb/day					
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
Vendor	0.1580	1.5976	1.9663	4.7800e-003	0.1375	0.0261	0.1636	0.0392	0.0240	0.0632		464.3482	464.3482	3.3100e-003		464.4178
Worker	0.1822	0.2303	2.8802	7.6400e-003	0.6036	4.7300e-003	0.6083	0.1601	4.3700e-003	0.1645		594.8033	594.8033	0.0282		595.3957
Total	**0.3402**	**1.8279**	**4.8465**	**0.0124**	**0.7411**	**0.0308**	**0.7720**	**0.1993**	**0.0284**	**0.2276**		**1,059.1515**	**1,059.1515**	**0.0315**		**1,059.8134**

3.6 Paving - 2018

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	lb/day										lb/day					
Off-Road	1.6114	17.1628	14.4944	0.0223		0.9386	0.9386		0.8635	0.8635		2,245.2695	2,245.2695	0.6990		2,259.9481
Paving	0.3367					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**1.9481**	**17.1628**	**14.4944**	**0.0223**		**0.9386**	**0.9386**		**0.8635**	**0.8635**		**2,245.2695**	**2,245.2695**	**0.6990**		**2,259.9481**

3.6 Paving - 2018

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	lb/day										lb/day					
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
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
Worker	0.0506	0.0640	0.8001	2.1200e-003	0.1677	1.3100e-003	0.1690	0.0445	1.2100e-003	0.0457		165.2231	165.2231	7.8400e-003		165.3877
Total	**0.0506**	**0.0640**	**0.8001**	**2.1200e-003**	**0.1677**	**1.3100e-003**	**0.1690**	**0.0445**	**1.2100e-003**	**0.0457**		**165.2231**	**165.2231**	**7.8400e-003**		**165.3877**

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	lb/day										lb/day					
Off-Road	1.6114	17.1628	14.4944	0.0223		0.9386	0.9386		0.8635	0.8635	0.0000	2,245.2695	2,245.2695	0.6990		2,259.9481
Paving	0.3367					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**1.9481**	**17.1628**	**14.4944**	**0.0223**		**0.9386**	**0.9386**		**0.8635**	**0.8635**	**0.0000**	**2,245.2695**	**2,245.2695**	**0.6990**		**2,259.9481**

3.6 Paving - 2018

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	lb/day										lb/day					
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
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
Worker	0.0506	0.0640	0.8001	2.1200e-003	0.1677	1.3100e-003	0.1690	0.0445	1.2100e-003	0.0457		165.2231	165.2231	7.8400e-003		165.3877
Total	**0.0506**	**0.0640**	**0.8001**	**2.1200e-003**	**0.1677**	**1.3100e-003**	**0.1690**	**0.0445**	**1.2100e-003**	**0.0457**		**165.2231**	**165.2231**	**7.8400e-003**		**165.3877**

3.7 Architectural Coating - 2018

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	lb/day										lb/day					
Archit. Coating	55.4516					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2986	2.0058	1.8542	2.9700e-003		0.1506	0.1506		0.1506	0.1506		281.4485	281.4485	0.0267		282.0102
Total	**55.7502**	**2.0058**	**1.8542**	**2.9700e-003**		**0.1506**	**0.1506**		**0.1506**	**0.1506**		**281.4485**	**281.4485**	**0.0267**		**282.0102**

3.7 Architectural Coating - 2018

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	lb/day										lb/day					
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
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
Worker	0.0371	0.0469	0.5867	1.5600e-003	0.1230	9.6000e-004	0.1239	0.0326	8.9000e-004	0.0335		121.1636	121.1636	5.7500e-003		121.2843
Total	**0.0371**	**0.0469**	**0.5867**	**1.5600e-003**	**0.1230**	**9.6000e-004**	**0.1239**	**0.0326**	**8.9000e-004**	**0.0335**		**121.1636**	**121.1636**	**5.7500e-003**		**121.2843**

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	lb/day										lb/day					
Archit. Coating	55.4516					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2986	2.0058	1.8542	2.9700e-003		0.1506	0.1506		0.1506	0.1506	0.0000	281.4485	281.4485	0.0267		282.0102
Total	**55.7502**	**2.0058**	**1.8542**	**2.9700e-003**		**0.1506**	**0.1506**		**0.1506**	**0.1506**	**0.0000**	**281.4485**	**281.4485**	**0.0267**		**282.0102**

3.7 Architectural Coating - 2018

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	lb/day										lb/day					
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
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
Worker	0.0371	0.0469	0.5867	1.5600e-003	0.1230	9.6000e-004	0.1239	0.0326	8.9000e-004	0.0335		121.1636	121.1636	5.7500e-003		121.2843
Total	**0.0371**	**0.0469**	**0.5867**	**1.5600e-003**	**0.1230**	**9.6000e-004**	**0.1239**	**0.0326**	**8.9000e-004**	**0.0335**		**121.1636**	**121.1636**	**5.7500e-003**		**121.2843**

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	lb/day										lb/day					
Mitigated	1.3906	4.2498	17.0906	0.0487	3.2658	0.0657	3.3316	0.8726	0.0606	0.9332		4,017.2762	4,017.2762	0.1450		4,020.3206
Unmitigated	1.3906	4.2498	17.0906	0.0487	3.2658	0.0657	3.3316	0.8726	0.0606	0.9332		4,017.2762	4,017.2762	0.1450		4,020.3206

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Office Park	236.01	34.96	16.20	594,271	594,271
Parking Lot	0.00	0.00	0.00		
Unrefrigerated Warehouse-No Rail	173.25	125.69	125.69	684,273	684,273
Total	409.26	160.66	141.90	1,278,544	1,278,544

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	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
Office Park	16.60	8.40	6.90	33.00	48.00	19.00	82	15	3
Parking Lot	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0
Unrefrigerated Warehouse-No	16.60	8.40	6.90	59.00	0.00	41.00	92	5	3

LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
0.512137	0.059943	0.180601	0.139123	0.042256	0.006647	0.016115	0.031670	0.001940	0.002502	0.004362	0.000588	0.002117

5.0 Energy Detail

4.4 Fleet Mix

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	lb/day										lb/day					
NaturalGas Mitigated	0.0134	0.1222	0.1026	7.3000e-004		9.2800e-003	9.2800e-003		9.2800e-003	9.2800e-003		146.5839	146.5839	2.8100e-003	2.6900e-003	147.4760
NaturalGas Unmitigated	0.0134	0.1222	0.1026	7.3000e-004		9.2800e-003	9.2800e-003		9.2800e-003	9.2800e-003		146.5839	146.5839	2.8100e-003	2.6900e-003	147.4760

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	lb/day										lb/day					
Unrefrigerated Warehouse-No Rail	549.12	5.9200e-003	0.0538	0.0452	3.2000e-004		4.0900e-003	4.0900e-003		4.0900e-003	4.0900e-003		64.6024	64.6024	1.2400e-003	1.1800e-003	64.9955
Office Park	696.843	7.5100e-003	0.0683	0.0574	4.1000e-004		5.1900e-003	5.1900e-003		5.1900e-003	5.1900e-003		81.9815	81.9815	1.5700e-003	1.5000e-003	82.4804
Parking Lot	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
Total		**0.0134**	**0.1222**	**0.1026**	**7.3000e-004**		**9.2800e-003**	**9.2800e-003**		**9.2800e-003**	**9.2800e-003**		**146.5839**	**146.5839**	**2.8100e-003**	**2.6800e-003**	**147.4760**

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	lb/day										lb/day					
Unrefrigerated Warehouse-No Rail	0.54912	5.9200e-003	0.0538	0.0452	3.2000e-004		4.0900e-003	4.0900e-003		4.0900e-003	4.0900e-003		64.6024	64.6024	1.2400e-003	1.1800e-003	64.9955
Office Park	0.696843	7.5100e-003	0.0683	0.0574	4.1000e-004		5.1900e-003	5.1900e-003		5.1900e-003	5.1900e-003		81.9815	81.9815	1.5700e-003	1.5000e-003	82.4804
Parking Lot	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
Total		**0.0134**	**0.1222**	**0.1026**	**7.3000e-004**		**9.2800e-003**	**9.2800e-003**		**9.2800e-003**	**9.2800e-003**		**146.5839**	**146.5839**	**2.8100e-003**	**2.6800e-003**	**147.4760**

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	lb/day										lb/day					
Mitigated	3.1162	2.2000e-004	0.0239	0.0000		9.0000e-005	9.0000e-005		9.0000e-005	9.0000e-005		0.0505	0.0505	1.4000e-004		0.0534
Unmitigated	3.1162	2.2000e-004	0.0239	0.0000		9.0000e-005	9.0000e-005		9.0000e-005	9.0000e-005		0.0505	0.0505	1.4000e-004		0.0534

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	lb/day										lb/day					
Architectural Coating	0.4558					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	2.6582					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	2.2800e-003	2.2000e-004	0.0239	0.0000		9.0000e-005	9.0000e-005		9.0000e-005	9.0000e-005		0.0505	0.0505	1.4000e-004		0.0534
Total	**3.1162**	**2.2000e-004**	**0.0239**	**0.0000**		**9.0000e-005**	**9.0000e-005**		**9.0000e-005**	**9.0000e-005**		**0.0505**	**0.0505**	**1.4000e-004**		**0.0534**

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	lb/day										lb/day					
Architectural Coating	0.4558					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	2.6582					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	2.2800e-003	2.2000e-004	0.0239	0.0000		9.0000e-005	9.0000e-005		9.0000e-005	9.0000e-005		0.0505	0.0505	1.4000e-004		0.0534
Total	**3.1162**	**2.2000e-004**	**0.0239**	**0.0000**		**9.0000e-005**	**9.0000e-005**		**9.0000e-005**	**9.0000e-005**		**0.0505**	**0.0505**	**1.4000e-004**		**0.0534**

7.0 Water Detail

7.1 Mitigation Measures Water

8.0 Waste Detail

8.1 Mitigation Measures Waste

9.0 Operational Offroad

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

10.0 Vegetation

Agoura Landmark Project

South Coast Air Basin, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Office Park	21.32	1000sqft	0.85	21,320.00	0
Unrefrigerated Warehouse-No Rail	48.53	1000sqft	1.75	48,530.00	0
Parking Lot	161.00	Space	2.57	64,400.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	31
Climate Zone	8			**Operational Year**	2018
Utility Company	Southern California Edison				
CO2 Intensity (lb/MWhr)	630.89	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - Parking lot is 2.57 ac. per site plan. Total Lot acreage is 5.17.

Construction Phase - No demolition
30 days coating

Off-road Equipment -

Off-road Equipment -

Off-road Equipment - No demolition

Off-road Equipment -

Off-road Equipment -

Off-road Equipment -

Trips and VMT - no demolition

Grading -

Architectural Coating -

Vehicle Trips - Trips adjusted per traffic report.

Area Coating -

Construction Off-road Equipment Mitigation -

Area Mitigation -

Table Name	Column Name	Default Value	New Value
tblConstructionPhase	NumDays	20.00	30.00
tblConstructionPhase	NumDays	20.00	0.00
tblConstructionPhase	PhaseEndDate	1/13/2017	2/10/2017
tblConstructionPhase	PhaseStartDate	12/31/2016	1/28/2017
tblGrading	MaterialExported	0.00	5,198.00
tblLandUse	LotAcreage	0.49	0.85
tblLandUse	LotAcreage	1.11	1.75
tblLandUse	LotAcreage	1.45	2.57
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblProjectCharacteristics	OperationalYear	2014	2018
tblVehicleTrips	WD_TR	11.42	11.07
tblVehicleTrips	WD_TR	2.59	3.57

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					
2017	0.4300	3.7004	3.0047	4.8400e-003	0.2408	0.2259	0.4667	0.1062	0.2114	0.3176	0.0000	422.0221	422.0221	0.0794	0.0000	423.6896
2018	0.8869	0.4551	0.4142	7.0000e-004	0.0107	0.0269	0.0377	2.8800e-003	0.0253	0.0281	0.0000	60.2089	60.2089	0.0129	0.0000	60.4805
Total	**1.3169**	**4.1556**	**3.4189**	**5.5400e-003**	**0.2515**	**0.2528**	**0.5044**	**0.1091**	**0.2367**	**0.3457**	**0.0000**	**482.2310**	**482.2310**	**0.0923**	**0.0000**	**484.1701**

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					
2017	0.4300	3.7004	3.0047	4.8400e-003	0.2408	0.2259	0.4667	0.1062	0.2114	0.3176	0.0000	422.0217	422.0217	0.0794	0.0000	423.6892
2018	0.8869	0.4551	0.4142	7.0000e-004	0.0107	0.0269	0.0377	2.8800e-003	0.0253	0.0281	0.0000	60.2088	60.2088	0.0129	0.0000	60.4805
Total	**1.3169**	**4.1556**	**3.4189**	**5.5400e-003**	**0.2515**	**0.2528**	**0.5044**	**0.1091**	**0.2367**	**0.3457**	**0.0000**	**482.2306**	**482.2306**	**0.0923**	**0.0000**	**484.1697**

	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**	**0.00**	**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	0.5686	3.0000e-005	2.9900e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	5.7300e-003	5.7300e-003	2.0000e-005	0.0000	6.0600e-003
Energy	2.4500e-003	0.0223	0.0187	1.3000e-004		1.6900e-003	1.6900e-003		1.6900e-003	1.6900e-003	0.0000	207.5975	207.5975	8.8900e-003	2.1900e-003	208.4626
Mobile	0.2043	0.6878	2.5387	7.0700e-003	0.4845	9.9300e-003	0.4945	0.1297	9.1500e-003	0.1388	0.0000	529.8230	529.8230	0.0198	0.0000	530.2396
Waste						0.0000	0.0000		0.0000	0.0000	13.2858	0.0000	13.2858	0.7852	0.0000	29.7742
Water						0.0000	0.0000		0.0000	0.0000	4.7626	63.3207	68.0832	0.4921	0.0122	82.1840
Total	**0.7753**	**0.7102**	**2.5604**	**7.2000e-003**	**0.4845**	**0.0116**	**0.4962**	**0.1297**	**0.0109**	**0.1405**	**18.0483**	**800.7469**	**818.7952**	**1.3060**	**0.0143**	**850.6665**

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	0.5686	3.0000e-005	2.9900e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	5.7300e-003	5.7300e-003	2.0000e-005	0.0000	6.0600e-003
Energy	2.4500e-003	0.0223	0.0187	1.3000e-004		1.6900e-003	1.6900e-003		1.6900e-003	1.6900e-003	0.0000	207.5975	207.5975	8.8900e-003	2.1900e-003	208.4626
Mobile	0.2043	0.6878	2.5387	7.0700e-003	0.4845	9.9300e-003	0.4945	0.1297	9.1500e-003	0.1388	0.0000	529.8230	529.8230	0.0198	0.0000	530.2396
Waste						0.0000	0.0000		0.0000	0.0000	13.2858	0.0000	13.2858	0.7852	0.0000	29.7742
Water						0.0000	0.0000		0.0000	0.0000	4.7626	63.3207	68.0832	0.4920	0.0121	82.1764
Total	**0.7753**	**0.7102**	**2.5604**	**7.2000e-003**	**0.4845**	**0.0116**	**0.4962**	**0.1297**	**0.0109**	**0.1405**	**18.0483**	**800.7469**	**818.7952**	**1.3059**	**0.0143**	**850.6589**

	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**	**0.14**	**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	1/1/2017	12/30/2016	5	0	
2	Site Preparation	Site Preparation	1/28/2017	2/10/2017	5	10	
3	Grading	Grading	2/11/2017	3/10/2017	5	20	
4	Building Construction	Building Construction	3/11/2017	1/26/2018	5	230	
5	Paving	Paving	1/27/2018	2/23/2018	5	20	
6	Architectural Coating	Architectural Coating	2/24/2018	4/6/2018	5	30	

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: 107,673; Non-Residential Outdoor: 35,891 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition	Concrete/Industrial Saws	0	8.00	81	0.73
Demolition	Excavators	0	8.00	162	0.38
Demolition	Rubber Tired Dozers	0	8.00	255	0.40
Site Preparation	Rubber Tired Dozers	3	8.00	255	0.40
Site Preparation	Tractors/Loaders/Backhoes	4	8.00	97	0.37
Grading	Excavators	1	8.00	162	0.38
Grading	Graders	1	8.00	174	0.41
Grading	Rubber Tired Dozers	1	8.00	255	0.40
Grading	Tractors/Loaders/Backhoes	3	8.00	97	0.37
Building Construction	Cranes	1	7.00	226	0.29
Building Construction	Forklifts	3	8.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes	3	7.00	97	0.37
Building Construction	Welders	1	8.00	46	0.45
Paving	Pavers	2	8.00	125	0.42
Paving	Paving Equipment	2	8.00	130	0.36
Paving	Rollers	2	8.00	80	0.38
Architectural Coating	Air Compressors	1	6.00	78	0.48

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	0	0.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Site Preparation	7	18.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Grading	6	15.00	0.00	650.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	9	54.00	22.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Paving	6	15.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	11.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Clean Paved Roads

3.3 Site Preparation - 2017

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					0.0903	0.0000	0.0903	0.0497	0.0000	0.0497	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0242	0.2588	0.1970	2.0000e-004		0.0138	0.0138		0.0127	0.0127	0.0000	18.1577	18.1577	5.5600e-003	0.0000	18.2745
Total	**0.0242**	**0.2588**	**0.1970**	**2.0000e-004**	**0.0903**	**0.0138**	**0.1041**	**0.0497**	**0.0127**	**0.0623**	**0.0000**	**18.1577**	**18.1577**	**5.5600e-003**	**0.0000**	**18.2745**

3.3 Site Preparation - 2017

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	3.2000e-004	4.8000e-004	4.9700e-003	1.0000e-005	9.9000e-004	1.0000e-005	1.0000e-003	2.6000e-004	1.0000e-005	2.7000e-004	0.0000	0.8896	0.8896	5.0000e-005	0.0000	0.8906
Total	**3.2000e-004**	**4.8000e-004**	**4.9700e-003**	**1.0000e-005**	**9.9000e-004**	**1.0000e-005**	**1.0000e-003**	**2.6000e-004**	**1.0000e-005**	**2.7000e-004**	**0.0000**	**0.8896**	**0.8896**	**5.0000e-005**	**0.0000**	**0.8906**

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					0.0903	0.0000	0.0903	0.0497	0.0000	0.0497	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0242	0.2588	0.1970	2.0000e-004		0.0138	0.0138		0.0127	0.0127	0.0000	18.1577	18.1577	5.5600e-003	0.0000	18.2745
Total	**0.0242**	**0.2588**	**0.1970**	**2.0000e-004**	**0.0903**	**0.0138**	**0.1041**	**0.0497**	**0.0127**	**0.0623**	**0.0000**	**18.1577**	**18.1577**	**5.5600e-003**	**0.0000**	**18.2745**

3.3 Site Preparation - 2017

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	3.2000e-004	4.8000e-004	4.9700e-003	1.0000e-005	9.9000e-004	1.0000e-005	1.0000e-003	2.6000e-004	1.0000e-005	2.7000e-004	0.0000	0.8896	0.8896	5.0000e-005	0.0000	0.8906
Total	**3.2000e-004**	**4.8000e-004**	**4.9700e-003**	**1.0000e-005**	**9.9000e-004**	**1.0000e-005**	**1.0000e-003**	**2.6000e-004**	**1.0000e-005**	**2.7000e-004**	**0.0000**	**0.8896**	**0.8896**	**5.0000e-005**	**0.0000**	**0.8906**

3.4 Grading - 2017

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					0.0658	0.0000	0.0658	0.0337	0.0000	0.0337	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0346	0.3598	0.2538	3.0000e-004		0.0204	0.0204		0.0188	0.0188	0.0000	27.6117	27.6117	8.4600e-003	0.0000	27.7893
Total	**0.0346**	**0.3598**	**0.2538**	**3.0000e-004**	**0.0658**	**0.0204**	**0.0862**	**0.0337**	**0.0188**	**0.0525**	**0.0000**	**27.6117**	**27.6117**	**8.4600e-003**	**0.0000**	**27.7893**

3.4 Grading - 2017

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	5.4900e-003	0.0870	0.0687	2.4000e-004	5.5700e-003	1.2700e-003	6.8500e-003	1.5300e-003	1.1700e-003	2.7000e-003	0.0000	21.5562	21.5562	1.5000e-004	0.0000	21.5594
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	5.4000e-004	8.0000e-004	8.2900e-003	2.0000e-005	1.6500e-003	1.0000e-005	1.6600e-003	4.4000e-004	1.0000e-005	4.5000e-004	0.0000	1.4827	1.4827	8.0000e-005	0.0000	1.4843
Total	**6.0300e-003**	**0.0878**	**0.0769**	**2.6000e-004**	**7.2200e-003**	**1.2800e-003**	**8.5100e-003**	**1.9700e-003**	**1.1800e-003**	**3.1500e-003**	**0.0000**	**23.0388**	**23.0388**	**2.3000e-004**	**0.0000**	**23.0437**

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					0.0658	0.0000	0.0658	0.0337	0.0000	0.0337	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0346	0.3598	0.2538	3.0000e-004		0.0204	0.0204		0.0188	0.0188	0.0000	27.6117	27.6117	8.4600e-003	0.0000	27.7893
Total	**0.0346**	**0.3598**	**0.2538**	**3.0000e-004**	**0.0658**	**0.0204**	**0.0862**	**0.0337**	**0.0188**	**0.0525**	**0.0000**	**27.6117**	**27.6117**	**8.4600e-003**	**0.0000**	**27.7893**

3.4 Grading - 2017

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	5.4900e-003	0.0870	0.0687	2.4000e-004	5.5700e-003	1.2700e-003	6.8500e-003	1.5300e-003	1.1700e-003	2.7000e-003	0.0000	21.5562	21.5562	1.5000e-004	0.0000	21.5594
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	5.4000e-004	8.0000e-004	8.2900e-003	2.0000e-005	1.6500e-003	1.0000e-005	1.6600e-003	4.4000e-004	1.0000e-005	4.5000e-004	0.0000	1.4827	1.4827	8.0000e-005	0.0000	1.4843
Total	**6.0300e-003**	**0.0878**	**0.0769**	**2.6000e-004**	**7.2200e-003**	**1.2800e-003**	**8.5100e-003**	**1.9700e-003**	**1.1800e-003**	**3.1500e-003**	**0.0000**	**23.0388**	**23.0388**	**2.3000e-004**	**0.0000**	**23.0437**

3.5 Building Construction - 2017

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	0.3258	2.7726	1.9036	2.8100e-003		0.1870	0.1870		0.1757	0.1757	0.0000	251.4531	251.4531	0.0619	0.0000	252.7527
Total	**0.3258**	**2.7726**	**1.9036**	**2.8100e-003**		**0.1870**	**0.1870**		**0.1757**	**0.1757**	**0.0000**	**251.4531**	**251.4531**	**0.0619**	**0.0000**	**252.7527**

3.5 Building Construction - 2017

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	0.0188	0.1909	0.2551	5.0000e-004	0.0142	2.9200e-003	0.0171	4.0600e-003	2.6800e-003	6.7400e-003	0.0000	44.8269	44.8269	3.2000e-004	0.0000	44.8336
Worker	0.0204	0.0301	0.3134	7.6000e-004	0.0622	5.1000e-004	0.0627	0.0165	4.7000e-004	0.0170	0.0000	56.0444	56.0444	2.8900e-003	0.0000	56.1052
Total	**0.0392**	**0.2210**	**0.5685**	**1.2600e-003**	**0.0764**	**3.4300e-003**	**0.0799**	**0.0206**	**3.1500e-003**	**0.0237**	**0.0000**	**100.8712**	**100.8712**	**3.2100e-003**	**0.0000**	**100.9388**

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	0.3258	2.7726	1.9036	2.8100e-003		0.1870	0.1870		0.1757	0.1757	0.0000	251.4528	251.4528	0.0619	0.0000	252.7524
Total	**0.3258**	**2.7726**	**1.9036**	**2.8100e-003**		**0.1870**	**0.1870**		**0.1757**	**0.1757**	**0.0000**	**251.4528**	**251.4528**	**0.0619**	**0.0000**	**252.7524**

3.5 Building Construction - 2017

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	0.0188	0.1909	0.2551	5.0000e-004	0.0142	2.9200e-003	0.0171	4.0600e-003	2.6800e-003	6.7400e-003	0.0000	44.8269	44.8269	3.2000e-004	0.0000	44.8336
Worker	0.0204	0.0301	0.3134	7.6000e-004	0.0622	5.1000e-004	0.0627	0.0165	4.7000e-004	0.0170	0.0000	56.0444	56.0444	2.8900e-003	0.0000	56.1052
Total	**0.0392**	**0.2210**	**0.5685**	**1.2600e-003**	**0.0764**	**3.4300e-003**	**0.0799**	**0.0206**	**3.1500e-003**	**0.0237**	**0.0000**	**100.8712**	**100.8712**	**3.2100e-003**	**0.0000**	**100.9388**

3.5 Building Construction - 2018

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	0.0267	0.2326	0.1753	2.7000e-004		0.0149	0.0149		0.0141	0.0141	0.0000	23.6770	23.6770	5.7900e-003	0.0000	23.7987
Total	**0.0267**	**0.2326**	**0.1753**	**2.7000e-004**		**0.0149**	**0.0149**		**0.0141**	**0.0141**	**0.0000**	**23.6770**	**23.6770**	**5.7900e-003**	**0.0000**	**23.7987**

3.5 Building Construction - 2018

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	1.6700e-003	0.0167	0.0233	5.0000e-005	1.3500e-003	2.6000e-004	1.6200e-003	3.9000e-004	2.4000e-004	6.3000e-004	0.0000	4.1976	4.1976	3.0000e-005	0.0000	4.1982
Worker	1.7400e-003	2.6000e-003	0.0270	7.0000e-005	5.9200e-003	5.0000e-005	5.9700e-003	1.5700e-003	4.0000e-005	1.6200e-003	0.0000	5.1383	5.1383	2.6000e-004	0.0000	5.1437
Total	**3.4100e-003**	**0.0193**	**0.0503**	**1.2000e-004**	**7.2700e-003**	**3.1000e-004**	**7.5900e-003**	**1.9600e-003**	**2.8000e-004**	**2.2500e-003**	**0.0000**	**9.3359**	**9.3359**	**2.9000e-004**	**0.0000**	**9.3420**

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	0.0267	0.2326	0.1753	2.7000e-004		0.0149	0.0149		0.0141	0.0141	0.0000	23.6769	23.6769	5.7900e-003	0.0000	23.7986
Total	**0.0267**	**0.2326**	**0.1753**	**2.7000e-004**		**0.0149**	**0.0149**		**0.0141**	**0.0141**	**0.0000**	**23.6769**	**23.6769**	**5.7900e-003**	**0.0000**	**23.7986**

3.5 Building Construction - 2018

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	1.6700e-003	0.0167	0.0233	5.0000e-005	1.3500e-003	2.6000e-004	1.6200e-003	3.9000e-004	2.4000e-004	6.3000e-004	0.0000	4.1976	4.1976	3.0000e-005	0.0000	4.1982
Worker	1.7400e-003	2.6000e-003	0.0270	7.0000e-005	5.9200e-003	5.0000e-005	5.9700e-003	1.5700e-003	4.0000e-005	1.6200e-003	0.0000	5.1383	5.1383	2.6000e-004	0.0000	5.1437
Total	**3.4100e-003**	**0.0193**	**0.0503**	**1.2000e-004**	**7.2700e-003**	**3.1000e-004**	**7.5900e-003**	**1.9600e-003**	**2.8000e-004**	**2.2500e-003**	**0.0000**	**9.3359**	**9.3359**	**2.9000e-004**	**0.0000**	**9.3420**

3.6 Paving - 2018

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	0.0161	0.1716	0.1449	2.2000e-004		9.3900e-003	9.3900e-003		8.6400e-003	8.6400e-003	0.0000	20.3687	20.3687	6.3400e-003	0.0000	20.5019
Paving	3.3700e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0195**	**0.1716**	**0.1449**	**2.2000e-004**		**9.3900e-003**	**9.3900e-003**		**8.6400e-003**	**8.6400e-003**	**0.0000**	**20.3687**	**20.3687**	**6.3400e-003**	**0.0000**	**20.5019**

3.6 Paving - 2018

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	4.8000e-004	7.2000e-004	7.5100e-003	2.0000e-005	1.6500e-003	1.0000e-005	1.6600e-003	4.4000e-004	1.0000e-005	4.5000e-004	0.0000	1.4273	1.4273	7.0000e-005	0.0000	1.4288
Total	**4.8000e-004**	**7.2000e-004**	**7.5100e-003**	**2.0000e-005**	**1.6500e-003**	**1.0000e-005**	**1.6600e-003**	**4.4000e-004**	**1.0000e-005**	**4.5000e-004**	**0.0000**	**1.4273**	**1.4273**	**7.0000e-005**	**0.0000**	**1.4288**

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	0.0161	0.1716	0.1449	2.2000e-004		9.3900e-003	9.3900e-003		8.6400e-003	8.6400e-003	0.0000	20.3687	20.3687	6.3400e-003	0.0000	20.5019
Paving	3.3700e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0195**	**0.1716**	**0.1449**	**2.2000e-004**		**9.3900e-003**	**9.3900e-003**		**8.6400e-003**	**8.6400e-003**	**0.0000**	**20.3687**	**20.3687**	**6.3400e-003**	**0.0000**	**20.5019**

3.6 Paving - 2018

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	4.8000e-004	7.2000e-004	7.5100e-003	2.0000e-005	1.6500e-003	1.0000e-005	1.6600e-003	4.4000e-004	1.0000e-005	4.5000e-004	0.0000	1.4273	1.4273	7.0000e-005	0.0000	1.4288
Total	**4.8000e-004**	**7.2000e-004**	**7.5100e-003**	**2.0000e-005**	**1.6500e-003**	**1.0000e-005**	**1.6600e-003**	**4.4000e-004**	**1.0000e-005**	**4.5000e-004**	**0.0000**	**1.4273**	**1.4273**	**7.0000e-005**	**0.0000**	**1.4288**

3.7 Architectural Coating - 2018

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	0.8318					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	4.4800e-003	0.0301	0.0278	4.0000e-005		2.2600e-003	2.2600e-003		2.2600e-003	2.2600e-003	0.0000	3.8299	3.8299	3.6000e-004	0.0000	3.8375
Total	**0.8363**	**0.0301**	**0.0278**	**4.0000e-005**		**2.2600e-003**	**2.2600e-003**		**2.2600e-003**	**2.2600e-003**	**0.0000**	**3.8299**	**3.8299**	**3.6000e-004**	**0.0000**	**3.8375**

3.7 Architectural Coating - 2018

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	8.0000e-004	8.2600e-003	2.0000e-005	1.8100e-003	1.0000e-005	1.8200e-003	4.8000e-004	1.0000e-005	4.9000e-004	0.0000	1.5701	1.5701	8.0000e-005	0.0000	1.5717
Total	**5.3000e-004**	**8.0000e-004**	**8.2600e-003**	**2.0000e-005**	**1.8100e-003**	**1.0000e-005**	**1.8200e-003**	**4.8000e-004**	**1.0000e-005**	**4.9000e-004**	**0.0000**	**1.5701**	**1.5701**	**8.0000e-005**	**0.0000**	**1.5717**

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	0.8318					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	4.4800e-003	0.0301	0.0278	4.0000e-005		2.2600e-003	2.2600e-003		2.2600e-003	2.2600e-003	0.0000	3.8299	3.8299	3.6000e-004	0.0000	3.8375
Total	**0.8363**	**0.0301**	**0.0278**	**4.0000e-005**		**2.2600e-003**	**2.2600e-003**		**2.2600e-003**	**2.2600e-003**	**0.0000**	**3.8299**	**3.8299**	**3.6000e-004**	**0.0000**	**3.8375**

3.7 Architectural Coating - 2018

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	8.0000e-004	8.2600e-003	2.0000e-005	1.8100e-003	1.0000e-005	1.8200e-003	4.8000e-004	1.0000e-005	4.9000e-004	0.0000	1.5701	1.5701	8.0000e-005	0.0000	1.5717
Total	**5.3000e-004**	**8.0000e-004**	**8.2600e-003**	**2.0000e-005**	**1.8100e-003**	**1.0000e-005**	**1.8200e-003**	**4.8000e-004**	**1.0000e-005**	**4.9000e-004**	**0.0000**	**1.5701**	**1.5701**	**8.0000e-005**	**0.0000**	**1.5717**

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	0.2043	0.6878	2.5387	7.0700e-003	0.4845	9.9300e-003	0.4945	0.1297	9.1500e-003	0.1388	0.0000	529.8230	529.8230	0.0198	0.0000	530.2396
Unmitigated	0.2043	0.6878	2.5387	7.0700e-003	0.4845	9.9300e-003	0.4945	0.1297	9.1500e-003	0.1388	0.0000	529.8230	529.8230	0.0198	0.0000	530.2396

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Office Park	236.01	34.96	16.20	594,271	594,271
Parking Lot	0.00	0.00	0.00		
Unrefrigerated Warehouse-No Rail	173.25	125.69	125.69	684,273	684,273
Total	409.26	160.66	141.90	1,278,544	1,278,544

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	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
Office Park	16.60	8.40	6.90	33.00	48.00	19.00	82	15	3
Parking Lot	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0
Unrefrigerated Warehouse-No	16.60	8.40	6.90	59.00	0.00	41.00	92	5	3

LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
0.512137	0.059943	0.180601	0.139123	0.042256	0.006647	0.016115	0.031670	0.001940	0.002502	0.004362	0.000588	0.002117

5.0 Energy Detail

4.4 Fleet Mix

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	183.3288	183.3288	8.4300e-003	1.7400e-003	184.0463
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	183.3288	183.3288	8.4300e-003	1.7400e-003	184.0463
NaturalGas Mitigated	2.4500e-003	0.0223	0.0187	1.3000e-004		1.6900e-003	1.6900e-003		1.6900e-003	1.6900e-003	0.0000	24.2686	24.2686	4.7000e-004	4.4000e-004	24.4163
NaturalGas Unmitigated	2.4500e-003	0.0223	0.0187	1.3000e-004		1.6900e-003	1.6900e-003		1.6900e-003	1.6900e-003	0.0000	24.2686	24.2686	4.7000e-004	4.4000e-004	24.4163

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					
Unrefrigerated Warehouse-No Rail	200429	1.0800e-003	9.8200e-003	8.2500e-003	6.0000e-005		7.5000e-004	7.5000e-004		7.5000e-004	7.5000e-004	0.0000	10.6957	10.6957	2.0000e-004	2.0000e-004	10.7607
Office Park	254348	1.3700e-003	0.0125	0.0105	7.0000e-005		9.5000e-004	9.5000e-004		9.5000e-004	9.5000e-004	0.0000	13.5730	13.5730	2.6000e-004	2.5000e-004	13.6556
Parking Lot	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		**2.4500e-003**	**0.0223**	**0.0187**	**1.3000e-004**		**1.7000e-003**	**1.7000e-003**		**1.7000e-003**	**1.7000e-003**	**0.0000**	**24.2686**	**24.2686**	**4.6000e-004**	**4.5000e-004**	**24.4163**

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					
Unrefrigerated Warehouse-No Rail	200429	1.0800e-003	9.8200e-003	8.2500e-003	6.0000e-005		7.5000e-004	7.5000e-004		7.5000e-004	7.5000e-004	0.0000	10.6957	10.6957	2.0000e-004	2.0000e-004	10.7607
Office Park	254348	1.3700e-003	0.0125	0.0105	7.0000e-005		9.5000e-004	9.5000e-004		9.5000e-004	9.5000e-004	0.0000	13.5730	13.5730	2.6000e-004	2.5000e-004	13.6556
Parking Lot	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		**2.4500e-003**	**0.0223**	**0.0187**	**1.3000e-004**		**1.7000e-003**	**1.7000e-003**		**1.7000e-003**	**1.7000e-003**	**0.0000**	**24.2686**	**24.2686**	**4.6000e-004**	**4.5000e-004**	**24.4163**

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Office Park	366064	104.7555	4.8200e-003	1.0000e-003	105.1655
Parking Lot	56672	16.2177	7.5000e-004	1.5000e-004	16.2811
Unrefrigerated Warehouse-No Rail	217900	62.3557	2.8700e-003	5.9000e-004	62.5997
Total		**183.3288**	**8.4400e-003**	**1.7400e-003**	**184.0463**

5.3 Energy by Land Use - Electricity

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Office Park	366064	104.7555	4.8200e-003	1.0000e-003	105.1655
Parking Lot	56672	16.2177	7.5000e-004	1.5000e-004	16.2811
Unrefrigerated Warehouse-No Rail	217900	62.3557	2.8700e-003	5.9000e-004	62.5997
Total		**183.3288**	**8.4400e-003**	**1.7400e-003**	**184.0463**

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	0.5686	3.0000e-005	2.9900e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	5.7300e-003	5.7300e-003	2.0000e-005	0.0000	6.0600e-003
Unmitigated	0.5686	3.0000e-005	2.9900e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	5.7300e-003	5.7300e-003	2.0000e-005	0.0000	6.0600e-003

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	0.0832					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.4851					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	2.9000e-004	3.0000e-005	2.9900e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	5.7300e-003	5.7300e-003	2.0000e-005	0.0000	6.0600e-003
Total	**0.5686**	**3.0000e-005**	**2.9900e-003**	**0.0000**		**1.0000e-005**	**1.0000e-005**		**1.0000e-005**	**1.0000e-005**	**0.0000**	**5.7300e-003**	**5.7300e-003**	**2.0000e-005**	**0.0000**	**6.0600e-003**

