APPENDIX A

AIR QUALITY WORKSHEETS

POINT VIEW MASTER USE PLAN PROJECT

MND
Appendix A

Air Quality and Greenhouse Gas Assessment Files

Provided by PCR Services Corporation

February 2012

Appendix A.1
Air Quality

A.1-1 Construction Emissions

- CalEEMod Output File
- SCAQMD Rule 403 (Fugitive Dust) Control Requirements

A.1-2 Operational Emissions

- CalEEMod Output Files
    - Summer
    - Winter
- Regional Stationary Emissions Calculations
- Carbon Monoxide Dispersion Analysis
    - Emfac2007 Output: CO Emissions Factors
    - LOS Analysis
    - CO Analysis
        - 1-hr
        - 8-hr
    - CALINE4 Files

CalEEMod Version: CalEEMod.2011.1.1 Date: 12/13/2011

Pointview

South Coast AQMD Air District, Summer

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric
City Park	26	Acre
Golf Course	2.5	Acre
User Defined Recreational	2	User Defined Unit

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Utility Company**	Los Angeles Department of Water & Power
Climate Zone	8	**Precipitation Freq (Days)**	31		

1.3 User Entered Comments

Project Characteristics -

Land Use - Recreational Use #2 is Event Garden, which combines with the golf course to occupy less than 5 acres.
City Park = avocade, vineyard, citrus, olives, and vegetable garden.

Construction Phase - See Construction Assumptions

Off-road Equipment - See Construction Assumptions

Off-road Equipment - See Construction Assumptions

Off-road Equipment - See Construction Assumptions

Off-road Equipment - See Construction Assumptions

Trips and VMT - Initial planting would require temporary increase in number of on-site employees to 10-20 people at a AVR of 1.135.

Grading - Driveway is 1880ft long by 20ft wide (37600 sq ft) with no import/export of materials.

Vehicle Trips - See Traffic Study
Saturday and Sunday rates are assumed to be the same
Energy Use -

Solid Waste - Assumed Event Garden generates same solid waste as golf course

Land Use Change -

Off-road Equipment - See Construction Assumptions

Off-road Equipment - See Construction Assumptions

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					
2011	3.85	32.00	17.63	0.03	3.26	1.51	4.78	1.66	1.51	3.17	0.00	3,221.27	0.00	0.35	0.00	3,228.53
2012	3.93	30.09	16.67	0.04	3.26	1.87	4.67	1.66	1.87	3.06	0.00	3,932.99	0.00	0.35	0.00	3,940.38
Total	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**

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					
2011	3.85	32.00	17.63	0.03	3.05	1.51	4.57	1.66	1.51	3.17	0.00	3,221.27	0.00	0.35	0.00	3,228.53
2012	3.93	30.09	16.67	0.04	3.05	1.87	4.46	1.66	1.87	3.06	0.00	3,932.99	0.00	0.35	0.00	3,940.38
Total	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**

3.0 Construction Detail

3.1 Mitigation Measures Construction

3.2 Mass Site Grading - 2011

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					3.05	0.00	3.05	1.66	0.00	1.66						0.00
Off-Road	3.72	31.50	16.25	0.03		1.49	1.49		1.49	1.49		2,995.55		0.33		3,002.55
Total	**3.72**	**31.50**	**16.25**	**0.03**	**3.05**	**1.49**	**4.54**	**1.66**	**1.49**	**3.15**		**2,995.55**		**0.33**		**3,002.55**

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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00		0.00		0.00
Vendor	0.04	0.40	0.23	0.00	0.02	0.01	0.03	0.00	0.01	0.01		54.91		0.00		54.95
Worker	0.10	0.10	1.15	0.00	0.20	0.01	0.21	0.00	0.01	0.01		170.81		0.01		171.03
Total	**0.14**	**0.50**	**1.38**	**0.00**	**0.22**	**0.02**	**0.24**	**0.00**	**0.02**	**0.02**		**225.72**		**0.01**		**225.98**

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					3.05	0.00	3.05	1.66	0.00	1.66						0.00
Off-Road	3.72	31.50	16.25	0.03		1.49	1.49		1.49	1.49	0.00	2,995.55		0.33		3,002.55
Total	**3.72**	**31.50**	**16.25**	**0.03**	**3.05**	**1.49**	**4.54**	**1.66**	**1.49**	**3.15**	**0.00**	**2,995.55**		**0.33**		**3,002.55**

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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00		0.00		0.00
Vendor	0.04	0.40	0.23	0.00	0.00	0.01	0.02	0.00	0.01	0.01		54.91		0.00		54.95
Worker	0.10	0.10	1.15	0.00	0.01	0.01	0.01	0.00	0.01	0.01		170.81		0.01		171.03
Total	**0.14**	**0.50**	**1.38**	**0.00**	**0.01**	**0.02**	**0.03**	**0.00**	**0.02**	**0.02**		**225.72**		**0.01**		**225.98**

3.2 Mass Site Grading - 2012

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					3.05	0.00	3.05	1.66	0.00	1.66						0.00
Off-Road	3.54	29.63	15.40	0.03		1.38	1.38		1.38	1.38		2,995.55		0.32		3,002.21
Total	**3.54**	**29.63**	**15.40**	**0.03**	**3.05**	**1.38**	**4.43**	**1.66**	**1.38**	**3.04**		**2,995.55**		**0.32**		**3,002.21**

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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00		0.00		0.00
Vendor	0.03	0.36	0.21	0.00	0.02	0.01	0.03	0.00	0.01	0.01		55.03		0.00		55.07
Worker	0.09	0.09	1.06	0.00	0.20	0.01	0.21	0.00	0.01	0.01		167.29		0.01		167.51
Total	**0.12**	**0.45**	**1.27**	**0.00**	**0.22**	**0.02**	**0.24**	**0.00**	**0.02**	**0.02**		**222.32**		**0.01**		**222.58**

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					3.05	0.00	3.05	1.66	0.00	1.66						0.00
Off-Road	3.54	29.63	15.40	0.03		1.38	1.38		1.38	1.38	0.00	2,995.55		0.32		3,002.21
Total	**3.54**	**29.63**	**15.40**	**0.03**	**3.05**	**1.38**	**4.43**	**1.66**	**1.38**	**3.04**	**0.00**	**2,995.55**		**0.32**		**3,002.21**

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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00		0.00		0.00
Vendor	0.03	0.36	0.21	0.00	0.00	0.01	0.01	0.00	0.01	0.01		55.03		0.00		55.07
Worker	0.09	0.09	1.06	0.00	0.01	0.01	0.01	0.00	0.01	0.01		167.29		0.01		167.51
Total	**0.12**	**0.45**	**1.27**	**0.00**	**0.01**	**0.02**	**0.02**	**0.00**	**0.02**	**0.02**		**222.32**		**0.01**		**222.58**

3.3 Fine Site Grading - 2012

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					0.06	0.00	0.06	0.00	0.00	0.00						0.00
Off-Road	3.09	27.65	11.56	0.03		1.34	1.34		1.34	1.34		3,749.27		0.28		3,755.07
Total	**3.09**	**27.65**	**11.56**	**0.03**	**0.06**	**1.34**	**1.40**	**0.00**	**1.34**	**1.34**		**3,749.27**		**0.28**		**3,755.07**

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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00		0.00		0.00
Vendor	0.03	0.36	0.21	0.00	0.02	0.01	0.03	0.00	0.01	0.01		55.03		0.00		55.07
Worker	0.07	0.07	0.81	0.00	0.15	0.00	0.16	0.00	0.00	0.01		128.69		0.01		128.85
Total	**0.10**	**0.43**	**1.02**	**0.00**	**0.17**	**0.01**	**0.19**	**0.00**	**0.01**	**0.02**		**183.72**		**0.01**		**183.92**

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					0.06	0.00	0.06	0.00	0.00	0.00						0.00
Off-Road	3.09	27.65	11.56	0.03		1.34	1.34		1.34	1.34	0.00	3,749.27		0.28		3,755.07
Total	**3.09**	**27.65**	**11.56**	**0.03**	**0.06**	**1.34**	**1.40**	**0.00**	**1.34**	**1.34**	**0.00**	**3,749.27**		**0.28**		**3,755.07**

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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00		0.00		0.00
Vendor	0.03	0.36	0.21	0.00	0.00	0.01	0.01	0.00	0.01	0.01		55.03		0.00		55.07
Worker	0.07	0.07	0.81	0.00	0.01	0.00	0.01	0.00	0.00	0.01		128.69		0.01		128.85
Total	**0.10**	**0.43**	**1.02**	**0.00**	**0.01**	**0.01**	**0.02**	**0.00**	**0.01**	**0.02**		**183.72**		**0.01**		**183.92**

3.4 Paving - 2012

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	3.83	29.46	14.52	0.03		1.85	1.85		1.85	1.85		3,466.91		0.34		3,474.09
Paving	0.00					0.00	0.00		0.00	0.00						0.00
Total	**3.83**	**29.46**	**14.52**	**0.03**		**1.85**	**1.85**		**1.85**	**1.85**		**3,466.91**		**0.34**		**3,474.09**

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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00		0.00		0.00
Vendor	0.03	0.36	0.21	0.00	0.02	0.01	0.03	0.00	0.01	0.01		55.03		0.00		55.07
Worker	0.07	0.07	0.81	0.00	0.15	0.00	0.16	0.00	0.00	0.01		128.69		0.01		128.85
Total	**0.10**	**0.43**	**1.02**	**0.00**	**0.17**	**0.01**	**0.19**	**0.00**	**0.01**	**0.02**		**183.72**		**0.01**		**183.92**

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	3.83	29.46	14.52	0.03		1.85	1.85		1.85	1.85	0.00	3,466.91		0.34		3,474.09
Paving	0.00					0.00	0.00		0.00	0.00						0.00
Total	**3.83**	**29.46**	**14.52**	**0.03**		**1.85**	**1.85**		**1.85**	**1.85**	**0.00**	**3,466.91**		**0.34**		**3,474.09**

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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00		0.00		0.00
Vendor	0.03	0.36	0.21	0.00	0.00	0.01	0.01	0.00	0.01	0.01		55.03		0.00		55.07
Worker	0.07	0.07	0.81	0.00	0.01	0.00	0.01	0.00	0.00	0.01		128.69		0.01		128.85
Total	**0.10**	**0.43**	**1.02**	**0.00**	**0.01**	**0.01**	**0.02**	**0.00**	**0.01**	**0.02**		**183.72**		**0.01**		**183.92**

3.5 Golf Course - 2012

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	0.65	4.17	3.05	0.00		0.35	0.35		0.35	0.35		447.52		0.06		448.74
Total	**0.65**	**4.17**	**3.05**	**0.00**		**0.35**	**0.35**		**0.35**	**0.35**		**447.52**		**0.06**		**448.74**

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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00		0.00		0.00
Vendor	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
Worker	0.03	0.03	0.41	0.00	0.08	0.00	0.08	0.00	0.00	0.00		64.34		0.00		64.43
Total	**0.03**	**0.03**	**0.41**	**0.00**	**0.08**	**0.00**	**0.08**	**0.00**	**0.00**	**0.00**		**64.34**		**0.00**		**64.43**

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	0.65	4.17	3.05	0.00		0.35	0.35		0.35	0.35	0.00	447.52		0.06		448.74
Total	**0.65**	**4.17**	**3.05**	**0.00**		**0.35**	**0.35**		**0.35**	**0.35**	**0.00**	**447.52**		**0.06**		**448.74**

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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00		0.00		0.00
Vendor	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
Worker	0.03	0.03	0.41	0.00	0.00	0.00	0.01	0.00	0.00	0.00		64.34		0.00		64.43
Total	**0.03**	**0.03**	**0.41**	**0.00**	**0.00**	**0.00**	**0.01**	**0.00**	**0.00**	**0.00**		**64.34**		**0.00**		**64.43**

3.6 Event Garden Improvemnts - 2012

Unmitigated Construction On-Site

Category	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
	lb/day										lb/day					
Off-Road	1.82	17.15	7.17	0.02		0.78	0.78		0.78	0.78		2,443.29		0.16		2,446.68
Total	**1.82**	**17.15**	**7.17**	**0.02**		**0.78**	**0.78**		**0.78**	**0.78**		**2,443.29**		**0.16**		**2,446.68**

Unmitigated Construction Off-Site

Category	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
	lb/day										lb/day					
Hauling	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
Vendor	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
Worker	0.03	0.03	0.41	0.00	0.08	0.00	0.08	0.00	0.00	0.00		64.34		0.00		64.43
Total	**0.03**	**0.03**	**0.41**	**0.00**	**0.08**	**0.00**	**0.08**	**0.00**	**0.00**	**0.00**		**64.34**		**0.00**		**64.43**

Mitigated Construction On-Site

Category	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
	lb/day										lb/day					
Off-Road	1.82	17.15	7.17	0.02		0.78	0.78		0.78	0.78	0.00	2,443.29		0.16		2,446.68
Total	**1.82**	**17.15**	**7.17**	**0.02**		**0.78**	**0.78**		**0.78**	**0.78**	**0.00**	**2,443.29**		**0.16**		**2,446.68**

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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00		0.00		0.00
Vendor	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
Worker	0.03	0.03	0.41	0.00	0.00	0.00	0.01	0.00	0.00	0.00		64.34		0.00		64.43
Total	**0.03**	**0.03**	**0.41**	**0.00**	**0.00**	**0.00**	**0.01**	**0.00**	**0.00**	**0.00**		**64.34**		**0.00**		**64.43**

3.7 Planting - 2012

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	1.23	5.93	4.87	0.01		0.51	0.51		0.51	0.51		620.36		0.11		622.69
Total	**1.23**	**5.93**	**4.87**	**0.01**		**0.51**	**0.51**		**0.51**	**0.51**		**620.36**		**0.11**		**622.69**

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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00		0.00		0.00
Vendor	0.03	0.36	0.21	0.00	0.02	0.01	0.03	0.00	0.01	0.01		55.03		0.00		55.07
Worker	0.12	0.13	1.46	0.00	0.28	0.01	0.29	0.00	0.01	0.01		231.64		0.01		231.93
Total	**0.15**	**0.49**	**1.67**	**0.00**	**0.30**	**0.02**	**0.32**	**0.00**	**0.02**	**0.02**		**286.67**		**0.01**		**287.00**

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	1.23	5.93	4.87	0.01		0.51	0.51		0.51	0.51	0.00	620.36		0.11		622.69
Total	**1.23**	**5.93**	**4.87**	**0.01**		**0.51**	**0.51**		**0.51**	**0.51**	**0.00**	**620.36**		**0.11**		**622.69**

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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00		0.00		0.00
Vendor	0.03	0.36	0.21	0.00	0.00	0.01	0.01	0.00	0.01	0.01		55.03		0.00		55.07
Worker	0.12	0.13	1.46	0.00	0.01	0.01	0.02	0.00	0.01	0.01		231.64		0.01		231.93
Total	**0.15**	**0.49**	**1.67**	**0.00**	**0.01**	**0.02**	**0.03**	**0.00**	**0.02**	**0.02**		**286.67**		**0.01**		**287.00**

(Adopted May 7, 1976)(Amended November 6, 1992)
(Amended July 9, 1993)(Amended February 14, 1997)
(Amended December 11, 1998)

RULE 403. FUGITIVE DUST

(a) Purpose

The purpose of this rule is to reduce the amount of particulate matter entrained in the ambient air as a result of anthropogenic (man-made) fugitive dust sources by requiring actions to prevent, reduce or mitigate fugitive dust emissions.

(b) Applicability

The provisions of this rule shall apply to any activity or man-made condition capable of generating fugitive dust.

(c) Definitions

(1) ACTIVE OPERATIONS shall mean any activity capable of generating fugitive dust, including, but not limited to, earth-moving activities, construction/demolition activities, or heavy- and light-duty vehicular movement.

(2) ANEMOMETERS are devices used to measure wind speed and direction in accordance with the performance standards, and maintenance and calibration criteria as contained in the most recent Rule 403 Implementation Handbook, now or hereafter adopted by the Governing Board.

(3) BEST AVAILABLE CONTROL MEASURES represent fugitive dust control actions which are required to be implemented within the boundaries of the South Coast Air Basin. A detailed listing of best available control measures for each fugitive dust source type shall be as contained in the most recent Rule 403 Implementation Handbook, now or hereafter adopted by the Governing Board.

(4) BULK MATERIAL is sand, gravel, soil, aggregate material less than two inches in length or diameter, and other organic or inorganic particulate matter.

(5) CHEMICAL STABILIZERS mean any non-toxic chemical dust suppressant which must not be used if prohibited for use by the Regional Water Quality Control Boards, the California Air Resources Board, the U.S. Environmental Protection Agency (U.S. EPA), or any applicable law,

rule or regulation; and should meet any specifications, criteria, or tests required by any federal, state, or local water agency. Unless otherwise indicated, the use of a non-toxic chemical stabilizer shall be of sufficient concentration and application frequency to maintain a stabilized surface.

(6) CONSTRUCTION/DEMOLITION ACTIVITIES are any on-site mechanical activities preparatory to or related to the building, alteration, rehabilitation, demolition or improvement of property, including, but not limited to the following activities; grading, excavation, loading, crushing, cutting, planing, shaping or ground breaking.

(7) CONTINGENCY NOTIFICATION means that the U.S. EPA has determined and notified the District in writing that PM_{10} contingency requirements must be implemented based on a finding that: (1) PM_{10} and PM_{10} precursor emissions reductions were less than required at any three-year milestone reporting interval, or (2) the region failed to attain the PM_{10} standards within the time frames allotted under the Federal Clean Air Act, or (3) if as part of an Attainment/Maintenance Plan, the region is no longer in attainment of the PM_{10} standards.

(8) CONTRACTOR means any person who has a contractual arrangement to conduct an active operation for another person.

(9) DISTURBED SURFACE AREA means a portion of the earth's surface which has been physically moved, uncovered, destabilized, or otherwise modified from its undisturbed natural soil condition, thereby increasing the potential for emission of fugitive dust. This definition excludes those areas which have:

(A) been restored to a natural state, such that the vegetative ground cover and soil characteristics are similar to adjacent or nearby natural conditions;

(B) been paved or otherwise covered by a permanent structure; or

(C) sustained a vegetative ground cover over at least 95 percent of an area for a period of at least 6 months.

(10) DUST SUPPRESSANTS are water, hygroscopic materials, or non-toxic chemical stabilizers used as a treatment material to reduce fugitive dust emissions.

(11) EARTH-MOVING ACTIVITIES shall include, but not be limited to, grading, earth cutting and filling operations, loading or unloading of dirt

or bulk materials, adding to or removing from open storage piles of bulk materials, landfill operations, or soil mulching.

(12) FUGITIVE DUST means any solid particulate matter that becomes airborne, other than that emitted from an exhaust stack, directly or indirectly as a result of the activities of man.

(13) INACTIVE DISTURBED SURFACE AREA means any disturbed surface area upon which active operations have not occurred or are not expected to occur for a period of ten consecutive days.

(14) LARGE OPERATIONS means any active operations on property which contains in excess of 100 acres of disturbed surface area; or any earth-moving operation which exceeds a daily earth-moving or throughput volume of 7,700 cubic meters (10,000 cubic yards) three times during the most recent 365-day period.

(15) MEDIUM OPERATIONS means any active operations on property which contains between 50 and 100 acres of disturbed surface area; or any earth-moving operation with a daily earth-moving or throughput volume of between 3,850 cubic meters (5,000 cubic yards) and 7,700 cubic meters (10,000 cubic yards) three times during the most recent 365-day period.

(16) NON-ROUTINE means any non-periodic active operation which occurs no more than three times per year, lasts less than 30 cumulative days per year, and is scheduled less than 30 days in advance.

(17) OPEN STORAGE PILE is any accumulation of bulk material with 5 percent or greater silt content which is not fully enclosed, covered or chemically stabilized, and which attains a height of three feet or more and a total surface area of 150 or more square feet. Silt content level is assumed to be 5 percent or greater unless a person can show, by sampling and analysis in accordance with ASTM Method C-136 or other equivalent method approved in writing by the Executive Officer, the California Air Resources Board, and the U. S. EPA, that the silt content is less than 5 percent. The results of ASTM Method C-136 or equivalent method are valid for 60 days from the date the sample was taken.

(18) PARTICULATE MATTER means any material, except uncombined water, which exists in a finely divided form as a liquid or solid at standard conditions.

(19) PAVED ROAD means an improved street, highway, alley, public way, or easement that is covered by typical roadway materials excluding access

roadways that connect a facility with a public paved roadway and are not open to through traffic. Public paved roads are those open to public access and that are owned by any federal, state, county, municipal or any other governmental or quasi-governmental agencies. Private paved roads are any paved roads not defined as public.

(20) PM_{10} is particulate matter with an aerodynamic diameter smaller than or equal to 10 microns as measured by the applicable State and Federal reference test methods.

(21) PROPERTY LINE means the boundaries of an area in which either a person causing the emission or a person allowing the emission has the legal use or possession of the property. Where such property is divided into one or more sub-tenancies, the property line(s) shall refer to the boundaries dividing the areas of all sub-tenancies.

(22) REASONABLY AVAILABLE CONTROL MEASURES are appropriate techniques and procedures used to prevent or reduce the emission and airborne transport of fugitive dust, outside the boundaries of the South Coast Air Basin. These include, but are not limited to, application of dust suppressants, use of coverings or enclosures, paving, enshrouding, planting, reduction of vehicle speeds, and other measures as specified by the Executive Officer. A detailed listing of reasonably available control measures for each fugitive dust source type shall be as contained in the most recent Rule 403 Implementation Handbook, now or hereafter adopted by the Governing Board.

(23) SILT means any aggregate material with a particle size less than 74 micrometers in diameter which passes through a No. 200 Sieve.

(24) SIMULTANEOUS SAMPLING means the operation of two PM_{10} samplers in such a manner that one sampler is started within five minutes of the other, and each sampler is operated for a consecutive period which must be not less than 290 minutes and not more than 310 minutes.

(25) SOUTH COAST AIR BASIN means the non-desert portions of Los Angeles, Riverside, and San Bernardino counties and all of Orange County as defined in California Code of Regulations, Title 17, Section 60104. The area is bounded on the west by the Pacific Ocean, on the north and east by the San Gabriel, San Bernardino, and San Jacinto Mountains, and on the south by the San Diego county line.

(26) STABILIZED SURFACE means:

(A) any disturbed surface area or open storage pile which is resistant to wind-driven fugitive dust;

(B) any unpaved road surface in which any fugitive dust plume emanating from vehicular traffic does not exceed 20 percent opacity.

(27) UNPAVED ROADS are any unsealed or unpaved roads, equipment paths, or travel ways that are not covered by one of the following: concrete, asphaltic concrete, recycled asphalt, asphalt or other materials with equivalent performance as determined by the Executive Officer, the California Air Resources Board, and the U.S. EPA. Public unpaved roads are any unpaved roadway owned by Federal, State, county, municipal or other governmental or quasi-governmental agencies. Private unpaved roads are all other unpaved roadways not defined as public.

(28) VISIBLE ROADWAY DUST means any sand, soil, dirt, or other solid particulate matter which is visible upon paved road surfaces and which can be removed by a vacuum sweeper or a broom sweeper under normal operating conditions.

(29) WIND-DRIVEN FUGITIVE DUST means visible emissions from any disturbed surface area which is generated by wind action alone.

(30) WIND GUST is the maximum instantaneous wind speed as measured by an anemometer.

(d) Requirements

(1) A person shall not cause or allow the emissions of fugitive dust from any active operation, open storage pile, or disturbed surface area such that the presence of such dust remains visible in the atmosphere beyond the property line of the emission source.

(2) A person conducting active operations within the boundaries of the South Coast Air Basin shall utilize one or more of the applicable best available control measures to minimize fugitive dust emissions from each fugitive dust source type which is part of the active operation.

(3) A person conducting active operations outside the boundaries of the South Coast Air Basin may utilize reasonably available control measures in lieu of best available control measures to minimize fugitive dust emissions from each fugitive dust source type which is part of the active operation.

(4) A person shall not cause or allow PM_{10} levels to exceed 50 micrograms per cubic meter when determined, by simultaneous sampling, as the difference between upwind and downwind samples collected on high-volume particulate matter samplers or other U.S. EPA-approved equivalent method for PM_{10} monitoring. If sampling is conducted, samplers shall be:

(A) Operated, maintained, and calibrated in accordance with 40 Code of Federal Regulations (CFR), Part 50, Appendix J, or appropriate U.S. EPA-published documents for U.S. EPA-approved equivalent method(s) for PM_{10}.

(B) Reasonably placed upwind and downwind of key activity areas and as close to the property line as feasible, such that other sources of fugitive dust between the sampler and the property line are minimized.

(5) Any person in the South Coast Air Basin shall:

(A) prevent or remove within one hour the track-out of bulk material onto public paved roadways as a result of their operations; or

(B) take at least one of the actions listed in Table 3 and:

(i) prevent the track-out of bulk material onto public paved roadways as a result of their operations and remove such material at anytime track-out extends for a cumulative distance of greater than 50 feet on to any paved public road during active operations; and

(ii) remove all visible roadway dust tracked-out upon public paved roadways as a result of active operations at the conclusion of each work day when active operations cease.

(e) Contingency Requirements

When a contingency notification has occurred, the requirements of this subdivision shall become effective in the county subject to the notification 60 days after the first publication date in newspapers of general circulation in that county. Such publication shall specify that a contingency notification has occurred, and that any person who conducts or authorizes the conducting of a medium operation shall be required to comply with the provisions of subdivision (f), in addition to the requirements of subdivision (d).

(f) Special Requirements for Large Operations, and Medium Operations Under a Contingency Notification

(1) Any person who conducts or authorizes the conducting of either a large operation which is subject to the requirements of this rule, or a medium operation under a contingency notification as set forth in subdivision (e), shall either:

(A) take the actions specified in Tables 1 and 2 for each applicable source of fugitive dust within the property lines and shall:

(i) notify the Executive Officer not more than 7 days after qualifying as a large operation or as a medium operation under a contingency notification;

(ii) include, as part of the notification, the items specified in subparagraphs (f)(3)(A) and (f) (3)(B);

(iii) maintain daily records to document the specific actions taken;

(iv) maintain such records for a period of not less than 6 months; and

(v) make such records available to the Executive Officer upon request; or

(B) obtain an approved fugitive dust emissions control plan (plan).

(2) Any person subject to paragraph (f)(1) who elects to obtain an approved fugitive dust emission control plan must submit the plan to the Executive Officer no later than 30 days after the activity becomes a large operation.

(3) Any plan prepared pursuant to subparagraph (f)(1)(B) shall include:

(A) The name(s), address(es), and phone number(s) of the person(s) responsible for the preparation, submittal, and implementation of the plan;

(B) A description of the operation(s), including a map depicting the location of the site;

(C) A listing of all sources of fugitive dust emissions within the property lines;

(D) A description of the required control measures as applied to each of the sources identified in subparagraph (f)(3)(C). The description must be sufficiently detailed to demonstrate that the applicable best available control measures or reasonably available control measures will be utilized and/or installed during all periods of active operations.

(4) In the event that there are special technical (e.g., non-economic) circumstances, including safety, which prevent the use of at least one of the required control measure for any of the sources identified in subparagraph (f)(3)(C), a justification statement must be provided in lieu of the description required in subparagraph (f)(3)(D). The justification statement must explain the reason(s) why the required control measures cannot be implemented.

(5) Within 30 calendar days of the receipt of a plan submitted pursuant to subparagraph (f)(1)(B), the Executive Officer will either approve, conditionally approve, or disapprove the plan , in writing. For a plan to be approved or conditionally approved, three conditions must be satisfied:

(A) All sources of fugitive dust emissions must be identified (e.g., earth-moving, storage piles, vehicular traffic on unpaved roads, etc.).

(B) For each source identified, at least one of the required control measures must be implemented, or an acceptable justification statement pursuant to paragraph (f)(4) must be provided; and

(C) If, after implementation of the required control measures, visible dust emissions are crossing the property line(s), then high wind measures (e.g., increased watering) must be specified for immediate implementation.

(6) Conditional approval will be made if conditions are met, but the stated measures do not satisfactorily conform to the guidance contained in the applicable Rule 403 Implementation Handbook. If a plan is conditionally approved, the conditions necessary to modify the plan will be provided in writing to the person(s) identified in subparagraph (f)(3)(A). Such modifications must be incorporated into the plan within 30 days of the receipt of the notice of conditional approval, or the plan shall be disapproved. A letter to the Executive Officer stating that such modifications will be incorporated into the plan shall be deemed sufficient to result in approval of the plan.

(7) If a plan is disapproved by the Executive Officer:

(A) The reasons for disapproval shall be given to the applicant in writing.

(B) Within 7 days of the receipt of a notice of a disapproved plan, the applicant shall comply with the actions specified in Tables 1 and 2 for each applicable source of fugitive dust within the property lines.

(C) The applicant may resubmit a plan at any time after receiving a disapproval notification, but will not be relieved of complying with subparagraph (f)(7)(B) until such time as the plan has been approved.

(8) Failure to comply with any of the provisions in an approved or conditionally approved plan shall be a violation of subdivision (f).

(9) Any approved plan shall be valid for a period of one year from the date of approval or conditional approval of the plan. Plans must be resubmitted annually, at least 60 days prior to the expiration date, or the plan shall become disapproved as of the expiration date. If all fugitive dust sources and corresponding control measures or special circumstances remain identical to those identified in the previously approved plan, the resubmittal may contain a simple statement of no-change. Otherwise, a resubmittal must contain all the items specified in subparagraphs (f)(3)(A through D).

(10) Any person subject to the requirements of paragraph (f)(1) who no longer exceeds, and does not expect to exceed for a period of at least one year, the criteria for a large operation or a medium operation under a contingency notification may request a reclassification as a non-large operation not subject to subparagraph (f). To obtain this reclassification, a person must submit a request in writing to the Executive Officer specifying the conditions which have taken place to reduce the disturbed surface area and/or the earth-moving or throughput conditions to levels below the criteria for large operations. A person must further indicate that the criteria for large operations are not expected to be exceeded during the subsequent 12-month period. The Executive Officer shall either approve or disapprove the reclassification within 60 days from receipt of the reclassification request. The Executive Officer will disapprove the request if the indicated changes can not be verified to be below the criteria for large operations or a medium operation under a contingency notification. If approved, the person shall be relieved of all requirements under subdivision (f). Any person so reclassified would again be subject to the

requirements of subdivision (f) if at any time subsequent to the reclassification the criteria for large operations or a medium operation under a contingency notification are met.

(11) A person responsible for more than one operation subject to subparagraph (f) at non-contiguous sites may submit one plan covering multiple sites provided that:

(A) the contents of the plan apply similarly to all sites; and

(B) specific information is provided for each site, including, map of site location, address, description of operations, and a listing of all sources of fugitive dust emissions within the property lines.

(g) Compliance Schedule

All the newly amended provisions of this rule shall become effective upon adoption of this Rule Amendment. Pursuant to subdivision (f), any fugitive dust emission control plan which has been approved or conditionally approved prior to the date of adoption of these amendments shall remain in effect and the plan approval date and annual resubmittal date shall remain unchanged. If any changes to such plans are necessary as a result of these amendments, such changes shall not be required until the annual resubmittal date, pursuant to paragraph (f)(9).

(h) Exemptions

(1) The provisions of this rule shall not apply to:

(A) Agricultural operations outside the boundaries of the South Coast Air Basin, agricultural operations directly related to the raising of fowls or animals, and agricultural operations conducted within the boundaries of the South Coast Air Basin provided that the combined disturbed surface area within one continuous property line and not separated by a paved public road is 10 acres or less.

(B) Agricultural operations within the South Coast Air Basin, until June 30, 1999, whose combined disturbed surface area includes more than 10 acres. All provisions of this Rule shall become applicable to agricultural operations exceeding 10 acres beginning July 1, 1999, excluding those listed in (h)(1)(A), unless the person responsible for such operations voluntarily implements the conservation practices contained in the most recent Rule 403

Agricultural Handbook, now or hereafter adopted by the Governing Board. The person responsible for such operations must complete and maintain the self-monitoring form documenting sufficient conservation practices, as described in the Rule 403 Agricultural Handbook, and must make it available to the Executive Officer upon request.

(C) Any disturbed surface area less than one-half (1/2) acre on property zoned for residential uses.

(D) Active operations conducted during emergency life-threatening situations, or in conjunction with any officially declared disaster or state of emergency.

(E) Active operations conducted by essential service utilities to provide electricity, natural gas, telephone, water and sewer during periods of service outages and emergency disruptions.

(F) Any contractor subsequent to the time the contract ends, provided that such contractor implemented the required control measures during the contractual period.

(G) Any grading contractor, for a phase of active operations, subsequent to the contractual completion of that phase of earth-moving activities, provided that the required control measures have been implemented during the entire phase of earth-moving activities, through and including five days after the final grading inspection.

(H) Weed abatement operations ordered by a county agricultural commissioner or any state, county, or municipal fire department, provided that:

(i) mowing, cutting or other similar process is used which maintains weed stubble at least three inches above the soil; or

(ii) any discing or similar operation which cuts into and disturbs the soil is used and meets the following conditions:

[a] A determination is made by the issuing agency of the weed abatement order that, due to fire hazard conditions, rocks, or other physical obstructions, it is not practical to meet the conditions specified in clause (h)(1)(H)(i); and

[b] Such determination is made in writing and provided to the person conducting the weed abatement operation prior to beginning such activity; and

[c] Such written determination is provided to the Executive Officer upon request from the person conducting the weed abatement operation.

(Note: The provisions of clause (h)(1)(H)(ii) do not exempt the owner of any property from controlling fugitive dust emissions emanating from disturbed surface areas which have been created as a result of the weed abatement actions.)

(I) sandblasting operations.

(2) The provisions of paragraphs (d)(1) and (d)(4) shall not apply:

(A) When wind gusts exceed 25 miles per hour, provided that:

(i) The required control measures for high wind conditions are implemented for each applicable fugitive dust source type, as specified in Table 1, and;

(ii) Records are maintained in accordance with clauses (f)(1)(A)(iii), (f)(1)(A)(iv) and (f)(1)(A)(v); and

(iii) In the event there are technical (e.g., non-economic) reasons, including safety, why any of the required control measures in Table 1 cannot be implemented for one or more fugitive dust source categories, a person submits a "High Wind Fugitive Dust Control Plan" (HW-Plan). The HW-Plan must further provide an alternative measure of fugitive dust control, if technically feasible. Such plan will be subject to the same approval conditions as specified in subparagraphs (f)(5) and (f)(6).

(B) To unpaved roads, provided such roads:

(i) are used solely for the maintenance of wind-generating equipment; or

(ii) are unpaved public alleys as defined in Rule 1186; or

(iii) meet all of the following criteria:

(a) are less than 50 feet in width at all points along the road;

(b) are within 25 feet of the property line; and

(c) have a traffic volume less than 20 vehicle-trips per day.

(C) To any active operation, open storage pile, or disturbed surface area for which necessary fugitive dust preventive or mitigative actions are in conflict with the federal Endangered Species Act.

(D) To non-routine or emergency maintenance of flood control channels and water spreading basins.

(3) The provisions of paragraphs (d)(1), (d)(2), and (d)(4) shall not apply to:

(A) Blasting operations which have been permitted by the California Division of Industrial Safety; and

(B) Motion picture, television, and video production activities when dust emissions are required for visual effects. In order to obtain this exemption, the Executive Officer must receive notification in writing at least 72 hours in advance of any such activity and no nuisance results from such activity.

(4) The provisions of paragraph (d)(4) shall not apply if the dust control actions, as specified in Table 2, are implemented on a routine basis for each applicable fugitive dust source type. To qualify for this exemption, a person must:

(A) maintain records to document the dates of active operations, all applicable fugitive dust source types, and the actions taken consistent with Table 2;

(B) retain such records for a period of at least six months; and

(C) make such records available to the Executive Officer upon request.

(5) The provisions of paragraph (d)(5) shall not apply to earth coverings of public paved roadways where such coverings are approved by a local government agency for the protection of the roadway, and where such coverings are used as roadway crossings for haul vehicles.

(6) The provisions of subdivision (f) shall not apply to:

(A) officially-designated public parks and recreational areas, including national parks, national monuments, national forests, state parks, state recreational areas, and county regional parks;

(B) any construction and/or earth-moving activity in which the completion date is expected to be less than 60 days after the beginning date. To qualify for this exemption, a person must:

(i) notify the Executive Officer not more than 7 days after qualifying as a large operation or a medium operation under a contingency notification;

(ii) include, as part of the notification, the items specified in subparagraphs (f)(3)(A) and (f)(3)(B); and

(iii) take the actions specified in Tables 1 and 2 at such time as the construction and/or earth-moving activities extend more than 60 days after qualifying as a large operation or a medium operation under a contingency notification.

(C) any large operation or a medium operation under a contingency notification which is required to submit a dust control plan to any city or county government which has adopted a District-approved dust control ordinance. To qualify for this exemption, a person must submit a copy of the city- or county-approved dust control plan to the Executive Officer within 30 days of the effective date of this rule or within 30 days of receiving approval from the city or county government, whichever is later.

(D) any large operation or a medium operation under a contingency notification subject to Rule 1158, which has an approved dust control plan pursuant to Rule 1158, provided that all sources of fugitive dust are included in the Rule 1158 plan.

(i) Fees

(1) Any person subject to a plan submittal pursuant to subparagraph (f)(1)(B) or clause (h)(2)(A)(iii) or subparagraph (h)(1)(B) shall be assessed applicable filing and evaluation fees pursuant to Rule 306. Any person who simultaneously submits a plan pursuant to subparagraph (f)(1)(B) and clause (h)(2)(A)(iii) shall, for the purpose of this rule, be deemed to submit one plan.

(2) The submittal of an annual statement of no-change, pursuant to paragraph (f)(9), shall not be considered as an annual review, and therefore shall not be subject to annual review fees, pursuant to Rule 306.

(3) The owner/operator of any facility for which the Executive Officer conducts upwind/downwind monitoring for PM_{10} pursuant to paragraph (d)(4) shall be assessed applicable Ambient Air Analysis Fees pursuant to Rule 304.1. Applicable fees shall be waived for any facility which is

exempted from paragraph (d)(4) or meets the requirements of paragraph (d)(4).

TABLE 1

BEST [REASONABLY]* AVAILABLE CONTROL MEASURES FOR HIGH WIND CONDITIONS

FUGITIVE DUST SOURCE CATEGORY		CONTROL MEASURES
Earth-moving	(1A)	Cease all active operations; OR
	(2A)	Apply water to soil not more than 15 minutes prior to moving such soil.
Disturbed surface areas	(0B)	On the last day of active operations prior to a weekend, holiday, or any other period when active operations will not occur for not more than four consecutive days: apply water with a mixture of chemical stabilizer diluted to not less than 1/20 of the concentration required to maintain a stabilized surface for a period of six months; OR
	(1B)	Apply chemical stabilizers prior to wind event; OR
	(2B)	Apply water to all unstabilized disturbed areas 3 times per day. If there is any evidence of wind driven fugitive dust, watering frequency is increased to a minimum of four times per day; OR
	(3B)	Take the actions specified in Table 2, Item (3c); OR
	(4B)	Utilize any combination of control actions (1B), (2B), and (3B) such that, in total, these actions apply to all disturbed surface areas.
Unpaved roads	(1C)	Apply chemical stabilizers prior to wind event; OR
	(2C)	Apply water twice [once] per hour during active operation; OR
	(3C)	Stop all vehicular traffic.
Open storage piles	(1D)	Apply water twice [once] per hour; OR
	(2D)	Install temporary coverings.
Paved road track-out	(1E)	Cover all haul vehicles; OR
	(2E)	Comply with the vehicle freeboard requirements of Section 23114 of the California Vehicle Code for both public and private roads.
All Categories	(1F)	Any other control measures approved by the Executive Officer and the U.S. EPA as equivalent to the methods specified in Table 1 may be used.

* Measures in [brackets] are reasonably available control measures and only apply to sources not within the South Coast Air Basin.

TABLE 2

DUST CONTROL ACTIONS FOR EXEMPTION FROM PARAGRAPH (d)(3)[*]

FUGITIVE DUST SOURCE CATEGORY		**CONTROL ACTIONS**
Earth-moving (except construction cutting and filling areas, and mining operations)	(1a)	Maintain soil moisture content at a minimum of 12 percent, as determined by ASTM method D-2216, or other equivalent method approved by the Executive Officer, the California Air Resources Board, and the U.S. EPA. Two soil moisture evaluations must be conducted during the first three hours of active operations during a calendar day, and two such evaluations each subsequent four-hour period of active operations; OR
	(1a-1)	For any earth-moving which is more than 100 feet from all property lines, conduct watering as necessary to prevent visible dust emissions from exceeding 100 feet in length in any direction.
Earth-moving: Construction fill areas:	(1b)	Maintain soil moisture content at a minimum of 12 percent, as determined by ASTM method D-2216, or other equivalent method approved by the Executive Officer, the California Air Resources Board, and the U.S. EPA. For areas which have an optimum moisture content for compaction of less than 12 percent, as determined by ASTM Method 1557 or other equivalent method approved by the Executive Officer and the California Air Resources Board and the U.S. EPA, complete the compaction process as expeditiously as possible after achieving at least 70 percent of the optimum soil moisture content. Two soil moisture evaluations must be conducted during the first three hours of active operations during a calendar day, and two such evaluations during each subsequent four-hour period of active operations.

[*] Measures in [brackets] are reasonably available control measures and only apply to sources not within the South Coast Air Basin.

TABLE 2 (Continued) *

FUGITIVE DUST SOURCE CATEGORY		**CONTROL ACTIONS**
Earth-moving: Construction cut areas and mining operations:	(1c)	Conduct watering as necessary to prevent visible emissions from extending more than 100 feet beyond the active cut or mining area unless the area is inaccessible to watering vehicles due to slope conditions or other safety factors.
Disturbed surface areas (except completed grading areas)	(2a/b)	Apply dust suppression in sufficient quantity and frequency to maintain a stabilized surface. Any areas which cannot be stabilized, as evidenced by wind driven fugitive dust must have an application of water at least twice per day to at least 80 [70] percent of the unstabilized area.
Disturbed surface areas: Completed grading areas	(2c)	Apply chemical stabilizers within five working days of grading completion; OR
	(2d)	Take actions (3a) or (3c) specified for inactive disturbed surface areas.
Inactive disturbed surface areas	(3a)	Apply water to at least 80 [70] percent of all inactive disturbed surface areas on a daily basis when there is evidence of wind driven fugitive dust, excluding any areas which are inaccessible to watering vehicles due to excessive slope or other safety conditions; OR
	(3b)	Apply dust suppressants in sufficient quantity and frequency to maintain a stabilized surface; OR
	(3c)	Establish a vegetative ground cover within 21 [30] days after active operations have ceased. Ground cover must be of sufficient density to expose less than 30 percent of unstabilized ground within 90 days of planting, and at all times thereafter; OR
	(3d)	Utilize any combination of control actions (3a), (3b), and (3c) such that, in total, these actions apply to all inactive disturbed surface areas.

* Measures in [brackets] are reasonably available control measures and only apply to sources not within the South Coast Air Basin.

TABLE 2 (Continued) *

FUGITIVE DUST SOURCE CATEGORY		CONTROL ACTIONS
Unpaved Roads	(4a)	Water all roads used for any vehicular traffic at least once per every two hours of active operations [3 times per normal 8 hour work day]; OR
	(4b)	Water all roads used for any vehicular traffic once daily and restrict vehicle speeds to 15 miles per hour; OR
	(4c)	Apply a chemical stabilizer to all unpaved road surfaces in sufficient quantity and frequency to maintain a stabilized surface.
Open storage piles	(5a)	Apply chemical stabilizers; OR
	(5b)	Apply water to at least 80 [70] percent of the surface area of all open storage piles on a daily basis when there is evidence of wind driven fugitive dust; OR
	(5c)	Install temporary coverings; OR
	(5d)	Install a three-sided enclosure with walls with no more than 50 percent porosity which extend, at a minimum, to the top of the pile.
All Categories	(6a)	Any other control measures approved by the Executive Officer and the U.S. EPA as equivalent to the methods specified in Table 2 may be used.

* Measures in [brackets] are reasonably available control measures and only apply to sources not within the South Coast Air Basin.

TABLE 3
TRACK-OUT CONTROL OPTIONS
PARAGRAPH (d)(5)(B)

CONTROL OPTIONS

(1)	Pave or apply chemical stabilization at sufficient concentration and frequency to maintain a stabilized surface starting from the point of intersection with the public paved surface, and extending for a centerline distance of at least 100 feet and a width of at least 20 feet.
(2)	Pave from the point of intersection with the public paved road surface, and extending for a centerline distance of at least 25 feet and a width of at least 20 feet, and install a track-out control device immediately adjacent to the paved surface such that exiting vehicles do not travel on any unpaved road surface after passing through the track-out control device.
(3)	Any other control measures approved by the Executive Officer and the U.S. EPA as equivalent to the methods specified in Table 3 may be used.

CalEEMod Version: CalEEMod.2011.1.1 Date: 11/9/2011

Pointview

South Coast AQMD Air District, Summer

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric
City Park	26	Acre
Golf Course	2.5	Acre
Racquet Club	1	1000sqft
User Defined Recreational	2	User Defined Unit

1.2 Other Project Characteristics

Urbanization Urban

Climate Zone 8

Wind Speed (m/s) 2.2

Precipitation Freq (Days) 31

Utility Company Los Angeles Department of Water & Power

1.3 User Entered Comments

Project Characteristics -

Land Use - User Defined Recreational is Event Garden, which combines with the golf course to occupy less than 5 acres.
City Park = avocade, vineyard, citrus, olives, and vegetable garden.

Construction Phase - See Construction Assumptions

Off-road Equipment - See Construction Assumptions

Off-road Equipment - See Construction Assumptions

Off-road Equipment - See Construction Assumptions

Off-road Equipment - See Construction Assumptions

Trips and VMT - Initial planting would require temporary increase in number of on-site employees to 10-20 people at a AVR of 1.135.

Grading - Driveway is 1880ft long by 20ft wide (37600 sq ft) with no import/export of materials.

Vehicle Trips - See Traffic Study
Saturday and Sunday rates are assumed to be the same
Racquet Club only for energy usage factors. No mobile trips associated.

Energy Use -

Solid Waste - Assumed Event Garden generates same solid waste as golf course

Land Use Change -

Construction Off-road Equipment Mitigation -

2.0 Emissions Summary

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	0.03	0.00	0.00	0.00		0.00	0.00		0.00	0.00		0.00		0.00		0.00
Energy	0.00	0.01	0.00	0.00		0.00	0.00		0.00	0.00		6.98		0.00	0.00	7.02
Mobile	2.57	6.93	27.63	0.04	4.60	0.28	4.88	0.07	0.26	0.33		4,299.62		0.23		4,304.55
Total	**2.60**	**6.94**	**27.63**	**0.04**	**4.60**	**0.28**	**4.88**	**0.07**	**0.26**	**0.33**		**4,306.60**		**0.23**	**0.00**	**4,311.57**

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	0.03	0.00	0.00	0.00		0.00	0.00		0.00	0.00		0.00		0.00		0.00
Energy	0.00	0.01	0.00	0.00		0.00	0.00		0.00	0.00		6.98		0.00	0.00	7.02

Mobile	2.57	6.93	27.63	0.04	4.60	0.28	4.88	0.07	0.26	0.33		4,299.62		0.23		4,304.55
Total	**2.60**	**6.94**	**27.63**	**0.04**	**4.60**	**0.28**	**4.88**	**0.07**	**0.26**	**0.33**		**4,306.60**		**0.23**	**0.00**	**4,311.57**

4.0 Mobile Detail

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	2.57	6.93	27.63	0.04	4.60	0.28	4.88	0.07	0.26	0.33		4,299.62		0.23		4,304.55
Unmitigated	2.57	6.93	27.63	0.04	4.60	0.28	4.88	0.07	0.26	0.33		4,299.62		0.23		4,304.55
Total	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
City Park	20.80	20.80	20.80	81,216	81,216
Golf Course	13.00	15.00	15.00	52,991	52,991
Racquet Club	0.00	0.00	0.00		
User Defined Recreational	280.00	280.00	280.00	1,250,558	1,250,558
Total	313.80	315.80	315.80	1,384,766	1,384,766

4.3 Trip Type Information

	Miles			Trip %		
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
City Park	8.90	13.30	7.40	33.00	48.00	19.00
Golf Course	8.90	13.30	7.40	33.00	48.00	19.00
Racquet Club	8.90	13.30	7.40	11.50	69.50	19.00
User Defined Recreational	8.90	13.30	7.40	10.00	80.00	10.00

5.0 Energy Detail

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	0.00	0.01	0.00	0.00		0.00	0.00		0.00	0.00		6.98		0.00	0.00	7.02
NaturalGas Unmitigated	0.00	0.01	0.00	0.00		0.00	0.00		0.00	0.00		6.98		0.00	0.00	7.02
Total	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**

5.2 Energy by Land Use - NaturalGas

<u>Unmitigated</u>

	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	lb/day										lb/day					
City Park	0	0.00	0.00	0.00	0.00		0.00	0.00		0.00	0.00		0.00		0.00	0.00	0.00
Golf Course	0	0.00	0.00	0.00	0.00		0.00	0.00		0.00	0.00		0.00		0.00	0.00	0.00

Racquet Club	59.2877	0.00	0.01	0.00	0.00		0.00	0.00		0.00	0.00		6.98		0.00	0.00	7.02
User Defined Recreational	0	0.00	0.00	0.00	0.00		0.00	0.00		0.00	0.00		0.00		0.00	0.00	0.00
Total		**0.00**	**0.01**	**0.00**	**0.00**		**0.00**	**0.00**		**0.00**	**0.00**		**6.98**		**0.00**	**0.00**	**7.02**

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	lb/day										lb/day					
City Park	0	0.00	0.00	0.00	0.00		0.00	0.00		0.00	0.00		0.00		0.00	0.00	0.00
Golf Course	0	0.00	0.00	0.00	0.00		0.00	0.00		0.00	0.00		0.00		0.00	0.00	0.00
Racquet Club	0.0592877	0.00	0.01	0.00	0.00		0.00	0.00		0.00	0.00		6.98		0.00	0.00	7.02
User Defined Recreational	0	0.00	0.00	0.00	0.00		0.00	0.00		0.00	0.00		0.00		0.00	0.00	0.00
Total		**0.00**	**0.01**	**0.00**	**0.00**		**0.00**	**0.00**		**0.00**	**0.00**		**6.98**		**0.00**	**0.00**	**7.02**

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	0.03	0.00	0.00	0.00		0.00	0.00		0.00	0.00		0.00		0.00		0.00
Unmitigated	0.03	0.00	0.00	0.00		0.00	0.00		0.00	0.00		0.00		0.00		0.00

Total	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**

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	0.01					0.00	0.00		0.00	0.00						0.00
Consumer Products	0.02					0.00	0.00		0.00	0.00						0.00
Landscaping	0.00	0.00	0.00	0.00		0.00	0.00		0.00	0.00		0.00		0.00		0.00
Total	**0.03**	**0.00**	**0.00**	**0.00**		**0.00**	**0.00**		**0.00**	**0.00**		**0.00**		**0.00**		**0.00**

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	0.01					0.00	0.00		0.00	0.00						0.00
Consumer Products	0.02					0.00	0.00		0.00	0.00						0.00
Landscaping	0.00	0.00	0.00	0.00		0.00	0.00		0.00	0.00		0.00		0.00		0.00
Total	**0.03**	**0.00**	**0.00**	**0.00**		**0.00**	**0.00**		**0.00**	**0.00**		**0.00**		**0.00**		**0.00**

7.0 Water Detail

7.1 Mitigation Measures Water

8.0 Waste Detail

8.1 Mitigation Measures Waste

9.0 Vegetation

CalEEMod Version: CalEEMod.2011.1.1

Date: 11/9/2011

Pointview

South Coast AQMD Air District, Winter

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric
City Park	26	Acre
Golf Course	2.5	Acre
Racquet Club	1	1000sqft
User Defined Recreational	2	User Defined Unit

1.2 Other Project Characteristics

Urbanization Urban

Climate Zone 8

Wind Speed (m/s) 2.2

Precipitation Freq (Days) 31

Utility Company Los Angeles Department of Water & Power

1.3 User Entered Comments

Project Characteristics -

Land Use - User Defined Recreational is Event Garden, which combines with the golf course to occupy less than 5 acres.
City Park = avocade, vineyard, citrus, olives, and vegetable garden.
Racquet Club only for energy usage (natural gas, electricity)

Construction Phase - See Construction Assumptions

Off-road Equipment - See Construction Assumptions

Off-road Equipment - See Construction Assumptions

Off-road Equipment - See Construction Assumptions

Off-road Equipment - See Construction Assumptions

Trips and VMT - Initial planting would require temporary increase in number of on-site employees to 10-20 people at a AVR of 1.135.

Grading - Driveway is 1880ft long by 20ft wide (37600 sq ft) with no import/export of materials.

Vehicle Trips - See Traffic Study
Saturday and Sunday rates are assumed to be the same
Racquet Club only for energy usage factors. No mobile trips associated.

Energy Use -

Solid Waste - Assumed Event Garden generates same solid waste as golf course

Land Use Change -

Construction Off-road Equipment Mitigation -

2.0 Emissions Summary

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	0.03	0.00	0.00	0.00		0.00	0.00		0.00	0.00		0.00		0.00		0.00
Energy	0.00	0.01	0.00	0.00		0.00	0.00		0.00	0.00		6.98		0.00	0.00	7.02
Mobile	2.67	7.56	26.31	0.04	4.60	0.28	4.88	0.07	0.26	0.33		3,991.64		0.21		3,996.11
Total	**2.70**	**7.57**	**26.31**	**0.04**	**4.60**	**0.28**	**4.88**	**0.07**	**0.26**	**0.33**		**3,998.62**		**0.21**	**0.00**	**4,003.13**

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	0.03	0.00	0.00	0.00		0.00	0.00		0.00	0.00		0.00		0.00		0.00

Energy	0.00	0.01	0.00	0.00		0.00	0.00		0.00	0.00		6.98		0.00	0.00	7.02
Mobile	2.67	7.56	26.31	0.04	4.60	0.28	4.88	0.07	0.26	0.33		3,991.64		0.21		3,996.11
Total	**2.70**	**7.57**	**26.31**	**0.04**	**4.60**	**0.28**	**4.88**	**0.07**	**0.26**	**0.33**		**3,998.62**		**0.21**	**0.00**	**4,003.13**

4.0 Mobile Detail

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	2.67	7.56	26.31	0.04	4.60	0.28	4.88	0.07	0.26	0.33		3,991.64		0.21		3,996.11
Unmitigated	2.67	7.56	26.31	0.04	4.60	0.28	4.88	0.07	0.26	0.33		3,991.64		0.21		3,996.11
Total	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
City Park	20.80	20.80	20.80	81,216	81,216
Golf Course	13.00	15.00	15.00	52,991	52,991
Racquet Club	0.00	0.00	0.00		
User Defined Recreational	280.00	280.00	280.00	1,250,558	1,250,558
Total	313.80	315.80	315.80	1,384,766	1,384,766

4.3 Trip Type Information

	Miles			Trip %		
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
City Park	8.90	13.30	7.40	33.00	48.00	19.00
Golf Course	8.90	13.30	7.40	33.00	48.00	19.00
Racquet Club	8.90	13.30	7.40	11.50	69.50	19.00
User Defined Recreational	8.90	13.30	7.40	10.00	80.00	10.00

5.0 Energy Detail

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	0.00	0.01	0.00	0.00		0.00	0.00		0.00	0.00		6.98		0.00	0.00	7.02
NaturalGas Unmitigated	0.00	0.01	0.00	0.00		0.00	0.00		0.00	0.00		6.98		0.00	0.00	7.02
Total	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**

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	lb/day										lb/day					
City Park	0	0.00	0.00	0.00	0.00		0.00	0.00		0.00	0.00		0.00		0.00	0.00	0.00

Golf Course	0	0.00	0.00	0.00	0.00		0.00	0.00		0.00	0.00		0.00		0.00	0.00	0.00
Racquet Club	59.2877	0.00	0.01	0.00	0.00		0.00	0.00		0.00	0.00		6.98		0.00	0.00	7.02
User Defined Recreational	0	0.00	0.00	0.00	0.00		0.00	0.00		0.00	0.00		0.00		0.00	0.00	0.00
Total		**0.00**	**0.01**	**0.00**	**0.00**		**0.00**	**0.00**		**0.00**	**0.00**		**6.98**		**0.00**	**0.00**	**7.02**

<u>Mitigated</u>

	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	lb/day										lb/day					
City Park	0	0.00	0.00	0.00	0.00		0.00	0.00		0.00	0.00		0.00		0.00	0.00	0.00
Golf Course	0	0.00	0.00	0.00	0.00		0.00	0.00		0.00	0.00		0.00		0.00	0.00	0.00
Racquet Club	0.0592877	0.00	0.01	0.00	0.00		0.00	0.00		0.00	0.00		6.98		0.00	0.00	7.02
User Defined Recreational	0	0.00	0.00	0.00	0.00		0.00	0.00		0.00	0.00		0.00		0.00	0.00	0.00
Total		**0.00**	**0.01**	**0.00**	**0.00**		**0.00**	**0.00**		**0.00**	**0.00**		**6.98**		**0.00**	**0.00**	**7.02**

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	0.03	0.00	0.00	0.00		0.00	0.00		0.00	0.00		0.00		0.00		0.00

Unmitigated	0.03	0.00	0.00	0.00		0.00	0.00		0.00	0.00		0.00		0.00		0.00
Total	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**

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	0.01					0.00	0.00		0.00	0.00						0.00
Consumer Products	0.02					0.00	0.00		0.00	0.00						0.00
Landscaping	0.00	0.00	0.00	0.00		0.00	0.00		0.00	0.00		0.00		0.00		0.00
Total	**0.03**	**0.00**	**0.00**	**0.00**		**0.00**	**0.00**		**0.00**	**0.00**		**0.00**		**0.00**		**0.00**

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	0.01					0.00	0.00		0.00	0.00						0.00
Consumer Products	0.02					0.00	0.00		0.00	0.00						0.00
Landscaping	0.00	0.00	0.00	0.00		0.00	0.00		0.00	0.00		0.00		0.00		0.00
Total	**0.03**	**0.00**	**0.00**	**0.00**		**0.00**	**0.00**		**0.00**	**0.00**		**0.00**		**0.00**		**0.00**

7.0 Water Detail

7.1 Mitigation Measures Water

8.0 Waste Detail

8.1 Mitigation Measures Waste

9.0 Vegetation

Point View Master Use Plan Project

Regional and Localized Emissions Calculations (lbs/day)

	VOC	NOx	CO	SO2	PM10	PM2.5
Regional Project Emissions						
Mobile	3	8	28	<1	5	<1
Area	<1	17	1	<1	<1	<1
Energy	<1	<1	<1	<1	<1	<1
Total Project	**3**	**24**	**29**	**<1**	**5**	**<1**
Net Project Emissions						
Net Mobile	3	8	28	<1	5	<1
Net Area	<1	17	1	<1	<1	<1
Net Energy	<1	<1	<1	<1	<1	<1
Total Net	3	24	29	<1	5	<1
SCAQMD Significance Threshold	55	55	550	150	150	55
Difference	**(52)**	**(31)**	**(521)**	**(150)**	**(145)**	**(55)**
Significant?	**No**	**No**	**No**	**No**	**No**	**No**

Localized Project Emissions	VOC	NOx	CO	SO2	PM10	PM2.5
Area	<1	17	1	<1	<1	<1
Energy	<1	<1	<1	<1	<1	<1
Total	<1	17	1	<1	<1	<1
Localized Significance Threshold	N/A	98	785	N/A	4	2
Difference	N/A	**(81)**	**(784)**	N/A	**(4)**	**(2)**
Significant?	N/A	**No**	**No**	N/A	**No**	**No**

[a] *Area source emissions are calculated using the CalEEMod emissions model. Area sources include natural gas consumption, landscape fuel consumption, consumer products and miscellaneous sources (e.g., commercial solvent usage, architectural coatings).*

[b] *Stationary source emissions include emissions due to project-related electricity generation. Electricity generation-related emissions are calculated based on guidance provided in the SCAQMD CEQA Air Quality Handbook.*

[c] *The SCAQMD LSTs are based on Source Receptor Area 3 (Southwest Coastal Los Angeles County) for a one-acre site within a 60-meter receptor distance. One acre is the small project area for which LSTs are provided; the actual operational area at any given time is likely to be smaller.*

Numbers may not add up exactly, due to rounding. Worksheets and modeling output files are provided in Appendix A.

Source: PCR Services Corporation, 2011.

Title   : Los Angeles County Avg Winter CYr 2022 Default Title
Version : Emfac2007 V2.3 Nov 1 2006
Run Date : 2011/11/23 10:13:42
Scen Year: 2022 -- All model years in the range 1978 to 2022 selected
Season   : Winter
Area   : Los Angeles
****

Year: 2022 -- Model Years 1978 to 2022 Inclusive -- Winter
Emfac2007 Emission Factors: V2.3 Nov 1 2006

County Average   Los Angeles   County Average

Table 1: Running Exhaust Emissions (grams/mile)

Pollutant Name: Carbon Monoxide   Temperature: 60F Relative Humidity: 50%

Speed MPH	LDA	LDT	MDT	HDT	UBUS	MCY	ALL
3	1.467	2.631	3.618	7.863	20.809	24.532	2.569
4	1.434	2.569	3.552	7.863	20.809	24.532	2.525
5	1.403	2.509	3.490	7.863	20.809	24.532	2.483
6	1.372	2.451	3.344	7.220	18.994	23.663	2.391
7	1.343	2.396	3.211	6.628	17.378	22.862	2.304
8	1.315	2.342	3.087	6.083	15.936	22.124	2.223
9	1.288	2.291	2.973	5.583	14.648	21.442	2.148
10	1.261	2.241	2.867	5.124	13.495	20.814	2.077
11	1.236	2.194	2.769	4.705	12.462	20.235	2.010
12	1.211	2.147	2.678	4.324	11.535	19.702	1.948
13	1.187	2.103	2.592	3.978	10.701	19.211	1.889
14	1.164	2.060	2.513	3.666	9.951	18.760	1.835
15	1.141	2.018	2.438	3.387	9.274	18.346	1.783
16	1.119	1.978	2.368	3.140	8.664	17.967	1.735
17	1.098	1.939	2.302	2.923	8.113	17.621	1.691
18	1.078	1.901	2.240	2.736	7.614	17.306	1.649
19	1.058	1.865	2.182	2.570	7.162	17.021	1.609
20	1.038	1.830	2.127	2.473	6.753	16.765	1.575
21	1.020	1.796	2.075	2.384	6.382	16.536	1.542
22	1.001	1.763	2.025	2.301	6.045	16.333	1.510
23	0.984	1.731	1.979	2.225	5.739	16.156	1.480
24	0.967	1.700	1.935	2.154	5.461	16.004	1.451
25	0.950	1.670	1.893	2.089	5.208	15.876	1.424
26	0.934	1.640	1.853	2.029	4.979	15.773	1.398

Title   : Los Angeles County Avg Winter CYr 2022 Default Title
Version : Emfac2007 V2.3 Nov 1 2006
Run Date : 2011/11/23 10:40:37
Scen Year: 2022 -- All model years in the range 1978 to 2022 selected
Season   : Winter
Area   : Los Angeles
****

Year: 2022 -- Model Years 1978 to 2022 Inclusive -- Winter
Emfac2007 Emission Factors: V2.3 Nov 1 2006

County Average   Los Angeles   County Average

Table   1: Running Exhaust Emissions (grams/mile)

Pollutant Name: Carbon Monoxide   Temperature: 60F Relative Humidity: 50%

Speed MPH	LDA	LDT	MDT	HDT	UBUS	MCY	ALL
27	0.918	1.612	1.815	1.974	4.771	15.693	1.373
28	0.902	1.585	1.779	1.923	4.581	15.638	1.349
29	0.887	1.558	1.744	1.876	4.410	15.606	1.326
30	0.873	1.532	1.712	1.833	4.255	15.599	1.304
31	0.859	1.507	1.681	1.793	4.114	15.616	1.283
32	0.845	1.483	1.651	1.757	3.987	15.658	1.263
33	0.832	1.460	1.623	1.724	3.874	15.725	1.244
34	0.819	1.437	1.596	1.695	3.772	15.820	1.226
35	0.806	1.414	1.570	1.668	3.681	15.941	1.208
36	0.794	1.393	1.545	1.644	3.600	16.092	1.192
37	0.782	1.372	1.522	1.623	3.529	16.272	1.176
38	0.770	1.352	1.500	1.605	3.468	16.484	1.161
39	0.759	1.332	1.479	1.589	3.416	16.729	1.147
40	0.748	1.313	1.459	1.575	3.372	17.010	1.134

Intersection Level of Service Summary														
			NP (2022)			WP (2022)								
No.	Intersection	Peak Hour	V/C	Delay	LOS	V/C	Delay	LOS	LOS Increase	LOS >=D?	Criteria 1 Analyze?	Criteria 2 Analyze?	Analyze?
1	Via Rivera and Hawthorne Boulevard	AM	0.373		D	0.386		D	3.5%	Yes	Yes	No	**Yes**
		PM	0.332		C	0.333		C	0.3%	No	No	No	No
2	Palos Verde Drive and Hawthorne Boulevard	AM	0.471		A	0.508		A	7.9%	No	No	No	No
		PM	0.45		A	0.462		A	2.7%	No	No	No	No
3	Palos Verde Drive (South) and Seacove Drive	AM	0.294		B	0.336		B	14.3%	No	No	No	No
		PM	0.273		B	0.309		B	13.2%	No	No	No	No
4	Palos Verde Drive (South) and Wayfarers Chapel Drive	AM	0.294		B	0.36		C	22.4%	No	No	No	No
		PM	0.306		B	0.311		B	1.6%	No	No	No	No
5	Palos Verde Drive (South) and Palos Verde Drive (East)	AM	0.499		C	0.573		D	14.8%	No	No	Yes	**Yes**
		PM	0.516		C	0.528		C	2.3%	No	No	No	No
6	Palos Verde Drive (South) and Point View Driveway	AM	0.284		A	0.326		B	14.8%	No	No	No	No
		PM	0.277		A	0.346		B	24.9%	No	No	No	No

The SCAQMD recommends performing a CO hotspots analysis if the volume to capacity ratio increases by two percent or more as a result of a proposed project for intersections rated D or worse or if the LOS declines from C to D.

Criteria 1 = LOS D + V/C increase >= 2%
Criteria 2 = LOS C to D

Point View Master Use Plan Project

CALINE4 Modeling Results and Estimated Local 1-Hour Carbon Monoxide Concentrations (ppm)

Projected Background 1-Hour CO Concentrations (ppm) [a]

Monitoring Station: Hawthorne

Year	1-Hr Concentration
2012	7.3

Intersection and Receptor Locations	Future Without Project: Traffic CO Contribution [b]	Future Without Project: Estimated Local CO Concentration [c]	Future With Project: Traffic CO Contribution [b]	Future With Project: Estimated Local CO Concentration [c]	Exceedance of Significance Threshold [d]
VIA RIVERA AND HAWTHORNE BOULEVARD					
NE	0.6	7.9	0.6	7.9	NO
SE	0.6	7.9	0.6	7.9	NO
SW	0.5	7.8	0.5	7.8	NO
NW	0.7	8.0	0.7	8.0	NO
VIA RIVERA AND HAWTHORNE BOULEVARD					
NE	0.5	7.8	0.5	7.8	NO
SE	0.5	7.8	0.5	7.8	NO
SW	0.5	7.8	0.5	7.8	NO
NW	0.6	7.9	0.6	7.9	NO
PALOS VERDES DRIVE SOUTH AND PALOS VERDES DRIVE EAST					
NE	0.7	8.0	0.5	7.8	NO
SE	0.6	7.9	0.5	7.8	NO
SW	0.6	7.9	0.6	7.9	NO
NW	0.6	7.9	0.5	7.8	NO
PALOS VERDES DRIVE SOUTH AND PALOS VERDES DRIVE EAST					
NE	0.6	7.9	0.5	7.8	NO
SE	0.6	7.9	0.5	7.8	NO
SW	0.5	7.8	0.5	7.8	NO
NW	0.5	7.8	0.5	7.8	NO
0					
NE	0.0	7.3	0.0	7.3	NO
SE	0.0	7.3	0.0	7.3	NO
SW	0.0	7.3	0.0	7.3	NO
NW	0.0	7.3	0.0	7.3	NO
0					
NE	0.0	7.3	0.0	7.3	NO
SE	0.0	7.3	0.0	7.3	NO
SW	0.0	7.3	0.0	7.3	NO
NW	0.0	7.3	0.0	7.3	NO

a Based on guidance provided by the AQMD Air Quality Analysis Guidance Handbook.

b The 1-hour traffic contribution (ppm) is determined by inputing total traffic volumes into the CALINE4 model.

c The estimated local concentration is the traffic contribution + the background concentration.

d The California Ambient Air Quality Standard for 1-hour CO concentrations is 20 ppm.

Point View Master Use Plan Project

CALINE4 Modeling Results and Estimated Local 8-Hour Carbon Monoxide Concentrations (ppm)

Projected Background 8-Hour CO Concentrations (ppm) [a]		
Monitoring Station: Hawthorne		Average Persistence Factor = 0.70
Year	8-Hr Concentration	
2012	6.1	

Intersection and Receptor Locations	Future Without Project: Traffic CO Contribution [b]	Future Without Project: Estimated Local CO Concentration [c]	Future With Project: Traffic CO Contribution [b]	Future With Project: Estimated Local CO Concentration [c]	Future With Project: Exceedance of Significance Threshold [d]
VIA RIVERA AND HAWTHORNE BOULEVARD					
NE	0.4	6.45	0.3	6.38	NO
SE	0.3	6.38	0.3	6.38	NO
SW	0.3	6.38	0.3	6.38	NO
NW	0.4	6.45	0.4	6.45	NO
VIA RIVERA AND HAWTHORNE BOULEVARD					
NE	0.3	6.38	0.3	6.38	NO
SE	0.3	6.38	0.3	6.38	NO
SW	0.3	6.38	0.3	6.38	NO
NW	0.4	6.45	0.4	6.45	NO
PALOS VERDES DRIVE SOUTH AND PALOS VERDES DRIVE EAST					
NE	0.4	6.45	0.3	6.38	NO
SE	0.3	6.38	0.3	6.38	NO
SW	0.4	6.45	0.3	6.38	NO
NW	0.4	6.45	0.3	6.38	NO
PALOS VERDES DRIVE SOUTH AND PALOS VERDES DRIVE EAST					
NE	0.3	6.38	0.3	6.38	NO
SE	0.3	6.38	0.3	6.38	NO
SW	0.3	6.38	0.3	6.38	NO
NW	0.3	6.38	0.3	6.38	NO
0					
NE	0.0	6.1	0.0	6.1	NO
SE	0.0	6.1	0.0	6.1	NO
SW	0.0	6.1	0.0	6.1	NO
NW	0.0	6.1	0.0	6.1	NO
0					
NE	0.0	6.1	0.0	6.1	NO
SE	0.0	6.1	0.0	6.1	NO
SW	0.0	6.1	0.0	6.1	NO
NW	0.0	6.1	0.0	6.1	NO
0					
NE	0.0	6.1	0.0	6.1	NO
SE	0.0	6.1	0.0	6.1	NO
SW	0.0	6.1	0.0	6.1	NO
NW	0.0	6.1	0.0	6.1	NO
0					
NE	0.0	6.1	0.0	6.1	NO
SE	0.0	6.1	0.0	6.1	NO
SW	0.0	6.1	0.0	6.1	NO
NW	0.0	6.1	0.0	6.1	NO
0					
NE	0.0	6.1	0.0	6.1	NO
SE	0.0	6.1	0.0	6.1	NO
SW	0.0	6.1	0.0	6.1	NO
NW	0.0	6.1	0.0	6.1	NO
0					
NE	0.0	6.1	0.0	6.1	NO
SE	0.0	6.1	0.0	6.1	NO
SW	0.0	6.1	0.0	6.1	NO
NW	0.0	6.1	0.0	6.1	NO

a Based on guidance provided by the AQMD Air Quality Analysis Guidance Handbook.

b The persistence factor is calculated as recommended in Table B.15 in the Transportation Project-Level Carbon Monoxide Protocol (Institute of Transportation Studies, UC Davis, Revised 1997). This is a generalized persistence factor likely to provide a conservative estimate in most situations.

c The estimated local concentration is the traffic contribution + the background concentration.

d The California Ambient Air Quality Standard for 8-hour CO concentrations is 9 ppm.

CALINE4: CALIFORNIA LINE SOURCE DISPERSION MODEL
JUNE 1989 VERSION
PAGE 1

JOB: PALOS VERDES DRIVE SOUTH AND PALOS VERDES DRIVE EAST AM NO PROJECT
RUN: (WORST CASE ANGLE)
POLLUTANT: Carbon Monoxide

I. SITE VARIABLES

U=	.5 M/S	Z0=	100. CM	ALT=	0. (FT)
BRG=	WORST CASE	VD=	.0 CM/S		
CLAS=	7 (G)	VS=	.0 CM/S		
MIXH=	1000. M	AMB=	.0 PPM		
SIGTH=	5. DEGREES	TEMP=	15.6 DEGREE (C)		

II. LINK VARIABLES

LINK DESCRIPTION	X1	Y1	X2	Y2	TYPE	VPH	EF (G/MI)	H (FT)	W (FT)
A. NF	15	-1500	15	-500	AG	568	2.8	.0	50.0
B. NA	15	-500	15	0	AG	568	3.9	.0	33.0
C. ND	15	0	15	500	AG	568	3.0	.0	33.0
D. NE	15	500	15	1500	AG	568	2.8	.0	50.0
E. SF	-15	1500	-15	500	AG	529	2.8	.0	50.0
F. SA	-15	500	-15	0	AG	529	3.9	.0	33.0
G. SD	-15	0	-15	-500	AG	529	3.0	.0	33.0
H. SE	-15	-500	-15	-1500	AG	529	2.8	.0	50.0
I. WF	1500	8	500	8	AG	0	2.8	.0	35.0
J. WA	500	8	0	8	AG	0	6.3	.0	33.0
K. WD	0	1800	0	1900	AG	0	6.3	.0	33.0
L. WE	0	1800	0	1900	AG	0	2.8	.0	35.0
M. EF	0	1800	0	1900	AG	0	2.8	.0	35.0
N. EA	0	1800	0	1900	AG	0	6.3	.0	33.0
O. ED	0	-8	500	-8	AG	0	6.3	.0	33.0
P. EE	500	-8	1500	-8	AG	0	2.8	.0	35.0
Q. NL	0	-1900	0	-1800	AG	0	3.8	.0	33.0
R. SL	0	-1900	0	-1800	AG	0	3.8	.0	33.0
S. WL	0	-1900	0	-1800	AG	0	6.3	.0	33.0
T. EL	0	-1900	0	-1800	AG	0	6.3	.0	33.0

III. RECEPTOR LOCATIONS

RECEPTOR	X	Y	Z
1. NE3	40	25	6.0
2. SE3	40	-25	6.0
3. SW3	-40	-25	6.0
4. NW3	-40	25	6.0
5. NE7	53	38	6.0
6. SE7	53	-38	6.0
7. SW7	-53	-38	6.0
8. NW7	-53	38	6.0

IV. MODEL RESULTS (WORST CASE WIND ANGLE)

RECEPTOR	BRG (DEG)	PRED CONC (PPM)	CONC/LINK (PPM) A	B	C	D	E	F	G	H
1. NE3	185.	.5	.0	.3	.0	.0	.0	.0	.0	.0
2. SE3	185.	.5	.0	.3	.0	.0	.0	.0	.0	.1
3. SW3	5.	.5	.0	.0	.0	.0	.0	.3	.0	.0
4. NW3	5.	.5	.0	.0	.0	.1	.0	.3	.0	.0
5. NE7	186.	.4	.0	.2	.0	.0	.0	.0	.0	.0
6. SE7	186.	.4	.0	.2	.0	.0	.0	.0	.0	.1
7. SW7	6.	.4	.0	.0	.0	.0	.0	.2	.0	.0
8. NW7	6.	.4	.0	.0	.0	.1	.0	.2	.0	.0

IV. MODEL RESULTS (WORST CASE WIND ANGLE) (CONT.)

RECEPTOR	CONC/LINK (PPM) I	J	K	L	M	N	O	P	Q	R	S	T
1. NE3	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
2. SE3	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
3. SW3	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
4. NW3	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
5. NE7	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
6. SE7	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
7. SW7	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
8. NW7	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0

CALINE4: CALIFORNIA LINE SOURCE DISPERSION MODEL
JUNE 1989 VERSION
PAGE 6

JOB: PALOS VERDES DRIVE SOUTH AND PALOS VERDES DRIVE EAST AM NO PROJECT
RUN: .000000E+00
POLLUTANT: Carbon Monoxide

I. SITE VARIABLES

U=	.5 M/S	Z0=	100. CM	ALT=	0. (FT)
BRG=	.0 DEGREES	VD=	.0 CM/S		
CLAS=	7 (G)	VS=	.0 CM/S		
MIXH=	1000. M	AMB=	.0 PPM		
SIGTH=	5. DEGREES	TEMP=	15.6 DEGREE (C)		

II. LINK VARIABLES

LINK DESCRIPTION	X1	Y1	X2	Y2	TYPE	VPH	EF (G/MI)	H (FT)	W (FT)
A. NF	15	-1500	15	-500	AG	568	2.8	.0	50.0
B. NA	15	-500	15	0	AG	568	3.9	.0	33.0
C. ND	15	0	15	500	AG	568	3.0	.0	33.0
D. NE	15	500	15	1500	AG	568	2.8	.0	50.0
E. SF	-15	1500	-15	500	AG	529	2.8	.0	50.0
F. SA	-15	500	-15	0	AG	529	3.9	.0	33.0
G. SD	-15	0	-15	-500	AG	529	3.0	.0	33.0
H. SE	-15	-500	-15	-1500	AG	529	2.8	.0	50.0
I. WF	1500	8	500	8	AG	0	2.8	.0	35.0
J. WA	500	8	0	8	AG	0	6.3	.0	33.0
K. WD	0	1800	0	1900	AG	0	6.3	.0	33.0
L. WE	0	1800	0	1900	AG	0	2.8	.0	35.0
M. EF	0	1800	0	1900	AG	0	2.8	.0	35.0
N. EA	0	1800	0	1900	AG	0	6.3	.0	33.0
O. ED	0	-8	500	-8	AG	0	6.3	.0	33.0
P. EE	500	-8	1500	-8	AG	0	2.8	.0	35.0
Q. NL	0	-1900	0	-1800	AG	0	3.8	.0	33.0
R. SL	0	-1900	0	-1800	AG	0	3.8	.0	33.0
S. WL	0	-1900	0	-1800	AG	0	6.3	.0	33.0
T. EL	0	-1900	0	-1800	AG	0	6.3	.0	33.0

III. RECEPTOR LOCATIONS

RECEPTOR	X	Y	Z
1. NE3	40	25	6.0
2. SE3	40	-25	6.0
3. SW3	-40	-25	6.0
4. NW3	-40	25	6.0
5. NE7	53	38	6.0
6. SE7	53	-38	6.0
7. SW7	-53	-38	6.0
8. NW7	-53	38	6.0

IV. MODEL RESULTS (PRED. CONC. INCLUDES AMB.)

RECEPTOR	PRED CONC (PPM)	CONC/LINK (PPM) A	B	C	D	E	F	G	H	I	J
1. NE3	.2	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
2. SE3	.2	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
3. SW3	.2	.0	.0	.0	.0	.0	.1	.0	.0	.0	.0
4. NW3	.2	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
5. NE7	.1	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
6. SE7	.1	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
7. SW7	.1	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
8. NW7	.1	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0

IV. MODEL RESULTS (PRED. CONC. INCLUDES AMB.) (CONT.)

RECEPTOR	CONC/LINK (PPM) K	L	M	N	O	P	Q	R	S	T
1. NE3	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
2. SE3	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
3. SW3	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
4. NW3	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
5. NE7	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
6. SE7	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
7. SW7	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
8. NW7	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0

CALINE4: CALIFORNIA LINE SOURCE DISPERSION MODEL
JUNE 1989 VERSION
PAGE 1

JOB: PALOS VERDES DRIVE SOUTH AND PALOS VERDES DRIVE EAST AM WITH PROJECT
RUN: (WORST CASE ANGLE)
POLLUTANT: Carbon Monoxide

I. SITE VARIABLES

U= .5 M/S	Z0= 100. CM	ALT= 0. (FT)
BRG= WORST CASE	VD= .0 CM/S	
CLAS= 7 (G)	VS= .0 CM/S	
MIXH= 1000. M	AMB= .0 PPM	
SIGTH= 5. DEGREES	TEMP= 15.6 DEGREE (C)	

II. LINK VARIABLES

LINK DESCRIPTION	X1	Y1	X2	Y2	TYPE	VPH	EF (G/MI)	H (FT)	W (FT)
A. NF	15	-1500	15	-500	AG	582	2.8	.0	50.0
B. NA	15	-500	15	0	AG	582	3.9	.0	33.0
C. ND	15	0	15	500	AG	679	3.0	.0	33.0
D. NE	15	500	15	1500	AG	679	2.8	.0	50.0
E. SF	-15	1500	-15	500	AG	541	2.8	.0	50.0
F. SA	-15	500	-15	0	AG	541	3.9	.0	33.0
G. SD	-15	0	-15	-500	AG	541	3.0	.0	33.0
H. SE	-15	-500	-15	-1500	AG	541	2.8	.0	50.0
I. WF	1500	8	500	8	AG	102	2.8	.0	35.0
J. WA	500	8	0	8	AG	102	6.3	.0	33.0
K. WD	0	1800	0	1900	AG	0	6.3	.0	33.0
L. WE	0	1800	0	1900	AG	0	2.8	.0	35.0
M. EF	0	1800	0	1900	AG	0	2.8	.0	35.0
N. EA	0	1800	0	1900	AG	0	6.3	.0	33.0
O. ED	0	-8	500	-8	AG	5	6.3	.0	33.0
P. EE	500	-8	1500	-8	AG	5	2.8	.0	35.0
Q. NL	0	-1900	0	-1800	AG	0	3.8	.0	33.0
R. SL	0	-1900	0	-1800	AG	0	3.8	.0	33.0
S. WL	0	-1900	0	-1800	AG	0	6.3	.0	33.0
T. EL	0	-1900	0	-1800	AG	0	6.3	.0	33.0

III. RECEPTOR LOCATIONS

RECEPTOR	COORDINATES (FT) X	Y	Z
1. NE3	40	25	6.0
2. SE3	40	-25	6.0
3. SW3	-40	-25	6.0
4. NW3	-40	25	6.0
5. NE7	53	38	6.0
6. SE7	53	-38	6.0
7. SW7	-53	-38	6.0
8. NW7	-53	38	6.0

IV. MODEL RESULTS (WORST CASE WIND ANGLE)

RECEPTOR	BRG (DEG)	PRED CONC (PPM)	CONC/LINK (PPM) A	B	C	D	E	F	G	H
1. NE3	185.	.6	.0	.3	.0	.0	.0	.0	.0	.0
2. SE3	355.	.6	.0	.0	.3	.0	.0	.0	.0	.0
3. SW3	5.	.5	.0	.0	.0	.1	.0	.3	.0	.0
4. NW3	5.	.5	.0	.0	.0	.1	.0	.3	.0	.0
5. NE7	186.	.4	.0	.2	.0	.0	.0	.0	.0	.0
6. SE7	354.	.4	.0	.0	.2	.0	.0	.0	.0	.0
7. SW7	6.	.4	.0	.0	.0	.1	.0	.2	.0	.0
8. NW7	6.	.4	.0	.0	.0	.1	.0	.2	.0	.0

IV. MODEL RESULTS (WORST CASE WIND ANGLE) (CONT.)

RECEPTOR	CONC/LINK (PPM) I	J	K	L	M	N	O	P	Q	R	S	T
1. NE3	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
2. SE3	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
3. SW3	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
4. NW3	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
5. NE7	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
6. SE7	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
7. SW7	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
8. NW7	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0

CALINE4: CALIFORNIA LINE SOURCE DISPERSION MODEL
JUNE 1989 VERSION
PAGE 4

JOB: PALOS VERDES DRIVE SOUTH AND PALOS VERDES DRIVE EAST AM WITH PROJECT

RUN: .000000E+00
POLLUTANT: Carbon Monoxide

I. SITE VARIABLES

U= .5 M/S	Z0= 100. CM	ALT= 0. (FT)
BRG= .0 DEGREES	VD= .0 CM/S	
CLAS= 7 (G)	VS= .0 CM/S	
MIXH= 1000. M	AMB= .0 PPM	
SIGTH= 5. DEGREES	TEMP= 15.6 DEGREE (C)	

II. LINK VARIABLES

LINK DESCRIPTION	X1	Y1	X2	Y2	TYPE	VPH	EF (G/MI)	H (FT)	W (FT)
A. NF	15	-1500	15	-500	AG	582	2.8	.0	50.0
B. NA	15	-500	15	0	AG	582	3.9	.0	33.0
C. ND	15	0	15	500	AG	679	3.0	.0	33.0
D. NE	15	500	15	1500	AG	679	2.8	.0	50.0
E. SF	-15	1500	-15	500	AG	541	2.8	.0	50.0
F. SA	-15	500	-15	0	AG	541	3.9	.0	33.0
G. SD	-15	0	-15	-500	AG	541	3.0	.0	33.0
H. SE	-15	-500	-15	-1500	AG	541	2.8	.0	50.0
I. WF	1500	8	500	8	AG	102	2.8	.0	35.0
J. WA	500	8	0	8	AG	102	6.3	.0	33.0
K. WD	0	1800	0	1900	AG	0	6.3	.0	33.0
L. WE	0	1800	0	1900	AG	0	2.8	.0	35.0
M. EF	0	1800	0	1900	AG	0	2.8	.0	35.0
N. EA	0	1800	0	1900	AG	0	6.3	.0	33.0
O. ED	0	-8	500	-8	AG	5	6.3	.0	33.0
P. EE	500	-8	1500	-8	AG	5	2.8	.0	35.0
Q. NL	0	-1900	0	-1800	AG	0	3.8	.0	33.0
R. SL	0	-1900	0	-1800	AG	0	3.8	.0	33.0
S. WL	0	-1900	0	-1800	AG	0	6.3	.0	33.0
T. EL	0	-1900	0	-1800	AG	0	6.3	.0	33.0

III. RECEPTOR LOCATIONS

RECEPTOR	COORDINATES (FT) X	Y	Z
1. NE3	40	25	6.0
2. SE3	40	-25	6.0
3. SW3	-40	-25	6.0
4. NW3	-40	25	6.0
5. NE7	53	38	6.0
6. SE7	53	-38	6.0
7. SW7	-53	-38	6.0
8. NW7	-53	38	6.0

IV. MODEL RESULTS (PRED. CONC. INCLUDES AMB.)

RECEPTOR	PRED CONC (PPM)	CONC/LINK (PPM) A	B	C	D	E	F	G	H	I	J
1. NE3	.2	.0	.0	.0	.1	.0	.0	.0	.0	.0	.0
2. SE3	.3	.0	.0	.0	.1	.0	.0	.0	.0	.0	.0
3. SW3	.2	.0	.0	.0	.0	.0	.1	.0	.0	.0	.0
4. NW3	.2	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
5. NE7	.1	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
6. SE7	.2	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
7. SW7	.1	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
8. NW7	.1	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0

IV. MODEL RESULTS (PRED. CONC. INCLUDES AMB.) (CONT.)

RECEPTOR	CONC/LINK (PPM) K	L	M	N	O	P	Q	R	S	T
1. NE3	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
2. SE3	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
3. SW3	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
4. NW3	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
5. NE7	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
6. SE7	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
7. SW7	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
8. NW7	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0

CALINE4: CALIFORNIA LINE SOURCE DISPERSION MODEL
JUNE 1989 VERSION
PAGE 1

JOB: PALOS VERDES DRIVE SOUTH AND PALOS VERDES DRIVE EAST PM NO PROJECT

RUN: (WORST CASE ANGLE)
POLLUTANT: Carbon Monoxide

I. SITE VARIABLES

U= .5 M/S	Z0= 100. CM	ALT= 0. (FT)
BRG= WORST CASE	VD= .0 CM/S	
CLAS= 7 (G)	VS= .0 CM/S	
MIXH= 1000. M	AMB= .0 PPM	
SIGTH= 5. DEGREES	TEMP= 15.6 DEGREE (C)	

II. LINK VARIABLES

LINK DESCRIPTION	LINK COORDINATES (FT) X1	Y1	X2	Y2	TYPE	VPH	EF (G/MI)	H (FT)	W (FT)
A. NF	15	-1500	15	-500	AG	537	2.8	.0	50.0
B. NA	15	-500	15	0	AG	537	3.9	.0	33.0
C. ND	15	0	15	500	AG	537	3.0	.0	33.0
D. NE	15	500	15	1500	AG	537	2.8	.0	50.0
E. SF	-15	1500	-15	500	AG	613	2.8	.0	50.0
F. SA	-15	500	-15	0	AG	613	3.9	.0	33.0
G. SD	-15	0	-15	-500	AG	613	3.0	.0	33.0
H. SE	-15	-500	-15	-1500	AG	613	2.8	.0	50.0
I. WF	1500	8	500	8	AG	0	2.8	.0	35.0
J. WA	500	8	0	8	AG	0	6.3	.0	33.0
K. WD	0	1800	0	1900	AG	0	6.3	.0	33.0
L. WE	0	1800	0	1900	AG	0	2.8	.0	35.0
M. EF	0	1800	0	1900	AG	0	2.8	.0	35.0
N. EA	0	1800	0	1900	AG	0	6.3	.0	33.0
O. ED	0	-8	500	-8	AG	0	6.3	.0	33.0
P. EE	500	-8	1500	-8	AG	0	2.8	.0	35.0
Q. NL	0	-1900	0	-1800	AG	0	3.8	.0	33.0
R. SL	0	-1900	0	-1800	AG	0	3.8	.0	33.0
S. WL	0	-1900	0	-1800	AG	0	6.3	.0	33.0
T. EL	0	-1900	0	-1800	AG	0	6.3	.0	33.0

III. RECEPTOR LOCATIONS

RECEPTOR	COORDINATES (FT) X	Y	Z
1. NE3	40	25	6.0
2. SE3	40	-25	6.0
3. SW3	-40	-25	6.0
4. NW3	-40	25	6.0
5. NE7	53	38	6.0
6. SE7	53	-38	6.0
7. SW7	-53	-38	6.0
8. NW7	-53	38	6.0

IV. MODEL RESULTS (WORST CASE WIND ANGLE)

RECEPTOR	BRG (DEG)	PRED CONC (PPM)	CONC/LINK (PPM) A	B	C	D	E	F	G	H
1. NE3	185.	.5	.0	.3	.0	.0	.0	.0	.0	.1
2. SE3	185.	.5	.0	.3	.0	.0	.0	.0	.0	.1
3. SW3	5.	.6	.0	.0	.0	.0	.0	.3	.0	.0
4. NW3	5.	.5	.0	.0	.0	.1	.0	.3	.0	.0
5. NE7	186.	.4	.0	.2	.0	.0	.0	.0	.0	.0
6. SE7	354.	.4	.0	.0	.1	.0	.0	.0	.0	.0
7. SW7	6.	.4	.0	.0	.0	.0	.0	.2	.0	.0
8. NW7	6.	.4	.0	.0	.0	.1	.0	.2	.0	.0

IV. MODEL RESULTS (WORST CASE WIND ANGLE) (CONT.)

RECEPTOR	CONC/LINK (PPM) I	J	K	L	M	N	O	P	Q	R	S	T
1. NE3	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
2. SE3	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
3. SW3	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
4. NW3	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
5. NE7	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
6. SE7	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
7. SW7	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
8. NW7	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0

CALINE4: CALIFORNIA LINE SOURCE DISPERSION MODEL
JUNE 1989 VERSION
PAGE 4

JOB: PALOS VERDES DRIVE SOUTH AND PALOS VERDES DRIVE EAST PM NO PROJECT

RUN: .000000E+00
POLLUTANT: Carbon Monoxide

I. SITE VARIABLES

U= .5 M/S	Z0= 100. CM	ALT= 0. (FT)
BRG= .0 DEGREES	VD= .0 CM/S	
CLAS= 7 (G)	VS= .0 CM/S	
MIXH= 1000. M	AMB= .0 PPM	
SIGTH= 5. DEGREES	TEMP= 15.6 DEGREE (C)	

II. LINK VARIABLES

LINK DESCRIPTION	X1	Y1	X2	Y2	TYPE	VPH	EF (G/MI)	H (FT)	W (FT)
A. NF	15	-1500	15	-500	AG	537	2.8	.0	50.0
B. NA	15	-500	15	0	AG	537	3.9	.0	33.0
C. ND	15	0	15	500	AG	537	3.0	.0	33.0
D. NE	15	500	15	1500	AG	537	2.8	.0	50.0
E. SF	-15	1500	-15	500	AG	613	2.8	.0	50.0
F. SA	-15	500	-15	0	AG	613	3.9	.0	33.0
G. SD	-15	0	-15	-500	AG	613	3.0	.0	33.0
H. SE	-15	-500	-15	-1500	AG	613	2.8	.0	50.0
I. WF	1500	8	500	8	AG	0	2.8	.0	35.0
J. WA	500	8	0	8	AG	0	6.3	.0	33.0
K. WD	0	1800	0	1900	AG	0	6.3	.0	33.0
L. WE	0	1800	0	1900	AG	0	2.8	.0	35.0
M. EF	0	1800	0	1900	AG	0	2.8	.0	35.0
N. EA	0	1800	0	1900	AG	0	6.3	.0	33.0
O. ED	0	-8	500	-8	AG	0	6.3	.0	33.0
P. EE	500	-8	1500	-8	AG	0	2.8	.0	35.0
Q. NL	0	-1900	0	-1800	AG	0	3.8	.0	33.0
R. SL	0	-1900	0	-1800	AG	0	3.8	.0	33.0
S. WL	0	-1900	0	-1800	AG	0	6.3	.0	33.0
T. EL	0	-1900	0	-1800	AG	0	6.3	.0	33.0

III. RECEPTOR LOCATIONS

RECEPTOR	COORDINATES (FT) X	Y	Z
1. NE3	40	25	6.0
2. SE3	40	-25	6.0
3. SW3	-40	-25	6.0
4. NW3	-40	25	6.0
5. NE7	53	38	6.0
6. SE7	53	-38	6.0
7. SW7	-53	-38	6.0
8. NW7	-53	38	6.0

IV. MODEL RESULTS (PRED. CONC. INCLUDES AMB.)

RECEPTOR	PRED CONC (PPM)	CONC/LINK (PPM) A	B	C	D	E	F	G	H	I	J
1. NE3	.2	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
2. SE3	.2	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
3. SW3	.3	.0	.0	.0	.0	.0	.1	.0	.0	.0	.0
4. NW3	.2	.0	.0	.0	.0	.1	.1	.0	.0	.0	.0
5. NE7	.1	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
6. SE7	.1	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
7. SW7	.1	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
8. NW7	.1	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0

IV. MODEL RESULTS (PRED. CONC. INCLUDES AMB.) (CONT.)

RECEPTOR	CONC/LINK (PPM) K	L	M	N	O	P	Q	R	S	T
1. NE3	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
2. SE3	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
3. SW3	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
4. NW3	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
5. NE7	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
6. SE7	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
7. SW7	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
8. NW7	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0

CALINE4: CALIFORNIA LINE SOURCE DISPERSION MODEL
JUNE 1989 VERSION
PAGE 1

JOB: PALOS VERDES DRIVE SOUTH AND PALOS VERDES DRIVE EAST PM WITH PROJECT

RUN: (WORST CASE ANGLE)
POLLUTANT: Carbon Monoxide

I. SITE VARIABLES

U= .5 M/S	Z0= 100. CM	ALT= 0. (FT)
BRG= WORST CASE	VD= .0 CM/S	
CLAS= 7 (G)	VS= .0 CM/S	
MIXH= 1000. M	AMB= .0 PPM	
SIGTH= 5. DEGREES	TEMP= 15.6 DEGREE (C)	

II. LINK VARIABLES

LINK DESCRIPTION	X1	Y1	X2	Y2	TYPE	VPH	EF (G/MI)	H (FT)	W (FT)
A. NF	15	-1500	15	-500	AG	705	2.8	.0	50.0
B. NA	15	-500	15	0	AG	705	3.9	.0	33.0
C. ND	15	0	15	500	AG	609	3.0	.0	33.0
D. NE	15	500	15	1500	AG	609	2.8	.0	50.0
E. SF	-15	1500	-15	500	AG	715	2.8	.0	50.0
F. SA	-15	500	-15	0	AG	715	3.9	.0	33.0
G. SD	-15	0	-15	-500	AG	715	3.0	.0	33.0
H. SE	-15	-500	-15	-1500	AG	715	2.8	.0	50.0
I. WF	1500	8	500	8	AG	4	2.8	.0	35.0
J. WA	500	8	0	8	AG	4	6.3	.0	33.0
K. WD	0	1800	0	1900	AG	0	6.3	.0	33.0
L. WE	0	1800	0	1900	AG	0	2.8	.0	35.0
M. EF	0	1800	0	1900	AG	0	2.8	.0	35.0
N. EA	0	1800	0	1900	AG	0	6.3	.0	33.0
O. ED	0	-8	500	-8	AG	100	6.3	.0	33.0
P. EE	500	-8	1500	-8	AG	100	2.8	.0	35.0
Q. NL	0	-1900	0	-1800	AG	0	3.8	.0	33.0
R. SL	0	-1900	0	-1800	AG	0	3.8	.0	33.0
S. WL	0	-1900	0	-1800	AG	0	6.3	.0	33.0
T. EL	0	-1900	0	-1800	AG	0	6.3	.0	33.0

III. RECEPTOR LOCATIONS

RECEPTOR	COORDINATES (FT) X	Y	Z
1. NE3	40	25	6.0
2. SE3	40	-25	6.0
3. SW3	-40	-25	6.0
4. NW3	-40	25	6.0
5. NE7	53	38	6.0
6. SE7	53	-38	6.0
7. SW7	-53	-38	6.0
8. NW7	-53	38	6.0

IV. MODEL RESULTS (WORST CASE WIND ANGLE)

RECEPTOR	BRG (DEG)	PRED CONC (PPM)	CONC/LINK (PPM) A	B	C	D	E	F	G	H
1. NE3	185.	.7	.0	.4	.0	.0	.0	.0	.0	.1
2. SE3	185.	.6	.0	.4	.0	.0	.0	.0	.0	.1
3. SW3	5.	.6	.0	.0	.0	.1	.0	.4	.0	.0
4. NW3	5.	.6	.0	.0	.0	.1	.0	.4	.0	.0
5. NE7	186.	.5	.0	.2	.0	.0	.0	.0	.0	.1
6. SE7	354.	.4	.0	.0	.2	.0	.1	.0	.0	.0
7. SW7	6.	.5	.0	.0	.0	.0	.0	.3	.0	.0
8. NW7	6.	.5	.0	.0	.0	.1	.0	.2	.0	.0

IV. MODEL RESULTS (WORST CASE WIND ANGLE) (CONT.)

RECEPTOR	CONC/LINK (PPM) I	J	K	L	M	N	O	P	Q	R	S	T
1. NE3	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
2. SE3	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
3. SW3	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
4. NW3	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
5. NE7	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
6. SE7	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
7. SW7	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
8. NW7	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0

CALINE4: CALIFORNIA LINE SOURCE DISPERSION MODEL
JUNE 1989 VERSION

JOB: PALOS VERDES DRIVE SOUTH AND PALOS VERDES DRIVE EAST PM WITH PROJECT

RUN: .000000E+00
POLLUTANT: Carbon Monoxide

I. SITE VARIABLES

U=	.5 M/S	Z0=	100. CM	ALT=	0. (FT)
BRG=	.0 DEGREES	VD=	.0 CM/S		
CLAS=	7 (G)	VS=	.0 CM/S		
MIXH=	1000. M	AMB=	.0 PPM		
SIGTH=	5. DEGREES	TEMP=	15.6 DEGREE (C)		

II. LINK VARIABLES

LINK DESCRIPTION	LINK COORDINATES (FT) X1	Y1	X2	Y2	TYPE	VPH	EF (G/MI)	H (FT)	W (FT)
A. NF	15	-1500	15	-500	AG	705	2.8	.0	50.0
B. NA	15	-500	15	0	AG	705	3.9	.0	33.0
C. ND	15	0	15	500	AG	609	3.0	.0	33.0
D. NE	15	500	15	1500	AG	609	2.8	.0	50.0
E. SF	-15	1500	-15	500	AG	715	2.8	.0	50.0
F. SA	-15	500	-15	0	AG	715	3.9	.0	33.0
G. SD	-15	0	-15	-500	AG	715	3.0	.0	33.0
H. SE	-15	-500	-15	-1500	AG	715	2.8	.0	50.0
I. WF	1500	8	500	8	AG	4	2.8	.0	35.0
J. WA	500	8	0	8	AG	4	6.3	.0	33.0
K. WD	0	1800	0	1900	AG	0	6.3	.0	33.0
L. WE	0	1800	0	1900	AG	0	2.8	.0	35.0
M. EF	0	1800	0	1900	AG	0	2.8	.0	35.0
N. EA	0	1800	0	1900	AG	0	6.3	.0	33.0
O. ED	0	-8	500	-8	AG	100	6.3	.0	33.0
P. EE	500	-8	1500	-8	AG	100	2.8	.0	35.0
Q. NL	0	-1900	0	-1800	AG	0	3.8	.0	33.0
R. SL	0	-1900	0	-1800	AG	0	3.8	.0	33.0
S. WL	0	-1900	0	-1800	AG	0	6.3	.0	33.0
T. EL	0	-1900	0	-1800	AG	0	6.3	.0	33.0

III. RECEPTOR LOCATIONS

RECEPTOR	X	Y	Z
	COORDINATES (FT)		
1. NE3	40	25	6.0
2. SE3	40	-25	6.0
3. SW3	-40	-25	6.0
4. NW3	-40	25	6.0
5. NE7	53	38	6.0
6. SE7	53	-38	6.0
7. SW7	-53	-38	6.0
8. NW7	-53	38	6.0

IV. MODEL RESULTS (PRED. CONC. INCLUDES AMB.)

RECEPTOR	PRED CONC (PPM)	CONC/LINK (PPM) A	B	C	D	E	F	G	H	I	J
1. NE3	.2	.0	.0	.0	.1	.0	.0	.0	.0	.0	.0
2. SE3	.3	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
3. SW3	.3	.0	.0	.0	.0	.1	.1	.0	.0	.0	.0
4. NW3	.3	.0	.0	.0	.0	.1	.1	.0	.0	.0	.0
5. NE7	.1	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
6. SE7	.2	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
7. SW7	.1	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
8. NW7	.1	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0

IV. MODEL RESULTS (PRED. CONC. INCLUDES AMB.) (CONT.)

RECEPTOR	CONC/LINK (PPM) K	L	M	N	O	P	Q	R	S	T
1. NE3	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
2. SE3	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
3. SW3	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
4. NW3	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
5. NE7	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
6. SE7	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
7. SW7	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
8. NW7	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0

Appendix A.2
Greenhouse Gas Emissions

- CalEEMod Output Files
    - Construction
    - Operational
- GHG Analysis

CalEEMod Version: CalEEMod.2011.1.1 Date: 12/13/2011

Pointview

South Coast AQMD Air District, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric
City Park	26	Acre
Golf Course	2.5	Acre
User Defined Recreational	2	User Defined Unit

1.2 Other Project Characteristics

Urbanization Urban

Climate Zone 8

Wind Speed (m/s) 2.2

Precipitation Freq (Days) 31

Utility Company Los Angeles Department of Water & Power

1.3 User Entered Comments

Project Characteristics -

Land Use - Recreational Use #2 is Event Garden, which combines with the golf course to occupy less than 5 acres.
City Park = avocade, vineyard, citrus, olives, and vegetable garden.

Construction Phase - See Construction Assumptions

Off-road Equipment - See Construction Assumptions

Off-road Equipment - See Construction Assumptions

Off-road Equipment - See Construction Assumptions

Off-road Equipment - See Construction Assumptions

Trips and VMT - Initial planting would require temporary increase in number of on-site employees to 10-20 people at a AVR of 1.135.

Grading - Driveway is 1880ft long by 20ft wide (37600 sq ft) with no import/export of materials.