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	0.0832					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.4851					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	2.9000e-004	3.0000e-005	2.9900e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	5.7300e-003	5.7300e-003	2.0000e-005	0.0000	6.0600e-003
Total	**0.5686**	**3.0000e-005**	**2.9900e-003**	**0.0000**		**1.0000e-005**	**1.0000e-005**		**1.0000e-005**	**1.0000e-005**	**0.0000**	**5.7300e-003**	**5.7300e-003**	**2.0000e-005**	**0.0000**	**6.0600e-003**

7.0 Water Detail

7.1 Mitigation Measures Water

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	68.0832	0.4920	0.0121	82.1764
Unmitigated	68.0832	0.4921	0.0122	82.1840

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Office Park	3.78928 / 2.32246	22.7056	0.1245	3.1200e-003	26.2865
Parking Lot	0 / 0	0.0000	0.0000	0.0000	0.0000
Unrefrigerated Warehouse-No Rail	11.2226 / 0	45.3777	0.3676	9.0300e-003	55.8975
Total		**68.0832**	**0.4921**	**0.0122**	**82.1840**

7.2 Water by Land Use

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Office Park	3.78928 / 2.32246	22.7056	0.1244	3.1200e-003	26.2845
Parking Lot	0 / 0	0.0000	0.0000	0.0000	0.0000
Unrefrigerated Warehouse-No Rail	11.2226 / 0	45.3777	0.3675	9.0200e-003	55.8918
Total		**68.0832**	**0.4920**	**0.0121**	**82.1764**

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	13.2858	0.7852	0.0000	29.7742
Unmitigated	13.2858	0.7852	0.0000	29.7742

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Office Park	19.83	4.0253	0.2379	0.0000	9.0210
Parking Lot	0	0.0000	0.0000	0.0000	0.0000
Unrefrigerated Warehouse-No Rail	45.62	9.2605	0.5473	0.0000	20.7533
Total		**13.2858**	**0.7852**	**0.0000**	**29.7742**

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Office Park	19.83	4.0253	0.2379	0.0000	9.0210
Parking Lot	0	0.0000	0.0000	0.0000	0.0000
Unrefrigerated Warehouse-No Rail	45.62	9.2605	0.5473	0.0000	20.7533
Total		**13.2858**	**0.7852**	**0.0000**	**29.7742**

9.0 Operational Offroad

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

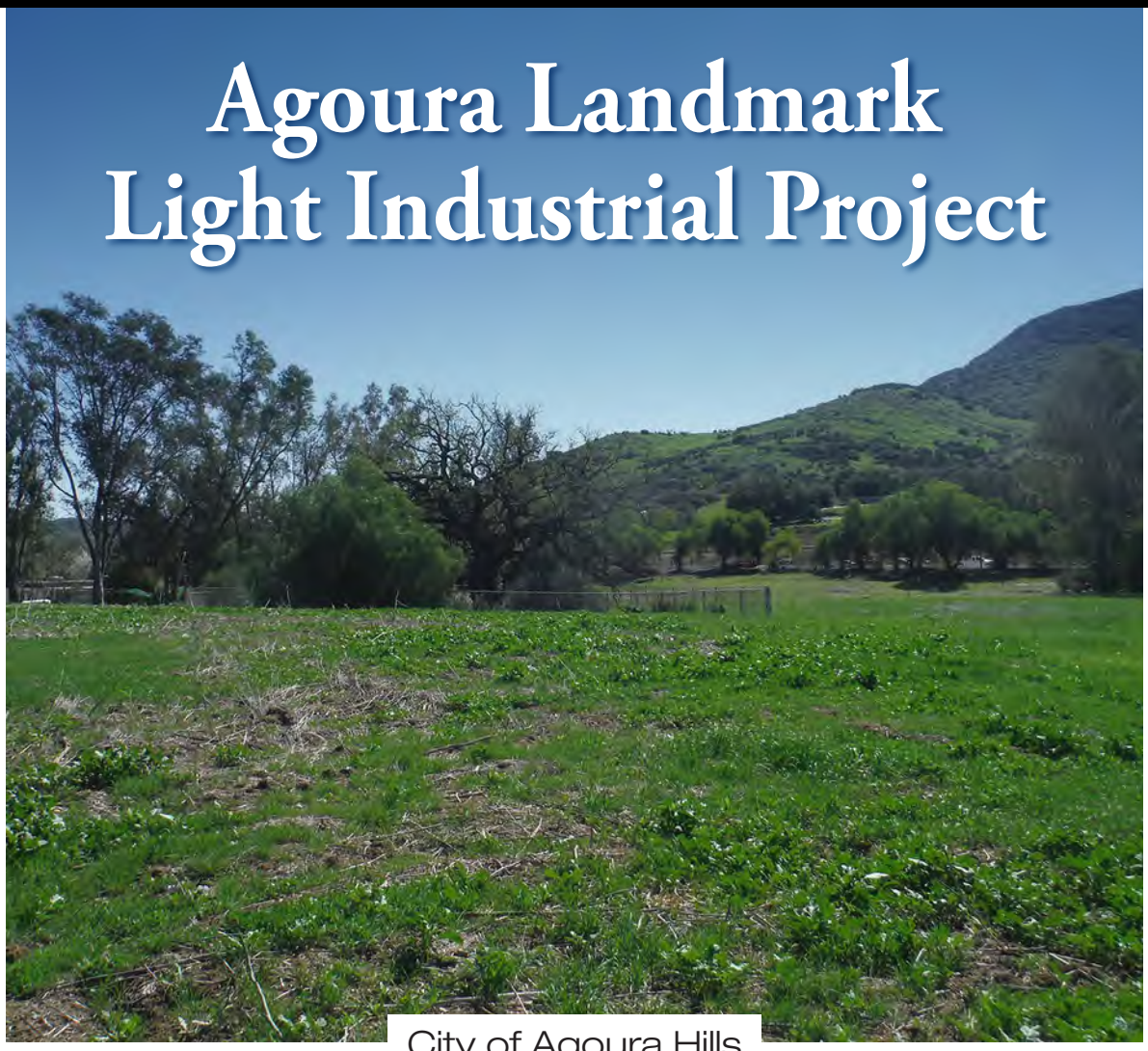
10.0 Vegetation

Biological Resource Inventory and Impact Analysis

APPENDIX D

Biological Resources Inventory and Impacts Analysis

Agoura Landmark Light Industrial Project



City of Agoura Hills

PREPARED FOR:

City of Agoura Hills

30001 Ladyface Court
Agoura Hills, CA 91301
Attn: Valerie Darbouze, Associate Planner
(818) 597-7328

PREPARED BY:

ENVICOM CORPORATION

4165 E. Thousand Oaks Blvd., Suite 290
Westlake Village, CA 91362
Attn: Jim Anderson, Senior Biologist
(818) 879-4700

June 24, 2016

BIOLOGICAL RESOURCES INVENTORY AND IMPACTS ANALYSIS

Agoura Landmark Light Industrial Project
City of Agoura Hills

Prepared for:

CITY OF AGOURA HILLS
30001 Ladyface Court
Agoura Hills, CA 91301
Attn: Valerie Darbouze, Associate Planner
(818) 597-7328

Prepared by:

ENVICOM CORPORATION
4165 E. Thousand Oaks Boulevard, Suite 290
Westlake Village, California 91362
Attn: Jim Anderson, Senior Biologist
(818) 879-4700

June 24, 2016

PLATES

APPENDICES

1.0 INTRODUCTION

Envicom Corporation has prepared this biological resources inventory and impacts analysis for the Agoura Landmark Light Industrial Project site (hereinafter the "project site"), which is located in the City of Agoura Hills, California. The project site consists of one (1) rectangular 5.17-acre parcel identified as APN No. 2061-003-027.

Report Scope and Content

This report summarizes the methods and results of a literature review, field survey, and jurisdictional delineation conducted by Envicom Corporation to identify and map the biological resources and jurisdictional areas at the project site. It includes a discussion of the protected and regulated resources confirmed present or absent, or that have potential to occur at the site. Maps and representative photographs of vegetation and jurisdictional waters and habitat are provided. The existing conditions discussion is followed by project impacts and recommended mitigation measures to offset the impacts. Lists of the vascular plants and vertebrate wildlife species observed during the field survey as well as an analysis of the potential for occurrence of special-status plant and wildlife species at the project site are included as appendices to the report.

Project Site Location

The project site is located at 29621 Agoura Road between Agoura Road and Highway 101, and approximately 0.5 miles west of Kanan Road in the City of Agoura Hills (see **Figure 1**, **Project Location Map**). The project site is within the southeastern ¼ of the USGS 7.5' Thousand Oaks topographic quadrangle map.

Project Description

Agoura Landmark, LC plans to build six (6) light industrial buildings including associated surface parking spaces and landscaping at the project site. The proposed buildings would be arranged into four (4) clusters around a common driveway with a roundabout towards the northerly side of the site. The median area within the roundabout would be landscaped and would retain a large valley oak tree. The project site plan is provided as **Appendix 1**.

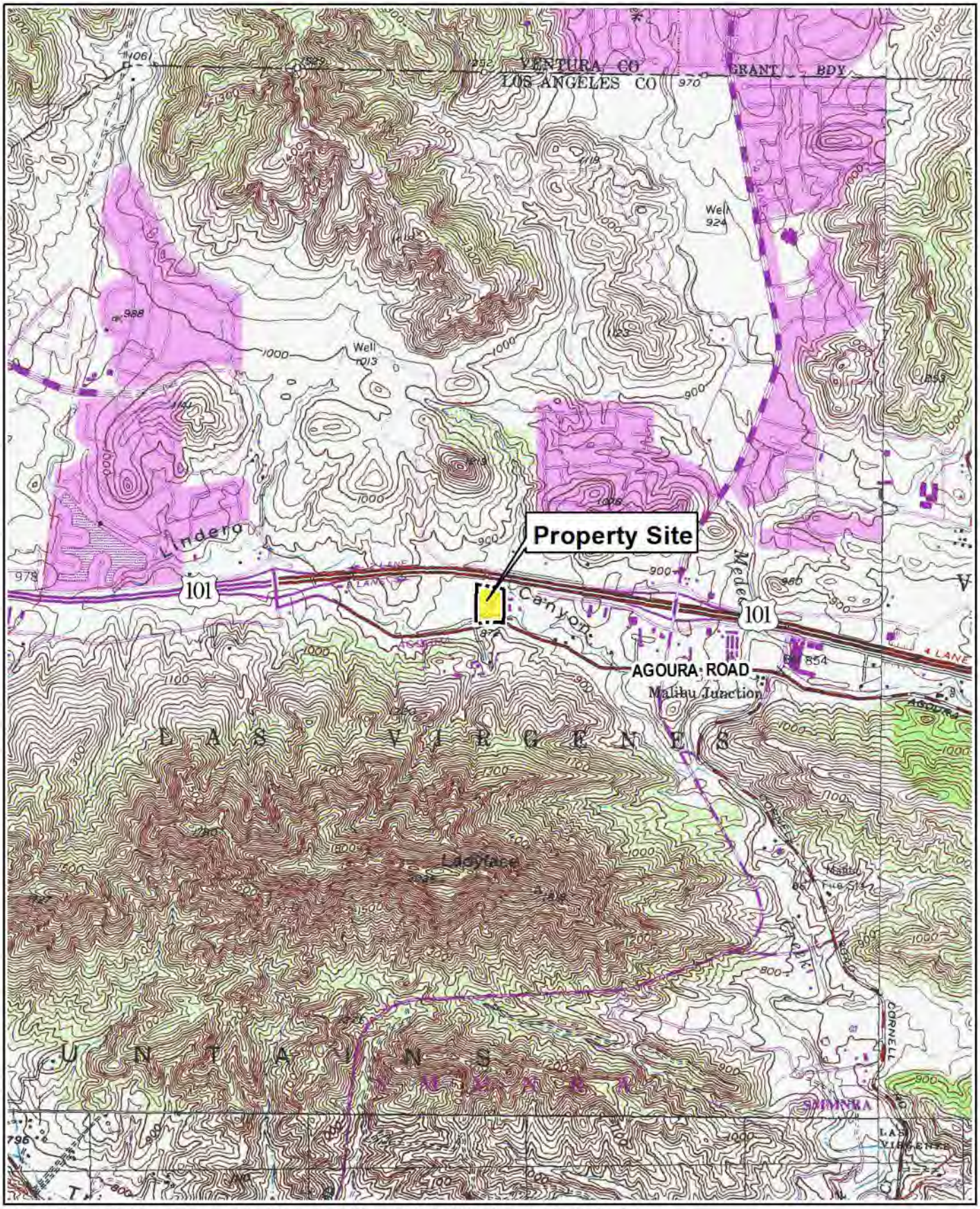
2.0 METHODS

2.1 BIOLOGICAL RESOURCES INVENTORY

Literature Review

The literature review included information available in standard biological references and relevant lists and databases pertaining to the status and known occurrences of sensitive and special-status biological resources. Other sources of information included aerial photographs, topographic maps, soil survey maps, climatic data, relevant policy and planning documents, and previous biological studies of the site. The following sources were among those reviewed in preparation for field surveys, or that were consulted during preparation of this report (for a complete list see the references section):

- *Biogeographic Information and Observation System (BIOS),* California Department of Fish and Wildlife (CDFW), formerly the California Department of Fish and Game (CDFG), data as of May 17, 2016;



Source: Portions of Calabasas, Thousand Oaks, Malibu and Point Dume, California USGS 7.5' Topographic Quadrangle maps.

Project Location Map

0 1,000 2,000 Feet

FIGURE 1

- *California Natural Diversity Database (CNDDB) Rarefind 5* report for the 7.5' United States Geological Survey (USGS) Thousand Oaks quadrangle and eight surrounding quadrangles, CDFW, data as of March 17, 2016;
- *California Native Plant Society (CNPS) Inventory of Rare and Endangered Vascular Plants of California* report for the 7.5' USGS Thousand Oaks quadrangle and eight surrounding quadrangles, CNPS, data as of March 17, 2016;
- *FWS Critical Habitat Mapper for Threatened and Endangered Species*, U.S. Fish and Wildlife Service (USFWS), data as of March 17, 2016;
- *List of Vegetation Alliances and Associations (Natural Communities List),* CDFW, September 2010;
- *List of Special Vascular Plants, Bryophytes, and Lichens,* CDFW, January 2016; and,
- *Special Animals,* CDFW, January 2016.

The results of the literature review with respect to the status and known occurrences of sensitive and special-status biological resources at the site and in the surrounding area are discussed under relevant sections later in this document. Lists generated when searching the CNDDB and CNPS Inventory of Rare and Endangered Plants are provided in **Appendix 2**.

Biological Survey

The biological survey to inventory the resources at the site was conducted by Mr. Jim Anderson, Senior Biologist at Envicom Corporation. The survey was conducted in late winter on February 25, 2016 between the hours of 10:20 a.m. and 3:20 p.m. in warm and clear conditions (mid-70s to low-80s °F) with winds of 0 to 5 m.p.h.

The survey extent included the subject property, which encompassed the proposed limits of grading and potential limits of fuel modification, based on standard Los Angeles County Fire Department (LACFD) requirements. The survey was performed by slowly walking transects across the site and by searching particular areas thoroughly, as necessary. The entire property was accessible.

The survey included a search for rare, threatened, and endangered plant species, special habitats, and sensitive natural communities; casual wildlife observation; and, an evaluation of the importance of the site for wildlife movement.

During the survey an inventory of vascular plant species and vertebrate wildlife species was recorded with all species identified to the taxonomic level necessary to determine their status. Vascular plant species identification relied on Baldwin B. et al. (2012). Wildlife were identified by direct observation, vocalization, or sign (e.g., tracks, scat, or burrows). Wildlife species identification relied upon Reid (2006), Sibley (2009), and Stebbins (2003).

Also during the survey, the native and non-native natural communities and habitats at the site were mapped using high-resolution aerial imagery from May 2015. Several photographs were taken as a record of conditions at the time of the survey.

2.2 JURISDICTIONAL DELINEATION

A jurisdictional delineation to determine the presence and the extent of United States Army Corps of Engineers (USACE) "wetland" and "non-wetland" Waters of the United States, Regional Water Quality

Control Board (RWQCB) Waters of the State, and CDFW jurisdictional streambed and riparian habitat at the project site was conducted by Mr. Anderson on March 10, 2016.

The jurisdictional delineation followed the methods described in the *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Arid West Region, Version 2.0* (September 2008) and definitions and protocols described by the CDFW for identifying and classifying jurisdictional streambed and riparian habitat.

During the field investigation, potential jurisdictional features within the property boundaries were examined for OHWMs, riparian vegetation, and indicators of hydrophytic vegetation, hydric soils, and wetland hydrology. The boundaries of jurisdictional features were geo-referenced using a hand-held Trimble GPS unit to sub-meter accuracy. Jurisdictional culverts were delineated based on field observations and utility plans provided by the project engineer. The connectivity of jurisdictional waters to downstream waterbodies was also assessed.

This delineation was not based on the *Clean Water Rule: Definition of "Waters of the United States"* (August 28, 2015), as the United States Court of Appeals Sixth Circuit has issued an order staying the Clean Water Rule nationwide. At the time of preparation of this document, USACE is not implementing the Clean Water Rule, and is using the 1986 regulations and applicable guidance (those in effect prior to August 28, 2015) in making jurisdictional determinations or taking other actions based on the definition of Waters of the United States.

USACE "Wetland" Waters of the United States

For an area to be classified as "wetland" Waters of the United States under the jurisdictional authority of the USACE, it must exhibit the three (3) criteria of hydrophytic vegetation, hydric soils and wetland hydrology, or must present an atypical or naturally problematic situation where one (1) (or more) of the criteria is not met. Atypical situations are wetlands in which vegetation, soil, or hydrology indicators are absent due to recent human activities or natural events. Naturally problematic wetlands are naturally occurring wetland types that lack indicators of hydrophytic vegetation, hydric soil, or wetland hydrology periodically due to normal seasonal or annual variability, or permanently due to the nature of the soils or plant species on the site.

The presence or absence of hydrophytic vegetation, hydric soils, and wetland hydrology was evaluated at each sample location, or 'sample plot.' Wetland Delineation Data Forms – Arid West Region, Version 2.0 were used to record data. A total of four (4) sample plots were evaluated, including two (2) along the margin of a jurisdictional wetland located at the site's northeastern boundary, and two (2) within an isolated patch of narrowleaf willow (*Salix exigua*) [FACW] and Mexican rush (*Juncus mexicanus*) [FACW] located at the site's northern boundary, the latter of which was determined to be non-jurisdictional. Completed forms for each sample plot are included in **Appendix 3**.

Hydrophytic vegetation

The "dominance test" was used to determine which areas at the site exhibited a predominance of hydrophytic vegetation. To accomplish this, cover estimates were made for each plant species and for each stratum (i.e., trees, shrubs, herbs, and woody vines). The dominant plant species were determined by selecting those species that individually or collectively accounted for more than 50 percent of the total cover of vegetation in each stratum. Additional species comprising 20 percent or more of the total cover in each stratum were also considered dominant species. Strata containing less than 5% absolute cover

were not sampled. The wetland indicator status of each dominant species was derived from the *National Wetland Plant List: 2014 Update of Wetland Ratings* (Lichvar, R.W., et al., 2014). As shown in **Table 1**, this list separates vascular plants into five (5) groups (Obligate Wetland [OBL], Facultative Wetland [FACW], Facultative [FAC], Facultative Upland [FACU], and Obligate Upland [UPL]) based on the frequency of occurrence of the plant in wetland areas. The indicator status of dominant species in the plots determines whether the hydrophytic vegetation criterion for wetland determination is met.

Hydric soils

The second criterion for wetland determination is the presence of hydric soils. Hydric soils are saturated, flooded, or ponded for sufficient duration to develop anaerobic conditions. Anaerobic conditions cause distinctive soil characteristics that are useful indicators for identifying hydric soils, such as accumulation of organic matter, or reduction, translocation, or accumulation of iron and other reducable elements. At each sample plot a soil pit was excavated to examine the soil profile and determine if hydric soil indicators were present. Hydric soil indicators include, but are not limited to, redoximorphic features (concretions, depletion and reduced matrix), gleyed soils, and low chroma. Soils that exhibit one or more hydric soil indicators meet the hydric soils criterion for wetland determination.

Table 1
Wetland Indicator Status of Wetland Plants (Lichvar R.W, et al. 2012)

Wetland Indicator Status	Definition
Obligate Wetland (OBL)	Almost always occur in wetlands. With few exceptions, these plants (herbaceous or woody) are found in standing water or seasonally saturated soils (14 or more consecutive days) near the surface.
Facultative Wetland (FACW)	Usually occur in wetlands, but may occur in non-wetlands. These plants predominately occur with hydric soils, often in geomorphic settings where water saturates the soils or floods the soil surface at least seasonally.
Facultative (FAC)	Occur in wetlands and non-wetlands. These plants can grow in hydric, mesic, or xeric habitats. The occurrence of these plants in different habitats represents responses to a variety of environmental variables other than just hydrology, such as shade tolerance, soil pH, and elevation, and they have a wide tolerance of soil moisture conditions.
Facultative Upland (FACU)	Usually occur in non-wetlands, but may occur in wetlands. These plants predominately occur on drier or more mesic sites in geomorphic settings where water rarely saturates the soils or floods the soil surface seasonally.
Obligate Upland (UPL)	Almost never occur in wetlands. These plants occupy mesic to xeric non-wetland habitats. They almost never occur in standing water or saturated soils. Typical growth forms include herbaceous, shrubs, woody vines, and trees.

Wetland Hydrology

The third criterion for wetland determination is the presence of wetland hydrology. Wetland hydrology indicators are used in combination with indicators of hydric soil and hydrophytic vegetation to determine whether an area is USACE wetland. For an area to be a wetland under jurisdiction of the USACE, it must have a continuing wetland hydrological regime. Wetland hydrology indicators provide evidence that the site has a continuing wetland hydrologic regime and that hydric soils and hydrophytic vegetation are not relicts of a past hydrologic regime. Wetland hydrology indicators include, but are not limited to: direct

observation of surface water or saturated soils; evidence of flooding or ponding such as watermarks, drift deposits, or sediment deposits; and soil conditions or vegetation that indicates soil saturation. However, the presence or absence of wetland hydrology indicators does not necessarily provide a basis for concluding that wetland conditions exist or do not exist at a site. The USACE technical standard for wetland hydrology requires 14 or more consecutive days of flooding or ponding, or a water table 12 inches or less below the soil surface, during the growing season at a minimum frequency of 5 years in 10.

USACE "Non-wetland" Waters of the United States

Streams that do not exhibit hydrophytic vegetation, hydric soils, and wetland hydrology may still be subject to USACE jurisdiction as "non-wetland" Waters of the United States, based on criteria outlined in the memorandum *"Revised Guidance on Clean Water Act Jurisdiction Following the Supreme Court Decision in Rapanos v. U.S. and Carabell v. U.S."* (Environmental Protection Agency (EPA)/USACE, December 2, 2008). The extent of USACE jurisdiction of "non-wetland" Waters of the U.S. is based upon the Ordinary High Water Mark (OHWM), which is defined as the line on the shore established by fluctuations of water and indicated by physical characteristics such as a clear, natural line impressed on the bank, shelving, changes in the character of the soil, destruction of terrestrial vegetation, or the presence of litter and debris. As stated, this delineation is not based on the new Clean Water Rule, as the Rule has been stayed nationwide by the United States Court of Appeals for the Sixth Circuit.

California Department of Fish and Wildlife Jurisdictional Streambed and Riparian Habitat

The extent of CDFW jurisdiction is defined as from the top of bank to the opposite top of bank and, if applicable, outside the stream banks to the canopy edge of riparian vegetation. Measurements from the top of the banks or to the canopy edge of riparian vegetation are typically wider than the OHWM measurement, often substantially so.

3.0 ENVIRONMENTAL SETTING

General Site Condition and Existing Land Use

The project site is mostly vacant and contains no existing buildings but has been disturbed by previous grading and routine discing for fuel modification purposes. There is an inactive and dilapidated baseball field and ancillary facilities as well as a short asphalt access road in the southwest corner of the site. Representative photographs of the project site are provided on **Plate 1.**

Topography

The majority of the project site is relatively flat or gradually sloped. There are some steeper berms near the northern and northeastern boundaries of the property. There is a large concave area in the central portion of the site, which is fenced to protect a large heritage-sized valley oak tree.

Elevation

Elevations range from approximately 865 feet to 880 feet above mean sea level (GoogleEarth, data accessed March 23, 2016).

Geology/Soils

Mapped soil units for the project site include Urban land – Xerothents, fill complex, 0 to 30 percent slopes and Urban land – Cropley, fill complex, 0 to 8 percent slopes (Web Soil Survey, websoilsurvey.nrcs.usda.gov). The site is not rocky and there are no rock outcrops.

Photo 1A – The southeastern portion of the site is shown. View faces southeast.

Photo 1B – The southwestern portion of the site is shown. View faces southwest.

Photo 1C – The western portion of the site is shown. View faces south from the northwestern corner of the site.

Photo 1D – The northeastern portion of the site is shown. View faces northeast.

Photo 1E – A heritage-sized valley oak (*Quercus lobata*) in the center of the site is shown. View faces north.

Photo 1F – A patch of native Mexican rush (*Juncus mexicanus*) growing in the partial shade of pepper trees near the southern boundary of the site is shown.

Representative Photos of Project Site

Climate

Average high/low summer temperatures in August are 96/58°F, average high/low winter temperatures in January are 68/40°F, and precipitation is approximately 18 inches per year (www.intellicast.com). Most of the rainfall occurs in the winter months. The region is currently in a severe drought with rainfall totals far below average levels over the three (3) preceding seasons.

Hydrology

The project site is within the Malibu Creek watershed. Although Lindero Creek previously ran through the site, it is now buried in a 20' open and closed reinforced concrete box culvert that traverses the southern portion of the site from west to east. The culvert flow continues to the east and eventually discharges into Medea Creek. There is also a smaller buried concrete storm drain that runs from south to north into the site before emptying into the 20' concrete box culvert. There is a small storm drain access in the southwestern portion of the site.

There is a small culvert inlet in the south-central portion of the site, which receives runoff from approximately 3.2 acres of the site. There is also another small culvert inlet near the northeastern site boundary, which is adjacent to a flat wetland area where flows from an off-site unnamed tributary to Lindero Creek spread out and pool. The western margin of this wetland area and its western bank extend into the project site.

The aforementioned unnamed tributary to Lindero Creek emerges from a culvert outlet at the toe of the south-facing side-slope of U.S. Highway 101, approximately 50-feet to the east of the project site. It then flows in a southeasterly direction through the northern portion of the Los Angeles County Animal Care Center property to a culvert inlet.

Disturbance History

As stated, the project site is disturbed and modified by prior grading, and much of the site is routinely disced presumably to reduce fuel loads. The entire site appears to have been modified historically.

Surrounding Land Use

The project site is within an urban area and situated along the developed corridor located between Agoura Road and the U.S. 101 Freeway. The project's surroundings consist of the U.S. 101 Freeway to the north, the Los Angeles County Animal Care Center to the east, Agoura Road and Gateway Foursquare Church to the south, and a Bank of America commercial office building to the west.

4.0 BIOLOGICAL RESOURCES

4.1 VEGETATION AND PLANT COMMUNITIES

The vegetation at the project site consists predominately of non-native grass/forb habitats and stands of non-native trees. The non-native grass/forb habitats are subject to routine fuel modification and consist of invasive grasses such as rip-gut brome (*Bromus diandrus*), red brome (*Bromus madritensis* ssp. *rubens*), and foxtail barley (*Hordeum murinum*), and invasive forbs such as black mustard (*Brassica nigra*), Italian thistle (*Carduus pycnocephalus*), red-stemmed filaree (*Erodium cicutarium*), and bur-clover (*Medicago polymorpha*). Representative native herbs found in the grass/forb habitats include fiddleneck (*Amsinckia intermedia*), succulent lupine (*Lupinus succulentus*), and red-maids (*Calandrinia ciliata*). The non-native tree stands, which consist primarily of introduced eucalyptus (*Eucalyptus* spp.) and Peruvian pepper trees

(*Schinus molle*), also contain a few coast live oaks (*Quercus agrifolia*) and sparse native shrubs such as coffee berry (*Fragula californica*), coyote brush (*Baccharis pilularis*), toyon (*Heteromeles arbutifolia*), and chaparral honeysuckle (*Lonicera subspicata* var. *denudata*). There are four (4) patches of native Mexican rush (*Juncus mexicanus*) growing in sunlit openings as well as in partial shade beneath the non-native pepper trees. The canopies of at least two (2) large red willows (*Salix laevigata*) and a large Fremont cottonwood (*Populus fremontii*), which are rooted off-site, extend into the northeastern corner of the property. These trees are part of a patch of riparian woodland habitat located to the east of the northeastern corner of the project site. The riparian habitat is associated with the unnamed tributary to Lindero Creek that flows through the northern portion of the adjacent Los Angeles County Animal Care Center property. There are a few narrowleaf willows (*Salix exigua*) along the property's northern fenceline, which appear to be supported by erosional runoff from the side-slope of U.S. 101, and possibly irrigation (there are sprinker heads in this area, although it is unknown if the sprinklers are used at this time). There is a large fenced-off area in the center of the property that encompasses a very large valley oak tree (*Quercus lobata*) as well as several valley oak seedlings, small coast live oaks, and other native and non-native trees and shrubs, such as European olive (*Olea europaea*) and native laurel sumac (*Malosma laurina*).

The plant communities at the project site are provided in **Table 2** and on **Figure 2**, **Vegetation Map**.

Table 2
Plant Communities at Project Site

Habitat Class	Plant Community*	Conservation Status Rank	On-Site Acreage
Native Oak Tree Stands	Valley Oak and Coast Live Oak Trees (*Quercus lobata, Q. agrifolia*)	Not ranked	0.19
Non-Native Tree Stands	Eucalyptus Semi-Natural Woodland Stands (*Eucalyptus* spp.) [79.100.00]	Not ranked	1.67
	Pepper Tree Semi-Natural Woodland Stands (*Schinus molle*) [79.200.02]		
Riparian Woodland	**Red Willow Woodland Alliance (*Salix laevigata*) [61.205.00]**	G3S3	0.06
Native Herbaceous	Mexican Rush Herbaceous Alliance (*Juncus mexicanus*) [45.562.02]	G5S4	0.12
Non-Native Herbaceous	Non-Native Grasses and Forbs	Not ranked	3.19
Other Landcover	Asphalt	n/a	0.06
		Total Acreage	**5.29**

* Numbers in brackets are unique codes for each plant community, as provided in *List of Vegetation Alliances and Associations* (*Natural Communities List*) (CDFW, September 2010). Plant communities in bold type are CDFW Natural Communities of Special Concern (Rare or Sensitive Plant Communities).

Global Ranking
The global rank (G-rank) is a reflection of the overall status of a natural community throughout its global range. Both Global and State ranks represent a letter+number score that reflects a combination of Rarity, Threat and Trend factors, with weighting being heavier on Rarity than the other two. "?"- Denotes an inexact numeric rank due to insufficient samples over the full, expected range of the vegetation type, but existing information points to the rank given.

Habitat Class	Plant Community*	Conservation Status Rank	On-Site Acreage

G1 - Critically Imperiled—At very high risk of extinction due to extreme rarity (often 5 or fewer occurrences), very steep declines, or other factors.
G2 - Imperiled—At high risk of extinction due to very restricted range, very few occurrences (often 20 or fewer), steep declines, or other factors.
G3 - Vulnerable—At moderate risk of extinction due to a restricted range, relatively few occurrences (often 80 or fewer), recent and widespread declines, or other factors.
G4 - Apparently Secure—Uncommon but not rare; some cause for long-term concern due to declines or other factors.
G5 - Secure—Common; widespread and abundant.

State Ranking
The state rank (S-rank) is assigned much the same way as the global rank, but state ranks refer to the imperilment status only within California's state boundaries.

S1 - Critically Imperiled—Critically imperiled in the state because of extreme rarity (often 5 or fewer occurrences) or because of factor(s) such as very steep declines making it especially vulnerable to extirpation from the state.
S2 - Imperiled—Imperiled in the state because of rarity due to very restricted range, very few occurrences (often 20 or fewer), steep declines, or other factors making it very vulnerable to extirpation from the state.
S3 - Vulnerable—Vulnerable in the state due to a restricted range, relatively few occurrences (often 80 or fewer), recent and widespread declines, or other factors making it vulnerable to extirpation from the state.
S4 - Apparently Secure—Uncommon but not rare in the state; some cause for long-term concern due to declines or other factors.
S5 - Secure—Common, widespread, and abundant in the state.

The individual oak trees or small groups of oak trees at the project site are not oak woodlands, but rather are isolated trees or inclusions within surrounding plant communities. There are no oak woodlands at the project site. Oak trees (and scrub oaks) meeting certain size requirements are protected pursuant to the City of Agoura Hills oak tree ordinance. Although the presence of oak trees was confirmed during field surveys conducted to prepare this report, documentation of the location and condition of oak trees that would require protection pursuant to the City's oak protection ordinance was outside the scope of this study.

Natural Communities of Special Concern

Natural Communities of Special Concern are communities that are of limited distribution statewide or within a county or region and are often vulnerable to environmental effects of projects. They are also referred to as rare or sensitive plant communities. The most current version of CDFW's *List of Vegetation Alliances and Associations (Natural Communities List)*[1] (CDFW, September 2010) indicates which natural communities are considered to be Natural Communities of Special Concern. This list is based on *A Manual of California Vegetation, 2nd Edition*, which is the California expression of the National Vegetation Classification. Natural communities are assigned a conservation status rank (also known as "rarity rank"), and natural communities with global or state conservation status ranks of G1 through G3, or S1 through S3, respectively, are rare or sensitive. Natural Communities of Special

[1] https://www.dfg.ca.gov/biogeodata/vegcamp/natural_comm_list.asp. The rare natural communities are asterisked on this list.

Legend

Property Boundary (APN #206-1003-027) and Fuel Modification Limits

Limits of Grading

Vegetation

- OT — Native Oak Tree Stands
  Valley Oak, Coast Live Oak
- NT — Non-Native Tree Stands [1]
  Peruvian pepper, Eucalyptus, Tree-of-Heaven, & others
- MR — Native Mexican Rush Meadow
  Juncus mexicanus
- NG — Non-Native Grasses and Forbs
  Foxtail Barley, Rip-Gut Brome, Black Mustard, Italian Thistle, & others
- RW — Red Willow Woodland *
  Red Willow, Fremont Cottonwood, Arroyo Willow
- Narrow-leaf Willow Shrubs [2]
  Salix exigua

Other Landcover

- A — Asphalt

* CDFW Sensitive Plant Community

1 The Non-Native Tree Stands also contain a few scattered native oak trees, some of which are protected by the City of Agoura Hills Oak Tree Ordinance. See the project's oak tree report for a comprehensive study of the oak trees at the site.

2 The number in parenthesis represents the number of individual narrow-leaf willows at that location.

Vegetation Map

0 60 Feet

FIGURE 2

Concern require special consideration and protection pursuant to the California Environmental Quality Act, specifically based on CEQA Thresholds Guidelines Appendix G Section 1V.b.[2]

The natural communities at the site were mapped in the field and then correlated with CDFW's *Natural Communities List* (see Figure 2). Natural communities are classified based on plant species composition and abundance, as well as underlying abiotic conditions, such as slope, aspect, or soil type. The acreages and conservation status ranks of the naturally occurring native plant communities at the project site are shown in Table 2. The other mapped communities are not ranked, but are clearly not rare or sensitive due to their non-native condition.

The only sensitive plant community at the project site is the Red Willow Woodland Alliance (*Salix laevigata*), which as stated extends into the northeastern corner of the project site (See Figure 2). The Red Willow Woodland Alliance receives a G3S3 rank, indicating it is at moderate risk of extinction globally and vulnerable in the state due to a restricted range, relatively few popluations, recent and widespread declines, or other factors.

Natural Communities Tracked by CNDDB

The CNDDB has also tracked Natural Communities (NCs) of conservation significance (also referred to as Holland Types), although no new occurrences of NCs have been added to the CNDDB since the mid-1990s. Based on a review of the CNDDB using the Rarefind 5 application, a total of 13 NCs have been reported by other observers in the Thousand Oaks Quadrangle area, or within adjacent quadrangles, which are as follows:

- California Walnut Woodland;
- Cismontane Alkali Marsh;
- Southern California Coastal Lagoon;
- Southern California Steelhead Stream;
- Southern Coast Live Oak Riparian Forest;
- Southern Coastal Salt Marsh;
- Southern Mixed Riparian Forest;
- Southern Riparian Forest;
- Southern Riparian Scrub;
- Southern Sycamore Alder Riparian Woodland;
- Southern Willow Scrub;
- Valley Needlegrass Grassland; and
- Valley Oak Woodland.

None of these CNDDB-tracked Natural Communities is reported for the project site or in the vicinity of the project site.

[2] CEQA Guidelines Appendix G Biological Resources IV.b reads as follows: "would the project have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local of resgional plans, policies, regulations or by the Californai Department of Fish and Game or US Fish and Wildlife Service?"

4.2 PLANT SPECIES

4.2.1 Plant Species Observed

A total of 67 vascular plant taxa were identified during the surveys of the project site, including one (1) conifer and 66 flowering plants, consisting of 58 dicots and 8 monocots. A total of 30 of the plants observed were naturally occurring native species and 37 were non-native or introduced, representing low diversity of native species and a relatively high proportion of non-natives. A complete list of the vascular plant species observed within the survey area is provided in **Appendix 4**. With a few exceptions, ornamental species at the site are not included in this list.

4.2.2 Special-Status Plant Species

Special-status plant species either have unique biological significance, limited distribution, restricted habitat requirements, particular susceptibility to human disturbance, or a combination of these factors. For the purposes of this report, special-status plant species are those plants listed, proposed for listing, or candidates for listing as Threatened or Endangered by the U.S. Fish and Wildlife Service (USFWS) under the Federal Endangered Species Act (FESA); those listed or proposed for listing as Rare, Threatened, or Endangered by the CDFW under the California Endangered Species Act (CESA); and plants on the CNPS Inventory of Rare and Endangered Vascular Plants with a California Rare Plant Rank (CRPR) 1A (which includes plants presumed extirpated in California and either rare or extinct elsewhere), CRPR 1B (which includes plants considered rare, threatened, or endangered in California and elsewhere), CRPR 2A (plants presumed extirpated in California, but common elsewhere), CRPR 2B (plants considered rare, threatened, or endangered in California, but more common elsewhere), and CRPR 3 (a review list for plants for which there is inadequate information to assign them to one of the other lists or to reject them).

The term "special-status" is also used herein to denote species on the CNPS Inventory with a CRPR 4 that meet criteria to be considered locally significant. Plants with a CRPR of 4 are not rare, but rather are included on a "watch list" of species with limited distribution. However, while plants in this category cannot be called "rare" from a statewide perspective, and very few, if any, are eligible for state listing, many of them are significant locally. For this reason, CNPS strongly recommends that CRPR 4 plants be evaluated for consideration during preparation of environmental documents, which may be particularly appropriate for the type locality of a CRPR 4 plant; populations at the periphery of a species' range; areas where the taxon is especially uncommon; areas where the taxon has sustained heavy losses; or populations exhibiting unusual morphology or occurring on unusual substrates.

The status codes for special-status plants are described in **Table 3**.

Table 3
Status Codes for Special-Status Plants

FEDERALLY PROTECTED SPECIES	
FE (Federal Endangered)	A species that is in danger of extinction throughout all or a significant portion of its range.
FT (Federal Threatened)	A species that is likely to become Endangered in the foreseeable future.
FC (Federal Candidate)	A species for which USFWS has sufficient information on its biological status and threats to propose it as Endangered or Threatened under the Endangered Species Act (ESA), but for which development of a proposed listing regulation is precluded by other higher priority listing activities.
STATE PROTECTED SPECIES	
CE (California Endangered)	A native species or subspecies which is in serious danger of becoming extinct throughout all, or a significant portion, of its range due to one or more causes, including loss of habitat, change in habitat, overexploitation, predation, competition, or disease.
CT (California Threatened)	A native species or subspecies that, although not presently threatened with extinction, is likely to become an Endangered species in the foreseeable future in the absence of the special protection and management efforts required by this chapter. Any animal determined by the commission as "Rare" on or before January 1, 1985, is a "Threatened species."
CR (California Rare)	A species, subspecies, or variety of plant is rare under the Native Plant Protection Act when, although not presently threatened with extinction, it is in such small numbers throughout its range that it may become Endangered if its present environment worsens. Animals are no longer listed as Rare; all animals listed as Rare before 1985 have been listed as threatened.
CALIFORNIA RARE PLANT RANK (CRPR) (formerly CNPS Lists)	
CRPR 1A	Plants presumed extirpated in California and either rare or extinct elsewhere.
CRPR 1B	Plants rare, threatened, or endangered in California and elsewhere.
CRPR 2A	Plants presumed extirpated in California, but more common elsewhere.
CRPR 2B	Plants rare, threatened, or endangered in California, but more common elsewhere.
CRPR 3	A review list for plants for which there is inadequate information to assign them to one of the other lists or to reject them.
CRPR 4	A watch list for plants that are of limited distribution in California.
CALIFORNIA NATIVE PLANT SOCIETY (CNPS) THREAT RANK	
The CNPS Threat Rank is an extension added onto the California Rare Plant Rank and designates the level of endangerment, as follows: • 0.1-Seriously threatened in California (over 80% of occurrences threatened / high degree and immediacy of threat) • 0.2-Fairly threatened in California (20-80% occurrences threatened / moderate degree and immediacy of threat) • 0.3-Not very threatened in California (<20% of occurrences threatened / low degree and immediacy of threat or no current threats known)	

Survey Results

No special-status plant species have been found at the project site, including during recent surveys conducted on February 25, 2016 by Envicom Corporation or during prior surveys conducted on February 21 and March 1, 2005 by Christopher A. Joseph & Associates (Christopher A. Joseph & Associates, August 9, 2005). Also, no CRPR 4 species have been found at the site. It should be noted that the

surveys were not conducted at the optimal time for detecting and identifying many of the rare plants that occur in the region, which for most rare species is springtime.

Potential for Occurrence Analysis – Special-Status Plant Species

An evaluation of the potential for occurrence at the site of special-status plant species known to occur in the region was undertaken through a search of the *CNPS Online Inventory of Rare and Endangered Plants, 8th ed.* (CNPS 2016) and the California Department of Fish and Wildlife's Natural Diversity Data Base (CNDDB) Rarefind 5 application (CDFW 2016) for sensitive "elements" reported within the Thousand Oaks quadrangle, and eight (8) others that surround it, namely Calabasas, Simi, Santa Susana, Moorpark, Triunfo Pass, Newbury Park, Point Dume, and Malibu Beach. CRPR 4 species were not included in the analysis. A number of special-status plant species not reported to the CNDDB that occur in the Santa Monica Mountains were also considered in the analysis, which is presented as **Appendix 5**.

All of the special-status plant species known to occur in the region are precluded from occurring at the site due to its highly disturbed and modified condition, lack of suitable habitat, or because the site is outside the known range and distribution of the species.

4.3 WILDLIFE SPECIES

4.3.1 Wildlife Observed

Wildlife species observed during biological surveys of the site by Envicom Corporation in 2016 and Christopher A. Joseph and Associates in 2005 were primarily species that are common or relatively common to the region. A list of the species observed at the site during the February 25, 2016 survey is provided as **Appendix 6**. The species observed represent only a few of the wildlife species that can be expected to utilize the disturbed and non-native habitats at the site for cover, foraging, and/or reproduction. Furthermore, in general, species observed include those that are more easily detected during daytime surveys. Some species (e.g., birds and small mammals) may reproduce at the site, and a range of larger or mobile species can be expected to utilize the site's resources occasionally, such as foraging raptors, and medium to large-sized mammals, such as for example coyotes and skunks. Bird species observed during the survey consisted primarily of winter and year-round residents, and potential migrants. Several common bird species especially those adapted to urban environments and non-native habitats can be expected to nest at the site in any given year.

4.3.2 Special-Status Wildlife Species

For the purposes of this report, special-status wildlife species are those species that are listed, proposed for listing, or that meet the criteria for listing as Endangered or Threatened under the FESA or CESA; and those that are listed on the CDFW's Special Animals list with a designation of SSC (California Species of Special Concern) or CFP (California Fully Protected). Mandatory special consideration or protection of these species is required pursuant to the Federal Endangered Species Act, the State Endangered Species Act, and/or the California Environmental Quality Act (CEQA). The status codes for special-status wildlife are described in **Table 4**.

Table 4
Status Codes for Special-Status Wildlife

FEDERALLY PROTECTED SPECIES	
FE (Federal Endangered)	A species that is in danger of extinction throughout all or a significant portion of its range.
FT (Federal Threatened)	A species that is likely to become endangered in the foreseeable future.
FC (Federal Candidate)	A species for which USFWS has sufficient information on its biological status and threats to propose it as endangered or threatened under the Endangered Species Act (ESA), but for which development of a proposed listing regulation is precluded by other higher priority listing activities.
FSC (Federal Species of Concern)	A species under consideration for listing, for which there is insufficient information to support listing at this time. These species may or may not be listed in the future, and many of these species were formerly recognized as "Category-2 Candidate" species.
STATE PROTECTED SPECIES	
CE (California Endangered)	A native species or subspecies which is in serious danger of becoming extinct throughout all, or a significant portion, of its range due to one or more causes, including loss of habitat, change in habitat, overexploitation, predation, competition, or disease.
CT (California Threatened)	A native species or subspecies that, although not presently threatened with extinction, is likely to become an endangered species in the foreseeable future in the absence of the special protection and management efforts required by this chapter. Any animal determined by the commission as "rare" on or before January 1, 1985, is a "threatened species."
SSC (California Species of Special Concern)	Animals that are not listed under the California Endangered Species Act, but which nonetheless 1) are declining at a rate that could result in listing, or 2) historically occurred in low numbers and known threats to their persistence currently exist.
CFP (California Fully Protected)	This designation originated from the State's initial effort in the 1960's to identify and provide additional protection to those animals that were rare or faced possible extinction. Lists were created for fish, mammals, amphibians, reptiles, and birds. Most fully protected species have also been listed as threatened or endangered species under the more recent endangered species laws and regulations. California Fully Protected species may not be taken or possessed at any time and no licenses or permits may be issued for their take except for collecting these species for necessary scientific research and relocation of the bird species for the protection of livestock.
SA (Special Animal)	"SA" is used herein if the animal is included on the CDFW's Special Animals list but does not fall under any of the categories listed above. In general, special protection of these species is not mandatory under CEQA, although CDFW considers these species to be among those of greatest conversation need.

Survey Results

No wildlife species that are designated or are candidates for listing as Threatened or Endangered under State or Federal law, or species that are designated as California Fully Protected or Species of Special

Concern under State law or regulations were observed during surveys of the site by Envicom Corporation on February 25 and March 10, 2016 or during surveys by Christopher A. Joseph & Associates in 2005. (Christopher A. Joseph & Associates, August 9, 2005).

Four (4) bird species considered to be "Special Animals" were identified at the project site by direct observation, vocalization, or sign, including Allen's hummingbird (*Selasphorus sasin*), Nuttall's woodpecker (*Picoides nuttallii*), oak titmouse (*Baeolophus inornatus*), and red-breasted sapsucker (*Sphyrapicus ruber*). Special protection of these species is not mandatory under CEQA, although CDFW considers these species to be among those of greatest conservation need. All of these species (as well as nearly all other species of birds) are protected when nesting by the Migratory Bird Treaty Act and California Fish and Game Code.

Potential for Occurrence – Special-Status Wildlife Species

A few special-status wildlife species that were not observed during the surveys have potential to occur at the project site and in the vicinity of the site, even if in some cases only infrequently, in transit, or on a temporary basis. An analysis of the potential for occurrence of special-status wildlife at the project site is presented in **Appendix 7**, which includes the species' protected status, primary habitat associations, and an assessment of their potential for occurrence (observed, potentially present, presumed absent, or absent). The potential for occurrence was undertaken through research of the CDFW Natural Diversity Database (CDFW 2016) using the Rarefind 5 application for special-status "elements" on the USGS 7.5' Thousand Oaks quadrangle and eight (8) adjacent quadrangles. The potential for occurrence analysis provides a speculative assessment of the potential for the occurrence of special-status animals on the basis of their known distribution and habitat requirements. The following special-status animals, including five (5) birds, and four (4) mammals, were determined to have at least some potential to occur at least temporarily at the project site:

- Loggerhead shrike (*Lanius ludovicianus*) [SSC]
- Northern harrier (*Circus cyaneus*) [SSC]
- Vaux's swift (*Chaetura vauxi*) [SSC]
- White-tailed kite (*Elanus leucurus*) [CFP]
- Yellow warbler (*Setophaga petechia brewsteri*) [SSC]
- Big free-tailed bat (*Nyctinomops macrotis*) [SSC]
- Pallid bat (*Antrozous pallidus*) [SSC]
- Western mastiff bat (*Eumops perotis californicus*) [SSC]
- Western red bat (*Lasiurus blossevillii*) [SSC]

The potential use of the project site by special-status wildlife species is limited to a few species of birds and mammals listed as California Fully Protected or Species of Special Concern by the State of California. No species listed under the Federal or the California Endangered Species Acts have potential to occur at the site. Most of special-status wildlife species with potential to occur on-site likely would occur only rarely or occasionally, and with low probability due to the site's urban location and non-native condition. These include species that may occasionally forage over and/or roost temporarily at the site, such as the northern harrier, Vaux's swift, white-tailed kite, yellow warbler, and the bat species. The potential for occurrence of some of the species in this category is unlikely, but they have not been excluded because their temporary presence at the site cannot be entirely discounted. Although not expected, the loggerhead shrike may occur at the site as a year-round resident individual, using a portion

of the site to meet its life history requirements for refuge, breeding and/or foraging. However, this species would probably have been observed during field surveys, if present. For additional information, see Appendix 7.

4.4 WILDLIFE MOVEMENT

Wildlife must to be able to access habitat for water, foraging, breeding, and cover. Examples of barriers or impediments to access include housing and other urban development, roads, fencing, unsuitable habitat, or open areas with little vegetative cover. Habitat linkages are physical connections that allow wildlife to move between areas of suitable habitat in both undisturbed and fragmented landscapes. These can be critical at both the local and regional level. Habitat linkages are necessary not only to access essential resources, but for dispersal and migration, to ensure the mixing of genes between populations, and so wildlife can respond and adapt to environmental stress, and thus are necessary to maintain healthy ecological and evolutionary processes. The term wildlife corridor typically refers to areas of open space of sufficient width to permit the movement or larger, mobile species to move from one major open space region to another. Regional habitat linkages are larger corridors or regions of connectivity that are important for movement of multiple species and maintenance of ecological processes at a regional scale. Wildlife crossings are generally small, narrow areas allowing wildlife to pass through an obstacle or barrier, such as a roadway to reach another patch of habitat. Wildlife crossings include culverts, drainage pipes, underpasses, tunnels, and, more recently, crossings created specifically for wildlife movement over highways.

Based on a review of the following documents the project site is not within an area that has been identified as important to wildlife movement, such as a regional-scale habitat linkage, a wildlife movement corridor, or a wildlife crossing:

- *City of Agoura Hills General Plan* (March 2010).
- *Santa Monica Mountains National Recreation Area Land Protection Plan* (National Park Service, March 1998).
- *South Coast Missing Linkages Project: A Linkage Design for the Santa Monica Mountains-Sierra Madre Connection* (Penrod, K. et. al., 2006).
- *California Essential Connectivity Project: A Strategy for Conserving a Connected California* (February 2010).

The potential importance of the project site to wildlife movement was also evaluated both in the field and by reviewing recent aerial photographs of the site and the surrounding area.

The project site although undeveloped is surrounded by commercial development, highways, and major roads, and is situated along the developed corridor between Agoura Road and the U.S. 101 Highway. Therefore, development of the project would not fragment natural habitat. The off-site tributary to Lindero Creek that runs near the northeastern corner of the site flows through two (2) small pipe culverts beneath the U.S. 101 Highway. Small or medium-sized animals may be able to pass through these culverts when flows are absent, or minimal. Therefore, these culverts may facilitate the movement of some species between remnant undeveloped habitats north of the highway and the natural habitats of Ladyface Mountain (via the project site and other nearby undeveloped properties along Agoura Road). However, the stream may flow year-round due to nuisance flows from upstream residential developments, although this has not been confirmed. Although the culverts are off-site and would not be modified by the project, development of the project would reduce the available undeveloped habitat in the vicinity of

these culverts, and the undeveloped project site is likely used by wildlife moving between these areas. These culverts however are not anticipated to be a particularly important wildlife crossing, due in part to the anticipated permanent or nearly permanent flows of water, which would be an impediment to many wildlife species, and also because they do not maintain a connection between large areas of natural habitat or open space. Rather, they provide a connection to a remnant area of habitat north of the highway that is surrounded by dense urban development.

Some animals may also move through the project site to access the off-site reach of the stream located near the project site's northeastern corner, as a source of water.

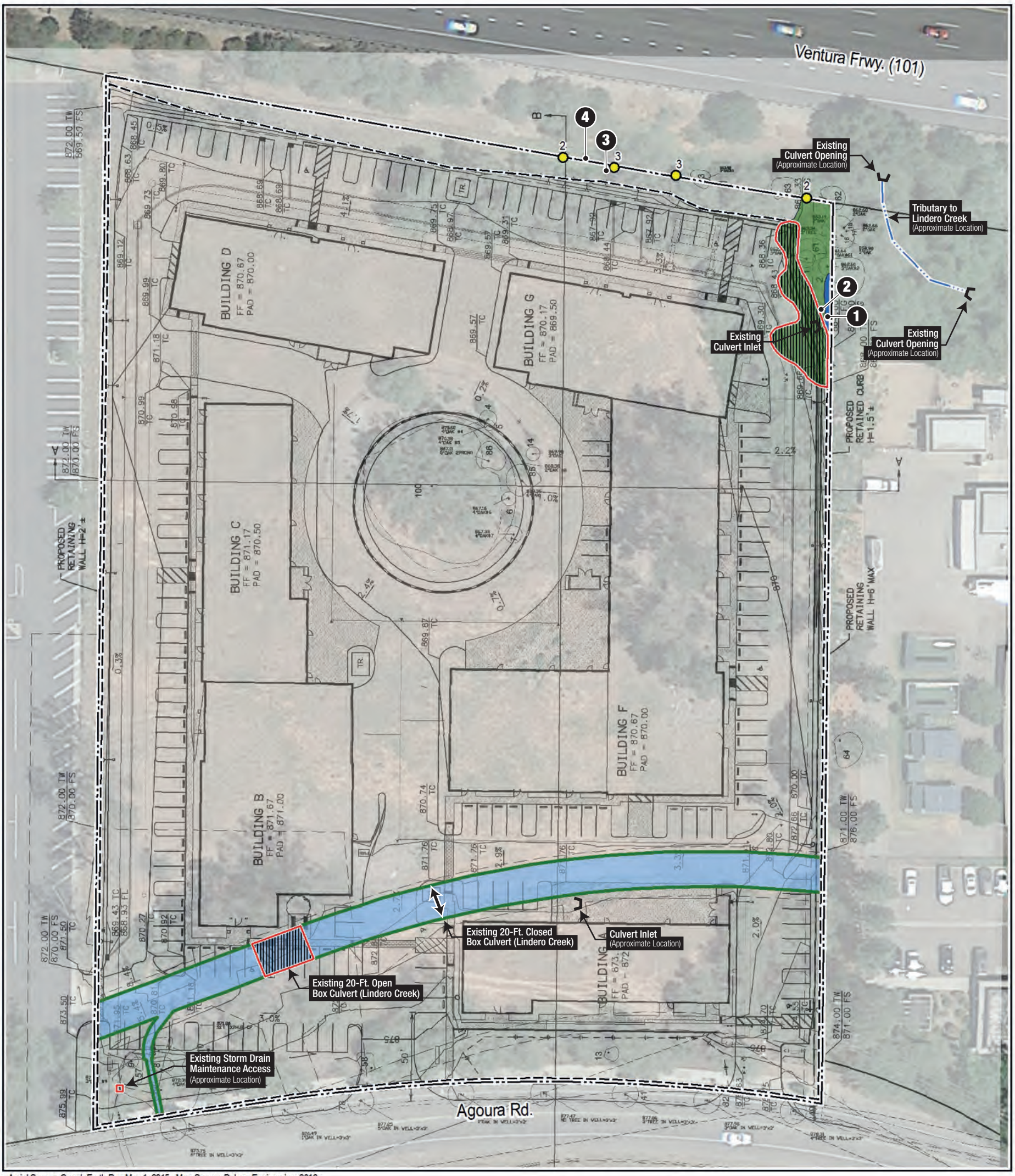
5.0 JURISDICTIONAL AREAS

The jurisdictional areas at the project site include a stream bank, a stream wetland, and a patch of riparian habitat in the northeastern corner of the site. Other jurisdictional areas include Lindero Creek, which passes from west to east through the site in a buried open and closed 20-foot wide concrete box culvert. There is also a buried jurisdictional lateral storm drain, which discharges to the 20' closed box culvert. A map of the jurisdictional areas at the site is provided as **Figure 3, Jurisdictional Delineation Map**. Photos relevant to the jurisdictional delineation are provided on **Plate 2** and **Plate 3**, and wetland determination data forms are provided in Appendix 3.

The 20' box culvert (Lindero Creek) and the lateral storm drain are entirely concrete-lined and contain no wetlands and support no riparian habitat. The 20' box culvert and the lateral storm drain are under jurisdiction of USACE as **"**non-wetland**"** Waters of the U.S. These facilities are also under the jurisdiction of CDFW.

The stream bank, stream wetland, and patch of riparian habitat in the northeastern corner of the site are associated with an unnamed tributary to Lindero Creek. The western margin of the tributary extends into the site. The tributary is an urban stream that is highly modified by prior landform alterations and development. It originates north of U.S. 101 and flows south beneath the U.S. 101 in two (2) pipe culverts to the northern portion of the County of Los Angeles Animal Care Center property, which is directly east of the project site. The channel widens substantially at this location due to the topography of the area. The tributary then flows in a southeasterly direction to a closed concrete box culvert before discharging at an off-site location to the subterranean concrete lined reach of Lindero Creek. The tributary is a non-navigable tributary that is connected via Lindero Creek, Medea Creek, Malibu Creek, and Malibu Lagoon to downstream traditional navigable waters (Pacific Ocean).

A stream wetland has formed where the tributary spreads out and pools, and the western margin of the wetland extends into the northeastern boundary of the site. The wetland appears to be flooded regularly, and the tributary may flow year-round, at least intermittently, due to nuisance water from upstream development. There is a small on-site culvert inlet at the western margin of the wetland. The tributary supports a relatively small patch of jurisdictional riparian willow woodland, which contains large red willows (*Salix laevigata*) [FACW] and a single large Fremont cottonwood (*Populus fremontii*) [FAC], as well as some smaller red willows and arroyo willows (*Salix lasiolepis*), but otherwise not much understory vegetation. The canopies of the large willows and the cottonwood tree extend into the northeastern corner of the project site. The trunks of the trees are rooted off-site.



Aerial Source: GoogleEarth Pro, May 1, 2015. Map Source: Delane Engineering, 2016.

Legend

- Property Boundary (APN #206-1003-027) and Fuel Modification Limits
- Limits of Grading
- Test Pits
- Narrow-leaf Willow Shrubs (*Salix exigua*) [1]

Jurisdictional Delineation		On-Site (Acres / LnFt.)	Impacted (Acres / LnFt.)
CDFW Jurisdiction	CDFW Jurisdiction	0.059 / 110'	0.036 / 97'
	Wetland Waters of the U.S.	0.003 / 33'	0.000 / 0'
	Non-Wetland Waters of the U.S.	0.203 / 491'	0.014 / 30'

1 The number in parenthesis represents the number of individual narrow-leaf willows at that location.

Jurisdictional Delineation Map

FEET 0 30 60

FIGURE 3

Photo 2A – Lindero Creek flows in a closed and an open concrete box culvert beneath the site. The open section of Lindero Creek in the southwestern portion of the site is shown.

Photo 2B – The jurisdictional stream and riparian habitat located near the northeastern corner of the site is shown. The western margin of this stream wetland and the canopies of riparian willows and a cottonwood extend into the site.

Photo 2C – This small on-site culvert inlet discharges to the jurisdictional stream wetland located near the northeastern site boundary.

Photo 2D – Test Pit 1 is shown.

Photo 2E – Soils in Test Pit 1 met the hydric soil indicator F3 Depleted Matrix. A soil sample taken from Test Pit 1 is shown.

Photo 2F – Test Pit 2 is shown.

Photo 3A – Sample Plot 3 is shown, which evaluated a patch of Mexican rush (*Juncus mexicanus*) [FACW] and narrowleaf willow (*Salix exigua*) [FACW] located at the northern site boundary. This area receives runoff from the side-slope of US 101, and it may also be irrigated, but it did not meet three-parameter wetland criteria.

Photo 3B – Test Pit 3 is shown.

Photo 3C – Erosional features on the south facing side-slope of US 101 are shown. Runoff from this slope drains to a topographically low area along the northern property boundary, resulting is mesic but not wetland conditions.

Photo 3D – Sample Plot 4 is shown, which evaluated a patch of Italian thistle (*Carduus pycnocephalus*) [UPL], black mustard (*Brassica nigra*) [UPL], and red brome (*Bromus madritensis*) [UPL] and narrowleaf willow (*Salix exigua*) [FACW]. This area receives some runoff from the side-slope of US 101, and it may also be irrigated, but it does not meet three-parameter wetland criteria.

Photo 3E – Test Pit 4 is shown.

Photo 3F – A tributary to Lindero Creek located east of the site flows beneath US 101 in the culverts shown in this photo. When flows are absent, or minimal, small or medium-sized animals could use these culverts to pass through the US 101 corridor.

The stream wetland meets the three (3) criteria of hydrophytic vegetation, hydric soils and wetland hydrology to be considered "wetland" Waters of the U.S., which was determined by evaluating two (2) sample plots (Sample Plots 1 & 2) along the western margin of the wetland. The predominance of hydrophytic vegetation parameter was met at both sample plots due to the presence of dominant red willow [FACW] and Fremont cottonwood [FAC]. The test pit at Sample Plot 1 was excavated just west of a damaged chain link fence at the margin of the flooded and saturated area. Soils in the test pit met the Depleted Below Dark Surface and the Depleted Matrix indicators for hydric soils. Several wetland hydrology indicators were also met at this location, the most obvious being the presence of surface water and saturated soils. The test pit for Sample Plot 2 was excavated at the toe of the slope that is adjacent to the flooded and saturated area. The upper portion of the soil profile was upland in characteristics, but due to a high water table the profile also met the Depleted Below Dark Surface and the Depleted Matrix indicators for hydric soils at depths below 8 inches. Wetland hydrology indicators observed at this location included a high water table and saturated soils, which were observed in the test pit. The OHWM on the lower western bank of the stream is evident as a break in the slope and a change in soil characteristics.

A topographically low area located along the site's northern boundary between the off-site side-slope of U.S. 101 and an on-site berm was also evaluated to determine if the three-parameter wetland criteria were met. It appears that storm water runoff from the adjacent highway side-slope accumulates temporarily at some locations within this low area, and the runoff provides sufficient moisture to support a small number of narrowleaf willow (*Salix exigua*) [FACW]. Two (2) sample plots were evaluated (Sample Plots 3 & 4), which did not meet the three-parameter criteria necessary to be considered "wetland" Waters of the United States. This area may also be irrigated as sprinklers were found along the northern fenceline, although it is unknown if the sprinklers are in use at this time. Regardless, the mesic conditions in this area are man-induced due to runoff from modified slopes and/or irrigation.

Both Sample Plot 3 and Sample Plot 4 focused on the small patches of narrowleaf willow [FACW] and/or Mexican rush (*Juncus mexicanus*) [FACW] occurring along the northern fenceline, but both plots failed to meet the predominance of hydrophytic vegetation indicator due to the presence of several upland species. Soils in test pits at both plots met the Redox Dark Surface indicator for hydric soils. The redoximorphic features found in the soils provided evidence of potential wetland hydrology, but other than the redox and some sandy erosional deposits from the adjacent highway side-slope there was no indication that water pools or that much water flows through these areas. A site visit was conducted on March 11, 2016 following an approximate 0.5-inch rain event earlier that same day, and no standing water was found within the topographically low area.

There is no evidence of a drainage or an OHWM along the northern site boundary. Despite prior reports from 2005 of a drainage in this area, we consider this to be a mesic area influenced by runoff from adjacent side-slopes, but it is not a jurisdictional wetland or a jurisdictional tributary to downstream traditional navigable waters.

In summary, the flooded and saturated area inside the northeastern site boundary qualifies as USACE "wetland" Waters of the U.S. Also, the western bank of the jurisdictional tributary to Lindero Creek, which is partially within the project site, and the riparian woodland that extends into the northeastern corner of the project site, are under CDFW jurisdiction. The topographically low area along the northern boundary of the site failed to meet all three criteria necessary for determination as "wetland" Waters of the U.S., and furthermore does not meet criteria to be considered a jurisdictional drainage. The concrete

box culverts including Lindero Creek and the lateral storm drain to Lindero Creek are under jurisdiction of USACE as "non-wetland" Waters of the U.S., and they are under the jurisdiction of CDFW.

The acreages and linear footage of USACE and CDFW jurisdiction at the project site is shown on **Table 5**.

Table 5
Delineated USACE and CDFW Jurisdictional Areas at Project Site

	USACE Waters of U.S. (Acres / Linear Ft)		CDFW Jurisdiction (Acres / Linear Ft)
	Wetlands	Non-wetlands	
Tributary to Lindero Creek	0.003 / 33	0 / 0	0.062 / 110
Box Culvert (Lindero Creek)	0.00 / 00	0.198 / 430	0.198 / 430
Storm Drain Lateral	0.00 / 00	0.005 / 61	0.005 / 61
Total	**0.003 / 33**	**0.203 / 491**	**0.265 / 601**

Areas below the OHWM that qualify as USACE "wetland" and "non-wetland" Waters of the U.S. are also under the jurisdiction of CDFW. Therefore, the acreages under CDFW jurisdiction shown on Table 5 include areas that are coincident with USACE jurisdiction as well as areas outside the OHWM that are soley under the jurisdictional of CDFW.

6.0 IMPACTS ANALYSIS

This impact analysis relies on a vesting tentative tract map, grading plan, and utility plan provided by Delane Engineering Inc. in April 2016. The Agoura Landmark Vesting Tentative Tract Map No. 73890 is attached as Appendix 1. The proposed limits of grading and fuel modification are shown overlaid on the site's biological resources on Figures 2 and 3. The limits of grading and fuel modification are inclusive of all proposed ground and vegetation disturbance associated with development of the project. This analysis assumes that fuel modification would not be conducted off-site.

The project would permanently remove or modify approximately 4.86 acres of disturbed non-native habitat and approximately 0.37 acres of disturbed native habitat. The project would impact 0.036 acres of sensitive Red Willow Woodland riparian habitat under the jurisdiction of CDFW in the northeastern corner of the site, but would avoid impacting the western margin of a stream wetland located just inside the northeastern site boundary. The project would also impact 0.014 acres (30 linear feet) of jurisdictional "non-wetland" Waters of the U.S., which is also under CDFW jurisdiction, by covering the open section of the Lindero Creek concrete box culvert with a concrete deck. A small maintenance access located in the southwestern part of the site and two (2) small culvert inlets would also be closed as part of the project. The project has low potential to impact potentially occurring special-status wildlife species and high potential to impact nesting birds, unless mitigation is incorporated. The site contains valley oak (*Quercus lobata*) and coast live oak trees (*Quercus agrifolia*), some of which meet size requirements to be protected by the City's oak tree ordinance. However, preparation of an impact analysis for oak trees protected by the City's ordinance was outside the scope of this report. See the project's oak tree report for an analysis of impacts to oak trees at the site.

A spring botanical survey was not conducted during preparation of this report. Based on a potential for occurrence analysis, the project has no reasonable potential to impact a special-status plant species. Nevertheless, we recommend a spring survey be conducted in 2016 to confirm the absence of special-status plants at the site.

6.1 IMPACTS TO SPECIAL-STATUS WILDLIFE SPECIES

This assessment of impacts to special-status wildlife considers those species that are listed, proposed for listing, or that meet the criteria for listing as Endangered or Threatened under the FESA or CESA; and those with a designation of SSC (California Species of Special Concern) or CFP (California Fully Protected), as mandatory special consideration and/or protection of these species is required pursuant to the Federal Endangered Species Act, the State Endangered Species Act, and/or CEQA. No wildlife species that are designated or are candidates for listing as Threatened or Endangered under State or Federal law, or species that are designated as California Fully Protected or Species of Special Concern under State law or regulations have been observed during surveys of the site. A few special-status wildlife species that were not observed during the surveys including five (5) birds, and four (4) mammals, were determined to have at least some potential to occur at the project site, including:

- Loggerhead shrike (*Lanius ludovicianus*) [SSC]
- Northern harrier (*Circus cyaneus*) [SSC]
- Vaux's swift (*Chaetura vauxi*) [SSC]
- White-tailed kite (*Elanus leucurus*) [CFP]
- Yellow warbler (*Setophaga petechia brewsteri*) [SSC]
- Big free-tailed bat (*Nyctinomops macrotis*) [SSC]
- Pallid bat (*Antrozous pallidus*) [SSC]
- Western mastiff bat (*Eumops perotis californicus*) [SSC]
- Western red bat (*Lasiurus blossevillii*) [SSC]

Most of these species would occur only rarely or occasionally, and would have low probability to use the site due to its predominately non-native condition and urban location. Also, with the one exception of the loggerhead shrike, all of these species would occur while foraging overhead, or while foraging or roosting temporarily at the site, but they would not inhabit the site or reproduce at the site. Most of these species would be capable of escaping harm during project development, including grading and fuel modification, while a few would be vulnerable to direct impacts, including injury and mortality. In this case the special-status species that could be directly impacted include tree roosting bats, such as the western red bat, which roosts in tree canopies, and the loggerhead shrike, which has the potential to nest at the site. The presence of roosting special-status bats is unlikely, but cannot be ruled out. The potential for occurrence of a resident loggerhead shrike is also unlikely and furthermore it would be protected if nesting at the site by the mitigation measure included herein requiring surveys and monitoring to avoid loss or injury to nesting birds (see BIO-2). Direct loss or injury to individuals of a special-status wildlife species would be a significant, but mitigable impact. Although individuals of these species could be impacted, if present, the loss of what is predominately non-native habitat associated with the project would not significantly impact a population of any of these species.

6.2 IMPACTS TO NESTING BIRDS

Ground and vegetation disturbing activities if conducted during the nesting bird season (February 1 to August 31) would have the potential to result in removal or disturbance to trees and shrubs that could contain active bird nests. In addition, these activities would also affect herbaceous vegetation that could support and conceal ground-nesting species. Birds nesting in the vicinity of project activities may potentially be disturbed by noise, lighting, dust, and human activities associated with the project, which could result in nesting failure and the loss of eggs or nestlings. Project activities that result in the loss of bird nests, eggs, and young, would be in violation of one (1) or more of California Fish and Game Code sections 3503 (any bird nest), 3503.5 (birds-of-prey), or 3511 (Fully Protected birds). In addition, removal or destruction of one (1) or more active nests of any other birds listed by the federal Migratory Bird Treaty Act of 1918 (MBTA), whether nest damage was due to vegetation removal or to other construction activities, would be considered a violation of the MBTA and California Fish and Game Code Section 3511. The loss of protected bird nests, eggs, or young due to project activities would be a significant, but mitigable impact.

6.3 IMPACTS TO JURISDICTIONAL HABITAT AND SENSITIVE PLANT COMMUNITIES

The project would permanently impact 0.014 acres (30 linear feet) of USACE "non-wetland" Waters of the U.S., which is also under CDFW jurisdiction, by covering the open section of the Lindero Creek concrete box culvert with a concrete deck. The extent of the USACE "non-wetland" Waters of the U.S. that would be impacted is shown on Figure 3. As this impact consists of modification of a concrete-lined box culvert with no habitat, these impacts would be less than significant.

The project would also permanently impact 0.036 acres of riparian habitat under the jurisdiction of CDFW in the northeastern corner of the site, which is associated with a jurisdictional tributary to Lindero Creek. The extent of the riparian habitat that would be impacted by the project is shown on Figure 3. The riparian habitat is comprised of the Red Willow Woodland Alliance natural community, which in addition to being jurisdictional habitat is also a CDFW Natural Community of Special Concern. Impacts to the jurisdictional riparian habitat and the Red Willow Woodland Alliance would consist of trimming the canopies of a small number of large mature native willow and cottonwood trees. The trees would not be removed, as while the canopies of the trees extend into the property the main trunks are located off-site. The trees would be trimmed and then maintained such that the canopies would not extend into the developed portion of the project site. Impacts to 0.036 acres to CDFW jurisdictional riparian habitat and the Red Willow Woodland Alliance natural community would be a significant, but mitigable impact.

The canopies of these trees also extend into the potential fuel modification zone in the northeastern corner of the property, i.e., the area between the grading limits and the property boundary. It is anticipated that the Los Angeles County Fire Department (LACFD) will limit fuel modification within CDFW jurisdictional habitat to the removal of deadwood. Therefore, potential impacts of fuel modification on CDFW jurisdictional habitat and Red Willow Woodland Alliance would be less than significant. However, the fuel modification necessary to protect structures is determined on a case-by-case basis.

Table 6
Permanent Impacts to USACE and CDFW Jurisdictional Areas

	USACE Waters of U.S. (Acres / Linear Feet)		CDFW Jurisdiction (Acres / Linear Feet)
	Wetlands	Non-wetlands	
Tributary to Lindero Creek	0 / 0	0 / 0	0.036 / 97
Box Culvert (Lindero Creek)	0 / 0	0.014 / 30	0.014 / 30
Storm Drain Lateral	0 / 0	0 / 0	0 / 0
Total	**0 / 0**	**0.014 / 30**	**0.050 / 127**

As shown on Table 6, the project would impact a total of 0.050 acres (127 linear feet) of CDFW jurisdictional area, including 0.014 acres (30 linear feet) that is coincident with USACE "non-wetland" Waters of the U.S. and 0.036 acres (97 acres) that is soley under the jurisdiction of CDFW.

No mitigation is required for impacts to the box culvert, as it is entirely concrete-lined and contains no habitat. The Applicant will however need to prepare and submit to the USACE for verification a "Preliminary Delineation Report for Waters of the U.S." for alterations to USACE jurisdictional Waters of the U.S. A Clean Water Act Section 404 permit shall be obtained from the USACE, as deemed necessary, and the Applicant shall comply with the permit conditions. The Applicant will also need to prepare and submit a Streambed Alternation Notification package to the CDFW for alterations to CDFW jurisdictional habitat. A Streambed Alteration Agreement shall be entered into with the CDFW under Section 1602 of the California Fish and Game Code, and the Applicant shall comply with the associated conditions. Mitigation for unavoidable impacts to CDFW jurisdictional habitat shall be provided through implementation of a Habitat Mitigation and Monitoring Program. A Clean Water Act Section 401 Water Quality Certification shall be obtained from the RWQCB, as deemed necessary, and the Applicant shall comply with the certification conditions.