Vehicle Trips - See Traffic Study
Saturday and Sunday rates are assumed to be the same

Energy Use -

Solid Waste - Assumed Event Garden generates same solid waste as golf course

Land Use Change -

Off-road Equipment - See Construction Assumptions

Off-road Equipment - See Construction Assumptions

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					
2011	0.05	0.43	0.24	0.00	0.05	0.02	0.07	0.03	0.02	0.05	0.00	39.31	39.31	0.00	0.00	39.40
2012	0.10	0.80	0.44	0.00	0.06	0.04	0.10	0.03	0.04	0.07	0.00	98.43	98.43	0.01	0.00	98.61
Total	**0.15**	**1.23**	**0.68**	**0.00**	**0.11**	**0.06**	**0.17**	**0.06**	**0.06**	**0.12**	**0.00**	**137.74**	**137.74**	**0.01**	**0.00**	**138.01**

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					
2011	0.05	0.43	0.24	0.00	0.05	0.02	0.07	0.03	0.02	0.05	0.00	39.31	39.31	0.00	0.00	39.40
2012	0.10	0.80	0.44	0.00	0.05	0.04	0.09	0.03	0.04	0.07	0.00	98.43	98.43	0.01	0.00	98.61
Total	**0.15**	**1.23**	**0.68**	**0.00**	**0.10**	**0.06**	**0.16**	**0.06**	**0.06**	**0.12**	**0.00**	**137.74**	**137.74**	**0.01**	**0.00**	**138.01**

3.0 Construction Detail

3.1 Mitigation Measures Construction

3.2 Mass Site Grading - 2011

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					0.05	0.00	0.05	0.03	0.00	0.03	0.00	0.00	0.00	0.00	0.00	0.00
Off-Road	0.05	0.43	0.22	0.00		0.02	0.02		0.02	0.02	0.00	36.68	36.68	0.00	0.00	36.76
Total	**0.05**	**0.43**	**0.22**	**0.00**	**0.05**	**0.02**	**0.07**	**0.03**	**0.02**	**0.05**	**0.00**	**36.68**	**36.68**	**0.00**	**0.00**	**36.76**

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	0.00	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
Vendor	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.67	0.67	0.00	0.00	0.67
Worker	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.97	1.97	0.00	0.00	1.97
Total	**0.00**	**0.01**	**0.01**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**2.64**	**2.64**	**0.00**	**0.00**	**2.64**

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					0.05	0.00	0.05	0.03	0.00	0.03	0.00	0.00	0.00	0.00	0.00	0.00
Off-Road	0.05	0.43	0.22	0.00		0.02	0.02		0.02	0.02	0.00	36.68	36.68	0.00	0.00	36.76
Total	**0.05**	**0.43**	**0.22**	**0.00**	**0.05**	**0.02**	**0.07**	**0.03**	**0.02**	**0.05**	**0.00**	**36.68**	**36.68**	**0.00**	**0.00**	**36.76**

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	0.00	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
Vendor	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.67	0.67	0.00	0.00	0.67
Worker	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.97	1.97	0.00	0.00	1.97
Total	**0.00**	**0.01**	**0.01**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**2.64**	**2.64**	**0.00**	**0.00**	**2.64**

3.2 Mass Site Grading - 2012

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					0.05	0.00	0.05	0.03	0.00	0.03	0.00	0.00	0.00	0.00	0.00	0.00
Off-Road	0.01	0.06	0.03	0.00		0.00	0.00		0.00	0.00	0.00	5.43	5.43	0.00	0.00	5.45
Total	**0.01**	**0.06**	**0.03**	**0.00**	**0.05**	**0.00**	**0.05**	**0.03**	**0.00**	**0.03**	**0.00**	**5.43**	**5.43**	**0.00**	**0.00**	**5.45**

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	0.00	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
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.10	0.10	0.00	0.00	0.10
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.29	0.29	0.00	0.00	0.29
Total	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.39**	**0.39**	**0.00**	**0.00**	**0.39**

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					0.05	0.00	0.05	0.03	0.00	0.03	0.00	0.00	0.00	0.00	0.00	0.00
Off-Road	0.01	0.06	0.03	0.00		0.00	0.00		0.00	0.00	0.00	5.43	5.43	0.00	0.00	5.45
Total	**0.01**	**0.06**	**0.03**	**0.00**	**0.05**	**0.00**	**0.05**	**0.03**	**0.00**	**0.03**	**0.00**	**5.43**	**5.43**	**0.00**	**0.00**	**5.45**

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	0.00	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
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.10	0.10	0.00	0.00	0.10
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.29	0.29	0.00	0.00	0.29
Total	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.39**	**0.39**	**0.00**	**0.00**	**0.39**

3.3 Fine Site Grading - 2012

Unmitigated Construction On-Site

Category	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
	tons/yr										MT/yr					
Fugitive Dust					0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Off-Road	0.03	0.26	0.11	0.00		0.01	0.01		0.01	0.01	0.00	32.30	32.30	0.00	0.00	32.35
Total	**0.03**	**0.26**	**0.11**	**0.00**	**0.00**	**0.01**	**0.01**	**0.00**	**0.01**	**0.01**	**0.00**	**32.30**	**32.30**	**0.00**	**0.00**	**32.35**

Unmitigated Construction Off-Site

Category	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
	tons/yr										MT/yr					
Hauling	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
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.47	0.47	0.00	0.00	0.47
Worker	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.04	1.04	0.00	0.00	1.04
Total	**0.00**	**0.00**	**0.01**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**1.51**	**1.51**	**0.00**	**0.00**	**1.51**

Mitigated Construction On-Site

Category	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
	tons/yr										MT/yr					
Fugitive Dust					0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Off-Road	0.03	0.26	0.11	0.00		0.01	0.01		0.01	0.01	0.00	32.30	32.30	0.00	0.00	32.35
Total	**0.03**	**0.26**	**0.11**	**0.00**	**0.00**	**0.01**	**0.01**	**0.00**	**0.01**	**0.01**	**0.00**	**32.30**	**32.30**	**0.00**	**0.00**	**32.35**

Mitigated Construction Off-Site

Category	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
	tons/yr										MT/yr					
Hauling	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
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.47	0.47	0.00	0.00	0.47
Worker	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.04	1.04	0.00	0.00	1.04
Total	**0.00**	**0.00**	**0.01**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**1.51**	**1.51**	**0.00**	**0.00**	**1.51**

3.4 Paving - 2012

Unmitigated Construction On-Site

Category	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
	tons/yr										MT/yr					
Off-Road	0.01	0.09	0.04	0.00		0.01	0.01		0.01	0.01	0.00	9.43	9.43	0.00	0.00	9.45
Paving	0.00					0.00	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total	**0.01**	**0.09**	**0.04**	**0.00**		**0.01**	**0.01**		**0.01**	**0.01**	**0.00**	**9.43**	**9.43**	**0.00**	**0.00**	**9.45**

Unmitigated Construction Off-Site

Category	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
	tons/yr										MT/yr					
Hauling	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
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.15	0.15	0.00	0.00	0.15
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.33	0.33	0.00	0.00	0.33
Total	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.48**	**0.48**	**0.00**	**0.00**	**0.48**

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	0.01	0.09	0.04	0.00		0.01	0.01		0.01	0.01	0.00	9.43	9.43	0.00	0.00	9.45
Paving	0.00					0.00	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total	**0.01**	**0.09**	**0.04**	**0.00**		**0.01**	**0.01**		**0.01**	**0.01**	**0.00**	**9.43**	**9.43**	**0.00**	**0.00**	**9.45**

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	0.00	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
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.15	0.15	0.00	0.00	0.15
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.33	0.33	0.00	0.00	0.33
Total	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.48**	**0.48**	**0.00**	**0.00**	**0.48**

3.5 Golf Course - 2012

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	0.01	0.05	0.04	0.00		0.00	0.00		0.00	0.00	0.00	5.07	5.07	0.00	0.00	5.09
Total	**0.01**	**0.05**	**0.04**	**0.00**		**0.00**	**0.00**		**0.00**	**0.00**	**0.00**	**5.07**	**5.07**	**0.00**	**0.00**	**5.09**

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	0.00	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
Vendor	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
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.69	0.69	0.00	0.00	0.69
Total	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.69**	**0.69**	**0.00**	**0.00**	**0.69**

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	0.01	0.05	0.04	0.00		0.00	0.00		0.00	0.00	0.00	5.07	5.07	0.00	0.00	5.09
Total	**0.01**	**0.05**	**0.04**	**0.00**		**0.00**	**0.00**		**0.00**	**0.00**	**0.00**	**5.07**	**5.07**	**0.00**	**0.00**	**5.09**

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	0.00	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
Vendor	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
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.69	0.69	0.00	0.00	0.69
Total	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.69**	**0.69**	**0.00**	**0.00**	**0.69**

3.6 Event Garden Improvemnts - 2012

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	0.03	0.24	0.10	0.00		0.01	0.01		0.01	0.01	0.00	31.02	31.02	0.00	0.00	31.07
Total	**0.03**	**0.24**	**0.10**	**0.00**		**0.01**	**0.01**		**0.01**	**0.01**	**0.00**	**31.02**	**31.02**	**0.00**	**0.00**	**31.07**

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	0.00	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
Vendor	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
Worker	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.77	0.77	0.00	0.00	0.77
Total	**0.00**	**0.00**	**0.01**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.77**	**0.77**	**0.00**	**0.00**	**0.77**

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	0.03	0.24	0.10	0.00		0.01	0.01		0.01	0.01	0.00	31.02	31.02	0.00	0.00	31.07
Total	**0.03**	**0.24**	**0.10**	**0.00**		**0.01**	**0.01**		**0.01**	**0.01**	**0.00**	**31.02**	**31.02**	**0.00**	**0.00**	**31.07**

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	0.00	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
Vendor	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
Worker	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.77	0.77	0.00	0.00	0.77
Total	**0.00**	**0.00**	**0.01**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.77**	**0.77**	**0.00**	**0.00**	**0.77**

3.7 Planting - 2012

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	0.02	0.08	0.07	0.00		0.01	0.01		0.01	0.01	0.00	7.88	7.88	0.00	0.00	7.91
Total	**0.02**	**0.08**	**0.07**	**0.00**		**0.01**	**0.01**		**0.01**	**0.01**	**0.00**	**7.88**	**7.88**	**0.00**	**0.00**	**7.91**

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	0.00	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
Vendor	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.70	0.70	0.00	0.00	0.70
Worker	0.00	0.00	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.76	2.76	0.00	0.00	2.77
Total	**0.00**	**0.01**	**0.02**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**3.46**	**3.46**	**0.00**	**0.00**	**3.47**

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	0.02	0.08	0.07	0.00		0.01	0.01		0.01	0.01	0.00	7.88	7.88	0.00	0.00	7.91
Total	**0.02**	**0.08**	**0.07**	**0.00**		**0.01**	**0.01**		**0.01**	**0.01**	**0.00**	**7.88**	**7.88**	**0.00**	**0.00**	**7.91**

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	0.00	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
Vendor	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.70	0.70	0.00	0.00	0.70
Worker	0.00	0.00	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.76	2.76	0.00	0.00	2.77
Total	**0.00**	**0.01**	**0.02**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**3.46**	**3.46**	**0.00**	**0.00**	**3.47**

CalEEMod Version: CalEEMod.2011.1.1

Date: 12/14/2011

Pointview

South Coast AQMD Air District, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric
City Park	26	Acre
Golf Course	2.5	Acre
Racquet Club	1	1000sqft
User Defined Recreational	2	User Defined Unit

1.2 Other Project Characteristics

Urbanization Urban

Climate Zone 8

Wind Speed (m/s) 2.2

Precipitation Freq (Days) 31

Utility Company Los Angeles Department of Water & Power

1.3 User Entered Comments

Project Characteristics -

Land Use - User Defined Recreational is Event Garden, which combines with the golf course to occupy less than 5 acres.
City Park = avocade, vineyard, citrus, olives, and vegetable garden.
Racquet Club only for energy usage (natural gas, electricity)

Construction Phase - See Construction Assumptions

Off-road Equipment - See Construction Assumptions

Off-road Equipment - See Construction Assumptions

Off-road Equipment - See Construction Assumptions

Off-road Equipment - See Construction Assumptions

Trips and VMT - Initial planting would require temporary increase in number of on-site employees to 10-20 people at a AVR of 1.135.

Grading - Driveway is 1880ft long by 20ft wide (37600 sq ft) with no import/export of materials.

Vehicle Trips - See Traffic Study
Saturday and Sunday rates are assumed to be the same
Racquet Club only for energy usage factors. No mobile trips associated.

Energy Use -

Solid Waste - Assumed Event Garden generates same solid waste as golf course

Land Use Change -

Construction Off-road Equipment Mitigation -

2.0 Emissions Summary

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	0.00	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
Energy	0.00	0.00	0.00	0.00		0.00	0.00		0.00	0.00	0.00	6.35	6.35	0.00	0.00	6.37
Mobile	0.04	0.11	0.42	0.00	0.06	0.00	0.07	0.00	0.00	0.01	0.00	57.62	57.62	0.00	0.00	57.68
Waste						0.00	0.00		0.00	0.00	2.08	0.00	2.08	0.12	0.00	4.67
Water						0.00	0.00		0.00	0.00	0.00	212.60	212.60	0.01	0.00	213.34
Total	**0.04**	**0.11**	**0.42**	**0.00**	**0.06**	**0.00**	**0.07**	**0.00**	**0.00**	**0.01**	**2.08**	**276.57**	**278.65**	**0.13**	**0.00**	**282.06**

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	0.00	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
Energy	0.00	0.00	0.00	0.00		0.00	0.00		0.00	0.00	0.00	6.35	6.35	0.00	0.00	6.37
Mobile	0.04	0.11	0.42	0.00	0.06	0.00	0.07	0.00	0.00	0.01	0.00	57.62	57.62	0.00	0.00	57.68
Waste						0.00	0.00		0.00	0.00	2.08	0.00	2.08	0.12	0.00	4.67
Water						0.00	0.00		0.00	0.00	0.00	212.60	212.60	0.01	0.00	213.34
Total	**0.04**	**0.11**	**0.42**	**0.00**	**0.06**	**0.00**	**0.07**	**0.00**	**0.00**	**0.01**	**2.08**	**276.57**	**278.65**	**0.13**	**0.00**	**282.06**

2.3 Vegetation

<u>Vegetation</u>

	ROG	NOx	CO	SO2	CO2e
Category	tons				MT
Vegetation Land Change					155.00
Total					**155.00**

4.0 Mobile Detail

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	0.04	0.11	0.42	0.00	0.06	0.00	0.07	0.00	0.00	0.01	0.00	57.62	57.62	0.00	0.00	57.68
Unmitigated	0.04	0.11	0.42	0.00	0.06	0.00	0.07	0.00	0.00	0.01	0.00	57.62	57.62	0.00	0.00	57.68
Total	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
City Park	3.12	3.12	3.12	12,182	12,182
Golf Course	1.00	1.00	1.00	3,905	3,905
Racquet Club	0.00	0.00	0.00		
User Defined Recreational	23.00	23.00	23.00	102,724	102,724
Total	27.12	27.12	27.12	118,812	118,812

4.3 Trip Type Information

	Miles			Trip %		
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
City Park	8.90	13.30	7.40	33.00	48.00	19.00
Golf Course	8.90	13.30	7.40	33.00	48.00	19.00
Racquet Club	8.90	13.30	7.40	11.50	69.50	19.00
User Defined Recreational	8.90	13.30	7.40	10.00	80.00	10.00

5.0 Energy Detail

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						0.00	0.00		0.00	0.00	0.00	5.19	5.19	0.00	0.00	5.21
Electricity Unmitigated						0.00	0.00		0.00	0.00	0.00	5.19	5.19	0.00	0.00	5.21
NaturalGas Mitigated	0.00	0.00	0.00	0.00		0.00	0.00		0.00	0.00	0.00	1.15	1.15	0.00	0.00	1.16
NaturalGas Unmitigated	0.00	0.00	0.00	0.00		0.00	0.00		0.00	0.00	0.00	1.15	1.15	0.00	0.00	1.16
Total	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**

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	tons/yr										MT/yr					
City Park	0	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
Golf Course	0	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
Racquet Club	21640	0.00	0.00	0.00	0.00		0.00	0.00		0.00	0.00	0.00	1.15	1.15	0.00	0.00	1.16
User Defined Recreational	0	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
Total		**0.00**	**0.00**	**0.00**	**0.00**		**0.00**	**0.00**		**0.00**	**0.00**	**0.00**	**1.15**	**1.15**	**0.00**	**0.00**	**1.16**

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	tons/yr										MT/yr					
City Park	0	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
Golf Course	0	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
Racquet Club	21640	0.00	0.00	0.00	0.00		0.00	0.00		0.00	0.00	0.00	1.15	1.15	0.00	0.00	1.16
User Defined Recreational	0	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

Total		**0.00**	**0.00**	**0.00**	**0.00**		**0.00**	**0.00**		**0.00**	**0.00**	**0.00**	**1.15**	**1.15**	**0.00**	**0.00**	**1.16**

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	ROG	NOx	CO	SO2	Total CO2	CH4	N2O	CO2e
Land Use	kWh	tons/yr				MT/yr			
City Park	0					0.00	0.00	0.00	0.00
Golf Course	0					0.00	0.00	0.00	0.00
Racquet Club	9240					5.19	0.00	0.00	5.21
User Defined Recreational	0					0.00	0.00	0.00	0.00
Total						**5.19**	**0.00**	**0.00**	**5.21**

Mitigated

	Electricity Use	ROG	NOx	CO	SO2	Total CO2	CH4	N2O	CO2e
Land Use	kWh	tons/yr				MT/yr			
City Park	0					0.00	0.00	0.00	0.00
Golf Course	0					0.00	0.00	0.00	0.00
Racquet Club	9240					5.19	0.00	0.00	5.21
User Defined Recreational	0					0.00	0.00	0.00	0.00
Total						**5.19**	**0.00**	**0.00**	**5.21**

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	0.00	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
Unmitigated	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
Total	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**

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	0.00					0.00	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Consumer Products	0.00					0.00	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Landscaping	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
Total	**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**

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	0.00					0.00	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Consumer Products	0.00					0.00	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Landscaping	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

Total	**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**

7.0 Water Detail

7.1 Mitigation Measures Water

	ROG	NOx	CO	SO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr				MT/yr			
Mitigated					212.60	0.01	0.00	213.34
Unmitigated					212.60	0.01	0.00	213.34
Total	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	ROG	NOx	CO	SO2	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	tons/yr				MT/yr			
City Park	0 / 30.9785					193.35	0.00	0.00	193.98
Golf Course	0 / 2.9787					18.59	0.00	0.00	18.65
Racquet Club	0.0591431 / 0.036249					0.66	0.00	0.00	0.71
User Defined Recreational	0 / 0					0.00	0.00	0.00	0.00
Total						**212.60**	**0.00**	**0.00**	**213.34**

Mitigated

	Indoor/Outdoor Use	ROG	NOx	CO	SO2	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	tons/yr				MT/yr			
City Park	0 / 30.9785					193.35	0.00	0.00	193.98
Golf Course	0 / 2.9787					18.59	0.00	0.00	18.65
Racquet Club	0.0591431 / 0.036249					0.66	0.00	0.00	0.71
User Defined Recreational	0 / 0					0.00	0.00	0.00	0.00
Total						**212.60**	**0.00**	**0.00**	**213.34**

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

	ROG	NOx	CO	SO2	Total CO2	CH4	N2O	CO2e
	tons/yr				MT/yr			
Mitigated					2.08	0.12	0.00	4.67
Unmitigated					2.08	0.12	0.00	4.67
Total	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	ROG	NOx	CO	SO2	Total CO2	CH4	N2O	CO2e
Land Use	tons	tons/yr				MT/yr			
City Park	2.24					0.45	0.03	0.00	1.02
Golf Course	2.33					0.47	0.03	0.00	1.06
Racquet Club	5.7					1.16	0.07	0.00	2.59
User Defined Recreational	0					0.00	0.00	0.00	0.00
Total						**2.08**	**0.13**	**0.00**	**4.67**

Mitigated

	Waste Disposed	ROG	NOx	CO	SO2	Total CO2	CH4	N2O	CO2e
Land Use	tons	tons/yr				MT/yr			
City Park	2.24					0.45	0.03	0.00	1.02
Golf Course	2.33					0.47	0.03	0.00	1.06
Racquet Club	5.7					1.16	0.07	0.00	2.59
User Defined Recreational	0					0.00	0.00	0.00	0.00
Total						**2.08**	**0.13**	**0.00**	**4.67**

9.0 Vegetation

	ROG	NOx	CO	SO2	Total CO2	CH4	N2O	CO2e
Category	tons				MT			
Unmitigated					155.00	0.00	0.00	155.00

Total	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**

9.1 Vegetation Land Change

Vegetation Type

	Initial/Final	ROG	NOx	CO	SO2	Total CO2	CH4	N2O	CO2e
	Acres	tons				MT			
Cropland	0 / 25					155.00	0.00	0.00	155.00
Total						**155.00**	**0.00**	**0.00**	**155.00**

Point View Master Use Plan Project
GHG Analysis

Construction Greenhouse Gas Emissions

Emission Source	CO_2e (Metric Tons)
Construction (Total – Years 2011-2012)	138
Agricultural Uses	11
Golf Course/Event Garden	38
Driveway Paving	89

Source: PCR Services Corporation

Proposed Project- 2012 (Mitigated)

Emission Source	CO_2e[e] (Metric Tons)
Construction	**138**
On-road Vehicles[a]	58
Electricity	46
Natural gas[c]	1.16
Water Conveyance	213
Waste	5
Total Operations	**323**
Total	**461**
GHG Threshold	
Metric Tons (CO2e)	3,000
Above the threshold?	**No**

[a] *Mobile source values were derived using CalEEMod. BAU emissions do not include Pavley or LCFS standards. Emissions calculated using the CARB Pavley I and Low Carbon Fuel Standard Post processor for EMFAC2007.*

[b] *Electricity Usage Rates from CalEEMod default values for Los Angeles Department of Water and Power. Proposed project emissions include CalGreen Mandatory Requirements which increases energy efficiency by 15% beyond Title 24 requirement*

[c] *Natural Gas Usage Rates from California Commercial End Use Survey (CEUS). Project related emissions include CALGreen requirements.*

[d] *Water conveyance energy rates from California Energy Commission Staff Report: California's Water - Energy Relationship. 2007. Project realted electricty emission factors*

[e] *All CO2e factors were derived using the California Climate Action*

Sources: PCR Services Corporation, 2011.

APPENDIX B

CARB DIESEL IDLING ATCM

POINT VIEW MASTER USE PLAN PROJECT

MND
Appendix B

Air Quality and Greenhouse Gas Assessment Files

Provided by PCR Services Corporation

February 2012

B.1 California Air Resources Board Air Toxics Control Measure (Diesel Idling)

California Environmental Protection Agency
Air Resources Board

Enforcement Division

Advisory

To: Owners, Operators, Renters or Lessees of In-Use Off-Road Vehicles in California

Number 377 **June 2008**

NEW IDLING LIMITS FOR OWNERS, OPERATORS, RENTERS OR LESSEES OF IN-USE OFF-ROAD DIESEL VEHICLES EFFECTIVE 6/15/08

The Air Resources Board (ARB) has adopted a regulation for In-Use Off-Road Diesel Vehicles, which became effective under California law on June 15, 2008. This regulation is designed to reduce harmful emissions from diesel powered construction and mining vehicles operating in California. Fleet owners are subject to retrofit or accelerated replacement/repower requirements for which ARB must obtain authorization prior to enforcement from the United States Environmental Protection agency under the federal Clean Air Act. However, this regulation also imposes idling limitations on owners, operators, renters or lessees of off-road diesel vehicles, which the ARB is authorized to enforce.

The idling limits are effective and enforceable as of June 15, 2008 The regulation requires an operator of applicable off-road vehicles (self-propelled diesel-fueled vehicles 25 horsepower and up that were not designed to be driven on-road) to limit idling to no more than five minutes. These requirements are specified in title 13, California Code of Regulations as follows:

§2449(d)(3) Idling

The Idling limits in Section 2449(d)(3) shall be effective and enforceable immediately upon this regulation being certified by the Secretary of State. Fleets must meet the following idling limits.

(A) Idling Limit – *No vehicles or engines subject to this regulation may idle for more than 5 consecutive minutes. Idling of a vehicle that is owned by a rental company is the responsibility of the renter or lessee, and the rental agreement should so indicate. The idling limit does not apply to:*

1. *idling when queuing,*
2. *idling to verify that the vehicle is in safe operating condition,*
3. *idling for testing, servicing, repairing or diagnostic purposes,*
4. *idling necessary to accomplish work for which the vehicle was designed (such as operating a crane),*
5. *idling required to bring the machine system to operating temperature, and*
6. *idling necessary to ensure safe operation of the vehicle.*

(B) Written Idling Policy – *As of March 1, 2009, medium and large fleets must also have a written idling policy that is made available to operators of the vehicles and informs them that idling is limited to 5 consecutive minutes or less.*

(C) Waiver – *A fleet owner may apply to the Executive Officer for a waiver to allow additional idling in excess of 5 consecutive minutes. The Executive Officer shall grant such a request upon finding that the fleet owner has provided sufficient justification that such idling is necessary.*

Therefore, waivers will be handled on a case by case basis.

§2449(i) Right of Entry

For the purpose of inspecting off-road vehicles and their records to determine compliance with these regulations, an agent or employee of ARB, upon presentation of proper credentials, has the right to enter any facility (with any necessary safety clearances) where off-road vehicles are located or off-road vehicle records are kept.

Non-Compliance: Health and Safety Code, Section 39674 (a) authorizes civil penalties for the violation of the programs for the regulation of toxic air contaminants not to exceed one thousand dollars ($1,000) for each day in which the violation occurs.

Health and Safety Code, Section 39674 (b) authorizes civil penalties for the violation of the programs for the regulation of toxic air contaminants not to exceed ten thousand dollars ($10,000) for each day in which the violation occurs.

As a matter of policy, each first time violation of the idling requirements will be assessed a minimum civil penalty of $300. Subsequent penalties can be up to $1,000 to $10,000. The standard for assessing penalties is one of strict liability. The owner, renter or lessee will be responsible for the penalty.

ARB will assess daily penalties for each idling vehicle found to be in violation. While ARB enforcement inspectors are not intending to begin unilateral field inspections for idling violations until after September 15 of this year, they will pursue idling complaints received from the public after June 15, 2008. "Idling inspections" will be conducted by our field staff by observing off-road vehicles at construction sites, mines or any other location where such vehicles operate. In case a vehicle is observed idling for more than five minutes, the operator and the site supervisor will be contacted to determine the reason for the idling and, if the reason for idling is not exempted by the rule, a $300 per day of violation citation will be issued to the owner, renter or lessee of the vehicle for a first time violation.

For further information about the In-Use Off-Road Diesel Vehicle regulation, please visit our website at: http://www.arb.ca.gov/msprog/ordiesel/ordiesel.htm. Fact sheets are available at http://www.arb.ca.gov/msprog/ordiesel/factsheets.htm, and the full text of the regulation is available at http://www.arb.ca.gov/regact/2007/ordiesl07/frooal.pdf

For questions regarding enforcement of the In-Use Off-Road Vehicle regulation, please contact Mr. Tajinder Gill at (626) 459-4304 or tgill@arb.ca.gov.

If you have questions about the regulation or our outreach efforts, please contact Ms. Elizabeth White (916-324-1704 or eiwhite@arb.ca.gov), or Ms. Kim Heroy Rogalski (916-327-2200 or kheroyro@arb.ca.gov).

APPENDIX C

GEOTECHNICAL REPORTS

C.1 – Event Garden Fireplace Geotech Report

C.2 – Orchard and Vineyard Agricultural Geotech Report

GINTER & ASSOCIATES, INC.
ENGINEERING GEOLOGY CONSULTANTS
27631 DURAZNO
MISSION VIEJO, CA 92692
OFC (949) 581-2363 CELL (714) 478-1167

GANTEC ENGINEERING, INC.
GEOTECHNICAL ENGINEERING CONSULTANTS
19420 KILFINAN STREET
NORTHRIDGE, CA 91326
NE: (818) 687 1997 Fax: (818)357 5744

York Point View Properties, LLC
550 Silver Spur Road, Ste. 250
Rancho Palos Verdes, CA 90275

February 18, 2010
Project # 100-02

Attn: Mr. Jim York

SUBJECT: **Engineering Geology and Geotechnical Engineering Evaluation for the Proposed Orchard and Vineyard Agricultural Operation, Point View Site, City of Rancho Palos Verdes, California**

References:
1. Neblett & Associates, Inc., June 17, 2008; Geologic Report Providing the Geologic Data To Support Adjusting the Moratorium Line Within the Point View Development Site, City of Rancho Palos Verdes, California; Project 279-004-05
2. Various Information Documents provided by client regarding details of the proposed orchard and vineyard agricultural operation

Dear Mr. York:

In accordance with your request, this transmittal has been prepared to address the geologic and geotechnical engineering aspects of the effects the proposed agricultural operation will have within and adjacent to the Point View site. The consultants of record for engineering geology and geotechnical engineering of the Point View site are Ginter & Associates, Inc. and Gantec Engineering, Inc., respectively. It is noteworthy that the undersigned have both authored, provided data and conclusions for the geologic and geotechnical reports for the subject site over the last 10 years± while working for Neblett & Associates, Inc. as Chief Geologist and Senior Geotechnical Engineer, including Reference 1.

General Description of Proposed Orchard and Vineyard Agricultural Operation:

The owner is proposing to plant up to 25 acres of avocados, grapes and citrus on the Point View property which will consist of 15 acres of new organic Haas avocados; 8 acres of Chardonnay and Pinot Noir wine grapes; 2 acres of citrus and non-organic avocados; and the installation of an irrigation system including two 4,000 gallon water tanks, pumps and water lines. These features are located as shown on Figure 1. Details of these agricultural elements can be found in reference number 2.

Avocado Orchards:

We have been informed by the client that Haas avocados have a relatively shallow root system that results in 80% of the water being obtained from the top 0.6 meters (2 ft±) of soil.

Each tree will be irrigated by a "spinner" type sprinkler that will provide a gentle uniform distribution of water. It is anticipated that these emitters will have a flow rate of 5 gallons/hour. Systematic samples will be collected and analyzed so that soils do not become saturated.

No grading or site contouring will be required, although the orchards may be tilled periodically for weed control and irrigation efficiency.

Vineyards:

It is our understanding that the vineyard rows will be 7 ft± wide and oriented in a southwest to northeast direction. The water delivery system will be an above ground drip system with a ½ gallon/hr. emitter on either side of the vine. The irrigation schedule will be designed to ensure that the grape vines are barely kept alive and the fruit is "stressed" for quality and production. The watering schedule for the growing period will range from 2 to 5 gallons/plant on a frequency schedule ranging from one to five times per month. We have been informed that water does not need to penetrate more than the 36-inch "feeding zone" of the plant and periodic soil testing will be performed to ensure that overwatering does not occur.

No grading or contouring will be required for these vineyards.

Citrus Orchard:

The citrus orchard will include oranges, lemons, limes and non-organic avocados. No grading or contouring will be necessary and irrigation will be provided by an above ground drip system with emitters that provide water at 5 gallons/hr.

Irrigation System:

Two 4,000 gallon water tanks are proposed at the location shown on Figure 1 that will be fed by an existing 6" water line and 2" water meter near the West Narcissa Drive extension. The tanks will be positioned adjacent to each other with gravel bases and a metal ring.

Irrigation of the vineyards and downhill orchards will be controlled by a gravity feed system or a pump, when required, and the uphill orchards will require a pump. No grading is required for the irrigation system.

General Geologic Conditions

The Point View site's geology has been investigated extensively by the undersigned and details of the work can be reviewed in reference number 1. In general, the majority of the agricultural features are located in the western and southwestern extremities of the Ancient Portuguese Bend Landslide Complex (map symbol Qlso). Vineyard #2 and portions of Vineyard #1 are located within an area designated as undifferentiated modern colluvium and paleo-seacliff debris and marine terrace (map symbol Qupc).

Based on the observations and logs of borings as part of the various investigations over the past several years the majority of the proposed orchards and vineyards are located in areas where a considerable thickness of soil, commonly 3 to 5 ft., mantles the surface. An exception to this is the western portion of Avocado Orchard #1 where weathered bedrock of the Tertiary Monterey Formation, Altamire Shale Member, is exposed. It is expected that shallow tilling (6" to 8") in this area may be necessary to provide an adequate substrate for orchard growth.

Recommendations:

In order to minimize surface soil erosion, we recommend the orchard rows be orientated in a direction that is perpendicular to the slope as much as possible. Such soil conservation techniques have been implemented successfully in this and other countries.

It will be essential to monitor the depth of moisture infiltration in the orchards to maintain sustainable growth and keep the percolation zone in the upper 2 to 3 feet.

Conclusions:

Based on our review of the existing geologic conditions and the details of the proposed orchard and vineyard agricultural operation, the subject agriculture plan is feasible and suitable from as engineering geologic and geotechnical engineering standpoint provided our recommendations are followed throughout the entire period of proposed agricultural operations.

The proposed agricultural features will not affect the geology and/or stability of the Point View site and vicinity.

Closure:

We appreciate the opportunity to provide our services. If you have any questions or require additional information, please contact the undersigned.

Respectfully submitted,

CERTIFIED ENGINEERING GEOLOGIST
DAVID H. GINTER
No. CEG 2250
EXP. 06-30-10
STATE OF CALIFORNIA

Dave Ginter, P.G., C.E.G.
Principal Engineering Geologist/President
GINTER & ASSOCIATES, INC.

Vela "Ganesh" Ganeshwara, P.E., G.E.
Principal Geotechnical Engineer/President
GANTEC ENGINEERING, INC.

REGISTERED GEOTECHNICAL ENGINEER
VELA GANESHWARA
RGE 2736
EXP. 09/30/01
GEOTECHNICAL
STATE OF CALIFORNIA

Attachment: Figure – 1: Generalized Geology Map

C.3 – All-Weather Access Road Geotech Report

Geologic and Geotechnical Engineering Review of the All-weather Access Road Plans for the Point View Site, Rancho Palos Verdes, California

Prepared for:

York Point View Properties, LLC

Prepared by:

Ginter & Associates, Inc.

Project No.: 100-01   August 31, 2010

CITY OF RANCHO PALOS VERDES
GEOTECHNICAL INVESTIGATION REPORT REVIEW CHECKLIST

Date Received:	November 1, 2010	Date Completed:	November 4, 2010
Date of Response:	October 25, 2010		
Date of Report:	August 31, 2010	Prior Review:	September 30, 2010
Consultant:	Ginter & Associates, Inc.	Their Job No.:	100-01
Applicant Name:	York Point View Properties, LLC Point View Development	Legend:	N = No Y = Yes
Site Address:	6001 Palos Verdes Drive South Rancho Palos Verdes, CA		
Lot/Tract No.:			
Proposed Project:	**All Weather Access Road for Point View Site, roadway is to consist of 3 inches of asphalt concrete over 4 inches of aggregate base materials. Remedial grading of 3 feet is proposed.**		

- **Geotechnical Response:**

Y/N Responsive to checklist comments
Y/N Grading/foundation plans changed as a result of response

- **Recommended Actions:**

Planning Department:

_X_ In Concept Approval for Planning Purposes

Building and Safety:

____ Report Approved _X_ Conditional Approval (See Below) ____ Additional Input Required

Items requiring response/further evaluation:

1. None

Additional comments/Conditions of Approval (no response required):

2. Note to City Staff: Consultant has noted in Response to Comment 1 that grading will be balanced within areas of grading for the road. No other balance areas outside the roadway shall be allowed. No export shall be allowed.

3. Note to City Staff: Staff should confirm that the Consultants (C.E.G. and/or G.E.) have signed the final dated grading/construction plans, thereby verifying the plans' geotechnical conformance with the Consultant's original report and associated addenda.

Limitations:

Our review is intended to determine if the submitted report(s) comply with City of Rancho Palos Verdes Codes and generally accepted geotechnical practices within the local area. The scope of our services for this third party review has been limited to a brief site visit and a review of the above referenced report and associated documents, as supplied by the City of Rancho Palos Verdes. Re-analysis of reported data and/or calculations and preparation of amended construction or design recommendations are specifically not included within our scope of services. Our review should not be considered as a certification, approval or acceptance of the consultant's work, nor is it meant as an acceptance of liability for final design or construction recommendations made by the geotechnical consultant of record or the project designers or engineers.

BY: ____________________
James M. Lancaster, Jr. C.E.G. 1927 Expires 6/30/12
ZEISER KLING CONSULTANTS, INC.

BY: ____________________
Dante P. Domingo, R.C.E. 57939 Expires 6/30/12
ZEISER KLING CONSULTANTS, INC.

Ginter & Associates, Inc.
27631 Durazno
Mission Viejo, CA 92692
ofc (949) 581-2363 cell (714) 478-1167

York Point View Properties, LLC
550 Silver Spur Road, Ste. 250
Rancho Palos Verdes, CA 90275

August 31, 2010
Project # 100-01

Attn: Mr. Jim York

SUBJECT: **Geologic and Geotechnical Engineering Review Of the All-weather Access Road Plans for the Point View Site, City of Rancho Palos Verdes, California**

REFERENCES: See attached list of references (Appendix 1)

1.0 Introduction

In accordance with your request, Ginter & Associates, Inc. has prepared this report to provide recommendations and a review of the subject All-weather Access Road Plans for the Point View site from an engineering geologic and geotechnical engineering standpoint. The plans were prepared by Rothman Engineering, Inc. at a scale of 1”=60’ and include sheets C-1 through C-6 (attached in Appendix II) and are utilized as the base for this report.

Sheet C-2 has been reduced to a scale of 1”=100’ and is used as a base for our Geologic Map (Figure 3). Laboratory analyses are present in Appendix III.

A significant amount of geologic and geotechnical engineering data from the previous geotechnical consultant, Neblett & Associates, Inc (N&A) that pertains to the subject access road pathway and immediate environ’s subsurface conditions has been utilized in this report.

Details of this information can be reviewed in reference reports by N&A dated 12/29/2000; 6/17/2008 (Appendix I).

It is noteworthy that the authors of this report were previously employed by N&A and have been directly involved with the aforementioned referenced reports and their investigations as Chief Geologist and Project Geotechnical Engineer for N&A. The authors have accumulated a vast knowledge of the geology and geotechnical engineering conditions of the Point View site and its surroundings.

1.1 Site Location and Description

The Point View site is an irregularly shaped parcel of hilly terrain containing approximately 94 acres in the south-central portion of the Palos Verdes Peninsula as shown on Figure 1. The subject access road transgresses the southern portion of the Point View site in a generally northeast to southwest direction with an ingress/egress located at the southwest corner at Palos Verdes Drive and another ingress/egress located near the northeast corner at Narcissa Drive (see Figure 2 and Sheet C-2).

The access road near Palos Verdes Drive is at an approximate elevation of 220 m.s.l. and rises to the northeast to an approximate elevation of 405 m.s.l. and descends gradually to Narcissa Drive at an elevation of 385 m.s.l. The steepest gradient is in the southwest (center line and profile sheet C-3) at approximately 16.8% rising to the northeast and then shallows to a gradient of 6 to 7% (center line and profile sheets C-4 and C-5) in the northeast.

2.0 Regional Geologic Setting:

The Palos Verdes Hills (PVH) are in the Continental Border land province and have a complex geologic structure and tectonic evolution. The PVH are dominated by a northwest-southwest trending, doubly plunging anticlinorium and the Palos Verdes Fault (Figure 2).

The core of the PVH consists of Mesozoic Catalina Schist overlain by Tertiary sediments of the Monterey Formation and basalt which in turn are overlain by shallow marine and non-marine surficial deposits of Quaternary age.

Several large landslides, including the Portuguese Bend landslide complex and the Abalone Cove landslide result from seaward dipping daylighted Tertiary marine shales along the southerly portion of the PVH.

One of the most striking features of the PVH is the 13 remnant marine terraces which document the relatively rapid uplift of the peninsula throughout the Quaternary Period and owe their origin to glacio-eustatic fluctuations in sea level superimposed on a tectonically rising block.

The subject access road and Point View site are located along the southwest rim of the synclinorium formed by the Ancient Portuguese Landslide Complex as shown in Figure 1.

3.0 Site Geology

The subject access road will be transgressing surficial deposits consisting of Marine and Non-Marine Terrace Deposits (Qt); Undifferentiated Modern Colluvium and Paleo Seacliff Debris and Marine Terraces (Qupc); and Ancient Portuguese Bend Landslide Debris. A description of these units follows:

3.1 Terrace Deposits (Qt):

Included within this unit are both Marine and Non-Marine Terrace Deposits. The Marine Terraces commonly include well-rounded pebbles, cobbles, boulders and shells in a sandy to silty sand matrix and occur as remnants in ancient wave-cut platforms. The Non-Marine Terrace Deposits are a poorly sorted mixture of slope wash, talus and colluvium which locally overlie marine terraces or ancient wave-cut platforms.

This unit has been delineated on the attached Geologic Map (Figure 3) and occurs along the southern portion of the Point View site. Some of these materials occur locally within the unit designated as Qupc, as well as the large ancient landslide mass (Qlso).

3.2 Undifferentiated Colluvium, Paleo-seacliff Debris and Marine Terrace Deposits (includes cliff-derived colluvium, talus, toppled blocks, slumps and local paleoslides, [Qups]):

This collage of surficial materials rims the Ancient Portuguese Bend Landslide Complex within the southwest portion of the Point View Parcel in a complex array of deposits associated with the ancient shore-cliff. This unit includes undifferentiated modern colluvium, paleo-seacliff debris includes cliff-derived colluvium, talus, toppled blocks, slumps and local shallow slides. The direction of movement of the shallow slides is generally seaward and obtuse to the major ancient landslide movement, which is in an east-southeasterly direction in the central and north-east portion of the Point View parcel.

The upper soils of this unit generally consist of a heterogeneous mixture of sand, silts and clays with rounded to angular clasts of the Altamira Shale Member of the Monterey Formation.

3.3 Ancient Portuguese Bend Landslide Deposits (Qlso):

This ancient landslide complex encroaches upon the northern portion of the Point View site as depicted in Figure 3 and extends offsite to the north into the Upper Filiorum and east as shown on Figure 2.

The depth of this slide complex in the vicinity of the northern portion of the subject access road is generally 190 ft.± and contains, in general, sands, silts and clays with clasts of bedrock fragments derived from the Altamira Shale Member of the Monterey Formation.

4.0 Laboratory Testing:

Laboratory R-Value tests were performed on soils obtained from surface samples obtained in the vicinity of the proposed access road as shown on Figure 3. The lab test results are presented in Appendix III.

5.0 Recommendations:

5.1 Removal of Unsuitable Material

Based on the boring logs in the proposed road's vicinity from previous investigations and the recent site visit, the surface soils in the upper 3 vertical feet will require removal and replacement with compacted artificial fill. Prior to grading operations, all vegetation should be removed and disposed of off-site. Following site preparation operations, it is recommended that the exposed site soils be over-excavated to a minimum uniform depth of 3 feet below existing grades. The excavation should be performed under the observation of the Project Geotechnical Engineer. The over-excavation should extend to minimum 3 ft. distance beyond street footprint.

5.2 Pavement Section Recommendations

The traffic index for the proposed access road is not known at this time. Therefore, we are providing pavement sections for various traffic indices so that appropriate section can be chosen once the traffic index for the proposed road become known. The pavement section was computed based on California Test Method 301 procedures for various assumed traffic indices tabulated below for the subject street. The selected design R-value is based on the result of laboratory R-Value test on representative sub-grade soil sample obtained from the subject street alignment. The result of R-value tests for sub-grade soil sample from the street alignment is attached.

Design R-Value	Assumed Traffic Index	Recommended Minimum Pavement Section	
		Asphalt Concrete (in.)	Aggregate Base (in.)
12	3	3	2
	4	3	5
	5	3	8.5
	6	4	10

Aggregate base should consist of crushed aggregate base (CAB) or crushed miscellaneous base (CMB), or equivalent, as specified in Sections 200-2.2 and 200-2.4 in the Standard Specifications For Public Works Construction, “Green Book”, and be compacted to minimum 95 percent of the maximum laboratory density determined in accordance with ASTM: D-1557, Method C.

The sub-grade soils should consist of engineered fill compacted to at least 90 percent relative compaction at approximately 2 to 3 percentage points wet of optimum moisture contents and exhibit firm and unyielding condition prior to placement of base course material. Additional testing should be performed, as necessary, to verify the sub-grade soil conditions exposed and compliance with project requirements.

LIMITATIONS

The report has been prepared for the exclusive use of York Point View Properties, LLC and their design consultants relative to the design and construction of the proposed access road. This report is not intended for other parties, and it may not contain sufficient information for other purposes.

The owner or his representative should make sure that the information and preliminary recommendations presented in this report are brought to the attention of the Project Architect and Project Engineer and incorporated into the project plans.

This office should be provided with final grading and foundation plans for review to enable us to confirm the preliminary recommendations and update the report, as necessary.

The findings contained in this report are based upon our evaluation and interpretation of the information obtained from limited borings and the results of the laboratory testing and engineering analysis. The opinions and recommendations provided were based on the assumption that the geotechnical conditions, which exist across the site, are similar to those observed in the test excavations. The condition and characteristics of the sub-surface materials at locations and depths other than those excavated and observed may be different and no representations are made as to their quality and engineering properties. Should any conditions encountered during construction differ from those described herein, this office should be contacted immediately for evaluation of the actual conditions and for appropriate recommendations prior to continuation of work.

The findings and recommendations presented herein were obtained in accordance with currently accepted professional engineering principles and practice in the field of geologic and geotechnical engineering, and reflect our best professional judgment. We make no other warranty either express or implied.

This report is subject to review by the controlling authorities. If you have any questions, or require additional information, please contact the undersigned.

Respectfully submitted,

Dave Ginter R.G., C.E.G.
Principal Engineering Geologist/President

Vela "Ganesh" Ganeshwara P.E., G.E.
Consulting Geotechnical Engineer

Attachments: Figure 1 Site Location Map
Figure 2 Regional Geologic Map
Figure 3 Site Geologic Map
Appendix I References
Appendix II Grading Plans for All-weather Access Road, Point View Site, by Rothman Engineering, Inc.
Appendix III Laboratory Analyses

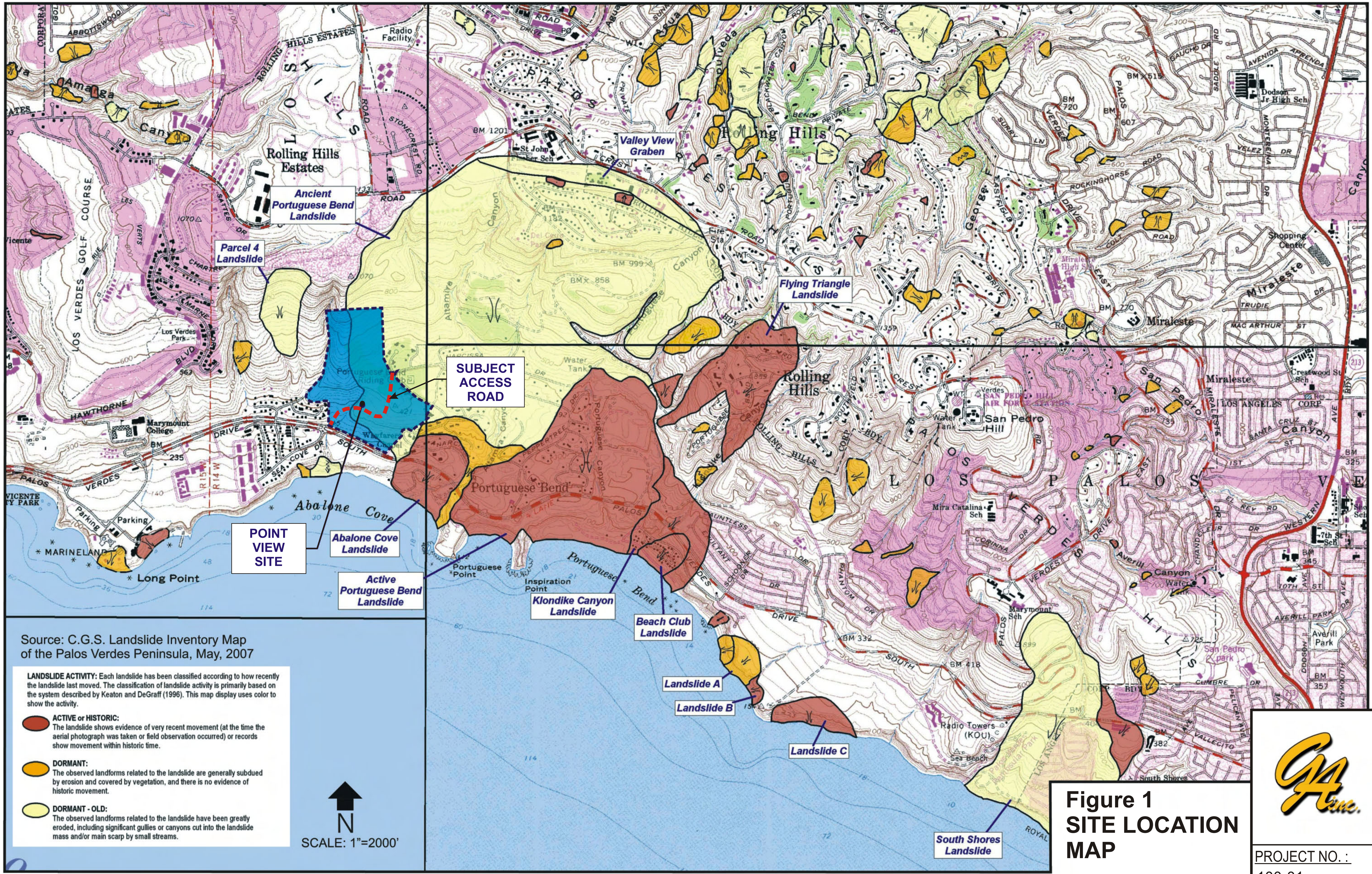


Figure 1
SITE LOCATION MAP

PROJECT NO. :
100-01

DATE :
August, 2010

LEGEND

PALOS VERDES PENINSULA AND VICINITY (Map DF-70)
Redondo Beach, Torrance, and San Pedro Quadrangles

QUATERNARY

Holocene

SURFICIAL SEDIMENTS

af *artificial fill or cut and fill; many areas may not be shown*
Qs *beach sediments, ranging from sand to cobble-boulder gravel*
Qds *loose dune and drift sand*
Qa *alluvium, mostly loamy clay of valleys and flood plains; includes fine sand near Palos Verdes Hills*
Qae *alluvium, similar to* **Qa** *but slightly elevated and locally dissected*
Qls *landslide debris; mostly of Monterey Shale*

Pleistocene

OLDER SURFICIAL SEDIMENTS

Qos *older, stabilized dune and drift sand - mostly unconsolidated fine-grained sand*
Qoa *older alluvium - nonmarine terrace cover of Woodring et al.,1946; Poland et al., 1959; Cleveland, 1972; sandy loam and loamy clay, includes sand and pebble gravel in Palos Verdes Hills, with pebbles derived mostly from Miocene hard siliceous shale and limestone; includes Palos Verdes Sand of Woodring et al.,1946, not differentiated on this map*
t *elevated old marine terrace remnants in Palos Verdes Hills, with little or no alluvial sedimentary cover; compiled in large part from Woodring et al.,1946; Cleveland, 1972*

SHALLOW MARINE SEDIMENTS
nonmarine(?) to shallow marine clastic sediments, weakly indurated; contain abundant marine molluscan fossils and microfossils; Pleistocene (Hallian Stage)
Qsp ***San Pedro Sand:*** *light gray to reddish-tan sand and pebble gravel, pebbles derived mostly from Miocene hard siliceous shale and limestone detritus; massive to locally cross-bedded*
Qtp ***Timms Point Silt:*** *yellowish-gray to gray sandy siltstone, formerly widely exposed in San Pedro*
Ql ***Lomita Marl:*** *gray-white marl and calcareous fine-grained sandstone, gray siltstone, in places with basal gravel of Miocene shale and limestone debris*

—UNCONFORMITY—

TERTIARY

Pliocene

FERNANDO FORMATION
(formerly Pico Formation, and Repetto Formation of Reed, 1933)
deep marine clastic sediments; Pliocene age
Tfp *Pico Member, in subsurface only, north of Palos Verdes fault; mostly blue and brown sandy shale and sandy siltstone; late Pliocene age, mostly Venturian Stage*
Tfr *soft gray siltstone-claystone, locally glauconitic; early Pliocene age, Repettian Stage.*

—DISCONFORMITY—

Miocene

MALAGA MUDSTONE
(formerly Malaga Mudstone member of Monterey Shale (Woodring et al., 1946)
deep marine clastic sediments; late Miocene age; similar to "Unnamed Shale" of east Los Angeles region (Dibblee, 1989)
Tmg *light gray sandstone and dark gray-brown mudstone with diatomaceous strata and limestone concretions; Mohnian - Delmontian Stages (Rowell, 1982)*

MONTEREY FORMATION
(equivalent to lower Puente Formation, north of Palos Verdes Fault)
deep marine biogenic, clastic, and volcanic sediments; early middle to late Miocene age; described below in descending stratigraphic order:
Tmv ***Valmonte Diatomite*** *- soft, white, punky, laminated diatomaceous shale and mudstone, in places up to 125 m thick; Mohnian Stage (Rowell, 1982)*
Tmad *diatomite in San Pedro area - lithologically very similar to Valmonte Diatomite, but probably equivalent in age to upper part of unit* **Tma***;*
Tma ***Altamira Shale - upper part:*** *white-weathering, thin-bedded siliceous and phosphatic shale with interbeds of limestone and siltstone, locally organic and diatomaceous; 40 m thick; with cherty and porcelaneous shale at base, up to 15 m thick (Conrad and Ehlig, 1983); Relizian(?) - Mohnian Stages (Rowell, 1982)*
Tmf ***Point Fermin Sandstone member****- light gray, bedded, indurated sandstone, contains abundant grains, pebbles and cobbles of blueschist, few of quartzite and basaltic rocks; ±40 m thick; early Mohnian Stage (Sloan, 1987)*
Tmat ***Altamira Shale - lower part:*** *mostly light gray shale and mudstone, with tuffaceous and dolomitic strata throughout, with total thickness up to 275 m, at or near top contains white, fine-grained, semi-indurated tuff bed*
m (*Miraleste Tuff of Woodring et al.,1936) about 2 m thick; near middle contains bentonitic Portuguese Tuff* **p** *(of Woodring et al., 1946) up to 25 m thick near Portuguese Bend; contains flows and intrusions of basaltic rocks* **(Tb)***, described separately below; Relizian -Luisian Stages (Rowell, 1982)*
In lower Puente Formation, north of Palos Verdes fault, in subsurface only:
Del Amo zone- *of Torrance oil field: oil-producing fine-grained sandstone and shale*
Nodular Shale- *dark brown organic shale with phosphatic laminae and blebs*
Basal Conglomerate- *poorly sorted, with blueschist debris (San Onofre breccia?)*

BASALT
mafic extrusive and intrusive rocks; early middle Miocene age
Tb *submarine flows, pillowed flows and breccias in* **Tmat** *(lower Altamira Shale), black, fine-grained basalt to mafic andesite, in places intruded into marine sediments as pepérite breccia; rock incoherent where weathered; includes sills, dikes, and irregular, discordant intrusions of basalt-diabase; associated with veins of barite, dolomite and quartz; age approximately 15.5-14.5 ma, or Relizian -Luisian Stages (Conrad and Ehlig, 1983)*

SAN ONOFRE BRECCIA
marine(?) clastic rocks; exposed at base of Altamira Shale at Bluff Cove only, base unexposed; middle Miocene age
Tso *San Onofre breccia: unsorted, subangular clasts, up to 0.5 m in size, mostly blueschist debris, white vein quartz, minor greenschist, rare garnet eclogite, in greenish-gray, friable, massive micaceous sandy matrix; probable landslide deposits*

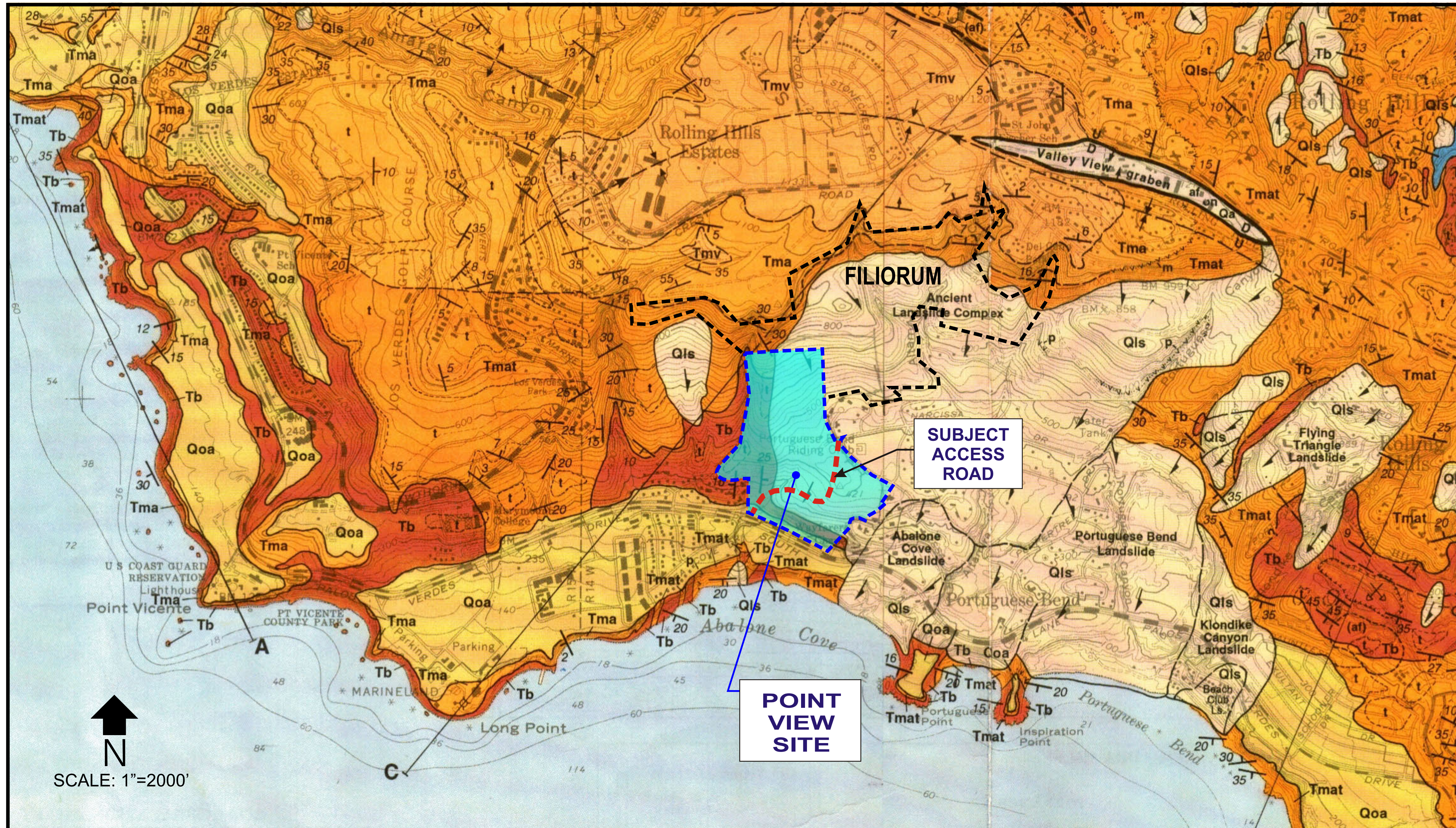
—UNCONFORMITY—

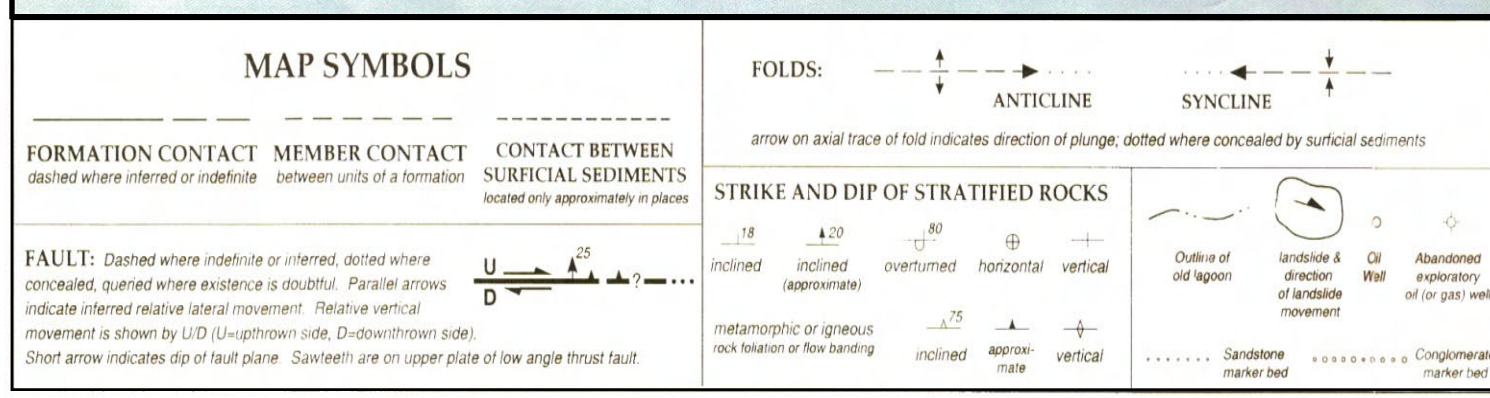
CRYSTALLINE BASEMENT ROCKS

MESOZOIC

Jurassic(?)

CATALINA SCHIST
former Franciscan(?) basement rocks, metamorphosed under subduction conditions of high pressure, low temperature; Jurassic(?) age
sc *quartz-sericite-schist, quartz-chlorite-schist, and glaucophane-blueschist, dark bluish-gray, weathered to rust brown, foliated and contorted; contains white quartz veins, thick chert beds, and rare small masses of metagabbro*



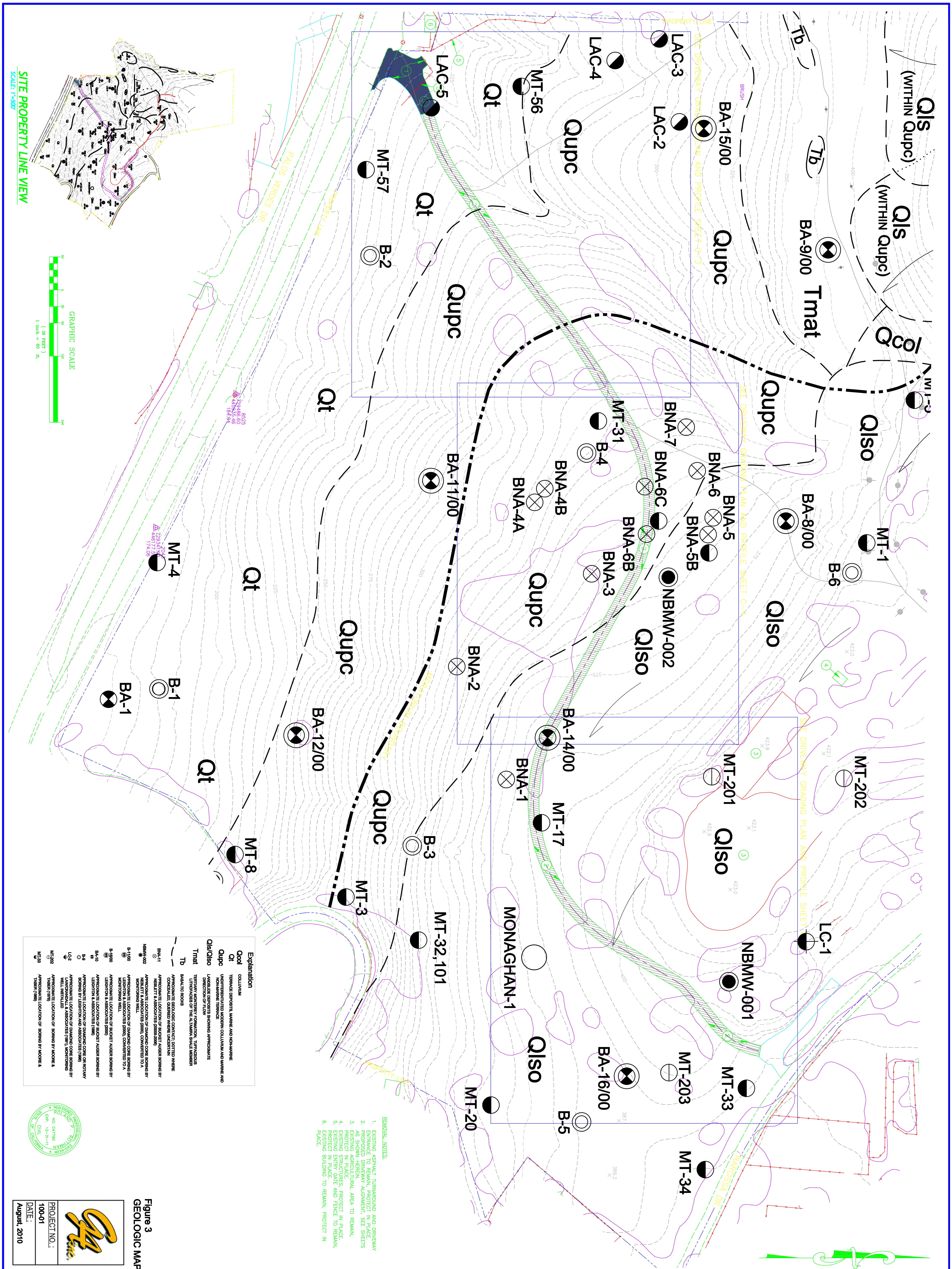


Source: DIBBLEE, T.W., Jr., 1999

Figure 2
REGIONAL GEOLOGIC MAP

PROJECT NO. :
100-01

DATE :
August, 2010



PLAN PREPARED IN THE OFFICES OF:	CLIENT / PROJECT	SHEET TITLE	
ROTHMAN ENGINEERING, INC. 205 S. BROADWAY, SUITE 206 LOS ANGELES, CALIFORNIA 90012 (213) 621-3155 FAX (213) 621-3105	YORK POINT VIEW PROPERTIES, LLC 6001 PALOS VERDES DRIVE SOUTH RANCHO PALOS VERDES, CA 90275	EXISTING CONDITIONS/ REMOVAL SHEET AND KEY MAP	CIVIL C-2 of 6 JOB NUMBER 0320-09-001

Appendix I

References

References

Ginter & Associates, Inc., August 20, 2009, Comments Concerning the All-Weather Access Road from Narcissa Road to the Point View Event Garden, City of Rancho Palos Verdes, California

Neblett & Associates, Inc., December 29, 2000, Preliminary Geologic and Geotechnical Engineering Report and Grading Plan Review, Point View Development Site, Rancho Palos Verdes, California, Volumes I & II

________________, June 17, 2008, Geologic Report Providing the Geologic Data to Support Adjusting the Moratorium Boundary Line Within the Point View Site, City of Rancho Palos Verdes, California

Appendix II

Grading Plans for All-weather Access Road, Point View Site by Rothman Engineering, Inc.

Appendix III

Laboratory Analyses

"We Test the Earth"

PACIFIC MATERIALS LABORATORY, INC.

August 11, 2010
Lab No. 3886-5
File No. 10-5795-5

C. Y. Geotech, Inc.
9428 Eton Ave., Unit M
Chatsworth, CA 91311

SUBJECT: **R-Value Testing**
Samples Delivered to Laboratory

Gentlemen:

Pursuant to your request, R-Value testing was performed on soil samples delivered to our laboratory. R-Value testing was performed in accordance with California Test 301-F criteria. The test results follow:

R-VALUE RESULTS

PROJECT: GEI/Ganesh, CYG-10-5578
LOCATION: B-1 - Point View Development

Soil Description: Dark Brown Fine Sandy Silty Clay with Some Gravels

ITEM	1	2	3
Compaction Pressure - psi	200/350	125/150	100/125
Initial Moisture - %	26.6	26.6	26.6
Moisture at Compaction - %	31.9	34.0	36.1
Density - pcf	86.4	82.6	79.2
R-Value	29	18	14
Exudation Pressure	578	430	280
Expansion Pressure thickness ft.	0.63	0.70	0.17

Assigned R-Value: 14*

Footnote:
*Please verify R-value based upon expansion thickness *(see California Test 301-F procedures).*

R-VALUE RESULTS

PROJECT: GEI/Ganesh, CYG-10-5578
LOCATION: B-2 - Point View Development

Soil Description: Dark Brown Fine Sandy Silty Clay with Some Gravels

ITEM	1	2	3
Compaction Pressure - psi	150/200	125/175	100/150
Initial Moisture - %	27.4	27.4	27.4
Moisture at Compaction - %	33.8	35.9	38.0
Density - pcf	82.8	80.4	78.9
R-Value	21	15	12
Exudation Pressure	509	403	298
Expansion Pressure thickness ft.	0.80	0.67	0.47

Assigned R-Value: 12*

Footnote:
*Please verify R-value based upon expansion thickness *(see California Test 301-F procedures).*

Thank you for allowing *Pacific Materials Laboratory, Inc.* to be of service. If we may be of further service regarding this or other geotechnical issues, please do not hesitate to call (805) 482-9801, fax (805) 445-6551 or write.

Respectfully Submitted,
PACIFIC MATERIALS LABORATORY, INC.

Douglas C. Papay, CE 29,565
President

REGISTERED PROFESSIONAL ENGINEER
DOUGLAS C. PAPAY
CE 29565
Exp: 3-31-11
CIVIL
STATE OF CALIFORNIA

DCP:dkp
cc: Addressee (3)

C.4 – GAZEBO GEOTECH REPORT

C.5 – Ginter Geology Summary Report

GINTER & ASSOCIATES, INC.
Engineering Geology Consultants
27631 Durazno
Mission Viejo, CA 92692
ofc (949) 581-2363 cell (714) 478-1167

York Point View Properties, LLC
550 Silver Spur Road, Ste. 250
Rancho Palos Verdes, CA 90275

August 19, 2011
Project No. 100-06

Attn: Mr. Jim York

Subject: **Geologic Summary for the Point View Master Use Plan Rancho Palos Verdes, California**

References: See Appendix I

Introduction:

This report has been prepared to provide a summary of the geology of the Point View property and surrounding area. It is intended as a general overview in support of the improvements that have been completed and those that are proposed as part of the Point View Master Use Plan. Improvements include a paved access road, event garden, restroom remodel, gazebo, waterline, agriculture, small golf course and greenhouse.

It should be noted that the undersigned has provided professional consultation on this property since 2000 through 2008, as Chief Geologist for Neblett & Associates, Inc. (N&A). During this period Mr. Ginter provided the majority of subsurface investigations and associated reports for the subject site. More recently, as Principal of Ginter & Associates, Inc., Mr. Ginter continues to provide geological and geotechnical consultation to the property owner.

Site Location and Description:

The Point View development site is an irregularly shaped parcel of hilly terrain containing approximately 94 acres in the south-central portion of the Palos Verdes peninsula as shown on Figure 1. The site ranges in elevation from approximately 700 feet mean sea level (m.s.l.) in the extreme northwest portion to approximately 170 feet m.s.l. in the extreme southeast portion resulting in 530 feet of relief.

The steep-sided Barkentine Canyon bounds the site to the west. Palos Verdes Drive South bounds the south. The northern and northeastern boundary is contiguous to the Upper Filiorum which was acquired by RPV in 2010 and the Plum Tree property which is under separate ownership. The eastern parcel perimeter trends irregularly along Narcissa Drive and the single family homes in the Portuguese Bend Community. The Point View site has a distinct geomorphic position on the southwestern semi-circular “rim” which approximately defines the boundary of the ancient Portuguese Bend landslide complex (Figure 1) which physiographically is a “deflated area” due to mass wasting from ancient landsliding. The large bowl-shaped synclinorium is expressed by the physiography, direction of landslide movements and underlying geologic structure.

Locally, the site is bisected in the central portion by a small northeast-southwest trending canyon with relatively shallow flanks which drains to the southwest to a storm drain and ultimately to Abalone Cove. West and north of this drainage the site consists of a relatively long prominent ridgeline which ascends from south to north in a stair-step fashion at a relatively steep gradient. East of this drainage, the site consists of a well rounded flat-topped anvil-shaped ridge in the north with steep slopes descending to the south to shallow slopes near Palos Verdes Drive South.

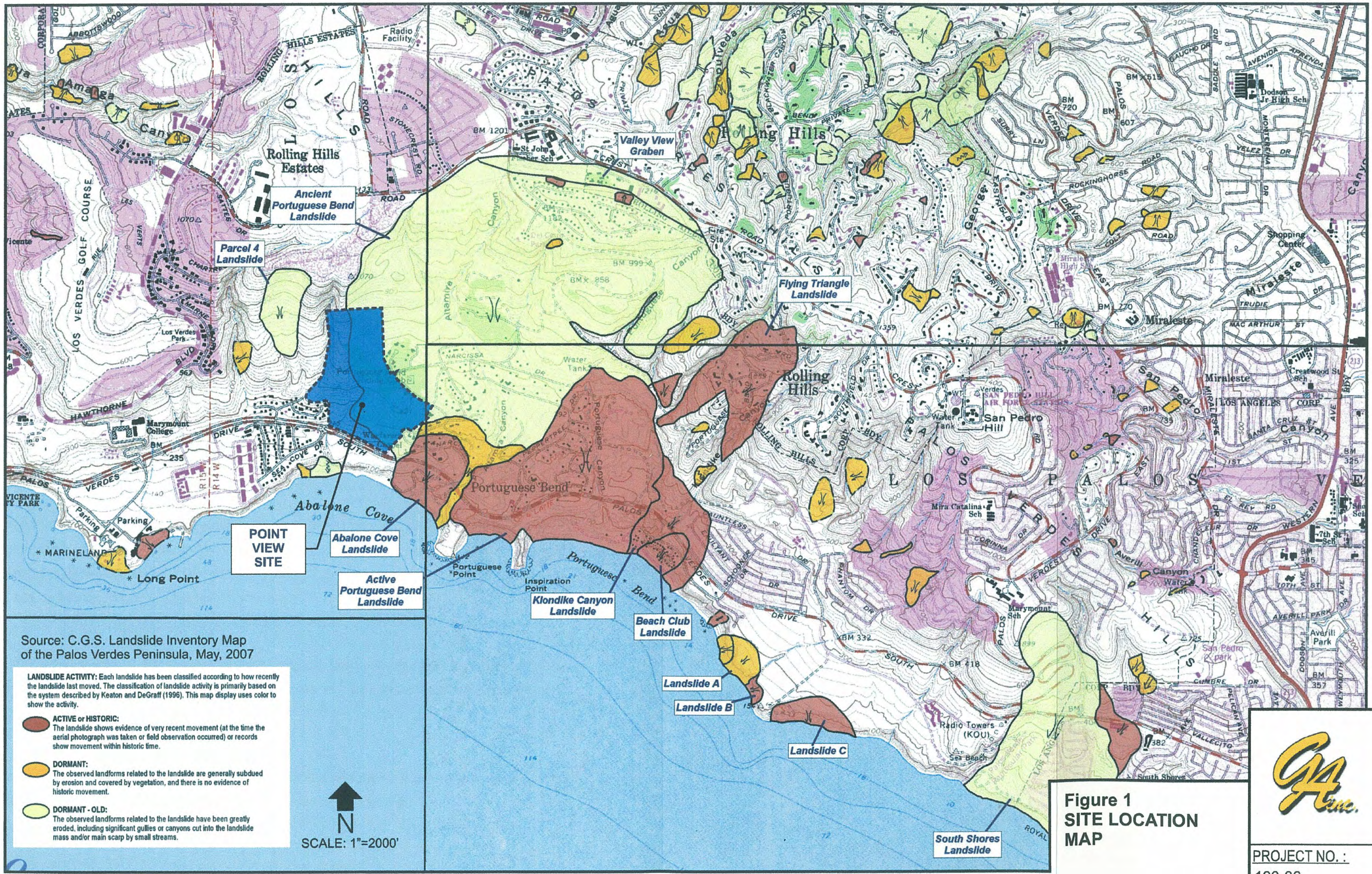


Figure 1
SITE LOCATION MAP

PROJECT NO.:
100-06

DATE:
Aug. 19, 2011

Project History:

Various Geologists have performed geologic investigations on the Point View property and surrounding area from 1969 to present. A complete index of these investigations is provided in the references attached (Appendix VI).

The most significant early investigations pertaining directly to the Point View property include those performed by Moore and Taber (1969), Robert Stone and Associates (1979), Law/Crandall (1990, 1991), Leighton and Associates (1996, 1998, 1999), and Dr. Perry Ehlig (1982-1999).

Also, noteworthy investigations have been performed on adjacent properties by Dr. Karl Vonder Linden (1972); Dr. Richard Jahns (1973); Robert Stone and Associates (1979); Lindvall, Richter and Associates (1973); Dr. Ehlig, Bryant, Conrad and others (1982-1992); and Leighton & Associates (L&A) (1990).

In the summer of 2000, Neblett & Associates (David Ginter) began their initial involvement with the Point View property. This initial work included a thorough review of all geologic, hydrogeologic, geotechnical data, all available drilling logs and core samples pertaining to the subject site and its environs.

During this initial phase of work, Neblett also reviewed historical air photos contained in the Fairchild Aerial Photo Collection at Whittier College, as well as various color and infrared color photos from Geo-Tech Imagery International.

Upon completion of the initial research Neblett and others conducted a subsurface investigation which resulted in the publication of a comprehensive report on 12/29/00.

Subsequent work by N&A included response reports addressing comments by Bing Yen & Associates (N&A response reports dated September 17, 2001; September 26, 2001; November

12, 2001; December 12, 2001; March 11, 2002; April 30, 2002; June 28, 2002; and November 8, 2002). In the spring of 2003, Bing Yen & Associates was acquired by the ATC Group. ATC then became the City of Rancho Palos Verdes' geotechnical consultant for the Point View project, and after reviewing all the reports and documents submitted by N&A. The result of the 12/29/00 report and subsequent responses to City Geologists' comments was a letter issued on 3/3/03 to the City of Rancho Palos Verdes stating that the reports and work by N&A were approved for the purpose of exclusion from the moratorium.

N&A provided Preliminary Geotechnical Recommendations for the Point View Event Garden Fireplace (December 16, 2008). In the summer of 2009, N&A dissolved and Ginter & Associates, Inc. (G&A) became the project's Geotechnical Consultant of Record for the Point View site. (February 2, 2010).

The following is a brief summary of pertinent reports provided by N&A under the supervision of Mr. Ginter:

- December 29, 2000; "Preliminary Geologic and Geotechnical Engineering Report and Grading Plan Review, Point View Development Site, Rancho Palos Verdes, California"

  This was a comprehensive report which included a thorough literature review, a review of logs and cores by others, a historical air photo review, a subsurface investigation involving 3 core borings with Borehole Imagery Processing Systems (BIPS) and emplacement of wells and a review of L&A's core borings (concurrent investigation by L&A) and downhole log bucket auger borings. This report contained various geologic maps, cross-sections, groundwater analyses, a conceptual remediation/removal plan with a sub-drainage system and stability analyses. The report concluded that a feasible development area could be established from a geotechnical aspect.

- September 26, 2001; "Response to the City of Rancho Palos Verdes for the Geotechnical Investigation and Grading Plan Review Report, Point View Development Site"

N&A responded to various questions by the City's reviewer, Bing Yen & Associates, concerning groundwater, slope stability, temporary backcut stability and shear strength parameters.

- November 12, 2001; "Shear Strength Parameters For Landslide Mass, Point View, Rancho Palos Verdes"

N&A revised the strength parameters for the landslide mass to a cohesion of 800 psf (38 kPa) and a friction angle of 24 degrees. This is considered very conservative, based on laboratory tests by N&A and others and two independent rock quality correlations presented by Hoek and Bierniawski.

- December 12, 2001; "Shear Strength Parameters For Cross-Bedding Bedrock, Point View, Rancho Palos Verdes"

This letter provided additional geotechnical information to substantiate the cross-bedding bedrock shear strength parameters utilized for the slope stability analyses. These parameters for bedrock (cohesion of 3000 psf-143 kPa) and a friction angle of 28 degrees are based on the amalgamation of laboratory testing and rock strength correlations presented by Hoek (2000) and Bieniawski (1989).

- March 11, 2002 and April 30, 2002; "Addendum Response to City of Rancho Palos Verdes for the Geologic/Geotechnical Engineering Investigation and Grading Plan Review Report, Point View"

This report provided a re-analysis of the previous cross-sections and new cross-sections in the Abalone Cove area utilizing the revised strength parameters. Also, included were the results of additional field mapping of the bluffs and inter-tidal shelf. The geologic data, maps, figures and analysis provided previously and in this report, confirm the temporary and long-term stability and overall feasibility of this project.

- June 28, 2002; “Second Addendum Response to the City of Rancho Palos Verdes, Point View Development Site”

  N&A responded to additional requests by the reviewer, which included stability analysis on a section positioned by the City Geologist from Point View to Abalone Cove and a section located in the deepest part of the conceptual removal plan and extending to the north into the superjacent community. The stability analyses confirmed the feasibility of the project, and the community to the north would not be affected.

- November 8, 2002; “Third Addendum Response Report, Point View Development, Rancho Palos Verdes”

  N&A responded to the reviewer’s concerns relative to the southeast corner of the project. It was concluded, based on the geology and stability analyses, that the grading activities would not affect the nearby community in the southeast corner of the site, nor would grading/development activities aggravate the Abalone Cove Landslide.

- September 14, 2007; “Geologic and Geotechnical Engineering Report and Grading Plan Review, Point View, City of Rancho Palos Verdes, California”

  This comprehensive report included all of N&A’s investigations and analyses up to this date, as well as data obtained from investigations by other consultants and provided recommendations for a feasible and safe development site. The Conceptual Lotting Study Plan by the Templeton Group was used for the basis of their analyses, etc.

  This report included a dewatering and subdrainage network plan, a removal plan, a sequence of grading scenario, buttresses, and accompanying stability analyses.

- June 17, 2008; "Geologic Report Providing the Geologic Data to Support Adjusting the Moratorium Boundary Line Within the Point View Site, City of Rancho Palos Verdes, California"

  N&A prepared this comprehensive report which presented the geologic data and analyses to support the proposed re-alignment of the Moratorium Boundary Line within the Point View Site. All data from N&A, as well as all pertinent data from other consultants, was amalgamated into this report's text, figures, tables and appendices. This data and the analyses have delineated the southern limits of the Ancient Portuguese Bend Landslide complex within Point View and are coincident with the proposed Moratorium Boundary Line as presented in this report.

- October 8, 2008; "Response to the City of Rancho Palos Verdes Regarding Landslide Moratorium Line Adjustment for Point View"

  Responses to various comments by the reviewer regarding minor adjustments for a setback, etc. were provided.

- December 16, 2008; "Preliminary Geotechnical Recommendations, Point View Event Garden Fireplace, Point View, Rancho Palos Verdes"

  This report provided recommendations for the removals, excavations, fill placement and foundation design.

- February 9, 2009; "Response to City of Rancho Palos Verdes for the Point View Event Garden Fireplace"

  N&A responded to their comments regarding updated CBC 2007 requirements for soluble sulfate, expansive soils, etc. and other minor items.

N&A provided summaries of groundwater measurements on the following dates:

March 21, 2002

April 5, 2002

May 17, 2002

November 27, 2002

December 18, 2002

April 2, 2003

November 21, 2003

March 30, 2004

July 15, 2004

September 30, 2004

February 25, 2005

Ginter & Associates, Inc. (G&A) provided the following reports/letters:

- "Comments Concerning the All-Weather Access Road from Narcissa Drive to the Point View Event Garden" – August 20, 2009
- "Response to City's Review of Access Road Report" – October 25, 2010
- "Engineering Geologic and Geotechnical Engineering Evaluation of the Proposed Orchard and Vineyard Agricultural Operation" – February 18,2010
- "Comments Concerning the Emplacement of the 2" Waterline Along Narcissa Drive and into Point View" – November 30, 2009
- "Comments Regarding Applicability of the Geologic Report dated 6/17/08 by N&A" – February 19, 2010 and February 28, 2011
- "Geologic and Geotechnical Engineering Review for the Proposed Gazebo" – August 30, 2010
- "Response to City's Review of Gazebo Report" – October 22, 2010
- "Geologic and Geotechnical Engineering Review of the All-Weather Access Road Plans" – August 31, 2010

- “Response to City’s Review of All-Weather Access Road” – October 25, 2010

Jurisdiction Aspects:

In 1973, the City of Rancho Palos Verdes was incorporated and the Portuguese Bend landslide complex was included within its boundaries. At that time, the City agreed that the slide area would remain status quo and that no action would be taken to stabilize the active Portuguese Bend Landslide.

However, in April 1978, following the rainiest winter since 1890 (Ehlig, 1982) the Abalone Cove landslide adjacent to the subject site began moving within an 80-acre area containing 20± homes. This prompted the City of Rancho Palos Verdes to place a building moratorium on the entire area containing the Portuguese Bend landslide complex pending investigations to determine which parts, if any, were stable enough to permit development. It also commissioned a study to determine what could be done to stop the Abalone Cove landslide.

This study was supervised by the late Dr. Perry Ehlig who determined that the slide could be stabilized by removing groundwater from as few as six wells. The Abalone Cove Homeowners Protective Association (ACHPA) was formed to install the wells and a pipeline to transport water to the ocean. The rate of slide movement abruptly slowed in response to dewatering by mid-1980.

In 1981, the State of California passed legislation that permitted the establishment of Geologic Hazard Abatement Districts and the Abalone Cove Landslide Abatement District (ACLAD) was established.

The moratorium line, moratorium areas, and landslides in the vicinity are shown on the attached Figures 1, 2 and Appendix V. The Point View site is situated as shown on Figure 2 in the southwestern portion of the Moratorium within zone 1, which is described by the City of Rancho Palos Verdes as “Un-subdivided land unaffected by large historic landslides located uphill or to the west of subdivided area”.

MORATORIUM ZONES

1. ZONE 1- UNSUBDIVIDED LAND UNAFFECTED BY LARGE HISTORIC LANDSLIDES LOCATED UPHILL OR TO THE WEST OF SUBDIVIDED AREA
2. ZONE 2- SUBDIVIDED LAND UNAFFECTED BY LARGE HISTORIC LANDSLIDES
3. ZONE 3- UNSUBDIVIDED LAND UNAFFECTED BY LARGE HISTORIC LANDSLIDES LOCATED EASTWARD OF SWEETBAY ROAD
4. ZONE 4- LAND AFFECTED BY THE KLONDIKE CANYON LANDSLIDE AND ADJACENT LAND INCLUDED IN THE KLONDIKE CANYON GEOLOGIC HAZARD ABATEMENT DISTRICT
5. ZONE 5- LAND AFFECTED BY THE ABALONE COVE LANDSLIDE AND ADJACENT LAND WHERE MINOR MOVEMENT HAS OCCURRED DUE TO LOSS OF LATERAL SUPPORT
6. ZONE 6-THE UPHILL, WESTERLY AND CENTRAL PARTS OF THE PORTUGUESES BEND LANDSLIDE, WHERE MOVEMENT CAN BE STOPPED THROUGH MITIGATION WITHOUT REQUIRING SHORELINE PROTECTION
7. ZONE 7-THE SEAWARD PART OF THE PORTUGUESEBEND LANDSLIDE WHERE CONTROL OF MOVEMENT REQUIRES SHORELINE PROTECTION
8. ZONE 8- LAND AFFECTED BY THE FLYING TRIANGLE LANDSLIDE INCLUDING IMMEDIATELY ADJACENT LAND

PORTUGUESE BEND PLANNIG AREAS

I PLANNING AREA I
- MAJORITY AT SAFETY FACTOR OF 1.5:1
- GROSS STABILITY PROVEN
- SLOPE EROSION AND ROCKFALL AN ISSUE
- SEWER & DRAINAGE AN ISSUE

II PLANNING AREA II
- FURTHER STUDY REQUIRED AND ANY DEVELOPMENT IN PLANNING AREA II
- $90,000 REQUIRED FOR ANY GEOTECHNICAL ANALYSIS (Leighton)

II–A PLANNING AREA II-A
- PRECISE LINE BOUNDARY BETWEEN PLANNING AREA II-A AND PLANNING AREA V TO BE DETERMINED
- CONCEPTUAL ILLUSTRATION DEPICTED SIMILAR TO LINE DR. EHLIG ACKNOWLEDGED ON DEC. 23,1994

III PLANNING AREA III
- FURTHER STUDY REQUIRED FOR DEVELOPMENT OF PLANNING AREA III AND MAJORITY OF PLANNING AREA V

IV PLANNING AREA IV
- MINOR REPORT REQUIRED INDICATING NO DEVELOPMENT IN THIS AREA

V PLANNING AREA V
- FURTHER STUDY REQUIRED FOR DEVELOPMENT

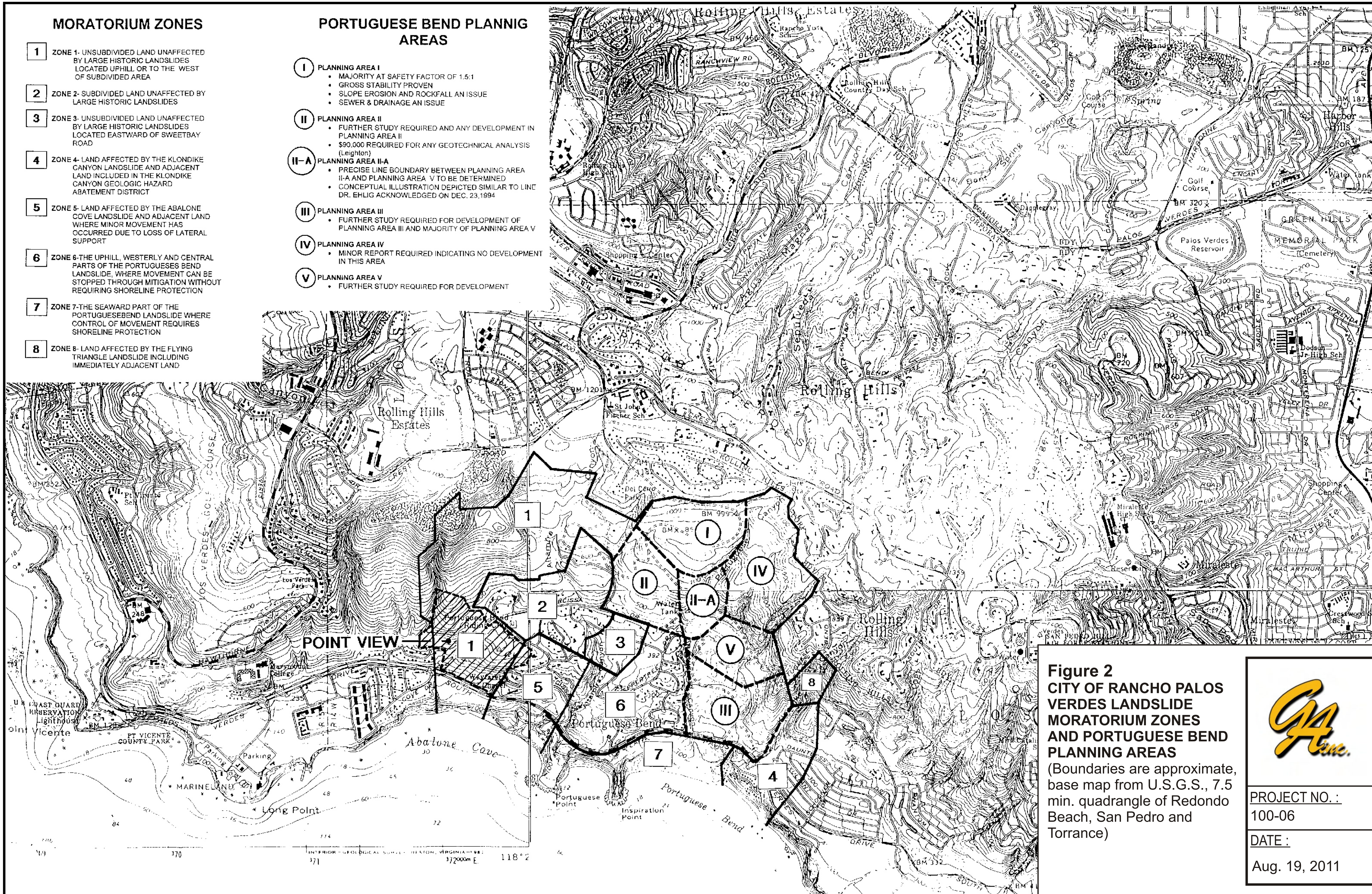


Figure 2
CITY OF RANCHO PALOS VERDES LANDSLIDE MORATORIUM ZONES AND PORTUGUESE BEND PLANNING AREAS
(Boundaries are approximate, base map from U.S.G.S., 7.5 min. quadrangle of Redondo Beach, San Pedro and Torrance)

PROJECT NO. : 100-06

DATE : Aug. 19, 2011

It should be noted that the location of the moratorium line was not based on site specific subsurface investigation, but rather a reconnaissance – level review of air photographs, geologic mapping by various geologists, and published geologic maps. It is unknown at this time who placed the moratorium line on the city topographic maps, however, discussions with representatives of the City of Rancho Palos Verdes indicate that they surmise that Dr. Perry Ehlig was asked by the City to put the moratorium line on the map.

Based on N&A's site specific subsurface investigations that included locating the southern limits of the Ancient Portuguese Landslide Complex within the Point View Site, they suggested the position of the moratorium boundary line should be relocated accordingly.

N&A proposed a revised Moratorium Line in their October 8, 2008 response report. This adjustment was based on core boring B-3 by L&A (1995), and N&A's bucket auger borings BNA-1 (2005), BNA-2, BNA-3, BNA-4A, BNA-4B, B-4 (L&A core boring, 1995) BNA-6, BNA-6B, BNA-6C, BNA-5, BNA-5B, BNA-7, BNA-9, BNA-10 and BNA-10B (bucket auger borings BNA-2 through BNA-10B by N&A were drilled in 2006.)

After reviewing this response report, the City's consulting Geologist approved the revised Moratorium Line within the Point View site on March 29, 2011. The approved revised Moratorium Line is shown on the Revised Figure 7 (attached).

Investigative Methods:

The following investigative methods were utilized by N&A and others during the previous investigations:

Aerial Photograph Analyses

A total of 63 stereo-pair photographs were reviewed from the Whittier College Fairchild Aerials Photography Collection from 1927 through 1958. Twelve of these were purchased for detailed analyses. In addition, a collage of photographs from Geo-Tech Imagery, Int'l were reviewed. These infrared/oblique and vertical infrared stereo pairs were purchased for detailed analyses.

The photos were useful in depicting the geomorphic expressions of the small and large landslides including landslide scarps and inferred direction of movement, as well as delineating any possible tonal lineaments indicative of faulting.

Geologic Field Mapping

Field mapping of the site and proximate areas, including the existing beach cliff and shoreline area, was performed by N&A's project and staff geologists throughout the investigations to delineate the various bedrock units, their lithology and structure, as well as the various surficial deposits.

Bucket-Auger Borings

Several episodes of subsurface investigations involving bucket-auger borings have occurred on the subject site. Noteworthy among these are 7 bucket-auger borings in 1996 by Leighton & Associates (L & A). The 7 bucket-auger borings by L & A that were also downhole logged by N&A in 2000; and 12 bucket-auger borings by N&A in 2005/2006.

All bucket-auger borings were downhole-logged by a registered geologist and sampled at regular intervals to provide materials for laboratory analyses.

The data from these borings were instrumental in determining depths of landslide debris, groundwater, and in-place bedrock lithology and structure.

Diamond Core Borings and Piezometers

Several episodes of diamond core borings up to 350 feet in depth have also been drilled on-site and in the area to the north known as the Upper Filiorum.

In 1991, Law/Crandall drilled 3 diamond core borings – one in the subject site, and 2 in the Upper Filiorum area. In 1996, L & A drilled 9 core borings within the Point View site and one in the Upper Filiorum. During the joint investigation of 2000, L & A drilled 3 core borings in the Upper Filiorum, and N&A drilled 3 core borings within the Point View site.

The core borings drilled in 2000 by L&A and N&A utilized the Colog Borehole Imagery Processing System (BIPS) to log the hole via a sophisticated camera, which provided a video log with precise depth indicators, color plots, ad bedding plane angle measurements. After completion of the BIPS logging, the holes were flushed out and piezometers were installed.

N&A's investigation in 2006 included a 300-foot deep core boring south of the Point View site above the existing beach cliff within Abalone Cove Shoreline Park. The core boring by N&A (2006) south of the site near the beach cliff was logged by a registered geologist and also by the BIPS. Upon completion of the BIPS logging, a piezometer was also installed in this boring.

All core borings were logged by a geologist in the field during drilling and detailed in the laboratory facility. The core borings by Law/Crandall were geophysically logged and then converted to a monitoring well with one of the borings eventually converted to a pumping well for ACLAD (ACLAD Well No. WW-14).

The 1996 core borings by L & A had select borings geophysically logged and borings B-4 through B-10 were converted to piezometers.

Geomorphic Setting:

The Palos Verdes Hills (PVH) form a rectangular peninsula on the southwest border of the Los Angeles Basin. The PVH are an elongate dome that rises from sea level to more than 1,400 feet. Rounded hills and broad valleys occur in the relatively higher west central portion of the hills. In contrast, steep slopes, gullies and deep canyons, characterize the ocean-bound sides. The western and southwestern shorelines are typified by broad coastal terraces and steep sea-cliffs, some in excess of 100 feet high.

The northern boundary of the PVH is a prominent escarpment that rises from the alluvial plains in the north (approx. elevation 150) to the crest of the escarpment to the immediate south (approx. elevation 225). The escarpment extends from near San Pedro Bay for about three miles west-northwest to Santa Monica Bay. The escarpment presumably marks the main trace of the Palos Verdes Fault. (Dibblee, 1999 & Wright,1991).

One of the most striking features of the PVH is the flight of 13 marine terraces, which have been well-documented in the classic Woodring, et al. paper (1946). These remnant marine terraces document the relatively rapid uplift of the PVH throughout the Quaternary Period. The terraces are as high as elevation 1230 feet; and they range in age from approximately 80 ka to 2ma (Shlemon, 2004). Woodring et al. (1946) mapped the site as being partially underlain by Pleistocene terrace numbers 2, 4, 5, and 7.

Regional Geologic Setting:

The PVH are in the Continental Borderland province and have a complex geologic structure and tectonic evolution. The dominant structural features of the PVH are the northwest-southeast trending, doubly plunging anticlinorium and the Palos Verdes fault. Numerous other faults and minor folds occur on the limbs of the anticlinorium.

The Palos Verdes Peninsula is located at the southwestern edge of the Los Angeles Basin. This proximity to the Transverse Ranges and boundary between the Pacific and North American plates has also influenced the structure and geologic history of the Palos Verdes Hills.

The San Andreas Fault System is comprised of many right-lateral, northwest-striking faults with the main San Andreas Fault and the sub-parallel faults such as the Whittier-Elsinore, San Jacinto, Newport-Inglewood, and Palos Verdes in succession to the west.

The Continental Borderland is characterized by northwest-trending basins and ridges that formed during middle-Miocene time. Miocene/Pliocene deformation included right-slip on major northwest-trending faults, differential vertical displacement, with folding and faulting of basinal sedimentary rocks (Wright,1991). The inner part of the borderland, which includes the PVH, has a basement of Mesozoic blueschist, greenschist, and other rocks of the Catalina Terrane. These rocks are oceanic trench sediments and basalts that were metamorphosed in Cretaceous time, at relatively high pressures and low temperatures, during initial subduction along the plate margin (Wright, 1991).

The geology of the Palos Verdes Hills has been well-documented by the classic publication of Woodring et al. (1946) and other well-known geologists such as T.W. Dibblee (1999) and Ehlig (1982).

The core of the Palos Verdes Hills consists of late Jurassic to late Cretaceous age blueschist and greenschist basement rocks known as the Catalina Schist, which outcrops in the northeastern slope of the peninsula. The oldest and most prevalent unit overlying the schist is the marine biogenic shale of the middle to late Miocene age Monterey Formation. The Monterey Formation is subdivided into the middle Miocene siliceous Altamira Shale, with a basalt at its base, the Valmonte Diatomite, and the late Miocene Malaga Mudstone. Overlying the Malaga Mudstone is the late Pliocene Fernando Formation, consisting of the Repetto Siltstone member and the Pico Member. The Fernando is, in turn, overlain by lower Pleistocene Lomita Marl, Timms Point Silt and San Pedro Sand (Woodring et al. 1946, Ehlig, 1987). Mantling these units are the late Pleistocene Palos Verdes Sand and both marine and non-marine terrace deposits.

The 13 marine terraces that encircle the flanks of the Palos Verdes Hills owe their origin to glacio-eustatic fluctuations in sea level superimposed on a tectonically rising block (Shlemon, 2004). Uplift commenced during the Pliocene, with the submarine growth of a doubly plunging anticline which emerged as an island in the early Pleistocene and became part of the mainland in the late Pleistocene via continued anticlinal uplift, regional uplift, deposition of sediments in the adjoining Los Angeles Basin, and eustatic sea level lowering (Conrad and Ehlig, 1987).

The Palos Verdes Hills are comprised of Tertiary and Quaternary bedrock units and younger Quaternary surficial units in a northwest-southeast trending anticlinal fold. Underlying the Tertiary and Quaternary rock is a “core” of Mesozoic age crystalline basement rock. This fold is the result of compression along the steeply dipping Palos Verdes fault zone. The Palos Verdes fault is considered to be active offshore (McNeilan et al., 1995, Francis et al, 1999), but no evidence of recent activity has been substantiated on land. Several faults and folds are expressed across the hills with a similar northwesterly trend. The Cabrillo fault, in the southeasterly portion of the peninsula, has also been mapped as an active fault offshore (Fisher et al., 2004). Holocene activity on the onshore portion of the Cabrillo fault has not been verified to date. The Cabrillo fault is located approximately 3 miles east of the subject site. Several large landslides, including Portuguese Bend, Abalone Cove, Klondike Canyon, South Shores, and Point Fermin result from failure of seaward dipping daylighted tertiary marine shales along the southerly portion of the Palos Verdes Hills. Several smaller slides, also resulting from northwest dipping tertiary marine shales have been mapped in the northerly central portion of the Palos Verdes Hills.

Neotectonics in the Palos Verdes Hills:

Palos Verdes Fault:

The Palos Verdes Fault is a northwest trending right lateral reverse oblique fault that is ~50 miles long. It has a sub-parallel strand that continues southerly for an additional 56 miles as the Palos Verdes-Coronado Bank fault zone. Onshore, the fault escarpment forms the northern boundary between flat topography of the South Bay and the Palos Verdes Hills to the south. The Palos Verdes Fault has three segments based on character and rate of displacement. The northwestern offshore segment, which underlies Santa Monica Bay and extends from the Palos Verdes Hills northwest to Redondo Canyon; the central segment of mainly oblique slip is delineated by the escarpment along the northeastern flank of the Palos Verdes Hills; and the offshore southern segment, which bifurcates into several strands with predominantly right-lateral slip in the Los Angeles and Long Beach Harbors (Marlow et al., 2000).

The offshore northwestern segment has been traced by bathymetry and seismic profiles from the Palos Verdes Hills to the Redondo Canyon in Santa Monica Bay (Fisher et al., 2004). This segment is characterized by right slip with evidence of recent sea floor displacement.

Several investigations of the offshore southeastern segment of the Palos Verdes Fault have characterized its style and activity using high-resolution seismic reflection data, multi-beam bathymetry, and a variety of other geophysical and geologic data. This segment of the Palos Verdes Fault has complex structural variations caused by changes in strike and fault geometry of a master right-lateral strike-slip fault at depth (Fisher et al., 2004).

McNeilan et al. (1996) in their study of the southeastern segment of the Palos Verdes fault in the Los Angeles Outer Harbor, have located the fault, documented evidence of Holocene activity, determined a slip-rate of 2.7 to 3 millimeters per year, and suggest a recurrence interval of 400 to 900 years for a Mw 7.0 to 7.2 event.

The onshore Palos Verdes Fault has been documented at depth by oil well data from the Gaffey Oil Field as presented on maps and cross-sections by Department of Oil and Gas and Dibblee (1999).

The Cabrillo Fault:

The onshore Cabrillo Fault, as mapped by Woodring et al. (1946), Cleveland (1976) and Dibblee (1999), is an inferred and concealed northwest-trending structure about four miles long, extending from Cabrillo Beach into central part of the Palos Verdes Hills. At present, there is little information about the extent and activity of the onshore Cabrillo Fault.

Offshore, the Cabrillo Fault extends southeasterly for 5 to 7 miles where Holocene activity is indicated (Bryant et al., 1986; and Fisher et al., 2004).