7.0 MITIGATION MEASURES

Impacts to Special-Status Wildlife Species

MM-1 Pre-construction Surveys for Special-Status Wildlife Species.

Prior to the commencement of ground or vegetation disturbing activities, including but not limited to grading and fuel modification, a qualified biologist(s) shall conduct two (2) pre-construction surveys for special-status wildlife species. The first survey shall be conducted within fourteen (14) days and the second survey shall be conducted within three (3) days of commencement of ground or vegetation disturbing activities. The pre-construction surveys shall incorporate appropriate methods and timing to detect potentially occurring special-status species. If a special-status species is found, avoidance of the species until it vacates the site is the preferred mitigation option. If special-status bats are found, appropriate exclusionary devices shall be used, as feasible, that allow bats to exit but not enter the roost site. If special-status bats are found roosting in tree foliage, the tree shall be removed using a method approved by CDFW that will allow bats to escape. Bat maternity roosts shall be left in place until the biologist determines the bats are no longer raising young. If avoidance of a special-status species is not feasible, the species shall be captured and transferred to appropriate habitat and location where they would not be harmed by project activities, preferably to open space

habitats in the vicinity of the project site. The City of Agoura Hills Planning and Community Development Department and CDFW if applicable shall be consulted regarding the presence of a special-status species at the site. If a federally listed species is found, the USFWS shall also be notified. Capture and relocation shall be subject to approval by City of Agoura Hills Planning and Community Development Department and CDFW. A letter report summarizing the methods and results of the surveys and exclusion, capture, and relocation activities, if applicable, shall be submitted to the City of Agoura Hills Planning and Community Development Department and CDFW prior to commencement of project activities.

Impacts to Nesting Birds

MM-2 Nesting Bird Surveys.

No earlier than 14 days prior to ground or vegetation disturbing activities that would occur during the nesting/breeding season of native bird species potentially nesting on the site (typically February 1 through August 31), a City-approved qualified biologist shall perform two (2) field surveys to determine if active nests of any bird species protected by the state or federal Endangered Species Acts, Migratory Bird Treaty Act, and/or the California Fish and Game Code Sections 3503, 3503.5, or 3511 are present in the disturbance zone or within 200 feet of the disturbance zone for songbirds or within 500 feet of the disturbance zone for raptors and special-status bird species. The second nesting bird survey shall be conducted within three (3) days of the start of ground or vegetation disturbing activities. A letter report summarizing the methods and results of the surveys shall be submitted to the City of Agoura Hills Planning and Community Development Department and CDFW prior to commencement of project activities. In the event that an active nest is found within the survey area, site preparation, construction, and fuel modification activities shall stop until consultation with the City of Agoura Hills Planning and Community Development Department, and when applicable CDFW and USFWS, is conducted and an appropriate setback buffer can be established. The buffer shall be demarcated and project activities within the buffer shall be postponed or halted, at the discretion of the biologist, until the nest is vacated and juveniles have fledged, as determined by the biologist, and there is no evidence of a second attempt at nesting.

Impacts to Jurisdictional Habitat and Sensitive Natural Communities

MM-3 Habitat Mitigation and Monitoring Program

The project shall implement the requirements of the final approved Habitat Mitigation and Monitoring Program, which shall mitigate for permanent impacts to 0.036 acres (97 linear feet) of CDFW jurisdictional habitat consisting of the sensitive Red Willow Woodland Alliance at a 2:1 ratio or a ratio acceptable to the Trustee Agencies.

The Habitat Mitigation and Monitoring Program shall mitigate for permanent impacts to riparian habitat via an acceptable mitigation approach that involves one or a combination of restoration or enhancement of degraded in-kind habitats, preservation of in-kind habitats, or by a contribution to an in-lieu fee program approved by the City of Agoura Hills Planning and Community Development Department and the CDFW.

The final Habitat Mitigation and Monitoring Program shall be developed by a qualified biologist, restoration ecologist or resource specialist and submitted to and approved by the City of Agoura Hills Planning and Community Development Department and CDFW, in compliance with California Fish and Game Code 1602 prior to issuance of a grading permit for the project. In broad terms, this Program shall at a minimum include:

- Description of the project/impact and mitigation sites;
- Specific objectives;
- Success criteria;
- Plant palette;
- Implementation plan;
- Maintenance activities;
- Monitoring plan; and
- Contingency measures.

Success criteria shall at a minimum be evaluated based on appropriate survival rates and percent cover of planted native species, as well as eradication and control of invasive species within the restoration area.

The target species and native plant palette, as well as the specific methods for evaluating whether the project has been successful at meeting the above-mentioned success criteria shall be determined by the qualified biologist, restoration ecologist, or resource specialist and included in the mitigation program.

The mitigation project or in-lieu fee contribution shall be initiated prior to development of the project. The mitigation project shall be implemented over a five-year period and shall incorporate an iterative process of annual monitoring and evaluation of progress and allow for adjustments to the program, as necessary, to achieve desired outcomes and meet success criteria. Annual reports discussing the implementation, monitoring, and management of the mitigation project shall be submitted to the City of Agoura Hills Planning and Community Development Department and the CDFW. Five years after project start, a final report shall be submitted to the City of Agoura Hills Planning and Community Development Department and CDFW, which shall at a minimum discuss the implementation, monitoring and management of the mitigation project over the five-year period, and indicate whether the mitigation project has been successful based on established success criteria. Restoration will be considered successful after the success criteria have been met for a period of at least 2 years without any maintenance or remediation activities other than invasive species control. The project shall be extended if success criteria have not been met at the end of the five-year period to the satisfaction of the City of Agoura Hills Planning and Community Development Department and the CDFW.

8.0 REFERENCES

Aerial Information Systems, Inc., Final USGS-NPS Vegetation Mapping Program Santa Monica Mountains National Recreation Area Photo Interpretation Report, May 23, 2007.

American Ornithologists' Union (AOU). 1998. Check-list of North American birds. Seventh edition. American Ornithologists' Union, Washington, D.C. [as modified by subsequent supplements and corrections published in The Auk]. Also available online: http://www.aou.org/.

Baldwin, B. G., D.H. Goldman, D.J. Keil, R. Patterson, T.J. Rosatti, and D.H. Wilken, editors. 2012. The Jepson manual: vascular plants of California, second edition. University of California Press, Berkeley.

Baker, R. J., L. C. Bradley, R. D. Bradley, J. W. Dragoo, M. D. Engstrom, R. S. Hoffman, C. A. Jones, F. Reid, D. W. Rice, and C. Jones. 2003. Revised checklist of North American mammals north of Mexico, 2003. Museum of Texas Tech University Occasional Papers 229:1-23.

Biogeographic Information and Observation System (BIOS), California Department of Fish and Wildlife, data as of March 17, 2016.

Birds of North America Online, Cornell Lab or Ornithology, data as of March 2016. http://bna.birds.cornell.edu/bna

California Natural Diversity Database (CNDDB) Rarefind 5 Element Occurrence Report for Thousand Oaks and eight (8) surrounding USGS quadrangles, California Department of Fish and Wildlife, data as of March 17, 2016.

California Department of Fish and Wildlife, Vegetation Classification and Mapping Program, List of Vegetation Alliances and Associations. September 2010. http://www.dfg.ca.gov/biogeodata/vegcamp/natural_comm_list.asp

CDFW and CNPS. Vegetation Classification of the Santa Monica Mountains Natural Recreation Area and Environs in Ventura and Los Angeles Counties, California, January 2006.

City of Agoura Hills General Plan, March 2010.

CNPS Inventory of Rare and Endangered Plants, 8th ed., California Native Plant Society, data as of March 17, 2016.

Consortium of California Herbaria, data as of March 2016. http://ucjeps.berkeley.edu/consortium/

Constantine, D.G. 1998. Range extensions of ten species of bats in California. Bull. So. Calif. Acad. Sci. 97(2):49-75.

Christopher A. Joseph and Associates. Biological Assessment and Preliminary Jurisdictional Wetlands Delineation. Revised August 9, 2005.

Crother, B. I. (editor). 2008. Scientific and standard English names of amphibians and reptiles of North America north of Mexico, with comments regarding confidence in our understanding. Sixth edition. Society for the Study of Amphibians and Reptiles Herpetological Circular 37:1-84.

De Lisle, H., G. Cantu, J. Feldner, P. O'Connor, M. Peterson and P. Brown. 1986. The distribution and present status of the herpetofauna of the Santa Monica Mountains of Los Angeles and Ventura counties, California. Southwestern Herpetologists Society Special Publication No. 2.

Environmental Laboratory. 1987. *U.S. Corps of Engineers Wetlands Delineation Manual*, Technical Report Y-87-1, U.S. Army Engineer Waterways Experiment Station, Vicksburg, Miss.

Evens, J. and T. Keeler-Wolf. 2006 (January). Vegetation Classification of the Santa Monica Mountains National Recreation Area and Environs in Ventura and Los Angeles Counties, California. California Department of Fish and Game and California Native Plant Society.

Garrett, K., Dunn, J., and Morse, B. 2006. Birds of the Los Angeles Region. R.W. Morse Company. Olympia, WA.

Garrett, K. and J. Dunn. 1981. Birds of Southern California; Status and distribution. Los Angeles Audubon Society, Los Angeles, California.

Grinnell, J., and A.H. Miller. 1944. The distribution of the birds of California. Pacific Coast Avifauna No. 27. 608 pp.

Hall, E.R., and K.R. Kelson. 1959. The mammals of North America. Ronald Press Co., New York.

Jennings, M.R., and M.P. Hayes. 1994. Amphibian and Reptile Species of Special Concern in California. Final Report to the California Department of Fish and Game, Inland Fisheries Division, Rancho Cordova, California.

Jepson Online Interchange: California Floristics, U.C. Berkeley, data as of March 2016. http://ucjeps.berkeley.edu/interchange/

Lichvar, R. W., M. Butterwick, N.C. Melvin, and W.N. Kirchner. 2014. The National Wetland Plant List: 2014 Update of Wetland Ratings.

Lichvar, R., N. Melvin, M. Butterwick, and W. Kirchner. 2012. National Wetland Plant List Indicator Rating Definitions. ERDC/CRREL TN-12-1. Hanover, NH: U.S. Army Engineer Research and Development Center, Cold Regions Research and Engineering Laboratory.

List of Special Vascular Plants, Bryophytes, and Lichens, California Department of Fish and Wildlife, March 2016.

National Park Service, Santa Monica Mountains National Recreation Area Land Protection Plan, March 1998.

Penrod, K. et. al., 2006. South Coast Missing Linkages Project: A Linkage Design for the Santa Monica Mountains-Sierra Madre Connection.

Raven, P.H., H.J. Thompson, and B.A. Prigge. 1986. Flora of the Santa Monica Mountains, California. Southern California Botanists, Special Publication No. 2.

Reid, Fiona. A Field Guide to Mammals of North America, 4th ed., Houghton Mifflin Company, New York, New York, 2006.

Santa Monica Mountains National Recreation Area, Geology of the Santa Monica Mountains (map derived from Diblee Geological Foundation Maps), November 2007.

Sawyer, J.O., T. Keeler-Wolf, and J. M. Evens, A Manual of California Vegetation, 2nd ed., California Native Plant Society Press, Sacramento, California, 2009.

Shuford, W. D., and Gardali, T., editors. 2008. California Bird Species of Special Concern: A ranked assessment of species, subspecies, and distinct populations of birds of immediate conservation concern in California. Studies of Western Birds 1. Western Field Ornithologists, Camarillo, California, and California Department of Fish and Game, Sacramento.

Sibley, D.A., 2003. The Sibley Field Guide to Birds of Western North America. A.A. Knopf, New York.

Soil Survey Staff, Natural Resources Conservation Service, United States Department of Agriculture. Web Soil Survey. Available online at http://websoilsurvey.nrcs.usda.gov/. Accessed March 2016.

Special Animals, California Department of Fish and Wildlife, January 2016.

Stebbins, Robert C. (Robert Cyril). A Field Guide to Western Reptiles and Amphibians, 3rd ed., Houghton Mifflin Company, New York, New York, 2003.

United States Army Corps of Engineers. 2008a. A Field Guide to the Identification of the Ordinary High Water Mark (OHWM) in the Arid West Region of the Western United States. U.S. Army Engineer Research and Development Center.

United States Army Corps of Engineers. 2008 (September). Interim Regional Supplement to The Corps of Engineers Wetland Delineation Manual: Arid West Region.

United States Department of Agriculture, National Resources Conservation Service. 2010. Field Indicators of Hydric Soils in the United States, Version 7.0. L.M. Vasilas, G.W. Hurt, and C.V. Noble (eds.). USDA, NRCS, in cooperation with the National Technical Committee for Hydric Soils.

U.S. Fish and Wildlife Service, FWS Critical Habitat Mapper for Threatened and Endangered Species, U.S. Fish and Wildlife Service, data as of March 17, 2016.

Western Bat Working Group, Species Info, Species Accounts, data as of August 2014. http://www.wbwg.org/speciesinfo/species_accounts/species_accounts.html

Williams, D.F. 1986 (June). Mammalian Species of Special Concern in California. Calif. Dept. Fish and Game Wildlife Management Division Admin. Rept. 86-1.

Zeiner, D.C, W.F. Laudenslayer, Jr., K.E. Mayer, and M. White. 1988 (May). California's Wildlife.Vol. I Amphibians and Reptiles. California Statewide Wildlife Habitat Relationships System, California Department of Fish and Game, Sacramento, Calif.

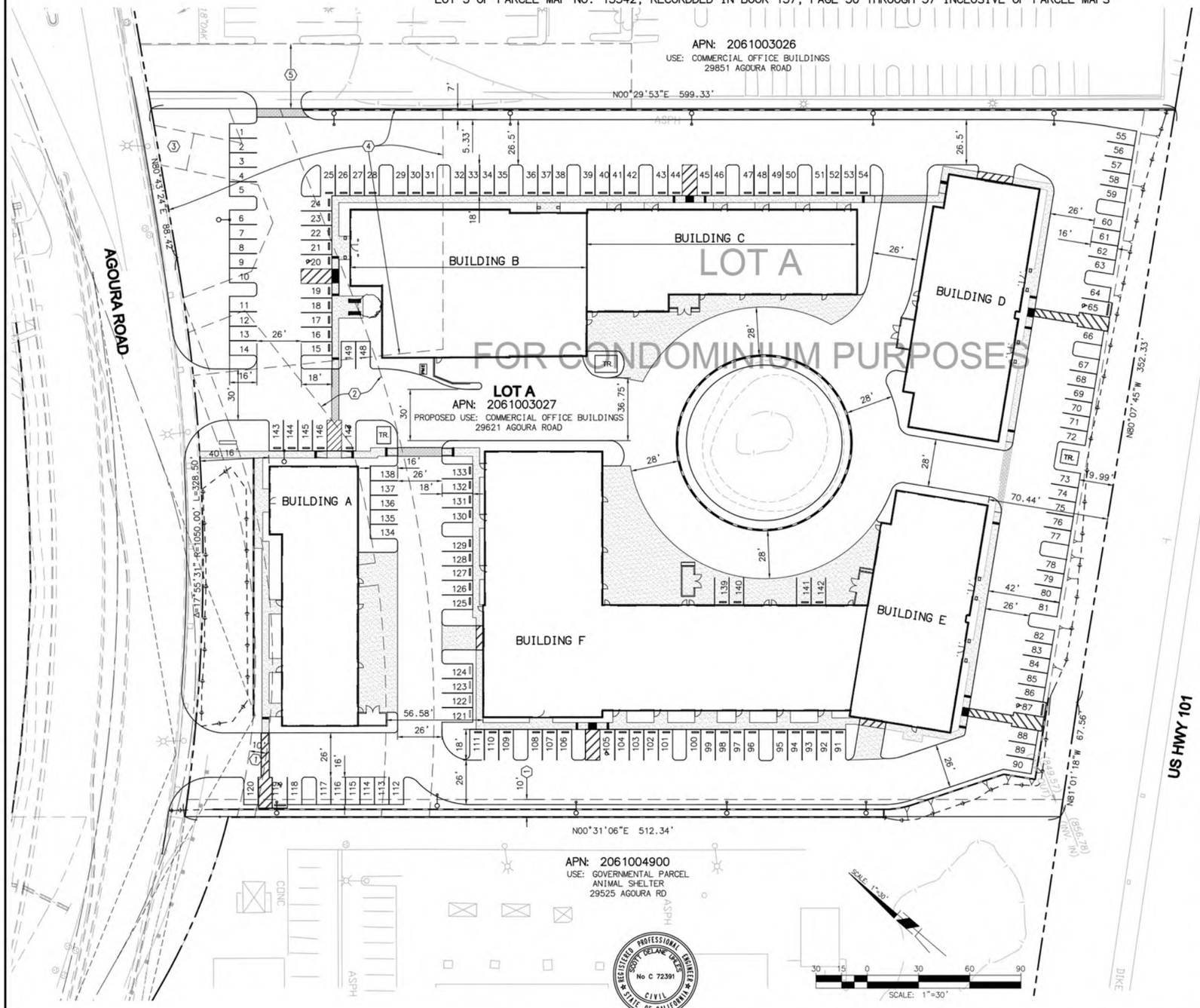
Zeiner, D.C, W.F. Laudenslayer, Jr., K.E. Mayer, and M. White. 1990a (April). California's Wildlife. Vol. III Mammals. California Statewide Wildlife Habitat Relationships System, California Department of Fish and Game, Sacramento, Calif.

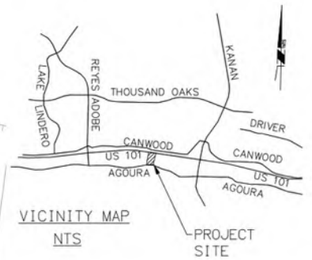
Zeiner, D.C, W.F. Laudenslayer, Jr., K.E. Mayer, and M. White. 1990b (November). California's Wildlife. Vol. II Birds. California Statewide Wildlife Habitat Relationships System, California Department of Fish and Game, Sacramento, Calif.

Appendix 1
Agoura Landmark Vesting Tentative Tract Map No. 73890, Delane Engineering Inc., April 2016

VESTING TENTATIVE TRACT MAP NO. 73890

LOT 3 OF PARCEL MAP NO. 13342, RECORDDED IN BOOK 157, PAGE 50 THROUGH 57 INCLUSIVE OF PARCEL MAPS





VICINITY MAP
NTS

PROJECT INFORMATION	
PROJECT NAME	AGOURA LANDMARK
OWNER/SUBDIVIDER	AGOURA LANDMARK, LP 569 CONSTITUTION AVE, SUITE H CAMARILLO, CA 93012 MARTIN TEITELBAUM PH (805) 383-2221
ARCHITECT	LANET-SHAW ARCHITECTS INC. 11741 W. PICO BVLD LOS ANGELES, CA 90064 BRETT SHAW PH (310) 479-4775
LEGAL DESCRIPTION	LOT 3 OF PARCEL MAP NO. 13342, RECORDED IN BOOK 157, PAGE 50 THROUGH 57 INCLUSIVE OF PARCEL MAPS.
BENCHMARK	VENTURA CO. BM CY-10004 (BM 7553) RDBM TAG SE COR BRIDGE OVER (101 FWY) 2M E/O E CF 8M E/O C/L REYES ADOBE RD & 28M N/O E BND ON-OFF RAMP ELEV. 939.168 (ADJ 1989)
THOMAS GUIDE	MAP PG 557 J6
FLOOD ZONE	ZONE X, MAP NUMBER 06037C1244F

PROPOSED LOTTING			
LOT	AREA (AC)	AREA (SF)	LAND USE
LOT A	5.17	225,337	INDUSTRIAL

FOR CONDOMINIUM PURPOSES

	EASEMENT & R/W SCHEDULE	
	EASEMENT DESCRIPTION	STATUS
①	10' WIDE EASEMENTS FOR PIPE LINES PURPOSES, AS GRANTED TO LAS VIRGENES MUNICIPAL WATER DISTRICT PER BOOK D3031, PG 352 AND BOOK D3161, PG 593, BOTH OF OFFICIAL RECORDS OF LOS ANGELES COUNTY.	TO REMAIN
②	EASEMENT FOR COVERED STORM DRAIN, FLOOD CONTROL AND INGRESS AND EGRESS PURPOSES, AS GRANTED TO LOS ANGELES COUNTY FLOOD CONTROL DISTRICT PER INSTRUMENT NO. 3516, RECORDED JULY 18, 1973, IN BOOK D5951, PG 227 OF OFFICIAL RECORDS OF LOS ANGELES COUNTY.	TO REMAIN
③	22' WIDE EASEMENT FOR STORM DRAIN PURPOSES, AS GRANTED TO COUNTY OF LOS ANGELES PER DOCUMENT RECORDED AUGUST 8, 1980, AS INSTRUMENT NO. 80-764242 OF OFFICIAL RECORDS OF LOS ANGELES COUNTY.	TO REMAIN
④	AN EASEMENT FOR FLOOD HAZARD AREA PURPOSES, AS GRANTED TO THE COUNTY OF LOS ANGELES PER PARCEL MAP NO. 13342, FILED IN BOOK 157, PG 50 OF PARCEL MAPS.	TO REMAIN
⑤	38' WIDE DRIVEWAY EASEMENT PER DOCUMENT RECORDED DECEMBER 13, 2001, AS INSTRUMENT NO. 2001-2385342 OF OFFICIAL RECORDS OF LOS ANGELES COUNTY.	TO REMAIN

PARKING SUMMARY	
DESCRIPTION	UNITS
STANDARD PARKING STALLS	142
ACCESSIBLE PARKING STALLS	7
TOTAL PARKING STALLS	149

LAND USE DATA	
GROSS AREA	225,337 SF (5.17 AC)
NET AREA	225,337 SF (5.17 AC)
EXISTING ZONING	INDUSTRIAL PLANNED DEVELOPMENT
PROPOSED ZONING	INDUSTRIAL PLANNED DEVELOPMENT
EXISTING LAND USE	INDUSTRIAL
PROPOSED LAND USE	INDUSTRIAL
BUILDING FOOTPRINT	69,867 SF
BUILDING A	8,060 SF
BUILDING B	12,106 SF
BUILDING C	8,403 SF
BUILDING D	10,716 SF
BUILDING E	9,452 SF
BUILDING F	21,130 SF
HARDSCAPE AREA	107,053 SF
LANDSCAPE AREA	48,417 SF

UTILITIES	
WATER:	LAS VIRGENES MUNICIPAL WATER DISTRICT 4232 LAS VIRGENES ROAD CALABASAS, CA 91302 (818) 880-4110
ELECTRICAL:	SOUTHERN CALIFORNIA EDISON 3589 FOOTHILL DRIVE THOUSAND OAKS, CA 91361 (805) 494-7016
TELEPHONE:	SBC (PAC BELL) 16201 RAYMER STREET, #115 VAN NUYS, CA 91406 (818) 373-6889
GAS:	SOUTHERN CALIFORNIA GAS 9400 OAKDALE AVENUE CHATSWORTH, CA 91313 (818) 701-3324
SEWER:	LA COUNTY, DEPT. OF PUBLIC WORKS SEWER MAINTENANCE DIVISION 1000 S. FREMONT AVENUE, BLDG A9 EAST ALHAMBRA, CA 91803 (626) 300-3308
CABLE:	TIME WARNER CABLE 2525 KNOLL DRIVE NEWBURY PARK, CA 91003 (805) 732-8474
CABLE:	CHARTER COMMUNICATIONS 3806 CROSSCREEK ROAD MALIBU, CA 90265 (310) 456-9010
CALTRANS:	CALTRANS 5660 RESEDA BOULEVARD TARZANA, CA 91356 (805) 388-1426

REVISION #	SYMBOL	DESCRIPTION OF CHANGE	APPROVED	DATE

SAVE DATE: 4/18/16 CSOLIS

PREPARED BY:
DELANE ENGINEERING
3812 SANTA MONICA BLVD, SUITE 206
SANTA MONICA, CA 90404
PHONE: 310.346.5711 FAX: DELANEENGINEERING.COM

SCOTT D. UHLES DATE

CITY OF AGOURA HILLS APPROVAL

REVIEWED BY DATE

ROMIRO ADEVA DATE 66865 RCE NO. 9/30/16 EXP DATE
CITY ENGINEER

CITY OF AGOURA HILLS

VESTING TENTATIVE TRACT MAP NO. 73890
FOR
AGOURA LANDMARK

SHEET 1 OF 1

CITY OF AGOURA HILLS DWG. NO. _____

PLOT DATE: 4/20/16 4:36 PM FILE NAME: H:\PDATA\2015068\CAD\LAND\DLA\TM\066-TM.DWG

Appendix 2
Biological Database Queries

Plant List

51 matches found. *Click on scientific name for details*

Search Criteria
Found in 9 Quads around 34118B7

Scientific Name	Common Name	Family	Lifeform	Rare Plant Rank	State Rank	Global Rank
Abronia maritima	red sand-verbena	Nyctaginaceae	perennial herb	4.2	S3S4	G4
Asplenium vespertinum	western spleenwort	Aspleniaceae	perennial rhizomatous herb	4.2	S4	G4
Astragalus brauntonii	Braunton's milk-vetch	Fabaceae	perennial herb	1B.1	S2	G2
Atriplex coulteri	Coulter's saltbush	Chenopodiaceae	perennial herb	1B.2	S2	G3
Atriplex serenana var. davidsonii	Davidson's saltscale	Chenopodiaceae	annual herb	1B.2	S1	G5T1
Baccharis malibuensis	Malibu baccharis	Asteraceae	perennial deciduous shrub	1B.1	S1	G1
California macrophylla	round-leaved filaree	Geraniaceae	annual herb	1B.2	S3?	G3?
Calochortus catalinae	Catalina mariposa lily	Liliaceae	perennial bulbiferous herb	4.2	S4	G4
Calochortus clavatus var. clavatus	club-haired mariposa lily	Liliaceae	perennial bulbiferous herb	4.3	S3	G4T3
Calochortus clavatus var. gracilis	slender mariposa lily	Liliaceae	perennial bulbiferous herb	1B.2	S2S3	G4T2T3
Calochortus fimbriatus	late-flowered mariposa lily	Liliaceae	perennial bulbiferous herb	1B.3	S3	G3
Calochortus plummerae	Plummer's mariposa lily	Liliaceae	perennial bulbiferous herb	4.2	S4	G4
Calystegia peirsonii	Peirson's morning-glory	Convolvulaceae	perennial rhizomatous herb	4.2	S4	G4
Camissoniopsis lewisii	Lewis' evening-primrose	Onagraceae	annual herb	3	S4	G4
Centromadia parryi ssp. australis	southern tarplant	Asteraceae	annual herb	1B.1	S2	G3T2
Cercocarpus betuloides var. blancheae	island mountain-mahogany	Rosaceae	perennial evergreen shrub	4.3	S4	G5T4
Chaenactis glabriuscula var. orcuttiana	Orcutt's pincushion	Asteraceae	annual herb	1B.1	S1	G5T1T2
Chorizanthe parryi var. fernandina	San Fernando Valley spineflower	Polygonaceae	annual herb	1B.1	S1	G2T1
Chorizanthe parryi var. parryi	Parry's spineflower	Polygonaceae	annual herb	1B.1	S3	G3T3
Convolvulus simulans	small-flowered morning-glory	Convolvulaceae	annual herb	4.2	S4	G4

Deinandra minthornii	Santa Susana tarplant	Asteraceae	perennial deciduous shrub	1B.2	S2	G2
Delphinium parryi ssp. blochmaniae	dune larkspur	Ranunculaceae	perennial herb	1B.2	S2	G4T2
Delphinium parryi ssp. purpureum	Mt. Pinos larkspur	Ranunculaceae	perennial herb	4.3	S4	G4T4
Dudleya blochmaniae ssp. blochmaniae	Blochman's dudleya	Crassulaceae	perennial herb	1B.1	S2	G3T2
Dudleya cymosa ssp. agourensis	Agoura Hills dudleya	Crassulaceae	perennial herb	1B.2	S2	G5T1
Dudleya cymosa ssp. marcescens	marcescent dudleya	Crassulaceae	perennial herb	1B.2	S2	G5T2
Dudleya cymosa ssp. ovatifolia	Santa Monica dudleya	Crassulaceae	perennial herb	1B.1	S1	G5T1
Dudleya multicaulis	many-stemmed dudleya	Crassulaceae	perennial herb	1B.2	S2	G2
Dudleya parva	Conejo dudleya	Crassulaceae	perennial herb	1B.2	S1	G1
Dudleya verityi	Verity's dudleya	Crassulaceae	perennial herb	1B.1	S1	G1
Eriogonum crocatum	conejo buckwheat	Polygonaceae	perennial herb	1B.2	S1	G1
Hordeum intercedens	vernal barley	Poaceae	annual herb	3.2	S3S4	G3G4
Horkelia cuneata var. puberula	mesa horkelia	Rosaceae	perennial herb	1B.1	S1	G4T1
Isocoma menziesii var. decumbens	decumbent goldenbush	Asteraceae	perennial shrub	1B.2	S2	G3G5T2T3
Juglans californica	Southern California black walnut	Juglandaceae	perennial deciduous tree	4.2	S3	G3
Lasthenia glabrata ssp. coulteri	Coulter's goldfields	Asteraceae	annual herb	1B.1	S2	G4T2
Lepechinia fragrans	fragrant pitcher sage	Lamiaceae	perennial shrub	4.2	S3	G3
Lilium humboldtii ssp. ocellatum	ocellated Humboldt lily	Liliaceae	perennial bulbiferous herb	4.2	S3	G4T3
Monardella hypoleuca ssp. hypoleuca	white-veined monardella	Lamiaceae	perennial herb	1B.3	S2S3	G4T2T3
Monardella sinuata ssp. gerryi	Gerry's curly-leaved monardella	Lamiaceae	annual herb	1B.1	S1	G1
Monardella sinuata ssp. sinuata	southern curly-leaved monardella	Lamiaceae	annual herb	1B.2	S2	G3T2
Navarretia ojaiensis	Ojai navarretia	Polemoniaceae	annual herb	1B.1	S1	G1
Nolina cismontana	chaparral nolina	Ruscaceae	perennial evergreen shrub	1B.2	S3	G3
Orcuttia californica	California Orcutt grass	Poaceae	annual herb	1B.1	S1	G1
Pentachaeta lyonii	Lyon's pentachaeta	Asteraceae	annual herb	1B.1	S1	G1
Phacelia hubbyi	Hubby's phacelia	Boraginaceae	annual herb	4.2	S4	G4
Phacelia ramosissima var. austrolitoralis	south coast branching phacelia	Boraginaceae	perennial herb	3.2	S3	G5?T3
Piperia michaelii	Michael's rein orchid	Orchidaceae	perennial herb	4.2	S3	G3
Senecio aphanactis	chaparral ragwort	Asteraceae	annual herb	2B.2	S2	G3?
Thelypteris puberula var. sonorensis	Sonoran maiden fern	Thelypteridaceae	perennial rhizomatous herb	2B.2	S2	G5T3
Tortula californica	California screw-moss	Pottiaceae	moss	1B.2	S2S3	G2G3

Suggested Citation

CNPS, Rare Plant Program. 2016. Inventory of Rare and Endangered Plants (online edition, v8-02). California Native Plant Society, Sacramento, CA. Website http://www.rareplants.cnps.org [accessed 17 March 2016].

Search the Inventory
Simple Search
Advanced Search
Glossary

Information
About the Inventory
About the Rare Plant Program
CNPS Home Page
About CNPS
Join CNPS

Contributors
The Calflora Database
The California Lichen Society

Selected Elements by Common Name

California Department of Fish and Wildlife

California Natural Diversity Database

Query Criteria: Quad is (Calabasas (3411826) or Malibu Beach (3411816) or Moorpark (3411838) or Newbury Park (3411828) or Point Dume (3411817) or Santa Susana (3411836) or Simi (3411837) or Thousand Oaks (3411827) or Triunfo Pass (3411818))

Species	Element Code	Federal Status	State Status	Global Rank	State Rank	Rare Plant Rank/CDFW SSC or FP
Agoura Hills dudleya *Dudleya cymosa ssp. agourensis*	PDCRA040A7	Threatened	None	G5T1	S2	1B.2
American badger *Taxidea taxus*	AMAJF04010	None	None	G5	S3	SSC
American peregrine falcon *Falco peregrinus anatum*	ABNKD06071	Delisted	Delisted	G4T4	S3S4	FP
arroyo chub *Gila orcuttii*	AFCJB13120	None	None	G2	S2	SSC
arroyo toad *Anaxyrus californicus*	AAABB01230	Endangered	None	G2G3	S2S3	SSC
bank swallow *Riparia riparia*	ABPAU08010	None	Threatened	G5	S2	
Blochman's dudleya *Dudleya blochmaniae ssp. blochmaniae*	PDCRA04051	None	None	G3T2	S2	1B.1
Braunton's milk-vetch *Astragalus brauntonii*	PDFAB0F1G0	Endangered	None	G2	S2	1B.1
burrowing owl *Athene cunicularia*	ABNSB10010	None	None	G4	S3	SSC
California leaf-nosed bat *Macrotus californicus*	AMACB01010	None	None	G4	S3	SSC
California mountain kingsnake (San Diego population) *Lampropeltis zonata (pulchra)*	ARADB19063	None	None	G4G5	S1S2	SSC
California Orcutt grass *Orcuttia californica*	PMPOA4G010	Endangered	Endangered	G1	S1	1B.1
California red-legged frog *Rana draytonii*	AAABH01022	Threatened	None	G2G3	S2S3	SSC
California screw moss *Tortula californica*	NBMUS7L090	None	None	G2G3	S2S3	1B.2
California Walnut Woodland *California Walnut Woodland*	CTT71210CA	None	None	G2	S2.1	
chaparral nolina *Nolina cismontana*	PMAGA080E0	None	None	G3	S3	1B.2
chaparral ragwort *Senecio aphanactis*	PDAST8H060	None	None	G3	S2	2B.2
Cismontane Alkali Marsh *Cismontane Alkali Marsh*	CTT52310CA	None	None	G1	S1.1	
coast horned lizard *Phrynosoma blainvillii*	ARACF12100	None	None	G3G4	S3S4	SSC

Species	Element Code	Federal Status	State Status	Global Rank	State Rank	Rare Plant Rank/CDFW SSC or FP
coastal California gnatcatcher *Polioptila californica californica*	ABPBJ08081	Threatened	None	G3T2	S2	SSC
coastal whiptail *Aspidoscelis tigris stejnegeri*	ARACJ02143	None	None	G5T3T4	S2S3	
conejo buckwheat *Eriogonum crocatum*	PDPGN081G0	None	Rare	G1	S1	1B.2
Conejo dudleya *Dudleya parva*	PDCRA04016	Threatened	None	G1	S1	1B.2
Cooper's hawk *Accipiter cooperii*	ABNKC12040	None	None	G5	S4	WL
Coulter's goldfields *Lasthenia glabrata ssp. coulteri*	PDAST5L0A1	None	None	G4T2	S2	1B.1
Coulter's saltbush *Atriplex coulteri*	PDCHE040E0	None	None	G3	S2	1B.2
Crotch bumble bee *Bombus crotchii*	IIHYM24480	None	None	G3G4	S1S2	
Davidson's saltscale *Atriplex serenana var. davidsonii*	PDCHE041T1	None	None	G5T1	S1	1B.2
decumbent goldenbush *Isocoma menziesii var. decumbens*	PDAST57091	None	None	G3G5T2T3	S2	1B.2
dune larkspur *Delphinium parryi ssp. blochmaniae*	PDRAN0B1B1	None	None	G4T2	S2	1B.2
Gerry's curly-leaved monardella *Monardella sinuata ssp. gerryi*	PDLAM18163	None	None	G3T1	S1	1B.1
Gertsch's socalchemmis spider *Socalchemmis gertschi*	ILARAU7010	None	None	G1	S1	
globose dune beetle *Coelus globosus*	IICOL4A010	None	None	G1G2	S1S2	
golden eagle *Aquila chrysaetos*	ABNKC22010	None	None	G5	S3	FP
hoary bat *Lasiurus cinereus*	AMACC05030	None	None	G5	S4	
late-flowered mariposa-lily *Calochortus fimbriatus*	PMLIL0D1J2	None	None	G3	S3	1B.2
least Bell's vireo *Vireo bellii pusillus*	ABPBW01114	Endangered	Endangered	G5T2	S2	
Lyon's pentachaeta *Pentachaeta lyonii*	PDAST6X060	Endangered	Endangered	G1	S1	1B.1
Malibu baccharis *Baccharis malibuensis*	PDAST0W0W0	None	None	G1	S1	1B.1
many-stemmed dudleya *Dudleya multicaulis*	PDCRA040H0	None	None	G2	S2	1B.2

Species	Element Code	Federal Status	State Status	Global Rank	State Rank	Rare Plant Rank/CDFW SSC or FP
marcescent dudleya *Dudleya cymosa ssp. marcescens*	PDCRA040A3	Threatened	Rare	G5T2	S2	1B.2
mesa horkelia *Horkelia cuneata var. puberula*	PDROS0W045	None	None	G4T1	S1	1B.1
monarch - California overwintering population *Danaus plexippus pop. 1*	IILEPP2012	None	None	G4T2T3	S2S3	
Ojai navarretia *Navarretia ojaiensis*	PDPLM0C130	None	None	G1	S1	1B.1
Orcutt's pincushion *Chaenactis glabriuscula var. orcuttiana*	PDAST20095	None	None	G5T1T2	S1	1B.1
pallid bat *Antrozous pallidus*	AMACC10010	None	None	G5	S3	SSC
Palmer's grapplinghook *Harpagonella palmeri*	PDBOR0H010	None	None	G4	S3	4.2
Parry's spineflower *Chorizanthe parryi var. parryi*	PDPGN040J2	None	None	G3T3	S3	1B.1
Plummer's mariposa-lily *Calochortus plummerae*	PMLIL0D150	None	None	G4	S4	4.2
Riverside fairy shrimp *Streptocephalus woottoni*	ICBRA07010	Endangered	None	G1G2	S1S2	
round-leaved filaree *California macrophylla*	PDGER01070	None	None	G3?	S3?	1B.2
San Bernardino ringneck snake *Diadophis punctatus modestus*	ARADB10015	None	None	G5T2T3Q	S2?	
San Diego desert woodrat *Neotoma lepida intermedia*	AMAFF08041	None	None	G5T3T4	S3S4	SSC
San Fernando Valley spineflower *Chorizanthe parryi var. fernandina*	PDPGN040J1	Candidate	Endangered	G2T1	S1	1B.1
Santa Ana sucker *Catostomus santaanae*	AFCJC02190	Threatened	None	G1	S1	
Santa Monica dudleya *Dudleya cymosa ssp. ovatifolia*	PDCRA040A5	Threatened	None	G5T1	S1	1B.1
Santa Monica grasshopper *Trimerotropis occidentiloides*	IIORT36300	None	None	G1G2	S1S2	
Santa Susana tarplant *Deinandra minthornii*	PDAST4R0J0	None	Rare	G2	S2	1B.2
silvery legless lizard *Anniella pulchra pulchra*	ARACC01012	None	None	G3G4T3T4Q	S3	SSC
slender mariposa-lily *Calochortus clavatus var. gracilis*	PMLIL0D096	None	None	G4T2T3	S2S3	1B.2
slender-horned spineflower *Dodecahema leptoceras*	PDPGN0V010	Endangered	Endangered	G1	S1	1B.1

Species	Element Code	Federal Status	State Status	Global Rank	State Rank	Rare Plant Rank/CDFW SSC or FP
Sonoran maiden fern *Thelypteris puberula var. sonorensis*	PPTHE05192	None	None	G5T3	S2	2B.2
Southern California Coastal Lagoon *Southern California Coastal Lagoon*	CALE1220CA	None	None	GNR	SNR	
southern California rufous-crowned sparrow *Aimophila ruficeps canescens*	ABPBX91091	None	None	G5T3	S2S3	WL
Southern California Steelhead Stream *Southern California Steelhead Stream*	CARE2310CA	None	None	GNR	SNR	
Southern Coast Live Oak Riparian Forest *Southern Coast Live Oak Riparian Forest*	CTT61310CA	None	None	G4	S4	
Southern Coastal Salt Marsh *Southern Coastal Salt Marsh*	CTT52120CA	None	None	G2	S2.1	
Southern Mixed Riparian Forest *Southern Mixed Riparian Forest*	CTT61340CA	None	None	G2	S2.1	
Southern Riparian Forest *Southern Riparian Forest*	CTT61300CA	None	None	G4	S4	
Southern Riparian Scrub *Southern Riparian Scrub*	CTT63300CA	None	None	G3	S3.2	
Southern Sycamore Alder Riparian Woodland *Southern Sycamore Alder Riparian Woodland*	CTT62400CA	None	None	G4	S4	
southern tarplant *Centromadia parryi ssp. australis*	PDAST4R0P4	None	None	G3T2	S2	1B.1
Southern Willow Scrub *Southern Willow Scrub*	CTT63320CA	None	None	G3	S2.1	
southwestern willow flycatcher *Empidonax traillii extimus*	ABPAE33043	Endangered	Endangered	G5T2	S1	
spotted bat *Euderma maculatum*	AMACC07010	None	None	G4	S3	SSC
steelhead - southern California DPS *Oncorhynchus mykiss irideus*	AFCHA0209J	Endangered	None	G5T1Q	S1	
tidewater goby *Eucyclogobius newberryi*	AFCQN04010	Endangered	None	G3	S3	SSC
tricolored blackbird *Agelaius tricolor*	ABPBXB0020	None	None	G2G3	S1S2	SSC
two-striped garter snake *Thamnophis hammondii*	ARADB36160	None	None	G4	S3S4	SSC
unarmored threespine stickleback *Gasterosteus aculeatus williamsoni*	AFCPA03011	Endangered	Endangered	G5T1	S1	FP
Valley Needlegrass Grassland *Valley Needlegrass Grassland*	CTT42110CA	None	None	G3	S3.1	
Valley Oak Woodland *Valley Oak Woodland*	CTT71130CA	None	None	G3	S2.1	

Species	Element Code	Federal Status	State Status	Global Rank	State Rank	Rare Plant Rank/CDFW SSC or FP
Verity's dudleya *Dudleya verityi*	PDCRA040U0	Threatened	None	G1	S1	1B.1
western mastiff bat *Eumops perotis californicus*	AMACD02011	None	None	G5T4	S3S4	SSC
western pond turtle *Emys marmorata*	ARAAD02030	None	None	G3G4	S3	SSC
western red bat *Lasiurus blossevillii*	AMACC05060	None	None	G5	S3	SSC
western small-footed myotis *Myotis ciliolabrum*	AMACC01140	None	None	G5	S3	
western spadefoot *Spea hammondii*	AAABF02020	None	None	G3	S3	SSC
white-tailed kite *Elanus leucurus*	ABNKC06010	None	None	G5	S3S4	FP
white-veined monardella *Monardella hypoleuca ssp. hypoleuca*	PDLAM180A3	None	None	G4T2T3	S2S3	1B.3
Yuma myotis *Myotis yumanensis*	AMACC01020	None	None	G5	S4	

Record Count: 91

Appendix 3
Wetland Determination Data Forms

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Agoura Landmark Light Industrial Project City/County: Agoura Hills Sampling Date: 3/10/16

Applicant/Owner: Agoura Landmark, LP State: CA Sampling Point: 1

Investigator(s): Jim Anderson, Senior Biologist, Envicom Corp. Section, Township, Range: SE1/4 of 7.5' USGS Thousand Oaks quad.

Landform (hillslope, terrace, etc.): bottomlands Local relief (concave, convex, none): Flat Slope (%): 0

Subregion (LRR): C Lat: 34.146585 Long: -118.769782 Datum: NAD 83 conv

Soil Map Unit Name: Urban Land – Xerothents, fill complex 0-30% slopes NWI classification: —

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ✓ No ____ (If no, explain in Remarks.)

Are Vegetation ____, Soil ____, or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes ✓ No ____

Are Vegetation ____, Soil ____, or Hydrology ____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes ✓	No ____	Is the Sampled Area within a Wetland? Yes ✓ No ____
Hydric Soil Present?	Yes ✓	No ____	
Wetland Hydrology Present?	Yes ✓	No ____	

Remarks: Sample plot is in/in a flat, bottomland area where flows from an unnamed tributary to Lindero Creek (located off-site) spread out and pool. The majority of this wetland area is east of the subject property, but the western margin extends a few feet into it. This is a relatively small, surrounded by urban development patch of wetland/riparian habitat. Highly modified condition due to prior landform and channel modifications, which is now normal circumstances for the area

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 30' x 30')	Absolute % Cover	Dominant Species?	Indicator Status
1. Salix laevigata	30	Y	FACW
2. Populus fremontii ssp fremontii	50	Y	FAC
3. (synonymous w/ P. deltoides var. fremontii)			
4.			
	80	= Total Cover	

Sapling/Shrub Stratum (Plot size: ____)			
1.			
2.			
3.			
4.			
5.			
		= Total Cover	

Herb Stratum (Plot size: ____)			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
		= Total Cover	

Woody Vine Stratum (Plot size: ____)			
1.			
2.			
		= Total Cover	

% Bare Ground in Herb Stratum 0 % Cover of Biotic Crust 0

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:	
OBL species	x 1 =	
FACW species	x 2 =	
FAC species	x 3 =	
FACU species	x 4 =	
UPL species	x 5 =	
Column Totals: (A)		(B)

Prevalence Index = B/A = ____

Hydrophytic Vegetation Indicators:

- ✓ Dominance Test is >50%
- ___ Prevalence Index is ≤3.0[1]
- ___ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
- ___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes ✓ No ____

Remarks: Sample plot extends off-site over approx. 30' x 30' area & includes areas w/ essentially same wetland hydrology & vegetation. The wetland (and tributary) support a few large red willows, a large Fremont cottonwood, and several smaller red & arroyo willows, but not much understory vegetation. The canopies of the large trees extend over the subject property, but the trunks are rooted off-site. High covered) litter.

Photos 3540 - 3550

SOIL

Sampling Point: 1

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-10	10YR 2/1	100	—	—			Silt loam	Mix organic/mineral w/ many roots.
10-16	5Y 4/2	65	7.5YR 5/8	35	C	M	Silty clay	sticky, very smooth

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5) (LRR C)
- ___ 1 cm Muck (A9) (LRR D)
- ✓ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ✓ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Vernal Pools (F9)

Indicators for Problematic Hydric Soils[3]:

- ___ 1 cm Muck (A9) (LRR C)
- ___ 2 cm Muck (A10) (LRR B)
- ___ Reduced Vertic (F18)
- ___ Red Parent Material (TF2)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ✓ No ____

Remarks: Meets A11 & F3 indicators. Test pit excavated west of damaged chain link fence at the margin of the flooded/saturated area, near base of slope that forms the western bank of the stream/flooded area. 10-16 inch layer is a depleted clay layer w/ obvious redox concentrations. Dark soil color may obscure indicators in 0-10 in layer.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ✓ Surface Water (A1)
- ✓ High Water Table (A2)
- ✓ Saturation (A3)
- ___ Water Marks (B1) (Nonriverine)
- ___ Sediment Deposits (B2) (Nonriverine)
- ✓ Drift Deposits (B3) (Nonriverine)
- ___ Surface Soil Cracks (B6)
- ___ Inundation Visible on Aerial Imagery (B7)
- ✓ Water-Stained Leaves (B9)
- ___ Salt Crust (B11)
- ___ Biotic Crust (B12)
- ✓ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ___ Water Marks (B1) (Riverine)
- ✓ Sediment Deposits (B2) (Riverine)
- ✓ Drift Deposits (B3) (Riverine)
- ✓ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Shallow Aquitard (D3)
- ___ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes ✓ No ____ Depth (inches): 8" (in vicinity not at test pit location)

Water Table Present? Yes ✓ No ____ Depth (inches): 2" (at test pit)

Saturation Present? (includes capillary fringe) Yes ✓ No ____ Depth (inches): 0" (at test pit)

Wetland Hydrology Present? Yes ✓ No ____

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Area is contiguous with stream, just a wider area

Remarks: As stated, flows from tributary spread out and pool in broader, broad, flat area. Wetland also receives discharges (stormwater only) from a small on-site culvert outlet. The wetland area appears to be flooded regularly, as the tributary to Linden Creek likely flows year-round—at least intermittently due to nuisance flows from upstream development. Also ~~probable~~ high water table. Pacific tree frogs heard & seen in area. Aquatic invertebrates in pooled water.

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Agoura Landmark Light Industrial Project City/County: Agoura Hills Sampling Date: 3/10/16

Applicant/Owner: Agoura Landmark, LP State: CA Sampling Point: 2

Investigator(s): Jim Anderson, Envicon Corp. Section, Township, Range: SE¼ of 7.5' USGS Thousand Oaks quad

Landform (hillslope, terrace, etc.): lower streambank Local relief (concave, convex, none): Flat Slope (%): Prominent sloped bank

Subregion (LRR): C Lat: 34.146597 Long: -118.769806 Datum: NAD 83 (Conus)

Soil Map Unit Name: Urban land – Xerorthents, fill complex, 0-30% slopes NWI classification:

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ✓ No ____ (If no, explain in Remarks.)

Are Vegetation ____, Soil ____, or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes ✓ No ____

Are Vegetation ____, Soil ____, or Hydrology ____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes ✓	No ____	Is the Sampled Area within a Wetland? Yes ✓ No ____
Hydric Soil Present?	Yes ✓	No ____	
Wetland Hydrology Present?	Yes ✓	No ____	

Remarks: Sample plot evaluates flat, bottomland area including where flows from an unnamed tributary to Lindero Creek (off-site) spread out and pool. The bank is within the subject property. Highly modified conditions due to prior landform and channel modifications, which are now the normal circumstances.

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 30 sq ft)	Absolute % Cover	Dominant Species?	Indicator Status
1. Salix lasiolepis	30	Y	FACW
2. Populus fremontii ssp fremontii	50	Y	FAC
3. (Synonymous w/			
4. P. deltoides var. fremontii)			
	80	= Total Cover	

Sapling/Shrub Stratum (Plot size: ____)			
1.			
2.			
3.			
4.			
5.			
	____	= Total Cover	

Herb Stratum (Plot size: ____)			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
	____	= Total Cover	

Woody Vine Stratum (Plot size: ____)			
1.			
2.			
	____	= Total Cover	

% Bare Ground in Herb Stratum 0 % Cover of Biotic Crust 0

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species ____	x 1 = ____
FACW species ____	x 2 = ____
FAC species ____	x 3 = ____
FACU species ____	x 4 = ____
UPL species ____	x 5 = ____
Column Totals: ____ (A)	____ (B)

Prevalence Index = B/A = ____

Hydrophytic Vegetation Indicators:

✓ Dominance Test is >50%

___ Prevalence Index is ≤3.0[1]

___ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes ✓ No ____

Remarks: Sample plot extends off-site over approx 30 sq ft to include areas w/ essentially same wetland hydrology and vegetation. The wetland (and tributary) support a few large willows, a large fremont cottonwood, and several smaller red & arroyo willows, but not much understory vegetation (the canopies of the large trees extend over the subject property, but the trunks are located off-site). High litter cover.

Plots 3551-3558

SOIL

Sampling Point: 2

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-8	10YR 3/2	100					clay loam	
8-16	5Y 4/2	80	7.5YR 5/8	20	C	M	Silty clay	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5) (LRR C)
- ___ 1 cm Muck (A9) (LRR D)
- ✓ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ✓ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Vernal Pools (F9)

Indicators for Problematic Hydric Soils[3]:

- ___ 1 cm Muck (A9) (LRR C)
- ___ 2 cm Muck (A10) (LRR B)
- ___ Reduced Vertic (F18)
- ___ Red Parent Material (TF2)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: ___

Depth (inches): ___

Hydric Soil Present? Yes ✓ No ___

Remarks:

Test pit dug at toe of bank. Upper part of profile is not flooded or inundated by high water table so upland in characteristics. However, at greater depth (8-16 inches) silty clay layer is depleted matrix w/ many obvious redox concentrations. Some prairie willows noted in test pit.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ___ Surface Water (A1)
- ✓ High Water Table (A2)
- ✓ Saturation (A3)
- ___ Water Marks (B1) (Nonriverine)
- ___ Sediment Deposits (B2) (Nonriverine)
- ___ Drift Deposits (B3) (Nonriverine)
- ___ Surface Soil Cracks (B6)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Salt Crust (B11)
- ___ Biotic Crust (B12)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ___ Water Marks (B1) (Riverine)
- ___ Sediment Deposits (B2) (Riverine)
- ___ Drift Deposits (B3) (Riverine)
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Shallow Aquitard (D3)
- ___ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes ___ No ✓ Depth (inches): ___

Water Table Present? Yes ✓ No ___ Depth (inches): 12" at test pit

Saturation Present? (includes capillary fringe) Yes ✓ No ___ Depth (inches): 10" at test pit

0" at test pit but up to 5" in vicinity.

Wetland Hydrology Present? Yes ✓ No ___

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

Toe slope of bank has wetland hydrology based on high water table and presence of hydric soil indicator. Therefore lower slope of bank included in wetland area when delineated, as willows are rooted in bottomland as well as on lower slopes of banks here. Mid to upper slope of banks not included as wetland.

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Agoura Landmark Light Industry Project City/County: Agoura Hills Sampling Date: 3/10/16

Applicant/Owner: Agoura Landmark, LP State: CA Sampling Point: 3

Investigator(s): Jim Anderson, Senior Biologist Section, Township, Range: SE 1/4 of 7.51 USGS Thousand Oaks quad

Landform (hillslope, terrace, etc.): Environ. Comp. prior Graded area Local relief (concave, convex, none): Flat Slope (%): 3

Subregion (LRR): C Lat: 34.146833 Long: -118.770239 Datum: NAD83 (decimal)

Soil Map Unit Name: Urban Land – Xerothents, fill complex, 0-30% slopes NWI classification: —

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ✓ No ____ (If no, explain in Remarks.)

Are Vegetation ____, Soil ____, or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes ✓ No ____

Are Vegetation ____, Soil ____, or Hydrology ____ naturally problematic? (If needed, explain any answers in Remarks.) man-induced mesic condition

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes ____	No ✓	Is the Sampled Area within a Wetland? Yes ____ No ✓
Hydric Soil Present?	Yes ✓	No ____	
Wetland Hydrology Present?	Yes ✓	No ____	

Remarks: In relatively flat area at base of two artificial slopes including an off-site side-slope of the highway and an on-site berm. It appears that stormwater runoff and possibly irrigation water may accumulate temporarily in this area, although it doesn't have appearance of wetland but rather a man-induced mesic area.

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: ____)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
	____ = Total Cover		
Sapling/Shrub Stratum (Plot size: 40 sq ft)			
1. Salix exigua	3	N	FACW
2. Baccharis pilularis	15	Y	UPL
3.			
4.			
5.			
	18 = Total Cover		
Herb Stratum (Plot size: 40 sq ft.)			
1. Juncus mexicanus	28	Y	FACW
2. Carduus pycnocephalus	7	N	UPL
3. Galium aparine	2	N	FACU
4. Rumex crispus	<1	N	FAC
5. Cirsium vulgare	<1	N	FACU
6. Bromus madritensis rubens	3	N	UPL
7.			
8.			
	40 = Total Cover		
Woody Vine Stratum (Plot size: ____)			
1.			
2.			
	____ = Total Cover		

% Bare Ground in Herb Stratum 0 % Cover of Biotic Crust 0

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 50 (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:	
OBL species 0	x 1 =	0
FACW species 31	x 2 =	62
FAC species <1	x 3 =	1
FACU species 2+	x 4 =	8+
UPL species 25	x 5 =	125
Column Totals: 58 (A)		196 (B)

Prevalence Index = B/A = 3.38

Hydrophytic Vegetation Indicators:

- ___ Dominance Test is >50%
- ___ Prevalence Index is ≤3.0[1]
- ___ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
- ___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes ____ No ✓

Remarks: Plot is coincident with extent of a patch of Juncus mexicanus. Mix of upland and wetland indicators. There are similar patches of J. mexicanus elsewhere onsite where there is clearly no wetland hydrology, but this patch was evaluated because of position at base of slopes and also because of the presence of a small # of hydrophytes.

Photos 3559-65

SOIL

Sampling Point: 3

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox %	Type[1]	Loc[2]	Texture	Remarks
0-4	10YR 4/6	80	7.5YR 6/8	20	C,CS	M	Silty clay loam	
4-16	10YR 3/2	75	7.5YR 6/8	25	C,CS	M	Silty clay	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5) (LRR C)
- ___ 1 cm Muck (A9) (LRR D)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ✓ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Vernal Pools (F9)

Indicators for Problematic Hydric Soils[3]:

- ___ 1 cm Muck (A9) (LRR C)
- ___ 2 cm Muck (A10) (LRR B)
- ___ Reduced Vertic (F18)
- ___ Red Parent Material (TF2)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):
Type: ______
Depth (inches): ______

(Meets Indicator) Hydric Soil Present? Yes ✓ No ___

Remarks: Meets F6 indicator although possibly relictual as reports from 2005 describe a condition where more water ~~was~~ may have been flowing into this area. Regardless, redox a result of man-induced condition as consequence of land modifications and possibly irrigation as well

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1) (Nonriverine)
- ___ Sediment Deposits (B2) (Nonriverine)
- ___ Drift Deposits (B3) (Nonriverine)
- ___ Surface Soil Cracks (B6)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Salt Crust (B11)
- ___ Biotic Crust (B12)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ___ Water Marks (B1) (Riverine)
- ✓ Sediment Deposits (B2) (Riverine) erosion deposits
- ___ Drift Deposits (B3) (Riverine)
- ___ Drainage Patterns (B10) erosional pattern
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Shallow Aquitard (D3)
- ___ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes ___ No ✓ Depth (inches): ______
Water Table Present? Yes ___ No ✓ Depth (inches): ______
Saturation Present? (includes capillary fringe) Yes ___ No ✓ Depth (inches): ______

Inferred from presence of redox that wetland hydrology of at least 7 days of ponding exists here although duration intermittent

Wetland Hydrology Present? Yes ✓ No ___

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks: No evidence of stream, OHWM, or even low bank in this area. Man-induced condition. Stormwater runoff from side-slope of highways and possibly irrigation water may accumulate in this area. Erosion pattern evident on sideslope & sandy erosional deposits from sideslope in sample plot. Sprinklers on side-slope as well as within and adjacent to pl[ot]

Site visit on 3/11/16 following 0.5 inches of rain and there was no surface water in this area. Duration of [illegible]

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Agoura Landmark Light Industrial Project City/County: Agoura Hills Sampling Date: 3/10/16

Applicant/Owner: Agoura Landmark, LC State: CA Sampling Point: 4

Investigator(s): Jim Anderson, Envicom Corp Section, Township, Range: SE¼ of 7.5' USGS Thousand Oaks quad

Landform (hillslope, terrace, etc.): previously graded area Local relief (concave, convex, none): Flat Slope (%): 3

Subregion (LRR): C Lat: 34.146913 Long: -118.770202 Datum: NAD83 (conus)

Soil Map Unit Name: Urban land – xerothents, fill complex, 0-30% slope NWI classification: —

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ✓ No ____ (If no, explain in Remarks.)

Are Vegetation ____, Soil ____, or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes ✓ No ____

Are Vegetation ____, Soil ____, or Hydrology ____ naturally problematic? (If needed, explain any answers in Remarks.) man-induced mesic condition

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes ____	No ✓	Is the Sampled Area within a Wetland? Yes ____ No ✓
Hydric Soil Present?	Yes ✓	No ____	
Wetland Hydrology Present?	Yes ____	No ✓	

Remarks: In relatively flat area at base of two artificial slopes including an off-site side slope off 101 Highway and an off-site berm. Runoff may accumulate in this area and there are sprinklers within and adjacent to sample plot. Does not have appearance of wetland but rather man-induced mesic area.

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: ____)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
	____ = Total Cover		
Sapling/Shrub Stratum (Plot size: 40 sq ft)			
1. Salix exigua	3	Y	FACW
2.			
3.			
4.			
5.			
	3 = Total Cover		
Herb Stratum (Plot size: 40 sq ft)			
1. Bromus madritensis	15	N	UPL
2. Carduus pycnocephalus	63	Y	UPL
3. Galium aparine	2	N	FACU
4. Brassica nigra	10	N	UPL
5.			
6.			
7.			
8.			
	90 = Total Cover		
Woody Vine Stratum (Plot size: ____)			
1.			
2.			
	____ = Total Cover		

% Bare Ground in Herb Stratum 0 % Cover of Biotic Crust 0

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 50 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	3	x 2 =	6
FAC species	0	x 3 =	0
FACU species	2	x 4 =	8
UPL species	88	x 5 =	440
Column Totals:	93 (A)		454 (B)

Prevalence Index = B/A = 4.88

Hydrophytic Vegetation Indicators:

___ Dominance Test is >50%

___ Prevalence Index is ≤3.0[1]

___ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes ____ No ✓

Remarks:

Vegetation primarily upland but area evaluated due to presence of small amounts of narrowleaf willow at base of artificial slopes.

Photos 3566 - 3573

SOIL

Sampling Point: 4

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-4	10YR 4/4	93	7.5YR 6/8	8	C	CS	M	silty clay loam
4-16	10YR 3/2	95	7.5YR 6/8	5	C	CS	M	silty clay

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5) (LRR C)
- ___ 1 cm Muck (A9) (LRR D)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ✓ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Vernal Pools (F9)

Indicators for Problematic Hydric Soils[3]:

- ___ 1 cm Muck (A9) (LRR C)
- ___ 2 cm Muck (A10) (LRR B)
- ___ Reduced Vertic (F18)
- ___ Red Parent Material (TF2)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Meets indicator

Hydric Soil Present? Yes ✓ No ___

Remarks:

Meets F6 indicator although possibly relictual as reports from 2005 describe condition where mine runoff (concentrated) was apparently flowing into this area. Regardless, redox is a result of man-induced condition as consequence of land modifications and possibly irrigation.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required: check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1) (Nonriverine)
- ___ Sediment Deposits (B2) (Nonriverine)
- ___ Drift Deposits (B3) (Nonriverine)
- ___ Surface Soil Cracks (B6)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Salt Crust (B11)
- ___ Biotic Crust (B12)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ___ Water Marks (B1) (Riverine)
- ___ Sediment Deposits (B2) (Riverine)
- ___ Drift Deposits (B3) (Riverine)
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Shallow Aquitard (D3)
- ___ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes ___ No ✓ Depth (inches): _____

Water Table Present? Yes ___ No ✓ Depth (inches): _____

Saturation Present? (includes capillary fringe) Yes ___ No ✓ Depth (inches): _____

Wetland Hydrology Present? Yes ___ No ✓

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks: No evidence of stream, ditch, or small bank in this area. No erosional features adjacent to sample plot on side slope like found at Sample plot #3. And no sandy erosional deposits. Sprinklers within plot and in vicinity. Man-induced condition. No pooling on 3/11/16 following 0.5-inch rain event. Some runoff may accumulate here but unknown if and duration of pooling occurs.

Appendix 4
Vascular Plants Observed
February 25 & March 10, 2016

* indicates a non-native or introduced species

GROUP **Family** ***Scientific Name***	**Common Name**
CONIFERS	
Pinaceae (Pine Family)	
**Pinus* sp.	pine
FLOWERING PLANTS-DICOTS	
Adoxaceae (Muskroot Family)	
Sambucus nigra ssp. *caerulea*	blue elderberry
Anacardiaceae (Sumac or Cashew Family)	
Malosma laurina	laurel sumac
**Schinus molle*	Peruvian pepper tree
Apocynaceae (Dogbane Family)	
Asclepias fascicularis	narrowleaf milkweed
**Nerium oleander*	oleander
Araliaceae (Ginseng Family)	
**Hedera helix*	English ivy
Asteraceae (Sunflower family)	
Ambrosia psilostachys	western ragweed
Baccharis pilularis	coyote brush
**Carduus pycnocephalus*	Italian thistle
**Centaurea melitensis*	tocalote
**Cirsium vulgare*	bull thistle
Corethrogyne filaginifolia	California aster
**Erigeron bonariensis*	Buenos Aires horseweed
Erigeron canadensis	Canadian horseweed
Helianthus annuus	common wild sunflower
**Helminthotheca echioides*	bristly oxtongue
Heterotheca grandiflora	telegraph weed
**Hypochaeris glabra*	smooth cat's ear
**Lactuca serriola*	prickly lettuce
Malacothrix saxatilis	cliff aster
**Medicago polymorpha*	bur clover
Pseudognaphalium californicum	California everlasting
**Sonchus asper*	prickly sowthistle
Boraginaceae (Borage or Waterleaf Family)	
Amsinckia intermedia	common fiddleneck
Brassicaceae (Mustard Family)	
**Brassica nigra*	black mustard
**Hirschfeldia incana*	hoary mustard
**Sisymbrium irio*	London rocket
Caprifoliaceae (Honeysuckle Family)	
Lonicera subspicata var. *denudata*	chaparral honeysuckle
Chenopodiaceae (Goosefoot Family)	
**Chenopodium* sp. 1	goosefoot
**Chenopodium* sp. 2	goosefoot
**Salsola australis*	Russian thistle

GROUP **Family** ***Scientific Name***	**Common Name**
Cucurbitaceae (Gourd Family)	
Marah macrocarpa	wild cucumber
Euphorbiaceae (Spurge Family)	
**Euphorbia* sp.	prostrate spurge
Fabaceae (Legume Family)	
Lupinus succulentus	succulent lupine
**Medicago polymorpha*	bur clover
Fagaceae (Oak Family)	
Quercus agrifolia	coast live oak
Quercus lobata	valley oak
Geraniaceae (Geranium Family)	
**Erodium cicutarium*	red-stemmed filaree
Grossulariaceae (Gooseberry Family)	
Ribes malvaceum	chaparral currant
Lamiaceae (Mint Family)	
**Marrubium vulgare*	horehound
Malvaceae (Mallow Family)	
**Malva parvifolia*	cheeseweed
Montiaceae (Miner's Lettuce Family)	
Calandrinia ciliata	red maids
Myrtaceae (Myrtle Family)	
**Eucalyptus camaldulensis*	red gum
**Eucalyptus sp.*	gum
Oleaceae (Olive Family)	
**Olea europaeae*	European olive
Polygonaceae (Buckwheat Family)	
**Polygonum aviculare* ssp. *depressum*	common knotweed
**Rumex crispus*	curly dock
Rhamnaceae (Buckthorn Family)	
Frangula californica	coffee berry
Rhamnus californica	hollyleaf red berry
Rosaceae (Rose Family)	
Heteromeles arbutifolia	toyon
Prunus ilicifolia	hollyleaf cherry
Rubiaceae (Madder Family)	
Galium aparine	annual bedstraw
Galium nuttallii	San Diego bedstraw
Salicaceae (Willow Family)	
Populus fremontii	Fremont cottonwood
Salix exigua	narrowleaf willow
Salix laevigata	red willow
Simaroubaceae (Quassia or Simarouba Family)	
**Ailanthus altissima*	tree of heaven

GROUP **Family** ***Scientific Name***	**Common Name**
Solanaceae (Nightshade family)	
Solanum xanti	purple nightshade
FLOWERING PLANTS-MONOCOTS	
Arecaceae (Palm Family)	
**Washingtonia robusta*	Mexican fan palm
Juncaceae (Rush Family)	
Juncus mexicanus	Mexican rush
Poaceae (Grass Family)	
**Bromus diandrus*	ripgut brome
**Bromus madritensis* ssp. *rubens*	red brome
**Cynodon dactylon*	Bermuda grass
**Hordeum murinum*	foxtail barley
**Pennesetum clandestinum*	Kikuyu grass
**Schismus barbatus*	Mediterranean grass

Appendix 5
Potential for Occurrence of Special-Status Plant Species

Common Name (*Scientific Name)*	Form	Blooming Period	Primary Habitat Associations	Status (Federal/State /CNPS)	Potential to Occur (high, moderate, low, none)
Agoura Hills dudleya (*Dudleya cymosa* ssp. *agourensis*)	perennial herb	May - June	Rocky, volcanic breccia in chaparral and cismontane woodland at elevations between 200 to 500 meters.	FT/1B.2	None. Site does not contain suitable habitat for this species.
Blochman's dudleya (*Dudleya blochmaniae* ssp. *blochmaniae*)	perennial herb	April - June	Open, rocky slopes; often in shallow clays over serpentine or in rocky areas with little soil; coastal bluff scrub, chaparral, coastal scrub, and valley and foothill grassland at elevations between 5 an 450 meters.	1B.1	None. Site does not contain suitable habitat for this species.
Braunton's milkvetch (*Astragalus brauntonii*)	perennial herb	January – August	Recent burns or disturbed areas, usually sandstone with carbonate layers in closed-cone coniferous forest, chaparral, coastal scrub, and valley and foothill grassland at elevations between 4 and 640 meters. A soil specialist in saline, somewhat alkaline soils high in calcium, manganese, with some potassium.	FE/1B.1	None. Site does not contain suitable habitat for this species.
California orcutt grass (*Orcuttia californica*)	annual herb	April – August	Vernal pools at elevations between 15 an 660 meters.	FE/CE/1B.1	None. Suitable vernal pool habitats are absent.
California screw moss (*Tortula californica*)	moss	--	Sandy soils in chenopod scrub and valley and foothill grassland at elevations between 10 and 1,460 meters.	1B.2	None. Site does not contain suitable habitat for this species.

Common Name (*Scientific Name)*	Form	Blooming Period	Primary Habitat Associations	Status (Federal/State /CNPS)	Potential to Occur (high, moderate, low, none)
Chaparral nolina (*Nolina cismontana*)	perennial evergreen shrub	May – July	Sandstone or gabbro substrates in chaparral and coastal scrub at elevations between 140 and 1275 meters.	1B.2	None. Site does not contain suitable habitat for this species.
Chaparral ragwort (*Senecio aphanactis*)	annual herb	January – April	Chaparral, cismontane woodland, and coastal scrub habitats at elevations between 15 and 800 meters, sometimes on alkaline soils.	2B.2	None. Site does not contain suitable habitat for this species.
Conejo buckwheat (*Eriogonum crocatum*)	perennial herb	April - July	Conejo volcanic outcrops in rocky chaparral, coastal scrub, and valley and foothill grassland habitats at elevations between 50 and 580 meters.	CR/1B.2	None. Site does not contain suitable habitat for this species.
Conejo dudleya (*Dudleya parva*)	perennial herb	May - June	Rocky or gravelly areas on clay or volcanic substrates in coastal scrub and valley and foothill grassland habitats at elevations between 60 and 450 meters.	FT/1B.2	None. Site does not contain suitable habitat for this species. Site is outside the known range of this species, which does not occur in the Santa Monica Mountains.
Coulter's goldfields (*Lasthenia glabrata* ssp. *coulteri*)	annual herb	February - June	Found in coastal salt marshes and swamps, playas, and vernal pools at elevations between 1 and 1220 meters.	1B.1	None. Site does not contain suitable habitat for this species.
Coulter's saltbush (*Atriplex coulteri*)	perennial herb	March – October	Alkaline or clay soils in coastal bluff scrub, coastal dunes, coastal scrub, and valley and foothill grassland habitats at elevations between 3 and 460 meters.	1B.2	None. Site does not contain suitable habitat for this species.

Common Name (*Scientific Name)*	Form	Blooming Period	Primary Habitat Associations	Status (Federal/State /CNPS)	Potential to Occur (high, moderate, low, none)
Davidson's saltscale (*Atriplex serenana* var. *davidsonii*)	annual herb	April – October	Alkaline soils in coastal bluff scrub and coastal scrub at elevations between 10 and 200 meters.	1B.2	None. Site does not contain suitable habitat for this species.
Decumbent goldenbush (*Isocoma menziesii* var. *decumbens*)	perennial shrub	April – November	Chaparral and sandy (often disturbed) areas in coastal scrub at elevations between 10 and 135 meters.	1B.2	None. Site does not contain suitable habitat for this species. A species of coastal areas and California islands with very limited number of occurrences in Ventura and Los Angeles County, all of which are far from the project site. Based on Consortium of California Herbaria records, the site is outside the known range of this species.
Dune larkspur (*Delphinium parryi* ssp. *blochmaniae*)	perennial herb	April – May	Maritime chaparral and coastal dunes at elevations between 0 and 200 meters.	1B.2	None. Site does not contain suitable habitat for this species.
Gerry's curly-leaved monardella (*Monardella sinuata* ssp. *gerryi*)	annual herb	April – June	Sandy openings in coastal scrub at elevations between 150 and 245 meters.	1B.1	None. Site does not contain suitable habitat for this species. Only one known occurrence of this newly documented species, which is in the Camarillo Hills. Site is outside of the current range and also appears to be outside of the historical range of this species.

Common Name (*Scientific Name)*	Form	Blooming Period	Primary Habitat Associations	Status (Federal/State /CNPS)	Potential to Occur (high, moderate, low, none)
Late-flowered mariposa lily (*Calochortus fimbriatus*)	perennial bulbiferous herb	June – August	Chaparral, cismontane woodland, and riparian woodland (often on serpentinite).	1B.3	None. Site does not contain suitable habitat for this species. Based on Consortium of California Herbaria records, the site is outside the known range of this species.
Lyon's pentachaeta (*Pentachaeta lyonii*)	annual herb	March – August	Rocky, clay substrates in coastal scrub, valley and foothill grassland, and openings in chaparral at elevations between 30 and 630 meters.	FE/CE/1B.1	None. Site does not contain suitable habitat for this species.
Malibu baccharis (*Baccharis malibuensis*)	perennial deciduous shrub	August	Chaparral, cismontane woodland, coastal scrub, and riparian woodland at elevations between 150 and 305 meters.	1B.1	None. Site does not contain suitable habitat for this species.
Many-stemmed dudleya (*Dudleya multicaulis*)	perennial herb	April – July	Chaparral, coastal scrub, and valley and foothill grassland at elevations between 15 and 790 meters, in heavy, often clayey soils or grassy slopes.	1B.2	None. Site does not contain suitable habitat for this species. Also, based on Consortium of California Herbaria records, the site is outside the known range of this species.
Marcescent dudleya (*Dudleya cymosa* ssp. *marcescens*)	perennial herb	April – July	On sheer rock surfaces and rocky volcanic cliffs in chaparral at elevations between 150 and 520 meters.	FT/CR/1B.2	None. Site does not contain suitable habitat for this species.
Mesa horkelia (*Horkelia cuneata* var. *puberula*)	perennial herb	February - September	Sandy or gravelly substrates in maritime chaparral, cismontane woodland, and coastal scrub at elevations between 70 and 810 meters.	1B.1	None. Site does not contain suitable habitat for this species.