Marine Terraces:

In the Palos Verdes Hills, 13 uplift-transgression cycles produced marine terrace remnants that encircle the peninsula as documented by Lajoie et al. (1991) and summarized by Shlemon (2004) were cut by eustactically rising sea levels superimposed in the tectonically rising Palos Verdes Hills. Woodring et al. (1946) dated some terraces based on paleontology. More recently, as noted in Shlemon 2004, the terraces are now relatively and numerically dated by the marine oxygen-isotope stage chronology (MIS) and by amino-acid stereochemistry of fossil mollusks. The lowest terrace (Woodring et al., 1946 “Terrace number 1”) was likely cut during Marine Isotope Stage 5A transgression-regression approximately 80ka ago.

Rate of Uplift:

Two competing hypotheses characterize the mechanism of the uplift of the Palos Verdes Hills. Shaw & Suppe, (1996) and Namson & Davis, (1990) suggest that major thrust or reverse faults underlie the Palos Verdes Hills. In contrast, McNeilan, (1996), postulate that uplift is related to oblique slip along a restraining bend in the Palos Verdes Fault Zone. Ward and Valensise (1994), “modeled” the uplift of the PVH and postulated 3.0 to 3.7 mm/year of oblique dextral/reverse slip on a fault dipping 67 degrees at a depth of 6 to 12 kilometers.

Site Geology:

A portion of the Point View site (the north and northeast portions) contains the western extremities of the large pre-historic Portuguese Bend landslide complex. The undifferentiated Altamira Shale member is exposed along the western portion of the site containing interbedded shales, sandstones and dolomitic siltstone, which is interspersed with basalt as sills and intrusions.

Overlying these units are surficial deposits consisting of marine and non-marine terrace deposits and an undifferentiated collage of modern colluvium and paleoseacliff debris which includes cliff derived colluvium, talus, toppled blocks, slumps and local paleoslides.

Stratigraphy:

The following is a brief description of the surficial deposits and underlying bedrock units from youngest to oldest, within and in the vicinity of the site. These units are delineated on Figure 9 and also on Figure 7 which was excerpted from a previous report (N&A, 2000).

Quaternary Landslide Deposits (Qls)

These landslides have been delineated as not being a part of the ancient landslide complex (Qlso) and are located west of the ancient landslide complex as delineated on Figures 7 and 9. These two landslides are also considered to be paleoslides associated with an ancient shoreline and are part of the undifferentiated surficial deposit designated as Qupc.

They vary in thickness from 30± feet to 75± feet and contain disoriented bedrock fragments in a silty to clayey matrix that is relatively loose and soft.

Ancient Landslide Deposits (Qlso)

This ancient landslide complex encroaches upon the northern portion of the subject site as depicted on Figure 9 in Appendix V and extends offsite to the north into the Upper Filiorum and east, as shown on Figure 7 (Appendix V).

The depth of this slide complex is on the order of 200± feet near the northeast property line and varies in depth to the north and east of the site from 50+ feet to 100± feet in general. The limits of the ancient landslide deposits are as shown on the attached Revised Figure 7 and generally are in the mid-section of the property from the east to the northwest.

Based on the cores and BIPS images from the subsurface investigation and outcrops exposing this unit, the characteristics of the landslide deposits are highly variable. Some of the slide material contains bedrock that has retained its initial structure and is not easily distinguished from in-place bedrock. Other portions of slide material are highly unconsolidated debris consisting of angular blocks in a fine-grained matrix with numerous voids.

Portions of the site contain terrace deposits which have moved en masse within the large landslide movements and have been designated as landslide debris.

The clasts of the majority of the slide debris contain the rock types of the Altamira Shale Member's Tuffaceous, Cherty and Phosphatic Lithofacies and range from relatively large bedrock blocks to rubble.

Undifferentiated Colluvium, Paleo-seacliff Debris and Marine Terrace Deposits [includes cliff-derived colluvium, talus, toppled blocks, slumps and local paleoslides (Qupc)]

This collage of surficial materials rims the ancient landslides complex within the southwest portion of the Point View Parcel in a complex array of deposits associated with the ancient shore-cliff correlated with Terrace No. 4 of Bryant, Woodring and others at the 60-80 meter elevation (195 ft. to 260 ft.). This unit includes undifferentiated modern colluvium, paleo-seacliff debris and marine terrace deposits. The paleo-seacliff debris includes cliff-derived colluvium, talus, toppled blocks, slumps and local shallow slides. The direction of movement of the shallow slides is generally seaward and obtuse to the major ancient landslide movement, which is in an east-southeasterly direction in the central and north-east portion of the Point View parcel.

Terrace Deposits (Qt)

Included within this unit are both marine and non-marine terrace deposits. The marine terraces commonly include well-rounded pebbles, cobbles, boulders and shells in a sandy to silty sand matrix and occur as remnants in ancient wave-cut platforms. The non-marine terrace deposits are a poorly sorted mixture of slope wash, talus and alluvium which locally overlie marine terraces or ancient wave-cut platforms.

This unit has been delineated on the attached Geologic Maps (Figures 7 and 9 of Appendix V) and occurs along the southern portion of the subject site. Some of these materials occur locally within the unit designated as Qupc, as well as the large ancient landslide mass (Qlso).

Colluvium (Qcol)

This surficial deposit occurs in the northwest portion of the site in relatively steep terrain bounding the ancient landslide complex. It consists of a loose, heterogeneous, and incoherent mass of soil material and/or rock fragments deposited by rainwash and sheet wash.

Accumulations of colluvium have been explored up to 14± feet in depth but, in general, thickness probably ranges between 5 feet and 10 feet.

Monterey Formation: Altamira Shale Member: Valmonte Diatomite (Tmv)

The Valmonte Diatomite occurs conformably overlying the Phosphatic Lithofacies north of the subject site and along the crest of the peninsula. It mainly consists of diatomite with minor phosphatic mudstone, siliceous limestone, sandstones and some vitric ash.

Phosphatic Lithofacies (Tmap)

This unit overlies the Cherty lithofacies and is exposed in the same area north of the site. It contains bituminous, phosphatic, diatomaceous shale with limestone and siltstone interbeds.

Cherty Lithofacies (Tmac)

Overlying the tuffaceous section is the Cherty Lithofacies which is exposed north of the subject site along the cliff-face of the backscarp of the Ancient Portuguese landslide complex (see Figure 7, Appendix V). It contains primarily chert and porcelanite derived from diatomaceous sediments (Dibblee, 2000) with a few limestone interbeds.

Fragments of this unit have been incorporated into the landslide debris and are often found at the surface as relatively square blocks a few feet in diameter.

Tuffaceous Lithofacies (Tmat)

This unit consists of interbedded tuffaceous sandstone, dolomitic siltstone, mudstone, dolostone, silty to sandy shale, Portuguese Tuff, sandstone, and basalt. The Portuguese Tuff occurs as a partially bentonized 50-60 feet thick unit within the Altamira Shale and appears responsible for the majority of the large landslides within and adjacent to the subject site.

The subsurface investigation encountered approximately a 200-foot to 250-foot stratigraphic section of this unit. Detailed descriptions are presented on the boring logs reports referenced (Appendix I) from N&A.

Intrusive basaltic rocks (Tb)

Basaltic rocks (volcanics) as sill-like bodies occur within the Altamira Shale Member and are grossly conformable with the interbeds. Thicknesses range from one foot to 150± ft. and were encountered in the subsurface investigation at depth northeast of the subject site, and in several core borings on-site, as well as in Core boring BNA-12 located south of the site near the beach.

Outcrops of this unit are rare and have been delineated on the attached geologic maps based on the investigations by L&A, Inc., and the investigation by Lindvall and Richter for the westerly adjacent parcel.

A review of aerial photographs and recent observations from private aircraft by the undersigned indicate the basalt extends from the beach offshore beneath the sea a considerable distance.

There is a considerable accumulation of basalt in the southern portion of the Point View site and southerly to the ocean's intertidal zone as denoted on the logs of core borings B-1, B-2, NBMW-003, and BNA-12.

The basalts range from fresh, hard, medium to dark gray rocks to soft, crumbly, altered rocks that are commonly variegated. The fresh, hard basalts were identified at depth in the drill core from the thicker bodies. The thin shallow basalts are considerably altered by chemical and mechanical weathering, as well as hydrothermal alteration which occurred concurrently with their emplacement or shortly thereafter.

Secondary minerals such as epidote, calcite, pyrite, marcasite, quartz, zeolites and clay minerals were recognized commonly as infillings in fractures and vugs.

Geologic Structure:

As previously indicated, the subject site is situated on the south limb of a major antiform whose axis is located north of the Portuguese Bend Landslide Complex (Dibblee, 1999).

The major structural feature affecting the site and the immediate environs is the generally east-west trending anticlinal fold whose axis has been shown concealed north of the site and which has been connected to that of Lindvall and Richter on the adjacent westerly property (Figure 7, Appendix V). The subject site is positioned on the south limb of this anticline.

The knowledge of the geologic structure within the site and environs has been greatly enhanced by the recent core borings and the associated BIPS data from N&A's NBMW-001, 002, 03, and BNA-12; L&A's core borings B-11/00, B-12/00 and B-13/00 as well as their bucket auger borings BA-8/00 thru BA-16/00. The graphic logs of pertinent borings are portrayed on the geologic map, which depict the bedding attitudes to the depths imaged by the BIPS for the core borings, as well as bedding and slide plane attitudes recorded from downhole logging from the bucket auger borings. The bedding attitudes portrayed on the graphic logs of L&A's core borings were obtained from their dip-meter logs. Note that not all of their core borings have geophysical logs.

The in-place structural data indicates, in general, a large undulating synclinorium with the subject Point View Parcel situated along the southwestern portion of this mega-structure.

The structure on the eastern portion of this site in the vicinity of NBMW-001 shows consistent and relatively shallow dips to the east and northeast below the landslide. Farther to the west in the vicinity of NBMW-002, moderate dips to the east-northeast are present below the landslide. In the vicinity of NBMW-003, the bedrock dips moderately to the east-southeast. North and northeast of the Point View Parcel and into the Upper Filiorum portion, the geologic structure generally indicates shallow southeast dips immediately north of the northwest corner of the Point View Site, to shallow southerly dips northeast of the site in the vicinity of B-12/00.

The anticline delineated by Lindvall and Richter for the westerly adjacent property to the north of the northwest perimeter of the Point View Parcel appears to continue in an easterly trend to the area between B-11/00 and B-12/00. Based on the bedding attitudes from these two borings, this anticline appears to be subdued in this area compared to the well-pronounced anticline from Lindvall and Richter to the west.

Based on the previous and recent subsurface data, local contortions of the bedding structure occur as a result of basalt intrusions present in the western portion of the Point View Parcel and near the southern perimeter.

The main anticlinal fold of Dibblee (1999) and the lesser-order anticline fold just north of the site may well be related to late Cenozoic tectonic uplift of the Palos Verdes Hills. Variations from the gross structure and minor flexures could be considered expressions of disruptions due to the emplacements of masses of volcanic rocks from submarine volcanism. Some of these localized contortions may have also been the result of submarine penecontemporaneous deformation during the Miocene.

Regional Landslide History:

Ancient Portuguese Bend Landslide Complex

One of the most well-known and studied landslide complexes in the Palos Verdes and Los Angeles areas, this slide occupies an areal extent of 2.5 square miles. In 1956, the Los Angeles County Road Department was in the process of extending Crenshaw Boulevard from its then terminus at Crest Road down to Palos Verdes Drive South when signs of distress confirmed reactivation of a segment that ultimately involved 260 acres of improved and unimproved properties. This project had initially reached removal of an estimated 200,000 cubic yards of earth immediately below Crest Road when signs of distress became apparent within a storm drain adjacent to grading and also at the then beach improvements of the Portuguese Bend Club. Since that time, the 1956 activated segment has continued to plague dwelling units and roadway improvements within its boundaries. Development has, however, been actively pursued due to real estate benefits engendered by ocean views and ocean-moderated Mediterranean climate.

The Portuguese Bend Landslide complex is comprised of discrete segmented landslides with each segment exhibiting cycles of movement and quiescence. Extensive detailed subsurface investigations by N&A for the Point View site have identified the areal and vertical limits of the various instabilities. These studies have been benefited by employing special downhole logging photographic techniques (BIPS – Borehole Imaging Processing System) that had not been available to previous investigations. Not only are continuous cores of the boreholes made available for study, special photographic equipment provided a downhole recording of the underlying rock units, thus allowing detailed inspections and analysis after completion of the field investigation.

Active Portuguese Bend Landslide Complex

The currently active Portuguese Bend landslide is bordered on the east and west lowermost segments by the 80 acre Abalone Cove and 50 acre Klondike Canyon Landslides, respectively. The subject site development is located 2000± ft. northwest of the active portion of the Portuguese Landslide Complex and is located on the western fringe of the inactive ancient landslide complex (Figure 1).

The currently active segments, have been in constant motion since its most recent 1956 inception with notable accelerations recorded following heavy rains.

Abalone Cove Landslide

Bordering the southwest side of the 1956 activated Portuguese Bend Landslide, the Abalone Cove Landslide is a remobilized part of the western portion of the ancient (Pleistocene age) Portuguese Bend Landslide complex.

Movement was first noticed in 1974 at the shoreline toe where distress propagated upslope to inland of Palos Verdes Drive South by 1980. Subsurface investigations by Ehlig in 1982 disclosed the westernmost segment is moving over ancient, inactive landslide debris. Dewatering prompted by cooperative homeowner efforts via an assessment has reduced movement to nearly imperceptible amounts associated with internal settlement. This area is remote from the Point View site and is approximately 3,000 ft.+ east of Point View.

Some investigations model landslide movement in a southerly direction down to the subject beachfront. However, subsurface investigations by N&A employing BIPS northwesterly of this slide indicate the slide movement may have been deflected by in place basaltic intrusions that redirect movement from an initially southeasterly to a southern direction.

Klondike Canyon Landslide

This fifty-acre instability juxtaposed the southeasternmost limits of the active Portuguese Bend Landslide and is arguably related to the larger, ancient landslide complex (Kerwin, 1982) Robert Stone and Associates (1982) hypothesized this slide originated as an eastern extension of the Portuguese Bend Landslide at least 37,000 years ago. Following several wet years, the slide activated in 1980, but moved less than three feet and caused minimal damage. Some authors feel the Klondike Canyon movement is due to drag from the Portuguese Bend, an association suggested by GPS survey data which recorded decreasing movement in an easterly direction from the common slide boundary. There have been no recorded or visibly noted movements since its 1980 active period.

Beach Club Landslide

A mapped area within the sea cliff portion of the Klondike Canyon Landslide exhibits a separate, discrete slide identified as the Beach Club Landslide. The basal failure plane is obviously independent of the larger Klondike slide as this latter basal failure surface is some 100 feet below the existing shore line elevation.

Flying Triangle Landslide

Overlooking the east side of the Portuguese Bend Landslide, this 32-acre instability is not physically a part of the Portuguese Bend complex. Studies indicate the slide is divided into three segments which are referred to as an eastern segment, shallow in depth; a main mass segment moving into Klondike Canyon; and a southern segment moving independently of the main mass into Paint Brush Canyon.

In 1980 approximately 5 acres of this slide became active. Subsequent wet years caused expansion of slide movement when, in 1983, the total landslide activity exceeded 90 acres Ehlig – 1992. Abatement activity by the City of Rancho Palos Verdes consists of two horizontal drains installed at the toe of the Klondike Canyon lobe.

This slide initiated homeowner litigation that involved 4 destroyed structures and one supported by designed, deepened piles. There has been no further remedial stabilization of this slide due to the prohibitively deep (300-400 ft.) failure surface and interference of adjoining improved properties.

South Shores Landslide (AKA 25th Street Slide)

Approximately 2 ½ miles east of the Portuguese Bend Landslide on Palos Verdes Drive South, this well known although inactive landslide became viewed as a potential geologic hazard in 1956 when the reactivated Portuguese Bend Landslide demonstrated its adverse impacts on man’s improvements. Dating by carbon-14 techniques disclosed its initial activity at 16,000 + ybp and its activity was likely a single event. Subsurface investigative techniques at the time the area was studied were hindered by hard, fractured bedrock units that all but precluded drilling efforts (Ray-1960). The slide depth was, however, established by indirect means using identifiable marker beds and these procedures disclosed the slide ranged to depths of 150 ft. (measured vertically). Areal dimensions include approximately 3,800 ft. from crown to toe and 2,000 ft. from flank to flank south of Palos Verdes Drive South.

Immediately following the 1956 reactivation of the Portuguese Bend Landslide, it was apparent that agency controls lacked effective measures for identifying and resolving geotechnical hazards. Construction within the then known and mapped 25th Street landslide did not require specific subsurface investigations nor were any efforts made to define adequate factors of safety. Although the Portuguese Bend slide raised concerns regarding construction of permanent single family structures, the then under construction residential improvements were allowed to continue. Proposed improvements in the then design stage were revised to a trailer court facility currently known as the South Shores Trailer Court. There have been no known reports of damage from landslide activity since completion of these improvements.

Ocean Trails Golf Course Landslide

A regulation 18-hole golf course overlooking the Pacific Ocean experienced damaging landslide activity in the early summer of 2000, just two weeks prior to its official opening. The 37 ± acre landslide area is south of Palos Verdes Drive South between the intersection of Palos Verdes Drive East and Ocean Trails Drive and occupies a gently inclined wave cut terrace capped by marine and non-marine deposited soils. Altamira shale of the Monterey Formation comprises the underlying bedrock and bedding structure inclines at shallow angles towards the ocean. A portion of the sea cliff descending from the pad exhibited landslide activity that had not experienced signs of recent movement. The original project developer and consultant proposed constructing a below grade, compacted earth shear key intended to interrupt and support adversely oriented bedding structure underlying the project. Since this would involve extensive grading and disturbance the Coastal Commission did not approve this concept and the existing landslide and golf course was capped with compacted, on site clayey adobe. These efforts were not successful in inhibiting movement and the reactivated slide destroyed a green and fairway within the golf course. Another developer then assumed control of the project and the golf course is under their current management.

The failure was remediated by partial removal of landslide debris and installation of shear keys and shear pins.

Point Ferman Landslide

Occupying a prominence projecting from the southeasternmost seacoast segment of the Palos Verdes Hills this landslide was triggered in 1929. Contributing factors include an over steepened wave cut sea cliff, adversely oriented bedding structure and rain fall in January of 1929. These combining effects precipitated movement along a bentonitic clay layer.

One of the oldest known active landslides in the peninsula, there have been no efforts to restore the slide due to its severe topography, geologic setting and lack of financial incentive to achieve code specified remediation.

Bluff Cove Landslide

In the early 1980s a local reentrant in the wave cut sea cliffs at the northwest portion of the Palos Verdes peninsula comprised the site instabilities that adversely impacted several single family residential structures. These now removed improvements were involved with landslides that affected both Altamira shale bedrock and soil units assigned to terrace deposits. The earliest slides involved Altamira bedrock and resulted in the loss of 2 residential structures, subsequent slides affecting nearly structures occurred within high (100 ft.), over-steepened slopes comprised of unconsolidated terrace deposits.

Site Landslides:

Paleoslides Associated with the Ancient Shoreline (Qupc)

Several borings penetrated shallow paleoslides that have failed along an ancient shorecliff. They consist of a loose, heterogeneous mixture of disoriented bedrock fragments in a sandy to silty clay matrix commonly overriding rounded cobbles, gravels and beach sands. These slides are now concealed by accumulations of colluvium, soil and vegetation and are not considered part of the ancient landslide complex (Qlso).

The paleoseacliff concept presented herein by N&A has also been recognized by the late Dr. Perry Ehlig in his review for the City of Rancho Palos Verdes of Mr. Keith W. Ehlert's geologic investigation report for the adjacent Wayfarer's Chapel project (1997). Dr. Ehlig noted that when comparing the elevation of the top of the in-place bedrock of the Ehlert boring and the Moore and Taber boring MT-8 and MT-3, "the elevation difference of 70 feet between the top of bedrock in the two borings suggests that a buried wave-cut sea cliff lies between the two borings".

Remnants of two paleoslides along the ancient shoreline have been delineated along the western ridgeline that trends north-south. In some cases, they have overridden both marine and non-marine terraces and other beach deposits.

Detailed downhole logging of some of the borings describe distinct slide planes dipping to the south and obtuse to the ancient landslide complex present on-site.

Quaternary Landslides (Qls)

The two paleoslides described above associated with the ancient shoreline off the western ridgeline are also designated as Quaternary Landslides and are considerably younger than the ancient landslide complex.

Ancient Landslide Complex (Qlso)

Based on the downhole logging of the bucket – auger borings penetrating this unit, and the cores and BIPS images from the subsurface investigation and outcrops exposing this unit, the characteristics of these deposits are highly variable. Some of the slide material contains bedrock that has retained its structure and is not easily distinguished from in-place bedrock. Other portions of slide material are highly unconsolidated debris consisting of angular blocks in a fine-grained matrix with numerous voids.

Portions of the site contain terrace deposits which have moved en masse with the large landslide movements and have been designated as landslide debris.

The clasts of the majority of the slide debris contains the rock types of the Altamira Shale Member's Tuffaceous, Cherty and Phosphatic Lithofacies and range from relatively large bedrock blocks to rubble.

The direction of movement is in an arcuate fashion towards the east and southeast. The ancient landslide movement has been partially "steered" by the subsurface geologic structure dipping to the east and southeast, as well as the preponderance of basalt via volcanic intrusion along the southern portion of the site forming a natural "buttress".

The landslides within the ancient landslide complex have occurred as a series of multiple failures consisting of rotational, block-guide and slump type movements, which extended over a considerable period of time dating back to approximately 120,000 years ago. The major landslides failed along the Potuguese Tuff resulting in the arcuate and hummocky morphology mimicking that of the recently active Abalone Cove landslide southeast of the subject site.

The initial large-scale movements probably initiated in the general area east of the subject site in the vicinity of the recently active Abalone Cove landslide and to the northeast near water well WW-13. This original development of large landsliding was probably associated with an emerging coastline due to declining sea-level and/or uplift of the Palos Verdes Hills which eroded and daylighted the weak beds of the Portuguese Tuff. This initial movement aggravated the stability of the surrounding areas to the west, northwest, and north.

The landslide movements and their directions of movement have been primarily controlled by the geological structure. The landslide directions of movement are essentially down-dip to the east-southeast in the eastern portion of the Point View Parcel, to the southeast in the northwest portion, and to the south in the area northeast of the site in the vicinity of B-12. These movement directions focus in the area immediately northeast of the site in the vicinity of WW-13 and WW-6.

Also, previous work reported by Law/Crandall, Inc. (July 2, 1991) states that “The ancient slide is quite deep in Core Hole LC-C1, with sliding indicated to have been largely in an easterly direction”, which further supports our landslide directions of movement.

Groundwater Analyses

A critical factor that plays an important role in the landsliding was and still is groundwater. The initial major landsliding to the east and northeast of the site disrupted the natural drainage systems, which resulted in a build-up of ground water and hydrostatic pressure that lubricated the Portuguese Tuffs surrounding the initial movement area. This groundwater “sump” northeast of the site is also supported by historical groundwater data.

This firm has reviewed the available groundwater data obtained from the City of Rancho Palos Verdes and various reports. In N&A’s 2000 report, this data was amalgamated and presented on a Groundwater Contour Map and a Historical Average Daily Well Production Bar Graph. The majority of the data relates to the ACLAD wells.

N&A monitored the wells on site and in the Upper Filiorum area from May 8, 2000 through 2008. It should be noted that many of the wells are dry and the majority of the site has no appreciable groundwater. The only portion of the site that contains any appreciable groundwater is the extreme northeast corner in the vicinity of NBMW-001 and 002, LC-1, B-5, Monaghan-1, and BNA-1. It should also be noted that no records have been found concerning the Monaghan-1 Well regarding who the driller was, the log, and the screened interval, etc.

The water elevation versus time graphs show the groundwater elevation fluctuations through time. (May 8, 2000 through 2008) for the monitoring wells measured by N&A. They indicate, in general, that the static groundwater elevation has risen approximately 10 ft. in each well that has water with the exception of LC-2 and B-13/00 located to the north in the Upper Filiorum area, Monaghan-1, and BNA-12.

Based on our review of the groundwater data, the most significant area of groundwater accumulation and highest well production is located to the northeast of the subject site (Figure 7, Appendix V). This “sump” also generally coincides with the structural low in the base of the landslide in the area offsite and northeast of NBMW-001.

Recent communications with ACLAD personnel indicate several of their pumping wells are drying up and overall production is gradually decreasing. However, the “sump” area described earlier that contains W-13 is still producing over 40,000 ± gallons per day.

The groundwater regime for the subject site and its environs is complex with the groundwater trapped in various compartments and associated with the intra-landslides within the ancient landslide complex. Recent communications with ACLAD personnel also infer the groundwater is in compartments and that some of their pumping wells are connected to others.

Summary of Existing and Proposed Improvements:

The improvements completed as of this date include the Event Garden with the fireplace and restroom remodel and a portion of the access road from Narcissa to the Event Garden. All work was completed in accordance with the geotechnical recommendation.

Future improvements yet to be completed include the all-weather access road, the gazebo, the greenhouse, small golf course and some agriculture. Future work By G&A will include the geotechnical reviews for the greenhouse and golf course, as well as the observation, monitoring and reporting for the grading, etc. of the all-weather access road.

Conclusions:

Based on the geologic data and analyses by this firm, N&A and L&A the existing and proposed improvements listed above will not aggravate the existing geologic conditions and/or existing landslides within and in the immediate environs of the subject site. The reader is referred to the referenced reports by this firm and by N&A (2000 through 2008) for detailed geologic information (i.e. boring logs, etc.).

Respectfully submitted,
GINTER & ASSOCIATES, INC.

Dave Ginter, P.G., C.E.G.
President/Principal Engineering Geologist

cc: Gary Weber, Weber Consulting

Attachments:

Figure 1 – Site Location Map
Figure 2 – City of Rancho Palos Verdes Landslide Moratorium Zones and Portuguese Bend Planning Areas
Appendix I – References
Appendix II – Point View Figures of Various Improvements
Appendix III – Seismicity Evaluation From N&A's 6/17/08 Report
Appendix IV – Charts of Well Monitoring Elevation vs. Time From N&A's 6/17/08 Report
Appendix V – Revised Geologic Maps Figures 7 and 9 From N&A 6/17/08 Report
Appendix VI – Summary of Borings Within and Adjacent to the Point View Site

APPENDIX I

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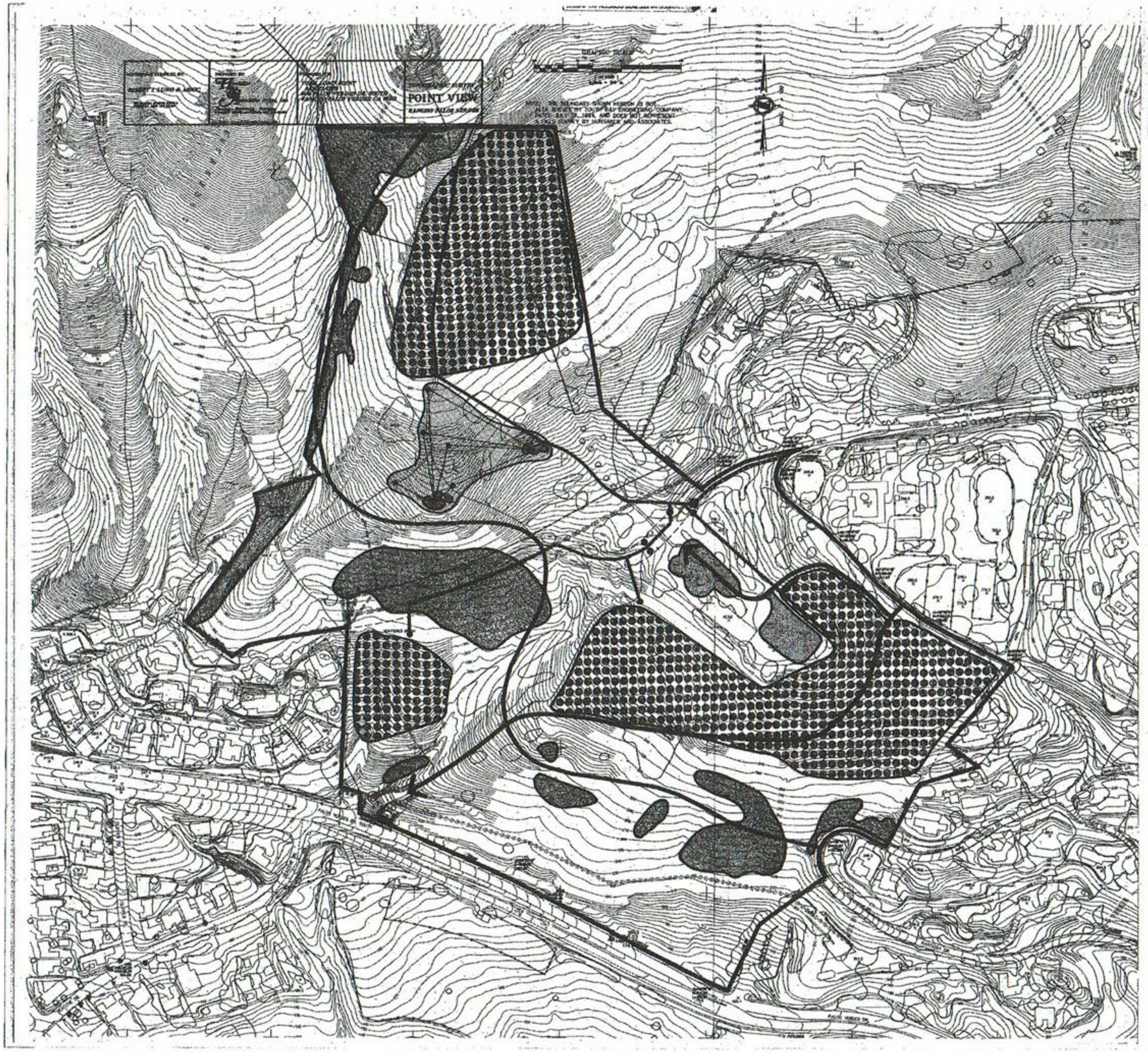
<u>APPENDIX II</u>

Point View Figures of Various Improvements



POINT VIEW PROPERTY

MASTER USE PLAN

- AGRICULTURE
- GOLF COURSE / EVENT GARDEN
- DRIVEWAY

LEGEND

- AGRICULTURE
- IRRIGATION
- GOLF COURSE
- EVENT GARDEN
- DRIVEWAY
- COASTAL SAGE SCRUB
- LANDSLIDE MORATORIUM

FIGURE 1

YORK POINT VIEW PROPERTIES, LLC

APRIL 2010

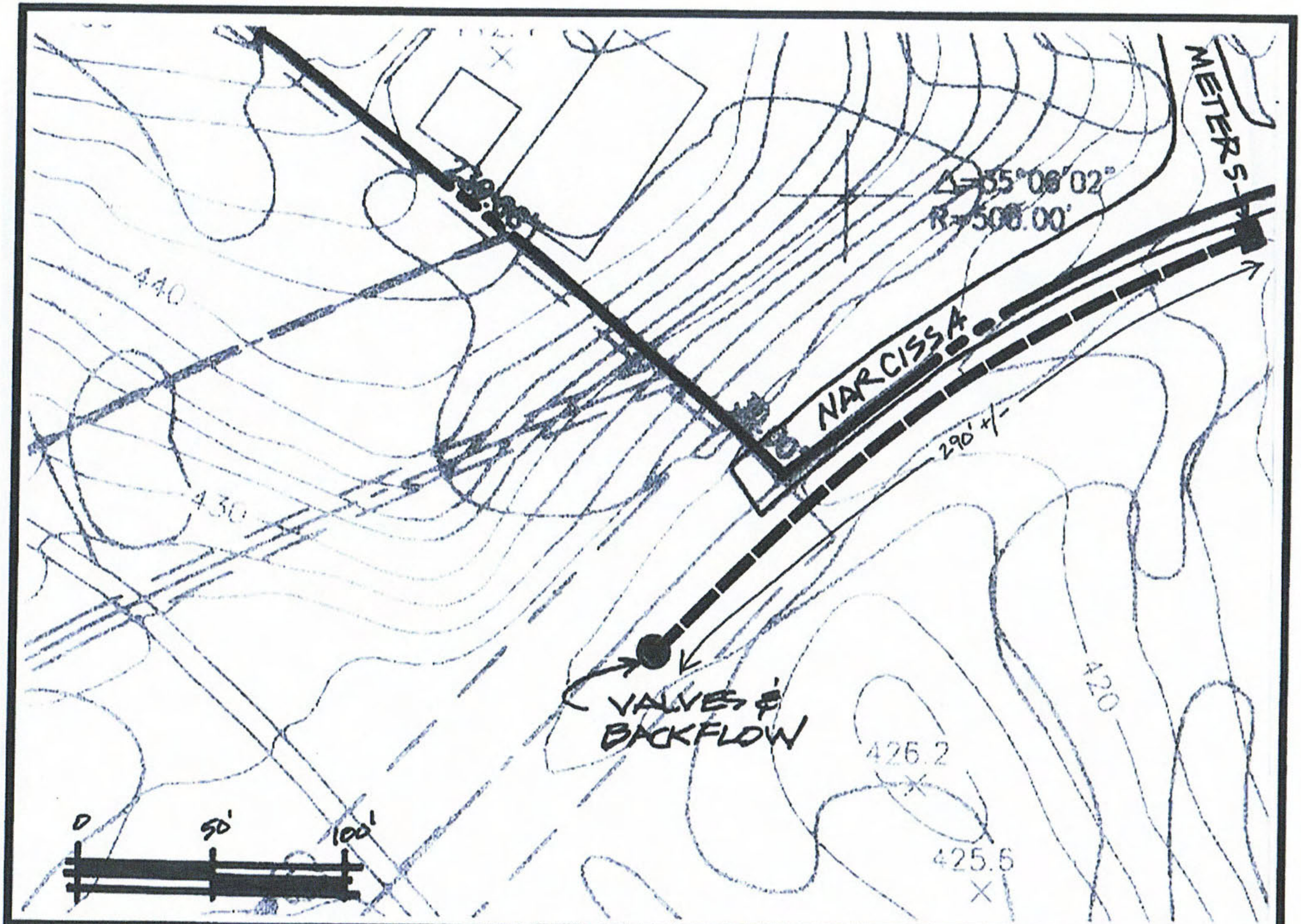
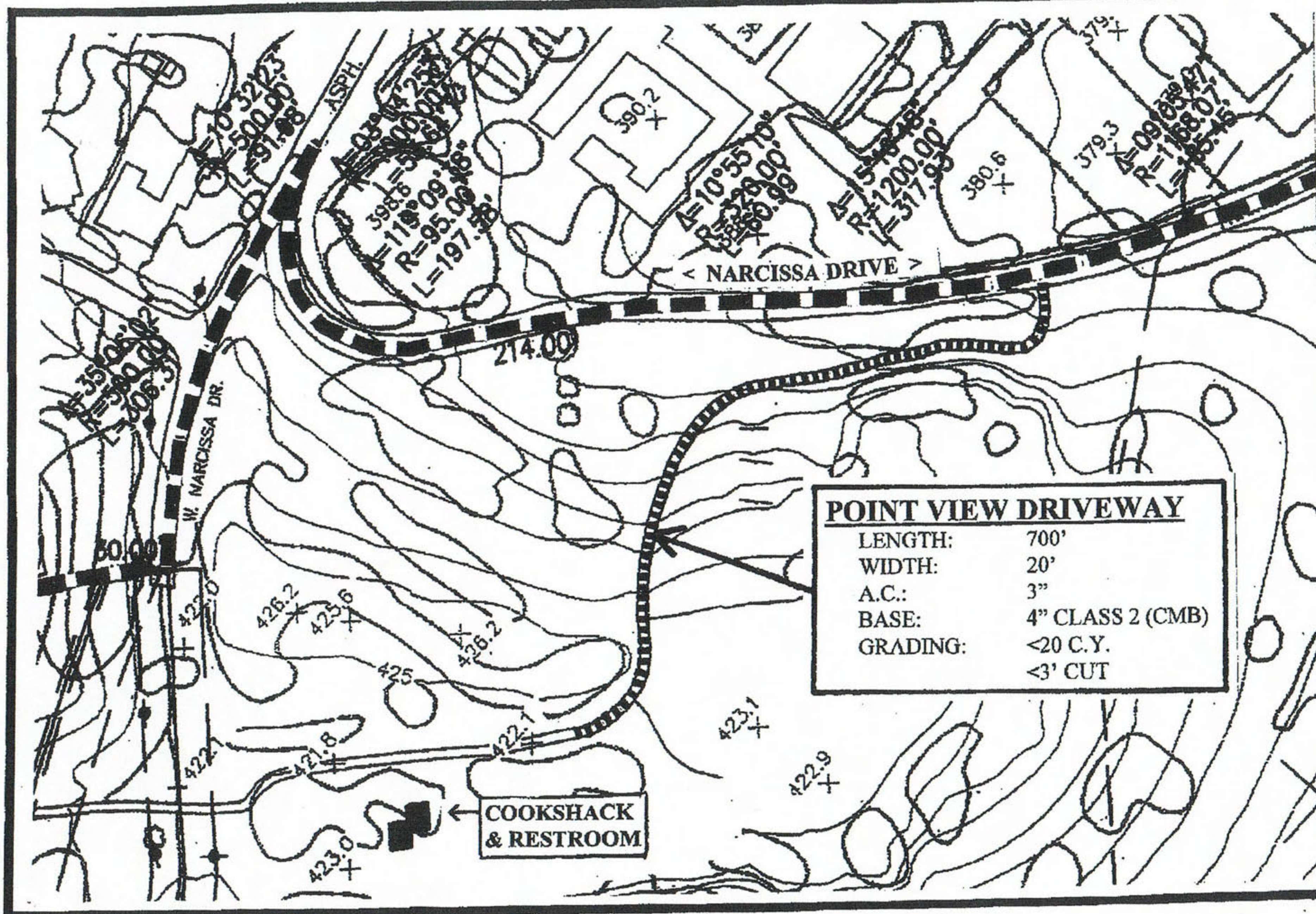
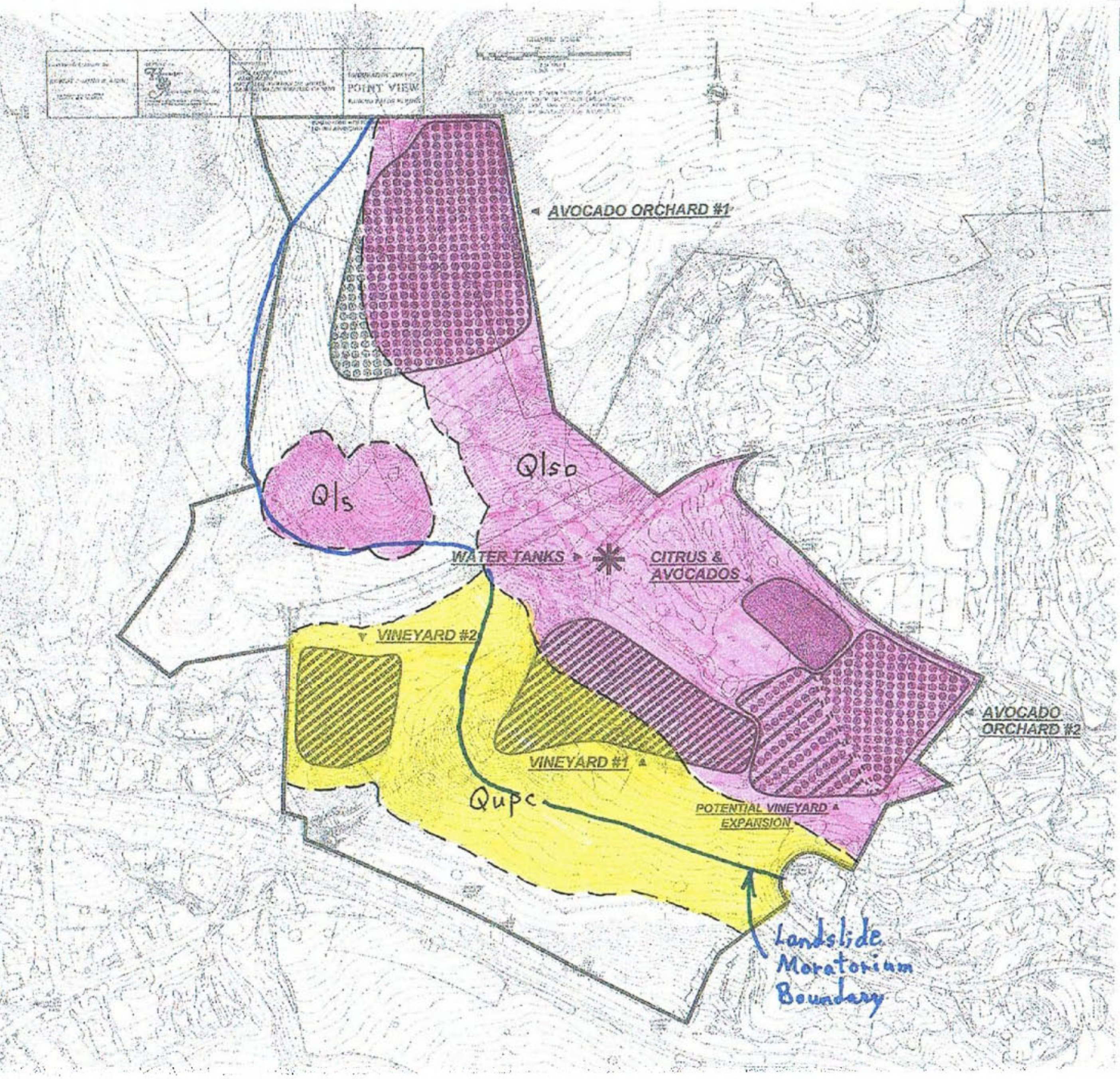


Figure 1

POINT VIEW WATER LINE LOCATION



POINT VIEW DRIVEWAY DETAIL



POINT VIEW PROPERTY

AGRICULTURE PLAN

- ORGANIC AVOCADO ORCHARDS
- VINEYARDS
- CITRUS ORCHARDS

LEGEND

ORGANIC AVOCADO ORCHARDS
- AVOCADO ORCHARD #1 (10 AC+/-)
- AVOCADO ORCHARD #2 (6 AC+/-)

VINEYARDS
- VINEYARD #1 (5 AC +/-)
- VINEYARD #2 (3 AC +/-)

CITRUS/NON-ORGANIC AVOCADOS

WATER TANKS

POTENTIAL VINEYARD EXPANSION

Geologic Legend

Qlso : Ancient Portuguese Bend Landslide Complex

Qls : Landslide

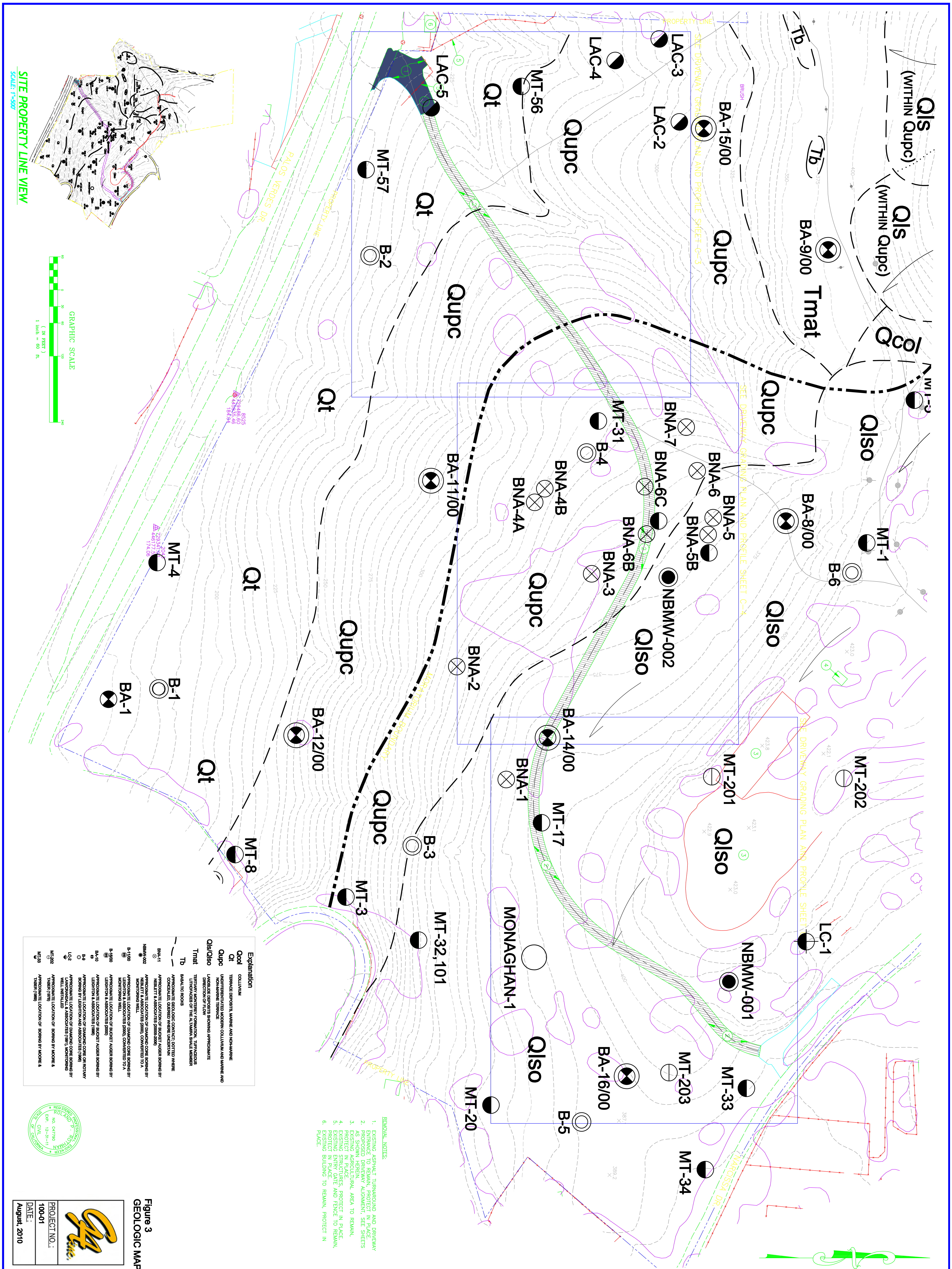
Qupc : Undifferentiated Colluvium/Paleo-Seacliff Debris/Marine Terrace

Figure 1

Generalized Geologic Map

YORK POINT VIEW PROPERTIES, LLC

C:\Documents and Settings\Del\Desktop\My Drawings\Point View\Ginter & Assoc\Driveway\ Sep 07, 2010



PLAN PREPARED IN THE OFFICES OF:
ROTHMAN ENGINEERING, INC.
205 S. BROADWAY, SUITE 206
LOS ANGELES, CALIFORNIA 90012
(213) 621-3155 FAX (213) 621-3105

CLIENT
YORK POINT VIEW PROPERTIES, LLC

PROJECT
6001 PALOS VERDES DRIVE SOUTH
RANCHO PALOS VERDES, CA 90275

SHEET TITLE
EXISTING CONDITIONS/ REMOVAL SHEET AND KEY MAP

REVISIONS

No.	DESCRIPTION	BY	DATE

DESIGNER: | APPR'D BY: | DRAFTER: | REVISED BY: | SCALE: 1"=60' | DATE: 08/27/10

CIVIL

C-2 of 6

JOB NUMBER
0320-09-001

<u>APPENDIX III</u>

Seismicity Evaluation

From N&A's 6/17/08 Report

TABLE 1.
PEAK GROUND ACCELERATION VALUES AND SEISMIC DESIGN PARAMETERS
POINT VIEW PROJECT

PEAK GROUND ACCELERATION VALUES

Attenuation Function Author	Estimated PGA Value Soft Rock/Fill Areas
Bozorgnia and others (1999)	0.359g
Sadigh and others (1997)	0.345g
Boore and others (1997)	0.373g
Mean PGA Value	0.359g

1997 UBC SEISMIC DESIGN PARAMETERS

SITE COORDINATES: SITE LATITUDE: 33.7469 SITE LONGITUDE: 118.3789 **UBC SEISMIC ZONE:** 0.4	**NEAREST TYPE A FAULT:** Cucamonga Fault DISTANCE: 73.4 km **NEAREST TYPE B FAULT:** Palos Verdes DISTANCE: 6.1 km
UBC SOIL PROFILE TYPE: SD **FILL AREAS** SELECTED UBC SEISMIC COEFFICIENTS: Na: 1.0 Nv: 1.2 Ca: 0.44 Cv: 0.74 Ts: 0.673 To: 0.135	**Soil Type SD** Stiff Soil Profile 600-1200 ft/sec

TABLE 2.
FAULT PARAMETERS
POINT VIEW

ABBREVIATED FAULT NAME	APPROX. DISTANCE (km)	SOURCE TYPE (A,B,C)	MAX. MAG. (Mw)	SLIP RATE (mm/yr)	FAULT TYPE (SS,DS,BT)
PALOS VERDES	6.1	B	7.1	3.00	SS
NEWPORT-INGLEWOOD (L.A.Basin)	18.5	B	6.9	1.00	SS
SANTA MONICA	33.9	B	6.6	1.00	DS
MALIBU COAST	34.6	B	6.7	0.30	DS
HOLLYWOOD	37.4	B	6.5	1.00	DS
ANACAPA-DUME	39.4	B	7.3	3.00	DS
ELSINORE-WHITTIER	42.7	B	6.8	2.50	SS
RAYMOND	44.1	B	6.5	0.50	DS
NEWPORT-INGLEWOOD (Offshore)	46.3	B	6.9	1.50	SS
VERDUGO	47.5	B	6.7	0.50	DS
SIERRA MADRE (Central)	54.7	B	7.0	3.00	DS
SAN JOSE	56.5	B	6.5	0.50	DS
SIERRA MADRE (San Fernando)	58.9	B	6.7	2.00	DS
CLAMSHELL-SAWPIT	59.4	B	6.5	0.50	DS
CHINO-CENTRAL AVE. (Elsinore)	62.0	B	6.7	1.00	DS
SANTA SUSANA	63.5	B	6.6	5.00	DS
SAN GABRIEL	64.1	B	7.0	1.00	SS
CORONADO BANK	67.6	B	7.4	3.00	SS
ELSINORE-GLEN IVY	69.6	B	6.8	5.00	SS
SIMI-SANTA ROSA	71.8	B	6.7	1.00	DS
HOLSER	72.3	B	6.5	0.40	DS
CUCAMONGA	73.4	A	7.0	5.00	DS
OAK RIDGE (Onshore)	75.4	B	6.9	4.00	DS
SAN CAYETANO	84.2	B	6.8	6.00	DS
SAN ANDREAS - 1857 Rupture	91.4	A	7.8	34.00	SS
ELSINORE-TEMECULA	96.0	B	6.8	5.00	SS
VENTURA - PITAS POINT	96.9	B	6.8	1.00	DS
SAN JACINTO-SAN BERNARDINO	97.7	B	6.7	12.00	SS
SAN ANDREAS - Southern	100.4	A	7.4	24.00	SS

SS = strike-slip; DS = dip-slip; BT = blind thrust

Fault Parameters from Peterson and others (1996).

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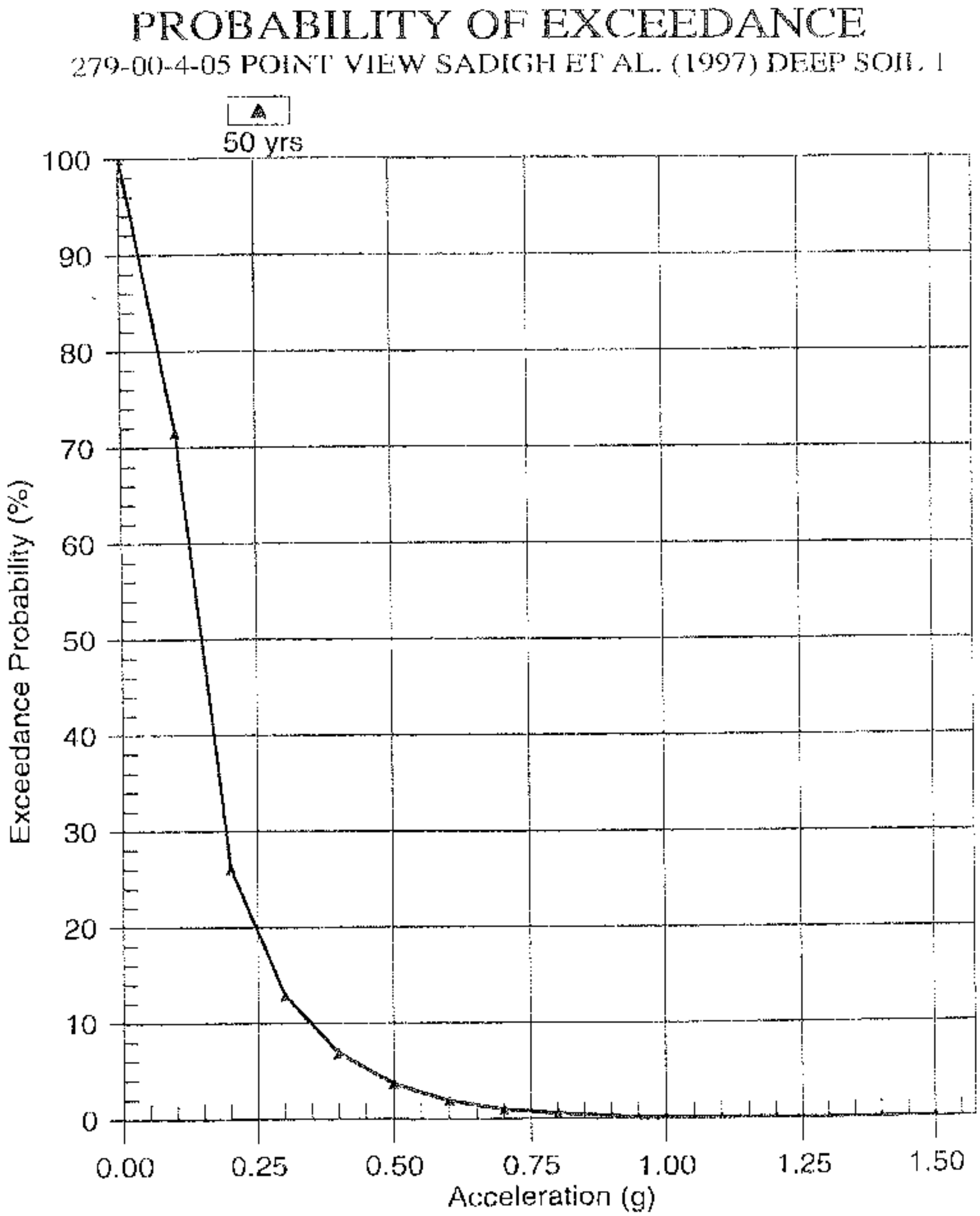

PROBABILITY OF EXCEEDANCE
279-00-4-05 POINT VIEW SADIGH ET AL. (1997) DEEP SOIL 1
50 yrs
Exceedance Probability (%)
100
90
80
70
60
50
40
30
20
10
0
0.00
0.25
0.50
0.75
1.00
1.25
1.50
Acceleration (g)

Figure 1-1

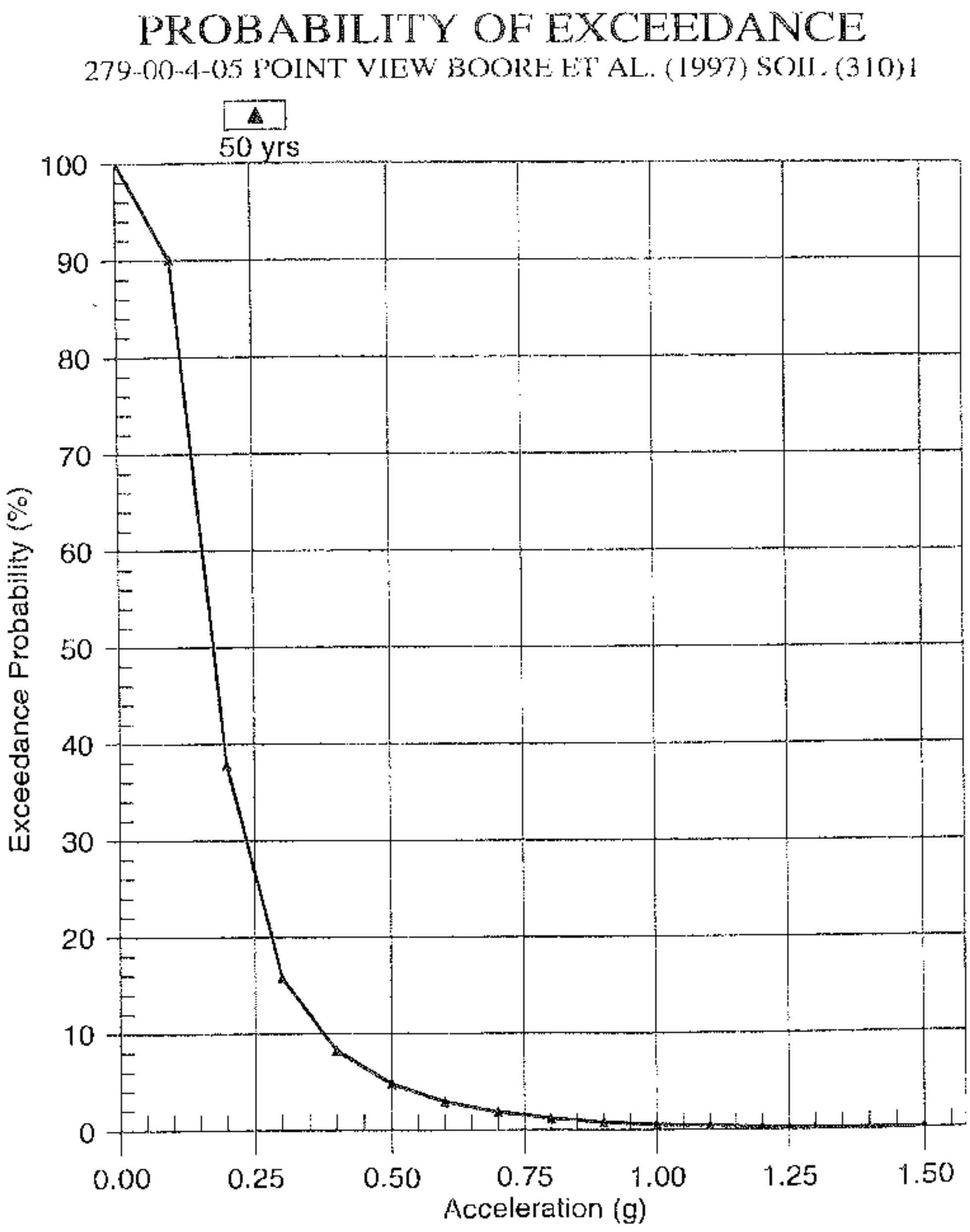

PROBABILITY OF EXCEEDANCE
279-00-4-05 POINT VIEW BOORE ET AL. (1997) SOIL (310)1
50 yrs
Exceedance Probability (%)
100
90
80
70
60
50
40
30
20
10
0
0.00
0.25
0.50
0.75
1.00
1.25
1.50
Acceleration (g)

Figure 1-2

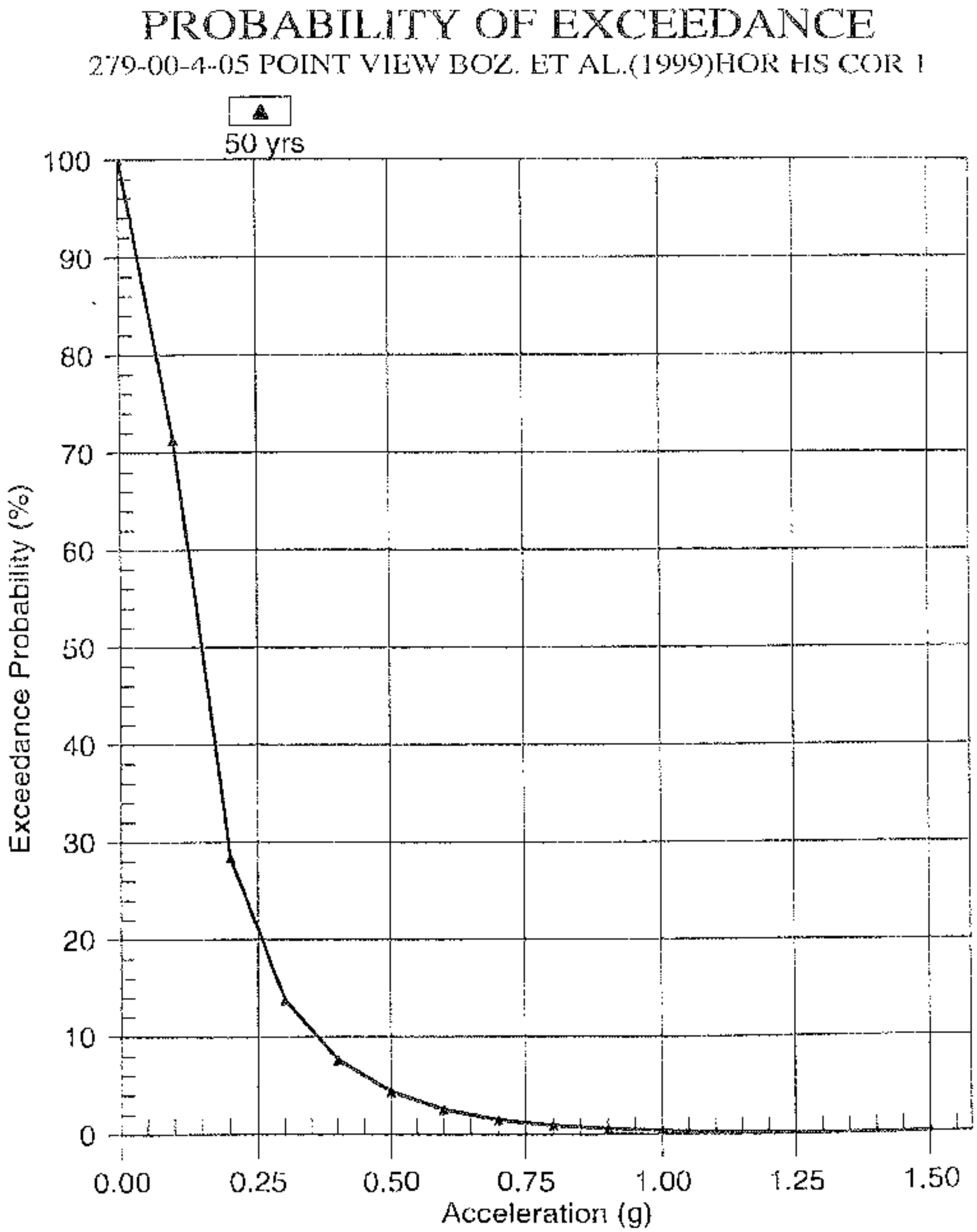

PROBABILITY OF EXCEEDANCE
279-00-4-05 POINT VIEW BOZ. ET AL.(1999)HOR HS COR 1
50 yrs
100
90
80
70
60
50
40
30
20
10
0
Exceedance Probability (%)
0.00
0.25
0.50
0.75
1.00
1.25
1.50
Acceleration (g)

Figure 1-3

DESIGN RESPONSE SPECTRUM

279-004-05 Point View, Seismic Zone: 0.4 Soil Profile: SD

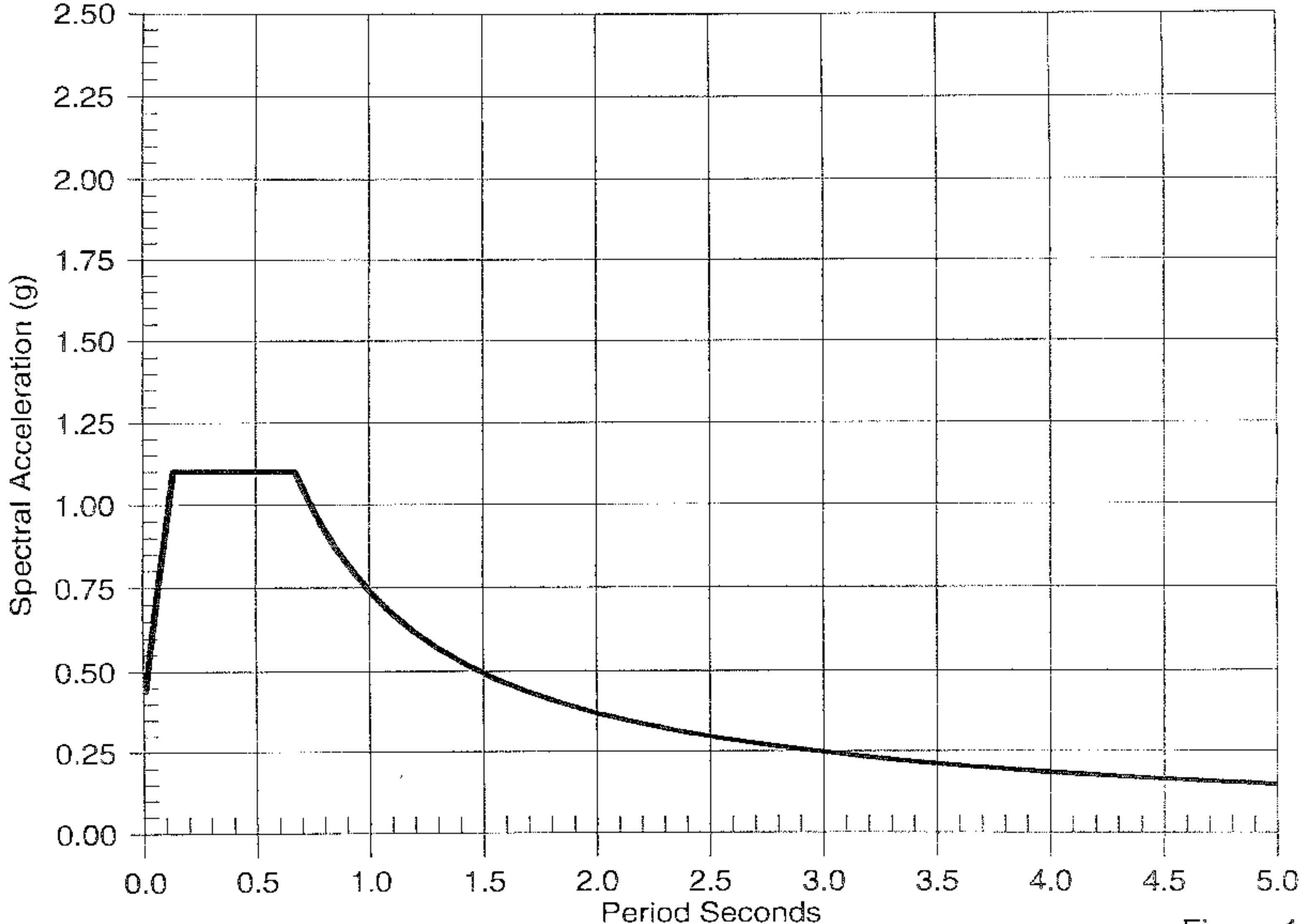
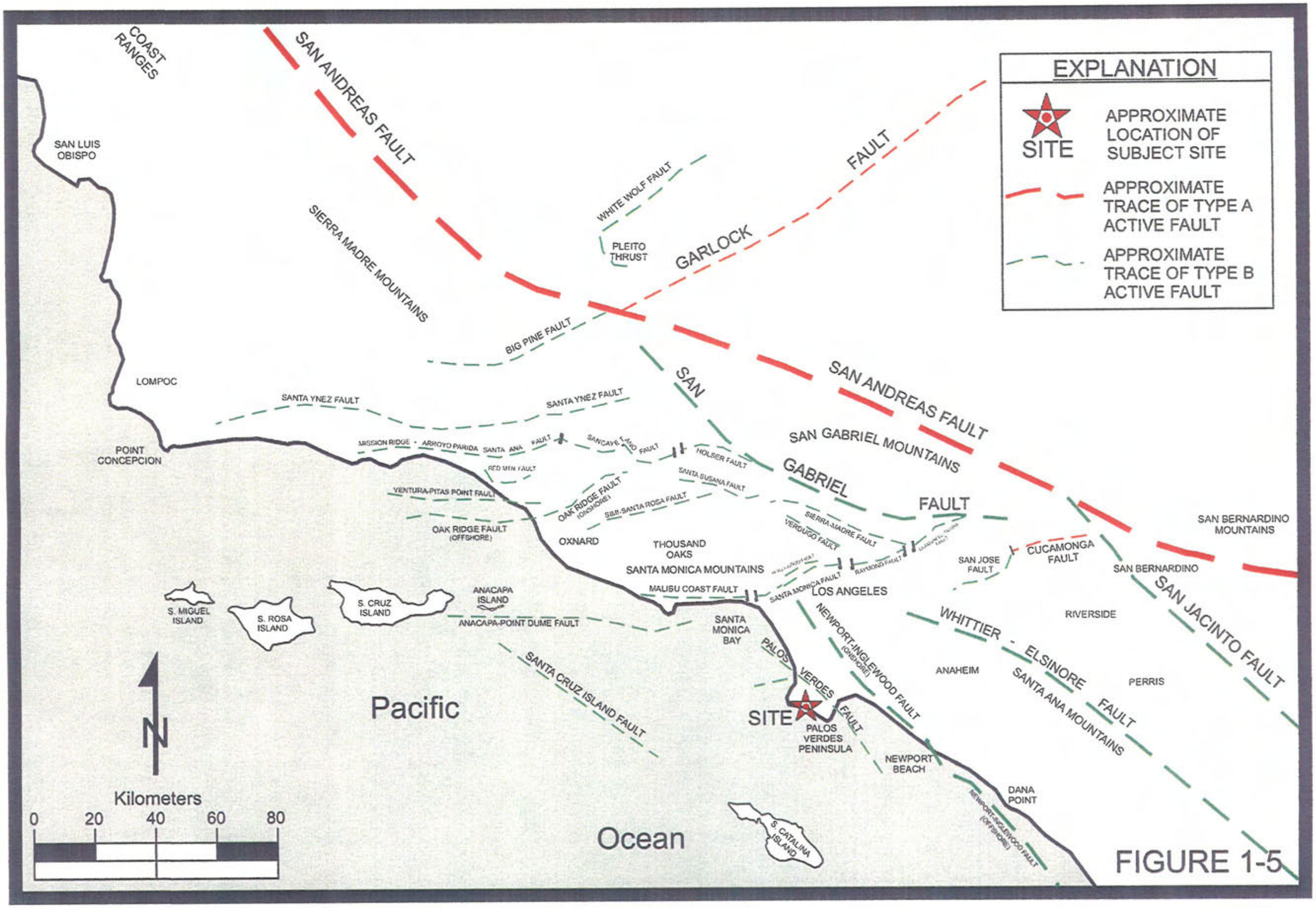


Figure 1-4



MAP OF ACTIVE FAULTS IN THE LOS ANGELES BASIN AND VICINITY

Modified from Jennings, 1994

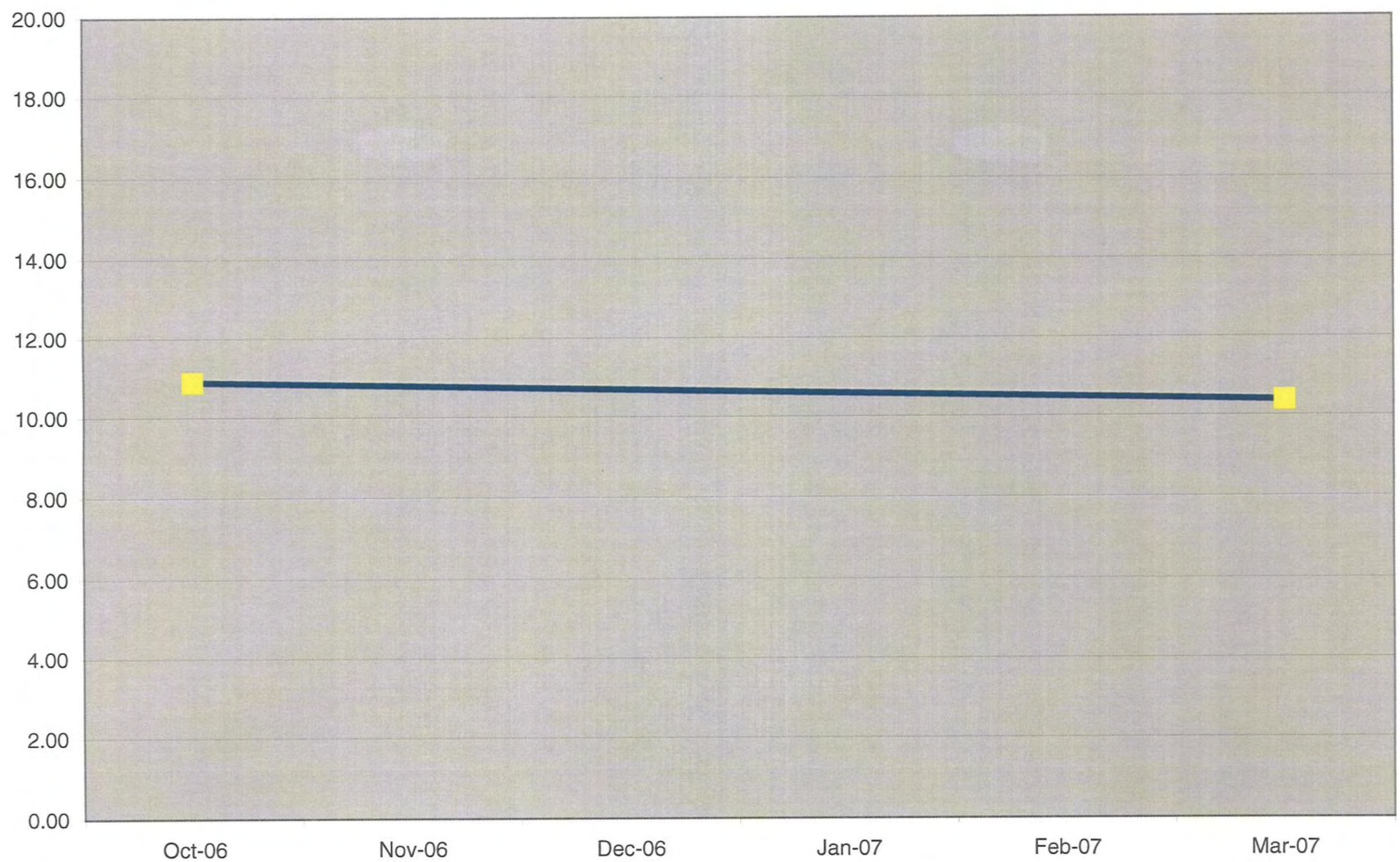
APPENDIX IV

Charts of Well Monitoring

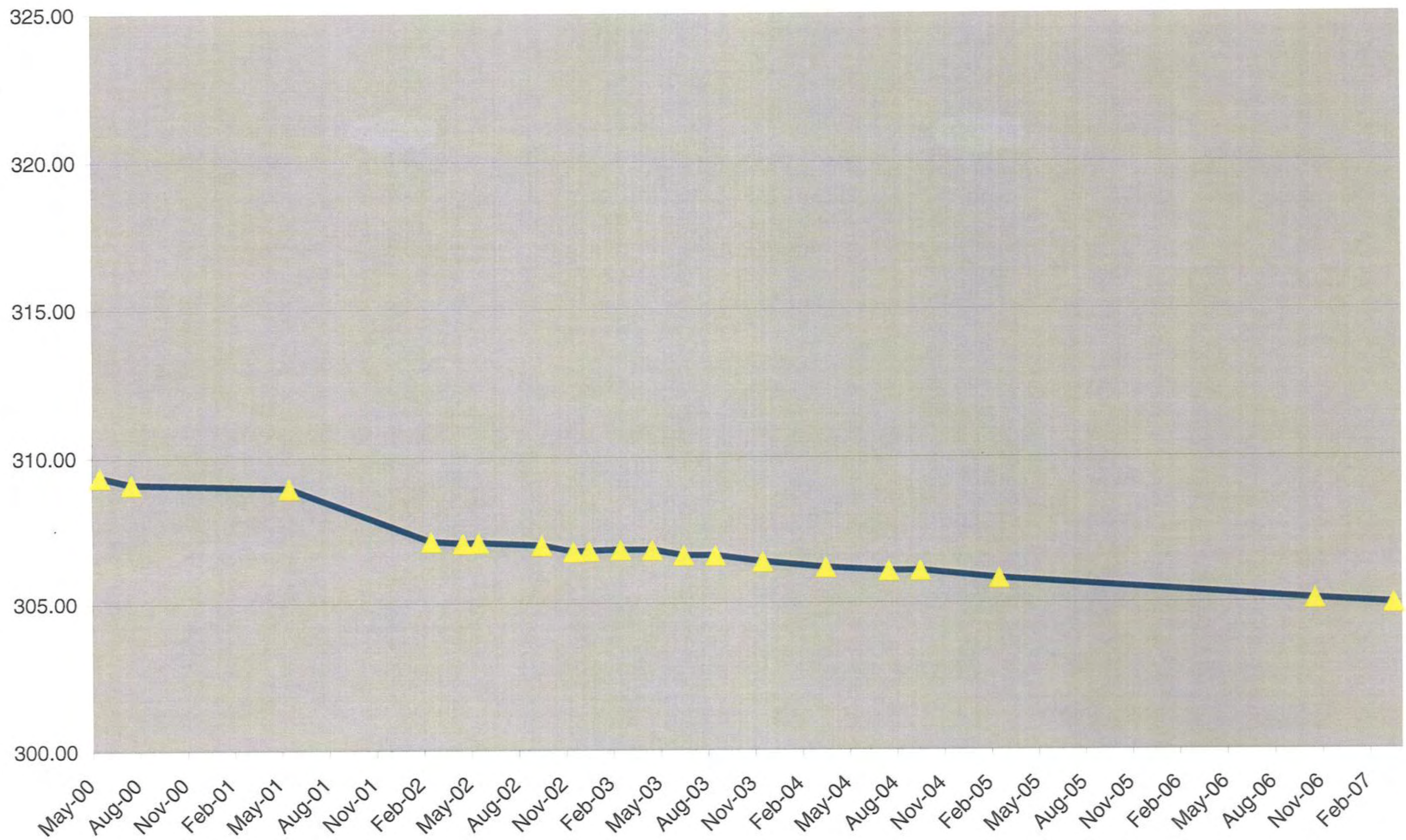
Elevation vs. Time

From N&A's 6/17/08 Report

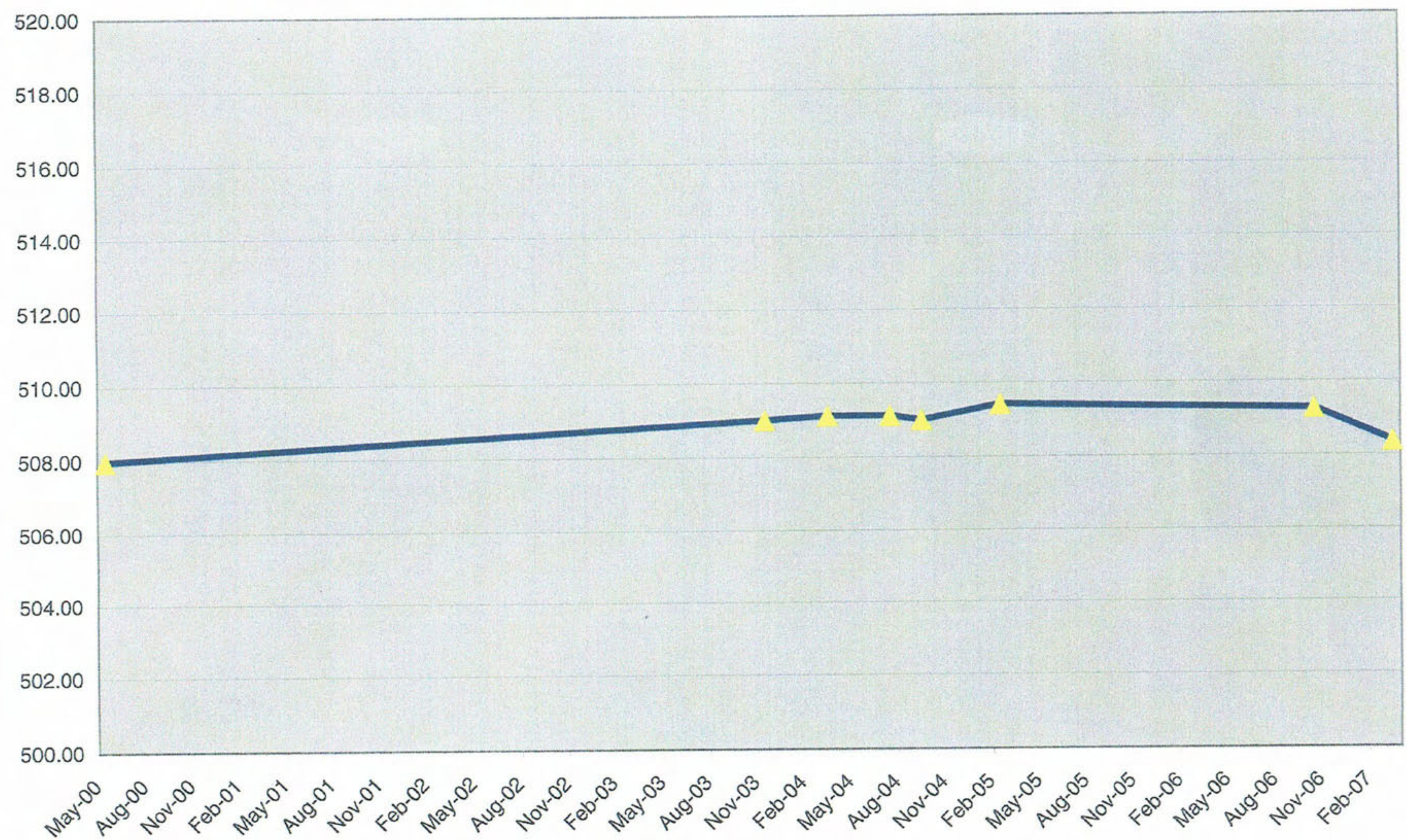
BNA-12: Water Elevation vs. Time



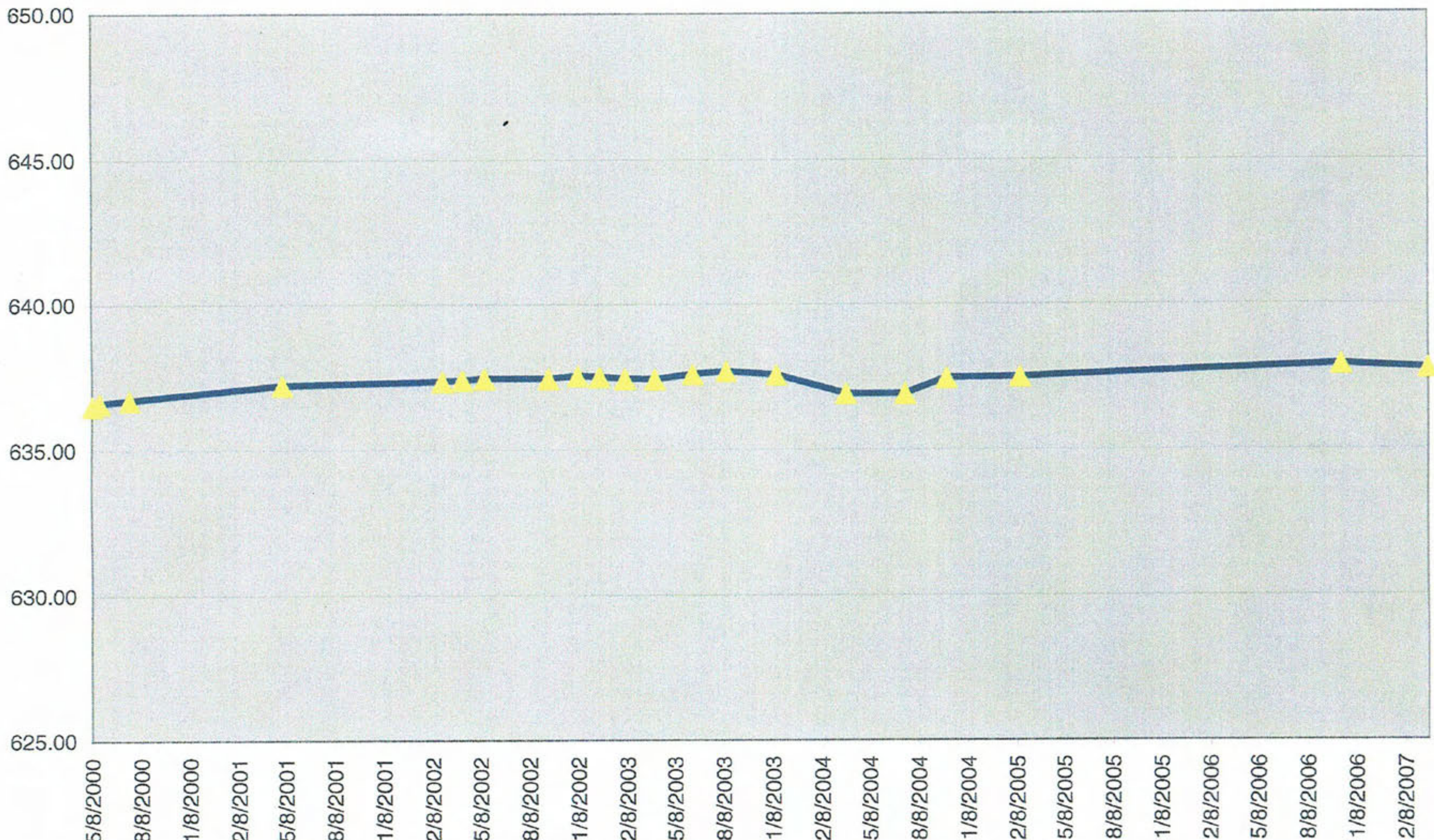
Monaghan 1: Water Elevation vs. Time

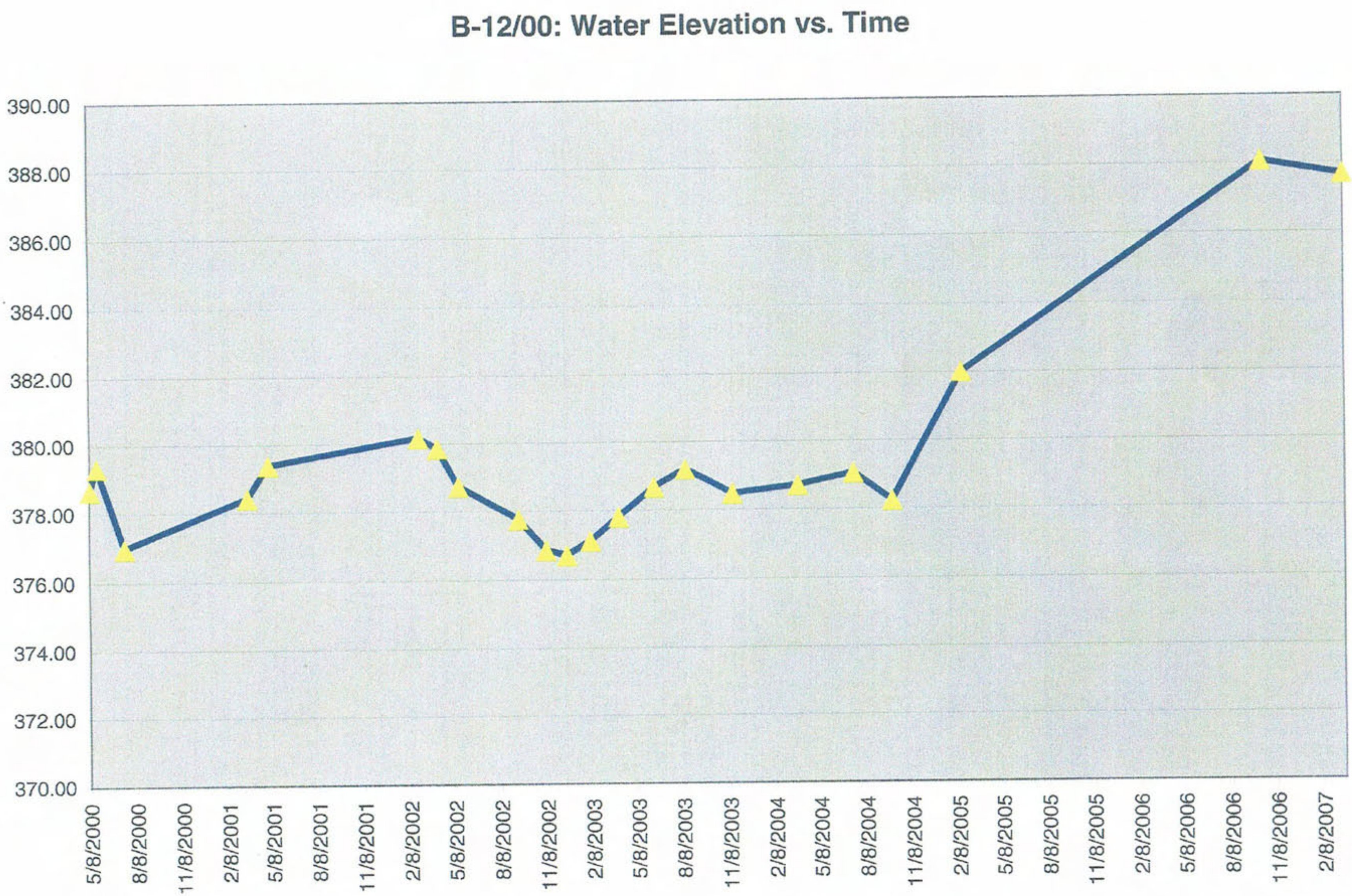


B-13/00: Water Elevation vs. Time



LC-2: Water Elevation vs. Time




B-12/00: Water Elevation vs. Time
390.00
388.00
386.00
384.00
382.00
380.00
378.00
376.00
374.00
372.00
370.00
5/8/2000
8/8/2000
11/8/2000
2/8/2001
5/8/2001
8/8/2001
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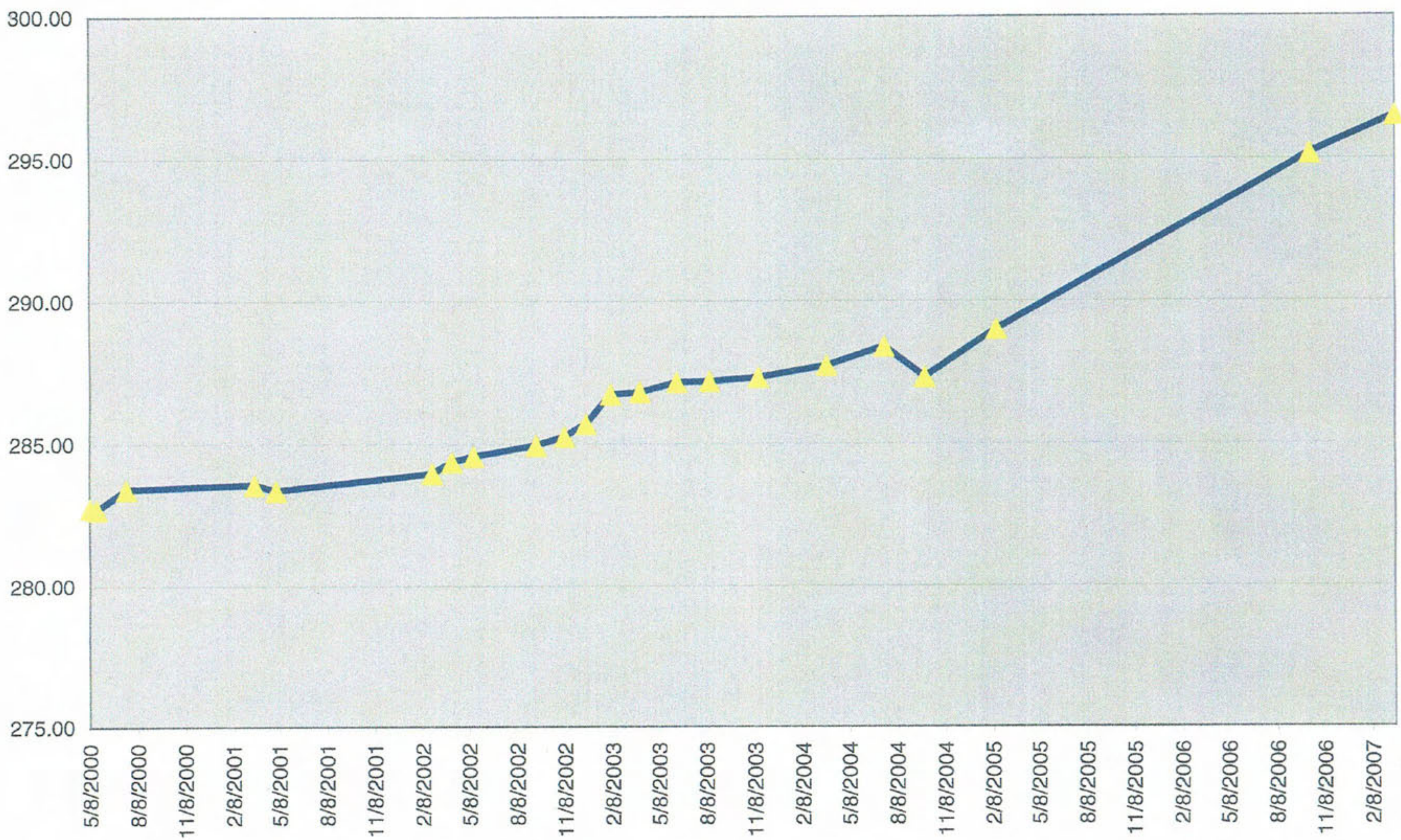
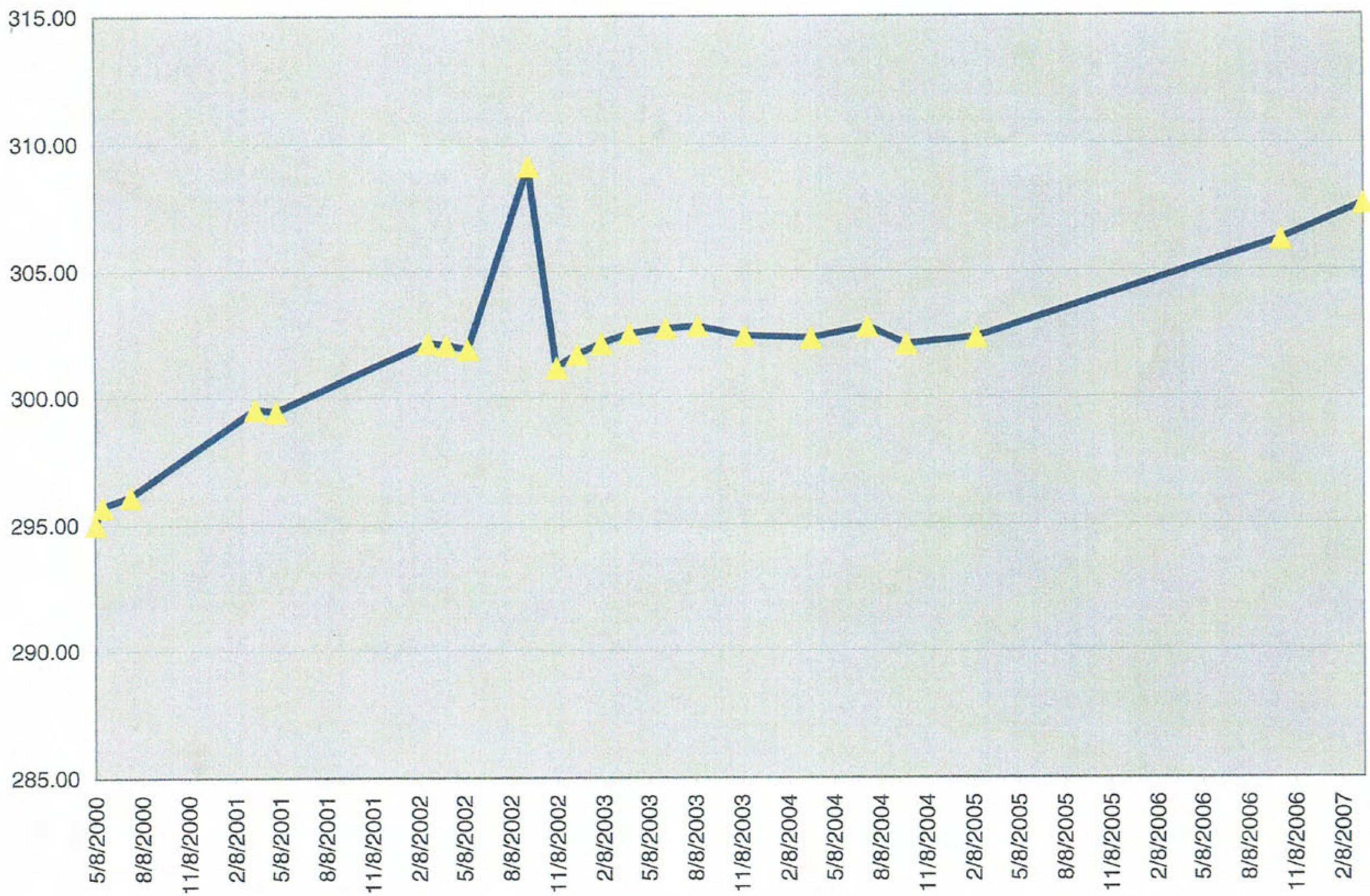
5/8/2006
8/8/2006
11/8/2006
2/8/2007

NB-MW-002: Water Elevation vs. Time



NB-MW-001: Water Elevation vs. Time



APPENDIX V

Revised Geologic Maps

Figures 7 and 9

From N&A Report dated 6/17/08

REVISED Figure 7
(Modified Figure 10 from Neblett & Associates 4-30-02 Report)
GEOLOGIC MAP OF POINT VIEW, UPPER FILIORUM AND VICINITY

NEBLETT & ASSOCIATES
4911 WARNER AVENUE, SUITE 218
HUNTINGTON BEACH, CA 92649
PHONE: (714) 840-8286 FAX: (714) 840-9796

PROJECT 279-004-05 DATE 6-17-08

REVISED Figure 9
GEOLOGIC MAP OF POINT VIEW
(100-Scale)

NEBLETT & ASSOCIATES
4911 WARNER AVENUE, SUITE 218
HUNTINGTON BEACH, CA 92649
PHONE: (714) 840-8286 FAX: (714) 840-9796

PROJECT 279-004-05 | DATE 6-17-08

Revised 10-08-08

APPENDIX VI

Summary of Borings
Within and Adjacent to
The Point View Site

TABLE I: Summary of Borings Drilled within Point View Development Site

Boring Designation	Logged By	Date Drilled	Boring Type	Total Depth (Feet)	Surface Elev. (msl)	Qls within Qupc		within Ancient Landslide		Outside Qls- Within Qupc and Qlso	Groundwater Depth	Groundwater Elevation	Notes
						Basal R/S Depth	Basal R/S Elevation	Groundwater Depth	Groundwater Elevation				
MT-1	Moore and Taber	1968	24" Bucket Auger	112	413			?			DRY		
MT-3	Moore and Taber	1968	24" Bucket Auger	32	275	N/A				✓	DRY		
MT-4	Moore and Taber	1968	24" Bucket Auger	35	170	N/A				✓	DRY		
MT-5	Moore and Taber	1968	24" Bucket Auger	65	407			49	358		DRY		
MT-8	Moore and Taber	1968	24" Bucket Auger	32	210	N/A				✓	DRY		
MT-17	Moore and Taber	1968	24" Bucket Auger	78	383			Unknown			DRY		
MT-18	Moore and Taber	1968	24" Bucket Auger	68	445			Unknown			DRY		
MT-20	Moore and Taber	1968	24" Bucket Auger	74	368			Unknown			DRY		
MT-29	Moore and Taber	1968	24" Bucket Auger	43	352	40	312				DRY		
MT-30	Moore and Taber	1968	24" Bucket Auger	87	362			74	288		86 feet	276	
MT-31	Moore and Taber	1968	24" Bucket Auger	66	324	52	272				DRY		
MT-32	Moore and Taber	1968	24" Bucket Auger	70	340			Unknown			DRY		
MT-33	Moore and Taber	1968	24" Bucket Auger	15	370			N/A			DRY		
MT-34	Moore and Taber	1968	24" Bucket Auger	30	365			N/A			DRY		
MT-44	Moore and Taber	1968	24" Bucket Auger	42	593						DRY		
MT-56	Moore and Taber	1968	24" Bucket Auger	26	258					✓	DRY		
MT-57	Moore and Taber	1968	24" Bucket Auger	22	210					✓	DRY		
MT-101	Moore and Taber	1968	5" Rotary Wash	132	340			86	254		N/A		
MT-201	Moore and Taber	1978	5" Rotary Wash	146	422			?			142	230	H2O when drilled
MT-202	Moore and Taber	1978	5" Rotary Wash	132±	424			?			N/A		
MT-203	Moore and Taber	1978	5" Rotary Wash	111	395			?			N/A		
LAC-2	L.A. County	1976	24" Bucket Auger	33	280					✓	DRY		
LAC-3	L.A. County	1976	24" Bucket Auger	26	276					✓	DRY		
LAC-4	L.A. County	1976	24" Bucket Auger	12	255					✓	DRY		
LAC-5	L.A. County	1976	24" Bucket Auger	18	225					✓	DRY		
LC-1	Law/Crandall	1990	Core	320	408			205	203		113	295	Screen: 100'-162' Monitored to 1999
B-1	Leighton & Assoc.	1995	2.5" Core	254	185					✓	N/A		
B-2	Leighton & Assoc.	1995	2.5" Core	207	230					✓	N/A		
B-3	Leighton & Assoc.	1995	2.5" Core	252	350			75	275		N/A		
B-4	Leighton & Assoc.	1995	2.5" Core	212±	327	60	267				DRY		Screen: 100'-140'
B-5	Leighton & Assoc.	1995	2.5" Core	300	385			193	192		108	277	Screen: 100'-140'
B-6	Leighton & Assoc.	1995	2.5" Core	202	415			74	341		DRY		Screen: 100'-140'
B-7	Leighton & Assoc.	1995	2.5" Core	237	420			99?	321?		DRY		Screen: 100'-140'
B-8	Leighton & Assoc.	1995	2.5" Core	260	462			71?	391?		DRY		Screen: 100'-140'
BA-1	Leighton & Assoc.	1995	30" Bucket Auger	46	180					✓	DRY		
BA-2	Leighton & Assoc.	1995	30" Bucket Auger	90	462			63?	399		DRY		
BA-3	Leighton & Assoc.	1996	30" Bucket Auger	118	610			46	564		DRY		
BA-4	Leighton & Assoc.	1996	30" Bucket Auger	95	600			86?	514		DRY		
BA-8/00	Leighton & Assoc.	2000	30" Bucket Auger	107	375			83	292		DRY		
BA-9/00	Leighton & Assoc.	2000	30" Bucket Auger	87	387					✓	DRY		
BA-10/00	Leighton & Assoc.	2000	30" Bucket Auger	86	405					✓	DRY		
BA-11/00	Leighton & Assoc.	2000	30" Bucket Auger	87	285	40	245				DRY		
BA-12/00	Leighton & Assoc.	2000	30" Bucket Auger	74	235					✓	DRY		
BA-13/00	Leighton & Assoc.	2000	30" Bucket Auger	72	450	29±	421				DRY		
BA-14/00	Leighton & Assoc.	2000	30" Bucket Auger	117	383			? 117+			DRY		
BA-15/00	Leighton & Assoc.	2000	30" Bucket Auger	71	310					✓	DRY		
BA-16/00	Leighton & Assoc.	2000	30" Bucket Auger	90	390			? 90+			DRY		
NBMW-001	Neblett and Assoc.	2000	2.5" Core	350	408			194	214		101 to 113	295 to 307	Screen: 87' to 247'
NBMW-002	Neblett and Assoc.	2000	2.5" Core	200	362			101	261		66 to 79	283 to 296	Screen: 83' to 150'
NBMW-003	Neblett and Assoc.	2000	2.5" Core	180	322	15?	307?						
											DRY		
BNA-1	Neblett and Assoc.	2005	30" Bucket Auger	115	375			115?	260?		100	275	Near Basal R/S
BNA-2	Neblett and Assoc.	2006	30" Bucket Auger	100	333	68	265				DRY		
BNA-3	Neblett and Assoc.	2006	30" Bucket Auger	102	355	70	285	102+			DRY		
BNA-4B	Neblett and Assoc.	2006	30" Bucket Auger	81	330	65	265				DRY		
BNA-5	Neblett and Assoc.	2006	30" Bucket Auger	24				?					Abandoned

TABLE I: Summary of Borings Drilled within Point View Development Site (continued)

Boring Designation	Logged By	Date Drilled	Boring Type	Total Depth (Feet)	Surface Elev. (msl)	Qls within Qupc		within Ancient Landslide		Outside Qls- Within Qupc and Qlso	Groundwater Depth	Groundwater Elevation	Notes
						Basal R/S Depth	Basal R/S Elevation	Groundwater Depth	Groundwater Elevation				
BNA-5B	Neblett and Assoc.	2006	30" Bucket Auger	29				?					Abandoned

BNA-6C	Neblett and Assoc.	2006	30" Bucket Auger	89	347	69.5	277.5				DRY		
BNA-7	Neblett and Assoc.	2006	30" Bucket Auger	74	335	47	288				DRY		
BNA-8	Neblett and Assoc.	2005	30" Bucket Auger	66	375					✓	DRY		
BNA-9	Neblett and Assoc.	2006	30" Bucket Auger	91.5	490					✓	DRY		
BNA-10	Neblett and Assoc.	2006	30" Bucket Auger	97	495	76	419				DRY		
BNA-10B	Neblett and Assoc.	2006	30" Bucket Auger	69	500	34.5	465				DRY		
BNA-11	Neblett and Assoc.	2006	30" Bucket Auger	53	475	22	453				DRY		
Core Boring Drilled in Abalone Cove Shoreline Park, South of Point View Site													
BNA-12	Neblett and Assoc.	2006	Core	303	155						144	11	

TABLE II: Summary of Borings Drilled within the Upper Filiorum and Outside the Point View Development Site

Boring Designation	Logged By	Date Drilled	Boring Type	Total Depth (Feet)	Surface Elev. (msl)	Basal R/S Depth	Basal R/S Elevation	Groundwater Depth	Groundwater Elevation	Screen Interval	Notes
MT-6	Moore and Taber	1968	24" Bucket Auger	83	470	? 65	? 405	DRY			
MT-14	Moore and Taber	1968	24" Bucket Auger	20	680	N/A					
MT-23	Moore and Taber	1968	24" Bucket Auger	26	757	N/A					
MT-25	Moore and Taber	1968	24" Bucket Auger	30	465	N/A					
MT-36	Moore and Taber	1968	24" Bucket Auger	26	882	N/A					
MT-37	Moore and Taber	1968	24" Bucket Auger	5	912	N/A					
MT-38	Moore and Taber	1968	24" Bucket Auger	11	892	N/A					
MT-39	Moore and Taber	1968	24" Bucket Auger	7	896	N/A					
MT-40	Moore and Taber	1968	24" Bucket Auger	42	534	?					
MT-41	Moore and Taber	1968	24" Bucket Auger	17	574	N/A					
MT-42	Moore and Taber	1968	24" Bucket Auger	42	560	N/A					
MT-43	Moore and Taber	1968	24" Bucket Auger	25	532	N/A					
MT-45	Moore and Taber	1968	24" Bucket Auger	36	569						Seep @ 23 feet
MT-51	Moore and Taber	1968	24" Bucket Auger	103	546	? 25		DRY			
MT-52	Moore and Taber	1968	24" Bucket Auger	57	544	?		20	524		
MT-53	Moore and Taber	1968	24" Bucket Auger	39	470	?		37	433		
MT-104	Moore and Taber	1968	5" Rotary Wash	126	778	126	652				Well Data Per Leighton and Associates
MT-105	Moore and Taber	1968	5" Rotary Wash	126	633	? 38		43	590		Well Data Per Leighton and Associates
MT-106	Moore and Taber	1968	5" Rotary Wash	86	675	?					Well Data Per Leighton and Associates
B-9	Leighton & Assoc.	1995	2.5" Core	250	530	71	459				
B-10	Leighton & Assoc.	1996	2.5" Core	210	720	120	600				
B-11/00	Leighton & Assoc.	2000	2.5" Core	349	698	107	591				
B-12/00	Leighton & Assoc.	2000	2.5" Core	349	530	159?	371				
B-13/00	Leighton & Assoc.	2000	2.5" Core	349	690	121?	569				
LC-2	LeRoy Crandall	1990	Core	360	885	237	648	267	618	234' -274'	Well Data per L&A, Well Damaged
LC-3	LeRoy Crandall	1990	Core	330	800	199	601	74	725	167' -207'	Well Data Per Leighton and Associates
LC-4	LeRoy Crandall	1990	Core	337	790	189	601	105	685	155' -195'	Well Data Per Leighton and Associates
GBA-1	Ginter & Associates	2010	30" Bucket Auger	12	514						Abandoned-severe caving
GBA-2	Ginter & Associates	2010	30" Bucket Auger	18	527						Abandoned-severe caving
GBA-2A	Ginter & Associates	2010	30" Bucket Auger	76	518	25	493	DRY			
GBA-3	Ginter & Associates	2010	30" Bucket Auger	113	562	19	543				Predominately volcanics 19'-113'
GBA-4	Ginter & Associates	2011	30" Bucket Auger	15	623						Abandoned-severe caving
GBA-4A	Ginter & Associates	2011	30" Bucket Auger	120	621	47.5	573.5	DRY			Predominately volcanics 47.5'-120'
GCB-1	Ginter & Associates	2011	Core (HQ)	210	626	59.75	566.25	DRY			Massive basalt from 140'-155'
GCB-2	Ginter & Associates	2011	Core (HQ)	210	642	92	550	DRY			Massive basalt from 160'-210'
GCB-3	Ginter & Associates	2011	Core (HQ)	210	793	149	644	DRY			Cased to 21'
GCB-4	Ginter & Associates	2011	Core (HQ)	160	506	50.6	455.4	DRY			Cased to 30'; massive basalt 130'-160'
GCB-5	Ginter & Associates	2011	Core (HQ)	151.5	582	41.5	540.5	DRY			Massive basalt 137'-151.5'
GCB-6	Ginter & Associates	2011	Core (HQ)	161.5	554	81.75	472.25	DRY			

TABLE III: Summary of Borings Drilled Outside the Point View Development Site and Within the Abalone Cove Landslide and the Ancient Portugese Bend Landslide Complex											
Boring Designation	**Logged By**	**Date Drilled**	**Boring Type**	**Total Depth (Feet)**	**Surface Elev. (msl)**	**Basal R/S Depth**	**Basal R/S Elevation**	**Groundwater Depth**	**Groundwater Elevation**	**Screen Interval**	**Notes**
ACL-1	Slosson and Assoc.	1988	Core	301	66	145?	-79	45	21		Abandoned 1991
ACL-2	Slosson and Assoc.	1988	Core	201	107	54?	53	54	53		Abandoned 1991
ACL-3	Slosson and Assoc.	1988	Core	250	168	?					
ACL-4	Slosson and Assoc.	1989	Core	350	179	172	7	136	43		Well Data Per Leighton and Associates
ACL-6	Slosson and Assoc.	?	Core	?	14	72?	-58	15	-1		Well Data Per Leighton and Associates
ACL-7A	Slosson and Assoc.	1990	Core	116	32	80?	-48	25±	-7		
ACL-7B	Slosson and Assoc.	1992	Core	251	32	77?	-45	?			
ACL-8	Slosson and Assoc.	1990	Core	217	72	?		50	22		
ACL-9	Slosson and Assoc.	1990	Core	260	14	111?					
HVLA-1	Slosson and Assoc.	1984	Core	136	138	?					
HVLA-2	Slosson and Assoc.	1984	Core	179	32	?			26		
HVLA-3	Slosson and Assoc.	1984	Core	194	70	159?	-89	70	0		Well Data Per Leighton and Associates
HVLA-4	Slosson and Assoc.	1984	Core	239	387	?					
HVLA-5	Slosson and Assoc.	1984	Core	194	454	105?	349	57	397		Well Data Per Leighton and Associates
PVP-1	Dr. K. Vonder Linden	1968	Core	225	207	130	77	130	77		
PVP-4	Dr. K. Vonder Linden	1968	Core	430	389	301	88	DRY			
PVP-8	Dr. K. Vonder Linden	1968	Core	338	356	205	151	304	52		
MT-7	Moore and Taber	1968	24" Bucket Auger	27	30	?		20	10		
MT-9	Moore and Taber	1968	24" Bucket Auger	27	56	22?	34	DRY			
MT-10	Moore and Taber	1968	24" Bucket Auger	76	407	?		DRY			
MT-11	Moore and Taber	1968	24" Bucket Auger	13	180	?					
MT-12	Moore and Taber	1968	24" Bucket Auger	12	178	?					
MT-13	Moore and Taber	1968	24" Bucket Auger	58	155	43?	112	DRY			
MT-16	Moore and Taber	1968	24" Bucket Auger	110	395	105?	290	DRY			
MT-24	Moore and Taber	1968	24" Bucket Auger	64	173	?		57	116		
MT-26	Moore and Taber	1968	24" Bucket Auger	70	655	?		DRY			
MT-28	Moore and Taber	1968	24" Bucket Auger	87	280	?		DRY			
MT-35	Moore and Taber	1968	24" Bucket Auger	26	288	?		DRY			
MT-46	Moore and Taber	1968	24" Bucket Auger	81	191	?					
MT-48	Moore and Taber	1968	24" Bucket Auger	66	77	62?	15	54	23		
MT-49	Moore and Taber	1968	24" Bucket Auger	18	78	?					
MT-50	Moore and Taber	1968	24" Bucket Auger	51	124	?					
MT-54	Moore and Taber	1968	24" Bucket Auger	74	183	74?	109	70	113		
MT-59	Moore and Taber	1968	24" Bucket Auger	135	518	71?	447	DRY			
MT-102	Moore and Taber	1968	5" Rotary Wash	185	395	168?	227				
MT-103	Moore and Taber	1968	5" Rotary Wash	170	407	152?	255				
MT-107	Moore and Taber	1968	5" Rotary Wash	125	107	112?	-5				
MT-109	Moore and Taber	1969	5" Rotary Wash	150	71	87	-16	32	39		
WFF	Robert Stone and Assoc.	1980	5" Air Rotary	150	168	92	76	75	93		Cased to 110'
W6I	Robert Stone and Assoc.	1984	5" Air Rotary	145	262	125?	137	126	136		Converted to Pumping Well
W6J	Robert Stone and Assoc.	1984	5" Air Rotary	120	207	93?	114	66	141		Converted to Pumping Well
WW-1	Robert Stone and Assoc.	1979	12" Mud-Rotary	195	378	?					Converted to Pumping Well
WW-2	Robert Stone and Assoc.	1979	12" Mud-Rotary	146	169	142?					
WW-3	K. Ehlig and Dr.P. Ehlig	1980	Cable w/ 14" Casing	162	284	162	122	96	188	100' - 162'	Pumping Well
WW-4	Robert Stone and Assoc.	1980	12" Mud-Rotary	90	221	79?				50' - 90'	
WW-5	Dr. P. Ehlig	1979	10" Mud-Rotary	108	168	103?				58' - 98'	Pumping Well
WW-6	Robert Stone and Assoc.		12" Mud-Rotary	145	390	?				95' - 145'	
WW-7	K. Ehlig and Dr.P. Ehlig	1980	Cable w/ 14" Casing	154	329	151?	178	134?	195	110' - 154'	Converted to Pumping Well
WW-8	Robert Stone and Assoc.		12" Mud-Rotary	79	348	?					Pumping Well
WW-9	Robert Stone and Assoc.	1985	12" Mud-Rotary	150	141	?				80' - 150'	Pumping Well
WW-10	Robert Stone and Assoc.	1985	12" Mud-Rotary	156	290	?				80' - 155'	
WW-11	Robert Stone and Assoc.	1985	10" Air-Rotary	136	317	?				47' - 127'	Pumping Well
WW-12	Robert Stone and Assoc.	1985	10" Air-Rotary	135	383	?				55' - 135'	Pumping Well
WW-13	Robert Stone and Assoc.	?	?	?	386						***Pumping Well- see L&A***
											LC-1 for Subsurface data
	Ehlert	1997	24" bucket auger	48	210						

C.6 – Ginter Response to Comments on Geology Summary Report

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Rancho Palos Verdes, CA 90275

November 14, 2011
Project No. 100-06

Attn: Mr. Jim York

Subject: **Response to PCR Services Corporation And Geosyntec Consultants Comments Regarding the Geologic Summary For the Point View Master Use Plan, Rancho Palos Verdes, California**

References: 1.) Ginter & Associates Inc., August 19, 2011; Geologic Summary for the Point View Master Use Plan, Rancho Palos Verdes, California
2.) PCR Services Corporation, Geosyntec Consultants October, 2011; Comments Regarding Geologic Summary of the Point View Master Use Plan, Rancho Palos Verdes

Dear Mr. York:

Pursuant to your request, Ginter & Associates, Inc. has prepared this response to the City's consultants, PCR and Geosyntec. (reference 2). Our responses correspond in order to their comments.

> **Comment #1:** **This report provides a summary of geologic conditions at the Point View Property and related historical background information. The proposed improvements, their potential impacts, and related recommendations are not a focus of this report.**

Response: The Geologic Summary Report (Ginter 8/19/11) referenced several reports, including those that evaluated the proposed project improvements, as well as selected non-project improvements. Project related reports include the driveway, agricultural operations, gazebo, and a new water line. Non-project reports include the greenhouse, fireplace, and restroom remodel. All of the referenced geology reports are in the City's files.

<u>Comment #2:</u> The report does not provide specific engineering or geologic conclusions or recommendations regarding the impacts of the proposed improvements. The report only states generally that the proposed improvements will not aggravate the existing geologic conditions and/or existing landslides. Given that it is agreed that mitigations will be required, these conclusions should be more detailed.

<u>Response</u>: The Environmental Assessment Information Form (Box 3C) recognizes that a portion of the project area is in "located on a geological unit or soil that is unstable or that could become unstable as a result of the project..." and that mitigation <u>may</u> be required. Selecting that box was in recognition that the area is located in a Landslide Moratorium Area. All conclusions, recommendations, and potential mitigation measures were identified in the individual reports identified above and referenced in the Geologic Summary Report. The following excerpts, which are taken from the referenced reports, describe the major conclusions and recommendations. Please note that we do not summarize the conclusions and recommendations for non-project geology improvements (greenhouse, restroom remodel, and fireplace).

- *<u>Driveway Report and Response (Ginter & Associates, 8/31/10 and 10/25/10):</u>*
  - *<u>Conclusions:</u>*
    - *"The proposed access road will have no impact on adjacent properties from and geologic engineering and geotechnical engineering standpoint"*
    - *"The proposed access road will not aggravate the existing landslide conditions"*
    - *"The proposed access road is suitable and acceptable for its intended use"*
    - *"From an engineering geologic and geotechnical engineering standpoint this recommended pavement section will be suitable and acceptable"*
  - *<u>Recommendations:</u>*
    - *"Concrete mix design, including water-cement ratio should, as a minimum, be in accordance with ... guidelines for severe sulfate exposure... Type V cement, a minimum concrete strength of 4500 pounds per square inch and minimum water-to-cement ratio of 0.45 for severe sulfate exposure."*
    - *Removal of Unsuitable Material: Based on the boring logs in the proposed road's vicinity from previous investigations and the recent site visit, the surface soils in the upper 3 vertical feet will require removal and replacement with compacted artificial fill. Prior to grading operations, all vegetation should be removed and disposed of off-site. Following site preparation operations, it is recommended that the exposed site soils be over-excavated to a minimum uniform depth of 3 feet below existing grades. The excavation should be performed under the observation of the Project Geotechnical Engineer. The over-excavation should extend to minimum 3 ft. distance beyond street footprint*
- *<u>Agricultural Operations Report (Ginter & Associates, 2/18/10):</u>*
  - *<u>Conclusions:</u>*
    - *"Based on our review of the existing geologic conditions and the details of the proposed orchard and vineyard agricultural operation, the subject agriculture plan is feasible and suitable from an engineering geologic and geotechnical engineering standpoint provided our recommendations are followed throughout the entire period of proposed agricultural operations."*
    - *"The proposed agricultural features will not affect the geology and/or stability of the Point View site and vicinity."*
  - *<u>Recommendations:</u>*

      - *In order to minimize surface soil erosion, we recommend the orchard rows be oriented in a direction that is perpendicular to the slope as much as possible.*
      - *It will be essential to monitor the depth of moisture infiltration in the orchards to maintain sustainable growth and keep the percolation zone in the upper 2 to 3 feet.*
- *Water Line Report (Ginter & Associates, 11/30/09):*
   - *Conclusion: "It is the opinion of the undersigned that water line emplacement will not adversely affect the geology of the Point View property or the surrounding properties."*
   - *Recommendations: None required*
- *Gazebo Report and Response (Ginter & Associates, 8/30/10 and 10/22/10):*
   - *Conclusions:*
      - *The proposed gazebo and attendant walk ways will not impact adjacent properties.*
      - *The proposed gazebo and attendant facilities will not aggravate the existing landslide conditions.*
      - *The subject site is suitable and acceptable for its intended use (gazebo).*
   - *Recommendations:*
      - *Slab Footprint Location: The slab for the gazebo should set back from the top of the natural slope to the south a minimum of 5 ft. horizontal.*
      - *Grading: The following grading recommendations are intended to produce more uniform subgrade and slab-on-grade support.*
      - *Removal of Unsuitable Soils: Prior to grading operations, all grass sod should be removed and disposed of off-site. Following site preparation operations, it is recommended that the exposed site soils be over-excavated to a minimum uniform depth of 3 feet below existing grades. The excavation should be performed under the observation of the Project Geotechnical Engineer. The over-excavation should extend to minimum 3 ft. distance beyond the slab footprint.*
      - *Fill Placement: The acceptability of excavation bottoms should be evaluated by the Project Geotechnical Engineer prior to placing approved fill soils. Approved excavation bottoms should be thoroughly moisture-conditioned, as necessary, to 3-5 percentage points above optimum moisture content, scarified to a minimum depth of 8 inches and compacted to minimum 90 percent of the laboratory maximum dry density (ASTM:D 1557). Fill materials should be placed in lifts not exceeding 6 inches in loose thickness, moisture-conditioned to2-3 percentage points above optimum moisture content and compacted to minimum 90percent relative compaction based on the laboratory maximum dry density. All grading should be performed under the observation and testing of the Project Geotechnical Engineer or his representative.*
      - *Fill Materials: On-site soils are suitable for fill and should be free of vegetation or other deleterious materials.*
      - *Testing and Observation: All site preparation, grading and compaction should be performed under the observation and testing of the Project Geotechnical Engineer or his representative. An adequate number of field tests should be performed to verify compliance with recommendations presented in this report and local ordinances. If it is determined during grading that site soils require over-excavation to greater depths for proper structural support, this additional work should be performed in accordance with the recommendations of the Project Geotechnical Engineer.*

- *Slab Design: Slabs should have a minimum thickness of six inches and be reinforced with a minimum of No.4 bars at a spacing of 12-inches on center each way placed at mid-height. Floor slabs designed in accordance with UBC should be based on highly expansive soil conditions. Structural loading considerations could govern slab design and should be evaluated by the Project Structural Engineer in addition to the soil expansion potential.*
- *Expansive Soils: A representative bulk soil sample was tested for expansion potential following the ASTM 4829 Test Procedure. The test result exhibits an expansion index of 73 (medium). However, based on the previous laboratory testing, the on-site soils generally consist of bentonitic clays exhibiting very high expansion potential. Structural elements such as footings and slabs in contact with the on-site soils will therefore be subject to high expansive forces due to sub-grade moisture fluctuations, and as a result there is potential for structural distress (especially in lightly loaded structures) in the form of cracking and vertical/lateral movements. The recommendations provided herein are intended to reduce the potential effects of soil expansion on structures. However, it must be recognized that these recommendations would help to mitigate distress due to soil expansion but may not completely eliminate the problem. The design of structural elements in contact with site soils should include considerations with respect to potential very high soil expansion.*
- *Soluble Sulfate: The referenced N&A October 4, 2007 report indicates that the soil corrosion potential due to sulfate exposure on concrete is considered severe. Concrete mix design, including water-cement ratio should, as a minimum, be in accordance with the recommendations in Table 4.3.1 in ACI-318 guidelines for severe sulfate exposure. Table 4.3.1 specifies Type V cement, a minimum concrete strength of 4500 pounds-per-square inch and a maximum water-to-cement ratio of 0.45 for severe sulfate exposure.*
- *Site Drainage: It must be noted that potential problems may develop when drainage is altered through construction of paved walkways and patios. Conditions which will lead to ground saturation must be avoided. No alteration of pad gradients should be allowed which will prevent pad runoff from being directed to approved disposal areas. Finish grades should be designed and constructed to maintain positive drainage away from structures at all times. Recommended minimum gradient away from structures for graded soil areas and hardscape areas is 2 percent and 1 percent respectively.*
- *Rodent Control: If rodent activity is present, the property owner must undertake a program for the elimination of burrowing animals. This must be an ongoing program in order to promote the slope stability of the subjacent natural slope.*
- *Irrigation: Water must not be allowed to flow over the natural subjacent slope. This may require the construction of a berm along the top of the slope if such devices are not in place.*

Comment #3: It is our opinion that the report should provide more detail in a number of areas. These areas are described below:

a. Significant portions of the proposed irrigated agricultural areas will be sited within the Ancient Portuguese Bend Landslide Complex. No discussion of the impacts of this operation on long term groundwater regime within the landslide was presented in this report. No details of a plan to monitor groundwater conditions related to this plan are presented. It is our understanding that the

Hydrology/SUSMP report currently being revised by the applicant will address groundwater infiltration and monitoring efforts. This information should be incorporated and analyzed in the Geologic Summary Report for its potential to impact the landslide complex.

Response: The agricultural operations should not result in any significant increase to the groundwater regime in the Portuguese Bend area. As described further in Response 3d, below, groundwater in this vicinity is located at depth (150' +/-). Since it is imperative that irrigation be tightly controlled for crop health, it is unlikely that any irrigation water will reach this extreme depth. As described in previous documentation, irrigation of orchards and vineyards will be through the use of drip and mini-sprinklers to accurately control the amount of water that is being used. We cannot understate how important correct irrigation is to the health and productivity of the proposed avocado and grape crops, therefore it is essential that we monitor soil moisture on a regular basis to insure a vigorous crop. While we have not developed a formal protocol of moisture readings, we anticipate that during the initial phase of the agricultural operation we will monitor on a weekly basis. As the trees and vines mature and become established, and the irrigation schedule is finalized, moisture readings will probably be done on a monthly basis during the growing season, as recommended by our agricultural advisors. It is important to note that irrigation will be conducted as described in previous communications and there will be periods when no irrigation is required. Monitoring will be conducted by the owner and designated agricultural workers. The specific moisture measuring device has not been determined, but we anticipate that it will be one that is typically used for agricultural operations and it should measure to a depth of about three feet.

With respect to "monitoring groundwater conditions", it is not our intent to conduct any groundwater monitoring. That is one of the primary responsibilities of the Abalone Cove Landslide Abatement District (ACLAD). ACLAD monitors and pumps groundwater from the greater Abalone Cove area. The District operates an comprehensive system of 17 dewatering wells and discharge lines, which are monitored on a regular basis.

The SUSMP (Standard Urban Stormwater Mitigation Plan) determines the impact of stormwater/runoff from a development and to reduce the quantity and improve the quality of runoff that leaves the site. In this case, the SUSMP evaluates the impact of runoff from the proposed agriculture areas and driveway. The SUSMP also provides mitigation and design measures (BMPs) to reduce the quantity of runoff and improve the water quality. The SUSMP does not directly discuss runoff infiltration, but as described below, it is the intent to capture the low flow runoff from the driveway and agricultural areas with vegetated buffers or redirect runoff to trench drains that will improve water quality. Please refer to the Hydrologic Analysis and SUSMP Calculations for 6001 Palos Verdes Drive South, Rancho Palos Verdes, CA 90275, prepared by Rothman Engineering Inc. (10/17/11) for a detailed discussion of stormwater BMPs.

b. Approximately 425 CY of cut and 375 CY of fill are proposed as part of the driveway grading plan. Some of this grading will occur within the Ancient Portuguese Bend landslide complex. While this grading is relatively minor, no discussion of its impacts on the landslide complex are presented.

Response: There will be no impacts associated with the proposed grading. Please refer to the referenced report and responses regarding the proposed all-weather driveway.

c. The golf course improvements are proposed within an area that is mapped as containing Quaternary landslide deposits. No discussion is provided regarding the potential impact of this improvement on these landslide deposits. We

understand that grading efforts for the golf course would be very minor and that no irrigation would be required for this feature. However, as with other features, this statement should be made in the geologic summary as the reason that the feature will not impact the landslide complex (if appropriate).

Response: The proposed golf course will involve less than 20 cubic yards of grading, no geology report has been prepared for this minor improvement. The golf course and associated grading will not adversely affect the geology of the property or adjacent properties.

d. The proposed stormwater BMPs (currently a vegetated buffer strip) rely to some degree infiltration to operate. These BMPS may result in minor changes in the distribution and amounts of groundwater infiltration from the natural condition. No discussion of these impacts are presented.

Response: Any changes to the distribution and amount of groundwater infiltration would be minor and insignificant. In fact, the infiltration of rainwater will be largely the same as it is today and agricultural irrigation will be controlled so as not to introduce new water to the groundwater regime in the Portuguese Bend area. In the low-flow condition, there will be a minor redistribution of runoff and infiltration, due to the construction of the driveway and vegetated buffer. In this case water will not infiltrate beneath the impervious driveway. The proposed vegetated buffer strip will reduce runoff velocities and capture some runoff for additional infiltration. The runoff that is not captured in the vegetated strip will sheetflow to the downhill side of the driveway and infiltrate much as it does now. Moreover, a small amount of runoff will be captured by the trench drains that will be installed near the intersection of the driveway with Palos Verdes Drive South and at Narcissa Drive. (See revised SUSMP for the location and design of these proposed facilities). In a peak flow condition, the ground is typically saturated anyway, therefore most runoff leaves the property and does not infiltrate. Also refer to the Hydrologic Analysis and SUSMP Calculations (Rothman Engineering Inc., 10/17/11) referenced above.

In the true perspective, the proposed changes will be very small and should not result in any measurable increase to the groundwater regime in the Portuguese Bend area. In fact, it is important to note that groundwater, in this general location, is at a depth of about 150 feet below the surface. In addition, it is commonly held by geologists familiar with Portuguese Bend that rainfall does not appreciably add to the groundwater regime. Rather, water is infiltrated in the major canyons, which adds to the groundwater regime.

Respectfully submitted,
GINTER & ASSOCIATES, INC.

By: Dave Ginter

Dave Ginter
President

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C.7 – Geosyntec Geotechnical Memorandum

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16 February 2012

Mr. Jay Ziff
PCR Services
233 Wilshire Boulevard, Suite 130
Santa Monica, California 90401

Subject: "Geology and Soils" and "Hydrology and Water Quality" Impacts Point View Master Use Plan, Rancho Palos Verdes, California

Dear Mr. Ziff:

The Point View Master Use Plan (the "Proposed Project") is the subject of a Mitigated Negative Declaration being prepared by the City of Rancho Palos Verdes ("the City") on behalf of the project applicant, York Point View Properties ("YPVP"). This letter was developed by Geosyntec Consultants for PCR Services ("PCR") who is serving as the City's consultant for preparation of a contemplated Mitigated Negative Declaration.

Geosyntec was retained to review and comment on materials prepared by PCR and YPVP as part of the preparation of the Mitigated Negative Declaration. These materials included the current project description, related grading plans, SUSMP (Standard Urban Stormwater Mitigation Plan) applications to the city, and other background information As described in our proposal dated 1 December 2010, Geosyntec's scope of work was to highlight potential project impacts in the areas of "Geology and Soils" and "Hydrology and Water Quality" and provide comments on appropriate mitigations for these impacts. This letter serves as the deliverable for this task.

This work was conducted by Chris Conkle, P.E., G.E. of Geosyntec Consultants. Senior review was provided by Mark Hanna, Ph.D., P.E., and Neven Matasovic Ph.D., P.E., G.E., in accordance with Geosyntec's quality assurance policies.

BACKGROUND

YPVP is proposing to implement the Proposed Project, which includes a number of physical improvements and new activities on a 94-acre property located at 6001 Palos Verdes Drive South in the Portuguese Bend area. The Proposed Project contains the following major components related to the Geosyntec' scope of work: the expansion of agricultural uses on the property and the construction of a paved access road through the property. These features are shown in Attachment A.

The Project site is currently predominantly undeveloped with a small developed area on a flat terrace in the north central portion of the site called the "event garden." Other existing improvements at the site include a one-acre avocado orchard in the northeast or "upland" portion of the site and a network of unpaved roads and trails. The figure included as Attachment A illustrates the location of existing and Proposed Project features.

There are currently two improved driveway entrances to the site: one along West Narcissa Drive on the north side of the property and one along Palos Verdes Drive South on the south side of the property.

The existing improvements at the Narcissa Drive entrance include a 700-foot long paved driveway that extends from Narcissa Drive southwest to the event garden area. As appropriate permits were not obtained at the time of this construction, this access road is proposed to be permitted as part of the Proposed Project.

Improvements at the Palos Verdes Drive South entrance were completed in 2007 and include 120 feet of paved access road. Where the paved portion of this driveway ends, an unpaved driveway continues uphill, connecting to the Narcissa Drive entrance. The Proposed Project includes paving the approximately 2,000-foot long unpaved portion of the internal driveway between the Palos Verdes Drive South entrance and the Narcissa Drive entrance. To minimize cut and fill, the existing unpaved driveway would be slightly realigned to the south approximately midway along the driveway alignment. Additionally, soils along the roadway alignment would be overexcavated and recompacted to a depth of three feet.

Additionally, the Proposed Project would plant approximately 25 acres of new avocado orchards and vineyards. Irrigation systems will be installed to service these proposed agricultural areas.

YPVP has retained a consulting team to prepare design plans and recommendation reports for submittal to the City regarding Proposed Project improvements. YPVP's Engineering Geology consultants are Ginter & Associates, Inc. (formerly Neblett & Associates). YPVP's civil engineer and stormwater consultant is Rothman Engineering. Geosyntec's comments presented in this letter are largely based on review of documents prepared by YPVP's consultants and submitted to the City.

The expansion of agricultural uses on the property, construction of the paved access roads, and implementation of associated stormwater best management practices with each of these improvements are the project components with the largest potential to produce impacts.

GEOLOGY AND SOILS

Discussion of Potential Impacts

General

The northeast portion of the Proposed Project site is located within the Portuguese Bend Landslide Complex. While portions of this landslide complex have been active within historic times, the portion of the landslide complex within the Proposed Project site, known as the Ancient Portuguese Bend Landslide Complex, has not been active within historic times. The “Geology and Soils” impacts of the Proposed Project relate primarily to whether the proposed improvements have the potential to cause substantial adverse effects related to the existing landslides complex within the area.

Ancient Portuguese Bend Landslide Complex

According to Ginter [2011], “A portion of the Point View Site (the north and northeast portions) contains the western extremities of the large prehistoric Portuguese Bend Landslide Complex.” The location of these Ancient Landslide Deposits (Qlso) are shown in Attachment B (Figure 7). When active the slide is assumed to have moved toward the southeast. As such, the project site is located along a rim at the approximate boundary of the ancient slide’s right flank.

As indicated in cross sections prepared by Neblett & Associates and included in Attachment B (Figure 10A and 10B), “The depth of the slide complex is 200± feet near the northeast property line and varies in depth to the north and east of the site from 50+ feet to 100± feet in general.” The lateral shear surface of the slide (right flank) runs from northwest to southeast across the site and is concealed by modern colluvium (Qupc). While concealed, the minimum depth of the shear surface is approximately 20 feet below existing grade near the top of the slope up from Palos Verdes Drive to the location of the existing event garden (see Figure 10A, cross section Oo-Oo′ in Attachment B.)

The City of Rancho Palos Verdes has imposed a moratorium on the filing, processing, approval or issuance of building, grading or other permits in the area of the City identified as the "Landslide Moratorium Area" or LMA. Certain types of minor improvements to existing development have been allowed in the LMA through the process known as the "Moratorium Exemption Permit."

Minor adjustments to the LMA Boundary Line within the Point View site were approved by the City on March 29, 2011 [Ginter, 2011]. The adjustments are shown in Attachment B (Figure 9). The majority of Proposed Project components lie within the moratorium boundary.

The stability of the existing slide was assessed as part of previous development application for the site [Neblett, 2000]. These stability assessments with existing topography indicated that the Ancient Landslide complex has minimum static global factors of safety (FS) ranging from 1.43 (Section A-A′) to 1.15 (Section B-B′). These findings indicate that the site as it exists does not meet the City's typical requirement for development (i.e., FS >1.5).

The upper limits of a recently active slide within the Ancient Portuguese Bend Landslide Complex, the Abalone Cove Landslide, are to the east and southeast of the project site (see Attachment B, Figure 7). The closest elements of the Proposed Project are located within several hundred feet of this recently active landslide. The direction of movement of this landslide is primarily away from the site boundary to the south and east. Movement of this slide is generally considered to have reactivated in 1978 when surface movement occurred within an approximately 80-acre area along Palos Verdes Drive South and Narcissa Drive that included approximately 20 homes. It was this event that ultimately led to the City's establishment of the LMA and the Abalone Cove Landslide Abatement District (ACLAD). To limit landslide movement, dewatering wells were installed between 1978 and 1982. Pumping from the wells, as undertaken and monitored by the ACLAD, appears to have substantially reduced major landslide movement.

Proposed Project Components and Potential Impacts

1. Slope Stability- Existing Portuguese Bend Landslide Complex

Even without accounting for the impact of Proposed Project improvements, Landslide movement of the Portuguese Bend Landslide Complex, specifically the Abalone Cove Landslide and the Ancient Landslide Complex can reasonably be expected to continue at some point in the future, thereby potentially affecting the Proposed Project site.

The site is partially in the LMA. As mentioned above, the LMA was established to address hazards associated with landslide movement as residential development and other improvements in the area constructed on the landslide masses have been and could in the future be affected by landslide deformation.

Groundwater control associated with the ACLAD complex stabilization measures have reduced landslide movement, but will not stop such movement. Movement of the Abalone Cove Landslide to the south-east of the site is still occurring and is expected to occur in the future.

When considering the proposed project, it is important to note that the Proposed Project does not include habitable buildings, but is focused on agricultural uses and improvements to support proposed periodic temporary use of the site for special events. In this way, the potential for significant impacts on property and public safety related to on-site uses in the event of a large landslide movement are considered **less than significant.**

As such, the Proposed Project's potential to result in significant landsliding impacts is primarily focused on the potential for changes on the site to increase the possibility of landslides that could affect structures or persons outside of the boundaries of the site.

2. Slope Stability- Impacts from Proposed Project

In general concerns regarding changes in stability of the existing landslide due to the Proposed Project can be divided into two areas:

1. Changes in the topography due to grading which might reduce the global factor of safety of the existing landslide.

2. Changes in groundwater conditions which may increase pore pressures on the sliding surface and reduce effective stress and thereby reducing global factors of safety.

The construction of the new access road and implementation of agricultural land use requiring irrigation have the potential to contribute to changes in the two above areas.

Construction of Access Road

Construction of the new access road will require minor changes in topography, including approximately 425 cubic yards of cut and 375 cubic yards of fill. The maximum permanent cuts and fill will be up to 2 feet. This grading will be distributed along the approximately 2,000-foot length of the access road. In addition to proposed permanent changes to grade, Ginter's recommendations also call for temporary over-excavation and recompaction of the upper 3 feet of subgrade soils below the proposed pavement section. This will require a substantial, but unspecified volume of excavation, stockpiling, and recompaction.

Ginter has concluded that "there will be no impacts associated with the proposed grading"[1]. Ginter additionally concludes that this action "will have no impact on adjacent properties from a geologic engineering and geotechnical engineering standpoint."

While Ginter has not specifically provided detailed descriptions regarding the conclusions of "no impact" in the 2011 Summary Report, these conclusions are apparently rooted in judgment based on previous stability calculations and site-specific experience. In particular, this experience primarily consists of a 2000 geotechnical investigation involving large cuts and fills for development of the site as a residential subdivision) previously proposed for the project site.[Neblett, 2000]

No fills steep cut or fill slopes are proposed as part of this project. As described above, the maximum depth of cut and fill proposed is only 2 feet. This small quantity of fill is at the limits of what can accurately be portrayed in a slope stability of a landslide of this size. Given this limited grading Ginter's conclusions appear credible and this work is likely to produce **an impact at a less than significant level.**

Golf Course and Other Minor Improvements

The proposed golf course would involve a negligible (less than 20 cubic yards) amount of grading, and therefore no geology report has been prepared for this minor improvement. Additionally, the golf course would be comprised of existing non-native grass and artificial turf, and no irrigation is necessary or proposed. In addition to the

[1] Ginter [2011] provides a summary of Ginter & Associates' conclusions and recommendations regarding the potential for impact from these improvements. The summaries of Ginter & Associate's conclusions in this section are taken from Ginter [2011].

access road findings previously discussed, Ginter [2011] provides “no impact” findings regarding the golf course and other minor project features. As such, impacts on slope stability associated with the golf course and these other minor project features are considered less than significant.

Agricultural Operations

A total of approximately 25 acres of avocado orchards and vineyards are proposed at locations indicated on the figure in Attachment C. This new agricultural land use will require irrigation. This irrigation will take place through drip and mini-sprinklers that have been designed to provide adequate irrigation while preventing excess watering.

The following information regarding irrigation is provided in the project description prepared by PCR Services Corporation (refer to Attachment A, Project Description, of the Initial Study):

> For the proposed vineyard, the rootstock selected for the site is well suited as its root system penetrates around 48 inches. The water delivery system would be an above-ground lateral drip system with a ½-gallon per hour emitter on either side of the vine. The system would be designed to limit water penetration to the “feeding zone” (36–48 inches) of the plant. The watering needs for the first year rootstock would be two gallons once a week for the first month, three gallons once a week during the second month and four gallons, once a week from the third month or until September when the vines would be watered twice, then allowed to go dormant for the winter.
>
> With respect to the avocado operations, Hass avocados have a relatively shallow root system, so up to 80 percent of the water is obtained from the top 2 feet of soil. The recommended irrigation schedule for the first two years is five (5) gallons per tree per week. Initially, each tree would be irrigated by "spot-spitter" type mini-sprinklers. These sprinkler heads provide a gentle rain-like distribution of water with excellent uniformity, which is critical to avocado trees. Young avocados are initially irrigated with a small, 90-degree spot-spitter. After two years, the sprinklers would be changed to a 180-degree pattern. At about four years "spinner" type micro sprinklers would be installed. Watering would mostly occur in the evening or at night to minimize evaporation. Watering would be tapered down from the initially anticipated five (5) gallons per tree as the trees mature. Irrigation would be manually operated by designated

YPVP staff and personnel would be present during watering to confirm that irrigation is sufficient from an agricultural point of view, while ensuring that excess water is not applied. Ginter [2011] estimates that shallow agricultural soil readings will take place on a monthly basis during normal operations.

In general static groundwater elevations in the area are relatively deep (approximately 70 feet below ground surface and above the base of the landslide at NB-MW-002 near the center of the site in 2008); however, "the groundwater regime for the subject site and its environs is complex with the groundwater trapped in various compartments and associated with the intra-landslides within the ancient landslide complex." [Neblett, 2008].

Given the complexity of the groundwater regime of the site and the shallow depth of some portions of the slide plane on site, there is the possibility that if not closely monitored, the proposed agriculture operations could affect groundwater conditions locally, potentially increasing pore pressures on the sliding surface. Given the large consequences of such a change, however small its chance of occurrence, this is a potentially significant impact requiring mitigation. As such, the below mitigation measure, which requires the implementation of a soil moisture monitoring system for agricultural uses, is required. **Implementation of this mitigation measure would reduce the potential landsliding impacts to a less than significant level.**

Proposed Mitigation Measures

The proposed Geology and Soils mitigation measure is summarized below. As mentioned above, this mitigation measure would limit the potential for significant impacts to property and public safety and reduce impacts of landsliding to a less than significant level.

1. Limit irrigation and concentrated infiltration to levels which have negligible impact on the existing landslides. Confirm that these practices are limited successfully by developing and implementing a detailed vadose zone monitoring program for areas within the footprint of Ancient Portuguese Bend Landslide Complex. Monitor soil moisture in the vadose zone as a proxy and early warning for potential changes in the saturated zone. This monitoring program should be developed based on a site specific evaluations addressing what the potential for change is and establishing appropriate monitoring measures. Implementation of this monitoring program will allow for ongoing

evaluations of changes in degree of saturation within the upper portion of the landslide mass.

The proposed vadose zone monitoring plan should be reviewed and approved by the City prior to beginning of agricultural operations. The monitoring plan should at a minimum establish the location, depth, and type of monitoring equipment as well as a frequency of data gathering. An effective monitoring program will require a period of baseline monitoring to establish seasonal trends.

No change in soils moisture as a result of the irrigation should be allowed at depths greater than 5 feet below ground surface unless a greater depth is established in a technical report submitted by YPVP and approved by the city. Changes in soil moisture below this depth may indicate that there is a potential for groundwater conditions at the site to be affected locally by the operation.

The implementation and monitoring of this program shall be carried out by a licensed geotechnical engineer or engineering geologist who should provide monitoring reports to the city, at a minimum quarterly frequency.

HYDROLOGY AND WATER QUALITY

<u>Discussion of Potential Impacts</u>

General

This section describes potential impacts on hydrology and water quality. Information regarding hydrology is largely based on a site-specific hydrology study, “the SUSMP report,” prepared on behalf of YPVP by Rothman Engineering. Rothman also prepared grading plans for the access road which provide details regarding stormwater BMPs (Attachment D). The study focuses on impacts of the proposed roadway grading on site drainage patterns and provides detailed calculations and designs for stormwater quality best management practices (BMPs) including treatment control BMPs. Select figures from this report are included as Attachment E.

Site Hydrology and Best Management Practice Description

According to the SUSMP report, no changes in drainage area tributary to each of the discharge points are proposed as part of the project. The site drainage areas in question discharge into Abalone Cove, a recognized environmentally sensitive area (ESA).

The description of site hydrology is based on Figures H-1 and H-2 of the SUSMP report [Rothman, 2011] included as Attachment E. Descriptions of water courses and conveyances downstream of the drainage areas described below are based on information provided in a previous EIR prepared for the site [PCR, 2005].

Drainage Area 1 and SUSMP 1

This 31.97-acre drainage area encompasses the majority of the western portion of site. The tributary area includes proposed avocado orchards, vineyards, and a portion of the access road.

According to [PCR, 2005] Area 1 flows into an existing 24-inch reinforced concrete pipe (RCP) storm drain that extends under Palos Verdes Drive South and outlets into a natural watercourse south of the road and discharges to Abalone Cove.

Proposed best management practices proposed for this area (SUSMP 1) include a vegetated buffer strip along the western side of the access road and a catch basin filter insert to collect flows not tributary to the buffer strip at the end of the south end of the access road.

Drainage Area 2 and SUSMP 2

Located east of Area 1, this area contains 26.94 acres of drainage area, including a proposed vineyard and access road. According to [PCR, 2005], the runoff from this area drains to an existing 24 inch RCP storm drain (near the south central portion of the site) and an existing 18 inch RCP storm drain (near the south east corner of the site) "that extends under Palos Verdes Drive South and outlets into a small watercourse in the central portion of Abalone Cove Shoreline Park. From there, runoff is conveyed on the surface through the park. At the bluff, the runoff flows directly to the beach and into Abalone Cove."

Proposed best management practices proposed for this area (SUSMP 2) include a vegetated buffer strip along the south side of the access road.

Drainage Area 3 and SUSMP 3

Located along the eastern boundary of the site, this drainage area consists of 10.93 acres, including proposed avocado orchards, vineyards and the access road. The runoff from this area is conveyed to Narcissa Drive and then flows along the eastern property boundary before discharging in the previously mentioned 18” RCP under Palos Verdes Drive South through the park, and directly to the beach and into Abalone Cove.

Proposed best management practices proposed for this area (SUSMP 3) include a vegetated buffer strip along the south side of the access road.

Drainage Area 4 and SUSMP 4

Runoff from this drainage area (3.19 acres) in the eastern portion of the site currently sheet flows off the property to Narcissa Drive. This area will include proposed avocado orchards, the proposed access road, and the existing access road to Narcissa.

Proposed best management practices for this area (SUSMP 4) include a vegetated buffer strip along the south side of the proposed access road and construction of a vegetated buffer strip along the north side of the existing “Narcissa” access road. Additionally, a catch basin filter insert is proposed at the Narcissa entrance to capture sheet flow from the immediate area which would otherwise travel off site.

Barkentine Canyon

Not included in Rothman’s study is a description of the portions of the site that are tributary directly to Barkentine Canyon, a blue line stream to the west of the site. As evident in Rothman’s Figure S-2, a portion of the proposed agricultural area in the northwest corner of the site (Avocado orchards) is tributary to this stream. According to [PCR, 2005] “Waters draining from Barkentine Canyon … discharge into the 36-inch corrugated metal pipe (PD 094) that passes under Palos Verdes Drive South and into a natural drainage channel. This channel flows southeast and confluences with the natural channel (south of Palos Verdes Drive South), which conveys the runoff from [Drainage Area 1A]. This combined runoff is conveyed to Abalone Cove.”

Potential Water Quality Impacts

The Proposed Project does not substantially alter the existing drainage patterns at the site. While some additional impervious surface is proposed, according to Rothman there is no resulting increase in flow rates from the existing condition. However, there are potential concerns related to water quality impacts related to construction and changes in land use (access road and agricultural).

1. Stormwater Quality Impacts during Construction Phase

   Grading and construction activities have the potential to result in erosion of exposed soils and transportation of sediment into the natural drainage channels and Abalone Cove. This is considered a potentially significant impact.

2. Stormwater Quality Impacts Due to Discharge of Access Road Related Runoff

   Under the Proposed Project, access road related pollutants may be generated and carried off site by stormwater runoff. Access road-related pollutants may include trash; nutrients; oil and grease; copper, zinc, lead and cadmium; and bacteria.

   As the Proposed Project would discharge runoff from the access road to natural drainage channels and the Abalone Cove ESA, it has the potential to degrade water quality in these water bodies. This is considered a potentially significant impact.

3. Stormwater Quality Impacts Due to Discharge of Agricultural Stormwater Runoff

   As the Proposed Project would discharge runoff from the agricultural areas to natural drainage channels including Barkentine Canyon and the Abalone Cove ESA, it has the potential to degrade water quality in these water bodies. This is considered a potentially significant impact.

   Stormwater runoff from the proposed avocado orchards and vineyard has the potential to carry sediment, nutrients, and pesticides.

4. Stormwater Quality Impacts Due to Increased Site Use and Internal Circulation

   As the Proposed Project allows for increased internal foot, agricultural, and horse traffic, there is the potential for increased bacteria inputs and erosion on unpaved trails and roadways as well as from off-trail usage. This is considered a potentially significant impact.

<u>Proposed Mitigation Measures</u>

As discussed above, the Proposed Project has the potential to result in potentially significant impacts with respect to stormwater quality during construction and operation. As such, mitigation measures are provided below. These mitigation measures include requiring a Construction Stormwater Pollution Prevention Plan, multiple best management practices (BMPs) for the project's operational features, and institutional controls. **Implementation of the below mitigation measures would reduce potential construction and operational stormwater quality impacts to a less than significant level.**

1. Stormwater Quality During Construction Phase

   As this project will disturb one or more acres of soil, the YPVP will be required to obtain coverage under the State of California's General Permit for Discharges of Stormwater Associated with Construction Activity. As an appropriate mitigation for construction related stormwater impacts, YPVP will be required to prepare and carryout a Construction Stormwater Pollution Prevention Plan satisfying the requirements of this general permit. Consideration should also be given to applying construction BMPs in agricultural areas.

2. Implement Treatment Control BMPs for Access Roads as described in SUSMP report with appropriate modifications

   Compliance with regulatory requirements is an appropriate mitigation measure to address stormwater impacts from the access roads. The proposed BMPs include vegetated buffer strips and catch basin filter inserts.

   Geosyntec has the following comments regarding details of the implementation of these BMPs:

   - The vegetated buffer strips currently proposed are 20 feet wide (equal to the width of the access road.) Guidance from the California Stormwater BMP handbook indicates that as a sizing guideline the width of the vegetated buffer strip should be the same as the width of the tributary area and should not exceed 60 feet. This condition is not met in SUSMP Areas 2, 3, and 4 where additional areas upstream of the access road (up to several hundred feet) are tributary to the buffer strip. With large tributary areas upstream of the buffer strip, flow rates may exceed those required for appropriate residence time in the buffer strip. The applicability of the buffer strips in these areas should be demonstrated prior to their acceptance and implementation.

- Trash, bacteria, and nutrients may not be treated effectively by the proposed BMPs. While not typical pollutants of concern for roadways, these are all contained in city's guidelines regarding anticipated pollutants of concern and special consideration should be given to establishing additional site specific BMPs that limit the potential for these pollutants from entering stormwater at the site. As such, the additional institutional controls described in Item 4 below should be implemented to address concerns from these pollutants.

3. Implement BMPs for Agricultural Areas as Described in "the SUSMP report."

YPVP has proposed to provide cover crop (grass), straw mulch, and straw fiber rolls as necessary to control soil erosion in agricultural areas per Chapter 3 of [Sonoma, 2010]. A summary of the Cover Crop and other BMP requirements from this reference is as follows::

- Establish thick cover crops by October 15 and maintain them throughout the rainy season (until April 15).

- Broadcast crop cover seed in the fall. In order to have adequate protection by the start of the rainy season (October 15), the seed should be planted by mid-September. Initial irrigation will be required for most grasses with follow-up irrigation and fertilization. The cover crop should look like a lawn by October 15 (for new plantings and November 15 for replants) in order to provide adequate protection for the soil during the first heavy rains.

- If plant cover crop cannot be planted by mid-September and irrigate the seed, then seed may be planted in October and covered with straw mulch applied at the rate of two tons per acre (about 42 bales per acre). You should not be able to see any soil once the straw is applied.

- If rain is likely after the cover crop has been tilled and there is no perimeter erosion control, use straw mulch at the rate of two tons per acre (about 42 bales per acre) in areas where cover crops are planted.

- Whenever possible, avoid tilling early in the spring or late in the fall.

- Minimize tillage practices, especially if slopes are greater than nominal (>5-10%) or if soils are highly erodible.

- Do not till turn-around areas except for the infrequent need to reduce compaction. In this case, promptly cover the soil with straw mulch and replant with a cover crop before the rainy season.
- Avoid bringing equipment into the vineyard/orchard during the wet season. Close seasonal roads to traffic and maintain permanent roads to prevent erosion.
- Keep on site extra erosion control materials such as straw bales or wattles, gravel or geo-textile fabric and train vineyard/orchard crews in their proper installation.
- If necessary, provide Straw Mulch per California BMP Handbook BMP number EC-6.

This is an appropriate mitigation measure.

A detailed site plan indicating the layout of proposed BMPs based on Rothman's "SUSMP, Proposed Condition, Agricultural Plan (Fig. S-2)" should be submitted to the City for approval prior to construction of the proposed agricultural features.

4. Institutional controls should be implemented to guard against stormwater quality impacts from increased site use and internal circulation.

   This may include impacts from increased vehicle traffic in unpaved areas (agricultural and events guests) which may contribute to sediment loading and equestrian activities on paved portions of the site which may contribute to bacteria loading and increased erosion. Signage discouraging off-trail usage, trail and unpaved roadway BMPs, and other site specific institutional controls should be evaluated as potentially appropriate BMPs in these areas. As a specific measure to reduce the potential for discharge of pollutants of concern against which the proposed BMPs may not be particularly effective (e.g., sediment, trash, bacteria), an assessment of roadway and other circulation areas should be made by YPVP after each event and during heavy agricultural usage. If warranted based on this assessment, sweeping and trash removal in the affected areas should be undertaken immediately.

5. BMP Operation and Maintenance

   YPVP should be required to enter into an agreement with the City of Rancho Palos Verdes detailing YPVP's long-term Operations and Maintenance responsibilities regarding the proposed treatment control BMPs in the Access Road and Agricultural Areas.

CONCLUSION

This letter has identified a number of "Geology and Soils" and "Hydrology and Water Quality" related project impacts. Geosyntec's professional opinion is that, with the implementation of appropriate mitigation measures as outlined herein, the finding of a mitigated negative declaration is appropriate with regard to these impacts.

CLOSING

Geosyntec appreciates the opportunity to assist PCR and the City on this important project.

If there are any questions, please do not hesitate to contact the undersigned at (714) 969-0800.

Sincerely,

Christopher Conkle, P.E., G.E.
Project Engineer

Neven Matasovic, Ph.D., P.E., G.E.
Associate

Attachments:

Attachment A: Master Use Plan Figure
Attachment B: Geologic Maps [Neblett, 2008]
Attachment C: Project Agricultural Plan
Attachment D: Grading Plans
Attachment E: SUSMP Report [Rothman, 2011]

REFERENCES

Ginter [2011] "Response to PCR Services Corporation and Geosyntec Consultants Comments regarding the Geologic Summary for the Point View Master Use Plan, Rancho Palos Verdes, California" Letter, Ginter & Associates, Inc., Mission Viejo, California, November.

Neblett [2000], "Preliminary Geologic and Geotechnical Engineering Report and Grading Plan Review, Point View Development Site, Rancho Palos Verdes, California" Technical Report, Neblett & Associate, Inc., Huntington Beach, California, December.

Neblett [2008], "Geologic Report Providing Geologic Data to Support Adjusting the Moratorium Line with the Point View Site " Technical Report, Neblett & Associate, Inc., Huntington Beach, California, December.

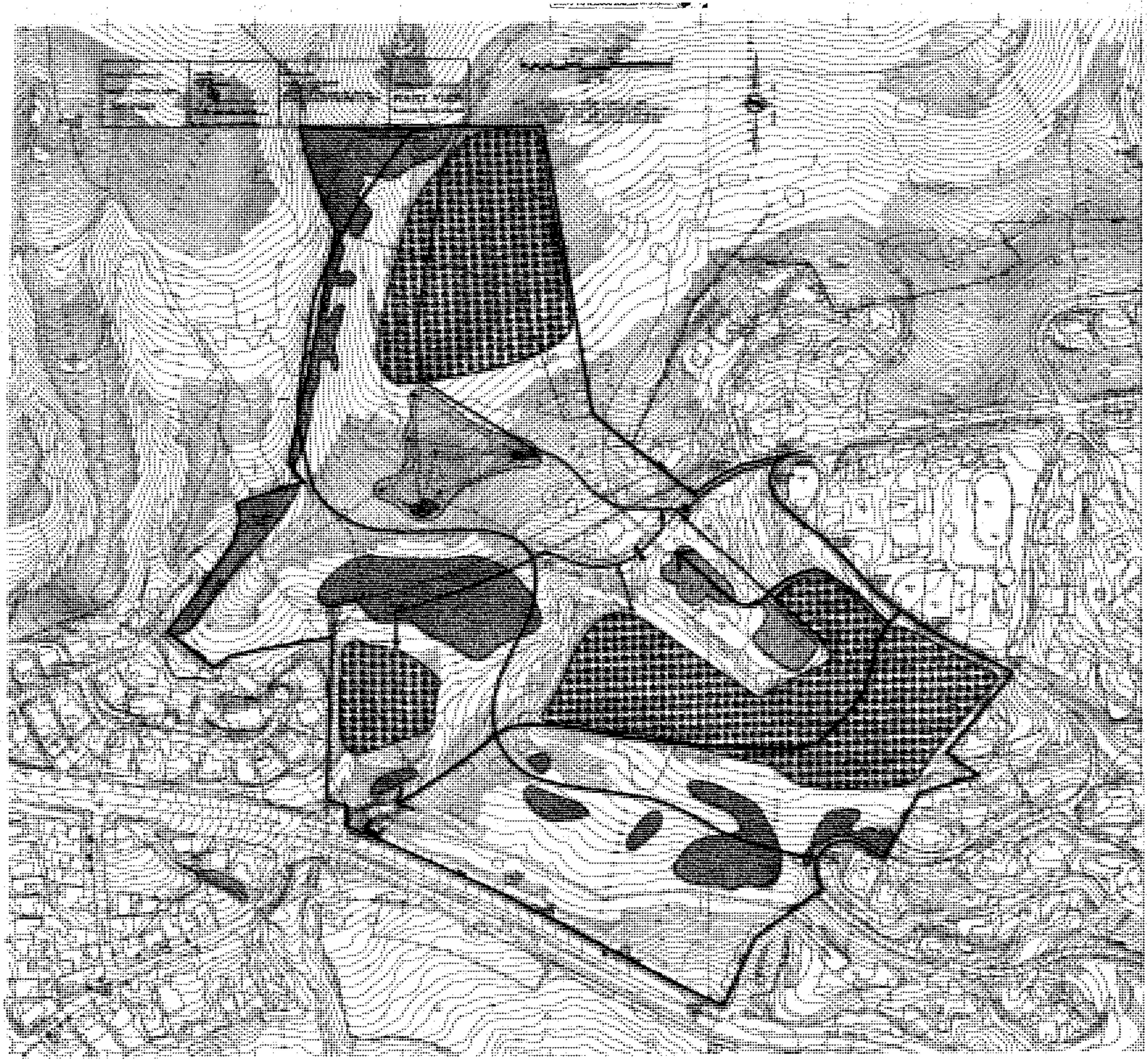
PCR [2005], "Draft Environmental Impact Report, Point View Project " Technical Report, PCR Services Corporation, Santa Monica, California, July.

Rothman [2011] "Hydrologic Analysis and SUSMP Calculations for 6001 Palos Verdes Drive South, Rancho Palos Verdes, CA 90275" Technical Report, Rothman Engineering, Los Angeles, California, October.

Sonoma [2010], "Best Management Practices for Agricultural Erosion and Sediment Control" Guidance Document, Sonoma County Agricultural Commissioner's Office, Sonoma, California, February.

ATTACHMENT A

MASTER USE PLAN FIGURE



POINT VIEW PROPERTY

MASTER USE PLAN

- AGRICULTURE
- GOLF COURSE / EVENT GARDEN
- DRIVEWAY

LEGEND

- AGRICULTURE
- IRRIGATION
- GOLF COURSE
- EVENT GARDEN
- DRIVEWAY
- COASTAL SAGE SCRUB
- LANDSLIDE MORATORIUM

FIGURE 1

YORK POINT VIEW PROPERTIES, LLC

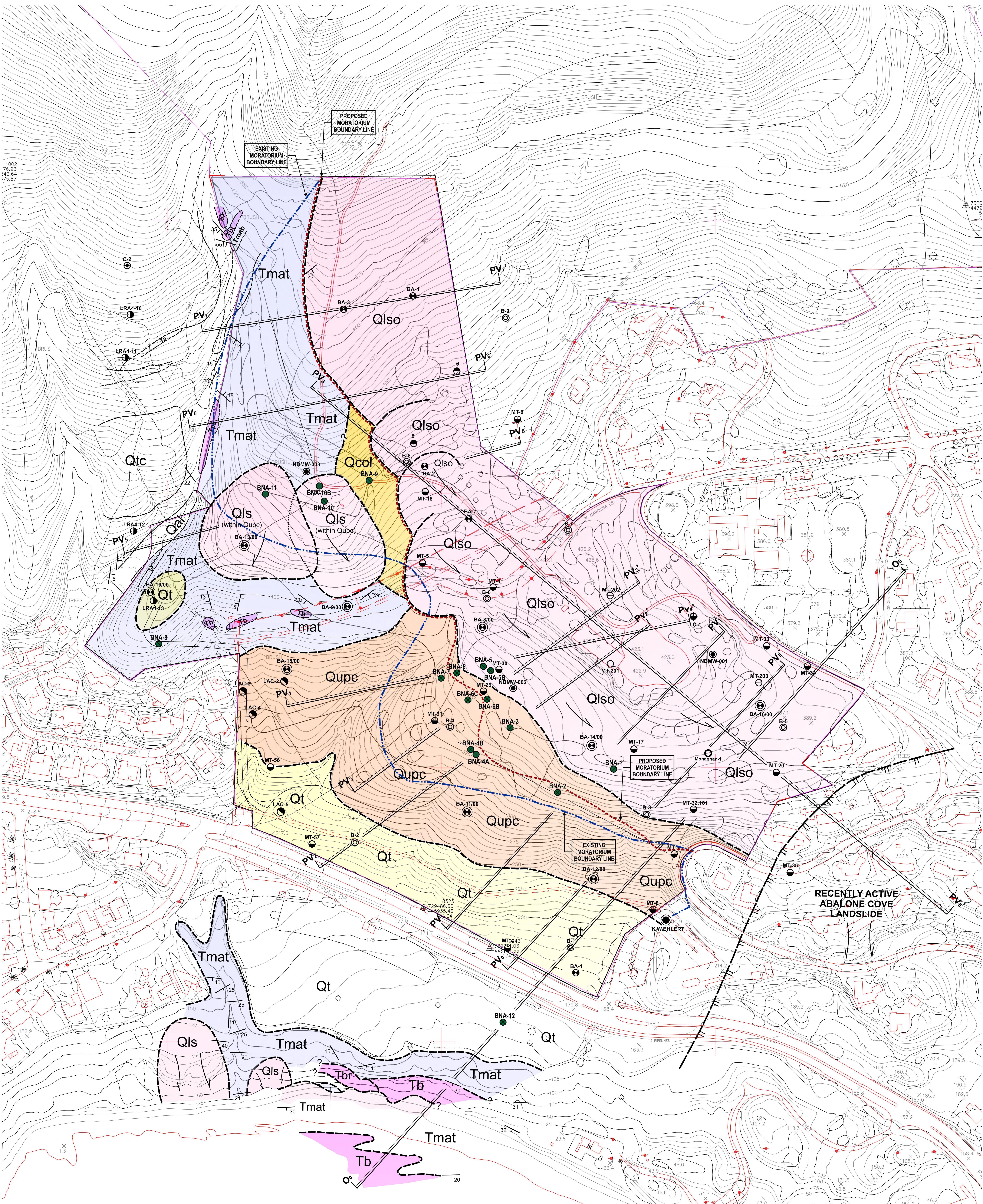
APRIL 2010

ATTACHMENT B

GEOLOGIC MAPS
[NEBLETT, 2008]

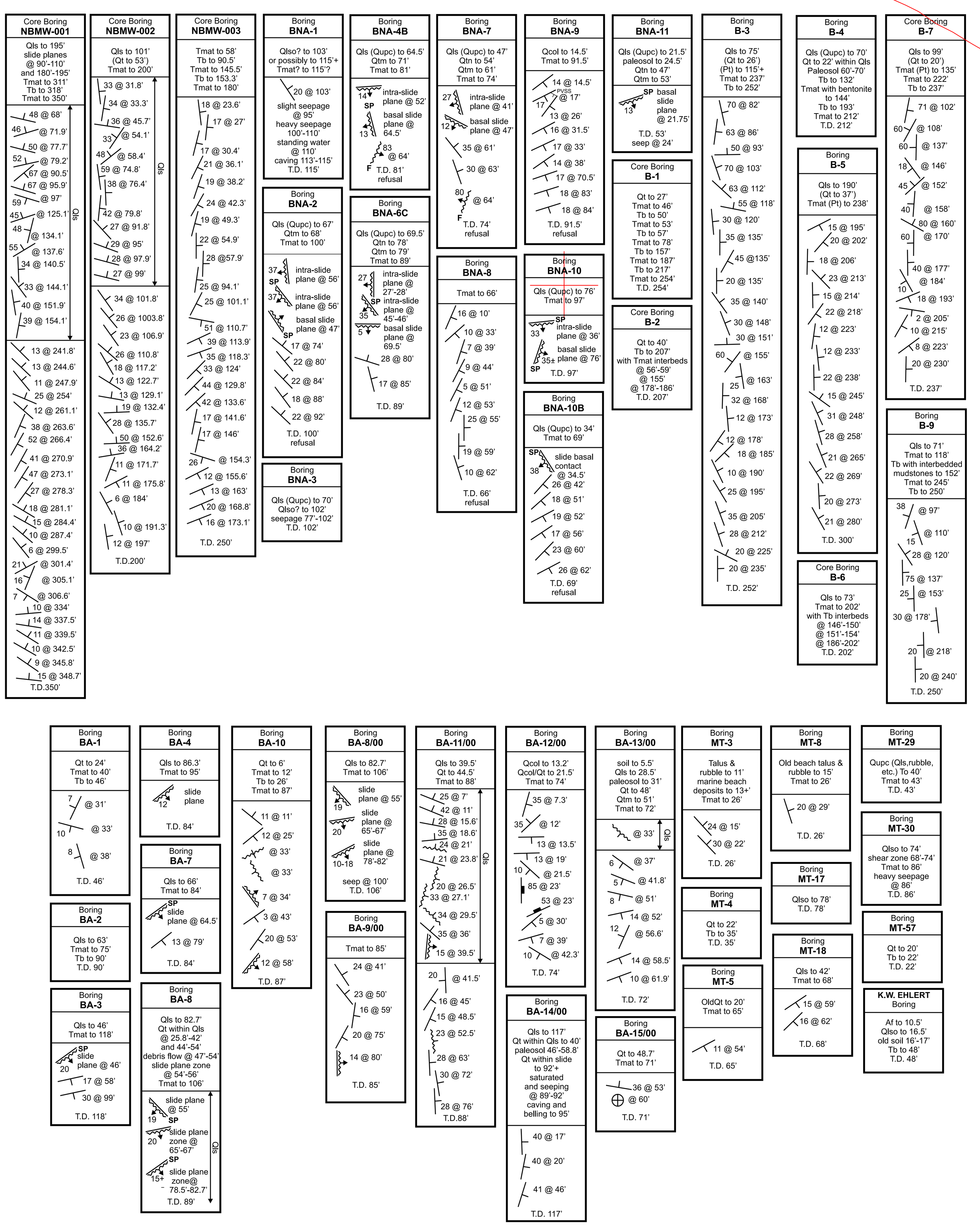
REVISED Figure 7
(Modified Figure 10 from Neblett & Associates 4-30-02 Report)
GEOLOGIC MAP OF POINT VIEW, UPPER FILIORUM AND VICINITY

NEBLETT & ASSOCIATES 4911 WARNER AVENUE, SUITE 218 HUNTINGTON BEACH, CA 92649 PHONE: (714) 840-8286 FAX: (714) 840-9796	
PROJECT 279-004-05	DATE 6-17-08



Explanation

Qcol	COLLUVIUM
Qt	TERRACE DEPOSITS, MARINE AND NON-MARINE
Qupc	UNDIFFERENTIATED MODERN COLLUVIUM AND PALEOSEACLIFF DEBRIS AND MARINE TERRACE: PALEOSEACLIFF DEBRIS INCLUDES CLIFF DERIVED COLLUVIUM, TALUS, TOPPLED BLOCKS, SLUMPS AND LOCAL PALEOSLIDES
Qls	LANDSLIDE DEPOSITS SHOWING APPROXIMATE DIRECTION OF FLOW
Tmat	TERTIARY MONTEREY FORMATION, ALTAMIRA SHALE MEMBER
pt	PORTUGUESE TUFF UNIT WITHIN ALTAMIRA SHALE
bt	BARKENTINE TUFF UNIT WITHIN ALTAMIRA SHALE
Tb (Tbt)	BASALTIC ROCKS (SUBSCRIPT "t" DENOTES UNITS CONTAINING ABUNDANT TUFF AND PUMICE)
?	APPROXIMATE GEOLOGIC CONTACT; DOTTED WHERE CONCEALED, QUERIED WHERE UNCERTAIN
	EXISTING MORATORIUM BOUNDARY LINE
	PROPOSED MORATORIUM BOUNDARY LINE
15	STRIKE AND DIP OF BEDDING
	HORIZONTAL BEDDING
45	STRIKE AND DIP OF JOINT
35	STRIKE AND DIP OF SHEARS ALONG BEDDING
25	STRIKE AND DIP OF SHEAR
SP 15	STRIKE AND DIP OF SLIDE PLANE
BNA-11	LOCATION OF BUCKET AUGER BORING BY NEBLETT & ASSOCIATES (2005-2006)
NBMW-002	LOCATION OF DIAMOND CORE BORING BY NEBLETT & ASSOCIATES (2000), CONVERTED TO MONITORING WELL
B-11/00	LOCATION OF DIAMOND CORE BORING BY LEIGHTON & ASSOCIATES (2000), CONVERTED TO MONITORING WELL
BA-16/00	LOCATION OF BUCKET AUGER BORING BY LEIGHTON & ASSOCIATES (2000)
BA-8	LOCATION OF BUCKET AUGER BORING BY LEIGHTON & ASSOCIATES (1996)
B-9	LOCATION OF DIAMOND CORE OR ROTARY BORING BY LEIGHTON & ASSOCIATES (1996)
MT-202	LOCATION OF BORING BY MOORE & TABER (1978)
MT-1	LOCATION OF BORING BY MOORE & TABER (1969)
LAC-4	LOCATION OF BUCKET AUGER BORING BY LOS ANGELES COUNTY ENGINEERING DEPARTMENT (1975)
LC-1	LOCATION OF DIAMOND CORE BORING BY LAW / CRANDALL & ASSOCIATES (1991), MONITORING WELL INSTALLED
8	LOCATION OF BORING BY STONE GEOLOGICAL SERVICE (1961)
LRA4-12	LOCATION OF EXPLORATORY BORING BY LRA (1982)
C-2	LOCATION OF BORING BY CONVERSE CONSULTANTS (1966 AND 1981)



REVISED Figure 9
GEOLOGIC MAP OF POINT VIEW
(100-Scale)

NEBLETT & ASSOCIATES
4911 WARNER AVENUE, SUITE 218
HUNTINGTON BEACH, CA 92649
PHONE: (714) 840-8286 FAX: (714) 840-9796

PROJECT 279-004-05 | DATE 6-17-08

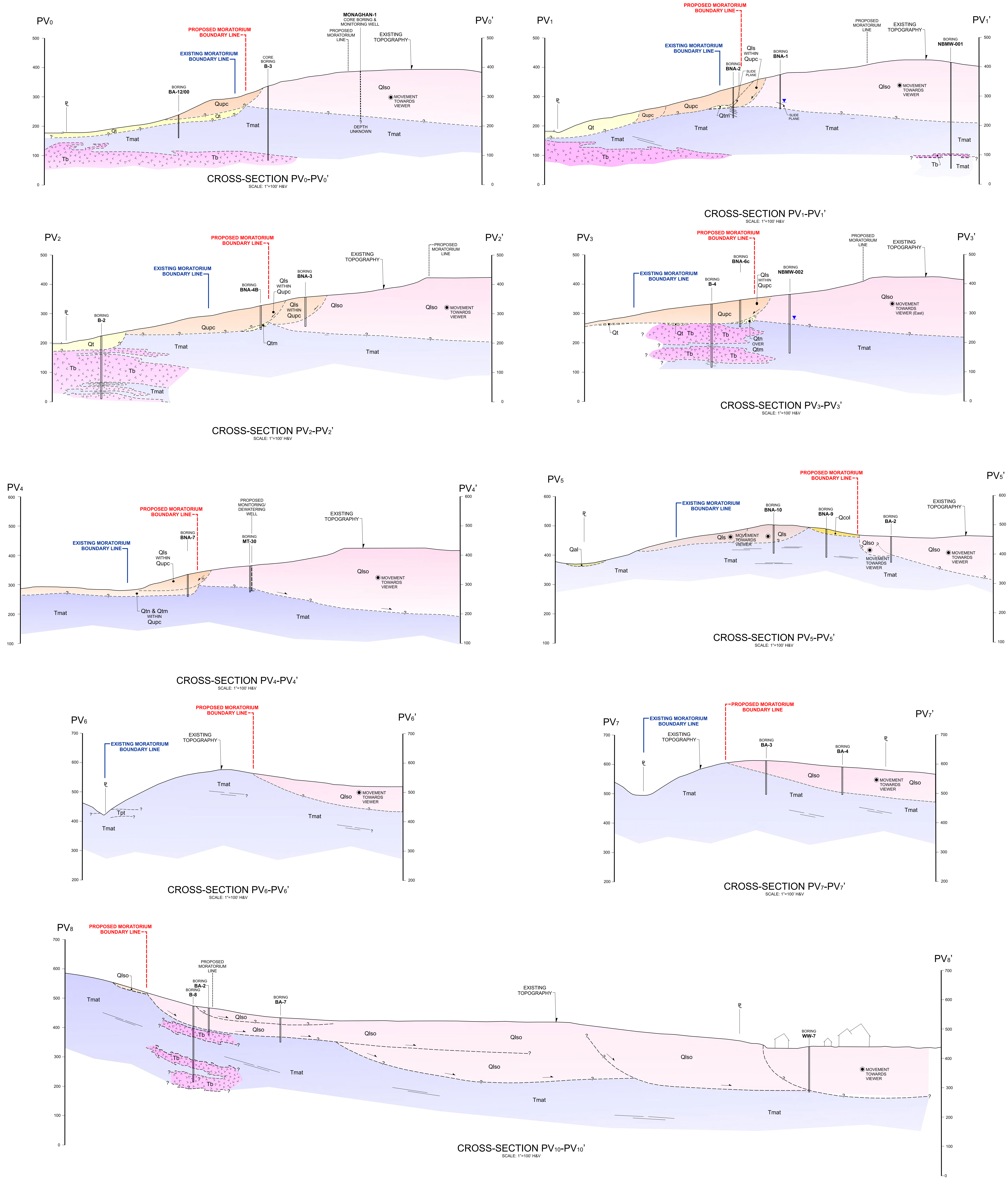
CROSS-SECTION Oo-Oo’

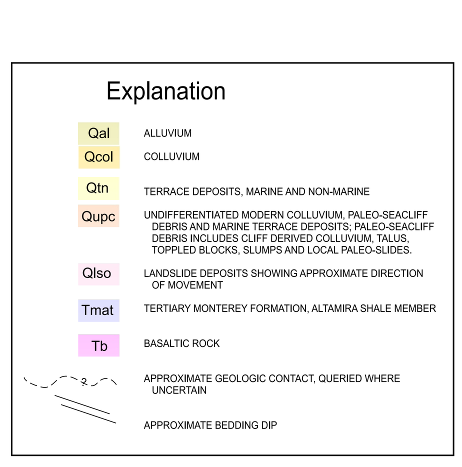
SCALE: 1"=100' H&V

Figure 10a
CROSS-SECTION Oo-Oo’

NEBLETT & ASSOCIATES
4911 WARNER AVENUE, SUITE 218
HUNTINGTON BEACH, CA 92649
PHONE: (714) 840-8286 FAX: (714) 840-9796

PROJECT 279-004-05 DATE 6-17-08





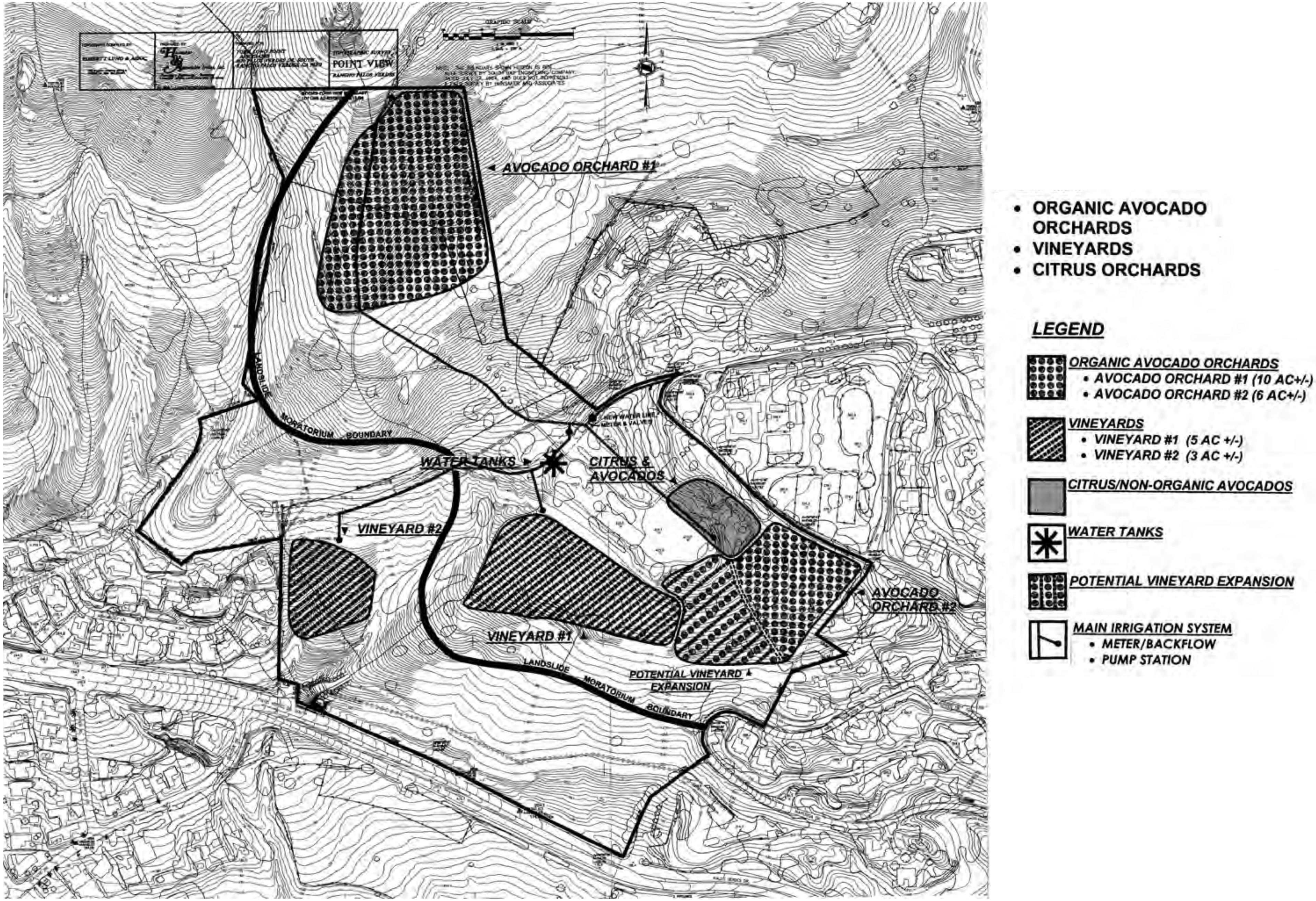
REVISED Figure 10b
CROSS-SECTION PV0-PV0'
THROUGH CROSS-SECTION PV8-PV8'

NEBLETT & ASSOCIATES
4911 WARNER AVENUE, SUITE 218
HUNTINGTON BEACH, CA 92649
PHONE: (714) 840-8286 FAX: (714) 840-9796

PROJECT 279-004-05 DATE 6-17-08

ATTACHMENT C

PROJECT AGRICULTURAL PLAN



- PRELIMINARY WORKING DRAFT -

PCR

Project Agricultural Plan

Point View Master Use Plan

Source: York Point View Properties, 2011.

FIGURE

A-8

ATTACHMENT D

GRADING PLANS

GENERAL NOTES

1. ALL GRADING AND CONSTRUCTION SHALL CONFORM TO APPENDIX CHAPTER 33 AND CHAPTER 18 (LATEST EDITION) OF THE CALIFORNIA BUILDING CODE UNLESS SPECIFICALLY NOTED ON THESE PLANS.
2. ANY MODIFICATIONS OF OR CHANGES TO APPROVED GRADING PLANS MUST BE APPROVED IN WRITING BY THE BUILDING OFFICIAL.
3. NO GRADING SHALL BE STARTED WITHOUT FIRST NOTIFYING THE BUILDING OFFICIAL. A PRE· GRADING MEETING AT THE SITE IS REQUIRED BEFORE THE START OF THE GRADING WITH THE FOLLOWING PEOPLE PRESENT: OWNER, GRADING CONTRACTOR, DESIGN CIVIL ENGINEER, SOILS ENGINEER, GEOLOGIST, CITY GRADING INSPECTOR(S) OR THEIR REPRESENTATIVES, AND WHEN REQUIRED THE ARCHEOLOGIST OR OTHER JURISDICTIONAL AGENCIES. PERMITTEE OR HIS AGENT ARE RESPONSIBLE FOR ARRANGING PRE-GRADE MEETING AND MUST NOTIFY THE BUILDING OFFICIAL AT LEAST TWO BUSINESS DAYS PRIOR TO PROPOSED PRE-GRADE MEETING.
4. APPROVAL OF THESE PLANS REFLECT SOLELY THE REVIEW OF PLANS IN ACCORDANCE WITH THE CALIFORNIA BUILDING CODE AND DOES NOT REFLECT ANY POSITION BY THE CITY OF RANCHO PALOS VERDES REGARDING THE STATUS OF ANY TITLE ISSUES RELATING TO THE LAND ON WHICH THE IMPROVEMENTS MAY BE CONSTRUCTED. ANY DISPUTES RELATING TO TITLE ARE SOLELY A PRIVATE MATTER NOT INVOLVING THE CITY OF RANCHO PALOS VERDES.
5. ALL GRADING AND CONSTRUCTION ACTIVITIES SHALL COMPLY WITH CITY OF RANCHO PALOS VERDES MUNICIPAL CODE, SECTION 17.56.020.8 THAT CONTROLS AND RESTRICTS NOISE FROM THE USE OF CONSTRUCTION AND GRADING EQUIPMENT FROM THE HOURS OF 7:00 PM TO 7:00 AM, AND ON SUNDAYS AND HOLIDAYS. (MORE RESTRICTIVE CONSTRUCTION ACTIVITY TIMES MAY GOVERN, AS REQUIAED BY THE PLANNING DEPARTMENT OR DISCRETIONARY APPROVAL CONDITIONS FOR THE PROJECT AND SHOULD BE SHOWN ON THE GRADING PLANS WHEN APPLICABLE.)
6. CALIFORNIA PUBLIC RESOURCES CODE (SECTION 5097.98) AND HEALTH AND SAFETY CODE (SECTION 7050,5) ADDRESS THE DISCOVERY AND DISPOSITION OF HUMAN REMAINS. IN THE EVENT OF DISCOVERY OR RECOGNITION OF ANY HUMAN REMAINS IN ANY LOCATION OTHER THAN A DEDICATED CEMETERY, THE LAW REQUIRES THAT GRADING IMMEDIATELY STOPS AND NO FURTHER EXCAVATION OR DISTURBANCE OF THE SITE, OR ANY NEARBY AREA WHERE HUMAN REMAINS MAY BE LOCATED, OCCUR UNTIL THE FOLLOWING HAS BEEN MEASURES HAVE BEEN TAKEN:
   a, THE COUNTY CORONER HAS BEEN INFORMED AND HAS DETERMINED THAT NO INVESTIGATION OF THE CAUSE OF DEATH IS REQUIRED, AND
   b, IF THE REMAINS ARE OF NATIVE AMERICAN ORIGIN, THE DESCENDANTS FROM THE DECEASED NATIVE AMERICANS HAVE MADE A RECOMMENDATION FOR THE MEANS OF TREATING OR DISPOSING, WITH APPROPRIATE DIGNITY, OF THE HUMAN REMAINS AND ANY ASSOCIATED GRAVE GOODS.
7. THE LOCATION AND PROTECTION OF All UTILITIES IS THE RESPONSIBILITY OF THE PERMITTEE.
8. ALL EXPORT OF MATERIAL FROM THE SITE MUST GO TO A PERMITTED SITE APPROVED BY THE BUILDING OFFICIAL OR A LEGAL DUMPSITE. RECEIPTS FOR ACCEPTANCE OF EXCESS MATERIAL BY A DUMPSITE ARE REQUIRED AND MUST BE PROVIDED TO THE BUILDING OFFICIAL UPON REQUEST.
9. A COPY OF THE GRADING PERMIT AND APPROVED GRADING PLANS MUST BE IN THE POSSESSION OF A RESPONSIBLE PERSON AND AVAILABLE AT THE SITE AT ALL TIMES.
10. SITE BOUNDARIES, EASEMENTS, DRAINAGE DEVICES, RESTRICTED USE AREAS SHALL BE LOCATED PER CONSTRUCTION STAKING BY FIELD ENGINEER OR LICENSED SURVEYOR. PRIOR TO GRADING, AS REQUESTED BY THE BUILDING OFFICIAL, ALL PROPERTY LINES, EASEMENTS, AND RESTRICTED USE AREAS SHALL BE STAKED.
11. THE STANDARD RETAINING WALL DETAILS SHOWN ON THE GRADING PLANS ARE FOR REFERENCE ONLY. STANDARD RETAINING WALLS ARE NOT CHECKED, PERMITTED, OR INSPECTED PER THE GRADING PERMIT. A SEPARATE RETAINING WALL PERMIT 15 REQUIRED FOR ALL STANDARD RETAINING WALLS, *NOTE.' this note only applies to standard retaining walls. Geo grid fabric and segmental retaining walls do not require a separate retaining wall pen nit. Details and construction notes for all geo grid walls must be on the grading plan.*
12, IF GRADING AUTHORIZED BY THIS PLAN IS TO EXTEND THROUGH THE RAINY SEASON, OCTOBER 1 THROUGH APRIL 15 OF THE FOLLOWING YEAR, SEPARATE UPDATED PLANS FOR EROSION CONTROL MUST BE SUBMITTED PRIOR TO SEPTEMBER 1
13. TRANSFER OF RESPONSIBILITY: IF THE CIVIL ENGINEER, THE SOILS ENGINEER, OR THE ENGINEERING GEOLOGIST OF RECORD IS CHANGED DURING GRADING, THE WORK SHALL BE STOPPED UNTIL THE REPLACEMENT HAS AGREED IN WRITING TO ACCEPT THEIR RESPONSIBILITY WITHIN THE AREA OF TECHNICAL COMPETENCE FOR APPROVAL UPON COMPLETION OF THE WORK. IT SHALL BE THE DUTY OF THE PERMITTEE TO NOTIFY THE BUILDING OFFICIAL IN WRITING OF SUCH CHANGE PRIOR TO THE RECOMMENCEMENT OF SUCH GRADING.

INSPECTION NOTES

1. THE PERMITTEE OR HIS AGENT SHALL NOTIFY THE BUILDING OFFICIAL AT LEAST ONE WORKING DAY IN ADVANCE OF REQUIRED INSPECTIONS AT FOLLOWING STAGES OF THE WORK.
   a. INITIAL· WHEN THE SITE HAS BEEN CLEARED OF VEGETATION AND UNA.PPROVED FILL HAS BEEN SCARIFIED. BENCHED OR OTHERWISE PREPARED FOR FILL, FILL SHALL NOT BE PLACEDPRIOR TO THIS INSPECTION. NOTE: PRIOR TO ANY CONSTRUCTION ACTIVITIES, INCLUDING GRADING, ALL STORM WATER POLLUTION PREVENTION MEASURES INCLUDING EROSION CONTROL DEVICES WHICH CONTAIN SEDIMENTS MUST BE INSTALLED.
   b. ROUGH - WHEN APPROXIMATE FINAL ELEVATIONS HAVE BEEN ESTABLISHED; DRAINAGE TERRACES, SWALES AND BERMS INSTALLED AT THE TOP OF THE SLOPE; AND THE STATEMENTS REQUIRED ON THESE PLANS, ON THE GRADING PERMIT AND IN THE DISCRETIONARY PERMIT HAVE BEEN RECEIVED.
   c. FINAL WHEN GRADING HAS BEEN COMPLETED; ALL DRAINAGE DEVICES INSTALLED; SLOPE PLANTING ESTABLISHED, IRRIGATION SYSTEMS INSTALLED AND THE AS·BUILT PLANS, REQUIRED STATEMENTS, AND REPOATS HAVE BEEN SUBMITTED AND APPROVED.
2. IN ADDITION TO THE INSPECTION REQUIRED OF THE BUILDING OFFICIAL FOR REGULAR GRADING, REPORTS AND STATEMENTS SHALL BE SUBMITTED TO THE BUILDING OFFICIAL IN A.CCORDANCE WITH SECTIONS 3317 AND 3318 OF THE CALIFORNIA BUILDING CODE.
3. ALL GRADED SITES MUST HAVE DRAINAGE SWALES, BERMS, AND OTHER DRAINAGE DEVICES INSTALLED PRIOR TO ROUGH GRADING APPROVAL. PER SECTION 3317.6 OF THE CALIFORNIA BUILDING CODE.
4. THE GRADING CONTRACTOR SHALL SUBMIT THE STATEMENT TO THE GRADING INSPECTOR AS REQUIRED BY SECTION 3318.1 OF THE CALIFORNIA BUILDING CODE AT THE COMPLETION OF ROUGH GRADING.
5. FINAL GRADING MUST BE APPROVED BEFORE OCCUPANCY OF BUILDINGS WILL. BE ALLOWED PER SECTION 3318 OF THE CALIFORNIA BUILDING CODE.

DRAINAGE NOTES

1 . ROOF DRAINAGE MUST BE DIVERTED FROM GRADED SLOPES.
2. PROVISIONS SHALL BE MADE TO ACCOMMODATE CONTRRIBUTORY DRAINAGE THROUGHOUT THE GRADING AND LANDSCAPING OPERATIONS.
3. ALL CONSTRUCTION AND GRADING WITHIN A STORM DRAIN EASEMENT ARE TO BE PERFORMED WITHIN THE PHYSICAL AND LEGAL LIMITATIONS OF THE EASEMENT.
4. ALL STORM DRAIN WORK IS TO BE DONE UNDER CONTINUOUS INSPECTION BY THE FIELD ENGINEER. WEEKLY STATUS REPORTS SHALL BE SUBMITTED BY THE FIELD ENGINEER TO THE BUILDING OFFICIAL.

AGENCY NOTES *(add applicable notes)*

1. AN ENCROACHMENT PERMIT FROM (OITY OF RANCHO PALOS VERDES DEPARTMENT OF PUBLIC WORKS) (CAL TRANS) (CITY OF) IS REQUIRED FOR ALL WORK WITHIN OR AFFECTING ROAD RIGHT OF WAY. ALL WORK WITHIN ROAD RIGHT OFWAY SHALL CONFORM TO (CITY OF RANCHO PALOS VERDES DEPARTMENT OF PUBLIC WORKS) (CAL TRANS) (CITY OF) ENCROACHMENT PERMIT,
2. AN ENCROACHMENT PERMIT ICONNECTION PERMIT IS REQUIRED FROM THE CITY OF RANCHO PALOS VERDES FLOOD CONTROL DISTRICT FOR ALL WORK WITHIN THE CITY OF RANCHO PALOS VERDES FLOOD CONTROL DISTRICT RIGHT OF WAY, ALL WORK SHALL OONFORM WITH CONDITIONS SET BY THE PERMIT.
3. PERMISSION TO OPERATE IN FIRE ZONE 4 MUST BE OBTAINED FROM THE FIRE PREVENTION BUREAU OR THE LOCAL FIRE STATION PRIOR TO COMMENCING WORK.
4. ALL WORK WITHIN THE STREAMBED AND AREAS OUTLINED ON GRADING PLANS SHALL CONFORM TO:
   A. ARMY CORP 404 PERMIT NUMBER: ____________________
   B. CALIFORNIA FISH & GAME PERMIT NO.: ____________________

GENERAL GEOTECHNICAL NOTES

1. ALL WORK MUST BE IN COMPLIANCE WITH THE RECOMMENDATIONS INCLUDED IN THE GEOTECHNICAL CONSULTANT'S REPORT(S) AND THE APPROVED GRADING PLANS AND SPECIFICATIONS.
2. GRADING OPERATIONS MUST BE CONDUCTED UNDER PERIODIC INSPECTIONS BY THE GEOTECHNICAL CONSULTANTS WITH MONTHLY INSPECTION REPORTS TO BE SUBMITTED TO THE GEOLOGY AND SOILS SECTION.
3. THE SOIL ENGINEER SHALL PROVIDE SUFFICIENT INSPECTIONS DURING THE PREPARATION OF THE NATURAL GROUND AND THE PLACEMENT AND COMPACTION OF THE FILL TO BE SATISFIED THAT THE WORK IS BEING PERFORMED IN ACCORDANCE WITH THE PLAN AND APPLICABLE CODE REQUIREMENTS.
4. ROUGH GRADING MUST BE APPROVED BY A FINAL ENGINEERING GEOILOGY AND SOILS ENGINEERING REPORT. AN AS-BUILT GEOLOGIC MAP MUST BE INCLUDED IN THE FINAL GEOLOGY REPORT. PROVIDE A FINAL REPORT STATEMENT THAT VERIFIES WORK WAS DONE IN ACCORDANCE WITH REPORT RECOMMENDATIONS AND CODE PROVISIONS. THE FINAL REPORT(S) MUST BE SUBMITTED TO THE BUILDING OFFICIAL FOR REVIEW AND APPROVAL
5. FOUNDATION, WALL AND POOL EXCAVATIONS MUST BE INSPECTED AND APPROVED BY THE CONSULTING GEOLOGIST AND SOIL ENGINEER, PRIOR TO THE PLACING OF STEEL OR CONCRETE.
6. BUILDING PADS LOCATED IN CUT/FILL TRANSITION AREAS SHALL BE OVER-EXCAVATED A MINIMUM OF THREE (3) FEET BELOW THE PROPOSED BOTTOM OF FOOTING.

FILL NOTES

1. ALL FILL SHALL BE COMPACTED TO THE FOLLOWING MINIMUM RELATIVE COMPACTION CRITERIA:
   a. 90 PERCENT OF MAXIMUM DRY DENSITY WITHIN 40 FEET BELOW FINISH GRADE.
   b. 93 PERCENT OF MAXIMUM DRY DENS!TY DEEPER THAN 40 FEET BELOW FINISH GRADE, UNLESS A LOWER RELATIVE COMPACTION (NOT LESS THAN 90 PERCENT OF MAXIMUM DRY DENSITY) IS JUSTIFIED BY THE GEOTECHNICAL ENGINEER.
2. SOIL DENSITY TESTING SHALL BE PERFORMED IN ACCORDANCE WITH THE FOLLOWING PROCEDURES:
   a. SOIL COMPACTION TEST ASTM D1557-02 SHALL BE THE TEST METHOD FOR LABORATORY DETERMINATION OF COMPACTION CHARACTERISTICS OF SOIL WHERE APPLICABLE. WHERE NOT APPLICABLE, A TEST ACCEPTABLE TO THE BUILDING OFFICIAL SHALL BE USED.
   b. FIELD DENSITY SHALL BE DETERMINED BY A METHOD ACCEPTABLE TO THE BUILDING OFFICIAL. HOWEVER, NOT LESS THAN 10% OF THE REQUIRED DENSITY TESTS, UNIFORMLY DISTRIBUTED, AND SHALL BE OBTAINED BY ASTM 01556-00 TO DETERMINE THE IN-PLACE DENSITY AND UNIT WEIGHT OF SOILS USING A SAND CONE APPARATUS.
3. SUFFICIENT TESTS OF THE FILL SOILS SHALL BE MADE TO DETERMINE THE RELATIVE COMPACTION OF THE FILL IN ACCORDANCE WITH THE FOLLOWING MINIMUM GUIDELINES:
   a. ONE TEST FOR EACH TWO-FOOT VERTICAL LIFT.
   b. ONE TEST FOR EACH 1,000 CUBIC YARDS OF MATERIAL PLACED.
   c. ONE TEST AT THE LOCATION OF THE FINAL FILL SLOPE FOR EACH BUILDING SITE (LOT) IN EACH FOUR· FOOT VERTICAL LIFT OR PORTION THEREOF.
   d. ONE TEST IN THE VICINITY OF EACH BUILDING PAD FOR EACH FOUR-FOOT VERTICAL liFT OR PORTION THEREOF.
4. SUFFICIENT TESTS OF FILL SOILS SHALL BE MADE TO VERIFY THAT THE SOIL PROPERTIES COMPLY WITH THE DESIGN REQUIREMENTS, AS DETERMINED BY THE SOIL ENGINEER INCLUDING SOIL TYPES, EXPANSIVITY, SHEAR STRENGTHS PARAMETERS AND CORRESPONDING UNIT WEIGHTS IN ACCORDANCE WITH THE FOLLOWING GUIDELINES:
   a. PRIOR AND SUBSEQUENT TO PLACEMENT OF THE FILL, SHEAR TESTS SHALL BE TAKEN ON EACH TYPE OF SOIL OR SOIL MIXTURE TO BE USED FOR ALL FILL SLOPES STEEPER THAN THREE (3) HORIZONTAL TO ONE VERTICAL.
   b. SHEAR TEST RESULTS FOR THE PROPOSED FILL MATERIAL MUST MEET OR EXCEED THE DESIGN VALUES USED IN THE GEOTECHNICAL REPORT TO DETERMINE SLOPE STABILITY REQUIREMENTS. OTHERWISE, THE SLOPE MUST BE REEVALUATED USING THE ACTUAL SHEAR TEST VALUE OF THE FILL MATERIAL THAT IS IN PLACE.
5. FILL SOILS SHALL BE FREE OF DELETERIOUS MATERIALS.
6. FILL SHALL NOT BE PLACED UNTIL STRIPPING OF VEGETATION, REMOVAL OF UNSUITABLE SOILS, AND INSTALLATION OF SUBDRAIN (IF ANY) HAVE BEEN INSPECTED AND APPROVED BY THE SOIL ENGINEER. THE BUILDING OFFICIAL MAY REQUIRE A "STANDARD TEST METHOD FOR MOISTURE, ASH, ORGANIC MATTER, PEAT OR OTHER ORGANIC SOILS" ASTM 0-2974-00 ON ANY SUSPECT MATERIAL. DETRIMENTAL AMOUNTS OF ORGANIC MATERIAL SHALL NOT BE PERMITTED IN FILLS. SOIL CONTAINING SMALL AMOUNTS OF ROOTS MAY BE ALLOWED PROVIDED THAT THE ROOTS ARE IN A QUANTITY AND DISTRIBUTED IN A MANNER THAT WILL NOT BE DETRIMENTAL TO THE FUTURE USE OF THE SITE AND THE SOILS ENGINEER APPROVES THE USE OF SUCH MATERIAL.
7. ROCK OR SIMILAR MATERIAL GREATER THAN 12 INCHES IN DIAMETER SHALL NOT BE PLACED IN THE FILL UNLESS RECOMMENDATIONS FOA SUCH PLACEMENT HAVE BEEN SUBMITTED BY THE SOIL ENGINEER AND APPROVED IN ADVANCE BY THE BUILDING OFFICIAL. LOCATION, EXTENT, AND ELEVATION OF ROCK DISPOSAL AREAS MUST BE SHOWN ON AN "AS BUILT" GRADING PLAN.
8. CONTINUOUS INSPECTION BY THE SOIL ENGINEER, OR A RESPONSIBLE REPRESENTATIVE, SHALL BE PROVIDED DURING ALL FILL PLACEMENT AND COMPACTION OPERATIONS WHERE FILLS HAVE A DEPTH GREATER THAN 30 FEET OR SLOPE SURFACE STEEPER THAN 2;1.
9. CONTINUOUS INSPECTION 8YTHE SOIL ENGINEER, OR A RESPONSIBLE REPRESENTATIVE, SHALL BE PROVIDED DURING ALL SUBDRAIN INSTALLATION.
10. ALL SUBDRAIN OUTLETS ARE TO BE SURVEYED FOR LINE AND ELEVATION. SUBDRAIN INFORMATION MUST BE SHOWN ON AN "AS BUILT" GRADING PLAN.
11. FILL SLOPES IN EXCESS OF 2:1 STEEPNESS RATIO ARE TO BE CONSTRUCTED BY THE PLACEMENT OF SOIL AT SUFFICIENT DISTANCE BEYOND THE PROPOSED FINISH SLOPE TO ALLOW COMPACTION EQUIPMENT TO BE OPERATED AT THE OUTER LIMITS OF THE FINAL SLOPE SURFACE. THE EXCESS FILL IS TO BE REMOVED PRIOR TO COMPLETION OF ROUGH GRADING. OTHER CONSTRUCTION PROCEDURES MAY BE USED WHEN IT IS DEMONSTRATED TO THE SATISFACTION OF THE BUILDING OFFICIAL THAT THE ANGLE OF SLOPE, CONSTRUCTION METHOD AND OTHER FACTORS WILL HAVE EQUIVALENT EFFECT.

PLANTING AND IRRIGATION NOTES:

1. PLANTING AND IRRIGATION ON GRADED SLOPES MUST COMPLY WITH THE FOLLOWING MINIMUM GUIDELINES:
   a. THE SURFACE OF ALL CUT SLOPES MORE THAN 5 FEET IN HEIGHT AND FILL SLOPES MORE THAN 3 FEET IN HEIGHT SHALL BE PROTECTED AGAINST DAMAGE BY EROSION BY PLANTING WITH GRASS OR GROUNDCOVER PLANTS. SLOPES EXCEEDING 15 FEET IN VERTICAL HEIGHT SHALL ALSO BE PLANTED WITH SHRUBS, SPACED AT NOT TO EXCEED 10 FEET ON CENTERS; OR TREES, SPACED AT NOT TO EXCEED 20 FEET ON CENTERS, OR A COMBINATION OF SHRUBS AND TREES AT EQUIVALENT SPACING, IN ADDITION TO THE GRASS OR GROUNDCOVER PLANTS. THE PLANTS SELECTED AND PLANTING METHODS USED SHALL BE SUITABLE FOR THE SOIL AND CLIMATIC CONDITIONS OF THE SITE. PLANT MATERIAL SHALL BE SELECTED WHICH WILL PRODUCE A COVERAGE OF PERMANENT PLANTING EFFECTIVELY CONTROLLING EROSION. CONSIDERATION SHALL BE GIVEN TO DEEP"ROOTED PLANTING MATERIAL. NEEDING LIMITED WATERING, MAINTENANCE, HIGH ROOT TO SHOOT RAT10, WIND SUSCEPTIBILITY AND FIRERETARDANT CHARACTERISTICS. ALL PLANT MATERIALS MUST BE APPROVED BY THE BUILDING OFFICIAL. NOTE: PLANTING NEED NOT BE PROVIDED FOR CUT SLOPES ROCKY IN CHARACTER AND NOT SUBJECT TO DAMAGE BY EROSION AND ANY SLOPES PROTECTED AGAINST EROSION DAMAGE BY OTHER METHODS WHEN SUCH METHODS HAVE BEEN SPECIFICALLY RECOMMENDED BY A SOIL ENGINEER, ENGINEERING GEOLOGIST, OR EQUIVALENT AUTHORITY AND FOUND TO OFFER EROSION PROTECTION EQUAL TO THAT PROVIDED BY THE PLANTING SPECIFIED ABOVE.
2. SLOPES REOUIRED TO BE PLANTED SHALL BE PROVIDED WITH AN APPROVED SYSTEM OF IRRIGATION THAT IS DESIGNED TO COVER ALL PORTIONS OF THE SLOPE. IRRIGATION SYSTEM PLANS SHALL BE SUBMITTED AND APPROVED PRIOR TO INSTALLATION. A FUNCTIONAL TEST OF THE SYSTEM MAY BE REQUIRED. FOR SLOPES LESS THAN 20 FEET IN VERTICAL HEIGHT! HOSE BIBS TO PERMIT HAND WATERING WILL BE ACCEPTABLE IF SUCH HOSE BIBS ARE INSTALLED AT CONVENIENTLY ACCESSIBLE LOCATIONS WHERE A HOSE NO LONGER THAN 50 FEET IS NECESSARY FOR IRRIGATION. THE REQUIREMENTS FOR PERMANENT IRRIGATION SYSTEMS MAY BE MODIFIED UPON SPECIFIC RECOMMENDATION OF A LANDSCAPE ARCHITECT OR EQUIVALENT AUTHORITY THAT, BECAUSE OF THE TYPE OF PLANTS SELECTED, THE PLANTING METHODS USED AND THE SOIL AND CLIMATE CONDITIONS AT THE SITE1 IRRIGATION WILL NOT BE NECESSARY FOR THE MAINTENANCE OF THE SLOPE PLANTING.
3. OTHER GOVERNMENTAL AGENCIES MAY HAVE ADDITIONAL REQUIREMENTS FOR LANDSCAPING AND IRRIGATION. IT IS THE RESPONSIBILITY OF THE APPLICANT TO COORDINATE WITH OTHER AGENCIES TO MEET THEIR REQUIREMENTS WHILE MAINTAINING COMPLIANCE WITH THE CALIFORNIA BUILDING CODE.
4. THE PLANTING AND IRRIGATION SYSTEMS SHALL BE INSTALLED AS SOON AS PRACTICAL AFTER ROUGH GRADING. PRIOR TO FINAL GRADING APPROVAL ALL REQUIRED SLOPE PLANTING MUST BE WELL ESTABLISHED.