Common Name (*Scientific Name)*	Form	Blooming Period	Primary Habitat Associations	Status (Federal/State /CNPS)	Potential to Occur (high, moderate, low, none)
Ojai navarretia (*Navarretia ojaiensis*)	annual herb	May – July	Valley and foothill grassland and openings in chaparral and coastal scrub at elevations between 275 and 620 meters.	1B.1	None. Site is too disturbed for any reasonable potential for occurrence.
Orcutt's pincushion (*Chaenactis glabriuscula* var. *orcuttiana*)	annual herb	January – August	Sandy soils in coastal bluff scrub and coastal dunes at elevations between 3 and 100 meters.	1B.1	None. A coastal species. Site does not contain suitable habitat for this species.
Palmer's grapplinghook (*Harpagonella palmeri*)	annual herb	March – May	Clay soils in chaparral, coastal scrub, and valley and foothill grassland at elevations between 20 and 955 meters.	4.2	None. Based on Consortium of California Herbaria records, the site is outside the known range of this species.
Parry's spineflower (*Chorizanthe parryi* var. *parryi*)	annual herb	April – June	Sandy or rocky openings in chaparral, cismontane woodland, coastal scrub, and valley and foothill grassland at elevations between 40 and 1705 meters.	1B.1	None. Site does not contain suitable habitat for this species. Project site is outside known range of this species.
Plummer's mariposa lily (*Calochortus plummerae*)	perennial bulbiferous herb	May – July	Occurs on rocky or sandy sites, usually of granitic or alluvial material in chaparral, cismontane woodland, coastal scrub, lower montane coniferous forest, and valley and foothill grassland at elevations between 100 and 1700 meters.	4.2	None. Site does not contain suitable habitat for this species.
Round-leaved filaree (*California macrophylla*)	annual herb	March – May	Cismontane woodland and valley and foothill grassland on clay soils at elevations between 15 and 1200 meters.	1B.1	None. Although may occur in non-native dominated grassland habitats, site is too disturbed for any reasonable potential for occurrence.

Common Name (*Scientific Name)*	Form	Blooming Period	Primary Habitat Associations	Status (Federal/State /CNPS)	Potential to Occur (high, moderate, low, none)
San Fernando Valley spineflower (*Chorizanthe parryi* var. *fernandina*)	annual herb	April - July	Sandy soils in coastal scrub and valley and foothill grassland at elevations between 3 and 1035 meters.	FC/CE/1B.1	None. Site does not contain suitable habitat for this species. Also, only known from three (3) occurrences, none of which are the Santa Monica Mountains.
Santa Monica dudleya (*Dudleya cymosa* ssp. *ovatifolia*)	perennial herb	March – June	Volcanic or sedimentary, rocky substrates in chaparral and coastal scrub at elevations between 150 and 1675 meters.	FT/1B.2	None. Site does not contain suitable habitat for this species.
Santa Susana tarplant (*Deinandra minthornii)*	perennial deciduous shrub	July - November	Rocky sandstone habitats in chaparral and coastal scrub at elevations between 280 and 760 meters.	CR/1B.2	None. Site does not contain suitable habitat for this species.
Slender mariposa-lily (*Calochortus clavatus* var. *gracilis*)	perennial bulbiferous herb	March - June	Shaded foothill canyons in chaparral, coastal scrub, and valley and foothill grassland at elevations between 320 and 1000 meters.	1B.2	None. Site does not contain suitable habitat for this species. Also, although there are Consortium of California Herbaria records for this species for the Santa Monica Mountains, but it is now recognized that this species does not occur in the Santa Monica Mountains area.
Slender-horned spineflower (*Dodecahema leptoceras*)	annual herb	April – June	Flood deposited terraces and washes in chaparral, cismontane woodland, and coastal scrub (alluvial fan sage scrub) at elevations between 200 and 760 meters.	FE/CE/1B.1	None. Site does not contain suitable habitat for this species.
Sonoran maiden fern (*Thelypteris puberula* var. *sonorensis*)	perennial rhizomatous herb	January – September	Meadows and seeps along streams and seepage areas at elevations between 50 and 610 meters.	2B.2	None. Site does not contain suitable habitat for this species.

Common Name (*Scientific Name)*	Form	Blooming Period	Primary Habitat Associations	Status (Federal/State /CNPS)	Potential to Occur (high, moderate, low, none)
Southern curly-leaved monardella (*Monardella sinuata* ssp. *sinuata*)	annual herb	April – September	Sandy soils in chaparral, cismontane woodlands, coastal dunes, and openings in coastal scrub at elevations between 0 and 300 meters.	1B.2	None. Site does not contain suitable habitat for this species. Also, site appears to be outside of its current and historical range.
Southern tarplant (*Centromadia parryi* ssp. *australis*)	annual herb	May - November	Margins of marshes and swamps, vernally mesic valley and foothill grassland, and sometimes on vernal pools at elevations between 0 and 425 meters.	1B.1	None. Site does not contain suitable habitat for this species.
Ventura marsh milkvetch (*Astragalus pycnostachyus* var. *lanosissimus*)	perennial herb	June – October	Coastal dunes, coastal scrub, edges of coastal salt and brackish marshes and swamps at elevations between 1 and 35 meters.	FE/CE/1B.1	None. Site does not contain suitable habitat for this species. An extremely rare species of coastal areas.
Verity's dudleya (*Dudleya verityi*)	perennial herb	May – June	Volcanic, rocky substrates in chaparral, cismontane woodland, and coastal scrub at elevations between 60 and 120 meters.	FT/1B.1	None. Site does not contain suitable habitat for this species. Also, species has a limited range and distribution. Site is outside the known range of this species, which occurs in western Santa Monica Mountains.
White rabbit-tobacco (*Pseudo-gnaphalium leucocephalum*)	perennial herb	July – December	Sandy and gravelly soils in chaparral, cismontane, coastal scrub and riparian woodland at eleveations between 0 and 2,100 meters.	2B.2	None. Site does not contain suitable habitat for this species.
White-veined monardella (*Monardella hypoleuca* ssp. *hypoleuca*)	perennial herb	April – December	Chaparral and cismontane woodland at elevations between 50 and 1,525 meters.	1B.3	None. Site does not contain suitable habitat for this species.

Common Name (*Scientific Name)*	Form	Blooming Period	Primary Habitat Associations	Status (Federal/State /CNPS)	Potential to Occur (high, moderate, low, none)

The following status codes are applicable to special-status plants

Federally Protected Species

FE (Federal Endangered): A species that is in danger of extinction throughout all or a significant portion of its range.

FT (Federal Threatened): A species that is likely to become endangered in the foreseeable future.

FC (Federal Candidate): A species for which USFWS has sufficient information on its biological status and threats to propose it as Endangered or Threatened under the Endangered Species Act (ESA), but for which development of a proposed listing regulation is precluded by other higher priority listing activities.

State Protected Species

CE (California Endangered): A native species or subspecies which is in serious danger of becoming extinct throughout all, or a significant portion, of its range due to one or more causes, including loss of habitat, change in habitat, overexploitation, predation, competition, or disease.

CT (California Threatened): A native species or subspecies that, although not presently threatened with extinction, is likely to become an endangered species in the foreseeable future in the absence of the special protection and management efforts required by this chapter. Any animal determined by the commission as "Rare" on or before January 1, 1985, is a "Threatened species."

CR (California Rare): A species, subspecies, or variety of plant is Rare under the Native Plant Protection Act when, although not presently threatened with extinction, it is in such small numbers throughout its range that it may become endangered if its present environment worsens. Animals are no longer listed as Rare; all animals listed as Rare before 1985 have been listed as Threatened.

California Native Plant Society (CNPS) Rare Plant Rank

CRPR 1A: Plants presumed extinct in California and either rare or extinct elsewhere.

CRPR 1B: Plants rare, threatened, or endangered in California and elsewhere.

CRPR 2A: Plants presumed extirpated in California, but more common elsewhere.

CRPR 2B: Plants rare, threatened, or endangered in California, but more common elsewhere.

CRPR 3: A review list for plants for which there is inadequate information to assign them to one of the other lists or to reject them.

CRPR 4: A watch list for plants that are of limited distribution in California.

CNPS Threat Rank

The CNPS Threat Rank is an extension added onto the California Rare Plant Rank and designates the level of endangerment, as follow:

- 0.1-Seriously threatened in California (over 80% of occurrences threatened / high degree and immediacy of threat).
- 0.2-Fairly threatened in California (20-80% occurrences threatened / moderate degree and immediacy of threat).
- 0.3-Not very threatened in California (<20% of occurrences threatened / low degree and immediacy of threat or no current threats known).

Appendix 6

Vertebrate Wildlife Species Observed*
February 25 and March 10, 2016

* by direct observation, sign, or vocalization

Common Name	*Scientific Name*
AMPHIBIANS	
Pacific tree frog	*Hyla regilla*
REPTILES	
side-blotched lizard	*Uta stansburiana*
western fence lizard	*Sceloporus occidentalis*
BIRDS	
acorn woodpecker	*Melanerpes formicivorus*
American crow	*Corvus brachyrhynchos*
Allen's hummingbird	*Selasphorus rufus*
American robin	*Turdus migratorius*
Anna's hummingbird	*Calypte anna*
Bewick's wren	*Thryomanes bewickii*
bushtit	*Psaltriparus minimus*
California towhee	*Pipilo crissalis*
hermit thrush	*Catharus guttatus*
house finch	*Carpodacus mexicanus*
mourning dove	*Zenaida macroura*
northern flicker	*Colaptes auratus*
Nuttall's woodpecker	*Picoides nuttallii*
oak titmouse	*Baeolophus inornatus*
red-breasted sapsucker	*Sphyrapicus ruber*
song sparrow	*Melospiza melodia*
white-crowned sparrow	*Zonotrichia leucophrys*
yellow-rumped warbler	*Setophaga coronata*
MAMMALS	
Botta's pocket gopher	*Thomomys bottae*
California ground squirrel	*Spermophilus beecheyi*
large-eared woodrat	*Neotoma macrotis*

Appendix 7
Potential for Occurrence of Special-Status Wildlife Species

Common Name (*Scientific Name*)	Status (Federal/State)	Primary Habitat Associations	Status on Site / Potential to Occur (Observed, Potentially Present, Presumed Absent, Absent)
Invertebrates			
Monarch - California overwintering populations (*Danaus plexippus pop. 1*)	SA (Overwintering sites are sensitive)	Roosting in large trees, primarily Eucalyptus, in winter along the coast from northern Mendocino County to Ensenada, Baja California Norte (Hogue 1993). Roost sites reported at several coastal locations (CDFW 2016).	**Presumed absent.** There are eucalyptus groves at the project site, but due to its inland location it is not a potential overwintering roost site for this species.
Riverside fairy shrimp (*Streptocephalus woottoni*)	FE/--	Endemic to western Riverside, Orange, and San Diego Counties in areas of tectonic swales/earth slump basins in grassland and coastal sage scrub. Inhabits seasonally astatic pools filled by winter/spring rains. Hatches in warm water later in season. Also known from Tierra Rejada pool preserve in Thousand Oaks, Ventura County.	**Presumed absent**. There are no naturally occurring seasonal pools that could be suitable habitat for this species at the project site.
Fish			
There is no potential for occurrence of special-status fishes at the site due to lack of suitable habitat.			
Amphibians			
Arroyo toad (*Anaxyrus californicus*)	FE/SSC	Semi-arid regions near washes or intermittent streams, including valley-foothill and desert riparian, desert wash, etc. Rivers with sandy banks, willows, cottonwoods, and sycamores; loose, gravelly areas of streams in drier parts of range.	**Presumed absent.** The stream and wetland habitats near the northeastern corner of the project site are not suitable breeding habitat for this species. Also, not known from Santa Monica Mountains.
California red-legged frog (*Rana draytonii*)	FT/SSC	Lowlands and foothills in or near permanent source of deep water with dense shrubby or emergent vegetation. Requires 11-20 weeks of permanent water for larval development. Must have access to estivation habitat. Nearest reported location: Simi Hills—Ahmanson Ranch (Now Upper Las Virgenes Open Space Preserve), East Las Virgenes Creek. Recently re-introduced to certain watersheds in the Santa Monica Mountains.	**Presumed absent**. The stream and wetland habitats near the northeastern corner of the project site are not suitable breeding habitat for this species. Not expected due to the highly modified condition of the adjacent tributary and Lindero Creek.
Western spadefoot (*Spea hammondii*)	--/SSC	Almost completely terrestrial, entering water only to breed. Occurs primarily in grassland habitats, but can be found in valley-foothill hardwood woodlands. Vernal pools are essential for breeding and egg-laying. Found in cismontane	**Presumed absent.** Site lacks suitable breeding habitat. Also, this species is not known to occur in the Santa Monica Mountains.

Common Name (*Scientific Name*)	Status (Federal/State)	Primary Habitat Associations	Status on Site / Potential to Occur (Observed, Potentially Present, Presumed Absent, Absent)
		woodland, coastal scrub, valley and foothills grassland, vernal pool, and wetlands.	
Reptiles			
California mountain kingsnake (San Diego population) (*Lampropeltis zonata pulchra*)	--/SSC	Prefers canyon bottoms, but wanders to adjacent coastal sage, valley oak savanna, or southern oak woodland.	**Presumed absent.** Site lacks suitable habitat for this species.
Coast horned lizard (*Phrynosoma blainvillii*)	--/SSC	Frequents a wide variety of habitats, most common in lowlands along sandy washes with scattered low bushes. Open areas for sunning, bushes for cover, patches of loose soil for burial, and abundant supply of ants and other insects.	**Presumed absent**. Site lacks suitable habitat for this species.
Coast patch-nosed snake (*Salvadora haxalepis virgultea*)	--/SSC	Brushy or shrubby vegetation in coastal southern California. Require small mammal burrows for refuge and overwintering sites. Inhabits semi-arid brushy areas and chaparral in canyons, rocky hillsides, and plains from sea level to around 7,000 ft.	**Presumed absent.** Site lacks suitable habitat for this species.
Silvery legless lizard (*Anniella pulchra*)	--/SSC	Sandy areas within other habitats; also in litter under live oaks. Soil moisture is essential.	**Presumed absent.** Not expected due to history of ground disturbance at the site.
Two-striped garter snake (*Thamnophis hammondii*)	--/SSC	Coastal California from vicinity of Salinas to northwest Baja California. From sea to about 7,000 feet elevation. Highly aquatic, found in or near permanent fresh water. Often along streams with rocky beds and riparian growth.	**Presumed absent.** The adjacent tributary to Lindero Creek is highly modified and runs in subterranean culverts for long distances upstream and downstream from the project site. Therefore, this species is presumed absent due to lack of suitable habitat.
Western pond turtle (*Actinemys marmorata*)	--/SSC	Inhabits permanently or nearly permanent bodies of water in many habitat types, below 6,000 feet in elevation. Requires basking sites, such as partially submerged logs, vegetation mats, or open mud banks. Needs suitable nesting sites with a proper thermal and hydric environment for incubation of the eggs. Nests sites are typically located on relatively dry, exposed slopes within 200 meters of the aquatic site, and usually much closer.	**Presumed absent.** The adjacent tributary to Lindero Creek is highly modified and runs in subterranean culverts for long distances upstream and downstream from the project site. Therefore, this species is presumed absent due to lack of suitable habitat.

Common Name (*Scientific Name*)	Status (Federal/State)	Primary Habitat Associations	Status on Site / Potential to Occur (Observed, Potentially Present, Presumed Absent, Absent)
Birds			
American peregrine falcon (*Falco peregrinus anatum*) (nesting)	--/CFP	Uncommon but widespread year-round resident in the Los Angeles region, with some influx of birds during migration (Garrett, K. et al, 2006). Nests near wetlands, lakes, rivers, or other water, on cliffs, banks, dunes, mounds, also man-made structures. Nest consists of a scrape on a depression or ledge in an open site.	**Presumed absent.**
Bank swallow (*Riparian riparia*) (nesting)	--/CT	Colonial nester; nests primarily in riparian and other lowland habitats west of the desert. Requires vertical banks/cliffs with fine-textured/sandy soils near streams, rivers, lakes, ocean to dig nest hole (CDFW 2016). Very uncommon spring transient and rare fall transient, and casual winter transient along the coast, formerly a fairly common summer resident, now virtually extirpated as a breeder in the region (Garrett and Dunn 1981).	**Presumed absent.**
Black swift (*Cypseloides niger*) (nesting)	--/SSC	Nests in moist crevice or cave on sea cliffs above the surf, or on cliffs behind, or adjacent to, waterfalls in deep canyons. Forages widely over many habitats (Zeiner et al. 1990b). Rare and irregular transient through coastal district, nesting at a few steep waterfall locations in the San Gabriel, San Bernardino, and San Jacinto mountains (Garrett and Dunn 1981).	**Presumed absent.**
Burrowing owl (*Athene cunicularia*) (burrow sites and some wintering sites)	--/SSC	Open, dry annual or perennial grasslands, deserts, and scrublands characterized by low-growing vegetation. Subterranean nester, dependent upon burrowing mammals, most notably, the California ground squirrel. Now extirpated from most of the coastal slope, although small numbers reach the coastal and valley regions in fall and winter (in the Los Angeles Region) (Garrett, et. al., 2006).	**Presumed absent.** Not expected due to routine discing at the site, and lack of suitable burrows for cover.

Common Name (*Scientific Name*)	Status (Federal/State)	Primary Habitat Associations	Status on Site / Potential to Occur (Observed, Potentially Present, Presumed Absent, Absent)
Coastal California gnatcatcher (*Polioptila californica californica*)	CT/SSC	Obligate, permanent resident of coastal scrub below 2,500 ft in southern California. Low, coastal scrub in arid washes, on mesas and slopes. There is only one record of this species in the CNDDB for the Santa Monica Mountains; two adults were identified in cactus scrub with buckwheat adjacent to the California State University, Channel Islands campus at the western edge of the Santa Monica Mountains in 2008 (CDFW 2016). This species is not known from other locations in the Santa Monica Mountains.	**Presumed absent.**
Golden eagle (*Aquila chrysaetos*) (nesting and wintering)	--/CFP	Rolling foothills, mountain areas, sage-juniper flats, and desert. Cliff-walled canyons provide nesting habitat in most parts of range; also, large trees in open areas. A rare and declining resident in rugged mountain areas in the interior of the Los Angeles region. A few may still nest in the Santa Ana Mountains, Chino Hills, and Santa Monica Mountains (Garrett et al., 2006).	**Presumed absent.**
Grasshopper sparrow (*Ammodramus savannarum*) (nesting)	--/SSC	Uncommon and very local summer resident on grassy slopes and mesas west of the deserts; noted only rarely in migration and in winter. For breeding, grasshopper sparrows require fairly continuous native grassland with occasional taller weedy stems or shrubs for singing perches (Garrett and Dunn 1981). Reported as casual in winter, uncommon spring and summer, and rare in fall in the Santa Monica Mountains.	**Presumed absent.**
Least Bell's vireo (*Vireo bellii pusillus*) (nesting)	FE/CE	Rare and local summer resident in lowland riparian woodlands, breeding in willow thickets and other dense, low riparian growth in lowlands and the lower portions of the canyons, generally along permanent or semi-permanent streams.	**Presumed absent.**

Common Name (*Scientific Name*)	Status (Federal/State)	Primary Habitat Associations	Status on Site / Potential to Occur (Observed, Potentially Present, Presumed Absent, Absent)
Least bittern (*Ixobrychus exilis*) (nesting)	--/SSC	Uncommon and local resident in the Los Angeles region in freshwater ponds and lakes with extensive margins of reeds (bulrushes, cattails) (Garrett et al., 2006).	**Presumed absent.**
Loggerhead shrike (*Lanius ludovicianus*) (nesting)	--/SSC	Broken woodlands, savannah, pinyon-juniper, Joshua tree, and riparian woodlands, desert oases, scrub and washes. Prefers open country for hunting, with perches for scanning, and fairly dense shrubs and brush for nesting. Only a few pairs still found in coastal lowlands in the Los Angeles region, although a small number of migrants augment this population from July to March (Garrett et. al. 2006).	**Potentially present.** Potential breeding resident, but probability of occurrence is low.
Long-eared owl (*Asio otus*) (nesting)	--/SSC	Nest in conifer, oak, riparian, pinyon-juniper, and desert woodlands that are either open or adjacent to grasslands, meadows, or shrublands. Key habitat components are some dense cover for nesting and roosting, suitable nest platforms, and open foraging areas.	**Presumed absent.**
Mountain plover (*Charadrius montanus*) (wintering)	--/SSC	Short grasslands, freshly plowed fields, newly sprouting grain fields, and sometimes sod farms. Short vegetation, bare ground and flat topography. Prefers grazed areas and areas with burrowing rodents. In the Los Angeles region, flocks winter (October to early March) in bare and heavily grazed agricultural fields in the Antelope Valley, but now very rare in open grasslands near the coast (Garrett et. al, 2006).	**Presumed absent.**
Northern harrier (*Circus cyaneus*) (nesting)	--/SSC	Uncommon migrant and winter visitor (mid-September to early April) to extensive open freshwater and saltwater marshes, grasslands and agricultural fields. Breeding populations have been virtually extirpated from the coastal lowlands in the Los Angeles area (Garrett et al. 2006).	**Potentially present** while foraging occasionally over the site, but not nesting.

Common Name (*Scientific Name*)	Status (Federal/State)	Primary Habitat Associations	Status on Site / Potential to Occur (Observed, Potentially Present, Presumed Absent, Absent)
Olive-sided flycatcher (*Contopus cooperi*) (nesting)	--/SSC	In the Los Angeles region, summer resident (May to early September) mainly in conifer, mixed, and canyon woodlands of San Gabriel Mountains, and very locally closer to coast where tall pines and eucalyptus augment native trees. Migrants scarce but widespread in lowlands from mid-April through May, and in September (Garrett et al., 2006)	**Presumed absent.**
Purple martin (*Progne subis*) (nesting)	--/SSC	Rather rare and very local summer resident in woodlands of the foothill portions of coastal district; also a rare spring transient. For nesting, they utilize old, tall sycamores, pines, etc., often within oak woodland or open conifer forest (Garrett and Dunn 1981).	**Presumed absent.**
Short-eared owl (*Asio flammeus*) (nesting)	--/SSC	Uncommon and local winter visitant along the coast, where it formerly nested. Wintering locations include Point Mugu, Sepulveda basin (Garrett and Dunn 1981). Usually found in open areas with few trees, such as annual and perennial grasslands, prairies, dunes, meadows, irrigated lands, and saline and fresh emergent wetlands (Zeiner et al. 1990b).	**Presumed absent.**
Southwestern willow flycatcher (*Empidonax trailii extimus*) (nesting)	FE/CE	Fairly common and widespread migrant from mid-May to early June, and again from August to early October. Formerly bred in wet willow thickets, but breeders are virtually gone from the L.A. region and endangered over most of the Southwest, although successfully nesting in 2000 for the first time in several decades on the Santa Clara River at Fillmore (Jim Greaves pers. comm. August 13, 2000). Most often occurs in broad, open river valleys or large mountain meadows with lush growth of shrubby willows (Zeiner et a l. 1990b).	**Presumed absent.**

Common Name (*Scientific Name*)	Status (Federal/State)	Primary Habitat Associations	Status on Site / Potential to Occur (Observed, Potentially Present, Presumed Absent, Absent)
Summer tanager (*Piranga rubra*) (nesting)	--/SSC	Rare, but regular in fall, winter, and late spring along the coast, mostly from Los Angeles Co. southward (Garrett and Dunn 1981). Frequents cottonwood-willow associations of riparian habitats for breeding, feeding, cover, and other activities (Zeiner et al. 1990b).	**Presumed absent.**
Tricolored blackbird (*Agelaius tricolor*) (nesting colony)	--/SSC	Highly colonial species. Largely endemic to California. Requires open water, protected nesting substrate, and foraging area with insect prey within a few kilometers of the colony.	**Presumed absent.**
Vaux's swift (*Chaetura vauxi*) (nesting)	--/SSC	Common migrant in the Los Angeles region from mid-April to mid-May, and again from late August to early October. Small flocks sometimes winter in coastal lowlands, but absent from early June to early August (Garrett et al., 2006).	**Potentially present** while foraging over the site temporarily as a migrant, but no potential to nest at the site.
White-tailed kite (*Elanus leucurus*) (nesting)	--/CFP	Uncommon resident in open grasslands, valley oak savannas, marshes, and agricultural areas throughout the lowlands of the Los Angeles region (Garrett et al. 2006). A nomadic species that may range widely in search of prey.	**Potentially present** while foraging occasionally over the site, but not nesting.
Yellow warbler (*Setophaga petechia brewsteri*)	--/SSC	In the Los Angeles region, common spring (late April through May) and fall (August to mid-October) migrants throughout the lowlands; a very few remain to winter in willow thickets, exotic growth. Fairly common breeder (late March to August) in tall foothill woodlands of cottonwood, willow or alders near watercourses; some breed in lowland willow (Garrett et al., 2006)	**Potentially present.** Potential to occur particularly in patch of willow habitat at northeastern corner of the site on a temporariy basis during migration, but not inhabiting or nesting at the site.
Yellow-breasted chat (*Icteria virens*)	--/SSC	Uncommon and local breeder (mid-April to August) in extensive riparian thickets in the lowlands; formerly more widespread. Scarce as a migrant, noted mainly in late April-May and August-September.	**Presumed absent.**

Common Name (*Scientific Name*)	Status (Federal/State)	Primary Habitat Associations	Status on Site / Potential to Occur (Observed, Potentially Present, Presumed Absent, Absent)
Mammals			
American badger (*Taxidea taxus*)	--/SSC	Most abundant in drier open stages of most shrub, forest, and herbaceous habitats, with friable soils. Needs sufficient food, friable soils and open, uncultivated ground. Preys on burrowing rodents. Digs burrows.	**Presumed absent.** No burrows potentially attributable to badgers were found during the February 2016 survey. Due to the urban, fragmented, and disturbed condition of the site, there is no reasonable potential for occurrence of this species at the site.
Big free-tailed bat (*Nyctinimops macrotis*)	--/SSC	Low-lying arid areas in southern California. Need high cliffs or rocky outcrops for roosting sites. Range (scattered records) extends from San Francisco Bay to Morro Bay, Santa Barbara, and coastal southern California from Los Angeles (Azusa, Burbank, Pomona) and San Bernardino counties southward (Constantine 1998).	**Potentially present** while foraging over the site, but not reproducing, hibernating, or roosting at the site.
Pallid bat (*Antrozous pallidus*)	--/SSC	Occurs in a wide variety of habitats including deserts, grasslands, shrublands, woodlands and forests from sea level to mixed conifer forests. Most common in open, dry habitats with rocky areas for roosting. Roosts must protect bats from high temperatures. Very sensitive to disturbance of roosting sites. Nearest reported location: China Flat, Simi Hills. Individuals detected acoustically during survey between Apr 2002 and Jul 2004. The majority of the detections in the SMMNRA were at this site.	**Potentially present** while foraging over the site, but not reproducing or hibernating at the site, although could potentially roost temporarily in trees (e.g., in cavities or exfoliating bark).
Ringtail (*Bassariscus astutus octavus*)	--/CFP	Occurs in various riparian habitats, and in brush stands of most forest and shrub habitats (Zeiner et al. 1990a).	**Presumed absent.** Site lacks suitable habitat for this species.
San Diego black-tailed jackrabbit (*Lepus californicus bennetii*)	--/SSC	Intermediate canopy stages of shrub habitats and open shrub / herbaceous and tree / herbaceous edges. Coastal sage scrub habitats in southern California.	**Presumed absent.** Site lacks suitable habitat for this species.
San Diego desert woodrat (*Neotoma lepida*)	--/SSC	Coastal southern California from San Diego County to San Luis Obispo County. Moderate to dense canopies preferred. They are particularly abundant in rock outcrops and rocky	**Presumed absent.** Site lacks suitable habitat for this species.

Common Name (*Scientific Name*)	Status (Federal/State)	Primary Habitat Associations	Status on Site / Potential to Occur (Observed, Potentially Present, Presumed Absent, Absent)
		cliffs and slopes (CDFW 2016). Occurs in a variety of habitats from sea level to 8500 feet (Zeiner et al. 1990a).	
Spotted bat (*Euderma maculatum*)	--/SSC	Mostly in foothills and mountains and desert regions of southern California, in a range of habitats from desert and grasslands through mixed conifer forest. Feeds over water and along washes. Feeds almost entirely on moths. Needs rock crevices in cliffs or caves for roosting. Nearest location: Malibu Creek State Park, near rocky pool and Century Lake area. Individuals recorded from this area 4 times in June and Aug 2003. Three (3) of the calls were recorded at dusk and the other within 1 hour after sunset, indicating a roost in the vicinity (CDFW 2016).	**Presumed absent.**
Western mastiff bat (*Eumops perotis californicus*)	--/SSC	Occurs in many open habitats including woodlands, coastal scrub, grasslands, chaparral, desert, and urban. Many open, semi-arid to arid habitats, including conifer and deciduous woodlands, coastal scrub, grasslands, chaparral etc. Roosts in crevices in cliff faces, high buildings, trees and tunnels. Nearest location: 2 mi e Cornell, Paramount Ranch. 1-3 animals detected 31 may 1995; Malibu Creek State Park, Century Lake (Century Reservoir); Peter Strauss Ranch; China Flat in the Simi Hills.	**Potentially present** while foraging over the site, but not reproducing, hibernating, or roosting at the site.
Western red bat (*Lasiurus blossevillii*)	--/SSC	Roosts in forests and woodlands, and feeds over a wide variety of habitats including grasslands, shrublands, open woodlands and forests, and croplands. Range in California includes Santa Monica Mountains (Zeiner et al. 1990a). Foliage-dwelling, migratory bat occurs in California's Central Valley, foothills, and in similar areas of tree growth in southern California (Constantine 1998).	**Potentially present** while foraging over the site or roosting temporarily in trees, but probably not reproducing or hibernating at the site.

Common Name (*Scientific Name*)	Status (Federal/State)	Primary Habitat Associations	Status on Site / Potential to Occur (Observed, Potentially Present, Presumed Absent, Absent)

The following status codes are applicable to special-status animals:

Federally Protected Species

FE (Federal Endangered): A species that is in danger of extinction throughout all or a significant portion of its range.

FT (Federal Threatened): A species that is likely to become endangered in the foreseeable future.

FC (Federal Candidate): A species for which USFWS has sufficient information on its biological status and threats to propose it as Endangered or Threatened under the Endangered Species Act (ESA), but for which development of a proposed listing regulation is precluded by other higher priority listing activities.

FSC (Federal Species of Concern): A species under consideration for listing, for which there is insufficient information to support listing at this time. These species may or may not be listed in the future, and many of these species were formerly recognized as "Category-2 Candidate" species.

State Protected Species

CE (California Endangered): A native species or subspecies which is in serious danger of becoming extinct throughout all, or a significant portion, of its range due to one or more causes, including loss of habitat, change in habitat, overexploitation, predation, competition, or disease.

CT (California Threatened): A native species or subspecies that, although not presently threatened with extinction, is likely to become an endangered species in the foreseeable future in the absence of the special protection and management efforts required by this chapter. Any animal determined by the commission as "Rare" on or before January 1, 1985, is a "Threatened species."

SSC (California Species of Special Concern): Animals that are not listed under the California Endangered Species Act, but which nonetheless 1) are declining at a rate that could result in listing, or 2) historically occurred in low numbers and known threats to their persistence currently exist.

CFP (California Fully Protected): This designation originated from the State's initial effort in the 1960's to identify and provide additional protection to those animals that were rare or faced possible extinction. Lists were created for fish, mammals, amphibians, reptiles, and birds. Most fully protected species have also been listed as Threatened or Endangered species under the more recent endangered species laws and regulations. California Fully Protected species may not be taken or possessed at any time and no licenses or permits may be issued for their take except for collecting these species for necessary scientific research and relocation of the bird species for the protection of livestock.

City Oak Tree Consultant's Memorandum and Revised Oak Tree Report

APPENDIX E

Greg Ainsworth

Memo

To: Valerie Darbouze, City of Agoura Hills

From: Greg Ainsworth, Oak Tree Consultant

Date: July 20, 2016

Re: SPR-01048-2015, OAK-01049-2015 – Martin Teitelbaum for Agoura Landmark LTD

Background

The proposed project includes the construction of four (4) two-story office buildings with associated parking, walkways, loading docks and landscaped planters. Envicom Corporation prepared an Oak Tree Report (January 5, 2015) that summarizes potential impacts to oak trees that would result of proposed construction at 29621 Agoura Road. The previous Consulting Arborist, Ann Burroughs, reviewed the Oak Tree Report and provided comments and recommendations in her memorandum dated February 19, 2015). A revised Oak Tree Report has since been submitted by Envicom Corporation (Revised May 23, 2016).

Oak Tree Impact Summary

There are 33 protected oak trees located within the property including one Landmark valley oak (*Quercus lobata*) and one (non-Landmark) valley oak, 31 coast live oaks (*Q. agrifolia*). Three holly oaks (*Q. ilex*) are located on the property; however, these oak trees are not native to Agoura Hills and are not included in the native oak trees that would be removed or encroached by the proposed project, and mitigation is not required for project–related impacts to these trees.

Proposed Oak Tree Removals - Proposed construction will require the removal of seven (7) coast live oaks (#'s 4, 5, 14, 58, 59, 78,and 83). Coast live oak tree #82 would also be removed; however this tree is dead and therefore is not counted as a removal.

Proposed Oak Tree Encroachments - Proposed activities would encroach into the protected zone of sixteen (16) protected oak trees: coast live oaks (#'s 1, 3, 6, 7, 8, 9, 10, 11, 13, 57, 61, 63, 84 [and 85*]), one valley oak (# 64), and one landmark valley oak (# 100). ** It should be noted that Oak Tree No. 85 would be severely encroached; therefore, mitigation is required as indicated in the discussion below.*

Proposed Oak Trees to be Preserved – The following twelve (12) oak trees will be preserved on the property in perpetuity: #'s 2, 12, 15, 16, 17, 18, 41, 60, 62, 77, 82, and 86.

Discussion

As indicated above, the proposed project as currently presented would result in the removal of seven (7) city-protected oak trees, the encroachment of sixteen (16) city-protected oak trees, and twelve (12) city-protected oak trees would be avoided and preserved in perpetuity; two of which are within City right-of-way (Tree No. 41 and 77). One additional tree, which is dead (Tree No. 82), will be removed. In accordance with the City's Oak Tree Preservation Guidelines, Section 9657.5, no less than four (4) native oaks shall be provided for any oak tree removed. As indicated in the Oak Tree Report, IV. Mitigation Measures (page 12), and in accordance with the Guidelines, replacement trees shall be a minimum of at least two (2) 24-inch box oaks and one 36-inch box oaks, such that the trunk diameters of the replacement oaks is equal to, or greater than, the trunks of the oak removed, with the assumption that a 24-inch box oak represents a 2-inch diameter tree and a 36-inch box oak represents a 3-inch diameter tree. The Oak Tree Report indicates that a 15-gallon tree will also be provided for each tree removed, with the assumption that a 15-galloin oak represents a 1-inch diameter tree. Lastly, approximately 34 percent of the Protective Zone of Oak Tree No. 85 will be permanently impacted by the construction of a retaining wall that would be placed around four-feet from the trunk of this tree, and impermeable pavers used for the driveway will be placed within the tree's Protective Zone. Despite the effort to preserve Oak Tree No. 85, it appears that the retaining wall will be within a few feet from the trunk of this tree, and therefore, the impact will be too great for the long-term survival of this tree. Therefore, tree replacement shall be required for Oak Tree No. 85 at a 4:1 ratio, with one 36-inch box oak tree, two 24-inch box oak trees, and one 15-gallon oak tree.

The following oak tree mitigation is required for the seven oak trees that would be removed, as well as, Oak Tree No. 85 that would be severely encroached (and therefore treated as a removal): sixteen (16) 24-inch box coast live oak trees, eight (8) 36-inch box coast live oak trees, and eight (8) 15-gallon (or larger) coast live oak trees. Based on the current Landscape Plan, a total of 24 coast live oak trees will be planted on the property. An in-lieu fee shall be paid to the City for the remaining mitigation trees that cannot be planted onsite, which shall be based on the averaged total value of all trees that would be removed. The value of the trees that would be removed shall be derived from the International Society of Arboriculture *Guide for Plant Appraisal (9th Edition)* and calculated by the City's Oak Tree Consultant.

It should be noted that in accordance with Section 9389.6 of the Municipal Code, one (1) native oak tree, twenty-four-inch box in size, per fifteen thousand (15,000) square feet of building area, shall be provided on site or at alternative locations as approved by the city. The location of the oak tree(s) shall be depicted on the landscape plan and shall be planted prior

to final construction inspections and field verified by the city's consulting arborist. This condition is separate from mitigation requirements for existing oak trees that would be removed or encroached by the proposed project.

Conditions of Approval

The following Conditions of Approval shall be implemented to allow for the removal and encroachments into the Protective Zone of oak trees identified in the Revised Oak Tree Report (Envicom, May 23, 2016).

1. All tree replacement, monitoring, and avoidance and minimization measures outlined in the Revised Oak Tree Report (Envicom, May 23, 2016) under Mitigation Measures (pages 12-14) and Recommendations (page 14) shall be implemented. Specifically, as stated in the Oak Tree Report, the following oak trees shall be planted onsite to mitigate for the trees that would be removed (including tree #85 that would be significantly encroached by the retaining wall): (16) 24-inch box coast live oak trees, (8) 36-inch box coast live oak trees, and eleven (8) 15-gallon (or larger) coast live oak trees.

   Coast live oak trees shall be incorporated into the project landscape plan. If it is determined by the City Planning Director that there is insufficient land available to plant the full number of mitigation trees onsite, then the applicant may pay an in-lieu fee for the remainder of the mitigation requirement. The exact amount of the fee is to be determined by the City's Oak Tree Consultant, based on the appraised value of the trees, as determined by the International Society of Arboriculture *Guide for Plant Appraisal (9th Edition),* and approved by the City Planning Director prior to issuance of a building permit or grading permit, whichever occurs first. The in-lieu fee shall be paid to the City's Oak Tree Mitigation Fund prior to issuance of a grading permit or commencement of project construction, whichever occurs sooner.