NPDES .. BEST MANAGEMENT PRACTICES NOTES

1. EVERY EFFORT SHOULD BE MADE TO ELIMINATE THE DISCHARGE OF NON-STORMWATER FROM THE PROJECT SITE AT ALL TIMES.
2. ERODED SEDIMENTS AND OTHER POLLUTANTS MUST BE RETAINED ON-SITE AND MAY NOT BE TRANSPORTED FROM THE SITE VIA SHEET FLOW, SWALES, AREA DRAINS. NATURAL DRAINAGE COURSES OR WIND.
3. STOCKPILES OF EARTH AND OTHER CONSTRUCTION RELATED MI\TERIALS MUST BE PROTECTED FROM BEING TRANSPORTED FROM THE SITE BY THE FORCES OF WIND OR WATER.
4. FUELS, OILS, SOLVENTS, AND OTHER TOXIC MATERIALS MUST BE STORED IN ACCORDANCE WITH THEIR LISTING AND ARE NOT TO CONTAMINATE THE SOIL AND SURFACE WATERS, ALL APPROVED STORAGE CONTAINERS ARE TO BE PROTECTED FROM THE WEATHER. SPILLS MUST BE CLEANED UP IMMEDIATELY AND DISPOSED OF IN A PROPER MANNER. SPILLS MAY NOT BE WASHED INTO THE DRAINAGE SYSTEM.
5. EXCESS OR WASTE CONCRETE MAY NOT BE WASHED INTO THE PUBLIC WAY OR ANY OTHER DRAINAGE SYSTEM. PROVISIONS SHALL BE MADE TO RETAIN CONCRETE WASTES ON~SITE UNTIL THEY CAN BE DISPOSED'OF AS SOLID WASTE.
6. TRASH AND OONSTRUCTION RELATED SOLID WASTES MUST BE DEPOSITED INTO A COVERED RECEPTACLE TO PREVENT CONTAMINATION OF RAINWATER. AND DISPERSAL BY WIND.
7. SEDIMENTS AND OTHER MATERIALS MAY NOT BE TRACKED FROM THE SITE BY VEHICLE TRAFFIC. THE CONSTRUCTION ENTRANCE ROADWAYS MUST BE STABILIZED SO AS TO INHIBIT SEDIMENTS FROM BEING DEPOSITED INTO'THE PUBLIC WAY. ACCIDENTAL DEPOSITIONS MUST BE SWEPT UP IMMEDIATELY AND MAY NOT BE WASHED DOWN BY RAIN OR OTHER MEANS.
8. ANY SLOPES WITH DISTURBED SOILS OR DENUDED OF VEGETATION M UST BE STABILIZED SO AS TO INHIBIT EROSION BY WIND AND WATER.
9. STRUCTURAL BMP'S MUST BE ACCESSIBLE FOR INSPECTION BY CITY PERSONNEL DURING REGULAR BUSINESS HOURS.

AS THE PROJECT OWNER OR AUTHORIZED AGENT OF THE OWNER, I HAVE READ AND UNDERSTAND THE REQUIREMENTS LISTED ABOVE, NECESSARY TO CONTROL STORM WATER POLLUTION FROM SEDIMENTS, EROSION, AND CONSTRUCTION MATERIALS, AND I CERTIFY THAT I WILL COMPLY WITH THESE REQUIREMENTS.

PRINT NAME: ____________________
(OWNER OR AUTHORIZED AGENT OF THE OWNER)

SIGNATURE: ____________________ DATE :__________
(OWNER OR AUTHORIZED AGENT OF THE OWNER)

ADDITIONAL ENGINEER'S NOTES:

1. CONTRACTORS SHALL ASSUME SOLE AND COMPLETE RESPONSIBILITY FOR JOB SITE CONDITIONS DURING THE COURSE OF CONSTRUCTION OF THIS PROJECT, INCLUDING SAFETY OF ALL PERSONS AND PROPERTY; THAT THIS REQUIRE- MENT SHALL APPLY CONTINUOUSLY AND NOT BE LIMITED TO NORMAL WORKING HOURS. CONTRACTOR SHALL DEFEND, INDEMNIFY AND HOLD THE OWNER AND THE ENGINEER HARMLESS FROM ANY AND ALL LIABILITY, REAL OR ALLEGED, IN CONNECTION WITH THE PERFORMANCE OF WORK ON THIS PROJECT EXCEPT FOR LIABILITY ARISING FROM THE SOLE NEGLIGENCE OF THE OWNER OR THE ENGINEER.
2. THE EXISTENCE AND LOCATION OF ANY UNDERGROUND UTILITY OR STRUCTURES SHOWN ON THESE PLANS ARE OBTAINED BY A SEARCH OF THE AVAILABLE RECORDS. TO THE BEST OF OUR KNOWLEDGE, THERE ARE NO EXISTING UTILITIES EXCEPT FOR AS SHOWN ON THIS MAP. THE CONTRACTOR IS REQUIRED TO TAKE PRECAUTIONARY MEASURES TO PROTECT THE UTILITY LINES SHOWN AND ANY OTHER LINES NOT OF RECORD OR NOT SHOWN ON THIS DRAWING.
3. THE CONTRACTOR IS REQUIRED TO FAMILIARIZE HIMSELF WITH THE PLANS, THE SOILS AND/OR GEOLOGIC REPORTS, AND THE SITE PRIOR TO COMMENCING WORK.
4. SPECIFICATIONS SHALL HAVE PRECEDENCE OVER DRAWINGS.
5. THE CONTRACTOR SHALL NOTIFY ROTHMAN ENGINEERING OF ANY DISCREPANCIES IN THE PLANS BEFORE PROCEEDING WITH CONSTRUCTION.
6. NOT USED.
7. RETAINING WALLS SHOWN ON THESE PLANS (IF ANY) ARE TO BE CONSTRUCTED BY SEPARATE PERMIT.
8. THE ENGINEER PREPARING THESE PLANS WILL NOT BE RESPONSIBLE FOR, OR LIABLE FOR, UNAUTHORIZED CHANGES TO OR USES OF THESE PLANS. ALL CHANGES TO THE PLANS MUST BE IN WRITING AND MUST BE APPROVED BY THE PREPARER OF THESE PLANS.
9. PROPOSED START DATE:____________________ PROPOSED COMPLETION DATE:____________________
10. IN GRADING INSPECTIONS MUST BE MADE BY THE CONSULTING GEOLOGIST AND SOILS ENGINEER. MONTHLY IN-GRADING INSPECTION REPORTS MUST BE SUBMITTED DIRECTLY TO THE GEOLOGY AND SOILS SECTION BY THE CONSULTANTS.
11. ROUGH GRADING MUST BE APPROVED BY A FINAL ENGINEERING GEOLOGY AND SOILS ENGINEERING REPORT. AN AS-BUILT GEOLOGIC MAP MUST BE INCLUDED IN THE FINAL GEOLOGY REPORT. PROVIDE A FINAL REPORT STATEMENT THAT VERIFIES WORK WAS DONE IN ACCORDANCE WITH REPORT RECOMMENDATIONS AND CODE PROVISIONS (SECTION 3318.1). THE FINAL REPORT(S) MUST BE SUBMITTED TO THE GEOTECHNICAL AND MATERIALS ENGINEERING DIVISION FOR REVIEW AND APPROVAL.
12. FOUNDATION, WALL, AND POOL EXCAVATIONS MUST BE INSPECTED AND APPROVED BY THE CONSULTING GEOLOGIST AND SOILS ENGINEER PRIOR TO THE PLACING OF STEEL OR CONCRETE.

GENERAL NOTES:

1. THE CONTRACTOR SHALL OBTAIN AND PAY FOR ALL REQUIRED ON-SITE AND OFF-SITE PERMITS BEFORE STARTING WORK.
2. THE CONTRACTOR SHALL VISIT THE SITE AND VERIFY ALL CONDITIONS PRIOR TO BIDDING THE WORK.
3. THE CONTRACTOR SHALL VERIFY ALL DIMENSIONS AND EXISTING CONDITIONS AT THE JOB SITE PRIOR TO THE START OF CONSTRUCTION AND THE ARCHITECT/ENGINEER SHALL BE NOTIFIED IMMEDIATELY OF ANY ERRORS OR CONFLICTS BEFORE PROCEEDING WITH THE WORK.
4. THE CONTRACTOR SHALL REFER TO ARCHITECTURAL PLANS FOR LOCATION OF ALL IMPROVEMENTS AND ADDITIONAL DETAIL REFERENCES NOT SHOWN ON THE GRADING PLAN.
5. EARTHWORK OPERATIONS SHALL BE COORDINATED WITH THE STRUCTURAL SUPPORT OF PAVEMENTS, SLABS, WALLS, BUILDING AND OTHER STRUCTURES EITHER ON OR OFF THE SITE. IT SHALL BE THE CONTRACTORS RESPONSIBILITY TO PROTECT AND/OR REPAIR AT HIS EXPENSE, ALL PROPERTY DAMAGED DURING CONSTRUCTION AND IT SHALL BE CORRECTED PRIOR TO FINAL APPROVAL OF THE BUILDING CONSTRUCTION.
6. NO ROCKS OR LUMPS WITH GREATER THAN 3 INCH DIAMETER SHALL BE PLACED IN THE FILL UNLESS SUCH PLACEMENT IS APPROVED BY THE SOILS ENGINEER AND THE GRADING INSPECTOR.
7. ALL GRADED SITES MUST HAVE DRAINAGE SWALES, BERMS AND OTHER DRAINAGE DEVICES IN PLACE AT THE ROUGH GRADING STAGE.
8. OWNER SHALL KEEP THE CONSTRUCTION AREA SUFFICIENTLY DAMPENED TO CONTROL DUST CAUSED BY GRADING AND CONSTRUCTION. OWNER SHALL, AT ALL TIMES PROVIDE REASONABLE CONTROL OF DUST CAUSED BY WIND.
9. ALL JOIN LINES SHALL BE TO EXISTING EXPANSION JOINTS OR TO LINES SAW CUT BY THE CONTRACTOR. CONTRACTOR SHALL MATCH ELEVATION OF EXISTING IMPROVEMENTS AT JOIN LINES WITHIN PUBLIC RIGHT-OF-WAY.
10. ALL LINE AND GRADE STAKING FOR THE PROJECT SHALL BE PERFORMED BY A LICENSED LAND SURVEYOR OR A REGISTERED ENGINEER OF THE STATE OF CALIFORNIA WHO IS PERMITTED BY LAW TO PRACTICE LAND SURVEYING.
11. STRAIGHT GRADES SHALL BE RUN BETWEEN INDICATED FINISH GRADE ELEVATIONS.
12. FINISH GRADE STAKES SHALL BE SET AT 25 FOOT INTERVALS FOR ALL CONCRETE GUTTERS FLATTER THAN 1% ALL GUTTERS SHALL BE FLOOD TESTED AND NO PONDING WILL BE ALLOWED.
13. PADS AT ROUGH GRADING SHALL HAVE A MINIMUM SLOPE OF 1%, FUTURE BUILDING PADS SHALL HAVE A MINIMUM SLOPE OF 1% DIRECTED AWAY FROM THE STREET.
14. NOT USED.
15. IMPORT MATERIALS SHALL BE TESTED AND CERTIFIED BY THE SOILS ENGINEER PRIOR TO IMPORT TO THE SITE.
16. THE SOILS ENGINEER SHALL PROVIDE SUFFICIENT INSPECTIONS DURING THE PREPARATION OF THE NATURAL GROUND AND THE PLACEMENT AND COMPACTION OF THE FILL TO BE SATISFIED THAT THE WORK IS BEING PERFORMED IN ACCORDANCE WITH THE PLAN AND APPLICABLE CODE REQUIREMENTS.

Storm Water Construction notes

Minimum BMP Requirements for Construction Activities for All Development Construction Projects

- Eroded sediments and other pollutants must be retained on site and may not be transported from the site via sheetflow, swales area drains, natural drainage courses or wind.
- Stockpiles or earth and other construction related materials must be protected from being transported from the site by the force of wind and water.
- Fuels, oils, solvents and other toxic materials must be stored in accordance with their listing and are not to contaminate the soil and surface waters. All approved storage containers are to be protected from the weather. Spills must be cleaned up immediately and disposed of in a proper manner. Spills may not be washed into the drainage system.
- Non-storm water runoff from equipment and vehicle washing and any other activity shall be contained at the project site.
- Excess or waste concrete may not be washed into the public way or any other drainage system. Provisions shall be made to retain concrete wastes on site until they can be disposed of as solid waste.
- Trash and construction related solid wastes must be deposited into a covered receptacle to prevent contamination of rainwater and dispersal by wind.
- Sediments and other materials may not be tracked from the site by vehicle traffic. The construction entrance roadways must be stabilized so as to inhibit sediments from being deposited into the public way. Accidental depositions must be swept up immediately and may not be washed down by rain or other means.
- Any slope with disturbed soils or denuded of vegetation must be stabilized so as to inhibit erosion by wind and water.
- Additional BMPs will be implemented as deemed necessary by City inspectors.

WM-1 MATERIAL DELIVERY AND STORAGE
Provide a material storage area with secondary containment and/or weather protection. Note the maintenance practices and schedule proposed for this area.

WM-2 MATERIAL USE
Hazardous materials, fertilizers, pesticides, plasters, solvents, paints, and other compounds must be properly handled in order to reduce the risk of pollution or contamination. Training and information on procedures for the proper use of all materials must be available to the employees that apply such materials.

WM-4 SPILL PREVENTION AND CONTROL
Identify spill prevention and control measures that will be taken for all proposed materials. Identify the methods, by which accidental spills will be cleaned and properly disposed of.

WM-5 SOLID WASTE MANAGEMENT
Provide designated waste collection areas and containers. Arrange for regular disposal. Provide covered storage with secondary containment. Containers are required to protect waste from rain to prevent water pollution and prevent wind dispersal.

WM-6 HAZARDOUS WASTE MANAGEMENT
Hazardous materials must be disposed of in accordance with State and Federal regulations. Identify the proposed methods of disposal and any special handling contracts that may be applicable.

WM-7 CONTAMINATED SOIL MANAGEMENT
Prevent or reduce the discharge of pollutants to stormwater from contaminated soil and highly acidic or alkaline soils by conducting pre-construction surveys, inspecting excavations regularly, and remediating contaminated soil promptly.

WM-8 CONCRETE WASTE MANAGEMENT
Store dry and wet materials under cover. Avoid on-site washout except in designated areas away from drains, ditches, streets, and streams. Concrete waste deposited on site shall set-up, be broken apart, and disposed of properly. Containment and proper disposal is required for all concrete waste.

WM-9 SANITARY / SEPTIC WASTE MANAGEMENT
Untreated raw wastewater is not to be discharged or buried. Sanitary sewer facilities on site are required to be in compliance with local health agency requirements. Sanitary or septic wastes must be treated or disposed of in accordance with State and local requirements.

TC-1 STABILIZED CONSTRUCTION ENTRANCE
A stabilized entrance is required for all construction sites to ensure that dirt and debris are not tracked onto the road or adjacent property. Maintenance of such a system is required for the duration of the project. Such stabilization may be of rock or paved.

SE-1 SILT FENCE / SE-3 SEDIMENT TRAP / SE-8 SAND BAGS
Eroded sediments must be retained on site and not permitted to enter the drainage system. May be waived at the sole discretion of the City Inspector if other erosion control BMPs are deemed sufficient.

GENERAL INFORMATION

GRADING PERMIT APPLICATION NO. BLD____________________*
EARTHWORK VOLUMES CUT 600 (CY), FILL 600 (CY)
OVER EXCAVATION/ ALLUVIAL REMOVAL & COMPACTION _____(CY) *
EXPORT _____ (.CY), EXPORT LOCATION: ____________________ *
IMPORT: ____(CY), IMPORT SOURCE: ____________________*
TOTAL DISTURBED AREA: 0.9 (ACRES) *
TOTAL PROPOSED LANDSCAPE AREA: _____ SQUARE FEET
PRE-DEVELOPMENT IMPERVIOUS AREA: 94.9 (ACRES)
POST-DEVELOPMENT IMPERVIOUS AREA: 94.0 (ACRES)
WASTE DISCHARGE IDENTIFICATION NUMBER (WDID #) ______
CONSTRUCTION & DEMOLITION DEBRIS RECYCLING AND REUSE PLAN (RPP ID) ____

PROPERTY INFORMATION

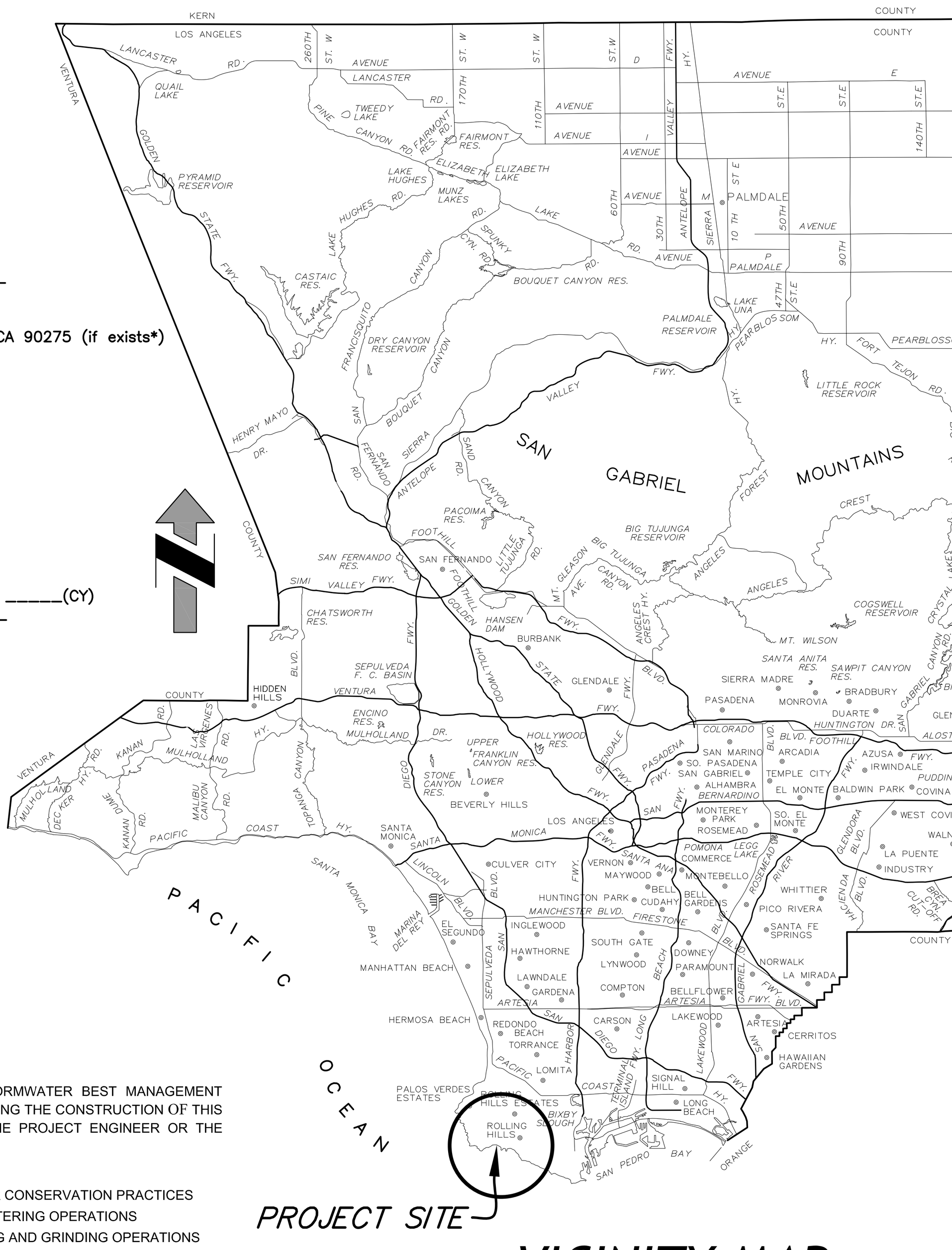
PROPERTY ADDRESS: 6001 PALOS VERDES DRIVE SOUTH, RANCHO PALOS VERDE, CA 90275 (if exists*)
TRACT / PARCEL MAP NO. N/A LOT/ PARCEL NO. N/A
PROPERTY OWNER: YORK POINT VIEW PROPERTIES, LLC.
ASSESSORS ID NUMBER(S) BOOK PAGE - 7572-012 APN 024-028 AND 029

ZONING AND PLANNING INFORMATION

PROPERTY ZONING: __________RS-1 AND RS-2 *
INTENDED LAND USE: AGRICULTURE AND EVENT GARDEN

FOR PROPOSED GRADED AREAS -I.E. SINGLE FAMILY RESIDENCE

CERTIFICATE OF COMPLIANCE: CC NO.: N/A
PLOT PLAN NUMBER: PP NO.: N/A
CONDITIONAL USE PERMIT: CUP NO. : N/A
EXPIRATION DATE: N/A
CALIFORNIA COASTAL COMMISSION AREA: N/A YES, ______. NO APPROVED VOLUME: ______(CY)
COASTAL DEVELOPMENT PERMIT CDP ______ EXPIRATION DATE: ________________

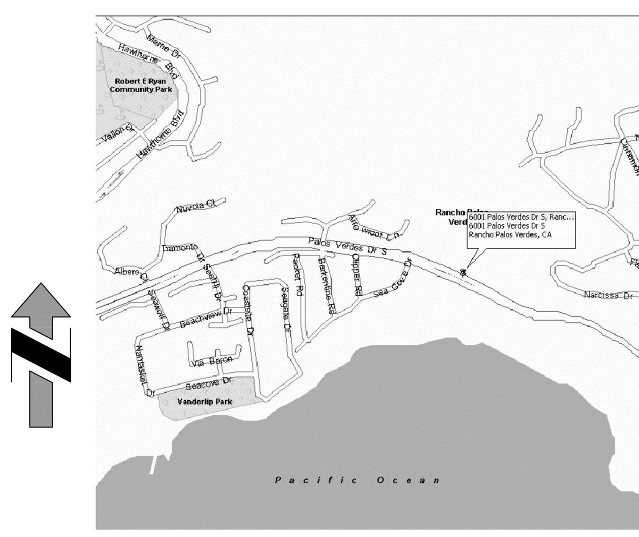


VICINITY MAP
NTS

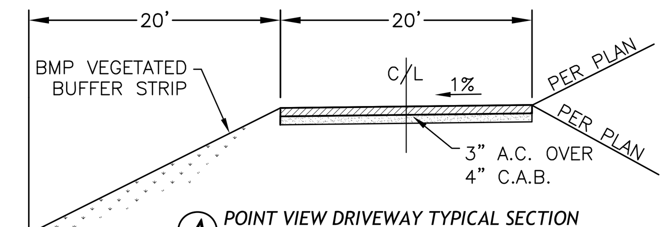
ATTACHMENT "B" NOTES

THE FOLLOWING BMPS AS OUTLINED IN, BUT NOT LIMITED TO, THE CALIFORNIA STORMWATER BEST MANAGEMENT PRACTICES HANDBOOK, JANUARY 2003, OR THE LATEST REVISED EDITION, MAY APPLY DURING THE CONSTRUCTION OF THIS PROJECT (ADDITIONAL MEASURES MAY BE REQUIRED IF DEEMED APPROPRIATE BY THE PROJECT ENGINEER OR THE BUILDING OFFICIAL).

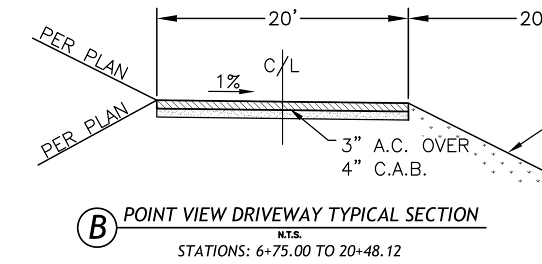
1. EROSION CONTROL
2. EC1- SCHEDULING
3. EC2- PRESERVATION OF EXISTING VEGETATION
4. EC3- HYDRAULIC MULCH
5. EC4- HYDROSEEDING
6. EC5- SOIL BINDERS
7. EC6- STRAW MULCH
8. EC7- GEOTEXTILES & MATS
9. EC8- WOOD MULCHING
10. EC9- EARTH DIKES AND DRAINAGE SWALES
11. EC10 - VELOCITY DISSIPATION DEVICES
12. EC11- SLOPE DRAINS
13. EC12- STREAM BANK STABILIZATION 14. EC13- POLYACRYLAMIDE
15. TEMPORARY SEDIMENT CONTROL
16. SE1 - SILT FENCE
17. SE2 - SEDIMENT BASIN
18. SE3 - SEDIMENT TRAP SE4 ~ CHECK DAM
19. SES - FIBER ROLLS
20. SE6 - GRAVEL BAG BERM
21. SE7 - STREET SWEEPING AND VACUUMING
22. SES - SANDBAG BARRIER
23. SE9 - STRAW BALE BARRIER
24. SE10 - STORM DRAIN INLET PROTECTION
25. WIND EROSION CONTROL
26. WE1 - WIND EROSION CONTROL
27. EQUIPMENT TRACKING CONTROL
28. TC1 - STABILIZED CONSTRUCTION ENTRANCE EXIT
29. TC2 - STABILIZED CONSTRUCTION ROADWAY
30. TC3 - ENTRANCE/OUTLET TIRE WASH
31. NON- STORMWATER MANAGEMENT
32. NS1- WATER CONSERVATION PRACTICES
33. NS2 - DEWATERING OPERATIONS
34. NS3 - PAVING AND GRINDING OPERATIONS
35. NS4 - TEMPORARY STREAM CROSSING
36. NS5 - CLEAR WATER DIVERSION
37. NSB - ILLICIT CONNECTION/DISCHARGE
38. NS7 - POTABLE WATER IRRIGATION
39. NS8 - VEHICLE AND EQUIPMENT CLEANING
40. NS9 - VEHICLE AND EQUIPMENT FUELING
41. NS10- VEHICLE AND EQUIPMENT MAINTENANCE
42. NS11 - PILE DRIVING OPERATIONS
43. NS12- CONCRETECURING
44. NS13- CONCRETE FINISHING
45. NS14- MATERIAL AND EQUIPMENT USE
46. NS15- DEMOLITION ADJACENT TO WA TEA
47. NS16- TEMPORARY BATCH PLANTS
48. WASTE MANAGEMENT & MATERIAL POLLUTION CONTROL
49. WMI - MATERIAL DELIVERY AND STORAGE
50. WM2- MATERIAL USE
51. WM3 - STOCKPILE MANAGEMENT
52. WM4 - SPILL PREVENTION AND CONTROL
53. WM5 - SOLID WASTE MANAGEMENT
54. WM6 - HAZARDOUS WASTE MANAGEMENT
55. WM7 - CONTAMINATiON SOIL MANAGEMENT
56. WM8 - CONCRETE WASTE MANAGEMENT
57. WM9 - SANITARY/SEPTIC WASTE MANAGEMENT
58. WM10- LIQUID WASTE MANAGEMENT
59. 06/06/2005 ATTACHMENTS



LOCATION MAP
NTS



A POINT VIEW DRIVEWAY TYPICAL SECTION
N.T.S.
STATIONS: 0+00.00 TO 6+75.00



B POINT VIEW DRIVEWAY TYPICAL SECTION
N.T.S.
STATIONS: 6+75.00 TO 20+48.12

YARDAGE CALCULATIONS:

GROSS YARDAGE VOLUMES

CUT = 425 c.y. FILL = 375 c.y.
NET = 50 c.y. (cut)

YARDAGE NOTES:

1. QUANTITIES SHOWN HEREON ARE FOR PERMIT FEE ESTABLISHMENT PURPOSES ONLY AND SHALL NOT BE USED FOR BIDDING OR CONTRACT PURPOSES. CONTRACTOR IS REQUIRED TO VERIFY ALL QUANTITIES PRIOR TO COMMENCEMENT OF WORK.
2. THE SOILS & GEOLOGICAL REPORT PREPARED BY NEBLET AND ASSOCIATES. NO. 279-004-75 DATED 10/08/08 AND ANY SUBSEQUENT REPORTS SHALL BE CONSIDERED A PART OF THESE PLANS AND ALL RECOMMENDATIONS THEREOF SHALL BE COMPLIED WITH.
3. NO BULKING OR SHRINKAGE HAS BEEN TAKEN INTO ACCOUNT ON THIS SHEET.
4. SITE SPOILS SUCH AS, FOUNDATIONS, RETAINING WALLS, UTILITY TRENCHING, ETC. ARE NOT ACCOUNTED FOR IN THE ABOVE VOLUMES.

PRIVATE ENGINEER'S NOTICE TO CONTRACTORS:
The civil engineer shall not be responsible in any way for the contractors' and subcontractors' compliance with the "occupational safety and health regulations" of the u.s. department of labor or with the State of California Department of Industrial Relations' "construction safety orders.' Contractor further agrees that he shall assume sole and complete responsibility for job site conditions during the course of construction of this project, including safety of all persons and property; that this requirement shall apply continuously and not be limited to normal working hours; and that the contractor shall defend, indemnify and hold the owner and the engineer harmless from any and all liability, real or alleged, in connection with the performance of work on this project, excepting for liability arising from the sole negligence of the owner or the engineer.

UNAUTHORIZED CHANGES AND USES:
The engineer preparing these plans will not be responsible for, or liable for, unauthorized changes to or uses of these plans. all changes to the plans must be in writing and must be approved by the preparer of these plans. The contractor shall be responsible to report discrepancies in plans and/or field conditions immediately to the design engineer for resolution prior to construction and shall be responsible for discrepancies not so reported and resolved.

Notice To Contractor:
A Permit from The California Division of Industrial Safety is required for trenches over five feet in depth .
Contractor is required to obtain permit prior to trenching

Approval By Soils Engineer and Geologist:
"This Plan has been reviewed and conforms to recommendations of soils engineering/geologic reports dated _________"
Signature ____________ Date ______
Signature ____________ Date ______

Approval By Civil Engineer:
"This Plan has been Prepared by me or under my supervision and direction"
Signature ____________ Date ______

REGISTERED PROFESSIONAL ENGINEER ROLAND P. ROTHMAN NO. C47790 EXP. 12-31-11 CIVIL STATE OF CALIFORNIA

LEGEND

(98.00) T.W. — EXISTING TOP OF WALL
(97.50) B.W. — EXISTING BOTTOM OF WALL
98.00 — TOP OF CURB ELEVATION
97.50 — FINISH SURFACE OR FLOW LINE ELEVATION
98.00 — SPOT ELEVATION
T.C. — DESCRIPTION OF ELEVATION
(98.00) — EXISTING SPOT ELEVATION
T.C. — DESCRIPTION OF ELEVATION
(92.35) — EXISTING SPOT ELEVATION
1.0% — PROPOSED GRADIENT AND DIRECTION OF FLOW
(1.0%) — EXISTING GRADIENT AND DIRECTION OF FLOW
PROPOSED SLOPE
1150 — PROPOSED CONTOUR
1150 — EXISTING CONTOUR

AC	=	ASPHALT/CONCRETE	G	=	GROUND
BW	=	BOTTOM OF WALL	GB	=	GRADE BREAK
CLF	=	CHAIN LINK FENCE	RET	=	RETAINING
CONC	=	CONCRETE	SDMH	=	STORMDRAIN MANHOLE
DI	=	DRAIN INLET	TC	=	TOP OF CURB
DO	=	DRAIN OUTLET	TW	=	TOP OF WALL
DWY	=	DRIVEWAY	TYP	=	TYPICAL
FL	=	FLOWLINE	WI	=	WROUGHT IRON
FS	=	FINISHED SURFACE			

CIVIL ENGINEER:
ROTHMAN ENGINEERING, Inc.
205 S. BROADWAY, SUITE 206
LOS ANGELES, CALIFORNIA 90012
TEL. (213) 621-3155 FAX (213) 621-3105

SOILS ENGINEER:
NEBLETT AND ASSOCIATES
4911 WARNER AVE., SUITE 118
HUNTINGTON BEACH, CA 92649
TEL. 714-840-8286

PROPERTY OWNER
THE YORK PROPERTIES
550 SILVER SPUR RD SUITE# 250
RANCHO PALOS VERDES, CA 90275
TEL. 714-569-0216

SHEET INDEX

CIVIL:

REFERENCE:

DIGALERT
Call Toll Free
1-800-422-4133
2 Working Days Before You Dig
Underground Service Alert
of Southern California

PLAN PREPARED IN THE OFFICES OF:
ROTHMAN ENGINEERING, INC.
205 S. BROADWAY, SUITE 206
LOS ANGELES, CALIFORNIA 90012
(213) 621-3155 FAX (213) 621-3105

CLIENT
YORK POINT VIEW PROPERTIES, LLC

PROJECT
6001 PALOS VERDES DRIVE SOUTH
RANCHO PALOS VERDES, CA 90275

SHEET TITLE
TITLE SHEET
POINT VIEW DRIVEWAY

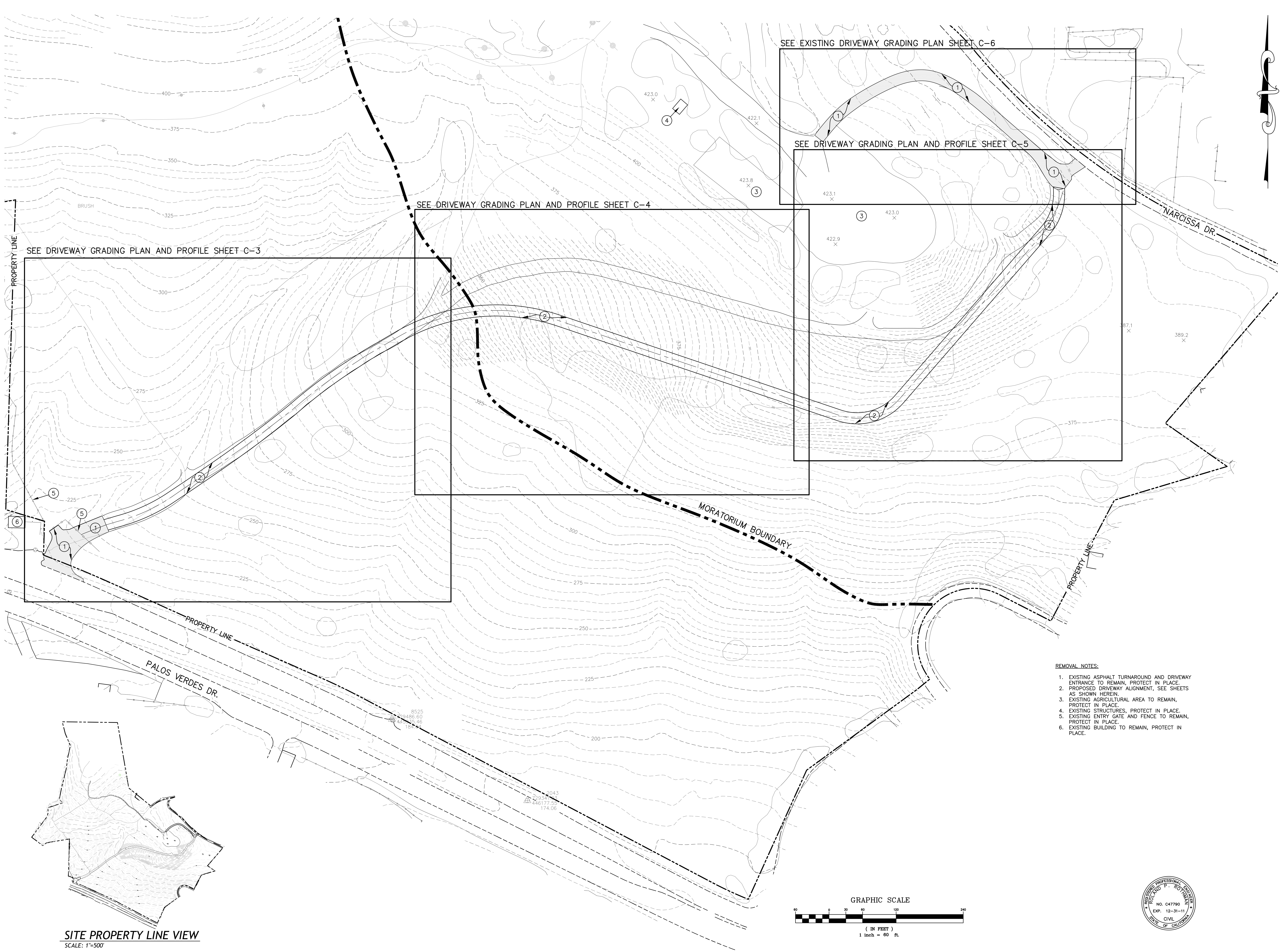
REVISIONS

No.	DESCRIPTION	BY	DATE

DESIGNER: MP,PR	APPR'D BY: __
DRAFTER: MP,PR	REVISED BY:
SCALE: AS SHOWN	DATE: 10/17/11

CIVIL

JOB NUMBER
0320-09-001



REMOVAL NOTES:

1. EXISTING ASPHALT TURNAROUND AND DRIVEWAY ENTRANCE TO REMAIN, PROTECT IN PLACE.
2. PROPOSED DRIVEWAY ALIGNMENT, SEE SHEETS AS SHOWN HEREIN.
3. EXISTING AGRICULTURAL AREA TO REMAIN, PROTECT IN PLACE.
4. EXISTING STRUCTURES, PROTECT IN PLACE.
5. EXISTING ENTRY GATE AND FENCE TO REMAIN, PROTECT IN PLACE.
6. EXISTING BUILDING TO REMAIN, PROTECT IN PLACE.

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6001 PALOS VERDES DRIVE SOUTH
RANCHO PALOS VERDES, CA 90275

SHEET TITLE
EXISTING CONDITIONS/ REMOVAL SHEET AND KEY MAP

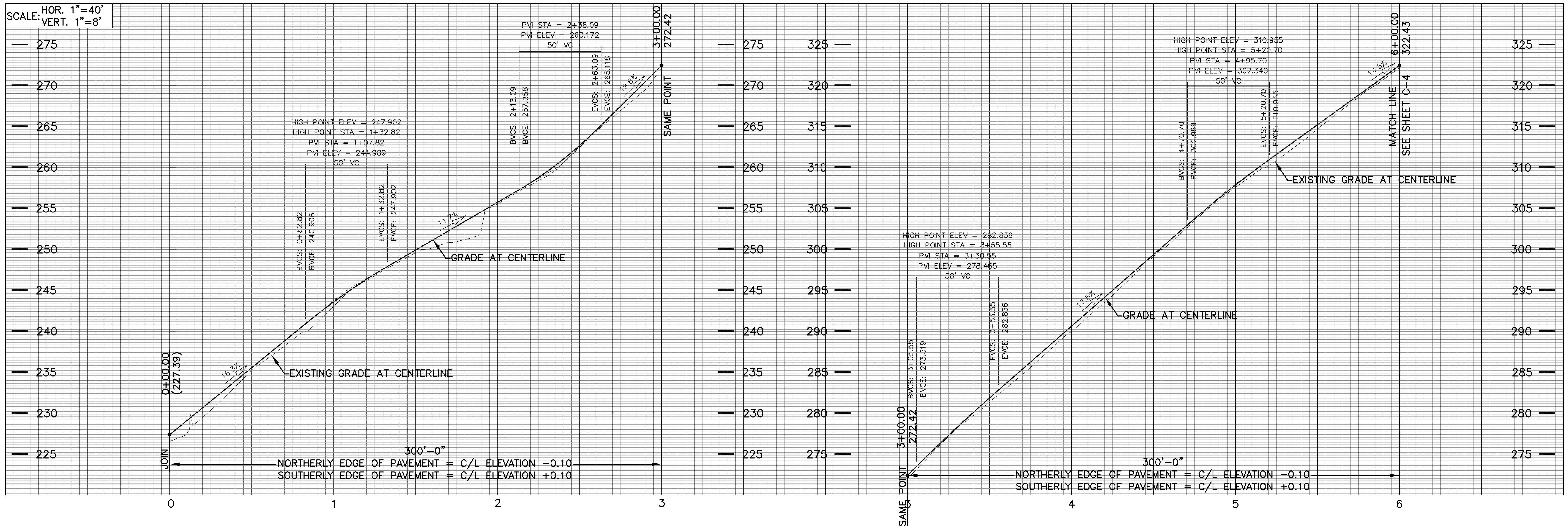
REVISIONS			
No.	DESCRIPTION	BY	DATE

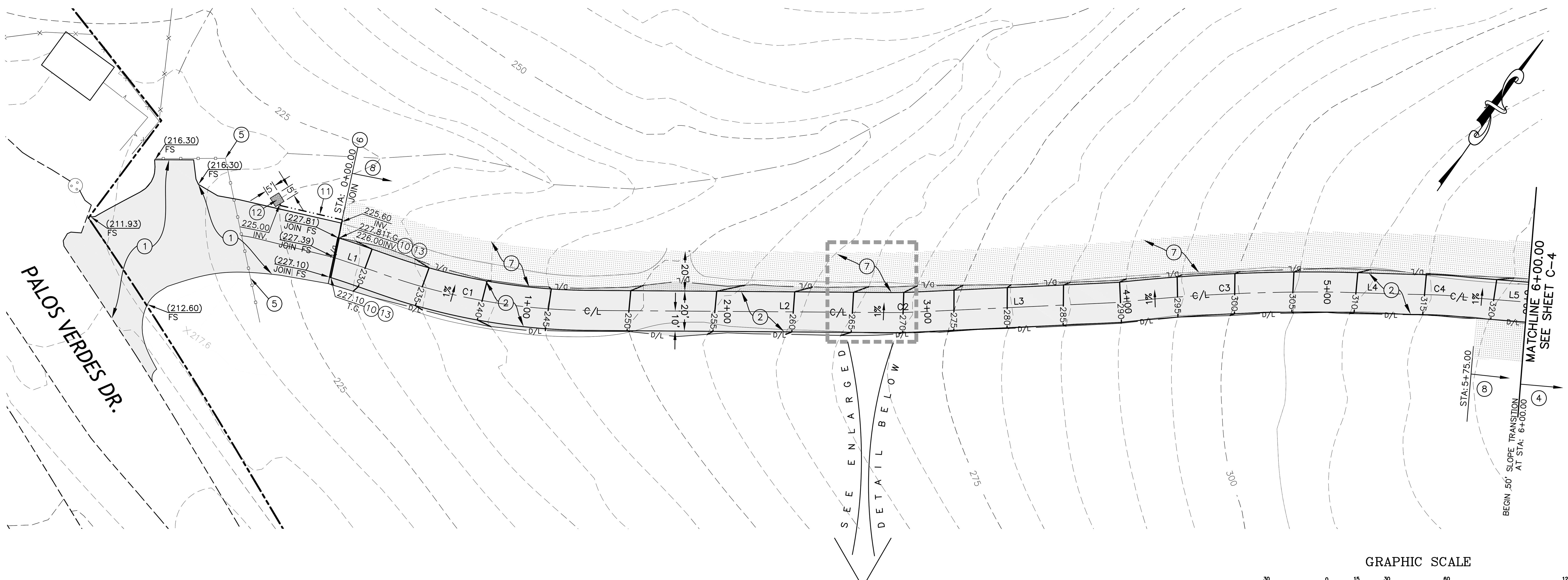
DESIGNER: MP,PR	APPR'D BY: __
DRAFTER: MP,PR	REVISED BY:
SCALE: 1"=60'	DATE: 10/17/11

CIVIL

C-2 of 7

JOB NUMBER
0320-09-001





CONSTRUCTION NOTES:

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4. CONSTRUCT 50' CROSS SLOPE TRANSITION.
5. EXISTING ENTRY GATE.
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7. RE-SEED SLOPE WITH BMP VEGETATION AS NEEDED WITHIN 20' WIDE VEGETATED BUFFER STRIP ZONE PER DETAIL 1, SHEET C-7.
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10. INSTALL NDS 8" PRO SERIES CHANNEL DRAIN, NDS MODEL No. 833, WITH TRAFFIC RATED GRATE AND KRISTAR FLOGARD LOPRO TRENCH DRAIN FILTER, KRISTAR MODEL No. FG-TDOF6, SEE DETAIL 3, SHEET C-7 FOR ADDITIONAL INFORMATION.
11. INSTALL 4" PVC PIPE FOR AREA DRAINAGE, PROVIDE MINIMUM 2% SLOPE.
12. CONSTRUCT PROPOSED RIP RAP PAD PER DETAIL 2, SHEET C-7.
13. PROVIDE STORM DRAIN STENCIL "NO DUMPING – DRAINS TO OCEAN" PER DETAIL 4, SHEET C-7.

NOTE:

- ALL CUT OR FILL SLOPES ADJACENT TO THE DRIVEWAY SHALL BE RE-PLANTED WITH NATIVE OR DROUGHT TOLERANT PLANTS.
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  - VEGETATED BUFFER STRIPS
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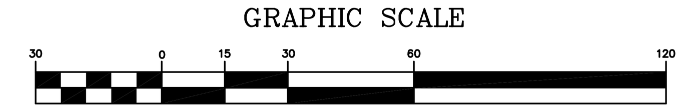
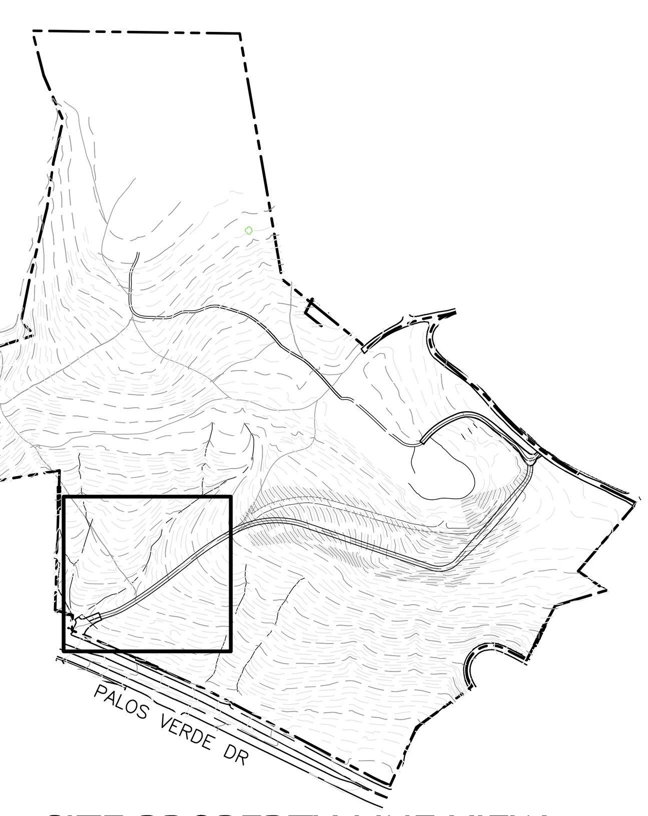


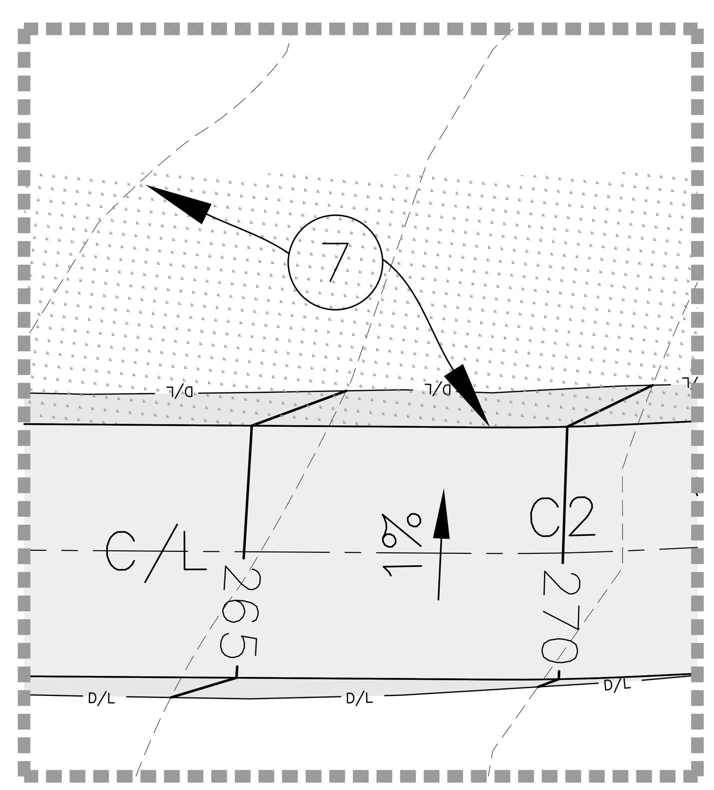
GRAPHIC SCALE

(IN FEET)
1 inch = 30 ft.



SITE PROPERTY LINE VIEW

SCALE: 1"=500'



ENLARGED VIEW- DRIVEWAY AND BUFFER STRIP

SCALE: 1"=10'

Curve Table: Alignments

Curve #	Radius	Length	Delta	Tangent
C1	315.000	107.664	19°34'59"	54.36
C2	200.000	10.870	3°06'50"	5.44
C3	900.000	110.213	7°00'59"	55.18
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Line Table: Alignments

Line #	Length	Direction
L1	21.225	N73° 30' 56.12"E
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REGISTERED PROFESSIONAL ENGINEER
ROLAND P. ROTHMAN
NO. C47790
EXP. 12-31-11
CIVIL
STATE OF CALIFORNIA

PLAN PREPARED IN THE OFFICES OF:
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RANCHO PALOS VERDES, CA 90275

SHEET TITLE
POINT VIEW DRIVEWAY
GRADING PLAN
AND PROFILE

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C-3 of 7

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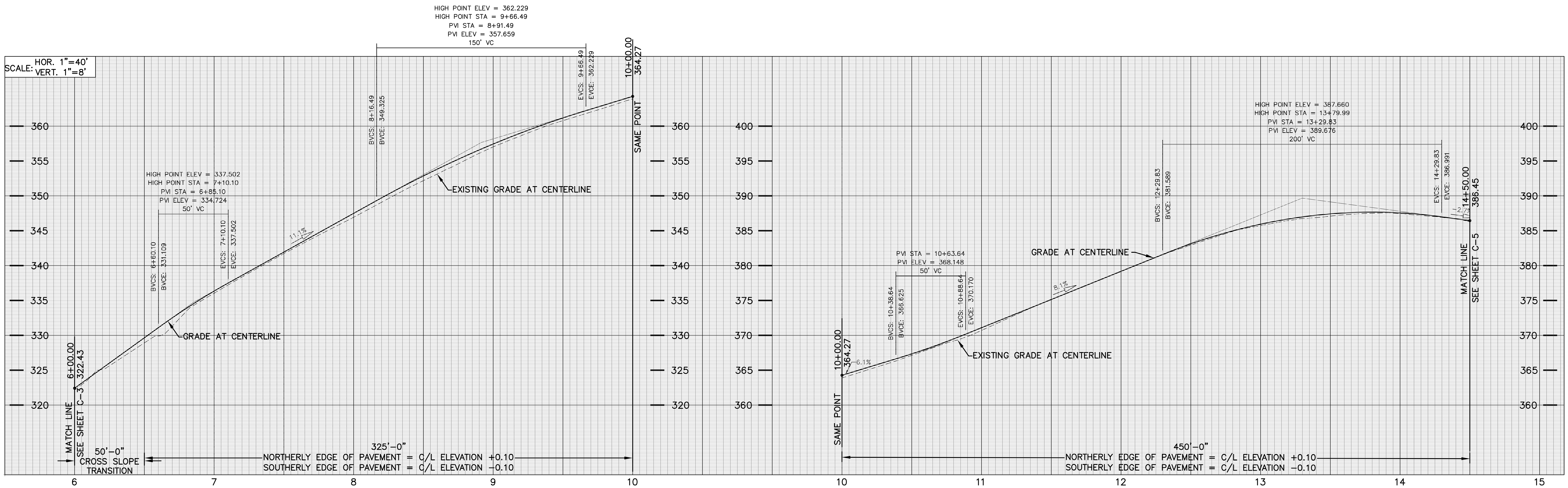

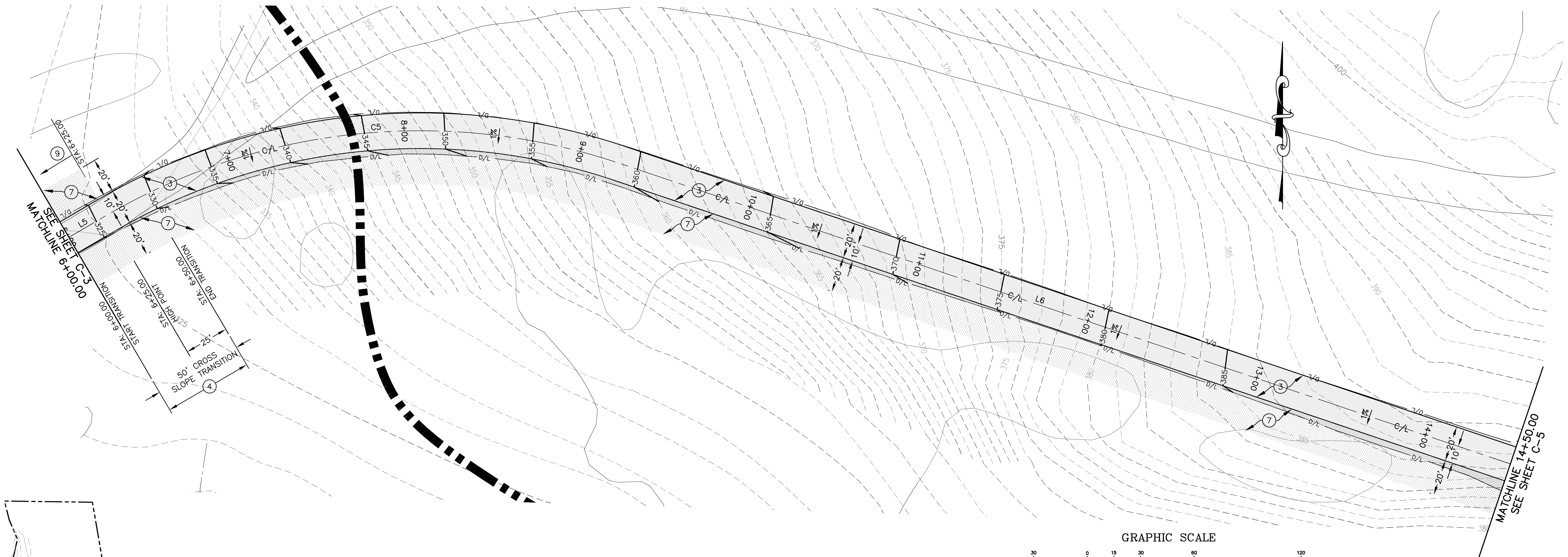

GRAPHIC SCALE

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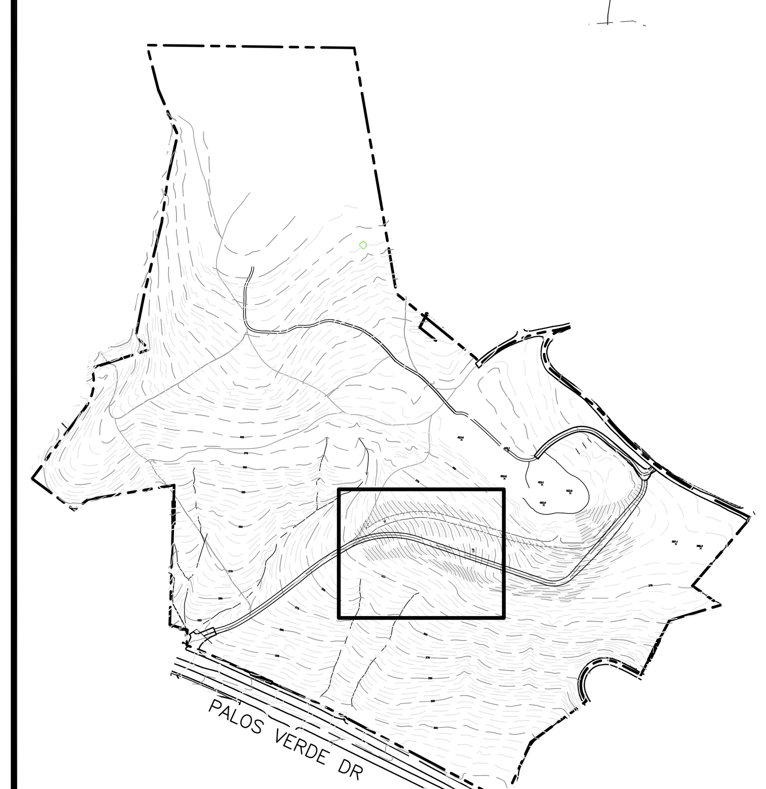

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SCALE: 1"=500'

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RANCHO PALOS VERDES, CA 90275

SHEET TITLE
POINT VIEW DRIVEWAY
GRADING PLAN
AND PROFILE

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CIVIL

C-4 of 7

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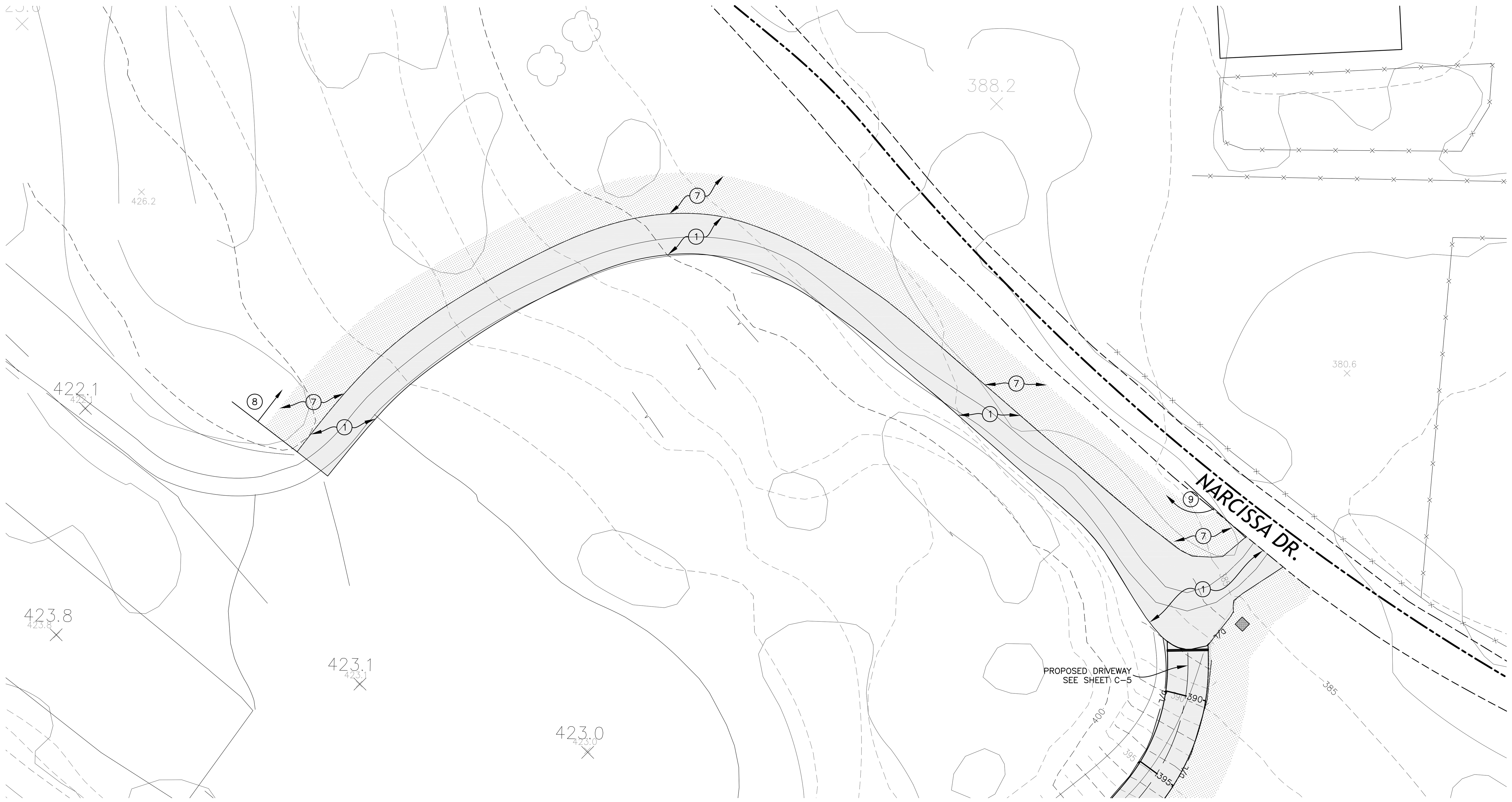

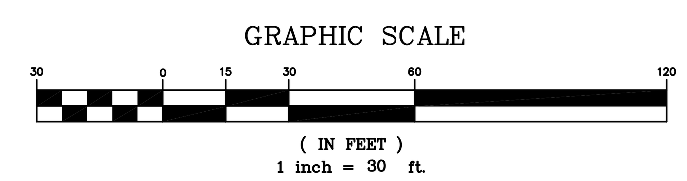

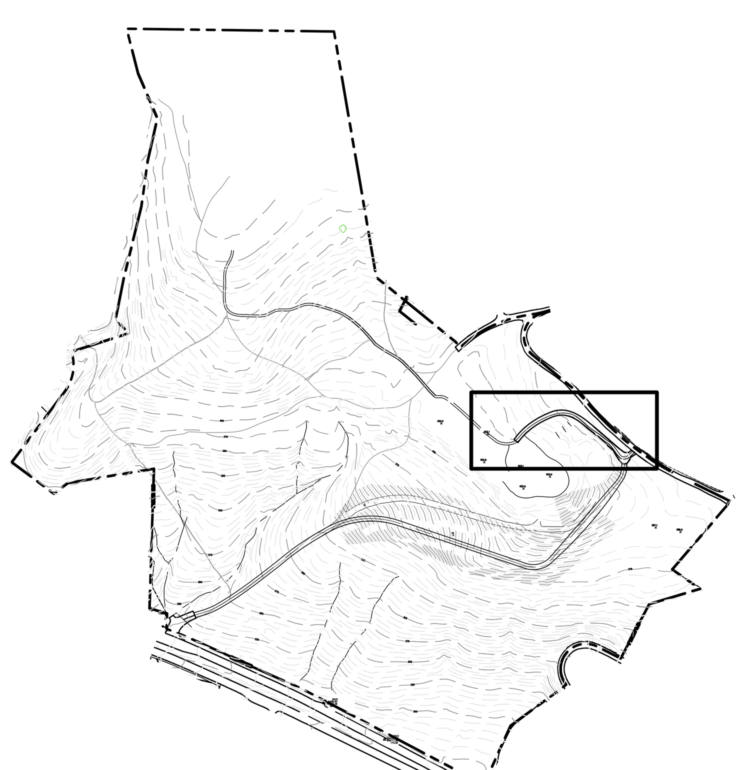

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6001 PALOS VERDES DRIVE SOUTH
RANCHO PALOS VERDES, CA 90275

SHEET TITLE
POINT VIEW DRIVEWAY
EXISTING DRIVEWAY
GRADING PLAN

REVISIONS

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SCALE: AS SHOWN	DATE: 10/17/11

CIVIL

C-6 of 7

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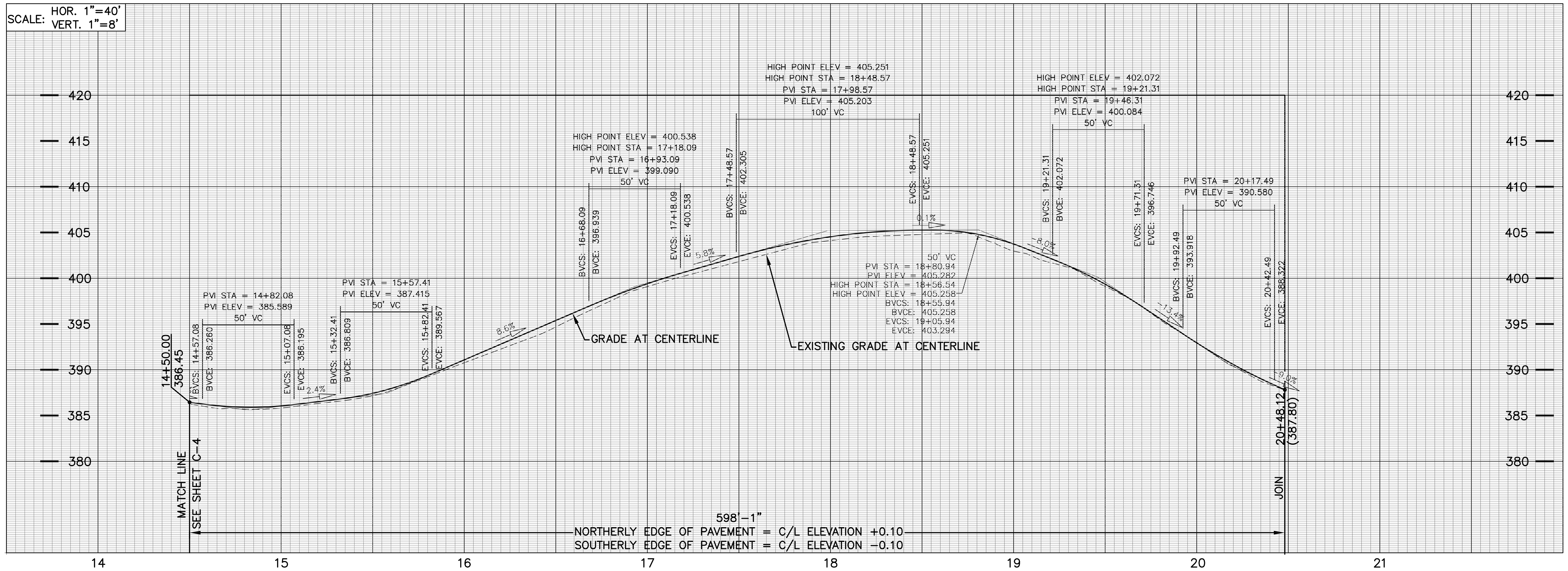

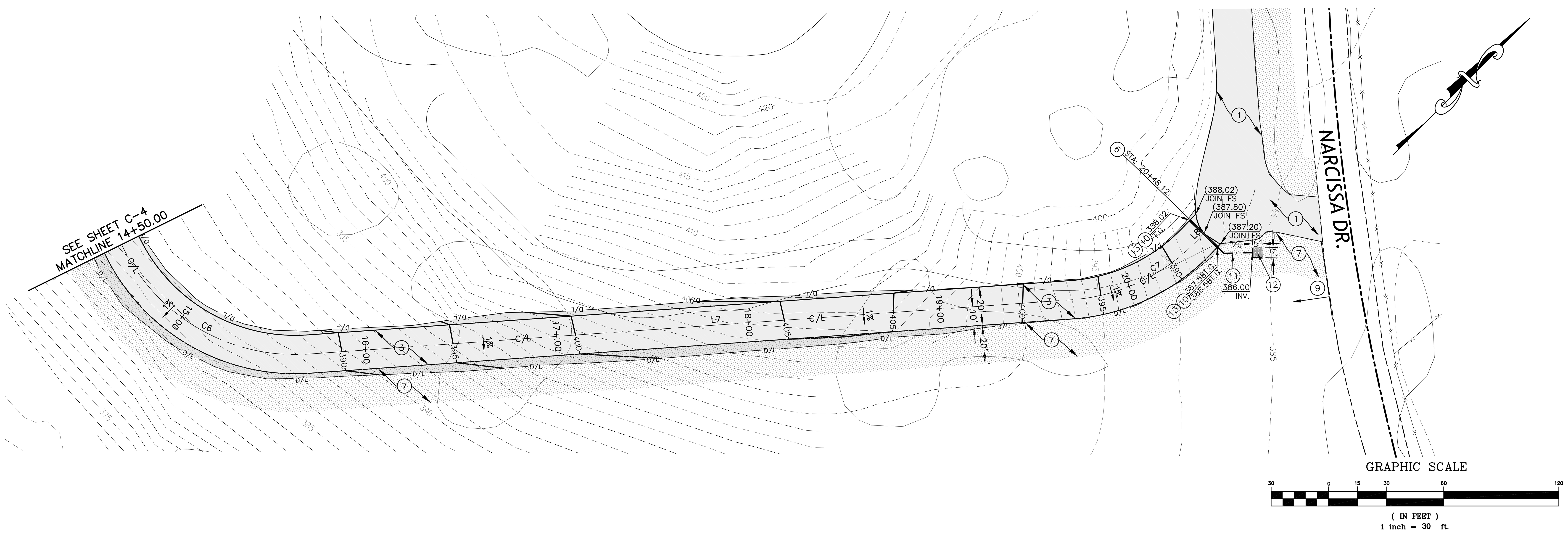

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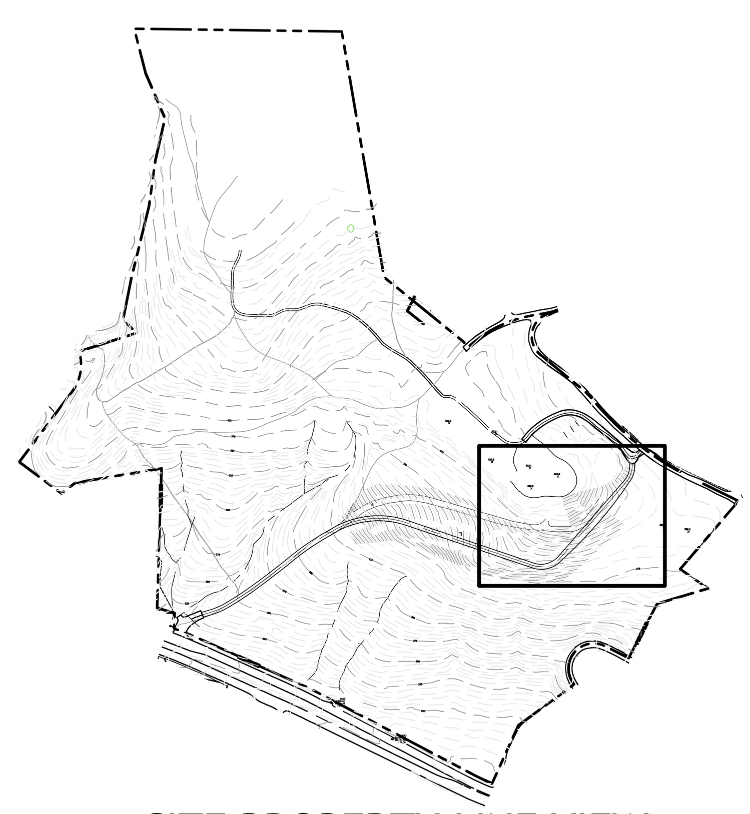

SITE PROPERTY LINE VIEW
SCALE: 1"=500'

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SHEET TITLE
POINT VIEW DRIVEWAY GRADING PLAN AND PROFILE

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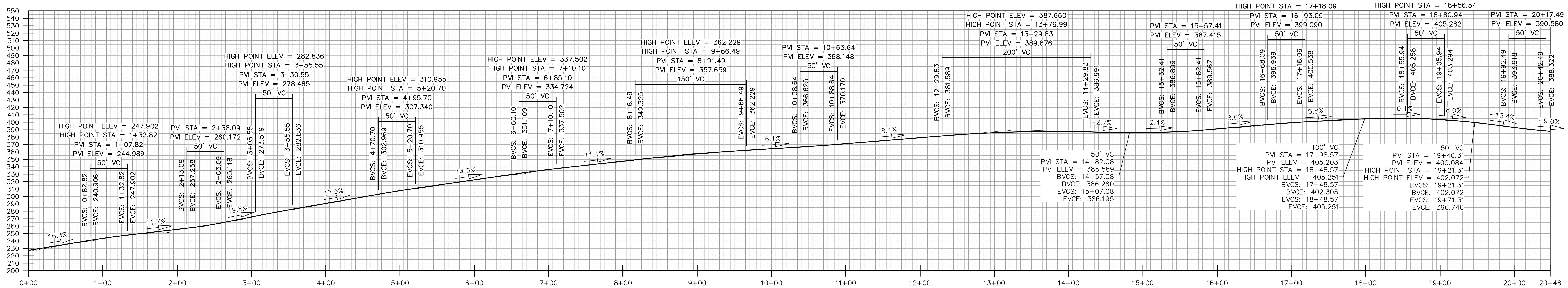
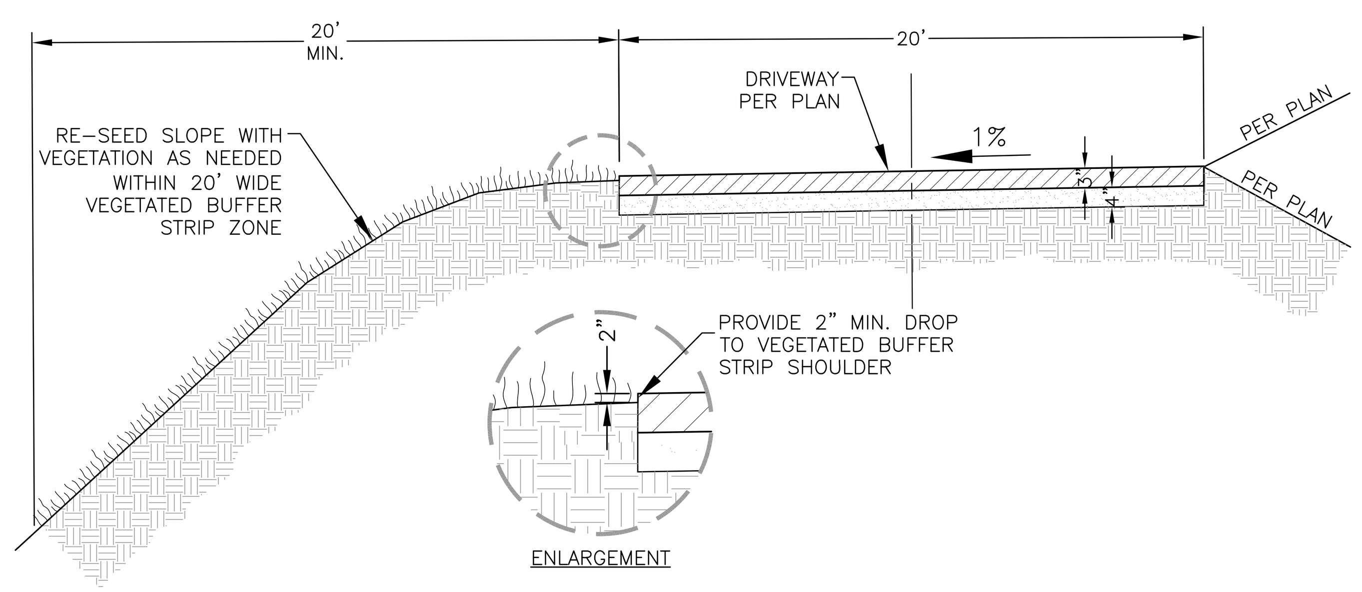


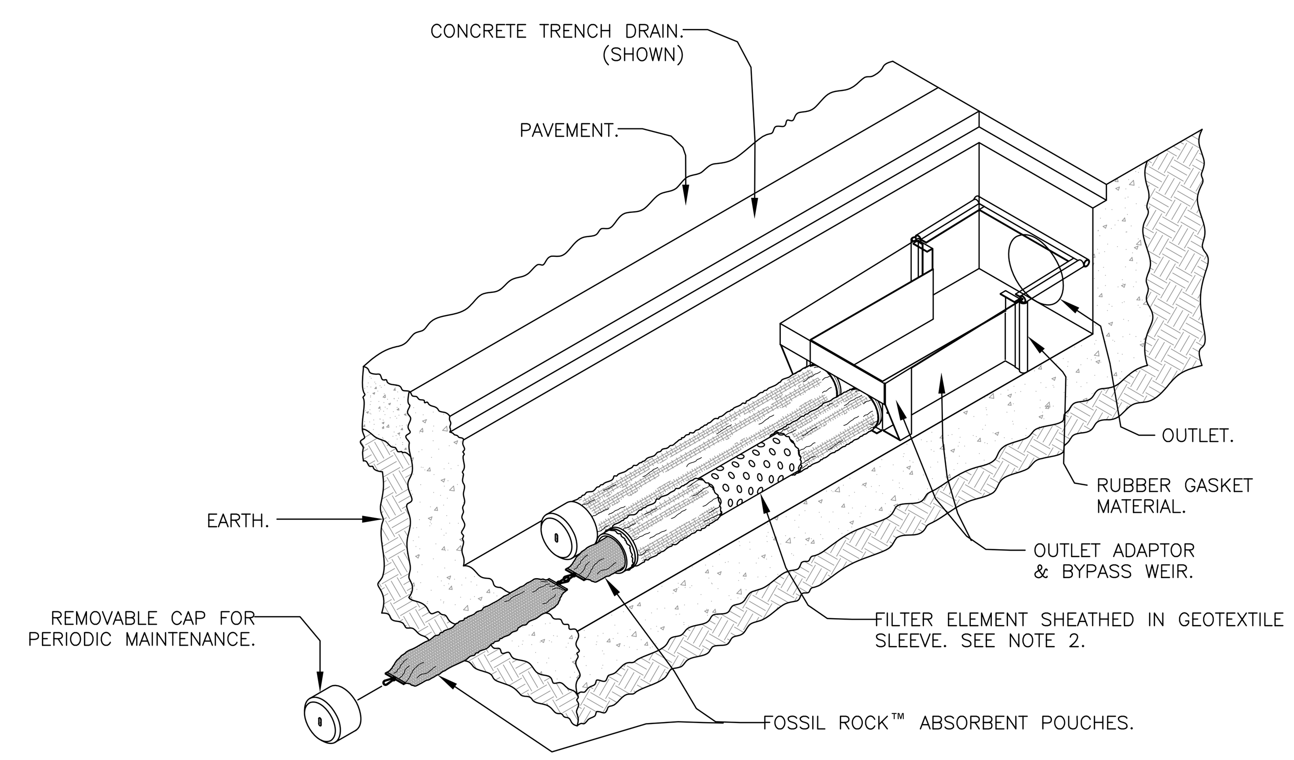
DRIVEWAY PROFILE

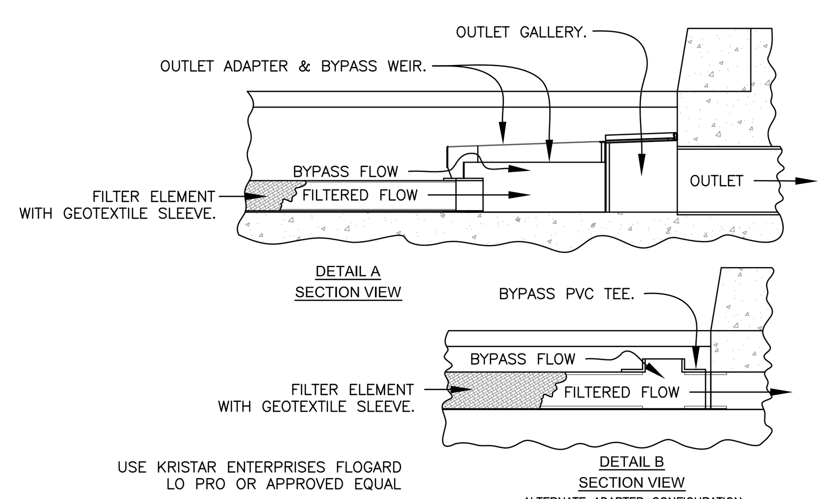
SCALE: 1"=60'



1 VEGETATED BUFFER STRIP

NOT TO SCALE





USE KRISTAR ENTERPRISES FLOGARD LO PRO OR APPROVED EQUAL

NOTES:

1. Filter outlet adapter shall be constructed from stainless steel Type 304.
2. Filter element is constructed from polypropylene woven monofilament geotextile surrounding a perforated filter housing. Filter element shall not allow the retention of water between storm events.
3. Filter inserts are supplied with "clip-in" filter pouches utilizing fossil rockf filter medium for the collection and retention of petroleum hydrocarbons (oils & greases).
4. FloGardd LoProf filter inserts and fossil rockf filter medium pouches must be maintained in accordance with manufacturer recommendations.
5. Outlet adapter can accommodate outlet openings at right angles and/or bottom outlet openings.
6. For alternate outlet adapter configurations used for extremely shallow trench drains contact Kristar Enterprises for engineering assistance.

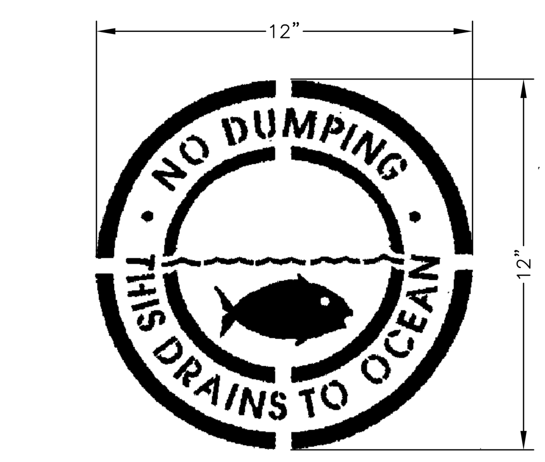
SPECIFIER CHART

MODEL	FILTER TYPE	TRENCH WIDTH "ID" (CLEAR OPENING)	MINIMUM TRENCH DEPTH (FROM BOTTOM OF GRATE)	SOLIDS STORAGE CAPACITY CUBIC FEET	FILTERED FLOW CUBIC FEET / SECOND	TOTAL BYPASS CAPACITY CUBIC FEET /SECOND
FG-TDOF3	PIPE *	3.0	6.5	0.1	0.5	0.1
FG-TDOF4	PIPE *	4.0	6.5	0.2	0.5	0.1
FG-TDOF6	PIPE	6.0	6.5	0.4	0.5	0.2
FG-TDOF8	PIPE	8.0	6.5	0.7	0.5	0.3
FG-TDOF10	PIPE	10.0	6.5	0.9	0.5	0.5
FG-TDOF12	PIPE	12.0	6.5	0.9	1.0	0.6
FG-TDOF18	PIPE	18.0	6.5	1.3	1.5	1.1
FG-TDOF24	PIPE	24.0	6.5	1.8	2.0	1.5
FG-TDOA6	PANEL	6.0	6.5	0.5	0.2	0.3
FG-TDOA8	PANEL	8.0	6.5	0.7	0.2	0.3
FG-TDOA10	PANEL	10.0	6.5	0.8	0.3	0.5
FG-TDOA12	PANEL	12.0	6.5	1.0	0.4	0.6
FG-TDOA18	PANEL	18.0	6.5	1.4	0.8	1.1
FG-TDOA24	PANEL	24.0	6.5	1.8	1.1	1.5

* ALTERNATE ADAPTER CONFIGURATION. SEE DETAIL B.

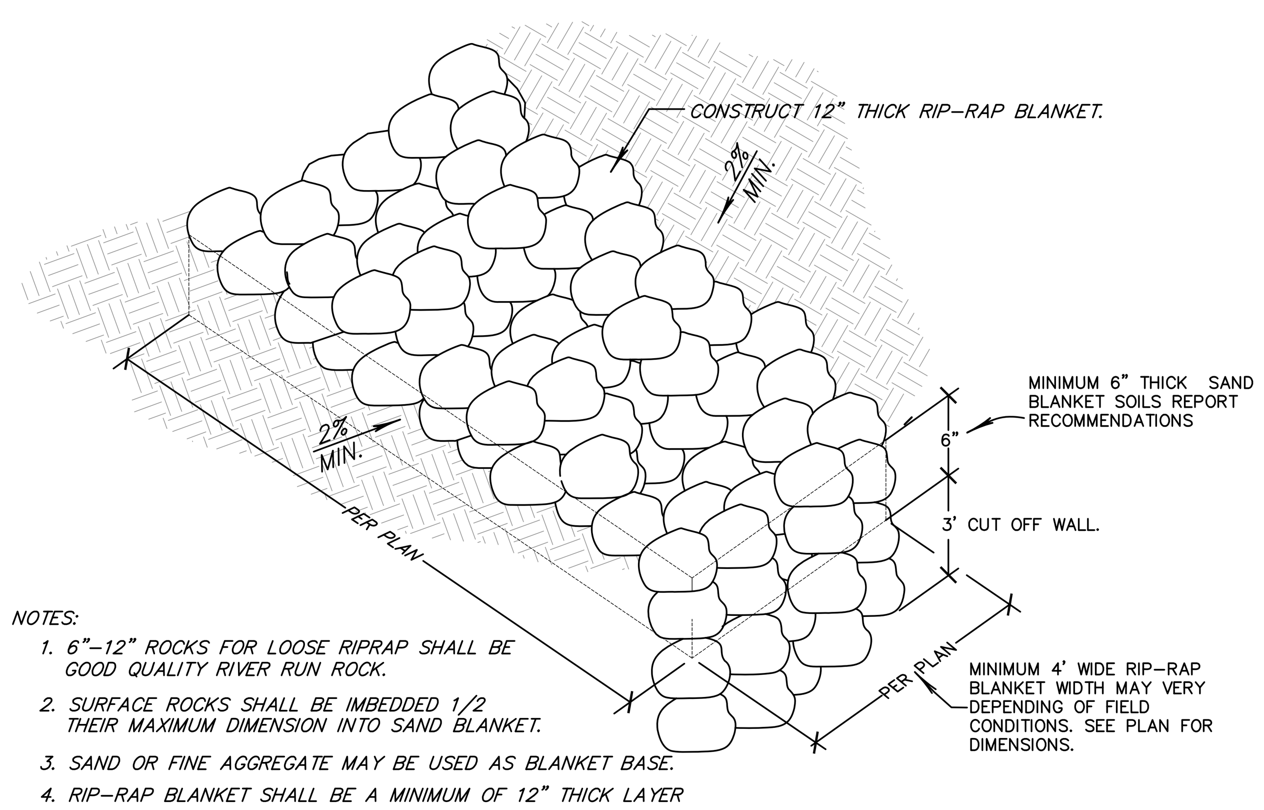
3 TRENCH DRAIN FILTER

NOT TO SCALE



4 STORM DRAIN STENCIL

NOT TO SCALE



NOTES:

1. 6"-12" ROCKS FOR LOOSE RIPRAP SHALL BE GOOD QUALITY RIVER RUN ROCK.
2. SURFACE ROCKS SHALL BE IMBEDDED 1/2 THEIR MAXIMUM DIMENSION INTO SAND BLANKET.
3. SAND OR FINE AGGREGATE MAY BE USED AS BLANKET BASE.
4. RIP-RAP BLANKET SHALL BE A MINIMUM OF 12" THICK LAYER

2 RIP RAP PAD

NOT TO SCALE

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ROTHMAN ENGINEERING, INC.
205 S. BROADWAY, SUITE 206
LOS ANGELES, CALIFORNIA 90012
(213) 621-3155 FAX (213) 621-3105

CLIENT
YORK POINT VIEW PROPERTIES, LLC

PROJECT
6001 PALOS VERDES DRIVE SOUTH
RANCHO PALOS VERDES, CA 90275

SHEET TITLE
POINT VIEW DRIVEWAY PROFILE AND DETAILS

REVISIONS

No.	DESCRIPTION	BY	DATE

DESIGNER: MP,PR	APPR'D BY: —
DRAFTER: MP,PR	REVISED BY:
SCALE: AS SHOWN	DATE: 10/17/11

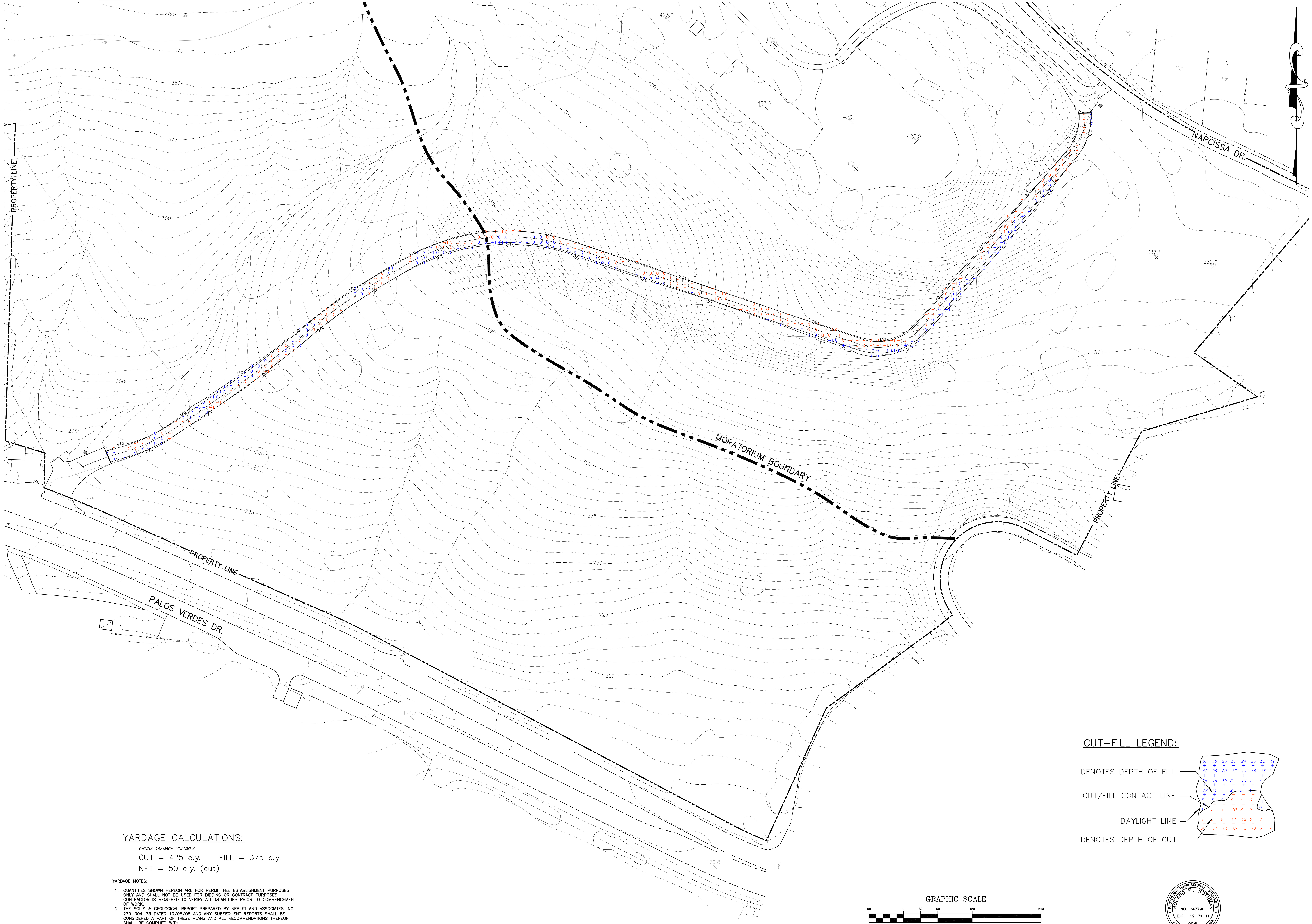
REGISTERED PROFESSIONAL ENGINEER ROLAND P. ROTHMAN NO. C47790 EXP. 12-31-11 CIVIL STATE OF CALIFORNIA

CIVIL

C-7 of 7

JOB NUMBER 0320-09-001

P:\Acad Rothman Engineering Job Files\0320 Gary Weber\6001 Palos Verdes Dr South\Civil\1 - Grading & Drainage\ Oct 19, 2011



YARDAGE CALCULATIONS:

GROSS YARDAGE VOLUMES

CUT = 425 c.y.   FILL = 375 c.y.

NET = 50 c.y. (cut)

YARDAGE NOTES:

1. QUANTITIES SHOWN HEREON ARE FOR PERMIT FEE ESTABLISHMENT PURPOSES ONLY AND SHALL NOT BE USED FOR BIDDING OR CONTRACT PURPOSES. CONTRACTOR IS REQUIRED TO VERIFY ALL QUANTITIES PRIOR TO COMMENCEMENT OF WORK.
2. THE SOILS & GEOLOGICAL REPORT PREPARED BY NEBLET AND ASSOCIATES. NO. 279–004–75 DATED 10/08/08 AND ANY SUBSEQUENT REPORTS SHALL BE CONSIDERED A PART OF THESE PLANS AND ALL RECOMMENDATIONS THEREOF SHALL BE COMPLIED WITH.
3. NO BULKING OR SHRINKAGE HAS BEEN TAKEN INTO ACCOUNT ON THIS SHEET.
4. SITE SPOILS SUCH AS, FOUNDATIONS, RETAINING WALLS, UTILITY TRENCHING, ETC. ARE NOT ACCOUNTED FOR IN THE ABOVE VOLUMES.

NO. C47790
EXP. 12–31–11
CIVIL

THIS SHEET FOR REFERENCE ONLY

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YORK POINT VIEW PROPERTIES, LLC

PROJECT
6001 PALOS VERDE DRIVE SOUTH
RANCHO PALOS VERDE, CA 90275

SHEET TITLE
CUT AND FILL
INFORMATION SHEET

REVISIONS

No.	DESCRIPTION	BY	DATE

DESIGNER: MP,PR	APPR'D BY: __
DRAFTER: MP,PR	REVISED BY:
SCALE: 1"=60'	DATE: 10/17/11

REFERENCE

R-1 of 1

JOB NUMBER
0320–09–001

ATTACHMENT E

SUSMP REPORT
[ROTHMAN, 2011]

Hydrology
Existing Conditions

205 S. Broadway, Suite 206, Los Angeles, California 90012
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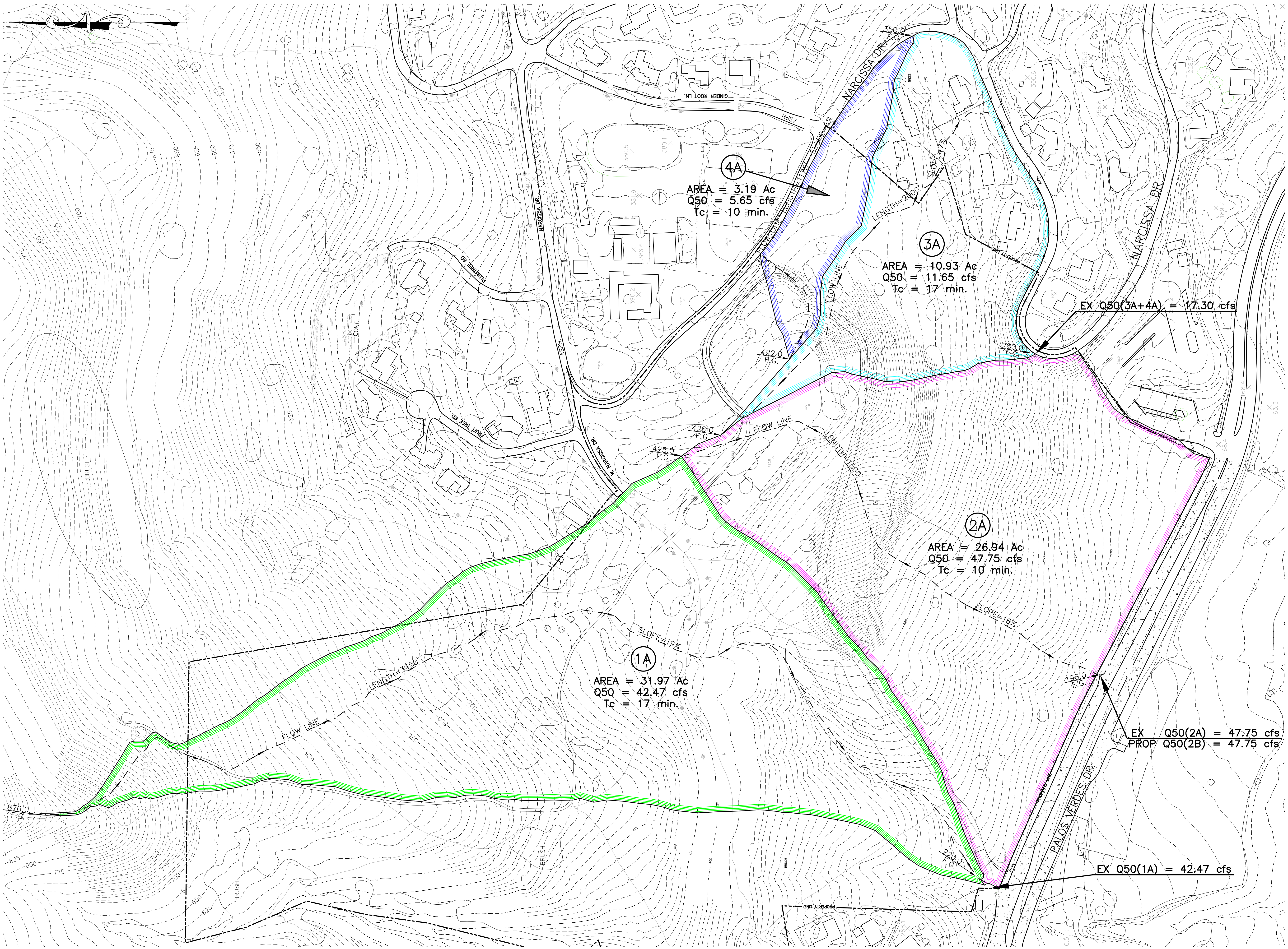

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LOS ANGELES, CALIFORNIA 90012
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CLIENT
YORK POINT VIEW PROPERTIES, LLC

PROJECT
6001 PALOS VERDES DRIVE SOUTH
RANCHO PALOS VERDES, CA 90275

SHEET TITLE
HYDROLOGY
EXISTING CONDITIONS

REVISIONS

No.	DESCRIPTION	BY	DATE

DESIGNER: MT	APPR'D BY: RR
DRAFTER: MT	REVISED BY:
SCALE: AS SHOWN	DATE: 10/17/11

HYDRO

H-1 of 2

JOB NUMBER
0320-09-001

Hydrology
Proposed Conditions

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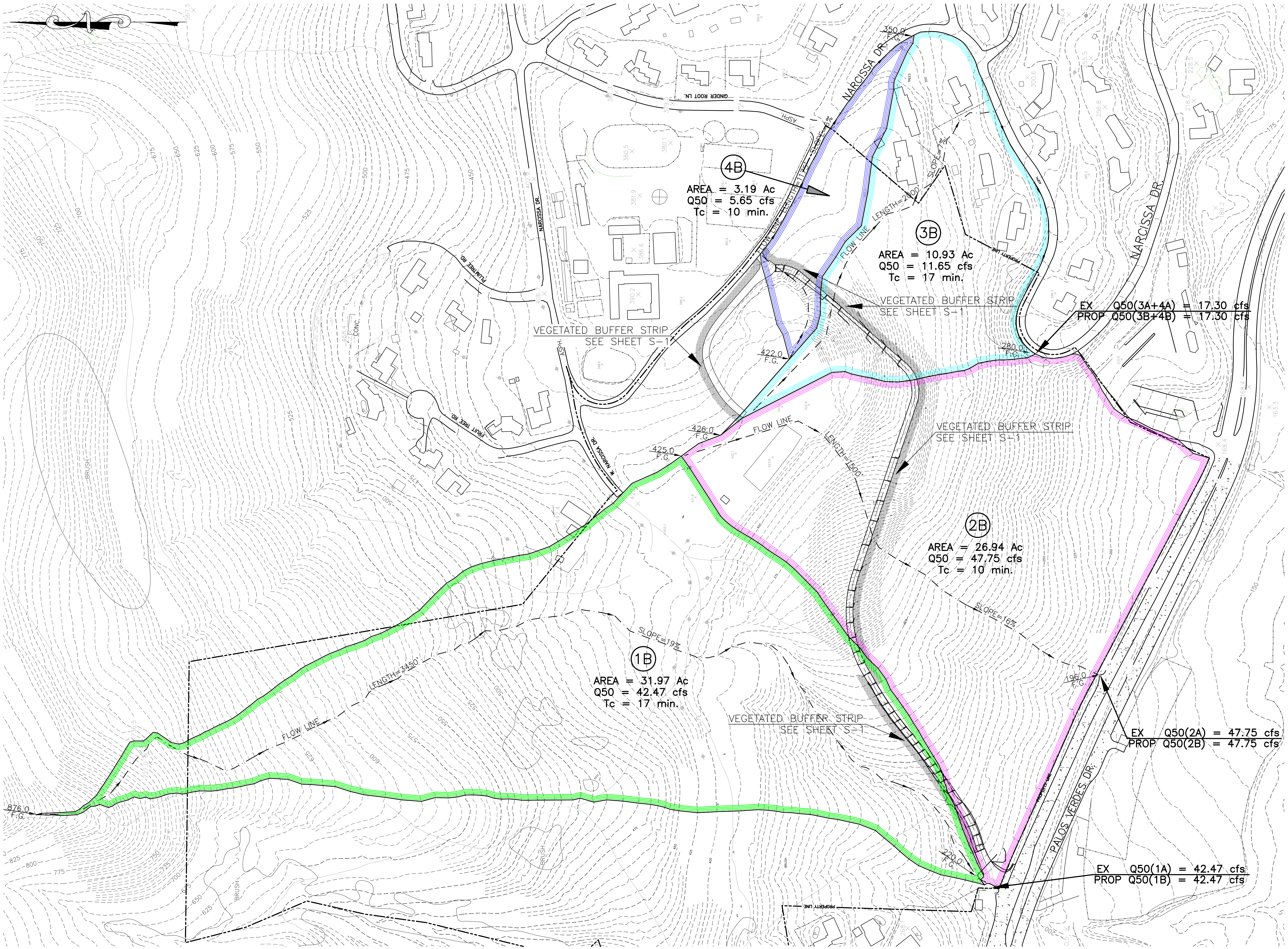

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LOS ANGELES, CALIFORNIA 90012
(213) 621-3155 FAX (213) 621-3105

CLIENT
YORK POINT VIEW PROPERTIES, LLC

PROJECT
6001 PALOS VERDES DRIVE SOUTH
RANCHO PALOS VERDES, CA 90275

SHEET TITLE
HYDROLOGY
PROPOSED CONDITIONS

REVISIONS			
No.	DESCRIPTION	BY	DATE

DESIGNER: MT	APPR'D BY: RR
DRAFTER: MT	REVISED BY:
SCALE: AS SHOWN	DATE: 10/17/11

HYDRO

H-2 of 2

JOB NUMBER
0320-09-001

P:\Acad Rothman Engineering Job Files\0320 Gary Weber\6001 Palos Verdes Dr South\Civil\8 - SUSMP\, Oct 17, 2011

SUSMP
Proposed Roadway

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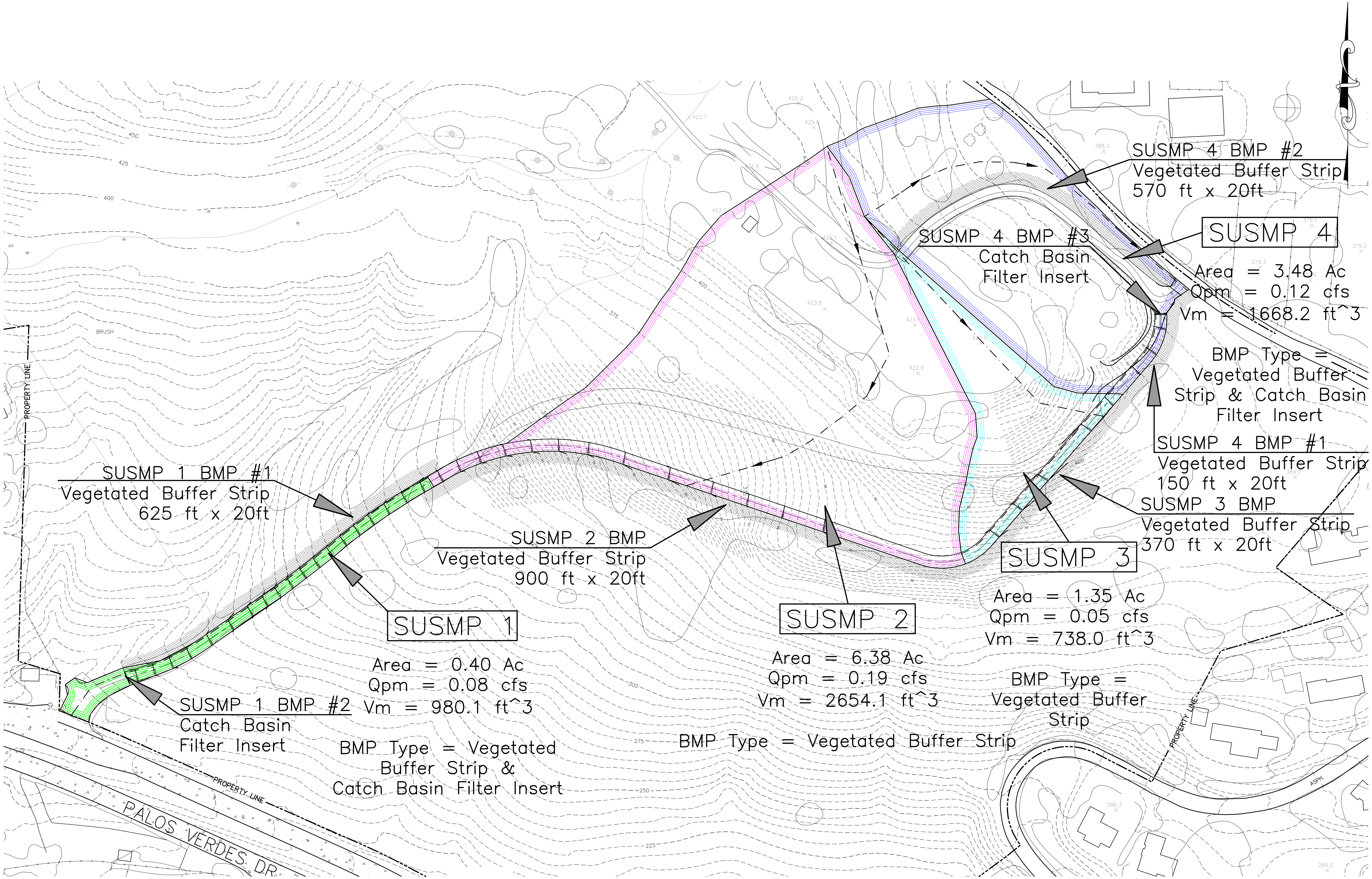

PLAN PREPARED IN THE OFFICES OF:
ROTHMAN ENGINEERING, INC.
205 S. BROADWAY, SUITE 206
LOS ANGELES, CALIFORNIA 90012
(213) 621-3155 FAX (213) 621-3105

CLIENT
YORK POINT VIEW PROPERTIES, LLC
PROJECT
6001 PALOS VERDES DRIVE SOUTH
RANCHO PALOS VERDES, CA 90275

SHEET TITLE
SUSMP
PROPOSED CONDITIONS
ROADWAY

REVISIONS

No.	DESCRIPTION	BY	DATE

DESIGNER: MT	APPR'D BY: RR
DRAFTER: MT	REVISED BY:
SCALE: AS SHOWN	DATE: 10/17/11

SUSMP

S-1 of 3

JOB NUMBER
0320-09-001

P:\Acad Rothman Engineering Job Files\0320 Gary Weber\6001 Palos Verdes Dr South\Civil\8 - SUSMP\ Oct 17, 2011

SUSMP
Proposed Agricultural

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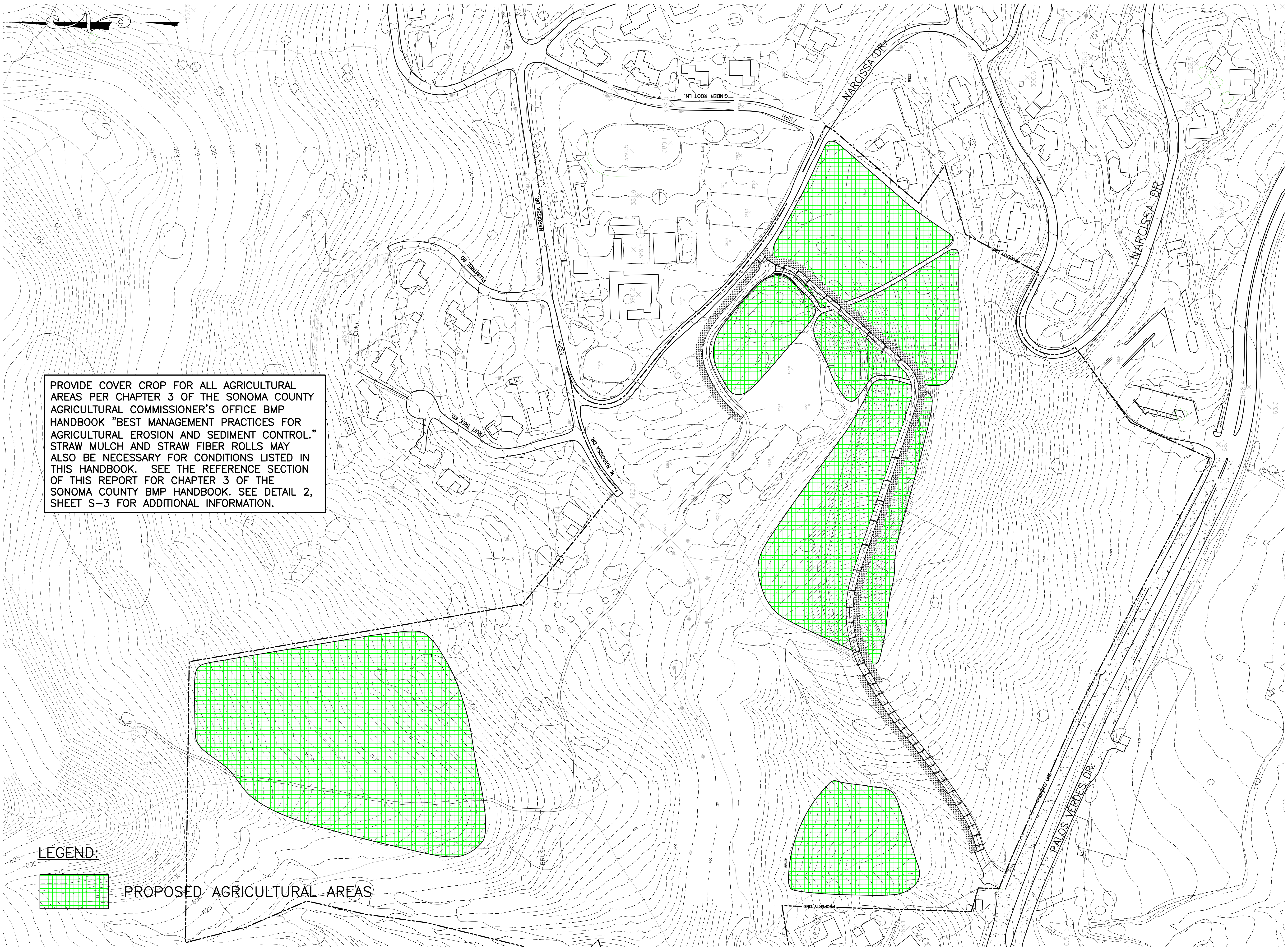


PROVIDE COVER CROP FOR ALL AGRICULTURAL AREAS PER CHAPTER 3 OF THE SONOMA COUNTY AGRICULTURAL COMMISSIONER'S OFFICE BMP HANDBOOK "BEST MANAGEMENT PRACTICES FOR AGRICULTURAL EROSION AND SEDIMENT CONTROL." STRAW MULCH AND STRAW FIBER ROLLS MAY ALSO BE NECESSARY FOR CONDITIONS LISTED IN THIS HANDBOOK. SEE THE REFERENCE SECTION OF THIS REPORT FOR CHAPTER 3 OF THE SONOMA COUNTY BMP HANDBOOK. SEE DETAIL 2, SHEET S-3 FOR ADDITIONAL INFORMATION.

LEGEND:

PROPOSED AGRICULTURAL AREAS

PLAN PREPARED IN THE OFFICES OF:
ROTHMAN ENGINEERING, INC.
205 S. BROADWAY, SUITE 206
LOS ANGELES, CALIFORNIA 90012
(213) 621-3155 FAX (213) 621-3105

CLIENT
YORK POINT VIEW PROPERTIES, LLC

PROJECT
6001 PALOS VERDES DRIVE SOUTH
RANCHO PALOS VERDES, CA 90275

SHEET TITLE
SUSMP
PROPOSED CONDITIONS
AGRICULTURE

REVISIONS

No.	DESCRIPTION	BY	DATE

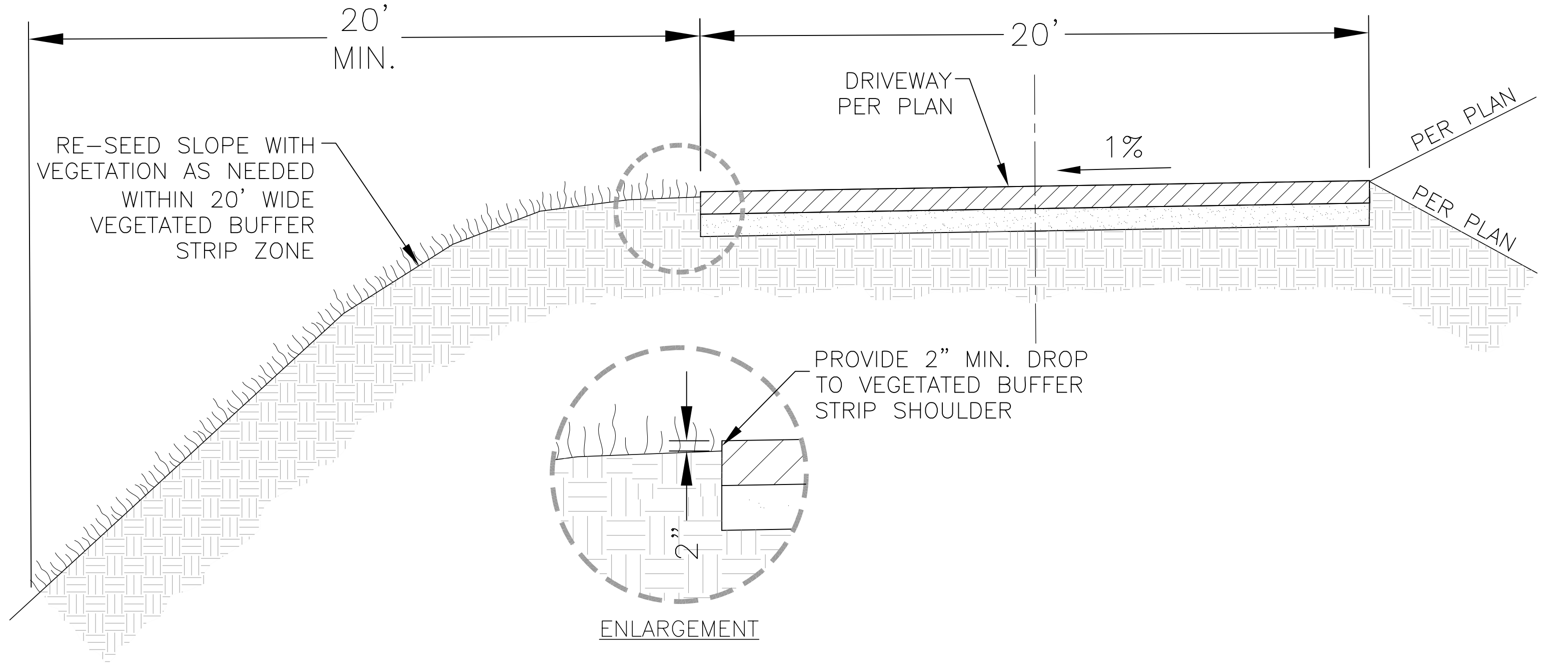
DESIGNER: MT	APPR'D BY: RR
DRAFTER: MT	REVISED BY:
SCALE: AS SHOWN	DATE: 10/17/11

SUSMP

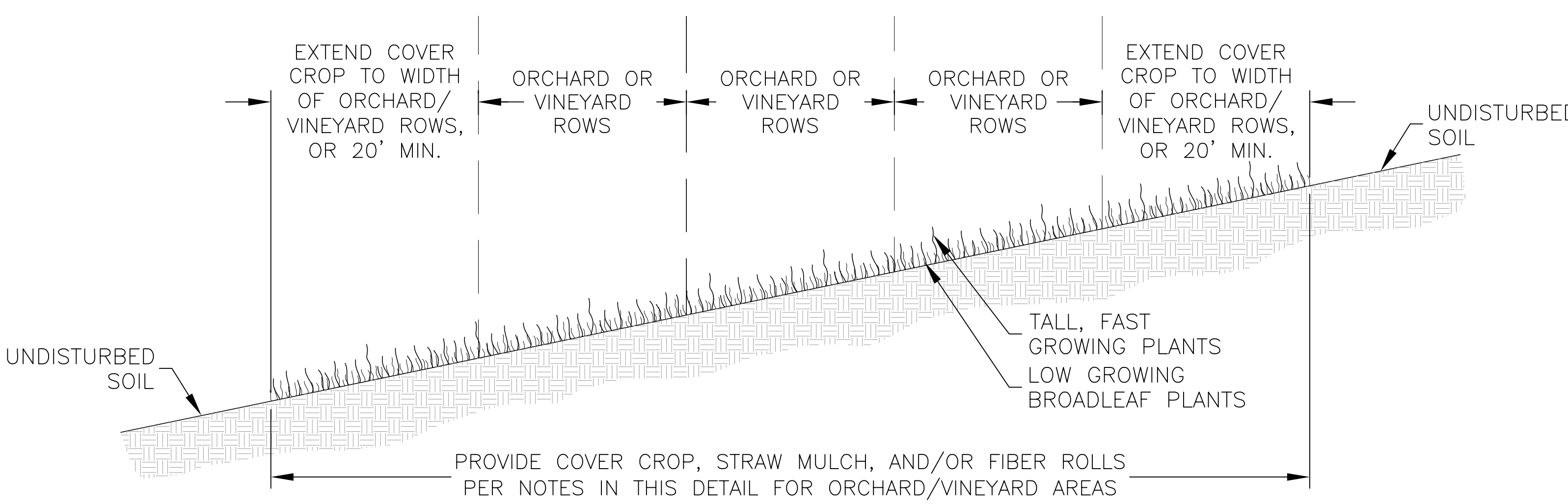
S-2 of 3

JOB NUMBER
0320-09-001

SUSMP
SUSMP Details



1 VEGETATED BUFFER STRIP
NOT TO SCALE



2 COVER CROP BMP
NOT TO SCALE

CROP COVER, STRAW MULCH, AND/OR FIBER ROLLS NOTES:

- ESTABLISH THICK COVER CROPS BY OCTOBER 15 AND MAINTAIN THEM THROUGHOUT THE RAINY SEASON (UNTIL APRIL 15).
- BROADCAST CROP COVER SEED IN THE FALL. IN ORDER TO HAVE ADEQUATE PROTECTION BY THE START OF THE RAINY SEASON (OCTOBER 15), THE SEED SHOULD BE PLANTED BY MID-SEPTEMBER. INITIAL IRRIGATION WILL BE REQUIRED FOR MOST GRASSES WITH FOLLOW-UP IRRIGATION AND FERTILIZATION. THE COVER CROP SHOULD LOOK LIKE A LAWN BY OCTOBER 15 (FOR NEW PLANTINGS AND NOVEMBER 15 FOR REPLANTS) IN ORDER TO PROVIDE ADEQUATE PROTECTION FOR THE SOIL DURING THE FIRST HEAVY RAINS.
- IF YOU CANNOT PLANT COVER CROP BY MID-SEPTEMBER AND IRRIGATE THE SEED, THEN YOU MAY PLANT YOUR SEED IN OCTOBER AND COVER IT WITH STRAW MULCH APPLIED AT THE RATE OF TWO TONS PER ACRE (ABOUT 42 BALES PER ACRE). YOU SHOULD NOT BE ABLE TO SEE ANY SOIL ONCE THE STRAW IS APPLIED.
- IF RAIN IS LIKELY AFTER THE COVER CROP HAS BEEN TILLED AND THERE IS NO PERIMETER EROSION CONTROL, USE STRAW MULCH AT THE RATE OF TWO TONS PER ACRE (ABOUT 42 BALES PER ACRE) IN AREAS WHERE COVER CROPS ARE PLANTED.
- WHENEVER POSSIBLE, AVOID TILLING EARLY IN THE SPRING OR LATE IN THE FALL.
- MINIMIZE TILLAGE PRACTICES, ESPECIALLY IF SLOPES ARE GREATER THAN NOMINAL (>5-10%) OR IF SOILS ARE HIGHLY ERODIBLE.
- DO NOT TILL TURN-AROUND AREAS EXCEPT FOR THE INFREQUENT NEED TO REDUCE COMPACTION. IN THIS CASE, PROMPTLY COVER THE SOIL WITH STRAW MULCH AND REPLANT WITH A COVER CROP BEFORE THE RAINY SEASON.
- AVOID BRINGING EQUIPMENT INTO THE VINEYARD/ORCHARD DURING THE WET SEASON. CLOSE SEASONAL ROADS TO TRAFFIC AND MAINTAIN PERMANENT ROADS TO PREVENT EROSION.
- KEEP ON SITE EXTRA EROSION CONTROL MATERIALS SUCH AS STRAW BALES OR WATTLES, GRAVEL OR GEO-TEXTILE FABRIC AND TRAIN VINEYARD/ORCHARD CREWS IN THEIR PROPER INSTALLATION.
- IF NECESSARY, PROVIDE STRAW MULCH PER CALIFORNIA BMP HANDBOOK BMP NUMBER EC-6.
- IF SOIL IS HIGHLY EROSIVE, PROVIDE FIBER ROLLS PER CALIFORNIA BMP HANDBOOK BMP NUMBER SE-5.

PLAN PREPARED IN THE OFFICES OF:
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LOS ANGELES, CALIFORNIA 90012
(213) 621-3155 FAX (213) 621-3105

CLIENT
YORK POINT VIEW PROPERTIES, LLC

PROJECT
6001 PALOS VERDES DRIVE SOUTH
RANCHO PALOS VERDES, CA 90275

SHEET TITLE
SUSMP
SUSMP DETAILS

REVISIONS			
No.	DESCRIPTION	BY	DATE

DESIGNER: MT	APPR'D BY: RR
DRAFTER: MT	REVISED BY:
SCALE: AS SHOWN	DATE: 10/17/11

SUSMP

S-3 of 3

JOB NUMBER
0320-09-001

APPENDIX D

ROTHMAN HYDRO AND SUSMP REPORT

Rothman Engineering, Inc
Civil Engineering, Civil Engineering Consulting

HYDROLOGIC ANALYSIS AND SUSMP CALCULATIONS FOR 6001 PALOS VERDES DRIVE SOUTH RANCHO PALOS VERDES, CA 90275

Client:
York Point View Properties, LLC

Job # 0320-09-001
10/17/11

Prepared by:
Rothman Engineering, Inc.
Roland Rothman, P.E.

205 S. Broadway, Suite 206, Los Angeles, California 90012
(213) 621-3155 Office - (213) 621-3105 Fax

I certify under penalty of law that this document and all attachments were prepared under my jurisdiction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system or those persons directly responsible for gathering the information, to the best of my knowledge and belief, the information submitted is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Roland P. Rothman	Position/Title	Date

205 S. Broadway, Suite 206, Los Angeles, California 90012
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Los Angeles County Hydrology Manual
50-Year 24-Hour Isohyet Map

Redondo Beach
1-H1.3

205 S. Broadway, Suite 206, Los Angeles, California 90012
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016 SOIL CLASSIFICATION AREA

7.2 INCHES OF RAINFALL

DPA - 6 DEBRIS POTENTIAL AREA

1 0 1 2 Miles

25-YEAR 24-HOUR ISOHYET REDUCTION FACTOR: 0.878
10-YEAR 24-HOUR ISOHYET REDUCTION FACTOR: 0.714

REDONDO BEACH
50-YEAR 24-HOUR ISOHYET

1-H1.3

LOS ANGELES COUNTY PUBLIC WORKS Public Service That Works

Project Overview

SUSMP & HYDROLOGY STUDY
6001 Palos Verdes Drive South, Rancho Palos Verdes, CA 90275

The following sheet shows design parameters and an example storm water runoff calculation.

Design Parameters:

Reference: Los Angeles County Department of Public Works Hydrology Manual

Hydrologic Map	1-H1-29, Pasadena
Rainfall Isohyet	4.9 IN (50 yr.-24 hr.)
Soil Type	002, 004
Debris Zone	DPA – 6
Impervious (p)	0.02 (Undeveloped Condition)
	1.00 (Driveway)

*A hydrology map delineating the tributary drainage areas and tabulated findings within this project is included at the back of this report.

Overview of Analysis Procedures:

Analysis of the storm drain runoff for both the existing and proposed conditions used the same techniques for analysis. Those being as follows:

- Used LA County Tc calculator to determine times of concentration, peak flow rate and burned peak flow rate.
- Used LA County – "Volume and Flow Rate Calculations" to calculate standard urban stormwater mitigation plan flow rates and volumes based on 0.75-inches of rainfall.

Project Description:

This site, located in the City of Rancho Palos Verdes, CA, consists of 94.15 acres of undeveloped land, of which approximately 1.10 acres will be disturbed for the placement of a proposed paved driveway over portions of an existing dirt trail.

This site will also include approximately 26 acres of agriculture including areas of avocado orchard, citrus orchard, and vineyards. This report will include BMP's for SUSMP water quality for the agricultural aspects of this project.

Hydrology Overview

205 S. Broadway, Suite 206, Los Angeles, California 90012
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Existing Conditions Hydrology:

For the existing conditions, runoff from the site will flow within four tributary areas: 1A, 2A, 3A, and 4A. In this condition, areas 1A and 2A will flow to the southern portion of the site along Palos Verdes Drive, while areas 3A and 4A will flow to the eastern portion of the site along Narcissa Drive.

Area 1A, to the north and west of the existing trail on-site, consists of undeveloped hillside land that drains southerly to Palos Verdes Drive.

Area 2A encompasses the frontage of the undeveloped property to the north of Palos Verdes Drive, which drains southerly to Palos Verdes Drive.

The following is a summary of the existing 50-year 24-hour peak flow rates that flow to Palos Verdes Drive:

Palos Verdes Drive:

Area Designation	Area (Ac)	Tc (min)	Q50 (cfs)
1A	31.97	17	42.47
2A	26.94	10	47.75
			90.22

Area 3A, on the eastern portion of the site, consists of an undeveloped upper tributary area (within the property) and a low density residential area below (see calculations for impervious percentage calculations) which drains easterly to Narcissa Drive.

Area 4A, on the northern portion of the site, consists of undeveloped land which drains northerly to Narcissa Drive.

The following is a summary of the existing 50-year 24-hour peak flow rates that flow to Narcissa Drive:

Narcissa Drive:

Area Designation	Area (Ac)	Tc (min)	Q50 (cfs)
3A	10.93	17	11.65
4A	3.19	10	5.65
			17.30

Existing Conditions Summary:

For the undeveloped property, the total runoff from the tributary areas shown will be 107.52 cfs.

Area Designation	Area (Ac)	Tc (min)	Q50 (cfs)
1A	31.97	17	42.47
2A	26.94	10	47.75
3A	10.93	17	11.65
4A	3.19	10	5.65
			107.52

Proposed Conditions Hydrology:

For the proposed conditions, runoff from the site will flow within four tributary areas: 1B, 2B, 3B, and 4B. In this condition, areas 1B and 2B will flow to the southern portion of the site along Palos Verdes Drive, while areas 3B and 4B will flow to the eastern portion of the site along Narcissa Drive.

Area 1B encompasses the same area as the existing area 1A and the proposed driveway will be constructed on the eastern ridgeline of the tributary area. The proposed driveway in area 1B will slope at with a 1% cross slope to the north of the driveway. Area 1B will continue to flow southerly to Palos Verdes Drive.

Area 2B encompasses the same area as the existing area 2A and the proposed driveway will be constructed across the tributary area. Runoff will flow southerly from the upper portion of Area 2B to the proposed driveway, across the proposed driveway, and continue to flow southerly to Palos Verdes Drive.

The following is a summary of the proposed 50-year 24-hour peak flow rates that flow to Palos Verdes Drive:

Palos Verdes Drive:

Area Designation	Area (Ac)	Tc (min)	Q50 (cfs)
1B	31.97	17	42.47
2B	26.94	10	47.75
			90.22

For areas 1B and 2B, runoff will remain the same as the proposed conditions despite the additional impervious area from the proposed driveway.

Area 3B encompasses the same area as the existing area 3A and the proposed driveway will be constructed across the tributary area. Runoff will flow easterly from the upper portion of Area 3B to the proposed driveway, across the proposed driveway, and continue to flow easterly to Narcissa Drive.

Area 4B encompasses the same area as the existing area 4A and the proposed driveway will be constructed across the tributary area. Runoff will flow northerly from the upper portion of Area 4B to the proposed driveway, across the proposed driveway, and continue to flow northerly to Narcissa Drive.

The following is a summary of the proposed 50-year 24-hour peak flow rates that flow to Narcissa Drive:

Narcissa Drive:

Area Designation	Area (Ac)	Tc (min)	Q50 (cfs)
3B	10.93	17	11.65
4B	3.19	10	5.65
			17.30

For areas 3B and 4B, runoff will remain the same as the proposed conditions despite the additional impervious area from the proposed driveway.

Proposed Conditions Summary:

For the proposed property, the total runoff from the tributary areas shown will be 107.52 cfs. The runoff will remain the same as the proposed conditions despite the additional impervious area from the proposed driveway.

Area Designation	Area (Ac)	Tc (min)	Q50 (cfs)
1B	31.97	17	42.47
2B	26.94	10	47.75
3B	10.93	17	11.65
4B	3.19	10	5.65
			107.52

SUSMP Overview

205 S. Broadway, Suite 206, Los Angeles, California 90012
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Proposed Conditions SUSMP: Roadway BMP's

For the proposed conditions, the "first flush" runoff from the impervious surfaces must be treated before leaving the site. The pollutants of concern for the driveway include petroleum hydrocarbons (gasoline, oil and grease), trash, and metals. The County of Los Angeles "Volume and Flow Rate Calculations" spreadsheet was used to calculate standard urban stormwater mitigation plan flow rates and volumes.

We have incorporated the Vegetated Buffer Strip (TC-31) best management practice (BMP) to treat the runoff from the proposed driveway: Vegetated Buffer Strips are grassed buffer strips vegetated surfaces that are designed to treat sheet flow from adjacent surfaces.

A summary of the calculations based on the Los Angeles County "Volume and Flow Rate Calculations" are shown below:

Area Designation	Area (Ac)	Flow-Based Qpm (cfs)	Volume-Based Vm (ft^3)	Treatment BMP
SUSMP 1	0.40	0.08	980.1	Vegetated Buffer Strip
SUSMP 2	6.38	0.19	2654.1	Vegetated Buffer Strip
SUSMP 3	1.35	0.05	738.0	Vegetated Buffer Strip
SUSMP 3	3.48	0.12	1668.2	Vegetated Buffer Strip

For areas SUSMP 1, SUSMP 2, SUSMP 3, and SUSMP 4, runoff from the driveway will sheet flow across the driveway onto the Vegetated Buffer Strip. This Vegetated Buffer Strip will consist of approved vegetation for the length of the driveway with a minimum width of 20 feet per the California BMP Handbook BMP number TC-31. This handbook requires that the Vegetated Buffer Strip width be equal to the width of the road which is 20 feet. In this area, any bare soil must be planted with approved vegetation to match the surrounding vegetation with approved; although, areas of existing vegetation will remain. The vegetated buffer strip has high removal effectiveness rating for petroleum hydrocarbons (gasoline, oil and grease), and metals, and a medium removal effectiveness rating for trash.

At this time there is no outdoor material storage planned for this site.

Calculations for Vegetated Buffer Strip:

The Vegetated Buffer Strip is sized to be the equal width of the area to be treated, the driveway in this case. For this project the driveway to be treated is 20 feet wide, and the proposed vegetated buffer strip is of equal width at 20 feet. Stormwater will sheet flow across the driveway and will be treated by the vegetated buffer strip.

The vegetated buffer strip will accept sheet flow from the driveway, and then it will slow runoff velocities allowing sediment and other pollutants to settle and provide some infiltration into the underlying soils.

For areas SUSMP 1 and SUSMP 4 we have also included trench drains with Catch Basin Filter Inserts (KriStar FloGard LoPro Trench Drain Model No. FG-TDOF6) to capture collect and treat all runoff were the driveway's 1% cross-slope is not able direct the runoff to the vegetated buffer strip. These trench drains are located at each end of the proposed driveway, will be stenciled with "No-Dumping – Drains to Ocean", and will outlet within the Vegetated Buffer Strip. The TSS removal effectiveness for filter inserts is shown on the following page.

The CASQA handbook has shown the removal effectiveness ratings for filter inserts as follows:

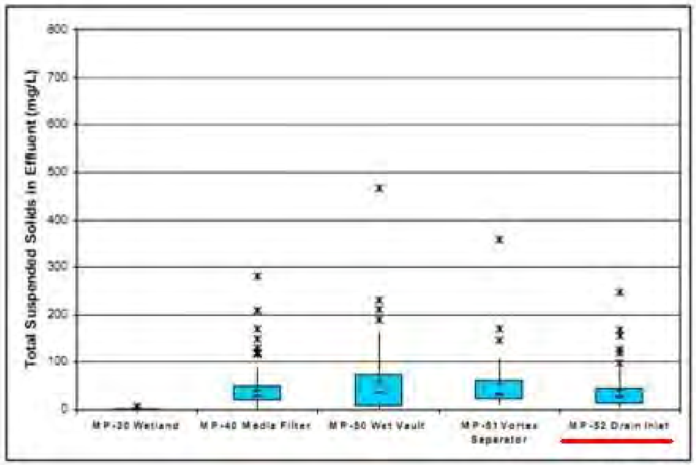


Figure 5-9
Total Suspended Solids in Effluent

- *Filters – TSS effluent concentrations range from 2 to 280 mg/L, with a median value of 29 mg/L*
- *Wetlands – TSS effluent concentrations vary little, and have a median value of 1.2 mg/L*
- *Inserts - TSS effluent concentrations range from 4 to 248 mg/L with a median value of 27 mg/L*
- *Vaults – TSS effluent concentrations range from 1 to 467 mg/L, with a median value of 36 mg/L*
- *Vortex – TSS effluent concentrations range from 13 to 359 mg/L, with a median value of 32 mg/L*

<u>Calculations for Vegetated Buffer Strip Catch Basin Filter Inserts:</u>

The catch basin filter inserts are used to treat runoff that will not otherwise be properly treated by the vegetated buffer strip. The "Volume and Flow Rate Calculations", in the calculations section of this report calculate the flow to be treated, "Qpm" for each of the areas tributary to the catch basins. The calculations provided are accompanied by a plan showing the tributary area, the calculated Qpm, and the treatment capacity of the catch basin filter inserts. A summary of this information is as follows:

Area	Catch Basin	Filter Manufacturer	Model Number	Qpm (cfs)	Filtered Flow Rate Capacity (cfs)
SUSMP 1	Trench Drain	Kristar	FG-TDOF6	0.02	0.50
SUSMP 4	Trench Drain	Kristar	FG-TDOF6	0.01	0.50

For both areas, the catch basins filtered flow rate exceeds the flow rate to be treated (Qpm), meaning that the filters are sized to adequately treat the runoff entering each catch basin.

Proposed Conditions SUSMP: Agricultural BMP's

The proposed site will also treat "first flush" runoff from agricultural portions of this site. The pollutants of concern for the agricultural portions of the site include including nutrients, pesticides, and sediment. We do not anticipate pathogens as a pollutant of concern for this project.

The proposed BMP for treatment of agricultural runoff will be a combination of cover crops, straw mulch, and fiber rolls, which for this report we will refer to as "Cover Crop BMP". Cover Crop BMP should be provided per chapter 3 of the Sonoma County Agricultural Commissioner's Office BMP handbook titled "Best Management Practices for Agricultural Erosion and Sediment Control". Chapter 3 of this handbook describes cover crops, straw mulch, fiber rolls, tillage practices, and erosion control for orchard and vineyard sites and has been included in the reference section of this report. In this handbook, cover crops are described as "the most cost effective method to reduce the introduction of sediments, nutrients, and pesticides to the stream channel through overland flow."

In addition to cover crop, straw mulch and fiber rolls (straw wattles) may be used as described in Chapter 3 of the "Best Management Practices for Agricultural Erosion and Sediment Control."

A summary of the Cover Crop BMP requirements is as follows (information provided by Sonoma County Agricultural Commissioner's Office, 2010):

- Establish thick cover crops by October 15 and maintain them throughout the rainy season (until April 15).
- Broadcast crop cover seed in the fall. In order to have adequate protection by the start of the rainy season (October 15), the seed should be planted by mid-September. Initial irrigation will be required for most grasses with follow-up irrigation and fertilization. The cover crop should look like a lawn by October 15 (for new plantings and November 15 for replants) in order to provide adequate protection for the soil during the first heavy rains.
- If you cannot plant cover crop by mid-September and irrigate the seed, then you may plant your seed in October and cover it with straw mulch applied at the rate of two tons per acre (about 42 bales per acre). You should not be able to see any soil once the straw is applied.
- If rain is likely after the cover crop has been tilled and there is no perimeter erosion control, use straw mulch at the rate of two tons per acre (about 42 bales per acre) in areas where cover crops are planted.
- Whenever possible, avoid tilling early in the spring or late in the fall.
- Minimize tillage practices, especially if slopes are greater than nominal (>5-10%) or if soils are highly erodible.
- Do not till turn-around areas except for the infrequent need to reduce compaction. In this case, promptly cover the soil with straw mulch and replant with a cover crop before the rainy season.
- Avoid bringing equipment into the vineyard/orchard during the wet season. Close seasonal roads to traffic and maintain permanent roads to prevent erosion.
- Keep on site extra erosion control materials such as straw bales or wattles, gravel or geo-textile fabric and train vineyard/orchard crews in their proper installation.
- If necessary, provide Straw Mulch per California BMP Handbook BMP number EC-6.
- If soil is highly erosive, provide Fiber Rolls per California BMP Handbook BMP number SE-5.

Calculations for SUSMP: Crop Cover, Straw Mulch and/or Fiber Rolls (Cover Crop BMP)

The cover crop, straw mulch, and/or fiber rolls BMP (Cover Crop BMP) is sized in a similar manner to the vegetated buffer strip in that the width of the BMP is equivalent to the width of the area to be treated. The Cover Crop BMP will cover the entire agricultural area for the orchard and vineyard portions of the site. For each orchard or vineyard row, the downstream row will treat the upstream row. The width of the Cover Crop BMP for the downstream row will be an equal width to the upstream row that it is treating. The orchard or vineyard row that is furthest downstream will be treated by the Cover Crop BMP area that will extend the width of the orchard or vineyard row, or a minimum of 20 feet if the row separations are less than 20 feet apart.

Proposed Conditions SUSMP: Structural BMP Maintenance:

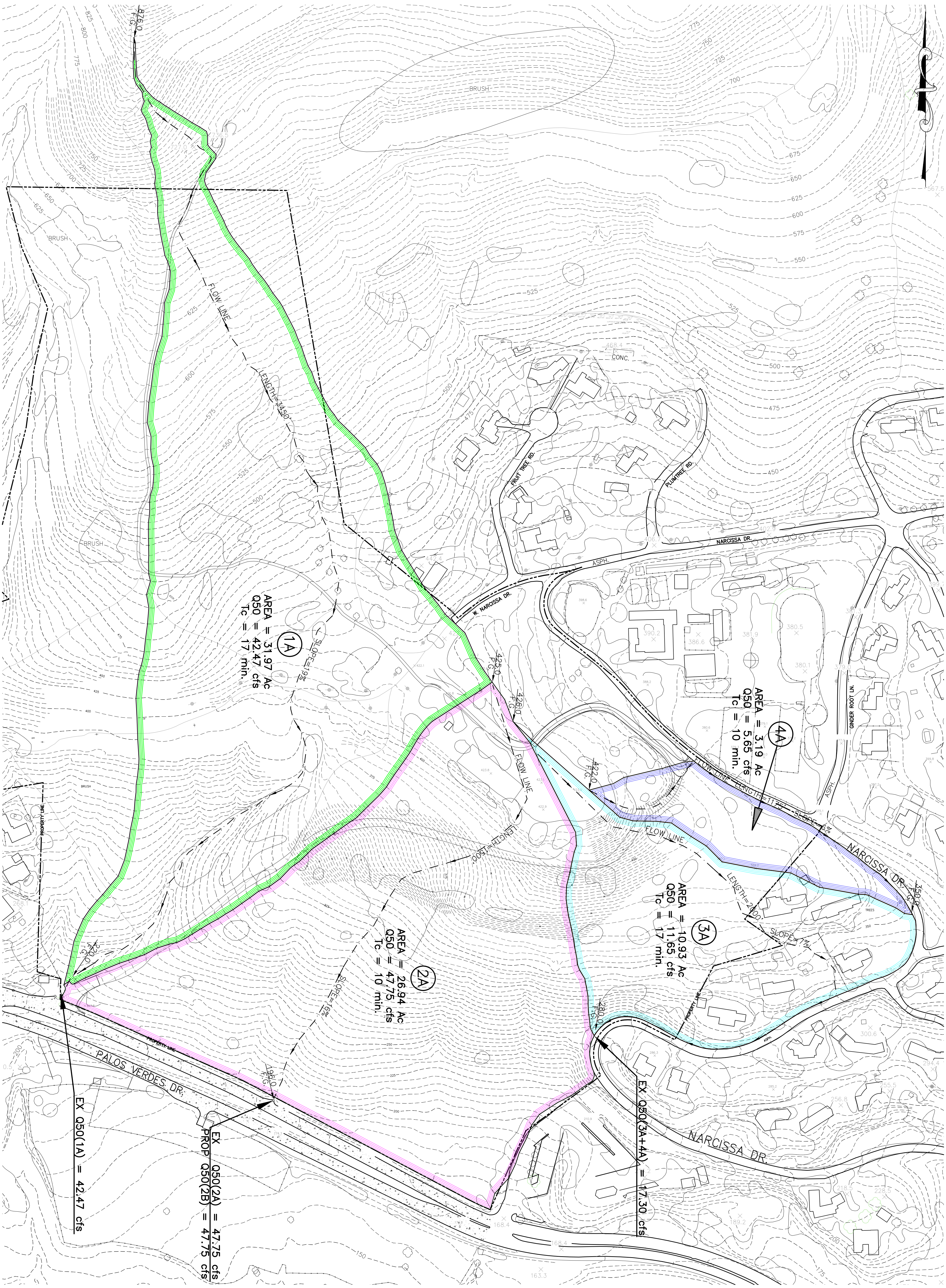
This SUSMP requires that all structural BMP's be accessible for inspection by City personnel during regular business hours. The operations and maintenance (O&M) plans for all structural BMP's is attached to this report. The entity (or entities) responsible for the long-term inspection and maintenance of all structural source control BMP's is:

Jim York
President/Owner, YPVP, LLC
York Point View Properties, LLC
550 Silver Spur Road, Suite 250
Rancho Palos Verdes, CA 90275
310-544-6177

Hydrology
Existing Conditions

205 S. Broadway, Suite 206, Los Angeles, California 90012
(213) 621-3155 Office - (213) 621-3105 Fax

P:\Acad Rothman Engineering Job Files\0320 Gary Weber\6001 Palos Verdes Dr South\Civil\8 - SUSMP\ Oct 17, 2011



REVISIONS			
No.	DESCRIPTION	BY	DATE

DESIGNER: MT
APPR'D BY:
DRAFTER: RR
REVISED BY:
SCALE: AS SHOWN
DATE: 10/17/11

HYDRO

H-1 of 2

JOB NUMBER 0320-09-001

SHEET TITLE
HYDROLOGY EXISTING CONDITIONS

CLIENT
YORK POINT VIEW PROPERTIES, LLC

PROJECT
6001 PALOS VERDES DRIVE SOUTH
RANCHO PALOS VERDES, CA 90275

PLAN PREPARED IN THE OFFICES OF:
ROTHMAN ENGINEERING, INC.
205 S. BROADWAY, SUITE 206
LOS ANGELES, CALIFORNIA 90012
(213) 621-3155 FAX (213) 621-3105

Hydrology
Proposed Conditions

205 S. Broadway, Suite 206, Los Angeles, California 90012
(213) 621-3155 Office - (213) 621-3105 Fax

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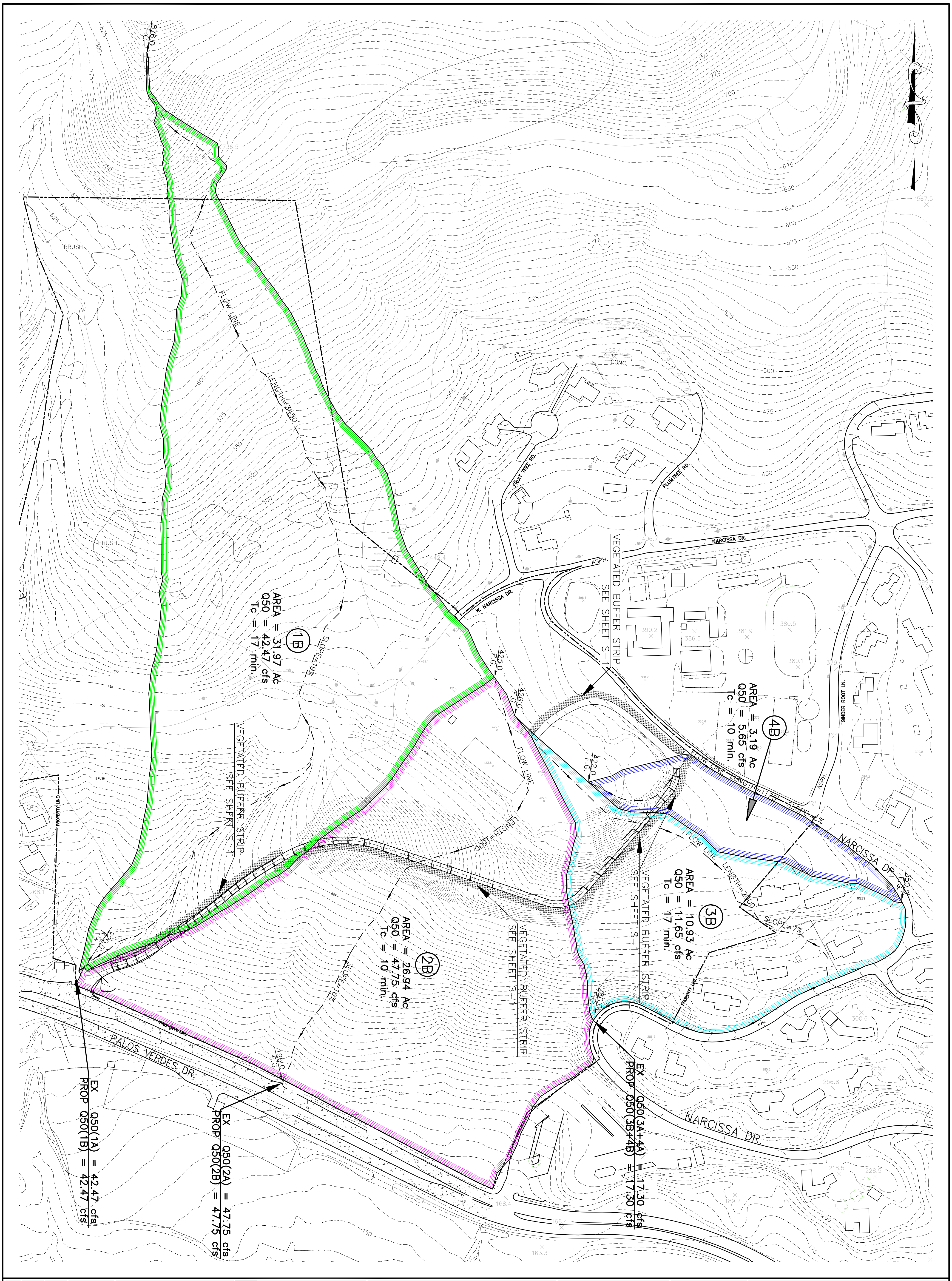

DESIGNER: MT	APPR'D BY: RR		
DRAFTER: MT	REVISED BY:		
SCALE: AS SHOWN	DATE: 10/17/11		

REVISIONS			
No.	DESCRIPTION	BY	DATE

HYDRO

H-2 of 2

JOB NUMBER 0320-09-001

SHEET TITLE

HYDROLOGY PROPOSED CONDITIONS

CLIENT

YORK POINT VIEW PROPERTIES, LLC

PROJECT

6001 PALOS VERDES DRIVE SOUTH
RANCHO PALOS VERDES, CA 90275

PLAN PREPARED IN THE OFFICES OF:

ROTHMAN ENGINEERING, INC.
205 S. BROADWAY, SUITE 206
LOS ANGELES, CALIFORNIA 90012
(213) 621-3155 FAX (213) 621-3105

SUSMP
Proposed Roadway

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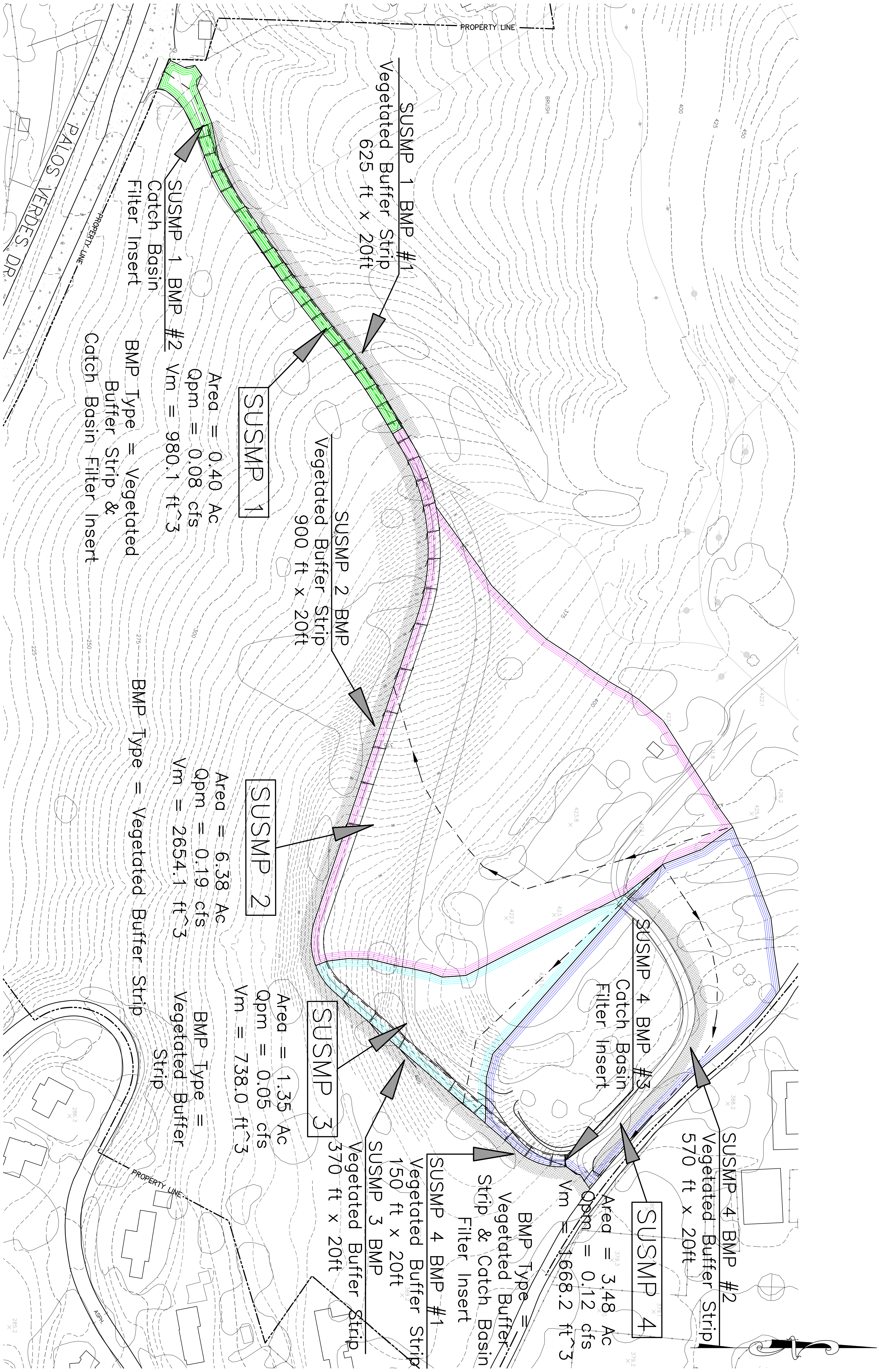


SUSMP	S-1 of 3	JOB NUMBER 0320-09-001	SCALE: AS SHOWN	DATE: 10/17/11	DESIGNER: MT	DRAFTER: MT	APPR'D BY: RR
							REVISED BY:

REVISIONS

No.	DESCRIPTION	BY	DATE

SHEET TITLE
SUSMP
PROPOSED CONDITIONS
ROADWAY

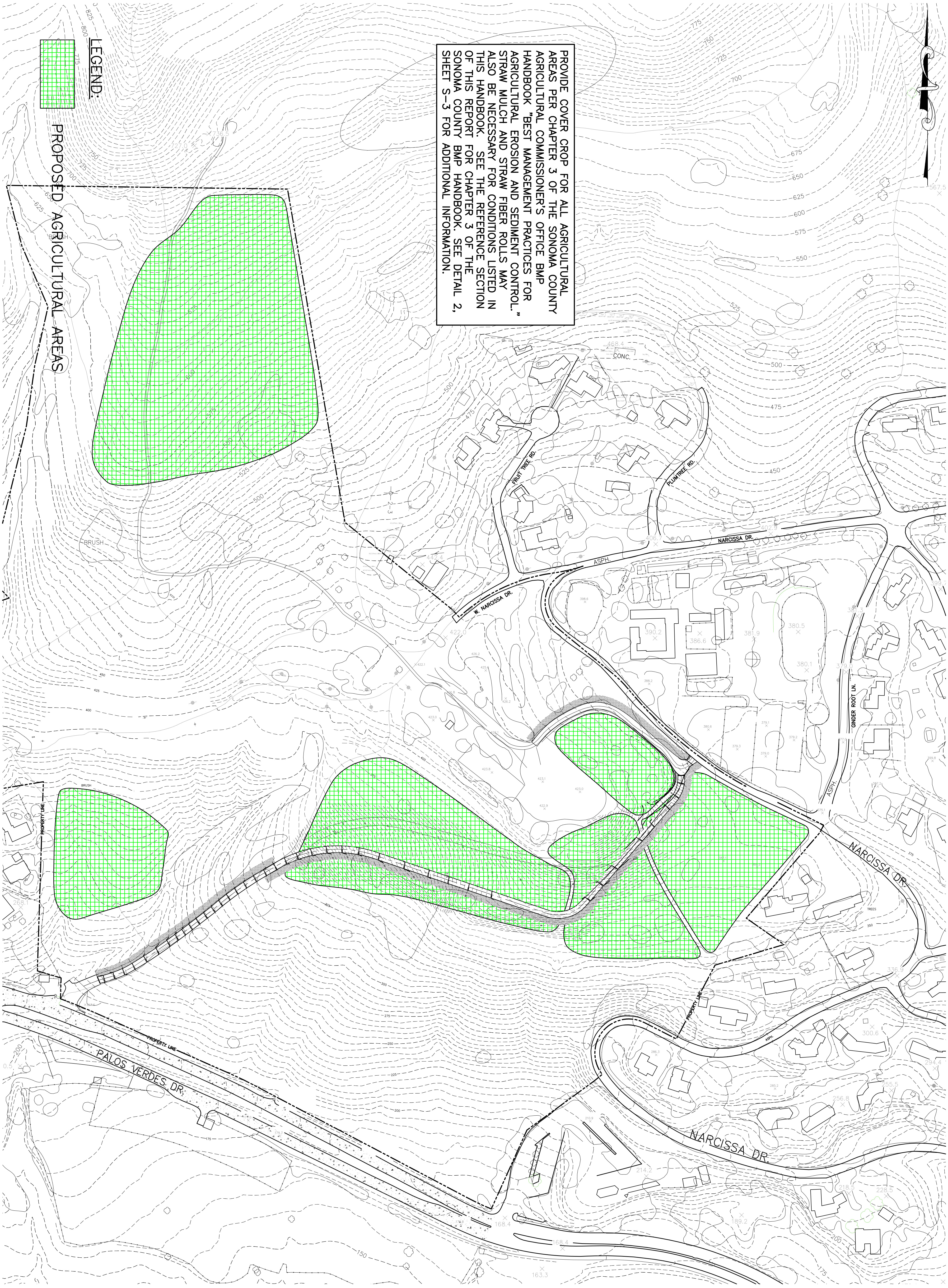
CLIENT
YORK POINT VIEW PROPERTIES, LLC

PROJECT
6001 PALOS VERDES DRIVE SOUTH
RANCHO PALOS VERDES, CA 90275

PLAN PREPARED IN THE OFFICES OF:
ROTHMAN ENGINEERING, INC.
205 S. BROADWAY, SUITE 206
LOS ANGELES, CALIFORNIA 90012
(213) 621-3155 FAX (213) 621-3105

SUSMP
Proposed Agricultural

205 S. Broadway, Suite 206, Los Angeles, California 90012
(213) 621-3155 Office - (213) 621-3105 Fax



JOB NUMBER 0320-09-001	S-2 of 3	SUSMP	DESIGNER: MT · APPR'D BY: · DRAFTER: RR · REVISED BY: · SCALE: AS SHOWN · DATE: 10/17/11

REVISIONS

No.	DESCRIPTION	BY	DATE

SHEET TITLE
SUSMP
PROPOSED CONDITIONS
AGRICULTURE

CLIENT
YORK POINT VIEW PROPERTIES, LLC

PROJECT
6001 PALOS VERDES DRIVE SOUTH
RANCHO PALOS VERDES, CA 90275

PLAN PREPARED IN THE OFFICES OF:
ROTHMAN ENGINEERING, INC.
205 S. BROADWAY, SUITE 206
LOS ANGELES, CALIFORNIA 90012
(213) 621-3155 FAX (213) 621-3105

SUSMP
SUSMP Details

205 S. Broadway, Suite 206, Los Angeles, California 90012
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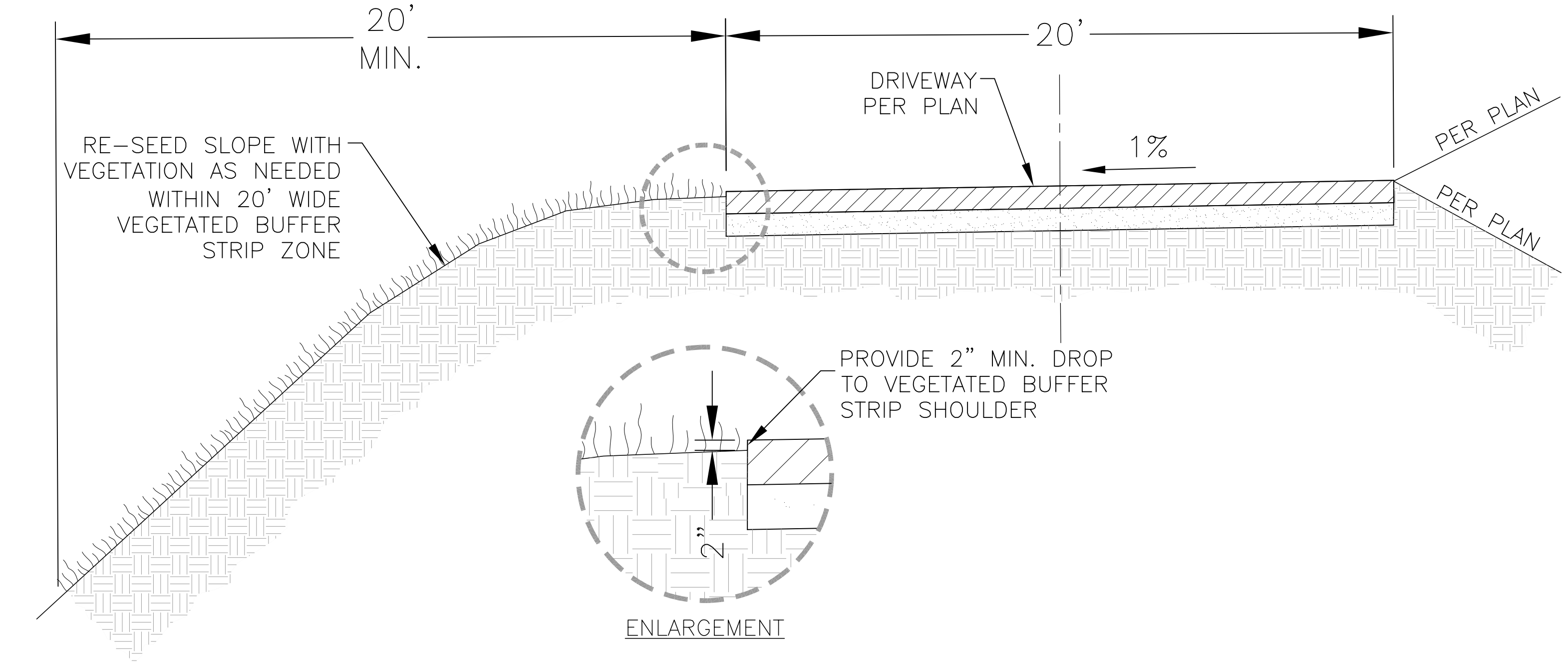
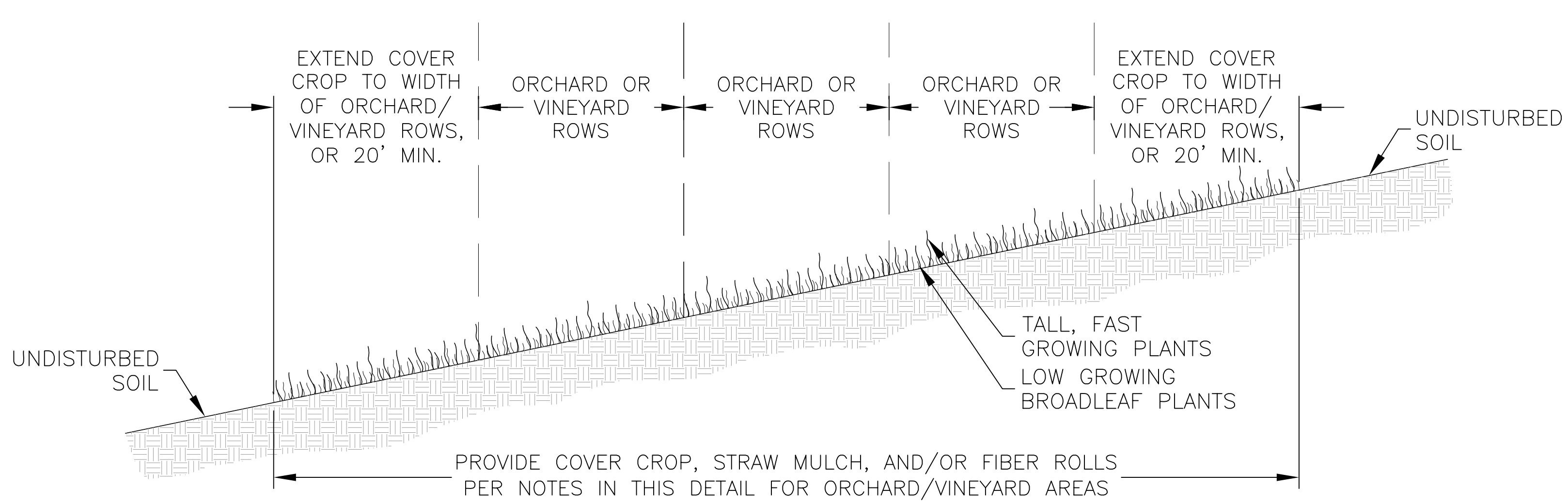


1 VEGETATED BUFFER STRIP

NOT TO SCALE



2 COVER CROP BMP

NOT TO SCALE

CROP COVER, STRAW MULCH, AND/OR FIBER ROLLS NOTES:

- ESTABLISH THICK COVER CROPS BY OCTOBER 15 AND MAINTAIN THEM THROUGHOUT THE RAINY SEASON (UNTIL APRIL 15).
- BROADCAST CROP COVER SEED IN THE FALL. IN ORDER TO HAVE ADEQUATE PROTECTION BY THE START OF THE RAINY SEASON (OCTOBER 15), THE SEED SHOULD BE PLANTED BY MID–SEPTEMBER. INITIAL IRRIGATION WILL BE REQUIRED FOR MOST GRASSES WITH FOLLOW–UP IRRIGATION AND FERTILIZATION. THE COVER CROP SHOULD LOOK LIKE A LAWN BY OCTOBER 15 (FOR NEW PLANTINGS AND NOVEMBER 15 FOR REPLANTS) IN ORDER TO PROVIDE ADEQUATE PROTECTION FOR THE SOIL DURING THE FIRST HEAVY RAINS.
- IF YOU CANNOT PLANT COVER CROP BY MID–SEPTEMBER AND IRRIGATE THE SEED, THEN YOU MAY PLANT YOUR SEED IN OCTOBER AND COVER IT WITH STRAW MULCH APPLIED AT THE RATE OF TWO TONS PER ACRE (ABOUT 42 BALES PER ACRE). YOU SHOULD NOT BE ABLE TO SEE ANY SOIL ONCE THE STRAW IS APPLIED.
- IF RAIN IS LIKELY AFTER THE COVER CROP HAS BEEN TILLED AND THERE IS NO PERIMETER EROSION CONTROL, USE STRAW MULCH AT THE RATE OF TWO TONS PER ACRE (ABOUT 42 BALES PER ACRE) IN AREAS WHERE COVER CROPS ARE PLANTED.
- WHENEVER POSSIBLE, AVOID TILLING EARLY IN THE SPRING OR LATE IN THE FALL.
- MINIMIZE TILLAGE PRACTICES, ESPECIALLY IF SLOPES ARE GREATER THAN NOMINAL (>5–10%) OR IF SOILS ARE HIGHLY ERODIBLE.
- DO NOT TILL TURN–AROUND AREAS EXCEPT FOR THE INFREQUENT NEED TO REDUCE COMPACTION. IN THIS CASE, PROMPTLY COVER THE SOIL WITH STRAW MULCH AND REPLANT WITH A COVER CROP BEFORE THE RAINY SEASON.
- AVOID BRINGING EQUIPMENT INTO THE VINEYARD/ORCHARD DURING THE WET SEASON. CLOSE SEASONAL ROADS TO TRAFFIC AND MAINTAIN PERMANENT ROADS TO PREVENT EROSION.
- KEEP ON SITE EXTRA EROSION CONTROL MATERIALS SUCH AS STRAW BALES OR WATTLES, GRAVEL OR GEO–TEXTILE FABRIC AND TRAIN VINEYARD/ORCHARD CREWS IN THEIR PROPER INSTALLATION.
- IF NECESSARY, PROVIDE STRAW MULCH PER CALIFORNIA BMP HANDBOOK BMP NUMBER EC–6.
- IF SOIL IS HIGHLY EROSIVE, PROVIDE FIBER ROLLS PER CALIFORNIA BMP HANDBOOK BMP NUMBER SE–5.

PLAN PREPARED IN THE OFFICES OF:
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LOS ANGELES, CALIFORNIA 90012
(213) 621-3155 FAX (213) 621-3105

CLIENT
YORK POINT VIEW PROPERTIES, LLC

PROJECT
6001 PALOS VERDES DRIVE SOUTH
RANCHO PALOS VERDES, CA 90275

SHEET TITLE
SUSMP
SUSMP DETAILS

REVISIONS

No.	DESCRIPTION	BY	DATE

DESIGNER: MT	APPR'D BY: RR
DRAFTER: MT	REVISED BY:
SCALE: AS SHOWN	DATE: 10/17/11

SUSMP

JOB NUMBER
0320–09–001

Hydrologic Calculations

205 S. Broadway, Suite 206, Los Angeles, California 90012
(213) 621-3155 Office - (213) 621-3105 Fax

Existing Conditions
50-Year Peak Flow

205 S. Broadway, Suite 206, Los Angeles, California 90012
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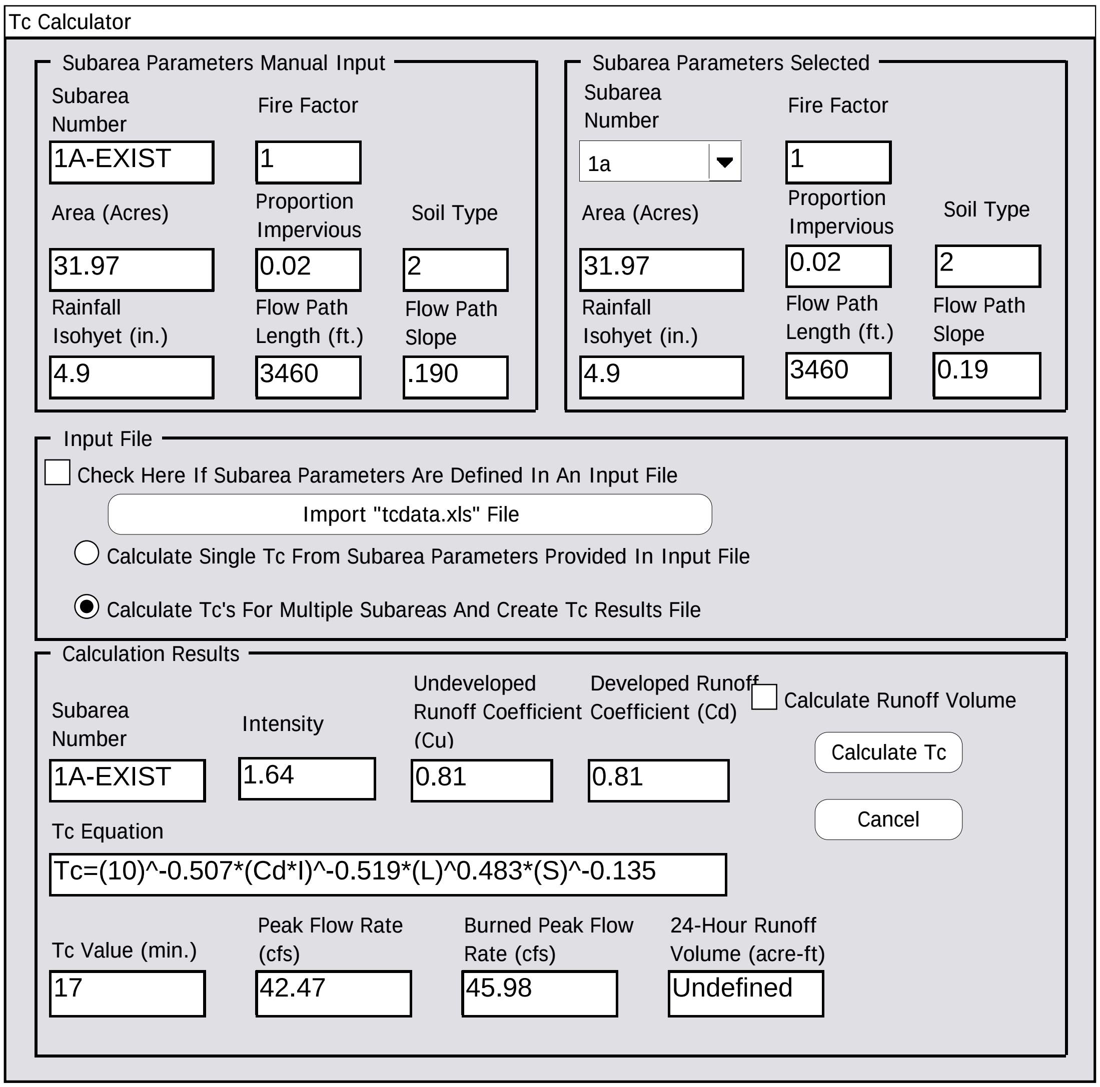
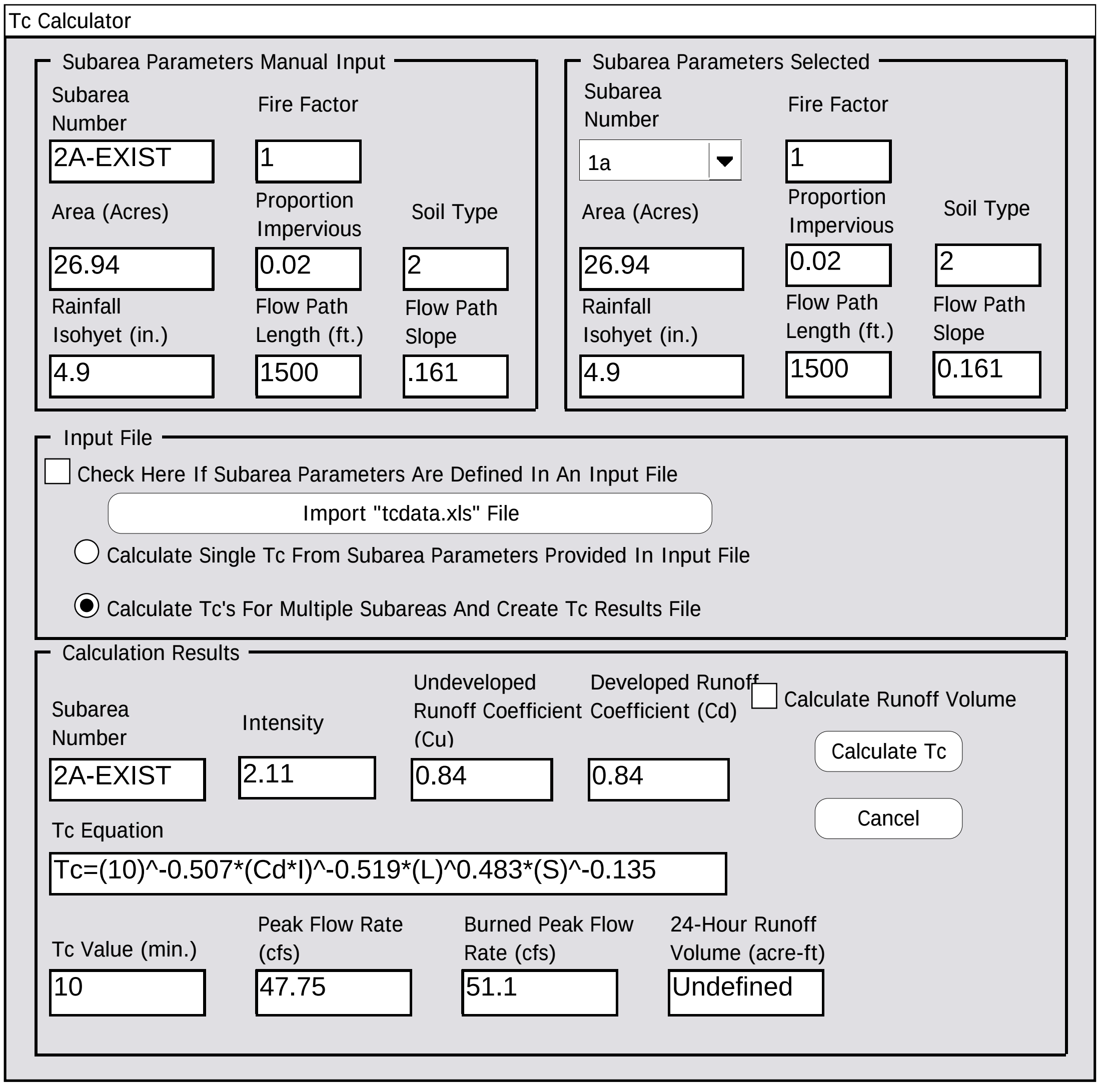
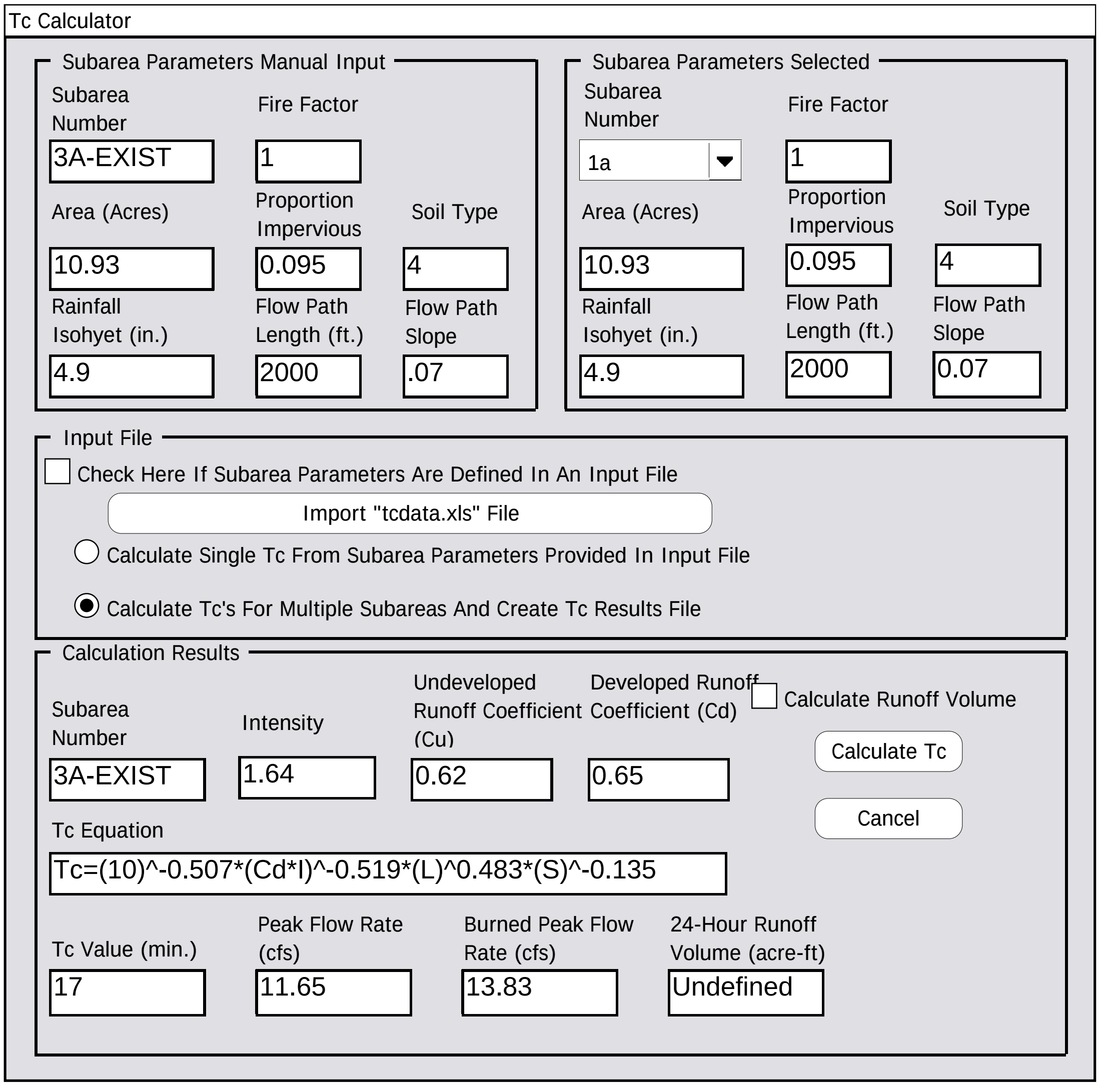


Tc Calculator
Subarea Parameters Manual Input
Subarea Number
1A-EXIST
Fire Factor
1
Area (Acres)
31.97
Proportion Impervious
0.02
Soil Type
2
Rainfall Isohyet (in.)
4.9
Flow Path Length (ft.)
3460
Flow Path Slope
.190
Subarea Parameters Selected
Subarea Number
1a
Fire Factor
1
Area (Acres)
31.97
Proportion Impervious
0.02
Soil Type
2
Rainfall Isohyet (in.)
4.9
Flow Path Length (ft.)
3460
Flow Path Slope
0.19
Input File
Check Here If Subarea Parameters Are Defined In An Input File
Import "tcdata.xls" File
Calculate Single Tc From Subarea Parameters Provided In Input File
Calculate Tc's For Multiple Subareas And Create Tc Results File
Calculation Results
Subarea Number
1A-EXIST
Intensity
1.64
Undeveloped Runoff Coefficient (Cu)
0.81
Developed Runoff Coefficient (Cd)
0.81
Calculate Runoff Volume
Calculate Tc
Cancel
Tc Equation
Tc=(10)^-0.507*(Cd*I)^-0.519*(L)^0.483*(S)^-0.135
Tc Value (min.)
17
Peak Flow Rate (cfs)
42.47
Burned Peak Flow Rate (cfs)
45.98
24-Hour Runoff Volume (acre-ft)
Undefined


Tc Calculator
Subarea Parameters Manual Input
Subarea Number
Fire Factor
2A-EXIST
1
Area (Acres)
Proportion Impervious
Soil Type
26.94
0.02
2
Rainfall Isohyet (in.)
Flow Path Length (ft.)
Flow Path Slope
4.9
1500
.161
Subarea Parameters Selected
Subarea Number
Fire Factor
1a
1
Area (Acres)
Proportion Impervious
Soil Type
26.94
0.02
2
Rainfall Isohyet (in.)
Flow Path Length (ft.)
Flow Path Slope
4.9
1500
0.161
Input File
Check Here If Subarea Parameters Are Defined In An Input File
Import "tcdata.xls" File
Calculate Single Tc From Subarea Parameters Provided In Input File
Calculate Tc's For Multiple Subareas And Create Tc Results File
Calculation Results
Subarea Number
Intensity
Undeveloped Runoff Coefficient (Cu)
Developed Runoff Coefficient (Cd)
Calculate Runoff Volume
2A-EXIST
2.11
0.84
0.84
Calculate Tc
Cancel
Tc Equation
Tc=(10)^-0.507*(Cd*I)^-0.519*(L)^0.483*(S)^-0.135
Tc Value (min.)
Peak Flow Rate (cfs)
Burned Peak Flow Rate (cfs)
24-Hour Runoff Volume (acre-ft)
10
47.75
51.1
Undefined



Tc Calculator
Subarea Parameters Manual Input
Subarea Number
3A-EXIST
Fire Factor
1
Area (Acres)
10.93
Proportion Impervious
0.095
Soil Type
4
Rainfall Isohyet (in.)
4.9
Flow Path Length (ft.)
2000
Flow Path Slope
.07
Subarea Parameters Selected
Subarea Number
1a
Fire Factor
1
Area (Acres)
10.93
Proportion Impervious
0.095
Soil Type
4
Rainfall Isohyet (in.)
4.9
Flow Path Length (ft.)
2000
Flow Path Slope
0.07
Input File
Check Here If Subarea Parameters Are Defined In An Input File
Import "tcdata.xls" File
Calculate Single Tc From Subarea Parameters Provided In Input File
Calculate Tc's For Multiple Subareas And Create Tc Results File
Calculation Results
Subarea Number
3A-EXIST
Intensity
1.64
Undeveloped Runoff Coefficient (Cu)
0.62
Developed Runoff Coefficient (Cd)
0.65
Calculate Runoff Volume
Calculate Tc
Cancel
Tc Equation
Tc=(10)^-0.507*(Cd*I)^-0.519*(L)^0.483*(S)^-0.135
Tc Value (min.)
17
Peak Flow Rate (cfs)
11.65
Burned Peak Flow Rate (cfs)
13.83
24-Hour Runoff Volume (acre-ft)
Undefined

Tc Calculator

Subarea Parameters Manual Input

Subarea Number	Fire Factor	
4A-EXIST	1	
Area (Acres)	**Proportion Impervious**	**Soil Type**
3.19	0.02	2
Rainfall Isohyet (in.)	**Flow Path Length (ft.)**	**Flow Path Slope**
4.9	1175	.064

Subarea Parameters Selected

Subarea Number	Fire Factor	
1a	1	
Area (Acres)	**Proportion Impervious**	**Soil Type**
3.19	0.02	2
Rainfall Isohyet (in.)	**Flow Path Length (ft.)**	**Flow Path Slope**
4.9	1175	0.064

Input File

☐ Check Here If Subarea Parameters Are Defined In An Input File

Import "tcdata.xls" File

○ Calculate Single Tc From Subarea Parameters Provided In Input File

◉ Calculate Tc's For Multiple Subareas And Create Tc Results File

Calculation Results

Subarea Number	Intensity	Undeveloped Runoff Coefficient (Cu)	Developed Runoff Coefficient (Cd)
4A-EXIST	2.11	0.84	0.84

☐ Calculate Runoff Volume

Calculate Tc

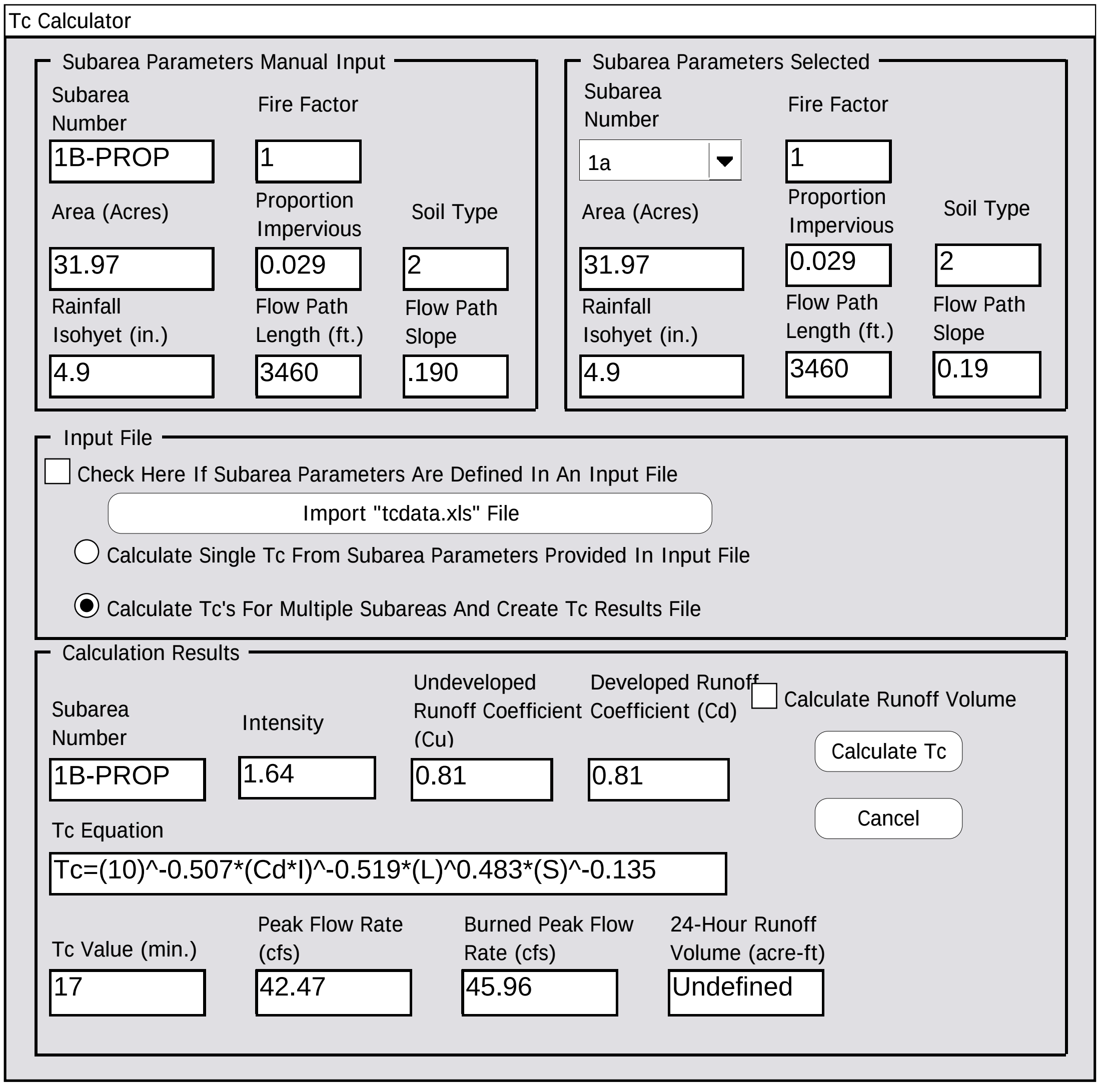
Cancel

Tc Equation

Tc=(10)^-0.507*(Cd*I)^-0.519*(L)^0.483*(S)^-0.135

Tc Value (min.)	Peak Flow Rate (cfs)	Burned Peak Flow Rate (cfs)	24-Hour Runoff Volume (acre-ft)
10	5.65	6.05	Undefined

Proposed Conditions
50-Year Peak Flow


Tc Calculator
Subarea Parameters Manual Input
Subarea Number
1B-PROP
Fire Factor
1
Area (Acres)
31.97
Proportion Impervious
0.029
Soil Type
2
Rainfall Isohyet (in.)
4.9
Flow Path Length (ft.)
3460
Flow Path Slope
.190
Subarea Parameters Selected
Subarea Number
1a
Fire Factor
1
Area (Acres)
31.97
Proportion Impervious
0.029
Soil Type
2
Rainfall Isohyet (in.)
4.9
Flow Path Length (ft.)
3460
Flow Path Slope
0.19
Input File
Check Here If Subarea Parameters Are Defined In An Input File
Import "tcdata.xls" File
Calculate Single Tc From Subarea Parameters Provided In Input File
Calculate Tc's For Multiple Subareas And Create Tc Results File
Calculation Results
Subarea Number
1B-PROP
Intensity
1.64
Undeveloped Runoff Coefficient (Cu)
0.81
Developed Runoff Coefficient (Cd)
0.81
Calculate Runoff Volume
Calculate Tc
Cancel
Tc Equation
Tc=(10)^-0.507*(Cd*I)^-0.519*(L)^0.483*(S)^-0.135
Tc Value (min.)
17
Peak Flow Rate (cfs)
42.47
Burned Peak Flow Rate (cfs)
45.96
24-Hour Runoff Volume (acre-ft)
Undefined

Tc Calculator

Subarea Parameters Manual Input

Subarea Number	Fire Factor	
2B-PROP	1	
Area (Acres)	**Proportion Impervious**	**Soil Type**
26.94	0.034	2
Rainfall Isohyet (in.)	**Flow Path Length (ft.)**	**Flow Path Slope**
4.9	1500	.161

Subarea Parameters Selected

Subarea Number	Fire Factor	
1a	1	
Area (Acres)	**Proportion Impervious**	**Soil Type**
26.94	0.034	2
Rainfall Isohyet (in.)	**Flow Path Length (ft.)**	**Flow Path Slope**
4.9	1500	0.161

Input File

☐ Check Here If Subarea Parameters Are Defined In An Input File

Import "tcdata.xls" File

○ Calculate Single Tc From Subarea Parameters Provided In Input File

◉ Calculate Tc's For Multiple Subareas And Create Tc Results File

Calculation Results

Subarea Number	Intensity	Undeveloped Runoff Coefficient (Cu)	Developed Runoff Coefficient (Cd)
2B-PROP	2.11	0.84	0.84

☐ Calculate Runoff Volume

Calculate Tc

Cancel

Tc Equation

Tc=(10)^-0.507*(Cd*I)^-0.519*(L)^0.483*(S)^-0.135

Tc Value (min.)	Peak Flow Rate (cfs)	Burned Peak Flow Rate (cfs)	24-Hour Runoff Volume (acre-ft)
10	47.75	51.07	Undefined

Tc Calculator

Subarea Parameters Manual Input

Subarea Number	Fire Factor	
3B-PROP	1	
Area (Acres)	**Proportion Impervious**	**Soil Type**
10.93	0.11	4
Rainfall Isohyet (in.)	**Flow Path Length (ft.)**	**Flow Path Slope**
4.9	2000	.07

Subarea Parameters Selected

Subarea Number	Fire Factor	
1a	1	
Area (Acres)	**Proportion Impervious**	**Soil Type**
10.93	0.11	4
Rainfall Isohyet (in.)	**Flow Path Length (ft.)**	**Flow Path Slope**
4.9	2000	0.07

Input File

☐ Check Here If Subarea Parameters Are Defined In An Input File

Import "tcdata.xls" File

○ Calculate Single Tc From Subarea Parameters Provided In Input File

◉ Calculate Tc's For Multiple Subareas And Create Tc Results File

Calculation Results

Subarea Number	Intensity	Undeveloped Runoff Coefficient (Cu)	Developed Runoff Coefficient (Cd)
3B-PROP	1.64	0.62	0.65

☐ Calculate Runoff Volume

Calculate Tc

Cancel

Tc Equation

Tc=(10)^-0.507*(Cd*I)^-0.519*(L)^0.483*(S)^-0.135

Tc Value (min.)	Peak Flow Rate (cfs)	Burned Peak Flow Rate (cfs)	24-Hour Runoff Volume (acre-ft)
17	11.65	13.82	Undefined

Tc Calculator

Subarea Parameters Manual Input

Subarea Number	Fire Factor	
4B-PROP	1	
Area (Acres)	**Proportion Impervious**	**Soil Type**
3.19	0.042	2
Rainfall Isohyet (in.)	**Flow Path Length (ft.)**	**Flow Path Slope**
4.9	1175	.064

Subarea Parameters Selected

Subarea Number	Fire Factor	
1a	1	
Area (Acres)	**Proportion Impervious**	**Soil Type**
3.19	0.042	2
Rainfall Isohyet (in.)	**Flow Path Length (ft.)**	**Flow Path Slope**
4.9	1175	0.064

Input File

☐ Check Here If Subarea Parameters Are Defined In An Input File

Import "tcdata.xls" File

○ Calculate Single Tc From Subarea Parameters Provided In Input File

◉ Calculate Tc's For Multiple Subareas And Create Tc Results File

Calculation Results

Subarea Number	Intensity	Undeveloped Runoff Coefficient (Cu)	Developed Runoff Coefficient (Cd)
4B-PROP	2.11	0.84	0.84

☐ Calculate Runoff Volume

Calculate Tc

Cancel

Tc Equation

Tc=(10)^-0.507*(Cd*I)^-0.519*(L)^0.483*(S)^-0.135

Tc Value (min.)	Peak Flow Rate (cfs)	Burned Peak Flow Rate (cfs)	24-Hour Runoff Volume (acre-ft)
10	5.65	6.04	Undefined

Impervious Percentage Calculations

Partially Developed Property - Impervious Percent Calculation

Area 1B

Total Area =	31.97	Ac.
Undeveloped Area =	31.68	Ac. at 2% impervious
Roadway Area =	0.29	Ac. at 100% impervious
Percent Impervious =	2.9%	

Area 2B

Total Area =	27.95	Ac.
Undeveloped Area =	27.54	Ac. at 2% impervious
Roadway Area =	0.41	Ac. at 100% impervious
Percent Impervious =	3.4%	

Area 3A

Total Area =	10.93	Ac.
Undeveloped Area =	6.64	Ac. at 2% impervious
Residential Area =	4.29	Ac. at 21% impervious (Low Density Residential)
Percent Impervious =	9.5%	

Area 3B

Total Area =	10.93	Ac.
Undeveloped Area =	6.47	Ac. at 2% impervious
Residential Area =	4.29	Ac. at 21% impervious (Low Density Residential)
Roadway Area =	0.17	Ac. at 100% impervious
Percent Impervious =	11.0%	

Area 4B

Total Area =	3.19	Ac.
Undeveloped Area =	3.12	Ac. at 2% impervious
Roadway Area =	0.07	Ac. at 100% impervious
Percent Impervious =	4.2%	

SUSMP Calculations

205 S. Broadway, Suite 206, Los Angeles, California 90012
(213) 621-3155 Office - (213) 621-3105 Fax

SUSMP
Volume and Flow Rate Calculations

205 S. Broadway, Suite 206, Los Angeles, California 90012
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APPENDIX A VOLUME & FLOW RATE CALCULATIONS

A.1 METHOD FOR CALCULATING STANDARD URBAN STORMWATER MITIGATION PLAN FLOW RATES AND VOLUMES BASED ON 0.75-INCHES OF RAINFALL: WORKSHEET

PROJECT NAME

6001 Palos Verdes Dr

Examination of Onsite Qpm for Area SUSMP 1

APPENDIX A **VOLUME & FLOW RATE CALCULATIONS**

PROVIDE PROPOSED PROJECT CHARACTERISTICS

Atotal	0.4	Acres
Type of Development	Street	
Predominate Soil Type #	4	
% of Project Impervious	100.0%	
% of Project Pervious	0.0%	
% of Project Contributing Undeveloped Area	0.0%	
Ai	0.40	Acres
Ap	0.00	Acres
Au	0	Acres
L =	715	feet
S =	15.0%	

APPENDIX A VOLUME & FLOW RATE CALCULATIONS

DETERMINING THE PEAK MITIGATED FLOW RATE (Qpm):

In order to determine the peak mitigated flow rate (Qpm) from the new development, use the Los Angeles County Department of Public Works Hydrology Manual. Use the Modified Rational Method for calculating the peak mitigation Qpm fro compliance with the Standard Urban Stormwater Mitigation Plan (SUSMP). Use atached Table 1 for all maximum intensity (Ix) values used.

By trial and error, determine the time of concentration (Tc), as shown below:

CALCULATION STEPS:

1. Assume an initial Tc value between 5 and 30 minutes.

Tc 5 minutes

2. Using Table 1, look up the assumed Tc value and select the corresponding Ix intensity in inches/hour.

Ix 0.447 inches/hour

3. Determine the value for the Undeveloped Runoff Coefficient, Cu, using the runoff coefficient curve corresponding to the predominant soil type.

Cu 0.10

4. Calculate the Developed Runoff Coefficient, Cd = (0.9*Imp.)+[(1.0 - Imp.)*Cu]

Cd 0.90

5. Calculate the value for Cd * Ix

Cd * Ix 0.402

6. Calculate the time of Concentration, Tc = $10^{(-0.507)}$ * (Cd * Ix $)^{(-0.519)}$ * $\text{Length}^{(0.483)}$ * $\text{Slope}^{(-0.135)}$

Calculated Tc 15.4 minutes

7. Calculate the difference between the initially assumed Tc and the calculated Tc, if the difference is greater than 0.5 minutes. Use the calculated Tc as the assumed initial Tc in the second iteration. If the Tc value is within 0.5 minutes, round the acceptable Tc value to the nearest minute.

APPENDIX A VOLUME & FLOW RATE CALCULATIONS

TABLE FOR ITERATIONS:

Iteration No.	Initial Tc (min)	Ix (in/hr)	Cu	Cd	Cd * Ix (in/hr)	Calculated Tc (min)	Difference (min)	
1	5	0.447	0.10	0.90	0.402	15.4	10.4	Unacceptable
2	15	0.267	0.10	0.90	0.240	20.1	5.1	Unacceptable
3	20	0.233	0.10	0.90	0.210	21.6	1.6	Unacceptable
4	22	0.223	0.10	0.90	0.201	22.1	0.1	Acceptable
5								
6								
7								
8								
9								
10								

Acceptable Tc value 22 minutes

8. Calculated the Peak Mitigation Flow Rate,

Qpm = Cd * Ix * Atotal * (1.008333 ft^3-hour / acre-inches-seconds)

Qpm = 0.08 cfs

APPENDIX A **VOLUME & FLOW RATE CALCULATIONS**

In oder to determine the volume (Vm) of stormwater runoff to be mitigated from the new development, use the following equation:

Vm = (2,722.5 ft^3 / acre) * [(Ai)(0.9) + (Ap + Au)(Cu)]

Vm = $\boxed{980.1}$ ft^3

APPENDIX A VOLUME & FLOW RATE CALCULATIONS

TABLE 1

INTENSITY - DURATION DATA FOR 0.75-INCHES OF RAINFALL
FOR ALL RAINFALL ZONES

Duration, Tc (min)	Rainfall Intensity, Ix (in/hr)
5	0.447
6	0.411
7	0.382
8	0.359
9	0.339
10	0.323
11	0.309
12	0.297
13	0.286
14	0.276
15	0.267
16	0.259
17	0.252
18	0.245
19	0.239
20	0.233
21	0.228
22	0.223
23	0.218
24	0.214
25	0.210
26	0.206
27	0.203
28	0.199
29	0.196
30	0.193

DETERMINING THE VOLUME (Vm)

APPENDIX A VOLUME & FLOW RATE CALCULATIONS

NOMENCLATURE

Ai	=	Impervious Area (acres)
Ap	=	Pervious Area (acres)
Au	=	Contributing Undeveloped Upstream Area (acres)
Atotal	=	Total Area of Development and Contributing Undeveloped Upstream Area (acres)
Cd	=	Developed Runoff Coefficient
Cu	=	Undeveloped Runoff Coefficient
Ix	=	Rainfall Intensity (inches/hour)
Qpm	=	Peak Mitigation Flow Rate (cfs)
Tc	=	Time of Concentration (minutes, must be between 5-30 min.)
Vm	=	Mitigation Volume (ft^3)

EQUATIONS

Atotal	=	Ai + Ap + Au
Ai	=	(Atotal * % of Development which is Impervious)
Ap	=	(Atotal * % of Development which is Pervious)
Au	=	(Atotal * % of Contributing Undeveloped Upstream Area***)
Cd	=	(0.9 * Imp.) + [(1.0 - Imp.) * Cu] If Cd < Cu, use Cd = Cu
Qpm	=	Cd * Ix * Atotal * (1 hour / 3,600 seconds) * (1 ft / 12 inches) * (43,560 ft^2 / 1 acre)
Tc	=	$10^{(-0.507)} * (Cd * Ix)^{(-0.519)} * Length^{(0.483)} * Slope^{(-0.135)}$
Vm	=	(0.75 inches) * [(Ai)(0.9) + (Ap + Au)(Cu)] * (1ft / 12 inches) * (43,560 ft^2 / 1 acre)
	=	(2,722.5 ft^3 / acre) * [(Ai)(0.9) + (Ap + Au)(Cu)]

***** Contributing Undeveloped Upstream Area is an area where stormwater runoff from an undeveloped upstream area will flow directly or indirectly to the Post-Construction Best Management Practices (BMPs) proposed for the development. This additional flow must be included in the flow rate and volume calculations to appropriately size the BMPs.**

APPENDIX A **VOLUME & FLOW RATE CALCULATIONS**

A.1 METHOD FOR CALCULATING STANDARD URBAN STORMWATER MITIGATION PLAN FLOW RATES AND VOLUMES BASED ON 0.75-INCHES OF RAINFALL: WORKSHEET

PROJECT NAME

6001 Palos Verdes Dr

Examination of Onsite Qpm for Area SUSMP 2

APPENDIX A VOLUME & FLOW RATE CALCULATIONS

PROVIDE PROPOSED PROJECT CHARACTERISTICS

Atotal	6.38	Acres
Type of Development	Street	
Predominate Soil Type #	4	
% of Project Impervious	6.6%	
% of Project Pervious	93.4%	
% of Project Contributing Undeveloped Area	0.0%	
Ai	0.42	Acres
Ap	5.96	Acres
Au	0	Acres
L =	765	feet
S =	7.8%	

APPENDIX A VOLUME & FLOW RATE CALCULATIONS

DETERMINING THE PEAK MITIGATED FLOW RATE (Qpm):

In order to determine the peak mitigated flow rate (Qpm) from the new development, use the Los Angeles County Department of Public Works Hydrology Manual. Use the Modified Rational Method for calculating the peak mitigation Qpm fro compliance with the Standard Urban Stormwater Mitigation Plan (SUSMP). Use atached Table 1 for all maximum intensity (Ix) values used.

By trial and error, determine the time of concentration (Tc), as shown below:

CALCULATION STEPS:

1. Assume an initial Tc value between 5 and 30 minutes.

Tc | 5 | minutes

2. Using Table 1, look up the assumed Tc value and select the corresponding Ix intensity in inches/hour.

Ix | 0.447 | inches/hour

3. Determine the value for the Undeveloped Runoff Coefficient, Cu, using the runoff coefficient curve corresponding to the predominant soil type.

Cu | 0.10

4. Calculate the Developed Runoff Coefficient, Cd = (0.9*Imp.)+[(1.0 - Imp.)*Cu]

Cd | 0.15

5. Calculate the value for Cd * Ix

Cd * Ix | 0.068

6. Calculate the time of Concentration, $Tc = 10^{(-0.507)} * (Cd * Ix)^{(-0.519)} * Length^{(0.483)} * Slope^{(-0.135)}$

Calculated Tc | 43.7 | minutes

7. Calculate the difference between the initially assumed Tc and the calculated Tc, if the difference is greater than 0.5 minutes. Use the calculated Tc as the assumed initial Tc in the second iteration. If the Tc value is within 0.5 minutes, round the acceptable Tc value to the nearest minute.

APPENDIX A   VOLUME & FLOW RATE CALCULATIONS

TABLE FOR ITERATIONS:

Iteration No.	Initial Tc (min)	Ix (in/hr)	Cu	Cd	Cd * Ix (in/hr)	Calculated Tc (min)	Difference (min)	
1	5	0.447	0.10	0.15	0.068	43.7	38.7	Unacceptable
2	44	0.193	0.10	0.15	0.029	67.5	23.5	Unacceptable
3	68	0.193	0.10	0.15	0.029	67.5	-0.5	Acceptable
4								
5								
6								
7								
8								
9								
10								

Acceptable Tc value 68 minutes

8. Calculated the Peak Mitigation Flow Rate,

Qpm = Cd * Ix * Atotal * (1.008333 ft^3-hour / acre-inches-seconds)

Qpm = 0.19 cfs

APPENDIX A **VOLUME & FLOW RATE CALCULATIONS**

In oder to determine the volume (Vm) of stormwater runoff to be mitigated from the new development, use the following equation:

$Vm = (2{,}722.5\ ft^3 / acre) * [(Ai)(0.9) + (Ap + Au)(Cu)]$

$Vm = \boxed{2654.1}\ ft^3$

APPENDIX A VOLUME & FLOW RATE CALCULATIONS

TABLE 1

INTENSITY - DURATION DATA FOR 0.75-INCHES OF RAINFALL
FOR ALL RAINFALL ZONES

Duration, Tc (min)	Rainfall Intensity, Ix (in/hr)
5	0.447
6	0.411
7	0.382
8	0.359
9	0.339
10	0.323
11	0.309
12	0.297
13	0.286
14	0.276
15	0.267
16	0.259
17	0.252
18	0.245
19	0.239
20	0.233
21	0.228
22	0.223
23	0.218
24	0.214
25	0.210
26	0.206
27	0.203
28	0.199
29	0.196
30	0.193

DETERMINING THE VOLUME (Vm)

APPENDIX A VOLUME & FLOW RATE CALCULATIONS

NOMENCLATURE

Ai	=	Impervious Area (acres)
Ap	=	Pervious Area (acres)
Au	=	Contributing Undeveloped Upstream Area (acres)
Atotal	=	Total Area of Development and Contributing Undeveloped Upstream Area (acres)
Cd	=	Developed Runoff Coefficient
Cu	=	Undeveloped Runoff Coefficient
Ix	=	Rainfall Intensity (inches/hour)
Qpm	=	Peak Mitigation Flow Rate (cfs)
Tc	=	Time of Concentration (minutes, must be between 5-30 min.)
Vm	=	Mitigation Volume (ft^3)

EQUATIONS

Atotal	=	Ai + Ap + Au
Ai	=	(Atotal * % of Development which is Impervious)
Ap	=	(Atotal * % of Development which is Pervious)
Au	=	(Atotal * % of Contributing Undeveloped Upstream Area***)
Cd	=	(0.9 * Imp.) + [(1.0 - Imp.) * Cu] If Cd < Cu, use Cd = Cu
Qpm	=	Cd * Ix * Atotal * (1 hour / 3,600 seconds) * (1 ft / 12 inches) * (43,560 ft^2 / 1 acre)
Tc	=	$10^{(-0.507)} * (Cd * Ix)^{(-0.519)} * Length^{(0.483)} * Slope^{(-0.135)}$
Vm	=	(0.75 inches) * [(Ai)(0.9) + (Ap + Au)(Cu)] * (1ft / 12 inches) * (43,560 ft^2 / 1 acre)
	=	(2,722.5 ft^3 / acre) * [(Ai)(0.9) + (Ap + Au)(Cu)]

***** Contributing Undeveloped Upstream Area is an area where stormwater runoff from an undeveloped upstream area will flow directly or indirectly to the Post-Construction Best Management Practices (BMPs) proposed for the development. This additional flow must be included in the flow rate and volume calculations to appropriately size the BMPs.**

APPENDIX A VOLUME & FLOW RATE CALCULATIONS

A.1 METHOD FOR CALCULATING STANDARD URBAN STORMWATER MITIGATION PLAN FLOW RATES AND VOLUMES BASED ON 0.75-INCHES OF RAINFALL: WORKSHEET

PROJECT NAME

6001 Palos Verdes Dr

Examination of Onsite Qpm for Area SUSMP 3

APPENDIX A **VOLUME & FLOW RATE CALCULATIONS**

PROVIDE PROPOSED PROJECT CHARACTERISTICS

Atotal	1.35	Acres
Type of Development	Street	
Predominate Soil Type #	2	
% of Project Impervious	12.6%	
% of Project Pervious	87.4%	
% of Project Contributing Undeveloped Area	0.0%	
Ai	0.17	Acres
Ap	1.18	Acres
Au	0	Acres
L =	530	feet
S =	4.0%	

APPENDIX A   VOLUME & FLOW RATE CALCULATIONS

DETERMINING THE PEAK MITIGATED FLOW RATE (Qpm):

In order to determine the peak mitigated flow rate (Qpm) from the new development, use the Los Angeles County Department of Public Works Hydrology Manual. Use the Modified Rational Method for calculating the peak mitigation Qpm fro compliance with the Standard Urban Stormwater Mitigation Plan (SUSMP). Use atached Table 1 for all maximum intensity (Ix) values used.