2. The following trees will be permanently encroached by the parking lot and/or waterline that introduce impermeable surfaces: 1, 3, 6, 8, 7, 9, 10, 11, 13, 57, 61, 63, 64, 84, and 100 (Tree No. 85 will also be encroached; however, because the encroachment would be severe, this tree is treated as a removal). If permeable surfaces (i.e., pavers with decomposed granite in-between) cannot be used within the Protective Zone of these trees for the parking lot and driveway, one 24-inch box oak tree of the same species shall be planted for each tree that will be encroached by (permanent) impermeable surface at a suitable location onsite as determined by a qualified arborist. Oak trees that will be planted for the aforementioned encroached trees shall be depicted on the Landscape Plan and shall depict the species, planting sizes, and planting locations, and shall be subject to review and approval by the City's Oak Tree Consultant.

   If there is not a suitable location to plant all mitigation oak trees on-site or at an off-site location (as determined by the city's oak tree consultant) for those trees that would be permanently encroached as indicated above, an in-lieu fee shall be paid for each tree that would be permanently encroached. The amount of the in-lieu fee for permanently encroached trees shall be based on the cost to purchase a 24-inch box oak tree, plus the estimated cost to plant the tree, and maintain the tree for one year, which shall be calculated by the City's Oak Tree Consultant.

3. All oak trees located on the property, including those that would be planted as shown on the landscape plan, shall be preserved in perpetuity.).

4. All new subsurface ground disturbance that will occur within the Protective Zone of an oak tree shall be performed using only hand tools under the direct observation of the applicant's oak tree consultant. If vegetation clearing or grading is not feasible within the Protective Zone with the use of hand tools, mechanical equipment may be allowed so long as a certified arborist is present to ensure that no impacts occur to the oak tree.

5. Prior to the start of any work or mobilization at the site, protective fencing shall be installed at the Protective Zone of preserved oak trees. The applicant or their consulting arborist shall consult the City's Oak Tree Consultant to determine the exact fencing configuration and appropriate fencing material, and submit a fencing plan subject to approval by the City's Oak Tree Consultant.

6. The applicant shall provide a minimum of 48 hours notice to the City Oak Tree Consultant prior to the start of approved work within the protected zone of any oak tree.

7. No grading, scarifying or other soil disturbance shall be permitted within the portion of a protected zone of any oak tree except as specifically required to complete the approved scope of work and in accordance with this oak tree permit.

8. No vehicles, equipment, materials, spoil or other items shall be used or placed within the protected zone of any oak tree at any time, except as specifically required to complete the approved work.

9. No irrigation or ground cover shall be installed within the Protective Zone of any existing oak tree unless specifically approved by the City Oak Tree Consultant and the Planning Director.

10. Prior to removal of the protective fencing, the applicant shall contact the City Oak Tree Consultant to perform a final inspection. The applicant shall proceed with any remedial measures the City Oak Tree Consultant deems necessary to protect or preserve the health of the subject oak tree at that time.

11. No pruning of live wood of an oak tree (including branches and roots) shall be permitted unless specifically authorized by the City Oak Tree Consultant and/or following an approved oak tree permit. Any authorized pruning shall be performed by a qualified arborist under the direct observation of the applicant's oak tree consultant. All pruning operations shall be consistent with ANSI A300 Standards – Part 1 Pruning and the most recent edition of the International Society of Arboriculture Best Management Practices for Tree Pruning.

12. No herbicides shall be used within 100 feet of the dripline of any oak tree unless the program is first reviewed and endorsed by the City Oak Tree Consultant.

13. The applicant's consulting arborist shall submit certification letters for all work completed within the protected zone of an oak tree within five working days of the completion of said work. The letter(s) shall describe all work performed, methods utilized, monitoring performed and shall state whether such work was completed in accordance with the above conditions of approval.

OAK TREE REPORT
AGOURA LANDMARK

Prepared for:

AGOURA LANDMARK, L.P.
560 Constitution Avenue, Suite H
Camarillo, California 93012
Attn: Mr. Martin Teitelbaum
(310) 470-4775

Prepared by:

ENVICOM CORPORATION
4165 E. Thousand Oaks Blvd., Suite 290
Westlake Village, California 91362
(818) 879-4700

January 5, 2015
Revised August 14, 2015
Revised May 23, 2016

I. BACKGROUND INFORMATION

Property Owner/Applicant Information

The property owner/applicant for this project is:

Agoura Landmark, L.P.
569 Constitution Avenue, Suite H
Camarillo, CA 93012

Preparer Information

The preparer of this Protected Tree Survey is:

Erin Roberts, Arborist/Biologist
ISA arborist certification #WE-10365A
Envicom Corporation
4165 E. Thousand Oaks Blvd., Ste. 290
Westlake Village, CA 91362
(818) 879-4700
eroberts@envicomcorporation.com

Project Location and Assessor Parcel Number

The project site is located at 29621 Agoura Road located on the north side of Agoura Road, approximately 0.5 mile west of Kanan Road, within the City of Agoura Hills. Project activities will occur on Los Angeles County Assessor Parcel Number 2061-003-027.

Assignment

The applicant has proposed to construct four (4) two-story office buildings with associated parking, walkways, and landscaped planters. Construction activities will require the removal of 7 (seven) coast live oaks (*Quercus agrifolia*) and one (1) holly oak (*Quercus ilex*), and encroachment into the Protection Zone (PZ) of fourteen (14) coast live oaks and two (2) valley oaks (*Quercus lobata*). On October 31, 2014 an arborist survey of protected trees was conducted. Pursuant to the Agoura Hills Oak Tree Preservation Guidelines, this report provides survey results for protected trees located within the areas of the proposed activities as well as an impact analyses based on the Site Plan prepared by *Delane Engineering* provided on May 12, 2016. This report is in accordance with the content requirements for the City of Agoura Hills Oak Tree Report (Oak Tree Preservation Guidelines Section IV.F).

Method of Field Evaluation

The City of Agoura Hills defines protected trees as all oaks trees 2″ in diameter or larger as measured 3.5′ above natural grade. Pursuant to the City's Ordinance, registered arborist Mr. John Oblinger (ISA # WE-6820A) conducted a survey and evaluation of protected trees within the subject project site and adjacent to the property boundary that may potentially be impacted by the proposed project activities. Many of the protected trees surveyed in this report had been tagged with an identifying number that corresponds to numbers assigned during previous protected tree surveys conducted in 2005, 2008, and 2009. Eighteen (18) additional protected trees of ordinance size were tagged by Mr. Oblinger during the 2014 survey. Visual inspections and measurements recorded on October 31, 2014 included the following:

- The trunk diameter at 3.5 feet above grade;
- The canopy extent; and
- Tree health, balance, and aesthetic values. These values were evaluated by visually inspecting the tree for signs of disease and pests, evidence of new growth and continued survival, and overall balance and value to the surrounding landscape.

II. SITE OBSERVATIONS AND TREE CONDITIONS

The subject property is an undeveloped lot that has been previously graded and consists of dirt and scattered herbaceous vegetation. Existing structures include a baseball diamond, backstop, and ancillary facilities. The property lies directly north of Agoura Road and south of the Ventura Freeway (U.S. Route 101). Other uses surrounding the property include the Los Angeles Department of Animal Care and Control facility to the east and an industrial park to the west. There are a total of 36 oak trees of ordinance size within the survey area that are protected by the Agoura Hills Oak Tree Preservation Guidelines. These include one (1) Landmark designated valley oak, 31 native coast live oaks, 1 native valley oak and three (3) naturalized holly oaks. The Landmark oak (Tree #100), an oak tree with a trunk diameter exceeding 48 inches, is recessed within a hollow where it is protected by a six-foot chain link fence constructed outside its dripline. Seven (7) smaller coast live oaks (Tree #s 4, 5, 6, 7, 14, 85, and 86) are located to the east of the Landmark oak, within the protective fencing. There are nine (9) coast live oaks (Tree #s 8, 9, 10, 11, 12, 77, 57, 83, and 84) located in the southwest corner of the property near a storm drain observation structure and one coast live oak (Tree #58) located east of the storm drain structure. Three (3) holly oaks (Tree #s 40, 41, and 77) and two (2) coast live oaks (Tree #s 78 and 82) function as street trees along the Agoura Road sidewalk just south of the property. Six (6) coast live oaks (Tree #s 1, 2, 3, 59, 61, and 63) are located in the northeast corner of the site. Five (5) coast live oaks (Tree #s 16, 17, 18, 60, and 62) and one valley oak (Tree #64) are located off-site on the animal control property located east of the subject project site, within approximately ten feet of the property fence. The results of the survey for each of these trees are documented on the survey forms provided in **Appendix 1**. The visual condition of each tree has been documented by photographs provided in **Appendix 2**. The 36 protected trees receive variable sun exposure and differ in terrain and surrounding environment. **Table 1** outlines the current site conditions that support each tree.

Table 1
Site Conditions

Tree Number	Species	Trunk Diameter (in.)	Exposure	Topography	Location Description
1	Qa	2.0	Partial Sun	Slope	Located near the northeast corner of the subject property.
2	Qa	2.0	Partial Sun	Slope	Located near the northeast corner of the subject property.
3	Qa	2.5	Partial Sun	Slope	Located near the northeast corner of the subject property.
4	Qa	3.0, 2.5	Full Sun	Slope	Located in the central portion of the subject property directly northeast of the Landmark tree (Tree #100).
5	Qa	3.0, 1.0	Full Sun	Slope	Located in the central portion of the subject property directly northeast of the Landmark tree (Tree #100).
6	Qa	2.5, 1.0	Full Sun	Slope	Located in the central portion of the subject property directly east of the Landmark tree (Tree #100).
7	Qa	3.5	Full Sun	Slope	Located near the southwestern corner of the subject property.
8	Qa	3.5	Partial Sun	Level	Located near the southwestern corner of the subject property.
9	Qa	2.0	Partial Sun	Level	Located near the southwestern corner of the subject property.
10	Qa	4.0	Full Sun	Level	Located near the southwestern corner of the subject property.
11	Qa	2.0, 1.0, 1.0	Partial Sun	Level	Located near the southwestern corner of the subject property.
12	Qa	3.0	Full Sun	Level	Located near the southwestern corner of the subject property.
13	Qa	1.9	Full Sun	Level	Located along the southern edge of the subject property directly north of Tree #41.
14	Qa	2.0	Full Sun	Slope	Located in the central portion of the subject property directly northeast of the Landmark tree (Tree #100).
15	Qa	2.5	Partial Sun	Level	Located on the Los Angeles Department of Animal Care and Control property directly east of the subject site.

Tree Number	Species	Trunk Diameter (in.)	Exposure	Topography	Location Description
16	Qa	3.5	Partial Sun	Level	Located near the northeast corner of the subject property on the Los Angeles Department of Animal Care and Control property.
17	Qa	2.5	Partial Sun	Level	Located near the northeast corner of the subject property on the Los Angeles Department of Animal Care and Control property.
18	Qa	2.0	Partial Sun	Level	Located near the northeast corner of the subject property on the Los Angeles Department of Animal Care and Control property.
40	Qi	3.5	Full Sun	Level	Street tree located along the southern edge of the subject property adjacent to Agoura Road.
41	Qi	2.0, 2.0	Full Sun	Level	Street tree located along the southern edge of the subject property adjacent to Agoura Road.
57	Qa	2.0, 1.0	Shade	Level	Located near a storm drain structure at the southwest corner of the subject property.
58	Qa	2.25	Partial Sun	Level	Located along the south edge of the property approximately 120 feet from the storm drain structure located on the southwestern edge of the property.
59	Qa	3.0	Partial Sun	Slope	Located near the northeast corner of the subject property.
60	Qa	7.5	Partial Sun	Slope	Located near the northeast corner of the subject property on the Los Angeles Department of Animal Care and Control property.
61	Qa	4.0	Partial Sun	Level	Located near the northeast corner of the subject property.
62	Qa	6.5	Partial Sun	Level	Located near the northeast corner of the subject property on the Los Angeles Department of Animal Care and Control property.

Tree Number	Species	Trunk Diameter (in.)	Exposure	Topography	Location Description
63	Qa	6.5	Shade	Level	Located near the northeast corner of the subject property.
64	Ql	9.0	Full Sun	Level	Located on the Los Angeles Department of Animal Care and Control property directly east of the subject site.
77	Qi	5.0	Full Sun	Level	Street tree located along the southern edge of the subject property adjacent to Agoura Road.
78	Qa	4.0	Full Sun	Level	Street tree located along the southern edge of the subject property adjacent to Agoura Road.
82	Qa	3.0	Full Sun	Level	Street tree located along the southern edge of the subject property adjacent to Agoura Road.
83	Qa	5.5, 3.0	Partial Sun	Level	Located near a storm drain structure at the southwest corner of the subject property.
84	Qa	10.0, 7.0	Partial Sun	Slope	Located near a storm drain structure at the southwest corner of the subject property.
85	Qa	6.0	Full Sun	Level	Located in the central portion of the subject property directly northwest of the Landmark tree (Tree #100).
86	Qa	6.5, 4.0	Full Sun	Level	Located in the central portion of the subject property directly northeast of the Landmark tree (Tree #100).
100	Ql	48.0	Full Sun	Level	Landmark tree located in the central portion of the subject property.

III. PROJECT IMPACTS

The proposed project would result in removal of seven (7) coast live oaks (Tree #s 4, 5, 14, 58, 59, 78, and 83) and one (1) holly oak (Tree # 40). Tree # 82 was reported dead during prior surveys, including the October 31st survey, and will also be removed at the onset of project activities.

Anticipated project development would result permanent encroachments into the Protection Zone (PZ) of the one (1) Landmark designated valley oak (Tree #100), fourteen (14) coast live oaks (Tree #s 1, 3, 6, 7, 8, 9, 10, 11, 13, 57, 61, 63, 84, and 85) and 1 valley oak (Tree # 64). The PZ is defined as the area within the dripline and extending a minimum of five (5) feet outside the dripline or 15 feet from the trunk of a tree; whichever is greater (Agoura Hills Oak Tree Preservation Guidelines Appendix A.II).

Tables 2 - 4 provide a summary of the proposed impacts to all 36 of the protected trees. Additionally, **Appendix 3** illustrates the impacts with respect to the proposed construction activities.

Trees to Remain without Impacts

A total of 12 protected trees would remain in place and would not be impacted by project activities. These are listed in **Table 2**.

Table 2
Trees Not Impacted

Tree Number	Species	Trunk Diameter (in.)	Landmark	Hazard	Health Rating
2	Qa	2.0	No	No	B
12	Qa	3.0	No	No	B
15	Qa	2.5	No	No	B
16	Qa	3.5	No	No	B
17	Qa	2.5	No	No	B
18	Qa	2.0	No	No	B
41	Qi	2.0, 2.0	No	No	C
60	Qa	7.5	No	No	B
62	Qa	6.5	No	No	B
77	Qi	5.0	No	No	B
82	Qa	3.0	No	No	F
86	Qa	6.5, 4.0	No	No	C

Trees to be Removed

Excavation and grading activities associated with the construction of the parking lots, retaining walls, and the two (2) driveways would require the removal of seven (7) coast live oak trees (Tree #s 4, 5, 14, 58, 59, 78, and 83,) and one (1) holly oak (Tree # 40) located within the grading footprint. One (1) additional tree, Tree # 82, was reported dead and will be removed at the onset of project activities. The trees proposed for removals, including the reason for these actions, are listed in **Table 3**.

Table 3
Trees to be Removed

Tree #	Species	Trunk Diameter (in.)	Heritage	Hazard	Health Rating	Reason for Disturbance
4	Qa	3.0, 2.5	No	No	B	To be removed to allow for grading activities associated with the construction of the proposed parking lot and the placement of a curb encompassing the large Landmark tree (Tree #100) located in the central portion of the property.

Tree #	Species	Trunk Diameter (in.)	Heritage	Hazard	Health Rating	Reason for Disturbance
5	Qa	3.0, 1.0	No	No	B	To be removed to allow for grading activities associated with the construction of the proposed the parking lot and placement of a curb encompassing the large Landmark tree (Tree #100) in place located in the central portion of the property.
14	Qa	2.0	No	No	B	To be removed to allow for grading activities associated with the construction of the proposed parking lot and the placement of a curb encompassing the large Landmark tree (Tree #100) dirt path located in the central portion of the property.
40	Qi	3.5	No	No	B	To be removed to allow for excavation and grading activities associated with the construction of the southeastern-most driveway.
58	Qa	2.3	No	No	C	To be removed to allow for excavation and grading activities associated with the construction of the proposed parking lot and the southwestern-most driveway.
59	Qa	3.0	No	No	B	To be removed to allow for excavation and grading activities associated with the construction of the proposed parking lot and adjacent retaining wall.
78	Qa	4.0	No	No	C	To be removed to allow for excavation and grading activities associated with the construction of the southwestern-most driveway.
82	Qa	3.0	No	No	F	Reported dead during onsite surveys.
83	Qa	5.5, 3.0	No	No	C	To be removed to allow for excavation and grading activities associated with the construction of the proposed parking lot.

Trees to Remain with Tree Protection Zone Impacts

Sixteen (16) trees will remain in place with PZ impacts (Tree #s 1, 3, 6, 7, 8, 9, 10, 11, 13, 57, 61, 63, 64, 84, 85, and 100). Proposed activities will remain outside the canopy of twelve (12) trees (Tree #s 1, 3, 6, 7, 8, 9, 10, 11, 13, 57, 63, and 64), impact up to 10% of the respective PZ of seven (7) trees (Tree #s 3, 6, 8, 11, 57, 63, 84, and 100). Proposed project activities will encroach into more than 10% of the PZ associated with eight (8) trees, including Tree # 1 (36%), Tree # 7 (22%), Tree #9 (32%), Tree # 10 (19%), Tree # 13 (15%), Tree # 61 (19%), Tree # 64 (15%), and Tree # 85 (34%). A detailed discussion of these encroachments is provided below.

Proposed activities within the PZ of Tree #s 1, 9, and 85 will be in excess of 30%. Impacts occurring within the PZ of Tree # 1 includes, grading for the parking lot, the construction of a 6-foot tall retaining wall, and the installation of a slope east of the retaining wall. Tree #1 is located east just downslope of activities associated with the proposed parking lot and retaining wall. The toe of the slope will remain just outside the dripline for Tree # 1, approximately 5 feet from the west edge of the trunk. Ground disturbance activities will not require trimming of the canopy and will remain above the grade of the existing root zone, allowing the existing grade within the dripline to be maintained. Based on these assumptions the resulting PZ impacts are not anticipated to significantly affect the health of the Tree # 1.

Impacts occurring within the PZ of Tree # 9 include, grading and trenching activities associated with the construction of the proposed parking lot and the placement of a proposed water line, respectively. Parking lot grading activities are anticipated to remain outside the canopy. Trenching activities are to remain approximately 5 feet outside the canopy, approximately 9 feet from the west side of the trunk. Based on conversations with the project Civil Engineer, Scott Uhles, activities to occur within the PZ will be conducted by hand and the existing grades beneath the canopies will be maintained. Thus, it is not anticipated these encroachments will significantly affect the health of Tree # 9.

Impacts anticipated to occur within the PZ of Tree #85 include the construction of a 3½-foot retaining wall, and grading and paving activities associated with the central portion of the parking lot. To allow for the construction of the wall and to provide adequate clearance for the adjacent parking lot, the eastern half of the canopy will be raised to 12-feet. Based on these assumptions and the placement of the impermeable surface of the parking lot beneath the dripline the resulting PZ impacts are anticipated to significantly affect the health of Tree # 85.

Proposed activities within the PZ of Tree # 7 will be in excess of 20%. Impacts occurring within the PZ of Tree # 7 include the construction of a 3½-foot retaining wall, and grading and paving activities associated with the central portion of the parking lot. These activities will remain outside the dripline for Tree # 7, trimming of the canopy will not be required, and the existing grade beneath the dripline will be maintained. Based on these assumptions the resulting PZ impacts are not anticipated to significantly affect the health of the Tree # 7.

Proposed activities within the PZ of Tree # 10, 13, 61, and 64 will be in excess of 10%. Impacts occurring within the PZ of Tree # 10 are associated with the grading for the parking lot to occur north of the trunk and canopy. These activities will remain outside the dripline for Tree # 10, trimming of the canopy will not be required, and the existing grade within the dripline will be maintained. Based on these assumptions the resulting TPZ impacts are not anticipated to significantly affect the health of the Tree # 10.

Impacts occurring within the PZ of Tree # 13 are associated with the grading activities and the placement of a slough wall south of Building A. The wall will be approximately 1-foot above grade and will require the excavation of a 18-inch wide and 3-foot deep trench within less than 2% the PZ associated Tree # 13. Construction activities will remain outside the dripline, trimming of the canopy will not be required, the existing grade within the dripline to be maintained, and the slough wall will impact less than 10% of the PZ. Based on these assumptions the resulting PZ impacts are not anticipated to significantly affect the health of the Tree # 13.

Impacts occurring within the PZ of Tree # 61 includes, grading for the parking lot, the construction of a 6-foot tall retaining wall, and the installation of a slope east of the retaining wall. Located directly east of Tree #1, Tree #61 is just downslope of activities associated with the proposed parking lot and retaining wall. Proposed activities will encroach 3½-feet into the west edge of the dripline, approximately 9.4-feet from the west edge of the trunk. These activities will not require altering of the canopy, will

predominately occur above the grade of the existing root zone, and, based on conversations with the project Civil Engineer, it is anticipated that the existing grade within the dripline will be maintained. Also, the impermeable material associated with the parking lot will be placed within 2% of the PZ. Based on these assumptions the resulting PZ impacts are not anticipated to significantly affect the health of the Tree # 61.

The 16 trees anticipated to have PZ impacts, including the reason for the disturbance, are listed in **Table 4**.

Table 4
Trees to Remain With Protection Zone Impacts

Tree #	Species	Trunk Diameter (in.)	Landmark	Health Rating	TPZ Impacts	Reason for Disturbance
1	Qa	2.0	No	B	36%	Grading during the construction of the proposed parking lot and associated retaining wall.
3	Qa	2.5	No	B	2%	Excavation and grading during the construction of the proposed slope to support the retaining wall along the northwestern edge of the project site.
6	Qa	2.5, 1.0	No	B	2%	Grading associated with the placement of 3½-foot retaining wall and the impermeable stamped concrete located in the central portion of the property.
7	Qa	3.5	No	B	22%	Grading associated with the placement of 3½-foot retaining wall and the impermeable stamped concrete located in the central portion of the property.
8	Qa	3.5	No	B	8%	Grading and trenching activities associated with the construction of the proposed parking lot and the placement of proposed water line, respectively.
9	Qa	2.0	No	B	32%	Grading and trenching activities associated with the construction of the proposed parking lot and the placement of proposed water line, respectively.
10	Qa	4.0	No	B	19%	Excavation and grading activities associated with the construction of the proposed parking lot.
11	Qa	2.0, 1.0, 1.0	No	B	1%	Excavation and grading activities associated with the construction of the proposed parking lot.

Tree #	Species	Trunk Diameter (in.)	Landmark	Health Rating	TPZ Impacts	Reason for Disturbance
13	Qa	1.9	No	B	15%	Excavation and grading activities associated with the construction of the southeastern-most building.
57	Qa	2.0, 1.0	No	B	7%	Grading and trenching activities associated with the construction of the proposed parking lot and the placement of proposed water line, respectively.
61	Qa	4.0	No	B	19%	Grading during the construction of the proposed parking lot and associated retaining wall.
63	Qa	6.5	No	B	2%	Excavation and grading during the construction of the proposed slope to support the retaining wall along the northwestern edge of the project site.
64	Ql	9.0	No	B	15%	Grading during the construction of the proposed parking lot and associated retaining wall.
84	Qa	10.0, 7.0	No	C	10%	Grading and trenching activities associated with the construction of the proposed parking lot and the placement of proposed water line, respectively
85	Qa	6.0	No	C	34%	Grading associated with the placement of 3½-foot retaining wall and the impermeable stamped concrete located in the central portion of the property.
100	Ql	48.0	Yes	C-	6%	Grading associated with the placement of 3½-foot retaining wall and the impermeable stamped concrete located in the central portion of the property.

Canopy heights from the existing grade were measured for the eight (8) trees with PZ impacts of 10% or greater (**Table 5**). It is not anticipated that the proposed activities will result in changes to the existing grade beneath the canopy of these or any other trees included in this report.

Table 5
Trees With Greater Than 10% PZ Impacts -
Existing and Proposed Canopy Height

Tree #	Species	TPZ Impacts	Canopy Height Above Existing Grade		Canopy Height Above Proposed Grade	
1	Qa	36%	N = 4’ E = 4’ S = 4’ W = 4’	NE = 4’ SE = 4’ NW = 4’ SW = 4’	N = 4’ E = 4’ S = 4’ W = 4’	NE = 4’ SE = 4’ NW = 4’ SW = 4’
7	Qa	22%	N = 1’ E = 1’ S = 1’ W = 1’	NE = 1’ SE = 1’ NW = 1’ SW = 1’	N = 1’ E = 1’ S = 1’ W = 1’	NE = 1’ SE = 1’ NW = 1’ SW = 1’
9	Qa	32%	N = 6’ E = 1’ S = 4’ W = 4’	NE = 1’ SE = 3’ NW = 4’ SW = 4’	N = 6’ E = 1’ S = 4’ W = 4’	NE = 1’ SE = 3’ NW = 4’ SW = 4’
10	Qa	19%	N = 0’ E = 7’ S = 7’ W = 9’	NE = 7’ SE = 7’ NW = 8’ SW = 7’	N = 0’ E = 7’ S = 7’ W = 9’	NE = 7’ SE = 7’ NW = 8’ SW = 7’
13	Qa	15%	N = 2’ E = 4’ S = 5’ W = 2’	NE = 2’ SE = 5’ NW = 2’ SW = 4’	N = 2’ E = 4’ S = 5’ W = 2’	NE = 2’ SE = 5’ NW = 2’ SW = 4’
61	Qa	19%	N = 12’ E = 8’ S = 3’ W = 15’	NE = 8’ SE = 6’ NW = 4’ SW = 12’	N = 12’ E = 8’ S = 3’ W = 15’	NE = 8’ SE = 6’ NW = 4’ SW = 12’
64	Ql	15%	N = 6’ E = 7’ S = 8’ W = 9’	NE = 7’ SE = 7’ NW =0’ SW = 5’	N = 6’ E = 7’ S = 8’ W = 9’	NE = 7’ SE = 7’ NW =0’ SW = 5’
85	Qa	34%	N = 3’ E = 3’ S = 3’ W = 1’	NE = 3’ SE = 8’ NW =9’ SW = 3’	N = 12’ E = 12’ S = 3’ W = 1’	NE = 12’ SE = 12’ NW =9’ SW = 3’

IV. MITIGATION MEASURES

The proposed project will result in the removal of eight (8) protected oak trees with a total trunk diameter of 38.8-inches. In accordance with Section 9657.5.C.3.c (c) of the Agoura Hills Municipal Code states that in no case shall less than four (4) native oaks be provided for any oak tree removed or relocated. These replacement plantings shall be a minimum of least two (2) 24-inch box oaks and one (1) 36-inch box oaks, such that the trunk diameters of these replacement oaks is equal to or greater than the trunks of the oaks removed, with the assumption that a 24-inch box oak represents a 2-inch diameter tree and a 36-inch box oak represents a 3-inch diameter. For the fourth tree one (1) 15-gallon tree will be provided, with the assumption that a 15-gallon oak represents a 1-inch diameter tree. Accordingly, onsite mitigation will be provided for the removal of eight (8) trees and the substantial removal of the canopy associated with Tree # 85. Since Tree # 82 was recorded dead prior to proposed project activities, mitigation for this tree will not be provided.

In accordance with the Oak Tree Conditions of Approval provided by the City on December 16, 2015, one (1) 24-inch box tree shall be provided to mitigate for permanent encroachments of greater than 10% into the Protective Zone resulting from the placement of impermeable surfaces. The proposed project will result in the placement of impermeable surfaces associated with the parking lot and/or waterline within more than 10% of the Protected Zone associated with six (6) trees.

Accordingly, to mitigate for the project impacts the landscape plan shall include the installation of ten (10) 15-gallon oaks, twenty-four (24) 24-inch box oaks, and nine (9) 36-inch box oaks. The exact species, planting sizes, and planting locations shall be subject to review and approval by the City Oak Tree Consultant. **Table 5** identifies the mitigation offsets for each of the trees that would be impacted.

In accordance with the Oak Tree Conditions of Approval, a 5-Year Maintenance and Monitoring Plan shall be prepared for all oak trees that will be planted onsite as project mitigation offsets. The plan shall describe how all mitigation trees will be maintained and monitored for the 5-year period following planting, and shall include remedial measures for any mitigation tree that fails during the monitoring period. The Plan shall be subject to review and approval by the City's Oak Tree Consultant.

The project arborist shall monitor all work performed within the PZ to ensure the impacts are conducted as proposed and they do not result in degradation of the quality or health of the tree. If the trees within PZ impacts significantly decline in health or die, off-set mitigation will be required consistent with the requirements to offset removals, as described above. The permittee shall ensure that the replacement trees live and maintain a healthy condition in perpetuity.

Table 6
Tree Mitigation

Tree Number	Species	Total Trunk Diameter (in.)	Health Grade	Mitigation Offsets
Trees To Be Removed				
4	Qa	5.5	B	1 -15 gallon specimen 2 - 24" box specimen 1 - 36" box specimen
5	Qa	4.0	B	1 -15 gallon specimen 2 - 24" box specimen 1 - 36" box specimen

Tree Number	Species	Total Trunk Diameter (in.)	Health Grade	Mitigation Offsets
14	Qa	2.0	B	1 -15 gallon specimen 2 - 24" box specimen 1 - 36" box specimen
40	Qi	3.5	B	1 -15 gallon specimen 2 - 24" box specimen 1 - 36" box specimen
58	Qa	2.3	C	1 -15 gallon specimen 2 - 24" box specimen 1 - 36" box specimen
59	Qa	3.0	B	1 -15 gallon specimen 2 - 24" box specimen 1 - 36" box specimen
78	Qa	4.0	C	1 -15 gallon specimen 2 - 24" box specimen 1 - 36" box specimen
83	Qa	8.5	B	2 -15 gallon specimen 2 - 24" box specimen 1 - 36" box specimen
85	Qa	6.0	C	1 -15 gallon specimen 2 - 24" box specimen 1 - 36" box specimen
TOTAL TRUNK DIAMETER REMOVED			***38.8"***	
Trees With Encroachment Greater Than 10%				
1	Qa	2.0	B	1 - 24" box specimen
7	Qa	3.5	B	1 - 24" box specimen
9	Qa	2.0	B	1 - 24" box specimen
10	Qa	4.0	B	1 - 24" box specimen
13	Qa	1.9	B	1 - 24" box specimen
64	Ql	9.0	B	1 - 24" box specimen
TOTAL MITIGATION REQUIRED				***10 - 15-gallon specimen*** ***24 - 24" box specimen*** ***9 - 36" box specimen***

Avoidance and Minimization Measures

The following avoidance and minimization measures are required to preserve the long-term health of all protected oak trees on-site:

1) Prune deadwood, broken branches and recommended structural pruning in accordance with International Society of Arboriculture, Pruning Standards and ANSI A-300 Pruning Guidelines.
2) Remove all concrete, trash, and debris located within the oak's Protection Zone. The oak Protection Zones shall be kept free of the construction materials in the future.
3) Protective fencing (minimum five-foot chain-link in concrete footing) shall be installed around the oak at the edge of the TPZ for all oak trees. Fencing can be taken down or moved to the edge of canopy or edge of grading only when approved work is being carried out under the observation of the applicant's oak tree consultant. The location of the fencing may be adjusted on a day-to-

day basis as agreed to by the City of Agoura Hills' oak tree consultant and the applicant's oak tree consultant.

4) Due to the close proximity to project activities the following oaks may require re-positioning of the protective fencing inside a portion of the canopy: Tree #s 1, 9, 61, 84, and 100. The project arborist must be present during the fence placement or repositioning. Regular inspections of this fencing shall occur during site development.
5) The fences must be installed prior to the commencement of any grading operations. Signs must be installed on the fence in four (4) locations around each tree, or at 50-foot intervals around an oak grove. The signs must be two (2) feet by two (2) feet and contain the following language: WARNING; THIS FENCE SHALL NOT BE REMOVED OR RELOCATED WITHOUT WRITTEN AUTHORITY FROM THE CITY OF AGOURA HILLS DEPARTMENT OF PLANNING AND COMMUNITY DEVELOPMENT.
6) All work performed within the TPZ of any oak shall be accomplished by utilizing hand tools only and must be monitored by the Project Arborist.
7) All roots exposed during project grading shall be clean cut at a 45-degree angle and treated by the Project Arborist.
8) The leaf-litter build-up under the canopy of the oak is ideal for healthy tree growth and root development. Do not alter or remove if possible. A 3-inch layer of mulch may be advisable in settings where leaf-litter has been lost.
9) Do not remove the tags numbering each oak on this site.
10) No construction materials are to be stored or discarded within the Protection Zone of any oak. Rinse water, concrete residue, liquid contaminates (paint, thinners, gasoline, oils, etc.) of any type shall not be deposited in any form at the base of an oak.
11) No vehicles shall be parked within the Protection Zone of an oak.
12) The Project Arborist will be overseeing the care of mitigation oaks and existing oaks that remain on-site through the completion of the construction phase of the project.
13) Operate in conformance with the City of Agoura Hills Oak Tree Preservation Guidelines.

V. RECOMMENDATIONS

Pruning Recommendations

When larger oaks become fixtures in public areas, regular maintenance pruning for end-weight reduction is imperative for safety. Healthy oaks, if not maintained, will eventually grow beyond their ability to support themselves and fail at a weak point. This commonly occurs at a branch union or the main crotch. Weight reduction pruning and/or cabling is vitally important in an oak tree preservation program. It is advised that mature oaks in public areas be inspected on an annual basis for tree health and safety (structural integrity).

Frequency of Watering

Care should be taken to avoid placing any sprinklers within watering distance to the trunk of an oak tree. Generally, sprinklers should not reach within 15' of a mature oak trunk. Grass or ground covers must never be planted next to the trunks. Too much moisture near the base of an oak is generally believed to be their leading cause of death in public settings. Oak Root Fungus tends to thrive in an over-irrigated setting. Oak trees survive and thrive on annual rainfall alone and generally do not need supplemental irrigation except during periods of extended drought. Watering should take place at or near the dripline only. Landscape plans should leave the area within the dripline of an oak tree in a native or natural setting where feasible.

APPENDIX 1

Tree Survey Data Forms

SUMMARY OF FIELD OBSERVATIONS

	TREE NUMBER	1	2	3	4	5	6	7	8	9	10
SPECIES	*Quercus agrifolia*	X	X	X	X	X	X	X	X	X	X
	Quercus ilex										
	Quercus lobata										
FORM	TREE HT. (ESTIMATED)	12'	15'	15'	10'	12'	11'	11'	18'	12'	18'
	LEAN (ANGLE)										
	TRUNK DIAMETERS	2"	2"	2.5"	3"	3"	2.5"	3.5"	3.5"	2"	4"
					2.5"	1"	1"				
PHYSICAL CONDITION	TRUNK CAVITY										
	TRUNK EXUDATION										
	TRUNK DAMAGE										
	BURIED ROOT COLLAR										
	EXPOSED ROOTS										
	WEAK CROTCH(ES)										
	FUNGAL DISEASE										
	INSECT/MITE DAMAGE										
	NEW/OLD FIRE DAMAGE										
	BRANCH CAVITIES										
	MAINSTEM DIEBACK										
	TWIG/BRANCH DIEBACK										
	EPICORMIC GROWTH										
	THIN FOLIAGE	X	X								
	VIGOR (GOOD/MOD/POOR)	G	G	G	G	G	G	G	G	G	G
	TERRAIN - SLOPED/LEVEL	S	S	S	S	S	S	S	L	L	L
RATING	HERITAGE										
	HEALTH	B	B	B	B	B	B	B	B	B	B
	AESTHETICS/COMFORMITY	A	B	B	B	B	B	B	C	C	B
TREAT-MENT	REMOVE DEADWOOD										
	INSECT/DISEASE TREAT										

SUMMARY OF FIELD OBSERVATIONS

	TREE NUMBER	11	12	13	14	15	16	17	18	40	41
SPECIES	*Quercus agrifolia*	X	X	X	X	X	X	X	X		
	Quercus ilex									X	X
	Quercus lobata										
FORM	TREE HT. (ESTIMATED)	12'	15'	12'	9'	15'	20'	18'	15'	9'	8'
	LEAN (ANGLE)			E						W	
	TRUNK DIAMETERS	2"	3"	1.9"	2"	2.5"	3.5"	2.5"	2"	3.5"	2"
		1"									2"
		1"									
PHYSICAL CONDITION	TRUNK CAVITY										
	TRUNK EXUDATION										
	TRUNK DAMAGE										
	BURIED ROOT COLLAR										
	EXPOSED ROOTS										
	WEAK CROTCH(ES)										X
	FUNGAL DISEASE										
	INSECT/MITE DAMAGE										
	NEW/OLD FIRE DAMAGE										
	BRANCH CAVITIES										
	MAINSTEM DIEBACK										
	TWIG/BRANCH DIEBACK										
	EPICORMIC GROWTH										X
	THIN FOLIAGE	X				X	X	X	X		
	VIGOR (GOOD/MOD/POOR)	G	G	G	G	G	G	G	G	G	G
	TERRAIN - SLOPED/LEVEL	L	L	L	S	L	L	L	L	L	L
RATING	HERITAGE										
	HEALTH	B	B	B	B	B	B	B	B	B	C
	AESTHETICS/COMFORMITY	C	A	B	B	A	A	A	A	C	C
TREAT-MENT	REMOVE DEADWOOD										
	INSECT/DISEASE TREAT										

Growing in chainlink.