By trial and error, determine the time of concentration (Tc), as shown below:

CALCULATION STEPS:

1. Assume an initial Tc value between 5 and 30 minutes.

Tc | 5 | minutes

2. Using Table 1, look up the assumed Tc value and select the corresponding Ix intensity in inches/hour.

Ix | 0.447 | inches/hour

3. Determine the value for the Undeveloped Runoff Coefficient, Cu, using the runoff coefficient curve corresponding to the predominant soil type.

Cu | 0.10

4. Calculate the Developed Runoff Coefficient, Cd = (0.9*Imp.)+[(1.0 - Imp.)*Cu]

Cd | 0.20

5. Calculate the value for Cd * Ix

Cd * Ix | 0.090

6. Calculate the time of Concentration, $Tc = 10^{(-0.507)} * (Cd * Ix)^{(-0.519)} * Length^{(0.483)} * Slope^{(-0.135)}$

Calculated Tc | 34.7 | minutes

7. Calculate the difference between the initially assumed Tc and the calculated Tc, if the difference is greater than 0.5 minutes. Use the calculated Tc as the assumed initial Tc in the second iteration. If the Tc value is within 0.5 minutes, round the acceptable Tc value to the nearest minute.

APPENDIX A **VOLUME & FLOW RATE CALCULATIONS**

TABLE FOR ITERATIONS:

Iteration No.	Initial Tc (min)	Ix (in/hr)	Cu	Cd	Cd * Ix (in/hr)	Calculated Tc (min)	Difference (min)	
1	5	0.447	0.10	0.20	0.090	34.7	29.7	Unacceptable
2	35	0.193	0.10	0.20	0.039	53.7	18.7	Unacceptable
3	54	0.193	0.10	0.20	0.039	53.7	-0.3	Acceptable
4								
5								
6								
7								
8								
9								
10								

Acceptable Tc value 54 minutes

8. Calculated the Peak Mitigation Flow Rate,

Qpm = Cd * Ix * Atotal * (1.008333 ft^3-hour / acre-inches-seconds)

Qpm = 0.05 cfs

APPENDIX A VOLUME & FLOW RATE CALCULATIONS

In oder to determine the volume (Vm) of stormwater runoff to be mitigated from the new development, use the following equation:

$Vm = (2{,}722.5\ ft^3 / acre) * [(Ai)(0.9) + (Ap + Au)(Cu)]$

$Vm = \boxed{738.0}\ ft^3$

APPENDIX A VOLUME & FLOW RATE CALCULATIONS

TABLE 1

INTENSITY - DURATION DATA FOR 0.75-INCHES OF RAINFALL
FOR ALL RAINFALL ZONES

Duration, Tc (min)	Rainfall Intensity, Ix (in/hr)
5	0.447
6	0.411
7	0.382
8	0.359
9	0.339
10	0.323
11	0.309
12	0.297
13	0.286
14	0.276
15	0.267
16	0.259
17	0.252
18	0.245
19	0.239
20	0.233
21	0.228
22	0.223
23	0.218
24	0.214
25	0.210
26	0.206
27	0.203
28	0.199
29	0.196
30	0.193

DETERMINING THE VOLUME (Vm)

APPENDIX A VOLUME & FLOW RATE CALCULATIONS

NOMENCLATURE

Ai	=	Impervious Area (acres)
Ap	=	Pervious Area (acres)
Au	=	Contributing Undeveloped Upstream Area (acres)
Atotal	=	Total Area of Development and Contributing Undeveloped Upstream Area (acres)
Cd	=	Developed Runoff Coefficient
Cu	=	Undeveloped Runoff Coefficient
Ix	=	Rainfall Intensity (inches/hour)
Qpm	=	Peak Mitigation Flow Rate (cfs)
Tc	=	Time of Concentration (minutes, must be between 5-30 min.)
Vm	=	Mitigation Volume (ft^3)

EQUATIONS

Atotal	=	Ai + Ap + Au
Ai	=	(Atotal * % of Development which is Impervious)
Ap	=	(Atotal * % of Development which is Pervious)
Au	=	(Atotal * % of Contributing Undeveloped Upstream Area***)
Cd	=	(0.9 * Imp.) + [(1.0 - Imp.) * Cu] If Cd < Cu, use Cd = Cu
Qpm	=	Cd * Ix * Atotal * (1 hour / 3,600 seconds) * (1 ft / 12 inches) * (43,560 ft^2 / 1 acre)
Tc	=	$10^{(-0.507)} * (Cd * Ix)^{(-0.519)} * Length^{(0.483)} * Slope^{(-0.135)}$
Vm	=	(0.75 inches) * [(Ai)(0.9) + (Ap + Au)(Cu)] * (1ft / 12 inches) * (43,560 ft^2 / 1 acre)
	=	(2,722.5 ft^3 / acre) * [(Ai)(0.9) + (Ap + Au)(Cu)]

***** Contributing Undeveloped Upstream Area is an area where stormwater runoff from an undeveloped upstream area will flow directly or indirectly to the Post-Construction Best Management Practices (BMPs) proposed for the development. This additional flow must be included in the flow rate and volume calculations to appropriately size the BMPs.**

APPENDIX A VOLUME & FLOW RATE CALCULATIONS

A.1 METHOD FOR CALCULATING STANDARD URBAN STORMWATER MITIGATION PLAN FLOW RATES AND VOLUMES BASED ON 0.75-INCHES OF RAINFALL: WORKSHEET

PROJECT NAME

6001 Palos Verdes Dr

Examination of Onsite Qpm for Area SUSMP 4

APPENDIX A VOLUME & FLOW RATE CALCULATIONS

PROVIDE PROPOSED PROJECT CHARACTERISTICS

Atotal	3.48	Acres
Type of Development	Street	
Predominate Soil Type #	2	
% of Project Impervious	9.5%	
% of Project Pervious	90.5%	
% of Project Contributing Undeveloped Area	0.0%	
Ai	0.33	Acres
Ap	3.15	Acres
Au	0	Acres
L =	630	feet
S =	6.8%	

APPENDIX A VOLUME & FLOW RATE CALCULATIONS

DETERMINING THE PEAK MITIGATED FLOW RATE (Qpm):

In order to determine the peak mitigated flow rate (Qpm) from the new development, use the Los Angeles County Department of Public Works Hydrology Manual. Use the Modified Rational Method for calculating the peak mitigation Qpm fro compliance with the Standard Urban Stormwater Mitigation Plan (SUSMP). Use atached Table 1 for all maximum intensity (Ix) values used.

By trial and error, determine the time of concentration (Tc), as shown below:

CALCULATION STEPS:

1. Assume an initial Tc value between 5 and 30 minutes.

Tc 5 minutes

2. Using Table 1, look up the assumed Tc value and select the corresponding Ix intensity in inches/hour.

Ix 0.447 inches/hour

3. Determine the value for the Undeveloped Runoff Coefficient, Cu, using the runoff coefficient curve corresponding to the predominant soil type.

Cu 0.10

4. Calculate the Developed Runoff Coefficient, Cd = (0.9*Imp.)+[(1.0 - Imp.)*Cu]

Cd 0.18

5. Calculate the value for Cd * Ix

Cd * Ix 0.079

6. Calculate the time of Concentration, $Tc = 10^{(-0.507)} * (Cd * Ix)^{(-0.519)} * Length^{(0.483)} * Slope^{(-0.135)}$

Calculated Tc 37.6 minutes

7. Calculate the difference between the initially assumed Tc and the calculated Tc, if the difference is greater than 0.5 minutes. Use the calculated Tc as the assumed initial Tc in the second iteration. If the Tc value is within 0.5 minutes, round the acceptable Tc value to the nearest minute.

APPENDIX A **VOLUME & FLOW RATE CALCULATIONS**

TABLE FOR ITERATIONS:

Iteration No.	Initial Tc (min)	Ix (in/hr)	Cu	Cd	Cd * Ix (in/hr)	Calculated Tc (min)	Difference (min)	
1	5	0.447	0.10	0.18	0.079	37.6	32.6	Unacceptable
2	38	0.193	0.10	0.18	0.034	58.2	20.2	Unacceptable
3	58	0.193	0.10	0.18	0.034	58.2	0.2	Acceptable
4								
5								
6								
7								
8								
9								
10								

Acceptable Tc value 58 minutes

8. Calculated the Peak Mitigation Flow Rate,

Qpm = Cd * Ix * Atotal * (1.008333 ft^3-hour / acre-inches-seconds)

Qpm = 0.12 cfs

APPENDIX A VOLUME & FLOW RATE CALCULATIONS

In oder to determine the volume (Vm) of stormwater runoff to be mitigated from the new development, use the following equation:

$Vm = (2{,}722.5\ ft^3 / acre) * [(Ai)(0.9) + (Ap + Au)(Cu)]$

Vm = $\boxed{1668.2}$ ft^3

APPENDIX A VOLUME & FLOW RATE CALCULATIONS

TABLE 1

INTENSITY - DURATION DATA FOR 0.75-INCHES OF RAINFALL
FOR ALL RAINFALL ZONES

Duration, Tc (min)	Rainfall Intensity, Ix (in/hr)
5	0.447
6	0.411
7	0.382
8	0.359
9	0.339
10	0.323
11	0.309
12	0.297
13	0.286
14	0.276
15	0.267
16	0.259
17	0.252
18	0.245
19	0.239
20	0.233
21	0.228
22	0.223
23	0.218
24	0.214
25	0.210
26	0.206
27	0.203
28	0.199
29	0.196
30	0.193

DETERMINING THE VOLUME (Vm)

APPENDIX A VOLUME & FLOW RATE CALCULATIONS

NOMENCLATURE

Ai	=	Impervious Area (acres)
Ap	=	Pervious Area (acres)
Au	=	Contributing Undeveloped Upstream Area (acres)
Atotal	=	Total Area of Development and Contributing Undeveloped Upstream Area (acres)
Cd	=	Developed Runoff Coefficient
Cu	=	Undeveloped Runoff Coefficient
Ix	=	Rainfall Intensity (inches/hour)
Qpm	=	Peak Mitigation Flow Rate (cfs)
Tc	=	Time of Concentration (minutes, must be between 5-30 min.)
Vm	=	Mitigation Volume (ft^3)

EQUATIONS

Atotal	=	Ai + Ap + Au
Ai	=	(Atotal * % of Development which is Impervious)
Ap	=	(Atotal * % of Development which is Pervious)
Au	=	(Atotal * % of Contributing Undeveloped Upstream Area***)
Cd	=	(0.9 * Imp.) + [(1.0 - Imp.) * Cu] If Cd < Cu, use Cd = Cu
Qpm	=	Cd * Ix * Atotal * (1 hour / 3,600 seconds) * (1 ft / 12 inches) * (43,560 ft^2 / 1 acre)
Tc	=	$10^{(-0.507)} * (Cd * Ix)^{(-0.519)} * Length^{(0.483)} * Slope^{(-0.135)}$
Vm	=	(0.75 inches) * [(Ai)(0.9) + (Ap + Au)(Cu)] * (1ft / 12 inches) * (43,560 ft^2 / 1 acre)
	=	(2,722.5 ft^3 / acre) * [(Ai)(0.9) + (Ap + Au)(Cu)]

***** Contributing Undeveloped Upstream Area is an area where stormwater runoff from an undeveloped upstream area will flow directly or indirectly to the Post-Construction Best Management Practices (BMPs) proposed for the development. This additional flow must be included in the flow rate and volume calculations to appropriately size the BMPs.**

SUSMP
BMP Treatment Calculations
Catch Basin Filter Inserts

205 S. Broadway, Suite 206, Los Angeles, California 90012
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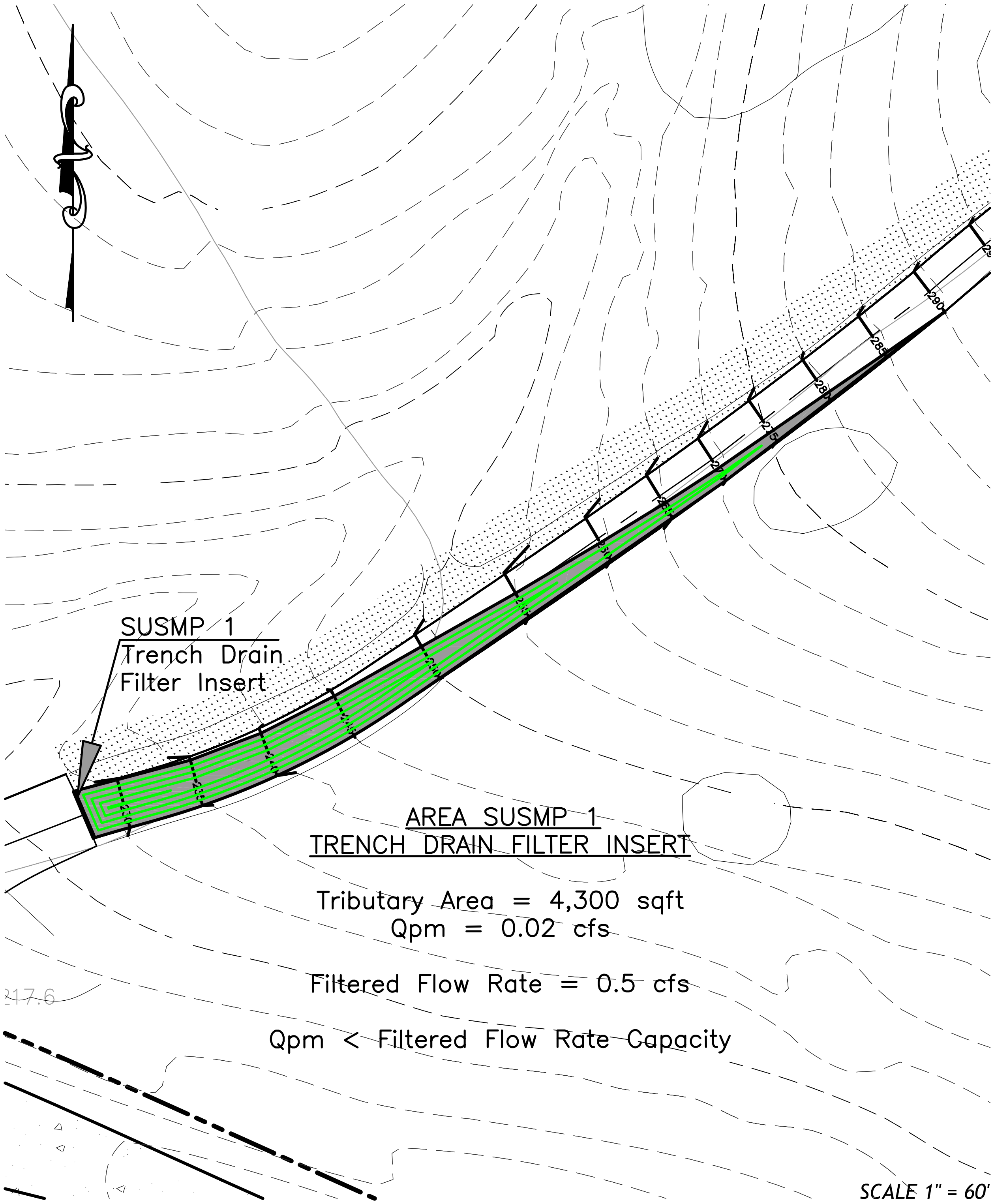


ROTHMAN ENGINEERING, INC.
205 S. BROADWAY, SUITE 206
LOS ANGELES, CALIFORNIA 90012
(213) 621-3155 FAX (213) 621-3105

AREA SUSMP 1
TRIBUTARY AREA CALCULATION FOR
KRISTAR LOPRO TENCH DRAIN FILTER INSERT

10/17/11

APPENDIX A VOLUME & FLOW RATE CALCULATIONS

A.1 METHOD FOR CALCULATING STANDARD URBAN STORMWATER MITIGATION PLAN FLOW RATES AND VOLUMES BASED ON 0.75-INCHES OF RAINFALL: WORKSHEET

PROJECT NAME

6001 Palos Verdes Dr

Examination of Onsite Qpm for Area SUSMP 1 - Trench Drain only for sizing of KriStar FloGard LoPro Trench Drain Media Filter, Model No. FG-TDOF6

APPENDIX A VOLUME & FLOW RATE CALCULATIONS

PROVIDE PROPOSED PROJECT CHARACTERISTICS

Atotal	0.099	Acres
Type of Development	Street	
Predominate Soil Type #	2	
% of Project Impervious	100.0%	
% of Project Pervious	0.0%	
% of Project Contributing Undeveloped Area	0.0%	
Ai	0.10	Acres
Ap	0.00	Acres
Au	0	Acres
L =	395	feet
S =	15.0%	

APPENDIX A VOLUME & FLOW RATE CALCULATIONS

DETERMINING THE PEAK MITIGATED FLOW RATE (Qpm):

In order to determine the peak mitigated flow rate (Qpm) from the new development, use the Los Angeles County Department of Public Works Hydrology Manual. Use the Modified Rational Method for calculating the peak mitigation Qpm fro compliance with the Standard Urban Stormwater Mitigation Plan (SUSMP). Use atached Table 1 for all maximum intensity (Ix) values used.

By trial and error, determine the time of concentration (Tc), as shown below:

CALCULATION STEPS:

1. Assume an initial Tc value between 5 and 30 minutes.

Tc 5 minutes

2. Using Table 1, look up the assumed Tc value and select the corresponding Ix intensity in inches/hour.

Ix 0.447 inches/hour

3. Determine the value for the Undeveloped Runoff Coefficient, Cu, using the runoff coefficient curve corresponding to the predominant soil type.

Cu 0.10

4. Calculate the Developed Runoff Coefficient, Cd = (0.9*Imp.)+[(1.0 - Imp.)*Cu]

Cd 0.90

5. Calculate the value for Cd * Ix

Cd * Ix 0.402

6. Calculate the time of Concentration, $Tc = 10^{(-0.507)} * (Cd * Ix)^{(-0.519)} * Length^{(0.483)} * Slope^{(-0.135)}$

Calculated Tc 11.6 minutes

7. Calculate the difference between the initially assumed Tc and the calculated Tc, if the difference is greater than 0.5 minutes. Use the calculated Tc as the assumed initial Tc in the second iteration. If the Tc value is within 0.5 minutes, round the acceptable Tc value to the nearest minute.

APPENDIX A VOLUME & FLOW RATE CALCULATIONS

TABLE FOR ITERATIONS:

Iteration No.	Initial Tc (min)	Ix (in/hr)	Cu	Cd	Cd * Ix (in/hr)	Calculated Tc (min)	Difference (min)	
1	5	0.447	0.10	0.90	0.402	11.6	6.6	Unacceptable
2	12	0.297	0.10	0.90	0.267	14.3	2.3	Unacceptable
3	14	0.276	0.10	0.90	0.248	14.9	0.9	Unacceptable
4	15	0.267	0.10	0.90	0.240	15.1	0.1	Acceptable
5								
6								
7								
8								
9								
10								

Acceptable Tc value 15 minutes

8. Calculated the Peak Mitigation Flow Rate,

Qpm = Cd * Ix * Atotal * (1.008333 ft^3-hour / acre-inches-seconds)

Qpm = 0.02 cfs

APPENDIX A VOLUME & FLOW RATE CALCULATIONS

In oder to determine the volume (Vm) of stormwater runoff to be mitigated from the new development, use the following equation:

Vm = (2,722.5 ft^3 / acre) * [(Ai)(0.9) + (Ap + Au)(Cu)]

Vm = $\boxed{242.6}$ ft^3

APPENDIX A **VOLUME & FLOW RATE CALCULATIONS**

TABLE 1

INTENSITY - DURATION DATA FOR 0.75-INCHES OF RAINFALL
FOR ALL RAINFALL ZONES

Duration, Tc (min)	Rainfall Intensity, Ix (in/hr)
5	0.447
6	0.411
7	0.382
8	0.359
9	0.339
10	0.323
11	0.309
12	0.297
13	0.286
14	0.276
15	0.267
16	0.259
17	0.252
18	0.245
19	0.239
20	0.233
21	0.228
22	0.223
23	0.218
24	0.214
25	0.210
26	0.206
27	0.203
28	0.199
29	0.196
30	0.193

DETERMINING THE VOLUME (Vm)

APPENDIX A VOLUME & FLOW RATE CALCULATIONS

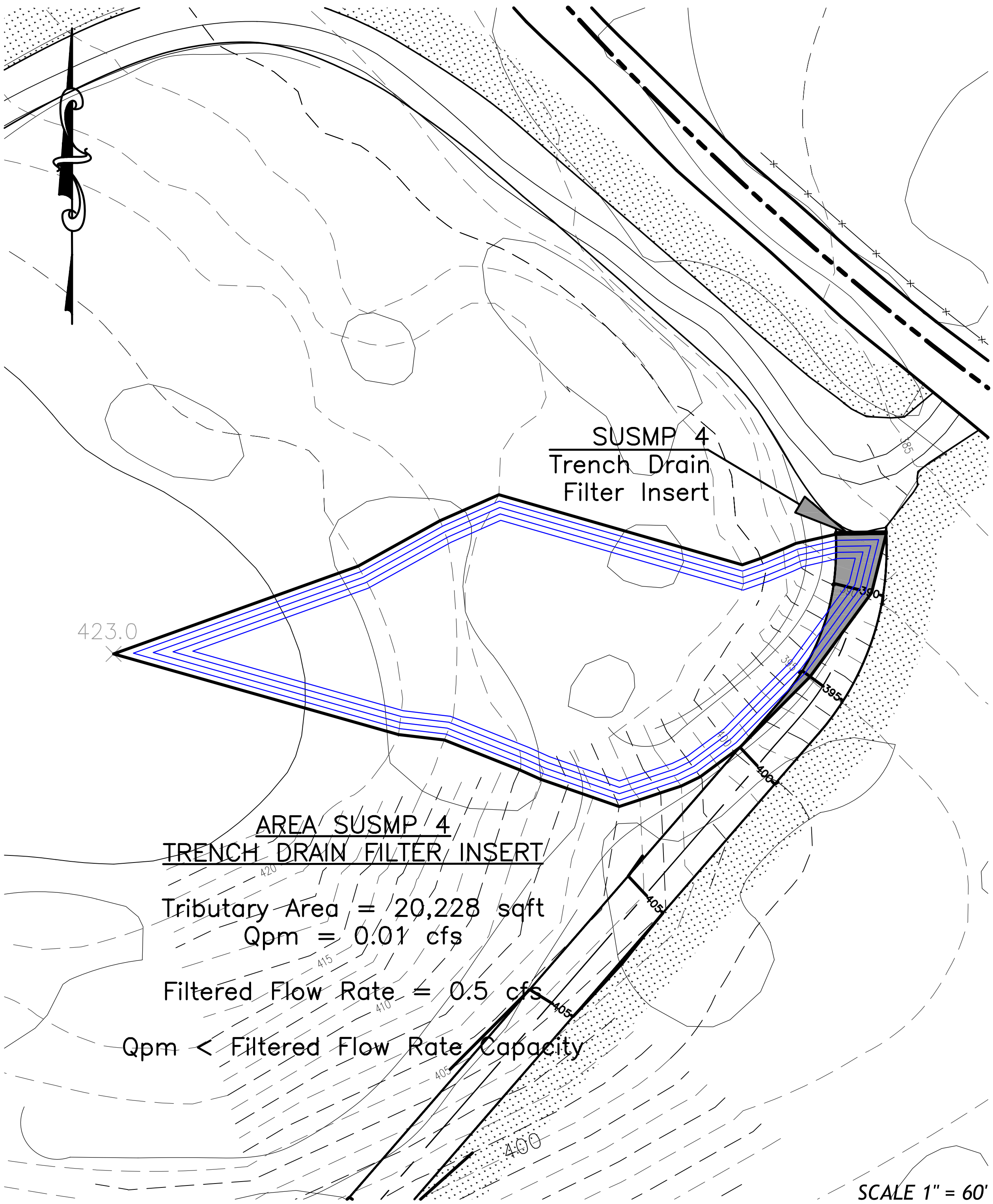
NOMENCLATURE

Ai	=	Impervious Area (acres)
Ap	=	Pervious Area (acres)
Au	=	Contributing Undeveloped Upstream Area (acres)
Atotal	=	Total Area of Development and Contributing Undeveloped Upstream Area (acres)
Cd	=	Developed Runoff Coefficient
Cu	=	Undeveloped Runoff Coefficient
Ix	=	Rainfall Intensity (inches/hour)
Qpm	=	Peak Mitigation Flow Rate (cfs)
Tc	=	Time of Concentration (minutes, must be between 5-30 min.)
Vm	=	Mitigation Volume (ft^3)

EQUATIONS

Atotal	=	Ai + Ap + Au
Ai	=	(Atotal * % of Development which is Impervious)
Ap	=	(Atotal * % of Development which is Pervious)
Au	=	(Atotal * % of Contributing Undeveloped Upstream Area***)
Cd	=	(0.9 * Imp.) + [(1.0 - Imp.) * Cu] If Cd < Cu, use Cd = Cu
Qpm	=	Cd * Ix * Atotal * (1 hour / 3,600 seconds) * (1 ft / 12 inches) * (43,560 ft^2 / 1 acre)
Tc	=	$10^{(-0.507)} * (Cd * Ix)^{(-0.519)} * Length^{(0.483)} * Slope^{(-0.135)}$
Vm	=	(0.75 inches) * [(Ai)(0.9) + (Ap + Au)(Cu)] * (1ft / 12 inches) * (43,560 ft^2 / 1 acre)
	=	(2,722.5 ft^3 / acre) * [(Ai)(0.9) + (Ap + Au)(Cu)]

***** Contributing Undeveloped Upstream Area is an area where stormwater runoff from an undeveloped upstream area will flow directly or indirectly to the Post-Construction Best Management Practices (BMPs) proposed for the development. This additional flow must be included in the flow rate and volume calculations to appropriately size the BMPs.**



RE

ROTHMAN ENGINEERING, INC.
205 S. BROADWAY, SUITE 206
LOS ANGELES, CALIFORNIA 90012
(213) 621-3155 FAX (213) 621-3105

AREA SUSMP 4
TRIBUTARY AREA CALCULATION FOR
KRISTAR LOPRO TENCH DRAIN FILTER INSERT

10/17/11

APPENDIX A VOLUME & FLOW RATE CALCULATIONS

A.1 METHOD FOR CALCULATING STANDARD URBAN STORMWATER MITIGATION PLAN FLOW RATES AND VOLUMES BASED ON 0.75-INCHES OF RAINFALL: WORKSHEET

PROJECT NAME

6001 Palos Verdes Dr

Examination of Onsite Qpm for Area SUSMP 4 - Trench Drain only for sizing of KriStar FloGard LoPro Trench Drain Media Filter, Model No. FG-TDOF6

APPENDIX A **VOLUME & FLOW RATE CALCULATIONS**

PROVIDE PROPOSED PROJECT CHARACTERISTICS

Atotal	0.464	Acres
Type of Development	Street	
Predominate Soil Type #	2	
% of Project Impervious	5.6%	
% of Project Pervious	94.4%	
% of Project Contributing Undeveloped Area	0.0%	
Ai	0.03	Acres
Ap	0.44	Acres
Au	0	Acres
L =	335	feet
S =	10.7%	

APPENDIX A VOLUME & FLOW RATE CALCULATIONS

DETERMINING THE PEAK MITIGATED FLOW RATE (Qpm):

In order to determine the peak mitigated flow rate (Qpm) from the new development, use the Los Angeles County Department of Public Works Hydrology Manual. Use the Modified Rational Method for calculating the peak mitigation Qpm fro compliance with the Standard Urban Stormwater Mitigation Plan (SUSMP). Use atached Table 1 for all maximum intensity (Ix) values used.

By trial and error, determine the time of concentration (Tc), as shown below:

CALCULATION STEPS:

1. Assume an initial Tc value between 5 and 30 minutes.

Tc | 5 | minutes

2. Using Table 1, look up the assumed Tc value and select the corresponding Ix intensity in inches/hour.

Ix | 0.447 | inches/hour

3. Determine the value for the Undeveloped Runoff Coefficient, Cu, using the runoff coefficient curve corresponding to the predominant soil type.

Cu | 0.10

4. Calculate the Developed Runoff Coefficient, Cd = (0.9*Imp.)+[(1.0 - Imp.)*Cu]

Cd | 0.15

5. Calculate the value for Cd * Ix

Cd * Ix | 0.065

6. Calculate the time of Concentration, $Tc = 10^{(-0.507)} * (Cd * Ix)^{(-0.519)} * Length^{(0.483)} * Slope^{(-0.135)}$

Calculated Tc | 28.9 | minutes

7. Calculate the difference between the initially assumed Tc and the calculated Tc, if the difference is greater than 0.5 minutes. Use the calculated Tc as the assumed initial Tc in the second iteration. If the Tc value is within 0.5 minutes, round the acceptable Tc value to the nearest minute.

APPENDIX A VOLUME & FLOW RATE CALCULATIONS

TABLE FOR ITERATIONS:

Iteration No.	Initial Tc (min)	Ix (in/hr)	Cu	Cd	Cd * Ix (in/hr)	Calculated Tc (min)	Difference (min)	
1	5	0.447	0.10	0.15	0.065	28.9	23.9	Unacceptable
2	29	0.196	0.10	0.15	0.028	44.3	15.3	Unacceptable
3	44	0.193	0.10	0.15	0.028	44.6	0.6	Unacceptable
4	45	0.193	0.10	0.15	0.028	44.6	-0.4	Acceptable
5								
6								
7								
8								
9								
10								

Acceptable Tc value 45 minutes

8. Calculated the Peak Mitigation Flow Rate,

Qpm = Cd * Ix * Atotal * (1.008333 ft^3-hour / acre-inches-seconds)

Qpm = 0.01 cfs

APPENDIX A VOLUME & FLOW RATE CALCULATIONS

In oder to determine the volume (Vm) of stormwater runoff to be mitigated from the new development, use the following equation:

$Vm = (2{,}722.5\ ft^3 / acre) * [(Ai)(0.9) + (Ap + Au)(Cu)]$

$Vm = \boxed{183.3}\ ft^3$

APPENDIX A VOLUME & FLOW RATE CALCULATIONS

TABLE 1

INTENSITY - DURATION DATA FOR 0.75-INCHES OF RAINFALL
FOR ALL RAINFALL ZONES

Duration, Tc (min)	Rainfall Intensity, Ix (in/hr)
5	0.447
6	0.411
7	0.382
8	0.359
9	0.339
10	0.323
11	0.309
12	0.297
13	0.286
14	0.276
15	0.267
16	0.259
17	0.252
18	0.245
19	0.239
20	0.233
21	0.228
22	0.223
23	0.218
24	0.214
25	0.210
26	0.206
27	0.203
28	0.199
29	0.196
30	0.193

DETERMINING THE VOLUME (Vm)

APPENDIX A VOLUME & FLOW RATE CALCULATIONS

NOMENCLATURE

Ai	=	Impervious Area (acres)
Ap	=	Pervious Area (acres)
Au	=	Contributing Undeveloped Upstream Area (acres)
Atotal	=	Total Area of Development and Contributing Undeveloped Upstream Area (acres)
Cd	=	Developed Runoff Coefficient
Cu	=	Undeveloped Runoff Coefficient
Ix	=	Rainfall Intensity (inches/hour)
Qpm	=	Peak Mitigation Flow Rate (cfs)
Tc	=	Time of Concentration (minutes, must be between 5-30 min.)
Vm	=	Mitigation Volume (ft^3)

EQUATIONS

Atotal	=	Ai + Ap + Au
Ai	=	(Atotal * % of Development which is Impervious)
Ap	=	(Atotal * % of Development which is Pervious)
Au	=	(Atotal * % of Contributing Undeveloped Upstream Area***)
Cd	=	(0.9 * Imp.) + [(1.0 - Imp.) * Cu] If Cd < Cu, use Cd = Cu
Qpm	=	Cd * Ix * Atotal * (1 hour / 3,600 seconds) * (1 ft / 12 inches) * (43,560 ft^2 / 1 acre)
Tc	=	$10^{(-0.507)} * (Cd * Ix)^{(-0.519)} * Length^{(0.483)} * Slope^{(-0.135)}$
Vm	=	(0.75 inches) * [(Ai)(0.9) + (Ap + Au)(Cu)] * (1ft / 12 inches) * (43,560 ft^2 / 1 acre)
	=	(2,722.5 ft^3 / acre) * [(Ai)(0.9) + (Ap + Au)(Cu)]

***** Contributing Undeveloped Upstream Area is an area where stormwater runoff from an undeveloped upstream area will flow directly or indirectly to the Post-Construction Best Management Practices (BMPs) proposed for the development. This additional flow must be included in the flow rate and volume calculations to appropriately size the BMPs.**

Reference

Product Information
Catch Basin Filter Inserts

205 S. Broadway, Suite 206, Los Angeles, California 90012
(213) 621-3155 Office - (213) 621-3105 Fax

NOTES:

1. Filter outlet adapter shall be constructed from stainless steel Type 304.

2. Filter element is constructed from polypropylene woven monofilament geotextile surrounding a perforated filter housing. Filter element shall not allow the retention of water between storm events.

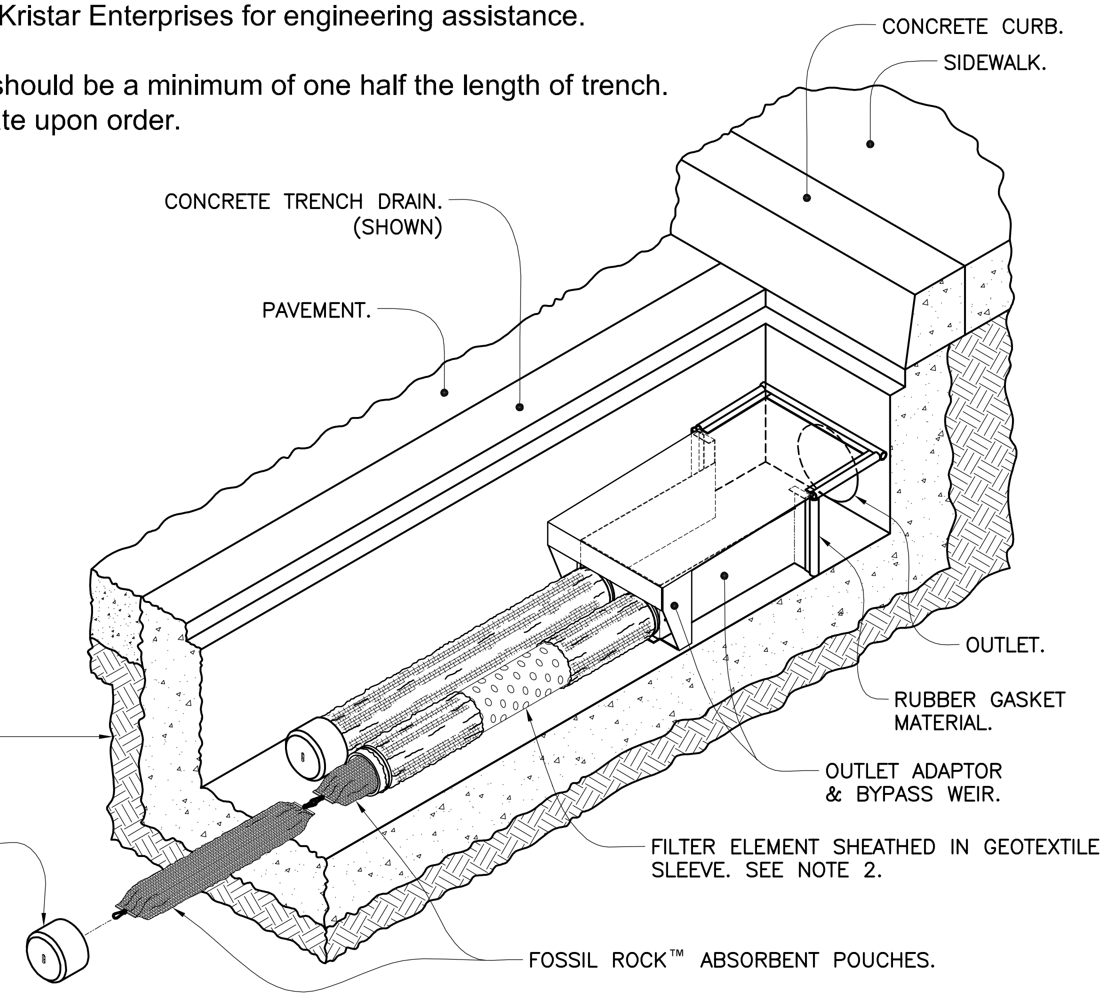
3. Filter inserts are supplied with "clip-in" filter pouches utilizing Fossil Rock ™ filter medium for the collection and retention of petroleum hydrocarbons (oils & greases).

4. FloGard® LoPro™ filter inserts and Fossil Rock™ filter medium pouches must be maintained in accordance with manufacturer recommendations.

5. Outlet adapter can accommodate outlet openings at right angles and/or bottom outlet openings.

6. For alternate outlet adapter configurations used for extremely shallow trench drains contact Kristar Enterprises for engineering assistance.

7. Filter element should be a minimum of one half the length of trench. Confirm flow rate upon order.



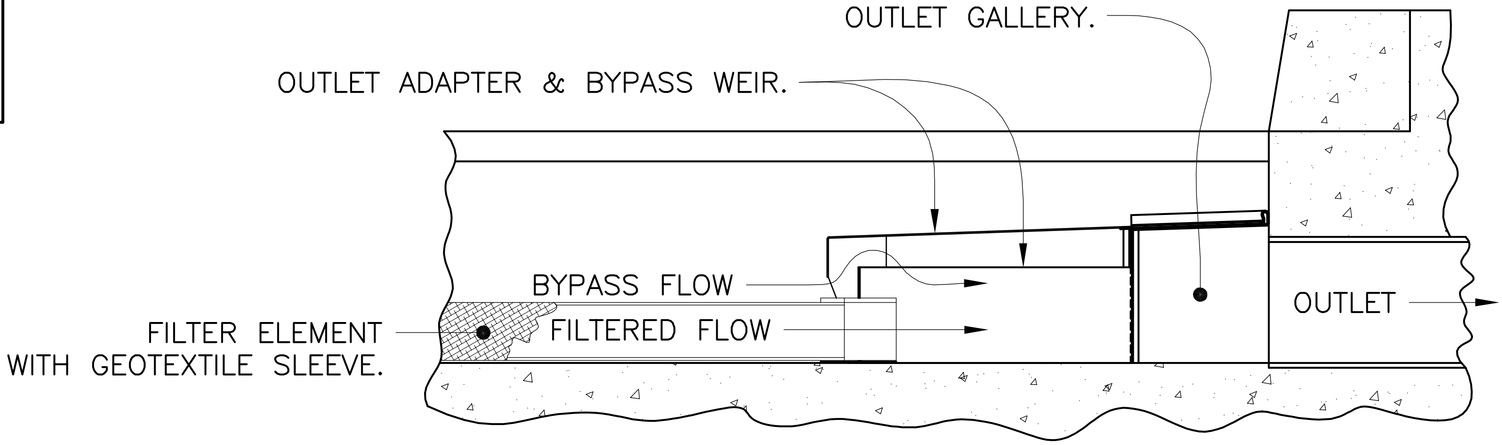
TITLE

FloGard® LoPro™

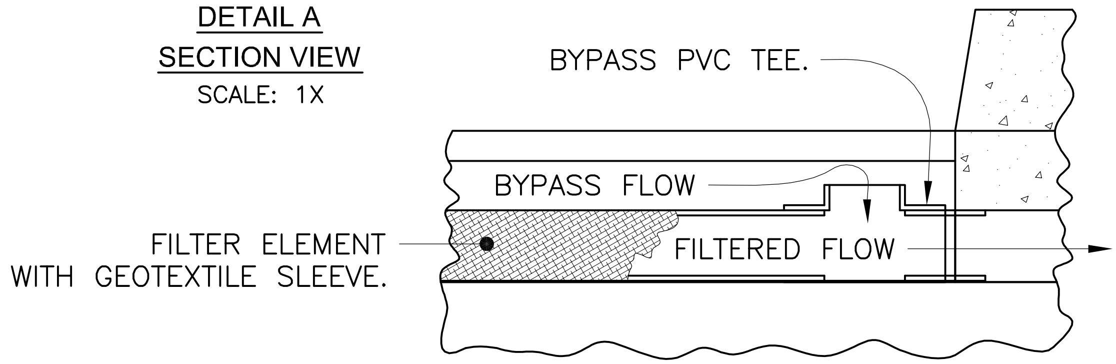
TRENCH DRAIN FILTER INSERT

KriStar Enterprises, Inc.
360 Sutton Place, Santa Rosa, CA 95407
Ph: 800.579.8819, Fax: 707.524.8186, www.kristar.com

DRAWING NO.	REV	ECO	DATE	
FG-LP-0002	F	0075 JPR 8/7/09	JPR 2/21/07	SHEET 1 OF 2



DETAIL A
SECTION VIEW
SCALE: 1X



DETAIL B
SECTION VIEW
ALTERNATE ADAPTER CONFIGURATION
SCALE: 1X

SPECIFIER CHART

MODEL	FILTER TYPE	TRENCH WIDTH "ID" (CLEAR OPENING)	MINIMUM TRENCH DEPTH (FROM BOTTOM OF GRATE)	SOLIDS STORAGE CAPACITY CUBIC FEET **	FILTERED FLOW CUBIC FEET / SECOND **	TOTAL BYPASS CAPACITY CUBIC FEET /SECOND
FG-TDOF3	PIPE *	3.0	6.5	0.1	0.5	0.1
FG-TDOF4	PIPE *	4.0	6.5	0.2	0.5	0.1
FG-TDOF6	PIPE	6.0	6.5	0.4	0.5	0.2
FG-TDOF8	PIPE	8.0	6.5	0.7	0.5	0.3
FG-TDOF10	PIPE	10.0	6.5	0.9	0.5	0.5
FG-TDOF12	PIPE	12.0	6.5	0.9	1.0	0.6
FG-TDOF18	PIPE	18.0	6.5	1.3	1.5	1.1
FG-TDOF24	PIPE	24.0	6.5	1.8	2.0	1.5
FG-TDOA6	PANEL	6.0	4.5	0.4	0.2	0.2
FG-TDOA8	PANEL	8.0	4.5	0.7	0.2	0.3
FG-TDOA10	PANEL	10.0	4.5	0.8	0.3	0.5
FG-TDOA12	PANEL	12.0	4.5	1.0	0.4	0.6
FG-TDOA18	PANEL	18.0	4.5	1.4	0.8	1.1
FG-TDOA24	PANEL	24.0	4.5	1.8	1.1	1.5

* ALTERNATE ADAPTER CONFIGURATION. SEE DETAIL B.
**CAPACITY PER 4-FT. SEGMENT USED.

TITLE

FloGard® LoPro™

TRENCH DRAIN FILTER INSERT

KriStar Enterprises, Inc.
360 Sutton Place, Santa Rosa, CA 95407
Ph: 800.579.8819, Fax: 707.524.8186, www.kristar.com

DRAWING NO.	REV	ECO	DATE	
FG-LP-0002	F	0075 JPR 8/7/09	JPR 2/21/07	SHEET 2 OF 2

SUSMP
California BMP Handbook Reference

205 S. Broadway, Suite 206, Los Angeles, California 90012
(213) 621-3155 Office - (213) 621-3105 Fax

Vegetated Buffer Strip TC-31

Description

Grassed buffer strips (vegetated filter strips, filter strips, and grassed filters) are vegetated surfaces that are designed to treat sheet flow from adjacent surfaces. Filter strips function by slowing runoff velocities and allowing sediment and other pollutants to settle and by providing some infiltration into underlying soils. Filter strips were originally used as an agricultural treatment practice and have more recently evolved into an urban practice. With proper design and maintenance, filter strips can provide relatively high pollutant removal. In addition, the public views them as landscaped amenities and not as stormwater infrastructure. Consequently, there is little resistance to their use.

California Experience

Caltrans constructed and monitored three vegetated buffer strips in southern California and is currently evaluating their performance at eight additional sites statewide. These strips were generally effective in reducing the volume and mass of pollutants in runoff. Even in the areas where the annual rainfall was only about 10 inches/yr, the vegetation did not require additional irrigation. One factor that strongly affected performance was the presence of large numbers of gophers at most of the southern California sites. The gophers created earthen mounds, destroyed vegetation, and generally reduced the effectiveness of the controls for TSS reduction.

Advantages

- Buffers require minimal maintenance activity (generally just erosion prevention and mowing).
- If properly designed, vegetated, and operated, buffer strips can provide reliable water quality benefits in conjunction with high aesthetic appeal.

Design Considerations

- Tributary Area
- Slope
- Water Availability
- Aesthetics

Targeted Constituents

☑	Sediment	■
☑	Nutrients	●
☑	Trash	▲
☑	Metals	■
☑	Bacteria	●
☑	Oil and Grease	■
☑	Organics	▲

Legend *(Removal Effectiveness)*

● Low ■ High

▲ Medium

- Flow characteristics and vegetation type and density can be closely controlled to maximize BMP effectiveness.
- Roadside shoulders act as effective buffer strips when slope and length meet criteria described below.

Limitations

- May not be appropriate for industrial sites or locations where spills may occur.
- Buffer strips cannot treat a very large drainage area.
- A thick vegetative cover is needed for these practices to function properly.
- Buffer or vegetative filter length must be adequate and flow characteristics acceptable or water quality performance can be severely limited.
- Vegetative buffers may not provide treatment for dissolved constituents except to the extent that flows across the vegetated surface are infiltrated into the soil profile.
- This technology does not provide significant attenuation of the increased volume and flow rate of runoff during intense rain events.

Design and Sizing Guidelines

- Maximum length (in the direction of flow towards the buffer) of the tributary area should be 60 feet.
- Slopes should not exceed 15%.
- Minimum length (in direction of flow) is 15 feet.
- Width should be the same as the tributary area.
- Either grass or a diverse selection of other low growing, drought tolerant, native vegetation should be specified. Vegetation whose growing season corresponds to the wet season is preferred.

Construction/Inspection Considerations

- Include directions in the specifications for use of appropriate fertilizer and soil amendments based on soil properties determined through testing and compared to the needs of the vegetation requirements.
- Install strips at the time of the year when there is a reasonable chance of successful establishment without irrigation; however, it is recognized that rainfall in a given year may not be sufficient and temporary irrigation may be required.
- If sod tiles must be used, they should be placed so that there are no gaps between the tiles; stagger the ends of the tiles to prevent the formation of channels along the strip.
- Use a roller on the sod to ensure that no air pockets form between the sod and the soil.

- Where seeds are used, erosion controls will be necessary to protect seeds for at least 75 days after the first rainfall of the season.

Performance

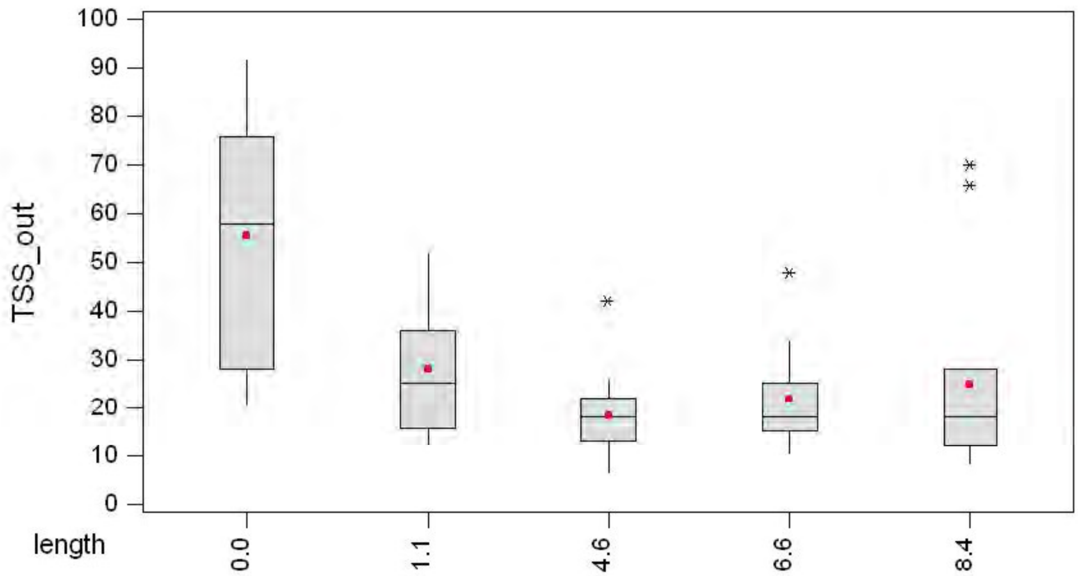
Vegetated buffer strips tend to provide somewhat better treatment of stormwater runoff than swales and have fewer tendencies for channelization or erosion. Table 1 documents the pollutant removal observed in a recent study by Caltrans (2002) based on three sites in southern California. The column labeled "Significance" is the probability that the mean influent and effluent EMCs are not significantly different based on an analysis of variance.

The removal of sediment and dissolved metals was comparable to that observed in much more complex controls. Reduction in nitrogen was not significant and all of the sites exported phosphorus for the entire study period. This may have been the result of using salt grass, a warm weather species that is dormant during the wet season, and which leaches phosphorus when dormant.

Another Caltrans study (unpublished) of vegetated highway shoulders as buffer strips also found substantial reductions often within a very short distance of the edge of pavement. Figure 1 presents a box and whisker plot of the concentrations of TSS in highway runoff after traveling various distances (shown in meters) through a vegetated filter strip with a slope of about 10%. One can see that the TSS median concentration reaches an irreducible minimum concentration of about 20 mg/L within 5 meters of the pavement edge.

Table 1 Pollutant Reduction in a Vegetated Buffer Strip

Constituent	Mean EMC Influent (mg/L)	Mean EMC Effluent (mg/L)	Removal %	Significance P
TSS	119	31	74	<0.000
NO_3-N	0.67	0.58	13	0.367
TKN-N	2.50	2.10	16	0.542
Total N[a]	3.17	2.68	15	-
Dissolved P	0.15	0.46	-206	0.047
Total P	0.42	0.62	-52	0.035
Total Cu	0.058	0.009	84	<0.000
Total Pb	0.046	0.006	88	<0.000
Total Zn	0.245	0.055	78	<0.000
Dissolved Cu	0.029	0.007	77	0.004
Dissolved Pb	0.004	0.002	66	0.006
Dissolved Zn	0.099	0.035	65	<0.000



Filter strips also exhibit good removal of litter and other floatables because the water depth in these systems is well below the vegetation height and consequently these materials are not easily transported through them. Unfortunately little attenuation of peak runoff rates and volumes (particularly for larger events) is normally observed, depending on the soil properties. Therefore it may be prudent to follow the strips with another practice than can reduce flooding and channel erosion downstream.

Siting Criteria

The use of buffer strips is limited to gently sloping areas where the vegetative cover is robust and diffuse, and where shallow flow characteristics are possible. The practical water quality benefits can be effectively eliminated with the occurrence of significant erosion or when flow concentration occurs across the vegetated surface. Slopes should not exceed 15 percent or be less than 1 percent. The vegetative surface should extend across the full width of the area being drained. The upstream boundary of the filter should be located contiguous to the developed area. Use of a level spreading device (vegetated berm, sawtooth concrete border, rock trench, etc) to facilitate overland sheet flow is not normally recommended because of maintenance considerations and the potential for standing water.

Filter strips are applicable in most regions, but are restricted in some situations because they consume a large amount of space relative to other practices. Filter strips are best suited to treating runoff from roads and highways, roof downspouts, small parking lots, and pervious surfaces. They are also ideal components of the "outer zone" of a stream buffer or as pretreatment to a structural practice. In arid areas, however, the cost of irrigating the grass on the practice will most likely outweigh its water quality benefits, although aesthetic considerations may be sufficient to overcome this constraint. Filter strips are generally impractical in ultra-urban areas where little pervious surface exists.

Some cold water species, such as trout, are sensitive to changes in temperature. While some treatment practices, such as wet ponds, can warm stormwater substantially, filter strips do not are not expected to increase stormwater temperatures. Thus, these practices are good for protection of cold-water streams.

Filter strips should be separated from the ground water by between 2 and 4 ft to prevent contamination and to ensure that the filter strip does not remain wet between storms.

Additional Design Guidelines

Filter strips appear to be a minimal design practice because they are basically no more than a grassed slope. In general the slope of the strip should not exceed 15fc% and the strip should be at least 15 feet long to provide water quality treatment. Both the top and toe of the slope should be as flat as possible to encourage sheet flow and prevent erosion. The top of the strip should be installed 2-5 inches below the adjacent pavement, so that vegetation and sediment accumulation at the edge of the strip does not prevent runoff from entering.

A major question that remains unresolved is how large the drainage area to a strip can be. Research has conclusively demonstrated that these are effective on roadside shoulders, where the contributing area is about twice the buffer area. They have also been installed on the perimeter of large parking lots where they performed fairly effectively; however much lower slopes may be needed to provide adequate water quality treatment.

The filter area should be densely vegetated with a mix of erosion-resistant plant species that effectively bind the soil. Native or adapted grasses, shrubs, and trees are preferred because they generally require less fertilizer and are more drought resistant than exotic plants. Runoff flow velocities should not exceed about 1 fps across the vegetated surface.

For engineered vegetative strips, the facility surface should be graded flat prior to placement of vegetation. Initial establishment of vegetation requires attentive care including appropriate watering, fertilization, and prevention of excessive flow across the facility until vegetation completely covers the area and is well established. Use of a permanent irrigation system may help provide maximal water quality performance.

In cold climates, filter strips provide a convenient area for snow storage and treatment. If used for this purpose, vegetation in the filter strip should be salt-tolerant (e.g., creeping bentgrass), and a maintenance schedule should include the removal of sand built up at the bottom of the slope. In arid or semi-arid climates, designers should specify drought-tolerant grasses to minimize irrigation requirements.

Maintenance

Filter strips require mainly vegetation management; therefore little special training is needed for maintenance crews. Typical maintenance activities and frequencies include:

- Inspect strips at least twice annually for erosion or damage to vegetation, preferably at the end of the wet season to schedule summer maintenance and before major fall run-off to be sure the strip is ready for winter. However, additional inspection after periods of heavy run-off is most desirable. The strip should be checked for debris and litter and areas of sediment accumulation.

- Recent research on biofiltration swales, but likely applicable to strips (Colwell et al., 2000), indicates that grass height and mowing frequency have little impact on pollutant removal;

consequently, mowing may only be necessary once or twice a year for safety and aesthetics or to suppress weeds and woody vegetation.

- Trash tends to accumulate in strip areas, particularly along highways. The need for litter removal should be determined through periodic inspection but litter should always be removed prior to mowing.

- Regularly inspect vegetated buffer strips for pools of standing water. Vegetated buffer strips can become a nuisance due to mosquito breeding in level spreaders (unless designed to dewater completely in 48-72 hours), in pools of standing water if obstructions develop (e.g. debris accumulation, invasive vegetation), and/or if proper drainage slopes are not implemented and maintained.

Cost

Construction Cost

Little data is available on the actual construction costs of filter strips. One rough estimate can be the cost of seed or sod, which is approximately 30¢ per ft^2 for seed or 70¢ per ft^2 for sod. This amounts to between $13,000 and $30,000 per acre of filter strip. This cost is relatively high compared with other treatment practices. However, the grassed area used as a filter strip may have been seeded or sodded even if it were not used for treatment. In these cases, the only additional cost is the design. Typical maintenance costs are about $350/acre/year (adapted from SWRPC, 1991). This cost is relatively inexpensive and, again, might overlap with regular landscape maintenance costs.

The true cost of filter strips is the land they consume. In some situations this land is available as wasted space beyond back yards or adjacent to roadsides, but this practice is cost-prohibitive when land prices are high and land could be used for other purposes.

Maintenance Cost

Maintenance of vegetated buffer strips consists mainly of vegetation management (mowing, irrigation if needed, weeding) and litter removal. Consequently the costs are quite variable depending on the frequency of these activities and the local labor rate.

References and Sources of Additional Information

Caltrans, 2002, BMP Retrofit Pilot Program Proposed Final Report, Rpt. CTSW-RT-01-050, California Dept. of Transportation, Sacramento, CA.

Center for Watershed Protection (CWP). 1996. *Design of Stormwater Filtering Systems*. Prepared for Chesapeake Research Consortium, Solomons, MD, and EPA Region V, Chicago, IL.

Desbonette, A., P. Pogue, V. Lee, and N. Wolff. 1994. *Vegetated Buffers in the Coastal Zone: A Summary Review and Bibliography*. Coastal Resources Center. University of Rhode Island, Kingston, RI.

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Drain Inserts MP-52

Description

Drain inserts are manufactured filters or fabric placed in a drop inlet to remove sediment and debris. There are a multitude of inserts of various shapes and configurations, typically falling into one of three different groups: socks, boxes, and trays. The sock consists of a fabric, usually constructed of polypropylene. The fabric may be attached to a frame or the grate of the inlet holds the sock. Socks are meant for vertical (drop) inlets. Boxes are constructed of plastic or wire mesh. Typically a polypropylene "bag" is placed in the wire mesh box. The bag takes the form of the box. Most box products are one box; that is, the setting area and filtration through media occur in the same box. Some products consist of one or more trays or mesh grates. The trays may hold different types of media. Filtration media vary by manufacturer. Types include polypropylene, porous polymer, treated cellulose, and activated carbon.

California Experience

The number of installations is unknown but likely exceeds a thousand. Some users have reported that these systems require considerable maintenance to prevent plugging and bypass.

Advantages

- Does not require additional space as inserts as the drain inlets are already a component of the standard drainage systems.
- Easy access for inspection and maintenance.
- As there is no standing water, there is little concern for mosquito breeding.
- A relatively inexpensive retrofit option.

Limitations

Performance is likely significantly less than treatment systems that are located at the end of the drainage system such as ponds and vaults. Usually not suitable for large areas or areas with trash or leaves than can plug the insert.

Design and Sizing Guidelines

Refer to manufacturer's guidelines. Drain inserts come any many configurations but can be placed into three general groups: socks, boxes, and trays. The sock consists of a fabric, usually constructed of polypropylene. The fabric may be attached to a frame or the grate of the inlet holds the sock. Socks are meant for vertical (drop) inlets. Boxes are constructed of plastic or wire mesh. Typically a polypropylene "bag" is placed in the wire mesh box. The bag takes the form of the box. Most box products are

Design Considerations

- Use with other BMPs
- Fit and Seal Capacity within Inlet

Targeted Constituents

- ☑ Sediment
- ☑ Nutrients
- ☑ Trash
- ☑ Metals
- ☐ Bacteria
- ☑ Oil and Grease
- ☑ Organics

Removal Effectiveness

See New Development and Redevelopment Handbook-Section 5.

one box; that is, the setting area and filtration through media occurs in the same box. One manufacturer has a double-box. Stormwater enters the first box where setting occurs. The stormwater flows into the second box where the filter media is located. Some products consist of one or more trays or mesh grates. The trays can hold different types of media. Filtration media vary with the manufacturer: types include polypropylene, porous polymer, treated cellulose, and activated carbon.

Construction/Inspection Considerations

Be certain that installation is done in a manner that makes certain that the stormwater enters the unit and does not leak around the perimeter. Leakage between the frame of the insert and the frame of the drain inlet can easily occur with vertical (drop) inlets.

Performance

Few products have performance data collected under field conditions.

Siting Criteria

It is recommended that inserts be used only for retrofit situations or as pretreatment where other treatment BMPs presented in this section area used.

Additional Design Guidelines

Follow guidelines provided by individual manufacturers.

Maintenance

Likely require frequent maintenance, on the order of several times per year.

Cost

- The initial cost of individual inserts ranges from less than $100 to about $2,000. The cost of using multiple units in curb inlet drains varies with the size of the inlet.

- The low cost of inserts may tend to favor the use of these systems over other, more effective treatment BMPs. However, the low cost of each unit may be offset by the number of units that are required, more frequent maintenance, and the shorter structural life (and therefore replacement).

References and Sources of Additional Information

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Woodward Clyde, June 11, 1996, Parking Lot Monitoring Report, Santa Clara Valley Nonpoint Source Pollution Control Program.

SUSMP
Sonoma County Agricultural Commissioner's Office
BMP's for Agricultural Erosion and Sediment Control

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Best Management Practices for Agricultural Erosion and Sediment Control

SONOMA COUNTY AGRICULTURAL COMMISSIONER'S OFFICE

CHAPTER THREE

Cover Crops, Tillage Practices and Erosion Control

Planting cover crops is the most cost effective method to reduce the introduction of sediment, nutrients, and pesticides to the stream channel through overland flow.

In addition to their ability to prevent sheet erosion, cover crops can serve many agronomic purposes such as improving tilth, fixing nitrogen in the soil, and providing habitat for beneficial insects.

Environmental Concerns

Surface runoff can carry sediment, nutrients, and pesticides directly to a stream, where they affect salmonids and their habitat.

Site Evaluation

Inventory all areas that have rilling and eroded channels. Also, note areas that have sparse natural vegetation or areas where the cover crop has not taken. These areas may need some soil amendments or may need to be reseeded with a different seed mix

Best Management Practices

1. Establish thick cover crops by October 15 and maintain them throughout the rainy season (until April 15).

2. Use straw mulch (2 tons/acre) in areas where cover crops are planted late in the fall or if rain is likely after the cover crop has been tilled and there is no perimeter erosion control.

3. Whenever possible, avoid tilling early in the spring or late in the fall. Leave filter strip areas or other perimeter erosion control in place if the vineyard rows are tilled early.

4. Minimize tillage practices, especially if slopes are greater than nominal (>5-10%) or if soils are highly erodible.

5. Filter strip areas or other perimeter erosion control should be left in place if the vineyard/orchard rows are tilled early.

6. Do not till turn-around areas except for the infrequent need to reduce compaction. In this case, promptly cover the soil with straw and replant with a cover crop before the rainy season.

7. If you till regularly, use sedimentation basins or vegetated filter strips to filter sediment before it reaches the stream.

8. Avoid bringing equipment into the vineyard/orchard during the wet season. Close seasonal roads to traffic and maintain permanent roads to prevent erosion.

9. Keep on site extra erosion control materials such as straw bales or wattles, gravel or geo-textile fabric and train vineyard crews in their proper installation.

10. Check the site after each rainfall event.

Cover Crops

Protecting bare soil surfaces is one of the best ways to prevent soil loss. Grasses, depending on the type, provide short-term soil stabilization for disturbed areas during construction of your project and can serve as long-term permanent soil stabilization for disturbed areas. There are many different seed mixtures you can choose from. Here are some key things to consider when choosing and planting a cover crop:

- Most important, be sure that your seed mixture provides overstory (tall fast growing plants like rye, grass, or barley) and understory (low growing broadleaf plants like clover) protection. For example, a mixture of oats and barley will only provide overstory protection and will only be slightly more effective than if you did nothing. The raindrops can still fall down between the tall plant stalks and dislodge soil particles. If you mix in some clover and brando brome, you will get understory protection and the soil will have better protection.

- The amount of seed you will need depends on the mix you choose. It can range from 30 lbs per acre for a more permanent type of cover crop to 90 lbs per acre for a quick erosion control soil builder mix. Your seed company will be able to help you determine what mix is best for your project and give you the recommended seed rate.

- Broadcast your seed in the fall. In order to have adequate protection by the start of the rainy season (October 15), the seed should be planted by mid-September. Initial irrigation will be required for most grasses with follow-up irrigation and fertilization. The cover crop should look like a lawn by October 15 (for new plantings and November 15 for replants) in order to provide adequate protection for the soil during the first heavy rains. If you cannot plant by mid-September and irrigate the seed, then you may plant your seed in October **and** cover it with straw mulch applied at the rate of two tons per acre.

The following section will give you guidelines on seed mixes for cover crops and application rates.

Example Cover Crop Seed Mix

Hillside- Shallow Soils
"Erosion Control"

"Zorro" annual fescue	40%
"Blando" brome	27%
"Hykon" rose clover	23%

(seeding rate: 25lbs. per acre)

Hillside Soils
-Frequent Mowing-

"Zorro" annual fescue	40%
Subterranean clover	35%
"Hykon" rose clover	25%

(seeding rate: 30 lbs. per acre)

Hillside Quick Erosion Control
"Soil Builder"

Red Oats	65%
Crimson clover	13%
Austrian winter pea	22%

(seeding rate: 90 lbs. per acre)

Quick Erosion Conrol
-Cold Soils-

Cereal rye	83%
Crimson clover	17%

(seeding rate: 90 lbs. per acre)

Vineyard Terrace
"Slope Stabilizer"

'Blando" brome	45%
"Molate" red fescue	55%

(seeding rate: 25 lbs. per acre)

Native, No-till Blend
(Mature vineyards)

California meadow barley	36%
"Molate" red fescue	38%
California brome	26%

(seeding rate: 39 lbs. per acre)

Example Cover Crop Seed Mix

Native, No till Blend
"Low growing"

Idaho fescue	50%
"Molate" red fescue	50%

(seeding rate: 30 lbs. per acre)

Emergency Winter Mix
"Quick Cover"

Common barley	85%
Annual ryegrass	15%

(seeding rate: 100 lbs. per acre)

High Altitude
"Mountain Turf"

Perennial ryegrass	35%
Creeping red fescue	35%
"Covar" sheep fescue	30%

(seeding rate: 32 lbs. per acre)

Heavy Use Areas
-Vineyard Headlands-

Bluebunch wildrye	40%
Cal.meadow barley	27%
California brome	33%

(seeding rate: 45 lbs. per acre)

Grassed Waterways**

Meadow Barley	41%
California brome	33%
"Blando" brome	26%

(seeding rate: 39 lbs. per acre)

*** straw mulch and irrigate to germinate before fall rains.*

"Showboat"

Crimson clover	44%
"Hykon rose clover	44%
Wildflower blend-	12%
Yarrow	
Calif. Poppy	
Paper poppy	
Tidy tips	

(seeding rate: 27 lbs. per acre)

Straw Mulch

The most effective erosion control practice (both in terms of protection and cost) is the use of cover crop and straw mulch. Straw provides a cushion between the disturbed soil and the velocity of the raindrop. It's the best insurance for **protection** from the early rains if you cannot plant your cover crop in mid-September and irrigate it.

- In order for straw to be effective, you must apply it at the rate of two tons per acre (about 42 bales per acre). You should not be able to see any soil once the straw is applied.

- Rice straw is the cleanest straw in terms of other weed seeds, but it is a coarse straw and therefore takes longer to degrade. Any straw or grass hay will work provided it's applied at the rate of two tons per acre.

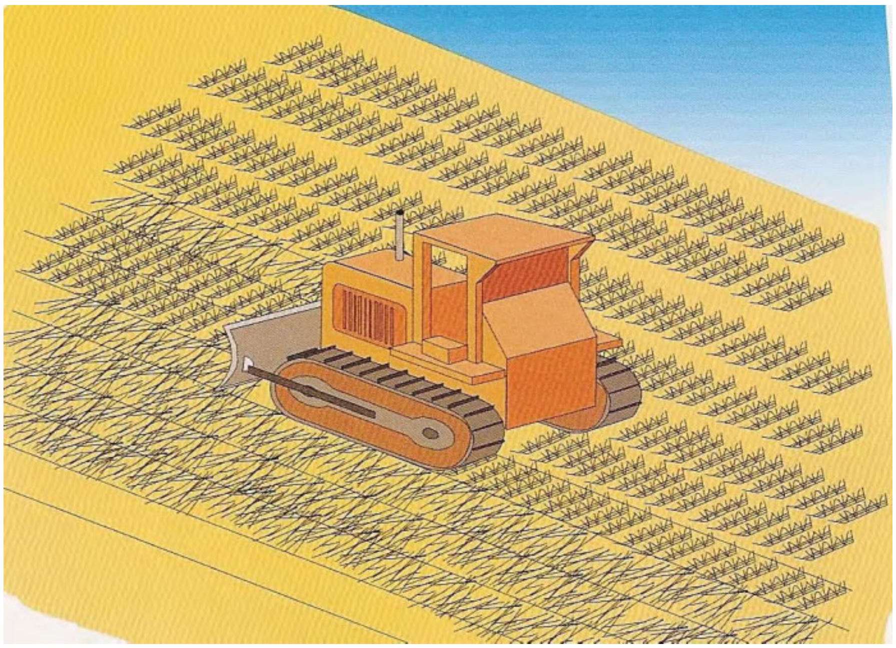
- If you are in an area that has high winds in the fall you must anchor your straw into the ground. You can do this by tracking it in (see example) or by crimping it. Otherwise, be prepared to replace the straw that gets blown away.

- Keep extra straw bales stored for emergency erosion control repairs. If you have an area that starts to gully you can stuff the gully with straw. You can also build emergency dikes to control drainage (see sediment barrier example).

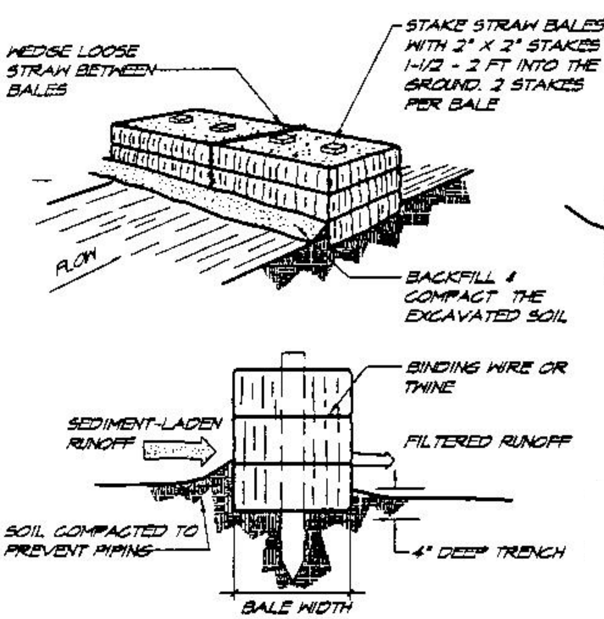
Example Tracking In Straw Mulch

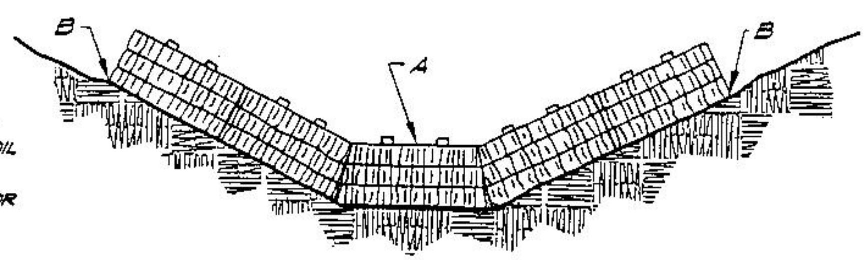
Notes:

1. Roughen slope with bulldozer.
2. Broadcast seed and fertilizer.
3. Spread straw mulch 3” thick (2 tons/acre).
4. Punch straw mulch into slope by running bulldozer up and down the slope.
5. Tracking with machinery on sandy soil provides roughening without undue compaction.



Example Straw Bale Sediment Barrier





Straw Wattles

Straw wattles or fiber rolls are designed to slow down runoff, filter and trap sediment before the runoff gets into watercourses. Straw wattles are porous and allow water to filter through fibers and trap sediment. They also slow down runoff thereby reducing sheet and rill erosion.

- Straw wattles are effective on slopes to shorten the slope length. They are designed for short slopes or slopes flatter than 3:1 and low surface flows not to exceed 1 c.f.s. for small areas.

- Straw wattles can also be used along stream banks for extra protection.

- They come in several sizes ranging from 8 to 20 inches in diameter.

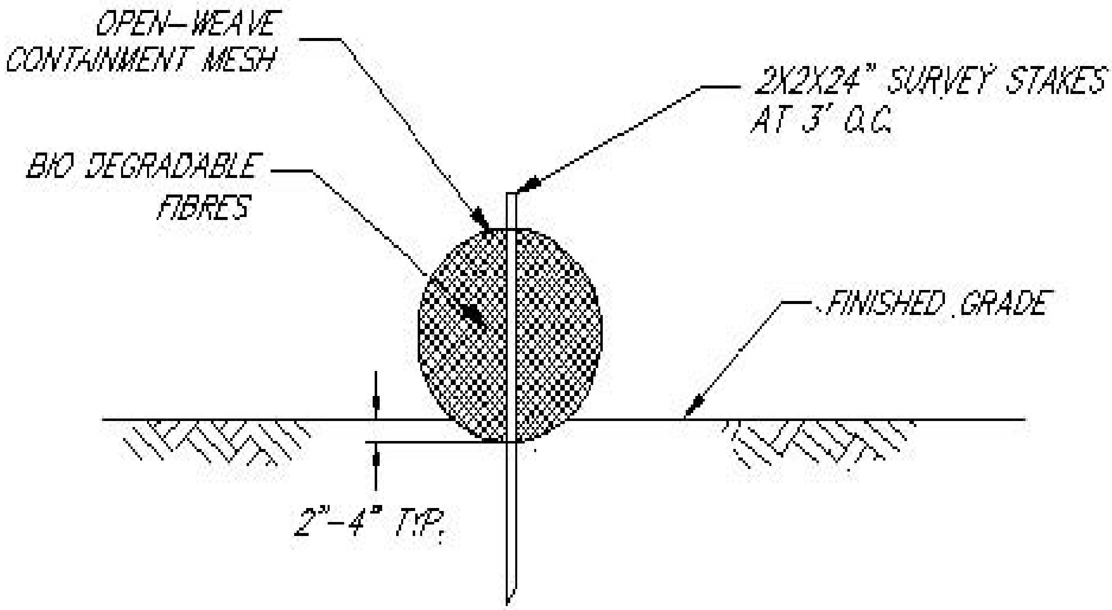
- It's very important that straw wattles are installed properly. If they're not installed properly, they will not work. Straw wattles must be installed on contour. You may need to have a surveyor help you to be sure you find the contours of your area.

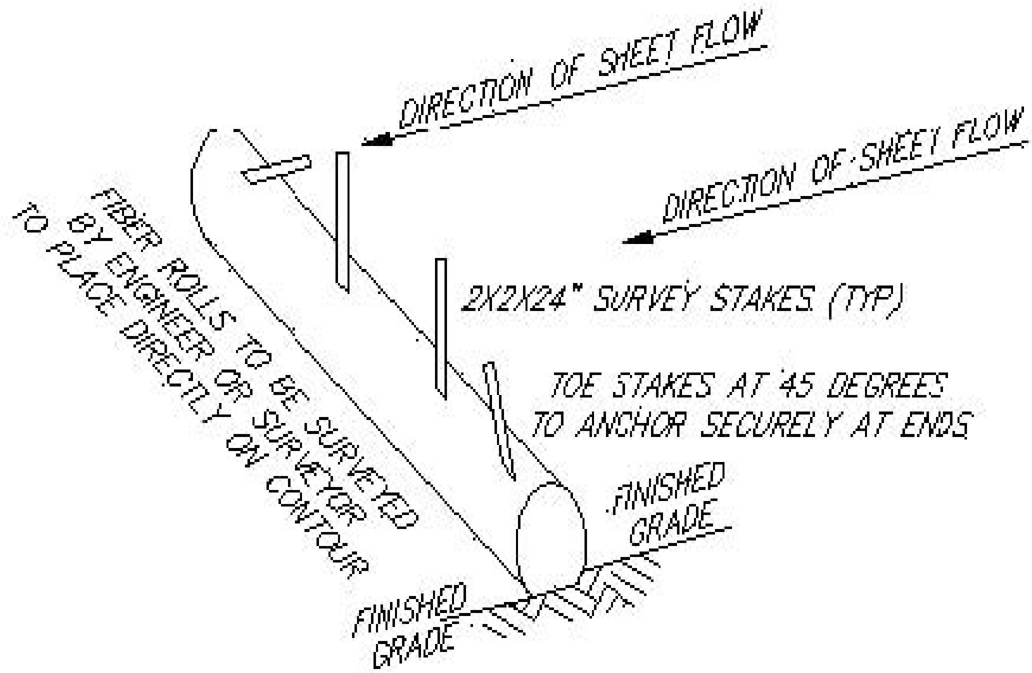
- A good rule of thumb for vertical spacing is: 3:1 slopes = 30 feet apart, 4:1 slopes = 40 feet apart, or as the project engineer dictates.

- Cover Crop should be seeded prior to installation. You will then need to dig a concave key trench 2 to 4 inches deep along the contour. Place the roll in the trench and stake (see example). You must backfill the trench on the uphill or flow side of the roll to prevent water from undercutting the roll. When more than one fiber roll is placed in a row, the roll should be abutted securely to one another with stakes to provide a tight joint. **Do not overlap the joint**.

- After your fiber rolls are in place, the straw mulch can be applied at the rate of 2 tons per acre. Do not drive over the straw wattles.

Example Straw Wattle





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OPERATIONS AND MAINTENANCE
FOR VEGETATED BUFFER STRIP

INSPECTION:

- After construction, inspect after seeding and after first major storms for any damages.
- Inspect for signs of erosions, damage to vegetation, channelization of flow, debris and litter, and areas of sediment accumulation. Perform inspections at the beginning and end of the wet season. Additional inspections after periods of heavy runoff are desirable.

MAINTENANCE:

As needed (frequent, seasonally):

- Mow grass to maintain a height of 3-4 inches, aesthetic, or other purposes. Litter should always be removed prior to mowing. Clippings should be composted.
- Irrigate as necessary to maintain the vegetation.
- Provide weed control, if necessary to control invasive species.

Semi- Annual:

- Remove litter, branches, rock blockages, and other debris and dispose of properly.
- Repair any damaged areas indentified during inspections. Erosion rills or gullies should be corrected as needed. Bare areas should be replanted as necessary.

Annual:

- Correct erosion problems in the soil.
- Plant an alternative grass species if the original grass cover has not been successfully established. Reseed and apply mulch to damaged areas.

As needed (infrequent):

- Remove all accumulated sediment .
- Rototill or cultivate the surface of the soil as needed.
- If roadway has excessive grease, oil, or buildup, provide sweeping of roadway until clean.

MAINTENANCE LOG

Keep a log of all inspection and maintenance performed on the vegetated buffer strip.

OPERATION & MAINTENANCE PLAN
FOR FILTER INSERT

The maintenance program will include the following key components:

1. **REGULAR SWEEPING AND REMOVAL OF DEBRIS:**
   Vehicle parking lot will be swept on a regular basis. Sediment and debris (litter, leaves, papers and cans, etc.) within the area, especially around the drainage inlet, will be collected and removed. The frequency of sweeping will be based on the amount of sediment and debris generated.

2. **REGULAR INSPECTIONS:**
   The catch basin, downspout, or trench drain filter insert will be inspected on a regular basis. The frequency of inspection will be based on pollutant loading, amount of debris, leaves, etc., and amount of runoff. At a minimum, there will be three inspections per year.

3. **CONDUCT OF THE VISUAL INSPECTION:**
   a. Broom sweep around the inlet and remove the inlet grate.
   b. Inspect the filter liner for serviceability. If called for, the filter body will be replaced.
   c. Check the condition of the adsorbent pouches and visually check the condition of the enclosed adsorbent. If the surface of the granules is more than 50% coated with a dark gray or black substance, the pouches will be replaced with new ones.
   d. Check for loose or missing nuts (on some models) and gaps between the filter and the inlet wall, which would allow bypass of the filter during low flows.
   e. The filter components will be replaced in the inlet and the grate replaced.

4. **CLEANING OUT THE FILTER INSERT:**
   Regardless of the model of filter insert, the devices must be cleaned out on a recurring basis. The manufacturer recommends at least three cleanings per year – more in high exposure areas. For the Hydro-Cartridge filters, the filter must be cleaned when the solids level reaches close to the full tip.
   a. The Standard Filter, in most cases, can be cleaned out by removing the device from the inlet and dumping the contents into a DOT approved drum for later disposal. If the oil-absorbent pouches need to be changed, the time to change them is immediately after dumping and before the filter is replaced in the inlet.
   b. Because of weight, method of installation and so forth, some filter inserts will be cleaned with the aid of a vector truck. If necessary, the oil-absorbent pouches will be changed after the pollutants have been removed and as the filter is being returned to service.

5. **STENCILING**
   Legibility of stencils and/ or signs at all storm drain inlets and catch basins within the project area must be maintained at all time.

6. **MAINTENANCE LOG:**
   Keep a log of all inspections and maintenance performed on the catch basins, trench drains, and filter inserts. Keep this log on-site.

OPERATIONS AND MAINTENANCE FOR
COMBINATION OF COVER CROP, STRAW MULCH, AND FIBER ROLLS
FOR AGRICULTURAL AREAS INCLUDING VINEYARDS AND ORCHARDS

GENERAL:

- Establish thick cover crops by October 15 and maintain them throughout the rainy season (until April 15).
- Broadcast crop cover seed in the fall. In order to have adequate protection by the start of the rainy season (October 15), the seed should be planted by mid-September. Initial irrigation will be required for most grasses with follow-up irrigation and fertilization. The cover crop should look like a lawn by October 15 (for new plantings and November 15 for replants) in order to provide adequate protection for the soil during the first heavy rains.
- If you cannot plant cover crop by mid-September and irrigate the seed, then you may plant your seed in October and cover it with straw mulch applied at the rate of two tons per acre (about 42 bales per acre). You should not be able to see any soil once the straw is applied.
- If rain is likely after the cover crop has been tilled and there is no perimeter erosion control, use straw mulch at the rate of two tons per acre (about 42 bales per acre) in areas where cover crops are planted.
- Whenever possible, avoid tilling early in the spring or late in the fall.
- Minimize tillage practices, especially if slopes are greater than nominal (>5-10%) or if soils are highly erodible.
- Do not till turn-around areas except for the infrequent need to reduce compaction. In this case, promptly cover the soil with straw mulch and replant with a cover crop before the rainy season.
- Avoid bringing equipment into the vineyard/orchard during the wet season. Close seasonal roads to traffic and maintain permanent roads to prevent erosion.
- Keep on site extra erosion control materials such as straw bales or wattles, gravel or geo-textile fabric and train vineyard/orchard crews in their proper installation.
- If necessary, provide Straw Mulch per California BMP Handbook BMP number EC-6.
- If soil is highly erosive, provide Fiber Rolls per California BMP Handbook BMP number SE-5.

COVER CROP SEED SELECTION:

- Most important, be sure that your seed mixture provides overstory (tall fast growing plants like rye, grass, or barley) and understory (low growing broadleaf plants like clover) protection. For example, a mixture of oats and barley will only provide overstory protection and will only be slightly more effective than if you did nothing. The raindrops can still fall down between the tall plant stalks and dislodge soil particles. If you mix in some clover and brando brome, you will get understory protection and the soil will have better protection.
- The amount of seed you will need depends on the mix you choose. It can range from 30 lbs per acre for a more permanent type of cover crop to 90 lbs per acre for a quick erosion control soil builder mix. Your seed company should be able to help you determine what mix is best for your project and give you the recommended seed rate.

INSPECTION:

- Inspect the site after each rain event.
- After construction, inspect after seeding and after first major storms for any damages.
- Inspect for signs of erosions, damage to vegetation, channelization of flow, debris and litter, and areas of sediment accumulation. Perform inspections at the beginning and end of the wet season. Additional inspections after periods of heavy runoff are desirable.

MAINTENANCE:

As needed (frequent, seasonally):

- Litter should always be removed prior to mowing.
- Clippings should be composted.
- Irrigate as necessary to maintain the vegetation.
- Provide weed control, if necessary to control invasive species.

Semi- Annual:

- Remove litter, branches, rock blockages, and other debris and dispose of properly.
- Repair any damaged areas indentified during inspections. Erosion rills or gullies should be corrected as needed. Bare areas should be replanted as necessary.

Annual:

- Correct erosion problems in the soil.
- Plant an alternative crop cover species if the original grass cover has not been successfully established. Reseed and apply straw mulch to damaged areas.

As needed:

- Remove all accumulated sediment.
- If you experience high winds in the fall you must anchor your straw mulch (if applicable) into the ground. You can do this by crimping it. Otherwise, replace any of the straw mulch that is blown away.
- If excessive erosion occurs, provide Fiber Rolls per California BMP Handbook BMP number SE-5.

MAINTENANCE LOG

Keep a log of all inspection and maintenance performed on the vegetated buffer strip.

SOURCES:

- Sonoma County Agricultural Commissioner's Office, "Best Management Practices for Agricultural Erosion and Sediment Control", January 2010, pages 8-16.
- California Stormwater Quality Association, "Stormwater Best Management Practice Handbook – Construction", March 2009, BMP Facts Sheets EC-6 and SE-5.

APPENDIX E

DETAILED NOISE CALCULATIONS

The Master Use Plan Project

DRAFT MND

Noise Worksheets

Provided by PCR Services Corporation

- Ambient Noise Data
- Construction Noise Calculations
- Off-Site Traffic Noise Calculations

Appendix

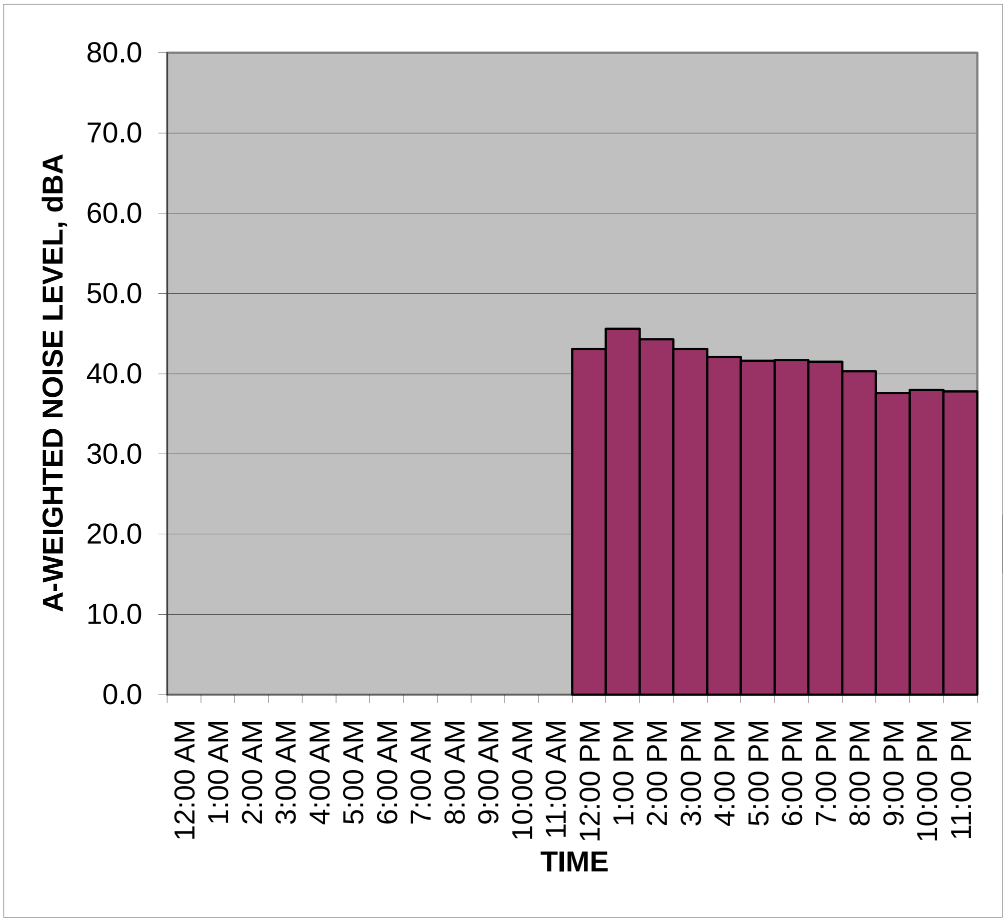
- Ambient Noise Data

Measured Ambient Noise Levels

Project: RPV - Pointview
Location: R1
Sources: Ambient

Date: June 9, 2011

TIME	HNL, dB(A)
12:00 AM	0.0
1:00 AM	0.0
2:00 AM	0.0
3:00 AM	0.0
4:00 AM	0.0
5:00 AM	0.0
6:00 AM	0.0
7:00 AM	0.0
8:00 AM	0.0
9:00 AM	0.0
10:00 AM	0.0
11:00 AM	0.0
12:00 PM	43.1
1:00 PM	45.6
2:00 PM	44.3
3:00 PM	43.1
4:00 PM	42.1
5:00 PM	41.6
6:00 PM	41.7
7:00 PM	41.5
8:00 PM	40.3
9:00 PM	37.6
10:00 PM	38.0
11:00 PM	37.8
CNEL, dB(A):	**44.9**



NOTES:

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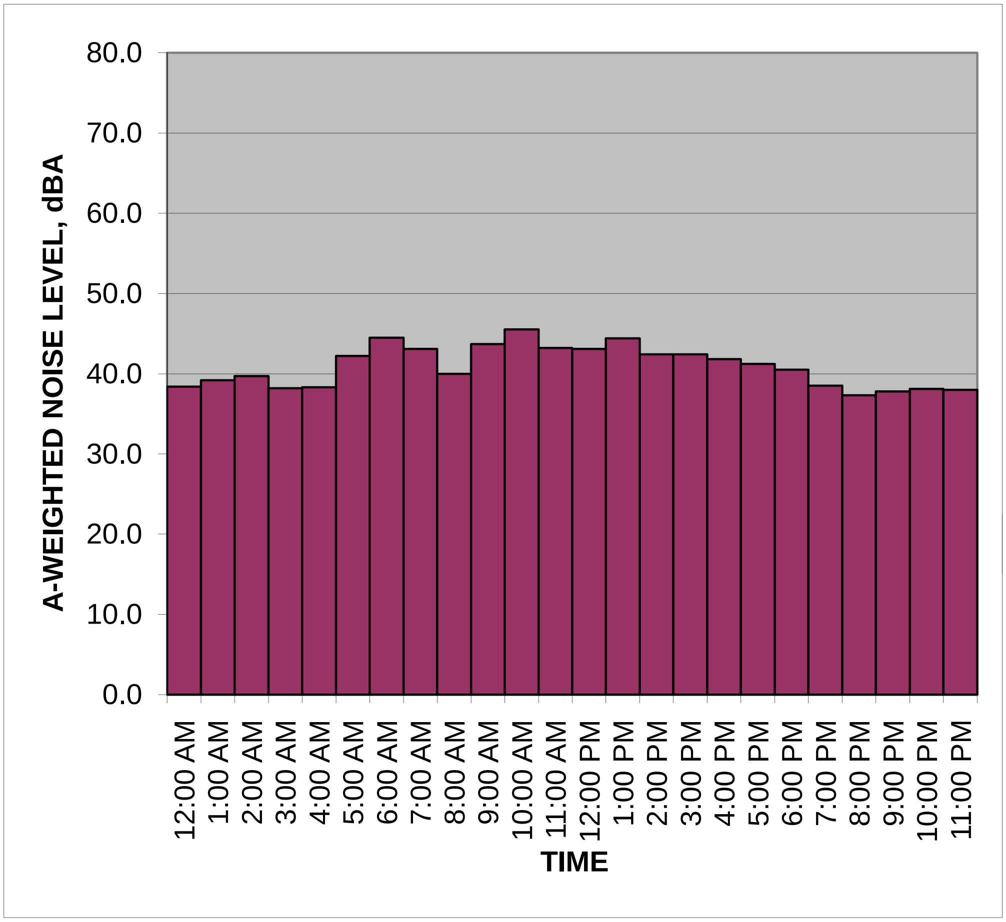
Measured Ambient Noise Levels

Project: RPV - Pointview
Location: R1
Sources: Ambient

Date: June 10, 2011

TIME	*HNL, dB(A)*
12:00 AM	38.4
1:00 AM	39.2
2:00 AM	39.7
3:00 AM	38.2
4:00 AM	38.3
5:00 AM	42.2
6:00 AM	44.5
7:00 AM	43.1
8:00 AM	40.0
9:00 AM	43.7
10:00 AM	45.5
11:00 AM	43.2
12:00 PM	43.1
1:00 PM	44.4
2:00 PM	42.4
3:00 PM	42.4
4:00 PM	41.8
5:00 PM	41.2
6:00 PM	40.5
7:00 PM	38.5
8:00 PM	37.3
9:00 PM	37.8
10:00 PM	38.1
11:00 PM	38.0
CNEL, dB(A):	**47.2**



NOTES:

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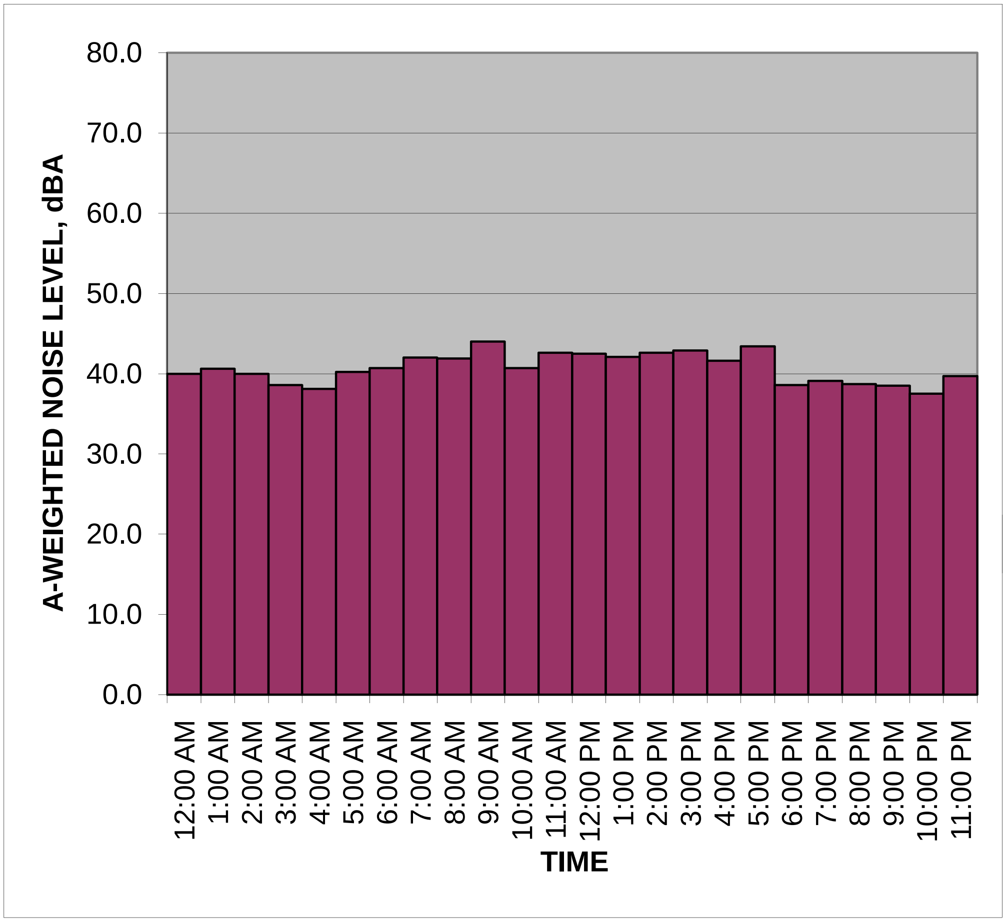
Measured Ambient Noise Levels

Project: RPV - Pointview
Location: R1
Sources: Ambient

Date: June 11, 2011

TIME	HNL, dB(A)
12:00 AM	40.0
1:00 AM	40.6
2:00 AM	40.0
3:00 AM	38.6
4:00 AM	38.1
5:00 AM	40.2
6:00 AM	40.7
7:00 AM	42.0
8:00 AM	41.9
9:00 AM	44.0
10:00 AM	40.7
11:00 AM	42.6
12:00 PM	42.5
1:00 PM	42.1
2:00 PM	42.6
3:00 PM	42.9
4:00 PM	41.6
5:00 PM	43.4
6:00 PM	38.6
7:00 PM	39.1
8:00 PM	38.7
9:00 PM	38.5
10:00 PM	37.5
11:00 PM	39.7
CNEL, dB(A):	**46.6**



NOTES:

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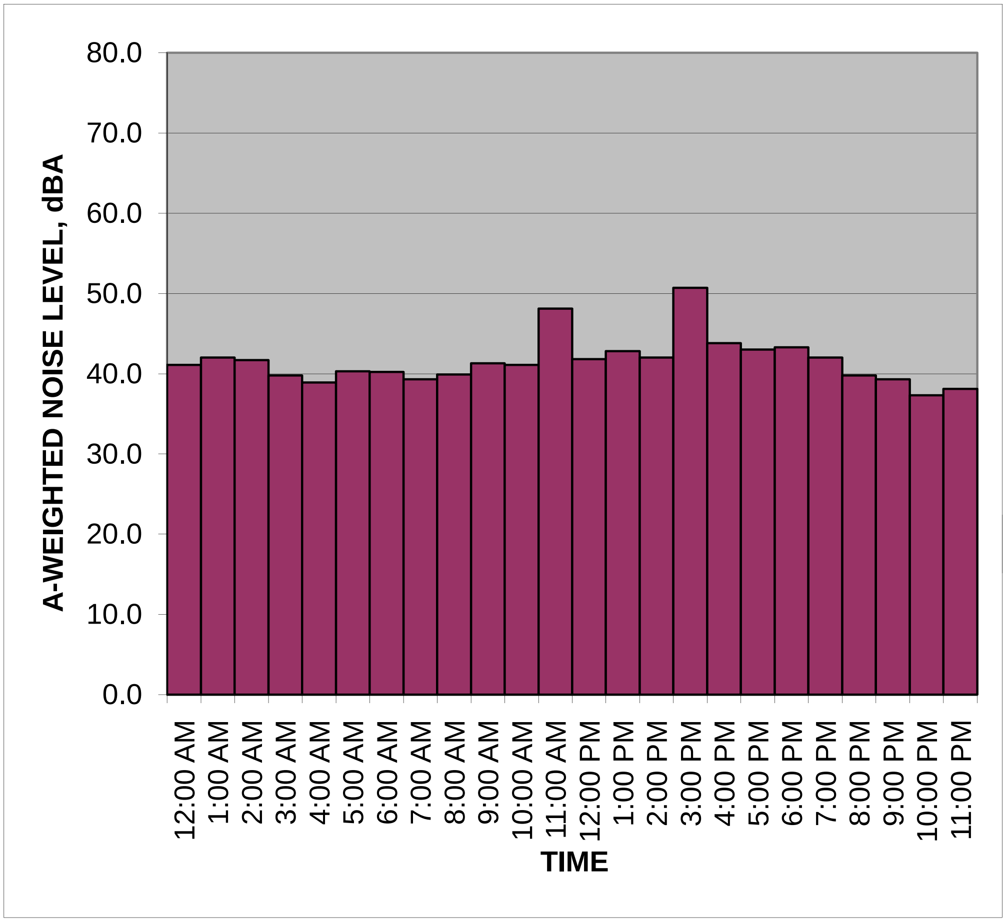
Measured Ambient Noise Levels

Project: RPV - Pointview
Location: R1
Sources: Ambient

Date: June 12, 2011

TIME	HNL, dB(A)
12:00 AM	41.1
1:00 AM	42.0
2:00 AM	41.7
3:00 AM	39.8
4:00 AM	38.9
5:00 AM	40.3
6:00 AM	40.2
7:00 AM	39.3
8:00 AM	39.9
9:00 AM	41.3
10:00 AM	41.1
11:00 AM	48.1
12:00 PM	41.8
1:00 PM	42.8
2:00 PM	42.0
3:00 PM	50.7
4:00 PM	43.8
5:00 PM	43.0
6:00 PM	43.3
7:00 PM	42.0
8:00 PM	39.8
9:00 PM	39.3
10:00 PM	37.3
11:00 PM	38.1
CNEL, dB(A):	**47.6**

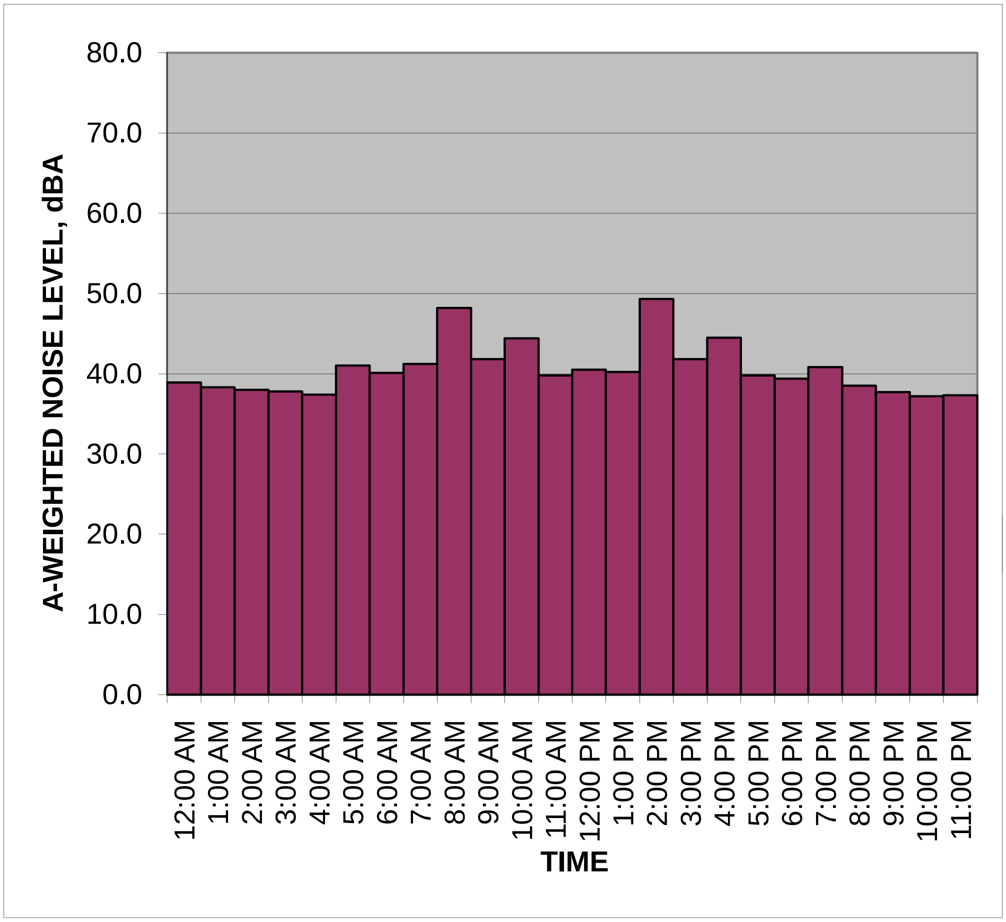


NOTES:

Measured Ambient Noise Levels

Project:	RPV-Pointview
Location:	R1
Sources:	Ambient
Date:	June 13, 2011

TIME	*HNL, dB(A)*
12:00 AM	38.9
1:00 AM	38.3
2:00 AM	38.0
3:00 AM	37.8
4:00 AM	37.4
5:00 AM	41.0
6:00 AM	40.1
7:00 AM	41.2
8:00 AM	48.2
9:00 AM	41.8
10:00 AM	44.4
11:00 AM	39.8
12:00 PM	40.5
1:00 PM	40.2
2:00 PM	49.3
3:00 PM	41.8
4:00 PM	44.5
5:00 PM	39.8
6:00 PM	39.4
7:00 PM	40.8
8:00 PM	38.5
9:00 PM	37.7
10:00 PM	37.2
11:00 PM	37.3
CNEL, dB(A):	**46.4**