Remove tree tie wire and padlock. In small planter.

Remove one codominant stem. In small planter.

SUMMARY OF FIELD OBSERVATIONS

	TREE NUMBER	57	58	59	60	61	62	63	64	77	78
SPECIES	*Quercus agrifolia*	X	X	X	X	X	X	X			X
	Quercus ilex									X	
	Quercus lobata								X		
FORM	TREE HT. (ESTIMATED)	12'	10'	20'	30'	20'	25'	25'	25'	15'	10'
	LEAN (ANGLE)						N	NE			W
	TRUNK DIAMETERS	2"	2.25"	3"	7.5"	4"	6.5"	6.5"	7"	5"	4"
		1"									
PHYSICAL CONDITION	TRUNK CAVITY										
	TRUNK EXUDATION										
	TRUNK DAMAGE										
	BURIED ROOT COLLAR										
	EXPOSED ROOTS										
	WEAK CROTCH(ES)										
	FUNGAL DISEASE										
	INSECT/MITE DAMAGE										
	NEW/OLD FIRE DAMAGE										
	BRANCH CAVITIES		X								
	MAINSTEM DIEBACK										
	TWIG/BRANCH DIEBACK										
	EPICORMIC GROWTH									X	X
	THIN FOLIAGE	X	X	X	X	X					
	VIGOR (GOOD/MOD/POOR)	M	M	G	G	G	G	G	G	G	G
	TERRAIN - SLOPED/LEVEL	L	L	S	S	L	L	L	L	L	L
RATING	HERITAGE										
	HEALTH	B	C	B	B	B	B	B	B	B	C
	AESTHETICS/COMFORMITY	C	C	B	B	B	B	B	C	B	C
TREAT-MENT	REMOVE DEADWOOD										
	INSECT/DISEASE TREAT										

Imbedded tree tag.

In small planter.

Needs corrective pruning of multi-stems. In small planter.

SUMMARY OF FIELD OBSERVATIONS

SPECIES	**TREE NUMBER**	82	83	84	85	86	100				
	Quercus agrifolia	X	X	X	X	X					
	Quercus ilex										
	Quercus lobata						X				
FORM	TREE HT. (ESTIMATED)	9'	15'	30'	15'	18'	60'				
	LEAN (ANGLE)			N							
	TRUNK DIAMETERS	3"	5.5"	10"	6"	6.5"	48"				
			3"	7"		4"					
PHYSICAL CONDITION	TRUNK CAVITY										
	TRUNK EXUDATION										
	TRUNK DAMAGE										
	BURIED ROOT COLLAR										
	EXPOSED ROOTS										
	WEAK CROTCH(ES)										
	FUNGAL DISEASE						X				
	INSECT/MITE DAMAGE			X							
	NEW/OLD FIRE DAMAGE										
	BRANCH CAVITIES										
	MAINSTEM DIEBACK	X									
	TWIG/BRANCH DIEBACK	X	X	X	X	X	X				
	EPICORMIC GROWTH	X									
	THIN FOLIAGE	X	X	X							
	VIGOR (GOOD/MOD/POOR)	P	G	M	G	G	M				
	TERRAIN - SLOPED/LEVEL	L	L	S	G	L	L				
RATING	HERITAGE										
	HEALTH	F	B	C	C	C	C-				
	AESTHETICS/COMFORMITY		C	C	B	C	C				
TREAT-MENT	REMOVE DEADWOOD										
	INSECT/DISEASE TREAT										
	Notes	In small planter.		Wood borer present.	Drought damage.	Drought damage.	Old fruiting body present on north side, at grade.				

DRIPLINE MEASUREMENTS

TREE NO.	DRIPLINE	N	NE	E	SE	S	SW	W	NW
1	HORIZ.	5	5	5	5	5	5	5	5
	VERT.	4	4	4	4	4	4	4	4
2	HORIZ.	5	5	5	5	5	5	5	5
	VERT.	8	8	8	8	8	8	8	8
3	HORIZ.	7	6	3	4	3	3	5	9
	VERT.	10	8	3	5	2	1	2	10
4	HORIZ.	5	5	5	5	5	5	5	5
	VERT.	1	1	1	1	1	1	1	1
5	HORIZ.	3	3	3	3	3	3	3	3
	VERT.	1	1	1	1	1	1	1	1
6	HORIZ.	4	4	4	4	4	4	4	4
	VERT.	1	1	1	1	1	1	1	1
7	HORIZ.	5	5	5	5	5	5	5	5
	VERT.	1	1	1	1	1	1	1	1
8	HORIZ.	7	6	6	0	0	0	7	7
	VERT.	6	6	8	0	0	0	4	6
9	HORIZ.	5	4	4	4	4	4	4	4
	VERT.	6	1	1	3	4	4	4	4
10	HORIZ.	0	3	5	7	10	8	4	4
	VERT.	0	7	7	7	7	7	9	8

DRIPLINE MEASUREMENTS

TREE NO.	DRIPLINE	N	NE	E	SE	S	SW	W	NW
11	HORIZ.	3	3	3	3	3	3	3	3
	VERT.	5	5	5	5	5	5	5	5
12	HORIZ.	3	4	6	6	6	6	6	4
	VERT.	9	9	8	7	7	7	7	9
13	HORIZ.	2	5	6	6	4	3	2	2
	VERT.	2	4	4	5	4	4	2	2
14	HORIZ.	4	4	4	4	4	4	4	4
	VERT.	1	1	1	1	1	1	1	1
15	HORIZ.	5	3	2	4	5	5	5	5
	VERT.	7	7	7	7	6	6	6	6
16	HORIZ.	6	6	6	6	6	6	3	3
	VERT.	8	8	8	8	8	8	8	8
17	HORIZ.	3	4	4	4	3	2	2	2
	VERT.	10	10	10	10	10	10	10	10
18	HORIZ.	6	5	3	3	1	1	1	4
	VERT.	8	8	8	8	10	10	10	8
40	HORIZ.	2	5	6	4	4	4	6	3
	VERT.	4	4	4	4	4	4	4	4
41	HORIZ.	1	3	3	4	5	5	5	3
	VERT.	5	5	5	5	5	5	5	5

DRIPLINE MEASUREMENTS

TREE NO.	DRIPLINE	N	NE	E	SE	S	SW	W	NW
57	HORIZ.	13	3	2	2	2	2	15	11
	VERT.	6	5	5	5	5	5	6	6
58	HORIZ.	8	0	0	0	0	4	6	11
	VERT.	1	0	0	0	0	1	2	3
59	HORIZ.	2	2	3	5	10	4	2	2
	VERT.	5	8	8	8	6	6	6	6
60	HORIZ.	14	18	15	11	6	4	4	8
	VERT.	10	15	15	20	20	20	15	10
61	HORIZ.	10	8	6	3	3	5	13	12
	VERT.	12	8	8	6	3	5	15	12
62	HORIZ.	10	8	5	4	3	3	4	11
	VERT.	10	9	6	6	6	6	8	10
63	HORIZ.	10	13	13	2	0	0	2	5
	VERT.	12	12	12	8	0	0	8	10
64	HORIZ.	3	7	12	15	15	5	3	0
	VERT.	6	7	7	7	8	5	9	0
77	HORIZ.	3	4	5	5	5	6	7	5
	VERT.	6	5	5	4	4	4	5	4
78	HORIZ.	3	4	7	4	8	4	7	5
	VERT.	6	6	6	6	6	6	6	6

LNDG Job No.: 2378-01 Date: 10/31/14

DRIPLINE MEASUREMENTS

TREE NO.	DRIPLINE	N	NE	E	SE	S	SW	W	NW
82	HORIZ.	0	0	0	0	0	0	0	0
	VERT.	0	0	0	0	0	0	0	0
83	HORIZ.	7	10	6	5	4	6	7	8
	VERT.	7	7	5	5	7	8	8	8
84	HORIZ.	25	25	22	20	15	11	23	27
	VERT.	15	5	8	8	12	15	15	18
85	HORIZ.	9	9	11	7	9	9	9	9
	VERT.	3	3	3	8	3	3	1	9
86	HORIZ.	11	9	10	8	4	6	7	8
	VERT.	8	1	3	2	1	1	8	8
100	HORIZ.	41	45	48	50	37	40	39	42
	VERT.	10	15	10	10	10	18	5	20
	HORIZ.								
	VERT.								
	HORIZ.								
	VERT.								
	HORIZ.								
	VERT.								
	HORIZ.								
	VERT.								

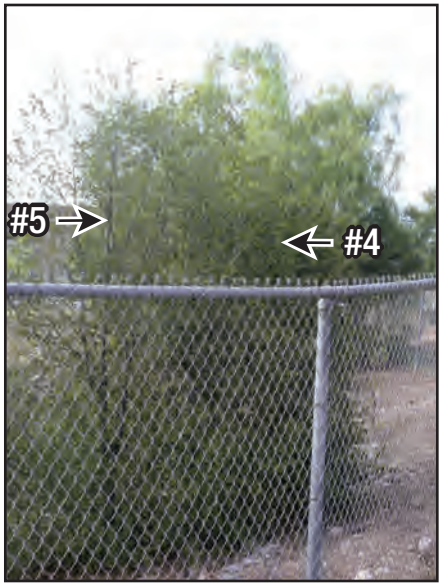
APPENDIX 2

Photographs of Protected Trees

Tree #1

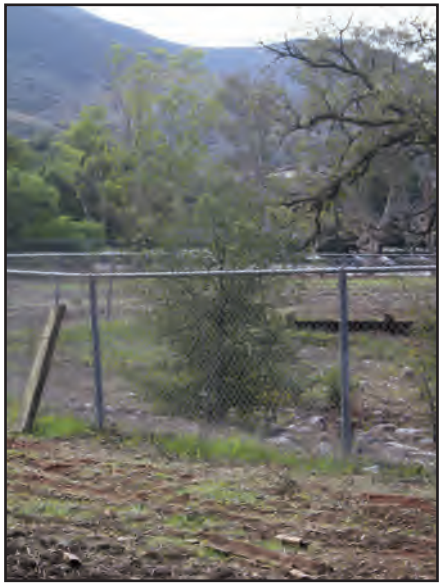
Tree #2

Tree #3



Tree #4 & #5

Tree #6



Tree #7

Tree #8

Tree #9

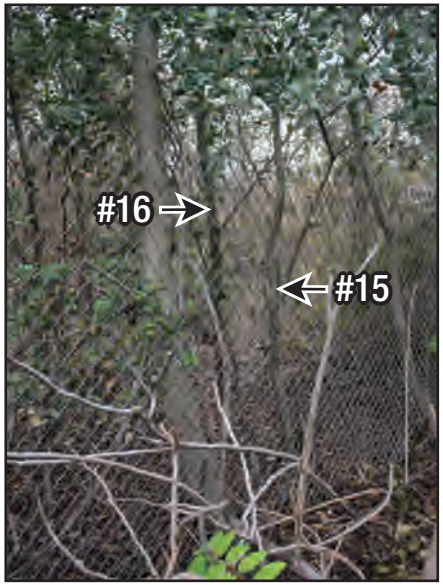
Tree #10

Tree #11

Tree #12

Tree #13

Tree #14



Tree #15 & #16

Tree #17 & #18

Tree #40

Photos of Surveyed Trees

Tree #41

Tree #57

Tree #58

Tree #59

Tree #60

Tree #61

Tree #62

Tree #63

Tree #64

Tree #77

Tree #78

Tree #82

Tree #83

Tree #84

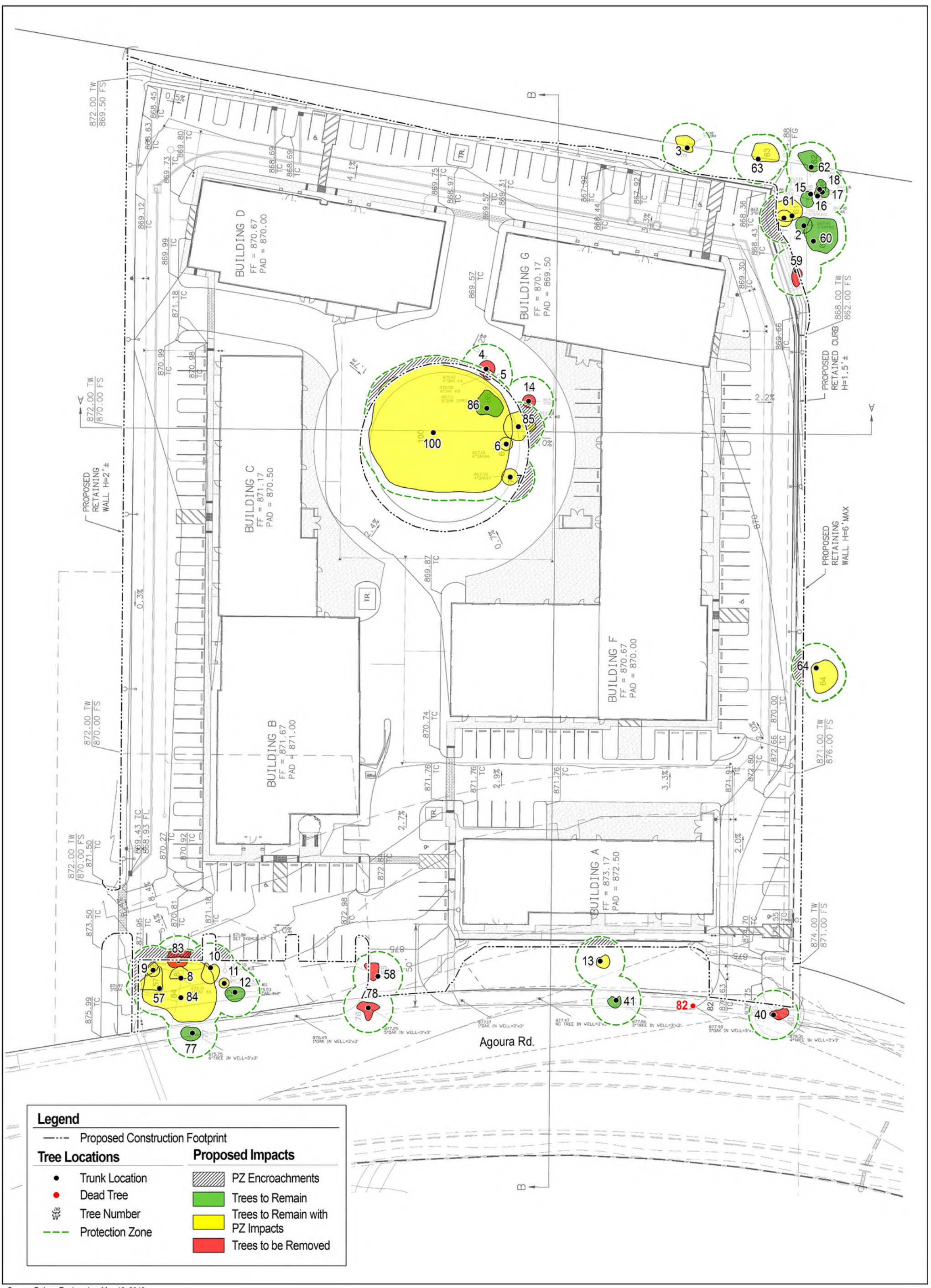
Tree #85

Tree #86

Tree #100

APPENDIX 3

Tree Location and Project Impacts Map



Source: Delane Engineering, May 12, 2016.

AGOURA LANDMARK MND

envicom

Tree Location and Project Impacts Map

0 20 40 Feet

FIGURE 1

Phase I Archaeological Report

APPENDIX F

A Phase 1 Archaeological Study
For Proposed Improvements to
29621 Agoura Road, (APN# 2061-003-027)
City of Agoura Hills, County of Los Angeles, California

Prepared for
Martin Teitelbaum
Teitelbaum Construction
569 Constitution Avenue, Suite H
Camarillo, California 93012
Phone: 805-383-2221 - Fax: 805-383-5959

Prepared by

Robert J. Wlodarski, Principal Investigator
Lauren DeOliveira, Project Manager
Historical, ***E***nvironmental, ***A***rchaeological, ***R***esearch, ***T***eam
M.A./RPA and CCPH Certified in History, Archaeology and Architectural History
Meets National Park Service Standards & Guidelines for Archaeology and Historic Preservation
Member of the National Council on Public History
8701 Lava Place, West Hills, California 91304-2126
Phone/Fax: 818-340-6676 - E-mail: robanne@ix.netcom.com

September 2015

Summary of Findings

At the request of Martin Teitelbaum (**Teitelbaum Construction)** of Camarillo, California, a Phase 1 Archaeological Study was prepared in support of an environmental document for Proposed Improvements to 29621 Agoura Road, (APN#2061-003-027), City of Agoura Hills, County of Los Angeles, California. This document is intended to assist the client in achieving compliance with the California Environmental Quality Act (CEQA) and the Planning Department of the City of Agoura Hills, County of Los Angeles, guidelines, policies and procedures pertaining to the completion of cultural resource investigations. The scope of work consisted of:

1. Performing a record search at the South Central Coastal Information Center, California State University Fullerton.
2. Conducting an on-foot surface reconnaissance of the entire project area.
3. Preparing a report summarizing the results of the record search and field investigation phases.

The undeveloped lot lies north of the Pacific Ocean, south of Simi Valley, east of San Buenaventura, and west of Burbank, within the City of Agoura Hills, County of Los Angeles, California (Figure 1). More specifically, the parcel is located on the Thousand Oaks, California 7.5 minute USGS Map (1981) within Township 1 North, Range 18 West, in an unsectioned portion of Rancho Las Virgenes (Figure 2). The property is bordered on the north by Highway 101, on the south by Agoura Road, on the west by 29851 Agoura Road (Bank of America Corporate offices), and on the east by 29525 Agoura Road (the Agoura Hills Animal Shelter) (Figure 3). The property appears to have been disked recently. A large fenced in Oak tree is located along the north of the property. Large pepper trees and eucalyptus trees are located along the northern, eastern and southern perimeters of the property. An old baseball field with backstop fence, bleachers, brick BBQ and cargo container is situated near the southwestern portion of the property, parallel to the Bank of America parking lot. A large concrete, subterranean, flood control basin is located to the southeast of the baseball field. Naturally occurring quartzite, conglomerate/breccia, and sandstone were seen on the property. The property has been extensively disturbed in the past by grading, disking and prior development activities (Figure 4) Figure 5 illustrates a proposed site plan.

Soils on the property belong to the ***Cropley Series*****,** which are very deep, well drained soils developed on nearly level to moderately sloping alluvial fans and valley floors in alluvium from mixed materials. They are characterized by dark gray, fine textured, angular blocky, neutral surface layers, with grayish brown, fine textured, massive, moderately alkaline and calcareous subsoils, over grayish brown moderately fine textured, massive, strongly calcareous substrata; and, ***Gilroy Series***, which are moderately deep to deep, well-drained residual soils developed on gently rolling to steep uplands on basic igneous rock. They are characterized by dark grayish brown, medium to moderately fine textured, granular, slightly acid surface soils, brown moderately fine textured angular blocky, medium acid subsoils resting on fractured basalt and volcanic breccia at 22-40 inches; (U.S. Department of Agriculture 1967).

A record search performed on September 22, 2015, by professional RPA-certified archaeologist Wayne Bonner, at the South Central Coastal Information Center, California State University, Fullerton (SCCIC-CSUF), indicated that no previously recorded prehistoric or historic archaeological sites or isolates exist on the property. Also, the following results apply within a ½ -mile radius of the subject property:

- Fourteen prehistoric archaeological resources are recorded: CA-LAN-320; -321; -432; -462; -671; -776; -842; -970; -971; -1021;-1024; -1027; -1069; and -1236.
- CA-LAN-1021, which was recorded in 1979, is situated roughly 400-feet to the south of the subject property, and 126 stone tools and debitage were collected during 1979, along with three pieces of large burned mammal bone. Major disturbances occurred to the site during the construction of Agoura Road and the completion of Hidden Hills Trail Camp where road clearance and landscaping occurred. During 1988, additional testing was performed by Singer and an assortment of tools, debitage, mammal and fish bone were recovered. Woodworking, tool maintenance and hunting seemed to be the primary activities taking place at the site over 1000 years ago.
- CA-LAN-1027 was recorded by Griff Coleman in 1972. The resource contained a midden component and numerous andesite and chert flakes and cores. During 1979, Clay Singer and Jamie Karl noted that the archaeological site covered a graded terrace immediately south of Agoura Road. The upper portion of the site had been graded and used to level the ground surface. Fire-affected rock, fused shale, chert, quartzite, chalcedony and andesite flakes, shellfish, mammal bone, awls, projectile bones and human remains were noted. Dr. Chester King, who visited the site in 1984, noted artifacts and human remains on the surface.
- No historic archaeological resources were identified.

- Twenty-nine prior investigations have been conducted (Atlantis Scientific 1977; Barkley & Cannon 1982; Brock & Van Horn 1980; Brown 1981; Chace 1979; D'Altroy 1976; Greenwood 1976; Hatheway & McKenna 1989a,b; Kirkish 1978; Leach 1980; Maki & Carbone 1996; Padon 1978; Rosen 1979; Rosen & Clewlow 1975; Schmidt & J. Romani (2010) Scientific Resource Surveys 1979; Singer 1979a,b; Singer & Atwood 1988, 1989; Tartaglia 1977; Van Horn 1985; Webb and Romani 1982; and, Wlodarski 1996, 2003, 2004, 2008, 2013).
- None of these studies encompassed the project area; therefore, the SCCIC mandated a Phase 1 Archaeological Study be performed for the subject property prior to construction.
- No National Register of Historic Places are identified (10/15/2004 with supplements to date).
- No California Register of Historic Resources exists (1992, with supplemental information to date).
- No California Historical Landmarks are listed (1995, with supplemental information to date).
- No California Points of Historical Interest are noted (1992, with supplemental information to date).
- No California State Historic Resources Commission issues are noted.
- No listed properties in the Office of Historic Preservation Historic Property data file are identified.
- No Archaeological Determinations of Eligibility are listed.

Additional information obtained from The Geography Department Map Reference Center, California State University Northridge, and the Los Angeles County Archives Project (Historical Records of Los Angeles County) follows:

- Township-Range Plat Map Surveys by, Henry Washington (1853), Henry Hancock (1854), J.E. Terrell (1861), G.H. Thompson (1870), J.R. Glover (1895) and M.E. Reilly (1895);
- 1853-Plat of the Rancho Las Virgenes (claimant: Maria Antonio Machado);
- 1874-Plat of the Rancho Las Virgenes (surveyed by W.P. Reynolds);
- 1876-Plat of the Rancho Las Virgenes (surveyed by John Goldsworthy);
- 1878-Plat of the Rancho Las Virgenes (confirmed to Maria Antonia Machado on July 11, 1878);
- 1879-Plat of the Rancho Las Virgenes (surveyed by William Minto in February, 1879);
- 1881-Plat Rancho Las Virgenes (surveyed by William Minto, June 10, 1881);
- Map of the County of Los Angeles, California (Stevenson, 1881);
- Map of the County of Los Angeles, California (Rowan, 1888);
- Map of the Reservoir Lands in the County of Los Angeles (Seebold-1891);
- Calabasas 15 minute USGS Topographic Map (1903 edition - surveyed in 1893, 1900-1901);
- Camulos 15 minute USGS Topographic Map (1903 edition - surveyed in 1893, 1900-1901);
- Triunfo Pass 15 minute USGS Topographic Map (surveyed in 1921 and 1943);
- Dry Canyon 15 minute USGS Topographic Map (1932 edition - surveyed in 1925 and 1929).

A pedestrian survey was conducted for the property by the author serving as Principal Investigator, and Lauren DeOliveira serving as Project Manager, on September 23, 2015. The parcel was inspected for surface indications of cultural resources. All exposed terrain and fortuitous exposures such as rodent burrows and excavated or cleared areas, were thoroughly inspected for signs of cultural resources. The following observations were made while in the field:

- The property is bordered on the north by Highway 101, on the south by Agoura Road, on the west by 29851 Agoura Road (Bank of America Corporate offices), and on the east by 29525 Agoura Road (the Agoura Hills Animal Shelter).
- The property appears to have been disked recently.
- A large fenced in Oak tree is located along the north of the property.
- Large pepper and eucalyptus trees are located along the northern, eastern and southern perimeters of the property.
- An old baseball field with backstop fence, bleachers, brick BBQ and cargo container is situated near the southwestern portion of the property, parallel to the Bank of America parking lot.
- A large concrete, subterranean, flood control basin is located to the southeast of the baseball field.
- Naturally occurring quartzite, conglomerate/breccia, and sandstone were seen on the property.
- The property has been extensively disturbed in the past by grading, disking and prior development activities

The results of the Phase 1 archaeological study yielded no indications of prehistoric or historic archaeological resources within the surveyed area. Plate 1 illustrates selected views of the property. Any proposed improvements within the parcel will have no adverse impacts on known cultural resources. No additional hindrances affected the results of this survey, and no conditions are placed on the project based on the results of this study.

The nature of a walkover can only confidently assess the potential for encountering surface cultural resource remains; therefore, customary caution is advised in developing within the project area. Should unanticipated cultural resource remains be encountered during land modification activities, work must cease, and the Planning Department of the City of Agoura Hills, County of Los Angeles shall be contacted immediately to determine appropriate measures to mitigate adverse impacts to the discovered resources. Cultural resource remains may include artifacts, shell, bone, features, foundations, trash pits and privies, etc.

If human remains are found during excavations related with this project, all work must halt, and the County Coroner must be notified (Section 7050.5 of the California Health and Safety Code). The coroner will determine if the remains are of forensic interest. If the coroner and supervising archaeologist, determine that the remains are prehistoric, the Coroner will contact the Native American Heritage Commission (NAHC). The NAHC will be responsible for designating the most likely descendant (MLD), who will be responsible for the disposition of the remains, as required by Section 5097.98 of the Public Resources Code. The MLD should make his/her recommendations within 48 hours of their notification by the NAHC. This recommendation may include A) the nondestructive removal and analysis of human remains and items associated with Native American human remains; (B) preservation of Native American human remains and associated items in place; (C) relinquishment of Native American human remains and associated items to the descendants for treatment; or (D) other culturally appropriate treatment.

Table of Contents

List of Figures

List of Plates

I. Introduction

1.1 Purpose and Scope of the Project

At the request of Martin Teitelbaum (**Teitelbaum Construction)** of Camarillo, California, a Phase 1 Archaeological Study was prepared in support of an environmental document for Proposed Improvements to 29621 Agoura Road, (APN#2061-003-027), City of Agoura Hills, County of Los Angeles, California. This document is intended to assist the client in achieving compliance with the California Environmental Quality Act (CEQA) and the Planning Department of the City of Agoura Hills, County of Los Angeles, guidelines, policies and procedures pertaining to the completion of cultural resource investigations. The scope of work consisted of:

1. Performing a record search at the South Central Coastal Information Center, California State University Fullerton.
2. Conducting an on-foot surface reconnaissance of the entire project area.
3. Preparing a report summarizing the results of the record search and field investigation phases.

1.2 Location and Description of the Project

The undeveloped lot lies north of the Pacific Ocean, south of Simi Valley, east of San Buenaventura, and west of Burbank, within the City of Agoura Hills, County of Los Angeles, California (Figure 1).

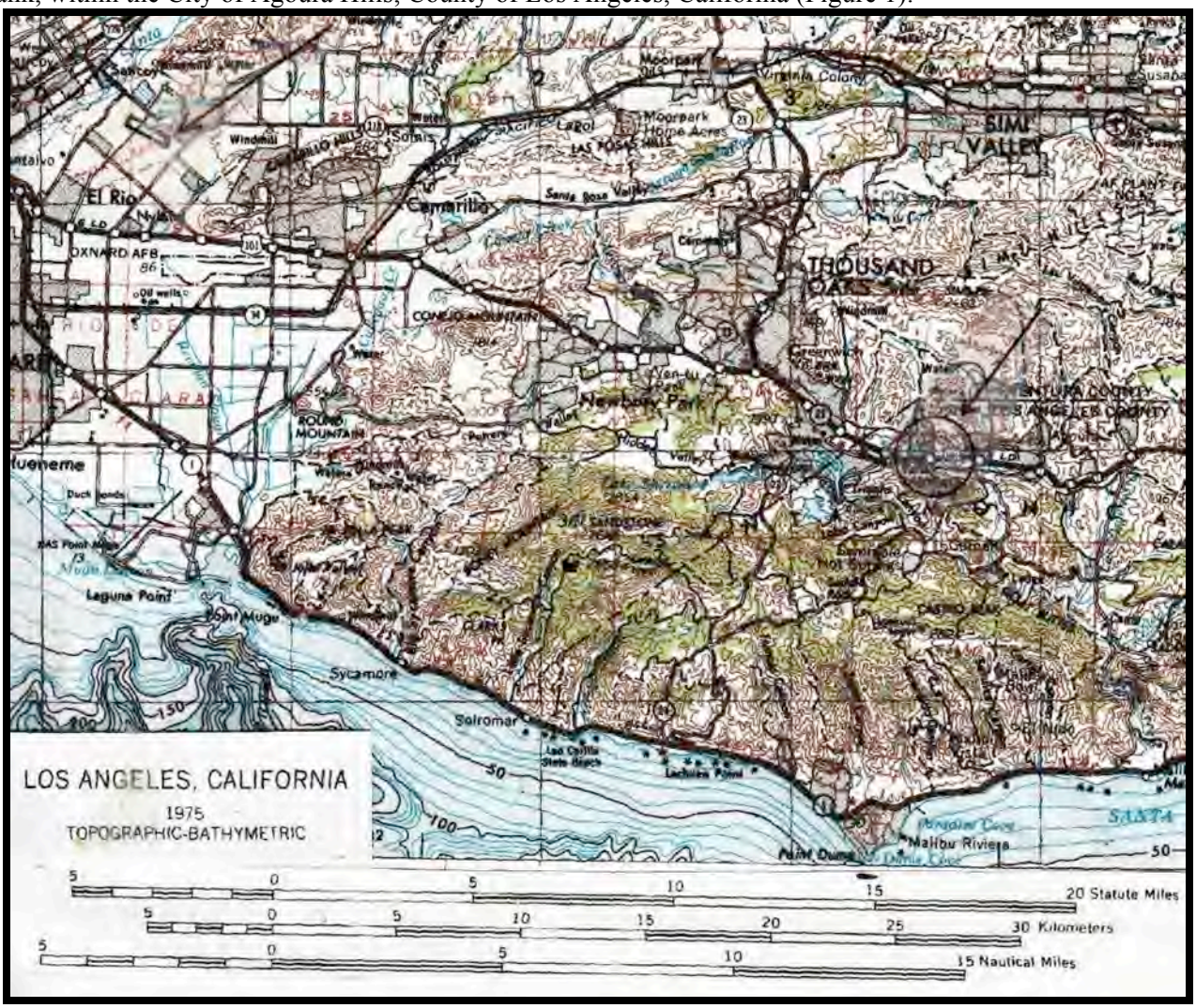


Figure 1: Vicinity Map

More specifically, the parcel is located on the Thousand Oaks, California 7.5 minute USGS Map (1981) within Township 1 North, Range 18 West, in an unsectioned portion of Rancho Las Virgenes (Figure 2).

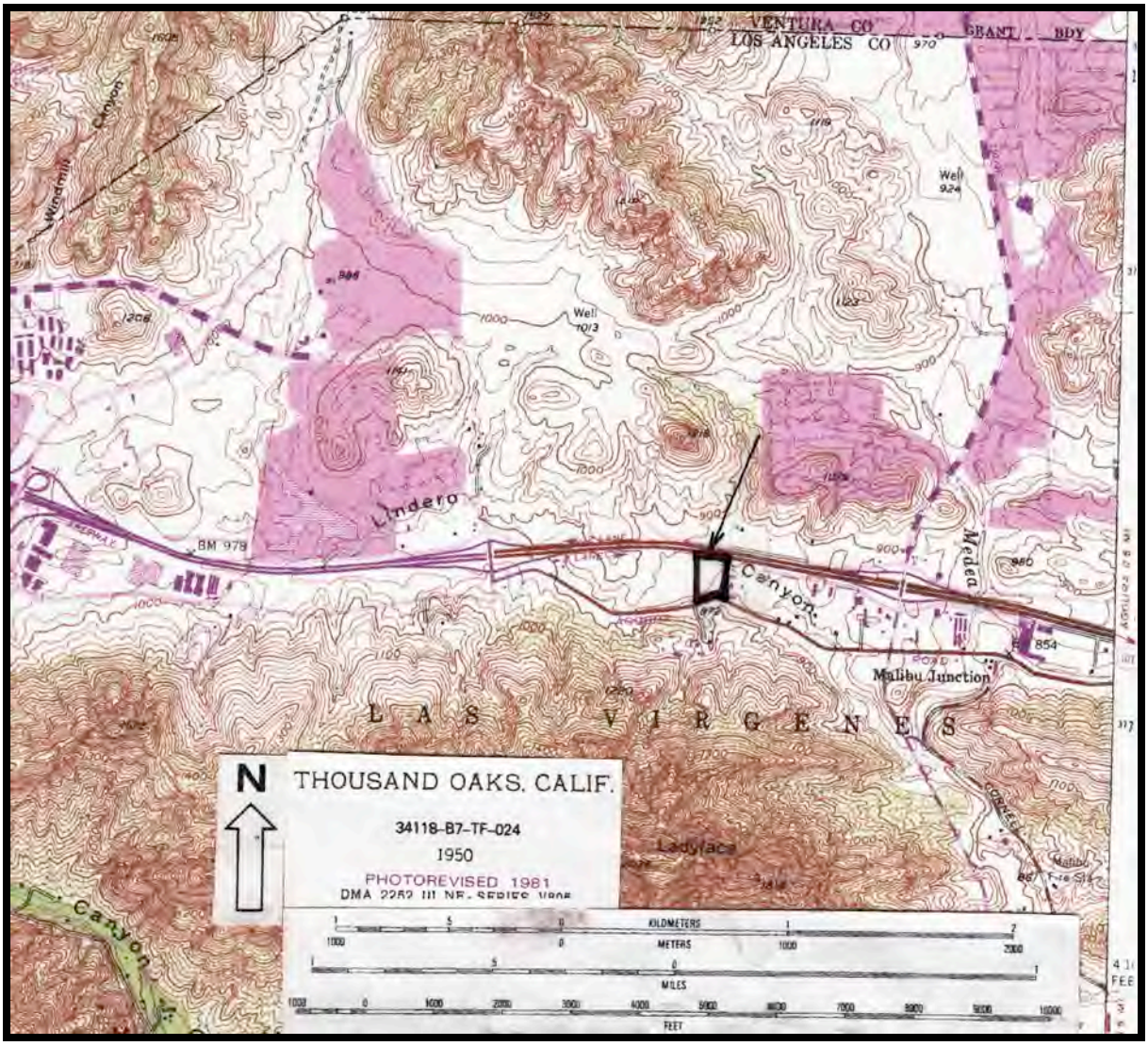


Figure 2: Location of the Survey

The property is bordered on the north by Highway 101, on the south by Agoura Road, on the west by 29851 Agoura Road (Bank of America Corporate offices), and on the east by 29525 Agoura Road (the Agoura Hills Animal Shelter) (Figure 3).

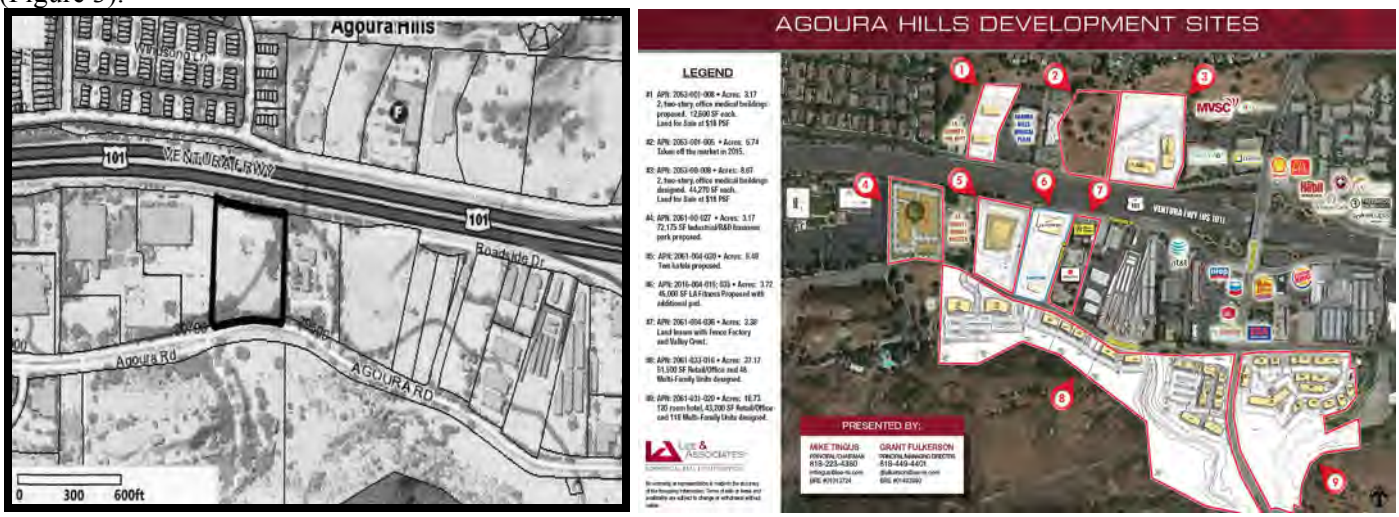


Figure 3: Location of the Project Area on the Assessor's Parcel Map