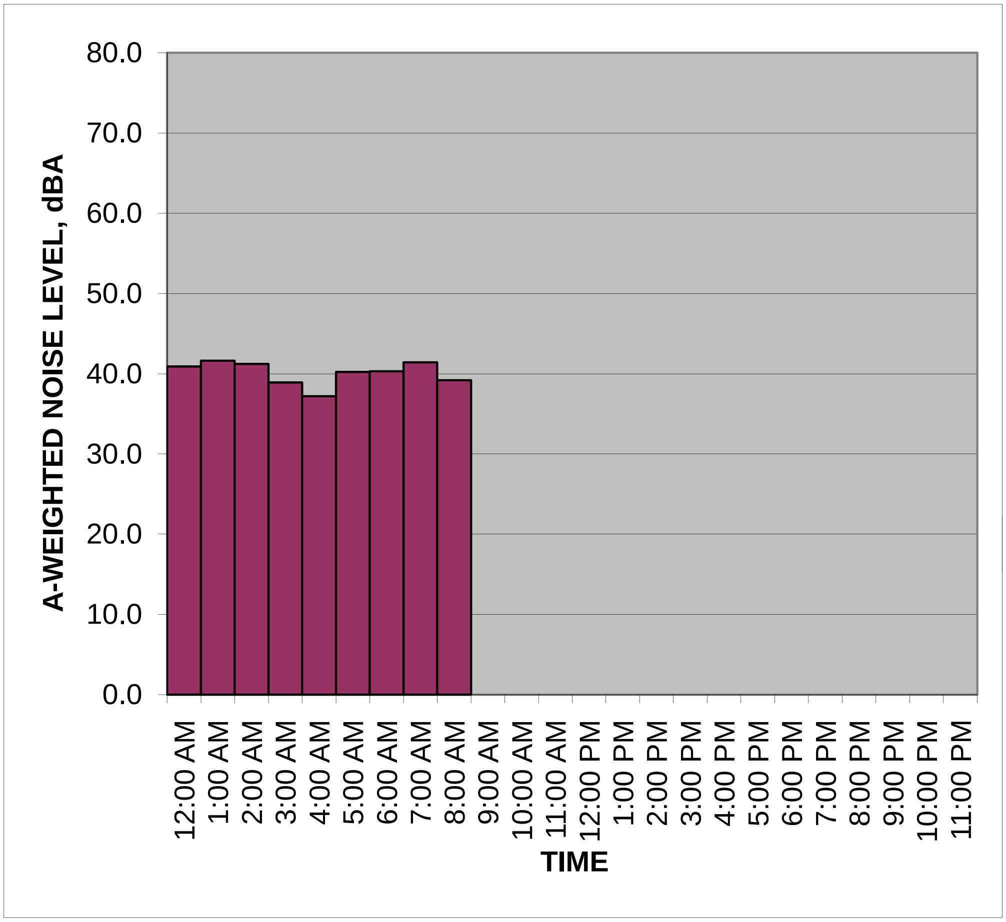
NOTES:

Measured Ambient Noise Levels

Project: RPV-Pointview
Location: R1
Sources: Ambient

Date: June 14, 2011

TIME	HNL, dB(A)
12:00 AM	40.9
1:00 AM	41.6
2:00 AM	41.2
3:00 AM	38.9
4:00 AM	37.2
5:00 AM	40.2
6:00 AM	40.3
7:00 AM	41.4
8:00 AM	39.2
9:00 AM	0.0
10:00 AM	0.0
11:00 AM	0.0
12:00 PM	0.0
1:00 PM	0.0
2:00 PM	0.0
3:00 PM	0.0
4:00 PM	0.0
5:00 PM	0.0
6:00 PM	0.0
7:00 PM	0.0
8:00 PM	0.0
9:00 PM	0.0
10:00 PM	0.0
11:00 PM	0.0
CNEL, dB(A):	**49.3**



NOTES:

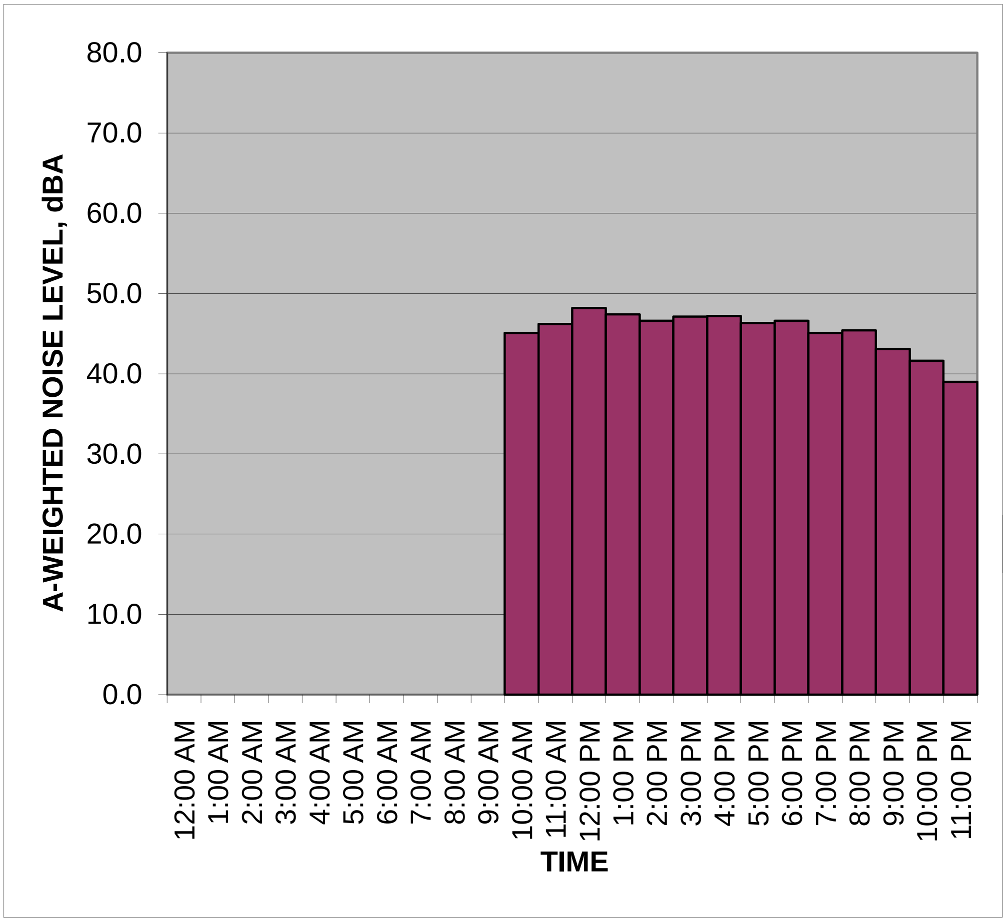
fieldcnel.xls

Measured Ambient Noise Levels

Project: RPV-Pointview
Location: R2
Sources: Ambient

Date: June 9, 2011

TIME	*HNL, dB(A)*
12:00 AM	0.0
1:00 AM	0.0
2:00 AM	0.0
3:00 AM	0.0
4:00 AM	0.0
5:00 AM	0.0
6:00 AM	0.0
7:00 AM	0.0
8:00 AM	0.0
9:00 AM	0.0
10:00 AM	45.1
11:00 AM	46.2
12:00 PM	48.2
1:00 PM	47.4
2:00 PM	46.6
3:00 PM	47.1
4:00 PM	47.2
5:00 PM	46.3
6:00 PM	46.6
7:00 PM	45.1
8:00 PM	45.4
9:00 PM	43.1
10:00 PM	41.6
11:00 PM	39.0
CNEL, dB(A):	**48.2**



NOTES:

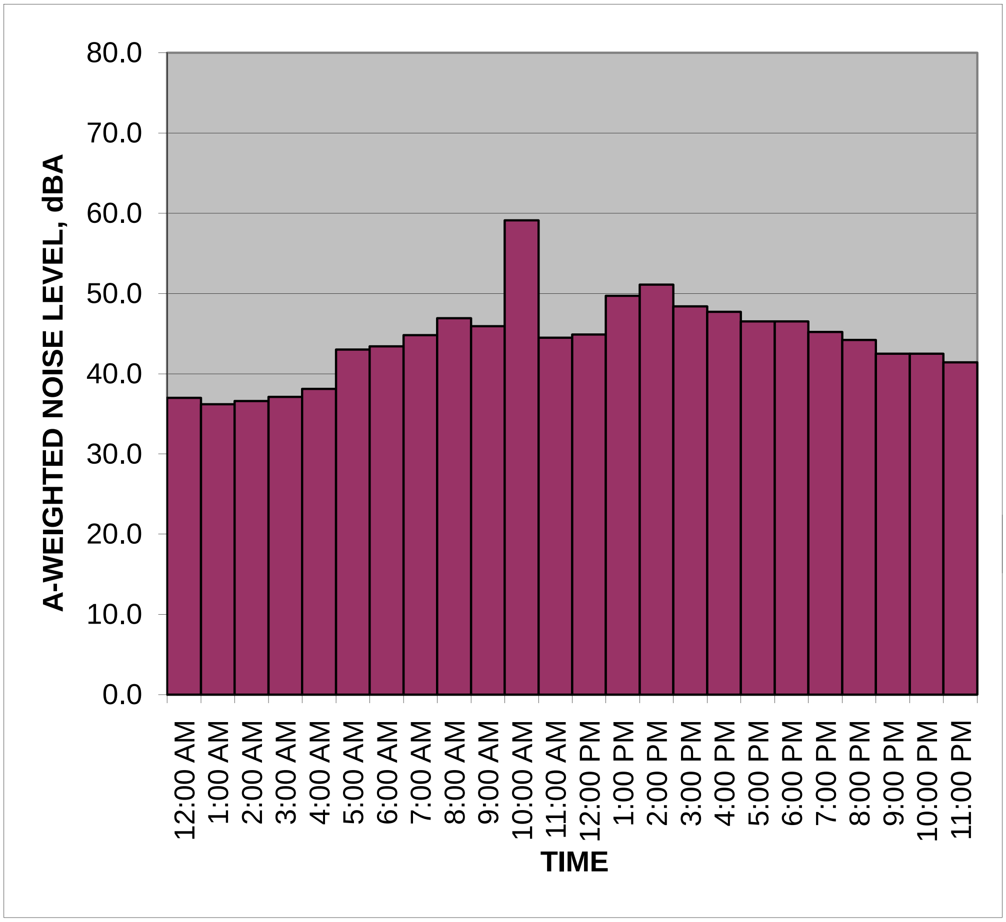
fieldcnel.xls

Measured Ambient Noise Levels

Project: RPV-Pointview
Location: R2
Sources: Ambient

Date: June 10, 2011

TIME	*HNL, dB(A)*
12:00 AM	37.0
1:00 AM	36.2
2:00 AM	36.6
3:00 AM	37.1
4:00 AM	38.1
5:00 AM	43.0
6:00 AM	43.4
7:00 AM	44.8
8:00 AM	46.9
9:00 AM	45.9
10:00 AM	59.1
11:00 AM	44.5
12:00 PM	44.9
1:00 PM	49.7
2:00 PM	51.1
3:00 PM	48.4
4:00 PM	47.7
5:00 PM	46.5
6:00 PM	46.5
7:00 PM	45.2
8:00 PM	44.2
9:00 PM	42.5
10:00 PM	42.5
11:00 PM	41.4
CNEL, dB(A):	**50.4**



NOTES:

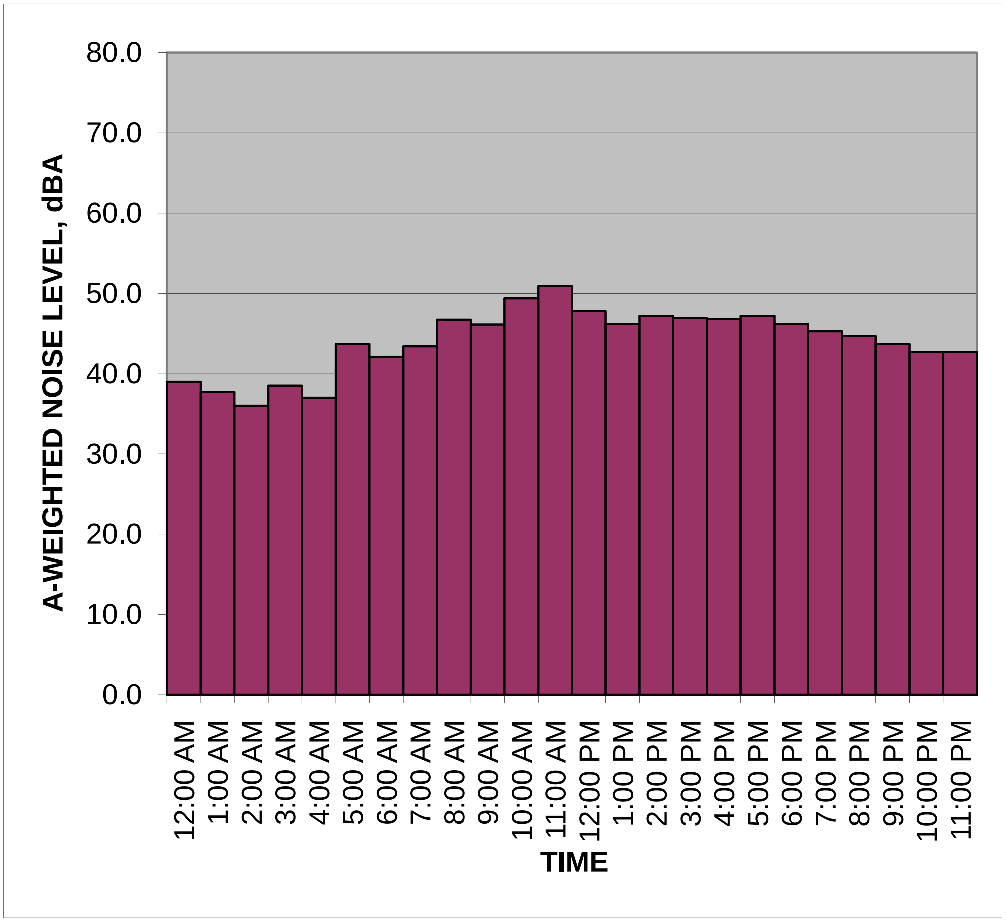
fieldcnel.xls

Measured Ambient Noise Levels

Project: RPV-Pointview
Location: R2
Sources: Ambient

Date: June 11, 2011

TIME	*HNL, dB(A)*
12:00 AM	39.0
1:00 AM	37.7
2:00 AM	36.0
3:00 AM	38.5
4:00 AM	37.0
5:00 AM	43.7
6:00 AM	42.1
7:00 AM	43.4
8:00 AM	46.7
9:00 AM	46.1
10:00 AM	49.4
11:00 AM	50.9
12:00 PM	47.8
1:00 PM	46.2
2:00 PM	47.2
3:00 PM	46.9
4:00 PM	46.8
5:00 PM	47.2
6:00 PM	46.2
7:00 PM	45.3
8:00 PM	44.7
9:00 PM	43.7
10:00 PM	42.7
11:00 PM	42.7
CNEL, dB(A):	**49.2**



NOTES:

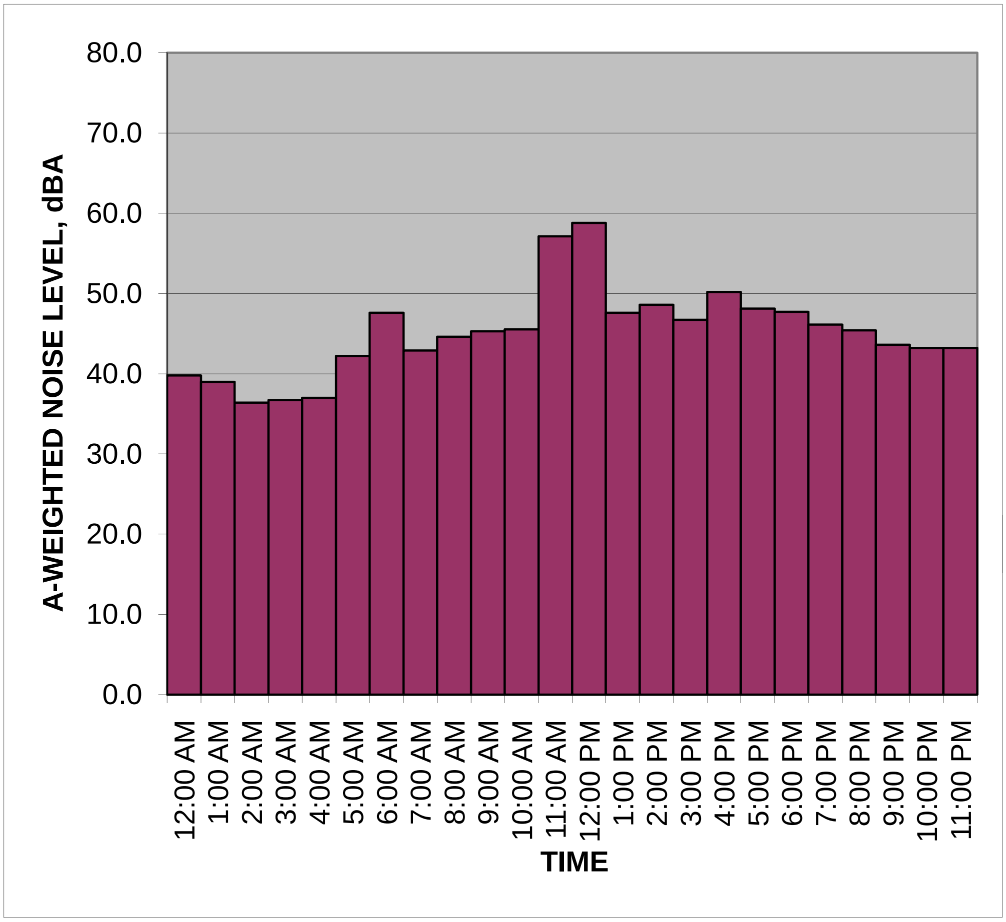
fieldcnel.xls

Measured Ambient Noise Levels

Project: RPV-Pointview
Location: R2
Sources: Ambient

Date: June 12, 2011

TIME	HNL, dB(A)
12:00 AM	39.8
1:00 AM	39.0
2:00 AM	36.4
3:00 AM	36.7
4:00 AM	37.0
5:00 AM	42.2
6:00 AM	47.6
7:00 AM	42.9
8:00 AM	44.6
9:00 AM	45.3
10:00 AM	45.5
11:00 AM	57.1
12:00 PM	58.8
1:00 PM	47.6
2:00 PM	48.6
3:00 PM	46.7
4:00 PM	50.2
5:00 PM	48.1
6:00 PM	47.7
7:00 PM	46.1
8:00 PM	45.4
9:00 PM	43.6
10:00 PM	43.2
11:00 PM	43.2
CNEL, dB(A):	**51.7**



NOTES:

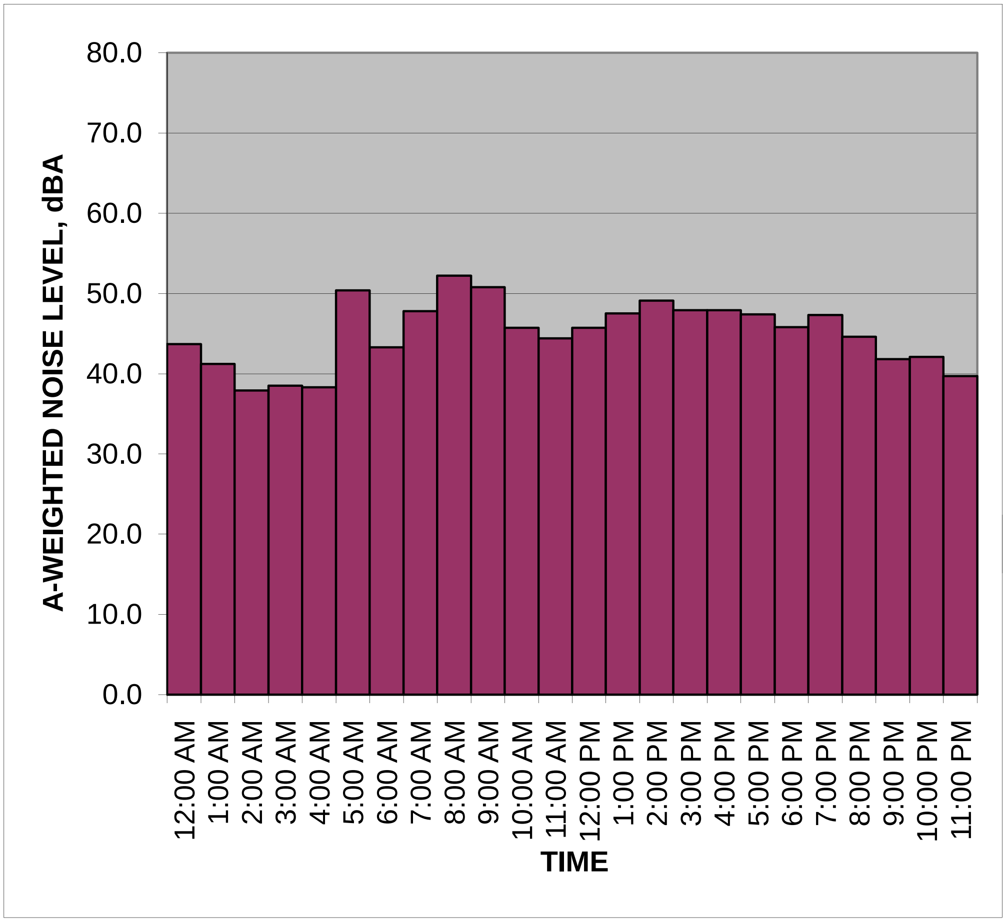
fieldcnel.xls

Measured Ambient Noise Levels

Project: RPV-Pointview
Location: R2
Sources: Ambient

Date: June 13, 2011

TIME	*HNL, dB(A)*
12:00 AM	43.7
1:00 AM	41.2
2:00 AM	37.9
3:00 AM	38.5
4:00 AM	38.3
5:00 AM	50.4
6:00 AM	43.3
7:00 AM	47.8
8:00 AM	52.2
9:00 AM	50.8
10:00 AM	45.7
11:00 AM	44.4
12:00 PM	45.7
1:00 PM	47.5
2:00 PM	49.1
3:00 PM	47.9
4:00 PM	47.9
5:00 PM	47.4
6:00 PM	45.8
7:00 PM	47.3
8:00 PM	44.6
9:00 PM	41.8
10:00 PM	42.1
11:00 PM	39.7
CNEL, dB(A):	**51.3**



NOTES:

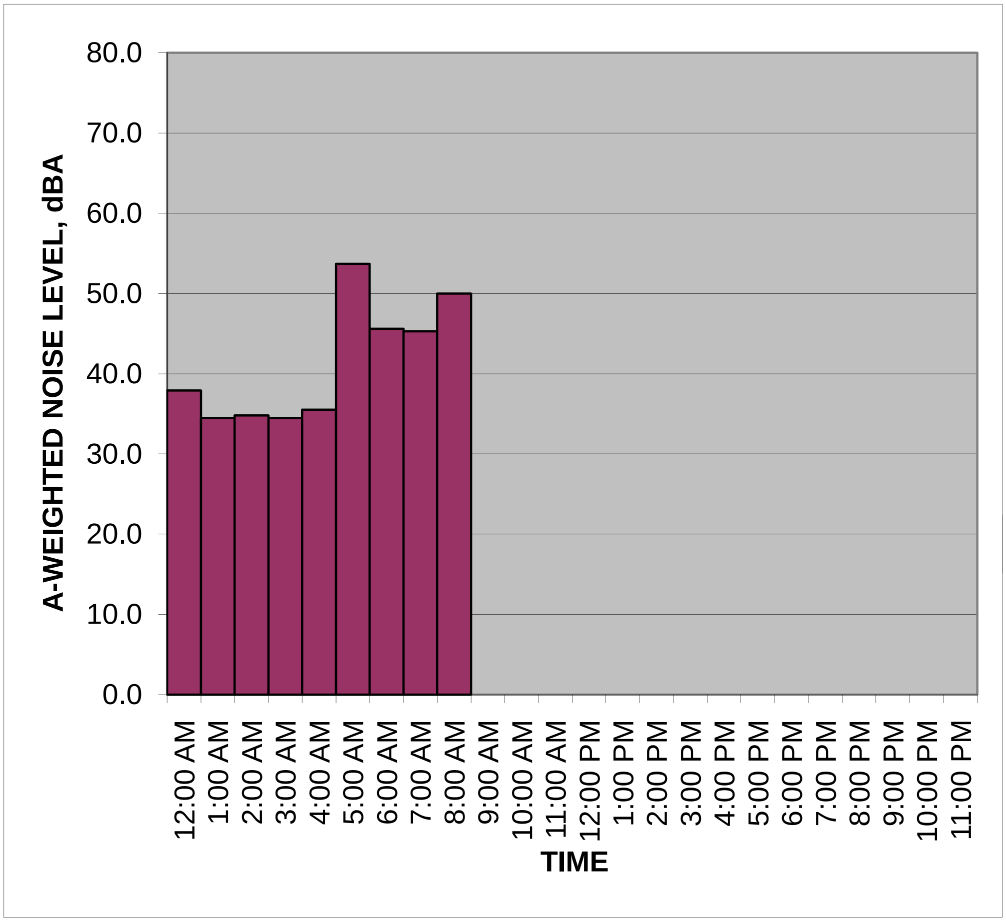
fieldcnel.xls

Measured Ambient Noise Levels

Project: RPV-Pointview
Location: R2
Sources: Ambient

Date: June 14, 2011

TIME	*HNL, dB(A)*
12:00 AM	37.9
1:00 AM	34.5
2:00 AM	34.8
3:00 AM	34.5
4:00 AM	35.5
5:00 AM	53.7
6:00 AM	45.6
7:00 AM	45.3
8:00 AM	50.0
9:00 AM	0.0
10:00 AM	0.0
11:00 AM	0.0
12:00 PM	0.0
1:00 PM	0.0
2:00 PM	0.0
3:00 PM	0.0
4:00 PM	0.0
5:00 PM	0.0
6:00 PM	0.0
7:00 PM	0.0
8:00 PM	0.0
9:00 PM	0.0
10:00 PM	0.0
11:00 PM	0.0
CNEL, dB(A):	**55.3**



NOTES:

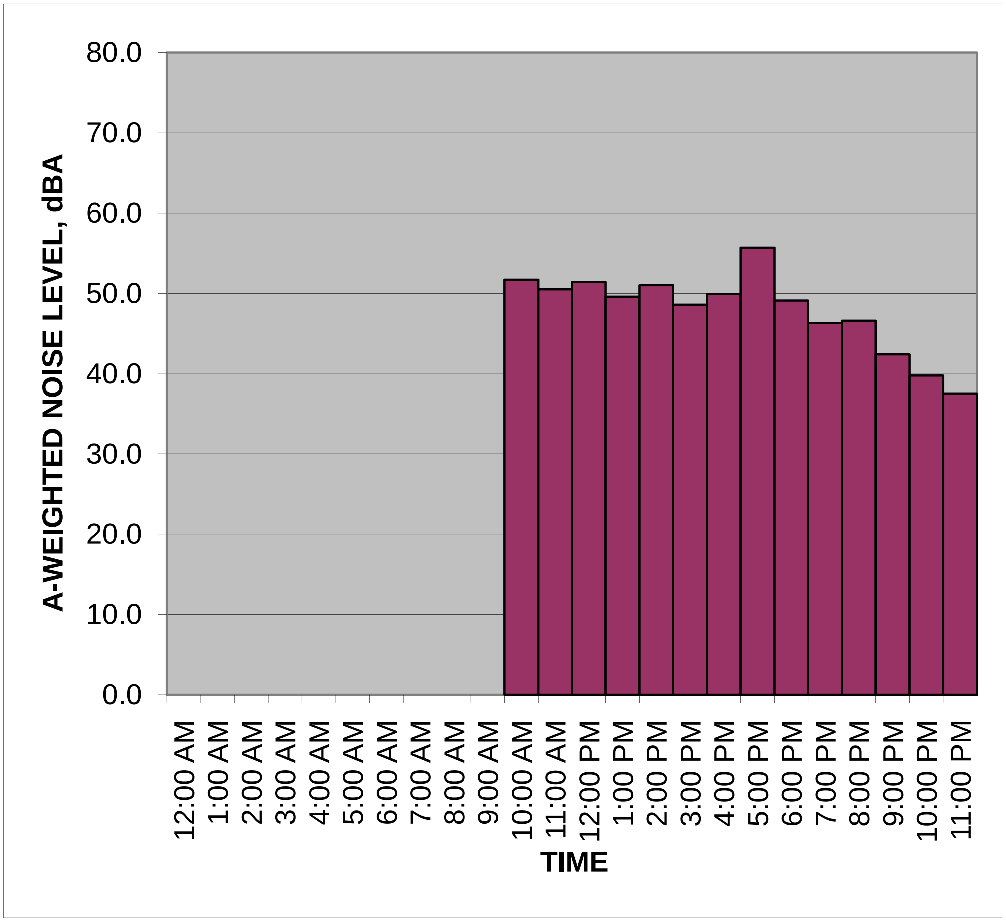
fieldcnel.xls

Measured Ambient Noise Levels

Project: RPV-Pointview
Location: R3
Sources: Ambient

Date: June 9, 2011

TIME	*HNL, dB(A)*
12:00 AM	0.0
1:00 AM	0.0
2:00 AM	0.0
3:00 AM	0.0
4:00 AM	0.0
5:00 AM	0.0
6:00 AM	0.0
7:00 AM	0.0
8:00 AM	0.0
9:00 AM	0.0
10:00 AM	51.7
11:00 AM	50.5
12:00 PM	51.4
1:00 PM	49.6
2:00 PM	51.0
3:00 PM	48.6
4:00 PM	49.9
5:00 PM	55.7
6:00 PM	49.1
7:00 PM	46.3
8:00 PM	46.6
9:00 PM	42.4
10:00 PM	39.8
11:00 PM	37.5
CNEL, dB(A):	**50.9**



NOTES:

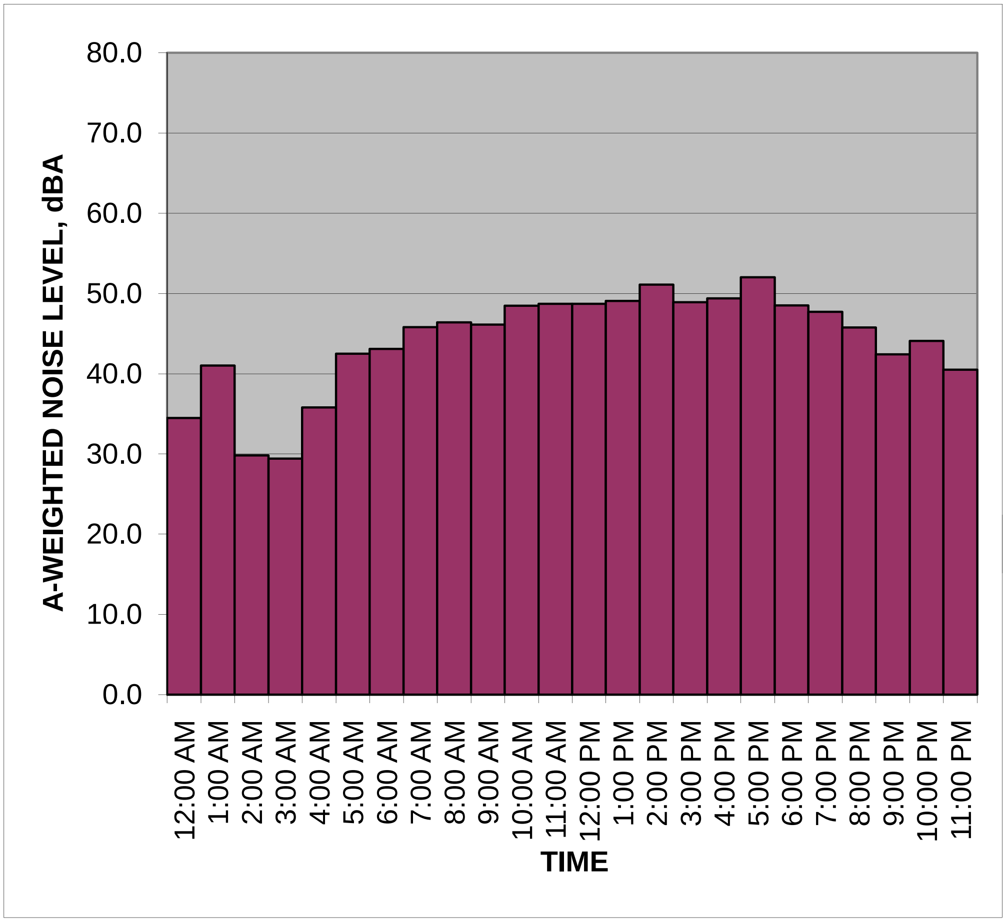
fieldcnel.xls

Measured Ambient Noise Levels

Project: RPV-Pointview
Location: R3
Sources: Ambient

Date: June 10, 2011

TIME	*HNL, dB(A)*
12:00 AM	34.5
1:00 AM	41.0
2:00 AM	29.8
3:00 AM	29.4
4:00 AM	35.8
5:00 AM	42.5
6:00 AM	43.1
7:00 AM	45.8
8:00 AM	46.4
9:00 AM	46.1
10:00 AM	48.5
11:00 AM	48.7
12:00 PM	48.7
1:00 PM	49.1
2:00 PM	51.1
3:00 PM	48.9
4:00 PM	49.4
5:00 PM	52.0
6:00 PM	48.5
7:00 PM	47.7
8:00 PM	45.8
9:00 PM	42.4
10:00 PM	44.1
11:00 PM	40.5
CNEL, dB(A):	**49.7**



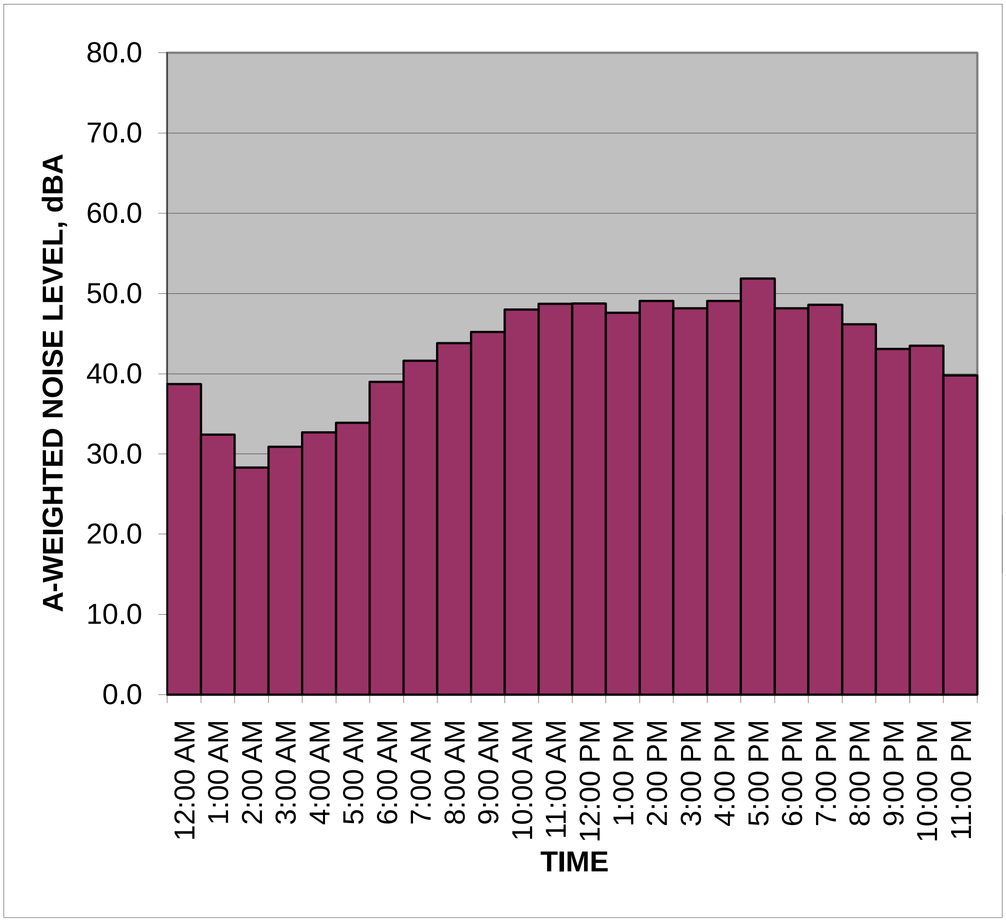
NOTES:

fieldcnel.xls

Measured Ambient Noise Levels

Project:	RPV-Pointview
Location:	R3
Sources:	Ambient
Date:	June 11, 2011

TIME	*HNL, dB(A)*
12:00 AM	38.7
1:00 AM	32.4
2:00 AM	28.3
3:00 AM	30.9
4:00 AM	32.7
5:00 AM	33.9
6:00 AM	39.0
7:00 AM	41.6
8:00 AM	43.8
9:00 AM	45.2
10:00 AM	48.0
11:00 AM	48.7
12:00 PM	48.8
1:00 PM	47.6
2:00 PM	49.1
3:00 PM	48.2
4:00 PM	49.1
5:00 PM	51.9
6:00 PM	48.2
7:00 PM	48.6
8:00 PM	46.2
9:00 PM	43.1
10:00 PM	43.5
11:00 PM	39.8
CNEL, dB(A):	**48.7**



NOTES:

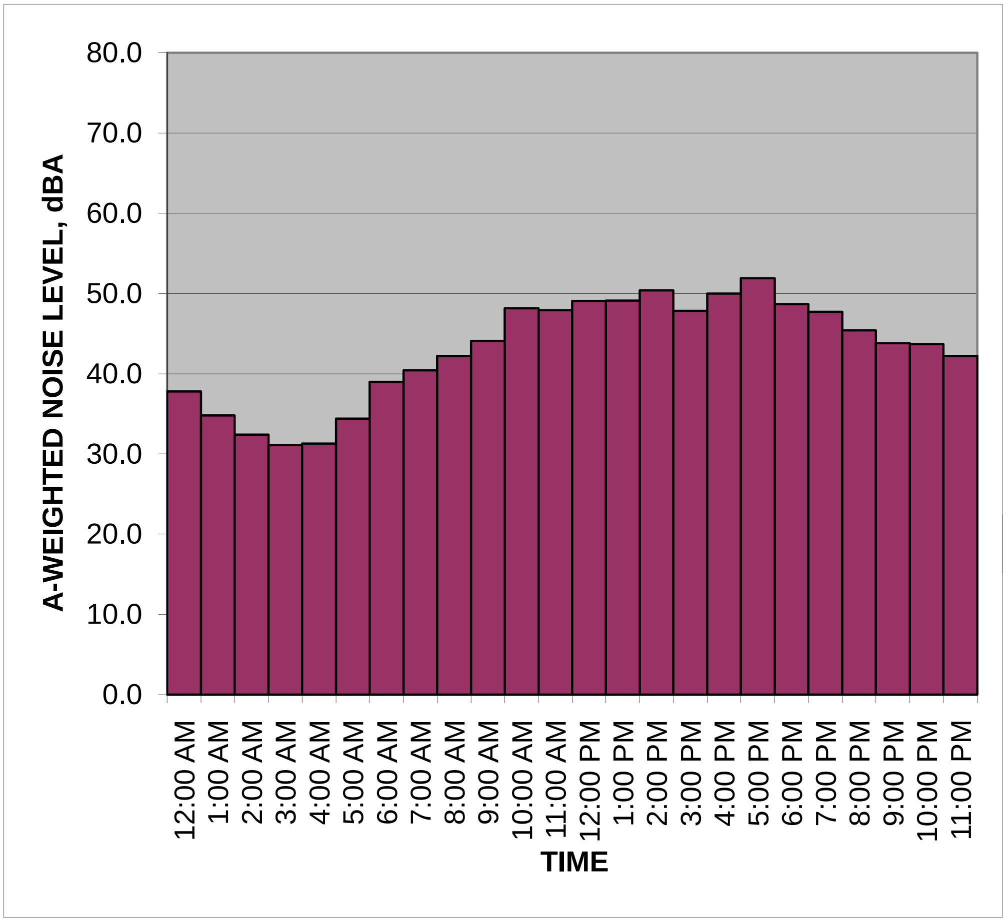
fieldcnel.xls

Measured Ambient Noise Levels

Project: RPV-Pointview
Location: R3
Sources: Ambient

Date: June 12, 2011

TIME	*HNL, dB(A)*
12:00 AM	37.8
1:00 AM	34.8
2:00 AM	32.4
3:00 AM	31.1
4:00 AM	31.3
5:00 AM	34.4
6:00 AM	39.0
7:00 AM	40.4
8:00 AM	42.2
9:00 AM	44.1
10:00 AM	48.2
11:00 AM	47.9
12:00 PM	49.1
1:00 PM	49.1
2:00 PM	50.4
3:00 PM	47.9
4:00 PM	50.0
5:00 PM	51.9
6:00 PM	48.7
7:00 PM	47.7
8:00 PM	45.4
9:00 PM	43.8
10:00 PM	43.7
11:00 PM	42.2
CNEL, dB(A):	**48.9**



NOTES:

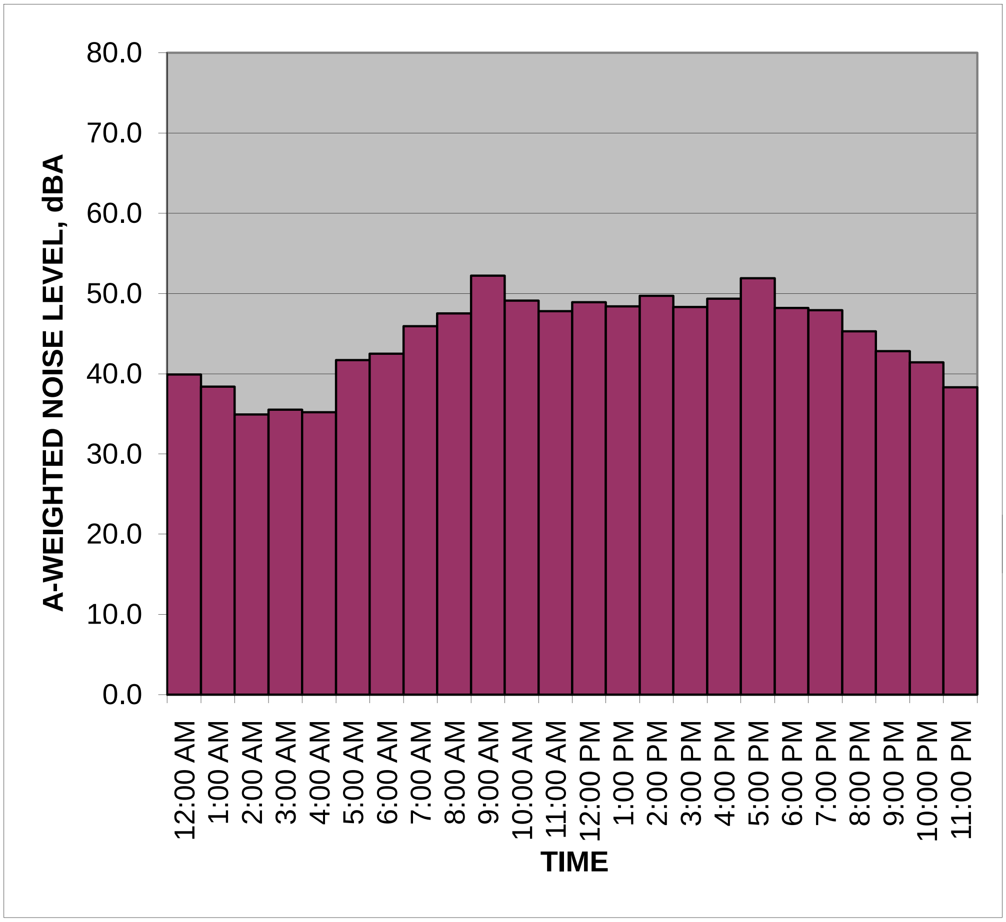
fieldcnel.xls

Measured Ambient Noise Levels

Project: RPV-Pointview
Location: R3
Sources: Ambient

Date: June 13, 2011

TIME	*HNL, dB(A)*
12:00 AM	39.9
1:00 AM	38.4
2:00 AM	34.9
3:00 AM	35.5
4:00 AM	35.2
5:00 AM	41.7
6:00 AM	42.5
7:00 AM	45.9
8:00 AM	47.5
9:00 AM	52.2
10:00 AM	49.1
11:00 AM	47.8
12:00 PM	48.9
1:00 PM	48.4
2:00 PM	49.7
3:00 PM	48.3
4:00 PM	49.4
5:00 PM	51.9
6:00 PM	48.2
7:00 PM	47.9
8:00 PM	45.3
9:00 PM	42.8
10:00 PM	41.4
11:00 PM	38.3
CNEL, dB(A):	**49.6**



NOTES:

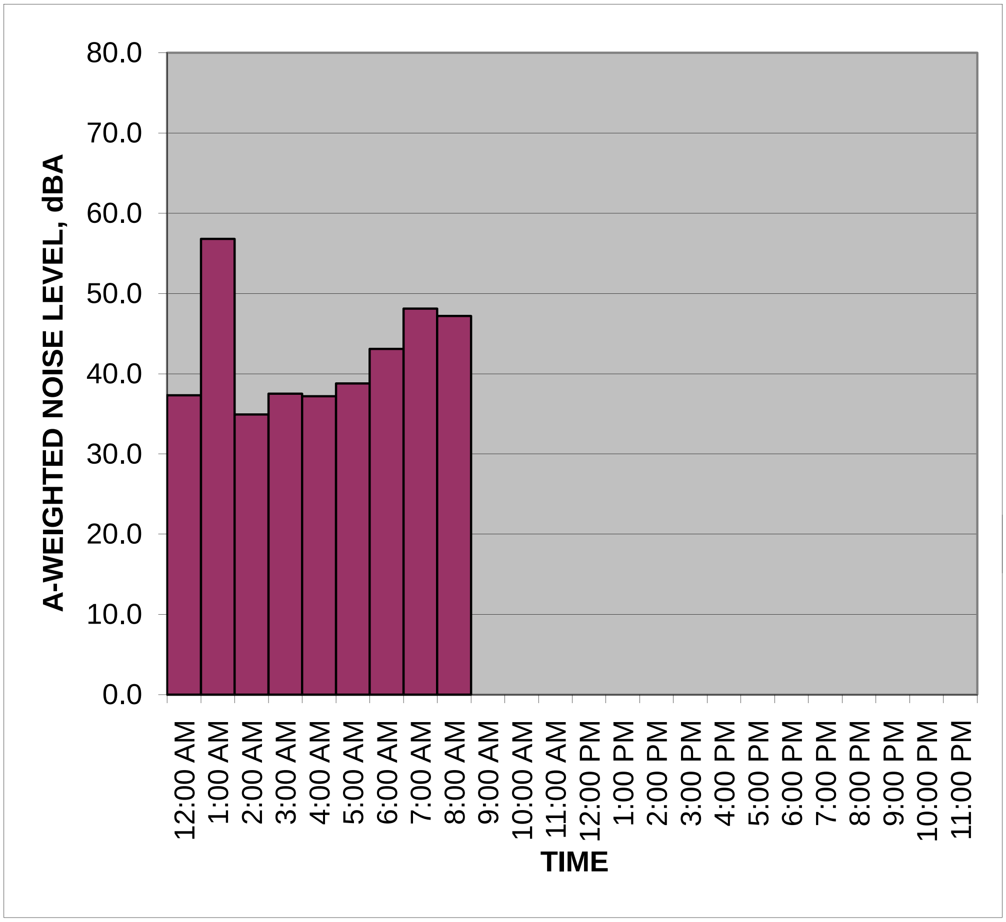
fieldcnel.xls

Measured Ambient Noise Levels

Project: RPV-Pointview
Location: R3
Sources: Ambient

Date: June 14, 2011

TIME	HNL, dB(A)
12:00 AM	37.3
1:00 AM	56.8
2:00 AM	34.9
3:00 AM	37.5
4:00 AM	37.2
5:00 AM	38.8
6:00 AM	43.1
7:00 AM	48.1
8:00 AM	47.2
9:00 AM	0.0
10:00 AM	0.0
11:00 AM	0.0
12:00 PM	0.0
1:00 PM	0.0
2:00 PM	0.0
3:00 PM	0.0
4:00 PM	0.0
5:00 PM	0.0
6:00 PM	0.0
7:00 PM	0.0
8:00 PM	0.0
9:00 PM	0.0
10:00 PM	0.0
11:00 PM	0.0
CNEL, dB(A):	**57.8**



NOTES:

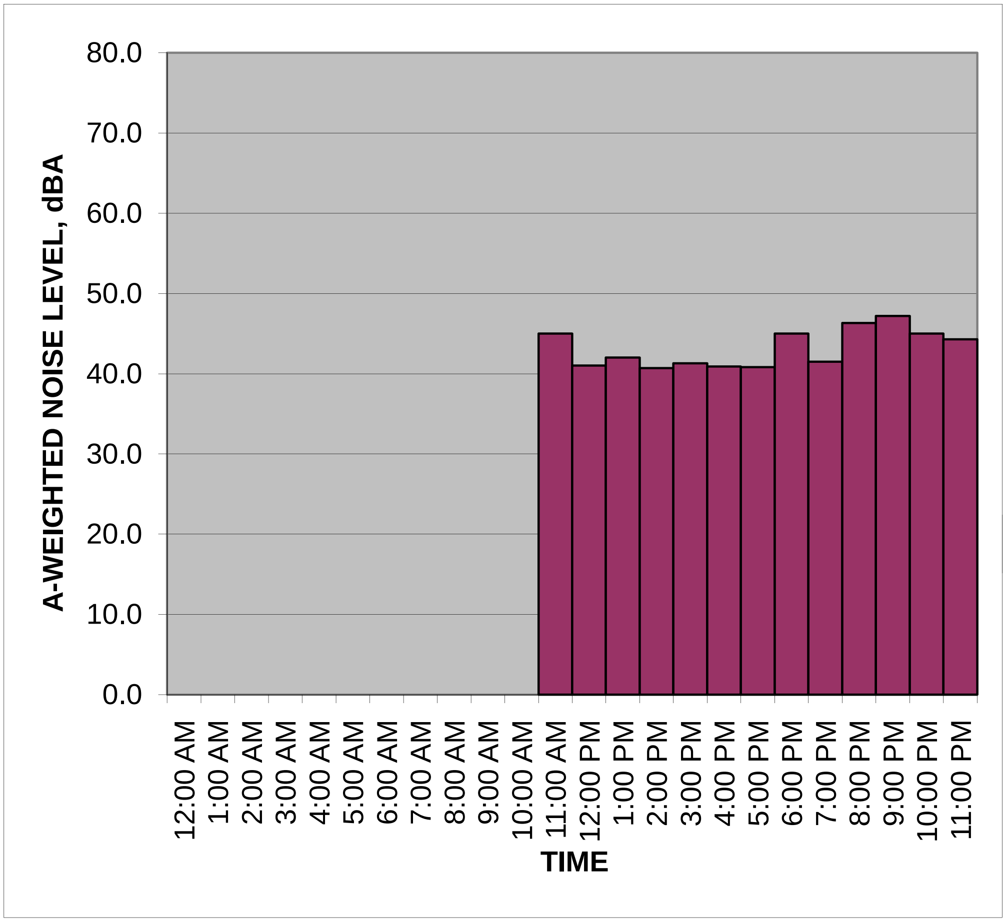
fieldcnel.xls

Measured Ambient Noise Levels

Project: RPV - Pointview
Location: R4
Sources: Ambient

Date: June 9, 2011

TIME	*HNL, dB(A)*
12:00 AM	0.0
1:00 AM	0.0
2:00 AM	0.0
3:00 AM	0.0
4:00 AM	0.0
5:00 AM	0.0
6:00 AM	0.0
7:00 AM	0.0
8:00 AM	0.0
9:00 AM	0.0
10:00 AM	0.0
11:00 AM	45.0
12:00 PM	41.0
1:00 PM	42.0
2:00 PM	40.7
3:00 PM	41.3
4:00 PM	40.9
5:00 PM	40.8
6:00 PM	45.0
7:00 PM	41.5
8:00 PM	46.3
9:00 PM	47.2
10:00 PM	45.0
11:00 PM	44.3
CNEL, dB(A):	**49.2**



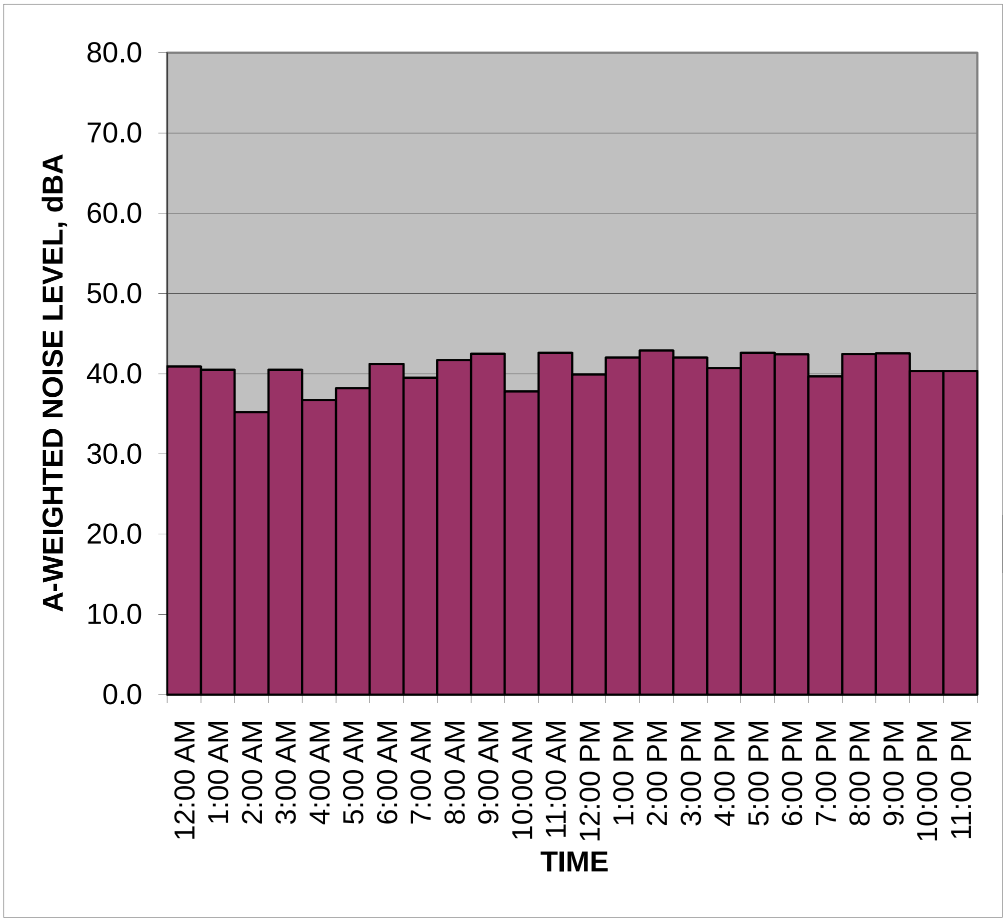
NOTES:

fieldcnel.xls

Measured Ambient Noise Levels

Project:	RPV - Pointview
Location:	R4
Sources:	Ambient
Date:	June 10, 2011

TIME	*HNL, dB(A)*
12:00 AM	40.9
1:00 AM	40.5
2:00 AM	35.2
3:00 AM	40.5
4:00 AM	36.7
5:00 AM	38.2
6:00 AM	41.2
7:00 AM	39.5
8:00 AM	41.7
9:00 AM	42.5
10:00 AM	37.8
11:00 AM	42.6
12:00 PM	39.9
1:00 PM	42.0
2:00 PM	42.9
3:00 PM	42.0
4:00 PM	40.7
5:00 PM	42.6
6:00 PM	42.4
7:00 PM	39.7
8:00 PM	42.5
9:00 PM	42.6
10:00 PM	40.4
11:00 PM	40.4
CNEL, dB(A):	**46.8**



NOTES:

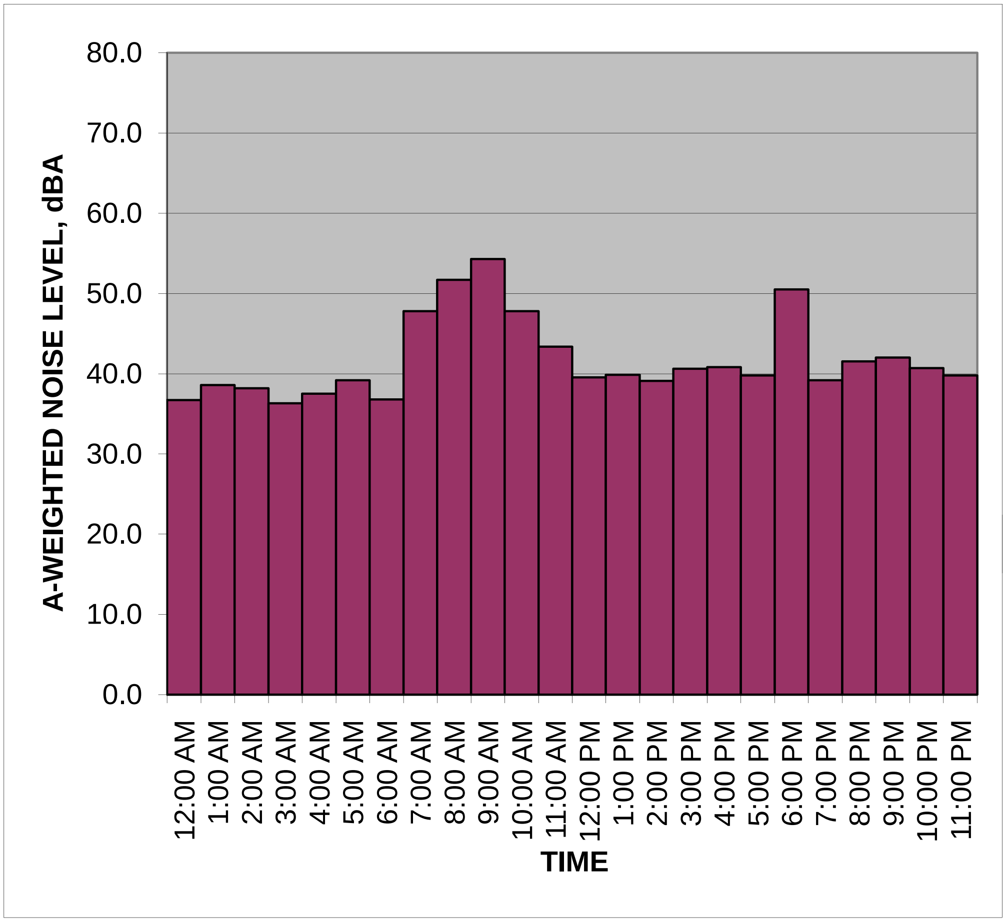
fieldcnel.xls

Measured Ambient Noise Levels

Project: RPV - Pointview
Location: R4
Sources: Ambient

Date: June 11, 2011

TIME	HNL, dB(A)
12:00 AM	36.7
1:00 AM	38.6
2:00 AM	38.2
3:00 AM	36.3
4:00 AM	37.5
5:00 AM	39.2
6:00 AM	36.8
7:00 AM	47.8
8:00 AM	51.7
9:00 AM	54.3
10:00 AM	47.8
11:00 AM	43.4
12:00 PM	39.6
1:00 PM	39.9
2:00 PM	39.1
3:00 PM	40.6
4:00 PM	40.8
5:00 PM	39.8
6:00 PM	50.5
7:00 PM	39.2
8:00 PM	41.6
9:00 PM	42.0
10:00 PM	40.7
11:00 PM	39.8
CNEL, dB(A):	**47.9**



NOTES:

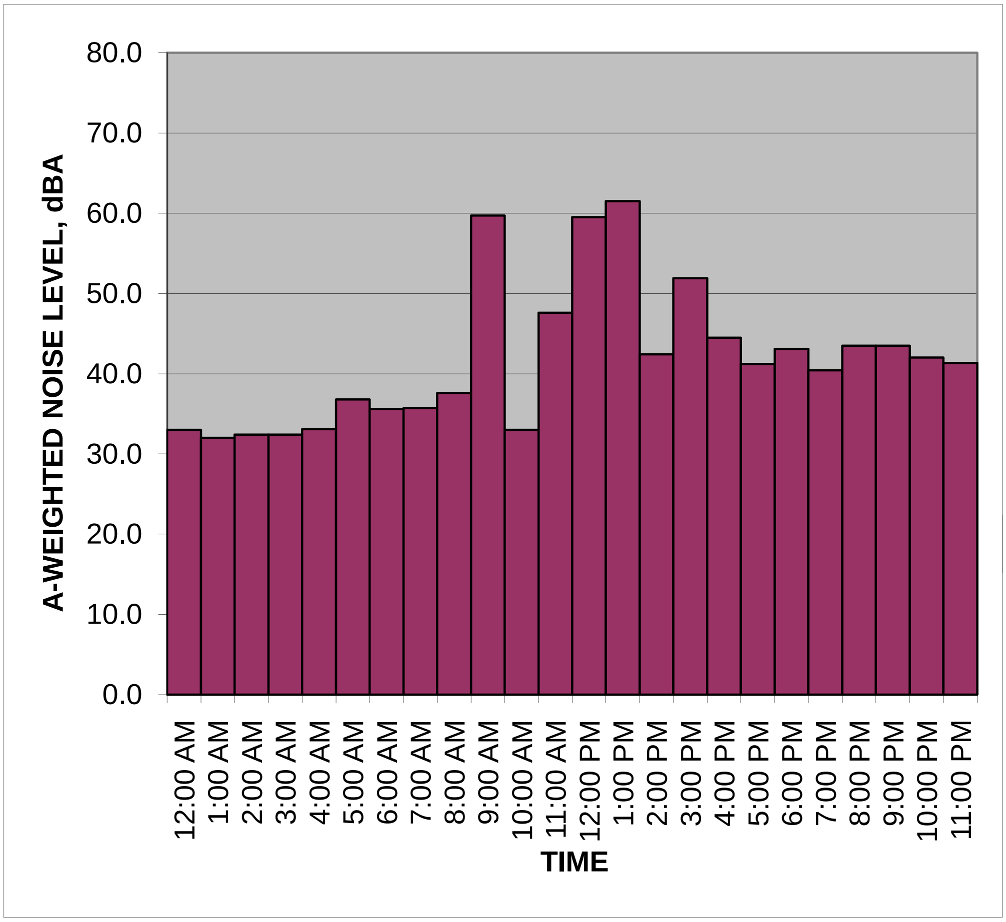
fieldcnel.xls

Measured Ambient Noise Levels

Project: RPV - Pointview
Location: R4
Sources: Ambient

Date: June 12, 2011

TIME	HNL, dB(A)
12:00 AM	33.0
1:00 AM	32.0
2:00 AM	32.4
3:00 AM	32.4
4:00 AM	33.1
5:00 AM	36.8
6:00 AM	35.6
7:00 AM	35.7
8:00 AM	37.6
9:00 AM	59.7
10:00 AM	33.0
11:00 AM	47.6
12:00 PM	59.5
1:00 PM	61.5
2:00 PM	42.4
3:00 PM	51.9
4:00 PM	44.5
5:00 PM	41.2
6:00 PM	43.1
7:00 PM	40.4
8:00 PM	43.5
9:00 PM	43.5
10:00 PM	42.0
11:00 PM	41.4
CNEL, dB(A):	**52.4**



NOTES:

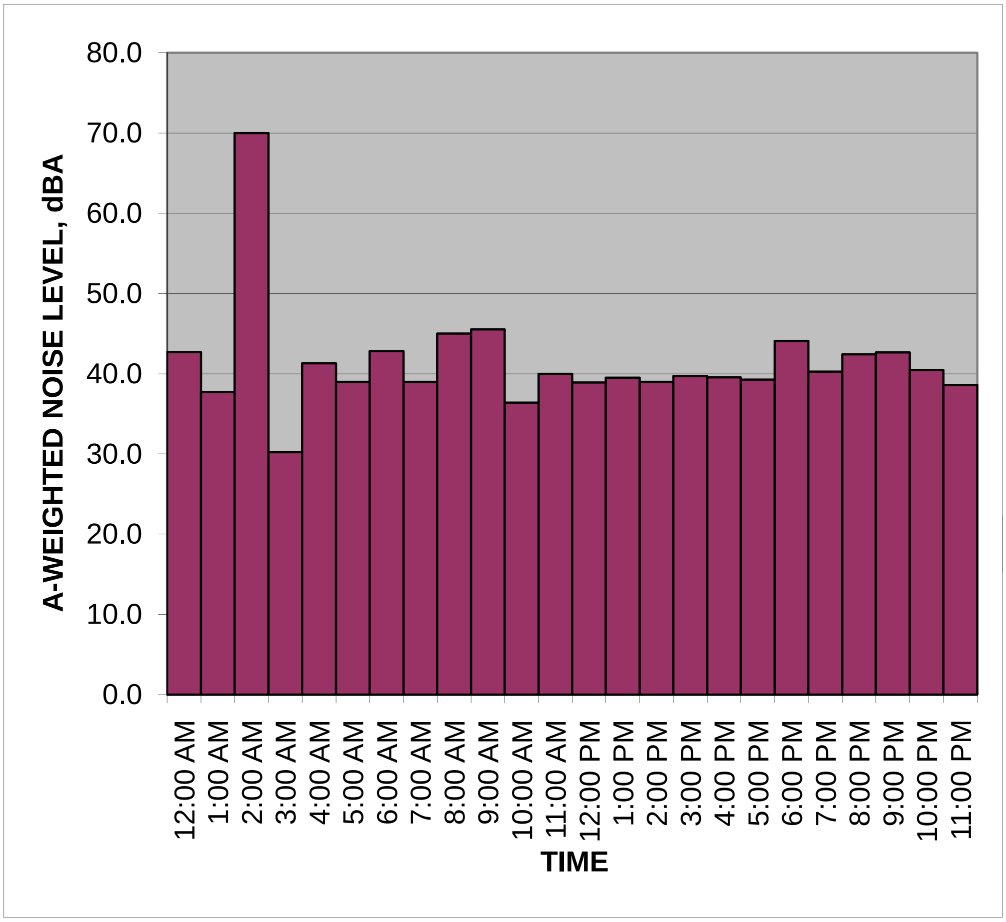
Measured Ambient Noise Levels

PCR

Project: RPV - Pointview
Location: R4
Sources: Ambient

Date: June 13, 2011

TIME	*HNL, dB(A)*
12:00 AM	42.7
1:00 AM	37.7
2:00 AM	70.0
3:00 AM	30.2
4:00 AM	41.3
5:00 AM	39.0
6:00 AM	42.8
7:00 AM	39.0
8:00 AM	45.0
9:00 AM	45.5
10:00 AM	36.4
11:00 AM	40.0
12:00 PM	38.9
1:00 PM	39.5
2:00 PM	39.0
3:00 PM	39.7
4:00 PM	39.6
5:00 PM	39.3
6:00 PM	44.1
7:00 PM	40.3
8:00 PM	42.4
9:00 PM	42.7
10:00 PM	40.5
11:00 PM	38.6
CNEL, dB(A):	**66.2**



NOTES:

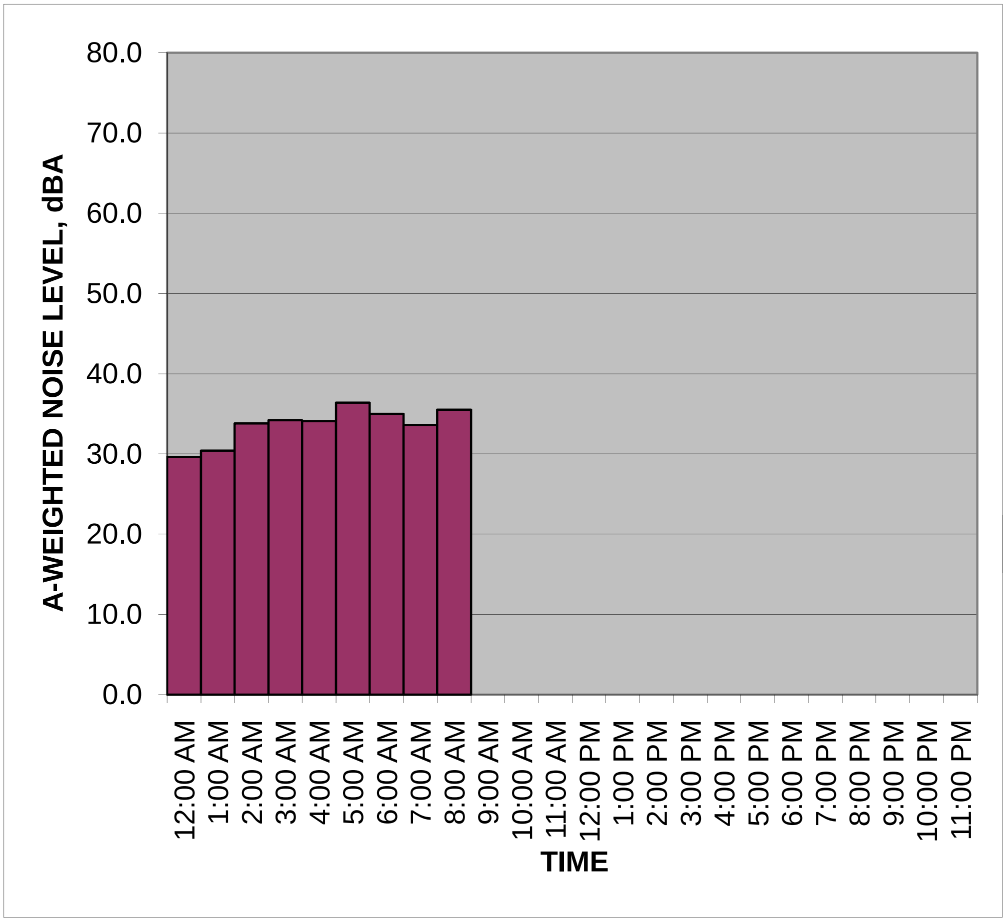
fieldcnel.xls

Measured Ambient Noise Levels

Project: RPV - Pointview
Location: R4
Sources: Ambient

Date: June 14, 2011

TIME	HNL, dB(A)
12:00 AM	29.6
1:00 AM	30.4
2:00 AM	33.8
3:00 AM	34.2
4:00 AM	34.1
5:00 AM	36.4
6:00 AM	35.0
7:00 AM	33.6
8:00 AM	35.5
9:00 AM	0.0
10:00 AM	0.0
11:00 AM	0.0
12:00 PM	0.0
1:00 PM	0.0
2:00 PM	0.0
3:00 PM	0.0
4:00 PM	0.0
5:00 PM	0.0
6:00 PM	0.0
7:00 PM	0.0
8:00 PM	0.0
9:00 PM	0.0
10:00 PM	0.0
11:00 PM	0.0
CNEL, dB(A):	**42.9**



NOTES:

Appendix

- Construction Noise Calculations

Project: Point View Master Use Plan

Construction Phase: **Phase 1**
Mass Grading

Equipment

Description	No. of Equip.	Reference Noise Level at 50ft, Lmax	Acoustical Usage Factor	Distance to Receptor, ft	Estimated Noise Shielding, dBA
Rubber Tired Loader	1	79	50%	740	5
Dozer	1	82	40%	840	5
Excavator	1	81	40%	940	5
Compactor	1	83	20%	940	5
Scrapers	1	84	40%	940	5

Receptor: **R1**

Construction Hour:

12	Hours during daytime (7 am to 7 pm)
0	Hours during evening (7 pm to 10 pm)
0	Hours during nighttime (10 pm to 7 am)

Results:

Lmax: **54**
Leq: **55**

Source for Ref. Noise Levels: LA CEQA Guides, 2006 & FHWA RCNM, 2005

Project: Point View Master Use Plan

Construction Phase: **Phase 2**
Fine Site Grading

Equipment

Description	No. of Equip.	Reference Noise Level at 50ft, Lmax	Acoustical Usage Factor	Distance to Receptor, ft	Estimated Noise Shielding, dBA
Tractor/Loader/Backhoe	1	80	25%	740	5
Other Equipment	1	85	50%	840	5
Tractor/Loader/Backhoe	1	80	25%	940	5
Other Equipment	1	85	50%	940	5

Receptor: ***R1***

Construction Hour:
12 Hours during daytime (7 am to 7 pm)
0 Hours during evening (7 pm to 10 pm)
0 Hours during nighttime (10 pm to 7 am)

Results:

Lmax: 55
Leq: 56

Source for Ref. Noise Levels: LA CEQA Guides, 2006 & FHWA RCNM, 2005

Project: Point View Master Use Plan

Construction Phase: **Phase 3**
Paving

Equipment

Description	No. of Equip.	Reference Noise Level at 50ft, Lmax	Acoustical Usage Factor	Distance to Receptor, ft	Estimated Noise Shielding, dBA
Tractor/Loader/Backhoe	1	80	25%	740	5
Paver	1	77	50%	840	5
Other Equipment	1	85	50%	940	5
Roller	1	80	20%	940	5
Other Equipment	1	85	50%	940	5

Receptor: ***R1***

Construction Hour:

12	Hours during daytime (7 am to 7 pm)
0	Hours during evening (7 pm to 10 pm)
0	Hours during nighttime (10 pm to 7 am)

Results:

Lmax: **55**
Leq: **56**

Source for Ref. Noise Levels: LA CEQA Guides, 2006 & FHWA RCNM, 2005

PCR

Project: Point View Master Use Plan

Construction Phase: **Phase 4**
Planting

Equipment

Description	No. of Equip.	Reference Noise Level at 50ft, Lmax	Acoustical Usage Factor	Distance to Receptor, ft	Estimated Noise Shielding, dBA
Hand Auger Drill	1	78	20%	600	0
Medium Size Tractor	1	80	25%	600	0

Receptor: ***R1***

Construction Hour:
12 Hours during daytime (7 am to 7 pm)
0 Hours during evening (7 pm to 10 pm)
0 Hours during nighttime (10 pm to 7 am)

Results:

Lmax: **58**
Leq: **54**

Source for Ref. Noise Levels: LA CEQA Guides, 2006 & FHWA RCNM, 2005, OSHA 2006

PCR

Project: Point View Master Use Plan

Construction Phase: **Phase 1**
Mass Grading

Equipment

Description	No. of Equip.	Reference Noise Level at 50ft, Lmax	Acoustical Usage Factor	Distance to Receptor, ft	Estimated Noise Shielding, dBA
Rubber Tired Loader	1	79	50%	370	0
Dozer	1	82	40%	470	0
Excavator	1	81	40%	570	0
Compactor	1	83	20%	570	0
Scrapers	1	84	40%	570	0

Receptor: **R2**

Construction Hour:

12 Hours during daytime (7 am to 7 pm)
0 Hours during evening (7 pm to 10 pm)
0 Hours during nighttime (10 pm to 7 am)

Results:

Lmax: **63**
Leq: **65**

Source for Ref. Noise Levels: LA CEQA Guides, 2006 & FHWA RCNM, 2005

PCR

Project: Point View Master Use Plan

Construction Phase: **Phase 2**
Fine Site Grading

Equipment

Description	No. of Equip.	Reference Noise Level at 50ft, Lmax	Acoustical Usage Factor	Distance to Receptor, ft	Estimated Noise Shielding, dBA
Tractor/Loader/Backhoe	1	80	25%	370	0
Other Equipment	1	85	50%	470	0
Tractor/Loader/Backhoe	1	80	25%	570	0
Other Equipment	1	85	50%	570	0

Receptor: ***R2***

Construction Hour:

12 Hours during daytime (7 am to 7 pm)
0 Hours during evening (7 pm to 10 pm)
0 Hours during nighttime (10 pm to 7 am)

Results:

Lmax: **66**
Leq: **66**

Source for Ref. Noise Levels: LA CEQA Guides, 2006 & FHWA RCNM, 2005

Project: Point View Master Use Plan

Construction Phase: **Phase 3**
Paving

Equipment

Description	No. of Equip.	Reference Noise Level at 50ft, Lmax	Acoustical Usage Factor	Distance to Receptor, ft	Estimated Noise Shielding, dBA
Tractor/Loader/Backhoe	1	80	25%	370	0
Paver	1	77	50%	470	0
Other Equipment	1	85	50%	570	0
Roller	1	80	20%	570	0
Other Equipment	1	85	50%	570	0

Receptor: ***R2***

Construction Hour:

12	Hours during daytime (7 am to 7 pm)
0	Hours during evening (7 pm to 10 pm)
0	Hours during nighttime (10 pm to 7 am)

Results:

Lmax:	**64**
Leq:	**65**

Source for Ref. Noise Levels: LA CEQA Guides, 2006 & FHWA RCNM, 2005

Project: Point View Master Use Plan

Construction Phase: **Phase 4**
Planting

Equipment

Description	No. of Equip.	Reference Noise Level at 50ft, Lmax	Acoustical Usage Factor	Distance to Receptor, ft	Estimated Noise Shielding, dBA
Hand Auger Drill	1	78	20%	120	0
Medium Size Tractor	1	80	25%	120	0

Receptor: ***R2***

Construction Hour:
12 Hours during daytime (7 am to 7 pm)
0 Hours during evening (7 pm to 10 pm)
0 Hours during nighttime (10 pm to 7 am)

Results:

Lmax: 72
Leq: 68

Source for Ref. Noise Levels: LA CEQA Guides, 2006 & FHWA RCNM, 2005, OSHA 2006

Project: Point View Master Use Plan

Construction Phase: **Phase 1**
Mass Grading

Equipment

Description	No. of Equip.	Reference Noise Level at 50ft, Lmax	Acoustical Usage Factor	Distance to Receptor, ft	Estimated Noise Shielding, dBA
Rubber Tired Loader	1	79	50%	350	0
Dozer	1	82	40%	450	0
Excavator	1	81	40%	550	0
Compactor	1	83	20%	550	0
Scrapers	1	84	40%	550	0

Receptor: **R3**

Construction Hour:

12 Hours during daytime (7 am to 7 pm)
0 Hours during evening (7 pm to 10 pm)
0 Hours during nighttime (10 pm to 7 am)

Results:

Lmax: **63**
Leq: **65**

Source for Ref. Noise Levels: LA CEQA Guides, 2006 & FHWA RCNM, 2005

Project: Point View Master Use Plan

Construction Phase: **Phase 2**
Fine Site Grading

Equipment

Description	No. of Equip.	Reference Noise Level at 50ft, Lmax	Acoustical Usage Factor	Distance to Receptor, ft	Estimated Noise Shielding, dBA
Tractor/Loader/Backhoe	1	80	25%	350	0
Other Equipment	1	85	50%	450	0
Tractor/Loader/Backhoe	1	80	25%	550	0
Other Equipment	1	85	50%	550	0

Receptor: ***R3***

Construction Hour:
12 Hours during daytime (7 am to 7 pm)
0 Hours during evening (7 pm to 10 pm)
0 Hours during nighttime (10 pm to 7 am)

Results:

Lmax: **66**
Leq: **66**

Source for Ref. Noise Levels: LA CEQA Guides, 2006 & FHWA RCNM, 2005

Project: Point View Master Use Plan

Construction Phase: **Phase 3**
Paving

Equipment

Description	No. of Equip.	Reference Noise Level at 50ft, Lmax	Acoustical Usage Factor	Distance to Receptor, ft	Estimated Noise Shielding, dBA
Tractor/Loader/Backhoe	1	80	25%	350	0
Paver	1	77	50%	450	0
Other Equipment	1	85	50%	550	0
Roller	1	80	20%	550	0
Other Equipment	1	85	50%	550	0

Receptor: ***R3***

Construction Hour:

12	Hours during daytime (7 am to 7 pm)
0	Hours during evening (7 pm to 10 pm)
0	Hours during nighttime (10 pm to 7 am)

Results:

Lmax: **64**
Leq: **66**

Source for Ref. Noise Levels: LA CEQA Guides, 2006 & FHWA RCNM, 2005

Project: Point View Master Use Plan

Construction Phase: **Phase 4**
Planting

Equipment

Description	No. of Equip.	Reference Noise Level at 50ft, Lmax	Acoustical Usage Factor	Distance to Receptor, ft	Estimated Noise Shielding, dBA
Hand Auger Drill	1	78	20%	120	0
Medium Size Tractor	1	80	25%	120	0

Receptor: ***R3***

Construction Hour:

12 Hours during daytime (7 am to 7 pm)
0 Hours during evening (7 pm to 10 pm)
0 Hours during nighttime (10 pm to 7 am)

Results:

Lmax: **72**
Leq: **68**

Source for Ref. Noise Levels: LA CEQA Guides, 2006 & FHWA RCNM, 2005, OSHA 2006

Project: Point View Master Use Plan

Construction Phase: **Phase 1**
Mass Grading

Equipment

Description	No. of Equip.	Reference Noise Level at 50ft, Lmax	Acoustical Usage Factor	Distance to Receptor, ft	Estimated Noise Shielding, dBA
Rubber Tired Loader	1	79	50%	250	0
Dozer	1	82	40%	350	0
Excavator	1	81	40%	450	0
Compactor	1	83	20%	450	0
Scrapers	1	84	40%	450	0

Receptor: ***R4***

Construction Hour:

12 Hours during daytime (7 am to 7 pm)
0 Hours during evening (7 pm to 10 pm)
0 Hours during nighttime (10 pm to 7 am)

Results:

Lmax: **65**
Leq: **67**

Source for Ref. Noise Levels: LA CEQA Guides, 2006 & FHWA RCNM, 2005

PCR

Project: Point View Master Use Plan

Construction Phase: **Phase 2**
Fine Site Grading

Equipment

Description	No. of Equip.	Reference Noise Level at 50ft, Lmax	Acoustical Usage Factor	Distance to Receptor, ft	Estimated Noise Shielding, dBA
Tractor/Loader/Backhoe	1	80	25%	250	0
Other Equipment	1	85	50%	350	0
Tractor/Loader/Backhoe	1	80	25%	450	0
Other Equipment	1	85	50%	450	0

Receptor: ***R4***

Construction Hour:

12 Hours during daytime (7 am to 7 pm)
0 Hours during evening (7 pm to 10 pm)
0 Hours during nighttime (10 pm to 7 am)

Results:

Lmax: **68**
Leq: **68**

Source for Ref. Noise Levels: LA CEQA Guides, 2006 & FHWA RCNM, 2005

Project: Point View Master Use Plan

Construction Phase: **Phase 3**
Paving

Equipment

Description	No. of Equip.	Reference Noise Level at 50ft, Lmax	Acoustical Usage Factor	Distance to Receptor, ft	Estimated Noise Shielding, dBA
Tractor/Loader/Backhoe	1	80	25%	250	0
Paver	1	77	50%	350	0
Other Equipment	1	85	50%	450	0
Roller	1	80	20%	450	0
Other Equipment	1	85	50%	450	0

Receptor: ***R4***

Construction Hour:

12 Hours during daytime (7 am to 7 pm)
0 Hours during evening (7 pm to 10 pm)
0 Hours during nighttime (10 pm to 7 am)

Results:

Lmax: 66
Leq: 68

Source for Ref. Noise Levels: LA CEQA Guides, 2006 & FHWA RCNM, 2005

Project: Point View Master Use Plan

Construction Phase: **Phase 4**
Planting

Equipment

Description	No. of Equip.	Reference Noise Level at 50ft, Lmax	Acoustical Usage Factor	Distance to Receptor, ft	Estimated Noise Shielding, dBA
Hand Auger Drill	1	78	20%	120	0
Medium Size Tractor	1	80	25%	120	0

Receptor: ***R4***

Construction Hour:

12	Hours during daytime (7 am to 7 pm)
0	Hours during evening (7 pm to 10 pm)
0	Hours during nighttime (10 pm to 7 am)

Results:

Lmax: **72**
Leq: **68**

Source for Ref. Noise Levels: LA CEQA Guides, 2006 & FHWA RCNM, 2005, OSHA 2006

Appendix

- Off-Site Traffic Noise Calculations

Project: Point View Master Plan (Friday)

Existing										
	Speed	Traffic Volumes			Leq			CNEL		
Roadway/Segment	MPH	AM	PM	ADT	ROW	25 Feet	50 Feet	ROW	25 Feet	50 Feet
Palos Verdes Dr West n/o Hawthorne Boulevard	45	1053	1053	0	70.1	67.1	65.3	71.0	68.0	66.3
Palos Verdes Dr South between Hawthorne Blvd and Seacove Dr.	45	1204	1204	0	70.7	67.7	65.9	71.6	68.6	66.8
Palos Verdes Dr South between Seacove Dr and Point View Entry	45	1096	1096	0	70.3	67.3	65.5	71.2	68.2	66.4
Palos Verdes Dr South between Point View Entry St and Wayfarer	35	1104	1104	0	67.7	64.7	62.9	68.6	65.6	63.9
Palos Verdes Dr South between Wayfarer's Chapel and Palos Ver	40	1160	1160	0	70.4	66.8	64.9	71.3	67.7	65.8
Future No Project										
	Speed	Traffic Volumes			Leq			CNEL		
Roadway/Segment	MPH	AM	PM	ADT	ROW	25 Feet	50 Feet	ROW	25 Feet	50 Feet
Palos Verdes Dr West n/o Hawthorne Boulevard	45	1190	1190	0	70.6	67.6	65.9	71.5	68.6	66.8
Palos Verdes Dr South between Hawthorne Blvd and Seacove Dr.	45	1379	1379	0	71.3	68.3	66.5	72.2	69.2	67.4
Palos Verdes Dr South between Seacove Dr and Point View Entry	45	1265	1265	0	70.9	67.9	66.1	71.8	68.8	67.1
Palos Verdes Dr South between Point View Entry St and Wayfarer	35	1274	1274	0	68.3	65.3	63.6	69.2	66.2	64.5
Palos Verdes Dr South between Wayfarer's Chapel and Palos Ver	40	1332	1332	0	71.0	67.4	65.5	71.9	68.3	66.4
Future With Project										
	Speed	Traffic Volumes			Leq			CNEL		
Roadway/Segment	MPH	AM	PM	ADT	ROW	25 Feet	50 Feet	ROW	25 Feet	50 Feet
Palos Verdes Dr West n/o Hawthorne Boulevard	45	1218	1218	0	70.7	67.7	66.0	71.6	68.7	66.9
Palos Verdes Dr South between Hawthorne Blvd and Seacove Dr.	45	1427	1427	0	71.4	68.4	66.7	72.3	69.3	67.6
Palos Verdes Dr South between Seacove Dr and Point View Entry	45	1315	1315	0	71.0	68.1	66.3	72.0	69.0	67.2
Palos Verdes Dr South between Point View Entry St and Wayfarer	35	1397	1397	0	68.7	65.7	64.0	69.6	66.7	64.9
Palos Verdes Dr South between Wayfarer's Chapel and Palos Ver	40	1386	1386	0	71.1	67.6	65.6	72.1	68.5	66.6

	CNEL			
Summary	25 ft. from ROW		At ROW	
Roadway/Segment	Project Increment	Cumulative Increment	Project Increment	Cumulative Increment
Palos Verdes Dr West n/o Hawthorne Boulevard	0.1	0.7	0.1	0.6
Palos Verdes Dr South between Hawthorne Blvd and Seacove Dr.	0.1	0.7	0.1	0.7
Palos Verdes Dr South between Seacove Dr and Point View Entry	0.2	0.8	0.2	0.8
Palos Verdes Dr South between Point View Entry St and Wayfarer	0.5	1.1	0.4	1.0
Palos Verdes Dr South between Wayfarer's Chapel and Palos Ver	0.2	0.8	0.2	0.8

% of ADT				
Vehicle Type	Day	Eve	Night	Sub total
Auto	77.6%	11.6%	7.8%	97.0%
Medium Truck	1.6%	0.2%	0.2%	2.0%
Heavy Truck	0.8%	0.1%	0.1%	1.0%
	80.0%	12.0%	8.0%	100.0%

Project: Point View Master Plan (Friday)

Existing										
	Speed	Traffic Volumes			Leq			CNEL		
Roadway/Segment	MPH	AM	PM	ADT	ROW	25 Feet	50 Feet	ROW	25 Feet	50 Feet
Palos Verdes Dr South s/o Palos Verdes Dr East	40	1171	1171	0	70.4	66.8	64.9	71.3	67.8	65.8
Hawthorne Boulevard e/o Via Rivera	45	1265	1265	0	70.9	67.9	66.1	71.8	68.8	67.1
Hawthorne Boulevard between Via Rivera and Palos Verdes Dr W	45	1094	1094	0	70.2	67.3	65.5	71.2	68.2	66.4
Via Rivera n/o Hawthorne Boulevard	30	199	199	0	61.2	57.1	55.0	62.1	58.0	55.9
Via Vicente w/o Palos Verdes Dr West	30	96	96	0	58.0	53.9	51.9	58.9	54.8	52.8
Future No Project										
	Speed	Traffic Volumes			Leq			CNEL		
Roadway/Segment	MPH	AM	PM	ADT	ROW	25 Feet	50 Feet	ROW	25 Feet	50 Feet
Palos Verdes Dr South s/o Palos Verdes Dr East	40	1344	1344	0	71.0	67.4	65.5	71.9	68.4	66.4
Hawthorne Boulevard e/o Via Rivera	45	1315	1315	0	71.0	68.1	66.3	72.0	69.0	67.2
Hawthorne Boulevard between Via Rivera and Palos Verdes Dr W	45	1137	1137	0	70.4	67.4	65.7	71.3	68.4	66.6
Via Rivera n/o Hawthorne Boulevard	30	199	199	0	61.2	57.1	55.0	62.1	58.0	55.9
Via Vicente w/o Palos Verdes Dr West	30	96	96	0	58.0	53.9	51.9	58.9	54.8	52.8
Future With Project										
	Speed	Traffic Volumes			Leq			CNEL		
Roadway/Segment	MPH	AM	PM	ADT	ROW	25 Feet	50 Feet	ROW	25 Feet	50 Feet
Palos Verdes Dr South s/o Palos Verdes Dr East	40	1392	1392	0	71.2	67.6	65.7	72.1	68.5	66.6
Hawthorne Boulevard e/o Via Rivera	45	1336	1336	0	71.1	68.1	66.4	72.0	69.1	67.3
Hawthorne Boulevard between Via Rivera and Palos Verdes Dr W	45	1159	1159	0	70.5	67.5	65.8	71.4	68.4	66.7
Via Rivera n/o Hawthorne Boulevard	30	199	199	0	61.2	57.1	55.0	62.1	58.0	55.9
Via Vicente w/o Palos Verdes Dr West	30	96	96	0	58.0	53.9	51.9	58.9	54.8	52.8

	CNEL			
Summary	25 ft. from ROW		At ROW	
Roadway/Segment	Project Increment	Cumulative Increment	Project Increment	Cumulative Increment
Palos Verdes Dr South s/o Palos Verdes Dr East	0.1	0.7	0.2	0.8
Hawthorne Boulevard e/o Via Rivera	0.1	0.3	0.0	0.2
Hawthorne Boulevard between Via Rivera and Palos Verdes Dr W	0.0	0.2	0.1	0.2
Via Rivera n/o Hawthorne Boulevard	0.0	0.0	0.0	0.0
Via Vicente w/o Palos Verdes Dr West	0.0	0.0	0.0	0.0

	% of ADT			
Vehicle Type	Day	Eve	Night	Sub total
Auto	77.6%	11.6%	7.8%	97.0%
Medium Truck	1.6%	0.2%	0.2%	2.0%
Heavy Truck	0.8%	0.1%	0.1%	1.0%
	80.0%	12.0%	8.0%	100.0%

Project: Point View Master Plan (Friday)

Existing										
	Speed	Traffic Volumes			Leq			CNEL		
Roadway/Segment	MPH	AM	PM	ADT	ROW	25 Feet	50 Feet	ROW	25 Feet	50 Feet
Palos Verdes Dr East e/o Palos Verdes Dr South	40	250	250	0	64.6	60.5	58.4	65.5	61.4	59.3
0	0			0	-	-	-	-	-	-
0	0			0	-	-	-	-	-	-
0	0			0	-	-	-	-	-	-
0	0			0	-	-	-	-	-	-
Future No Project										
	Speed	Traffic Volumes			Leq			CNEL		
Roadway/Segment	MPH	AM	PM	ADT	ROW	25 Feet	50 Feet	ROW	25 Feet	50 Feet
Palos Verdes Dr East e/o Palos Verdes Dr South	40	310	310	0	65.5	61.4	59.4	66.4	62.3	60.3
0	0			0	-	-	-	-	-	-
0	0			0	-	-	-	-	-	-
0	0			0	-	-	-	-	-	-
0	0			0	-	-	-	-	-	-
Future With Project										
	Speed	Traffic Volumes			Leq			CNEL		
Roadway/Segment	MPH	AM	PM	ADT	ROW	25 Feet	50 Feet	ROW	25 Feet	50 Feet
Palos Verdes Dr East e/o Palos Verdes Dr South	40	313	313	0	65.5	61.5	59.4	66.5	62.4	60.3
0	0			0	-	-	-	-	-	-
0	0			0	-	-	-	-	-	-
0	0			0	-	-	-	-	-	-
0	0			0	-	-	-	-	-	-

CNEL

Summary	25 ft. from ROW		At ROW	
Roadway/Segment	Project Increment	Cumulative Increment	Project Increment	Cumulative Increment
Palos Verdes Dr East e/o Palos Verdes Dr South	0.1	1.0	0.1	1.0
0	-	-	-	-
0	-	-	-	-
0	-	-	-	-
0	-	-	-	-

	% of ADT			
Vehicle Type	Day	Eve	Night	Sub total
Auto	77.6%	11.6%	7.8%	97.0%
Medium Truck	1.6%	0.2%	0.2%	2.0%
Heavy Truck	0.8%	0.1%	0.1%	1.0%
	80.0%	12.0%	8.0%	100.0%

PCR

Project: Point View Master Plan (Friday Existing with Project)

Existing										
	Speed	Traffic Volumes			Leq			CNEL		
Roadway/Segment	MPH	AM	PM	ADT	ROW	25 Feet	50 Feet	ROW	25 Feet	50 Feet
Palos Verdes Dr West n/o Hawthorne Boulevard	45	1053	1053	0	70.1	67.1	65.3	71.0	68.0	66.3
Palos Verdes Dr South between Hawthron Blvd and Seacove Dr.	45	1201	1201	0	70.7	67.7	65.9	71.6	68.6	66.8
Palos Verdes Dr South between Seacove Dr and Point View Entry	45	1096	1096	0	70.3	67.3	65.5	71.2	68.2	66.4
Palos Verdes Dr South between Point View Entry St and Wayfarer	35	1104	1104	0	67.7	64.7	62.9	68.6	65.6	63.9
Palos Verdes Dr South between Wayfarer's Chapel and Palos Ver	40	1160	1160	0	70.4	66.8	64.9	71.3	67.7	65.8
Existing with Project										
	Speed	Traffic Volumes			Leq			CNEL		
Roadway/Segment	MPH	AM	PM	ADT	ROW	25 Feet	50 Feet	ROW	25 Feet	50 Feet
Palos Verdes Dr West n/o Hawthorne Boulevard	45	1080	1080	0	70.2	67.2	65.5	71.1	68.1	66.4
Palos Verdes Dr South between Hawthron Blvd and Seacove Dr.	45	1252	1252	0	70.8	67.8	66.1	71.8	68.8	67.0
Palos Verdes Dr South between Seacove Dr and Point View Entry	45	1146	1146	0	70.4	67.5	65.7	71.4	68.4	66.6
Palos Verdes Dr South between Point View Entry St and Wayfarer	35	1228	1228	0	68.2	65.2	63.4	69.1	66.1	64.3
Palos Verdes Dr South between Wayfarer's Chapel and Palos Ver	40	1216	1216	0	70.6	67.0	65.1	71.5	67.9	66.0
Future With Project										
	Speed	Traffic Volumes			Leq			CNEL		
Roadway/Segment	MPH	AM	PM	ADT	ROW	25 Feet	50 Feet	ROW	25 Feet	50 Feet
Palos Verdes Dr West n/o Hawthorne Boulevard	45	1218	1218	0	70.7	67.7	66.0	71.6	68.7	66.9
Palos Verdes Dr South between Hawthron Blvd and Seacove Dr.	45	1424	1424	0	71.4	68.4	66.7	72.3	69.3	67.6
Palos Verdes Dr South between Seacove Dr and Point View Entry	45	1315	1315	0	71.0	68.1	66.3	72.0	69.0	67.2
Palos Verdes Dr South between Point View Entry St and Wayfarer	35	1397	1397	0	68.7	65.7	64.0	69.6	66.7	64.9
Palos Verdes Dr South between Wayfarer's Chapel and Palos Ver	40	1386	1386	0	71.1	67.6	65.6	72.1	68.5	66.6

Summary	CNEL 25 ft. from ROW		CNEL At ROW	
Roadway/Segment	Project Increment	Cumulative Increment	Project Increment	Cumulative Increment
Palos Verdes Dr West n/o Hawthorne Boulevard	0.6	0.7	0.5	0.6
Palos Verdes Dr South between Hawthron Blvd and Seacove Dr.	0.5	0.7	0.5	0.7
Palos Verdes Dr South between Seacove Dr and Point View Entry	0.6	0.8	0.6	0.8
Palos Verdes Dr South between Point View Entry St and Wayfarer	0.6	1.1	0.5	1.0
Palos Verdes Dr South between Wayfarer's Chapel and Palos Ver	0.6	0.8	0.6	0.8

% of ADT				
Vehicle Type	Day	Eve	Night	Sub total
Auto	77.6%	11.6%	7.8%	97.0%
Medium Truck	1.6%	0.2%	0.2%	2.0%
Heavy Truck	0.8%	0.1%	0.1%	1.0%
	80.0%	12.0%	8.0%	100.0%

Project: Point View Master Plan (Friday Existing with Project)

Existing										
	Speed	Traffic Volumes			Leq			CNEL		
Roadway/Segment	MPH	AM	PM	ADT	ROW	25 Feet	50 Feet	ROW	25 Feet	50 Feet
Palos Verdes Dr South s/o Palos Verdes Dr East	40	1171	1171	0	70.4	66.8	64.9	71.3	67.8	65.8
Hawthorne Boulevard e/o Via Rivera	45	1265	1265	0	70.9	67.9	66.1	71.8	68.8	67.1
Hawthorne Boulevard between Via Rivera and Palos Verdes Dr W	45	1094	1094	0	70.2	67.3	65.5	71.2	68.2	66.4
Via Rivera n/o Hawthorne Boulevard	30	199	199	0	61.2	57.1	55.0	62.1	58.0	55.9
Via Vicente w/o Palos Verdes Dr West	30	96	96	0	58.0	53.9	51.9	58.9	54.8	52.8
Existing With Project										
	Speed	Traffic Volumes			Leq			CNEL		
Roadway/Segment	MPH	AM	PM	ADT	ROW	25 Feet	50 Feet	ROW	25 Feet	50 Feet
Palos Verdes Dr South s/o Palos Verdes Dr East	40	1221	1221	0	70.6	67.0	65.1	71.5	67.9	66.0
Hawthorne Boulevard e/o Via Rivera	45	1286	1286	0	71.0	68.0	66.2	71.9	68.9	67.1
Hawthorne Boulevard between Via Rivera and Palos Verdes Dr W	45	1118	1118	0	70.3	67.4	65.6	71.3	68.3	66.5
Via Rivera n/o Hawthorne Boulevard	30	199	199	0	61.2	57.1	55.0	62.1	58.0	55.9
Via Vicente w/o Palos Verdes Dr West	30	96	96	0	58.0	53.9	51.9	58.9	54.8	52.8
Future With Project										
	Speed	Traffic Volumes			Leq			CNEL		
Roadway/Segment	MPH	AM	PM	ADT	ROW	25 Feet	50 Feet	ROW	25 Feet	50 Feet
Palos Verdes Dr South s/o Palos Verdes Dr East	40	1392	1392	0	71.2	67.6	65.7	72.1	68.5	66.6
Hawthorne Boulevard e/o Via Rivera	45	1336	1336	0	71.1	68.1	66.4	72.0	69.1	67.3
Hawthorne Boulevard between Via Rivera and Palos Verdes Dr W	45	1159	1159	0	70.5	67.5	65.8	71.4	68.4	66.7
Via Rivera n/o Hawthorne Boulevard	30	199	199	0	61.2	57.1	55.0	62.1	58.0	55.9
Via Vicente w/o Palos Verdes Dr West	30	96	96	0	58.0	53.9	51.9	58.9	54.8	52.8

	CNEL			
Summary	25 ft. from ROW		At ROW	
Roadway/Segment	Project Increment	Cumulative Increment	Project Increment	Cumulative Increment
Palos Verdes Dr South s/o Palos Verdes Dr East	0.6	0.7	0.6	0.8
Hawthorne Boulevard e/o Via Rivera	0.2	0.3	0.1	0.2
Hawthorne Boulevard between Via Rivera and Palos Verdes Dr W	0.1	0.2	0.1	0.2
Via Rivera n/o Hawthorne Boulevard	0.0	0.0	0.0	0.0
Via Vicente w/o Palos Verdes Dr West	0.0	0.0	0.0	0.0

	% of ADT			
Vehicle Type	Day	Eve	Night	Sub total
Auto	77.6%	11.6%	7.8%	97.0%
Medium Truck	1.6%	0.2%	0.2%	2.0%
Heavy Truck	0.8%	0.1%	0.1%	1.0%
	80.0%	12.0%	8.0%	100.0%

Project: Point View Master Plan (Friday Existing with Project)

Existing											
	Speed	Traffic Volumes			Leq			CNEL			
Roadway/Segment	MPH	AM	PM	ADT	ROW	25 Feet	50 Feet	ROW	25 Feet	50 Feet	
Palos Verdes Dr East e/o Palos Verdes Dr South	40	250	250	0	64.6	60.5	58.4	65.5	61.4	59.3	
0	0			0	-	-	-	-	-	-	
0	0			0	-	-	-	-	-	-	
0	0			0	-	-	-	-	-	-	
0	0			0	-	-	-	-	-	-	
Existing With Project											
	Speed	Traffic Volumes			Leq			CNEL			
Roadway/Segment	MPH	AM	PM	ADT	ROW	25 Feet	50 Feet	ROW	25 Feet	50 Feet	
Palos Verdes Dr East e/o Palos Verdes Dr South	40	256	256	0	64.7	60.6	58.5	65.6	61.5	59.5	
0	0			0	-	-	-	-	-	-	
0	0			0	-	-	-	-	-	-	
0	0			0	-	-	-	-	-	-	
0	0			0	-	-	-	-	-	-	
Future With Project											
	Speed	Traffic Volumes			Leq			CNEL			
Roadway/Segment	MPH	AM	PM	ADT	ROW	25 Feet	50 Feet	ROW	25 Feet	50 Feet	
Palos Verdes Dr East e/o Palos Verdes Dr South	40	313	313	0	65.5	61.5	59.4	66.5	62.4	60.3	
0	0			0	-	-	-	-	-	-	
0	0			0	-	-	-	-	-	-	
0	0			0	-	-	-	-	-	-	
0	0			0	-	-	-	-	-	-	

CNEL

Summary	25 ft. from ROW		At ROW	
	Project	Cumulative	Project	Cumulative
Roadway/Segment	Increment	Increment	Increment	Increment
Palos Verdes Dr East e/o Palos Verdes Dr South	0.9	1.0	0.9	1.0
0	-	-	-	-
0	-	-	-	-
0	-	-	-	-
0	-	-	-	-

% of ADT				
Vehicle Type	Day	Eve	Night	Sub total
Auto	77.6%	11.6%	7.8%	97.0%
Medium Truck	1.6%	0.2%	0.2%	2.0%
Heavy Truck	0.8%	0.1%	0.1%	1.0%
	80.0%	12.0%	8.0%	100.0%

Project: Point View Master Plan (Saturday)

Existing										
	Speed	Traffic Volumes			Leq			CNEL		
Roadway/Segment	MPH	AM	PM	ADT	ROW	25 Feet	50 Feet	ROW	25 Feet	50 Feet
Palos Verdes Dr West n/o Hawthorne Boulevard	45	937	937	0	69.6	66.6	64.8	70.5	67.5	65.8
Palos Verdes Dr South between Hawthron Blvd and Seacove Dr.	45	1112	1112	0	70.3	67.3	65.6	71.2	68.3	66.5
Palos Verdes Dr South between Seacove Dr and Point View Entry	45	1065	1065	0	70.1	67.1	65.4	71.1	68.1	66.3
Palos Verdes Dr South between Point View Entry St and Wayfarer	35	1077	1077	0	67.6	64.6	62.8	68.5	65.5	63.8
Palos Verdes Dr South between Wayfarer's Chapel and Palos Ver	40	1137	1137	0	70.3	66.7	64.8	71.2	67.6	65.7
Future No Project										
	Speed	Traffic Volumes			Leq			CNEL		
Roadway/Segment	MPH	AM	PM	ADT	ROW	25 Feet	50 Feet	ROW	25 Feet	50 Feet
Palos Verdes Dr West n/o Hawthorne Boulevard	45	962	962	0	69.7	66.7	64.9	70.6	67.6	65.9
Palos Verdes Dr South between Hawthron Blvd and Seacove Dr.	45	1140	1140	0	70.4	67.4	65.7	71.3	68.4	66.6
Palos Verdes Dr South between Seacove Dr and Point View Entry	45	1092	1092	0	70.2	67.3	65.5	71.2	68.2	66.4
Palos Verdes Dr South between Point View Entry St and Wayfarer	35	1105	1105	0	67.7	64.7	63.0	68.6	65.6	63.9
Palos Verdes Dr South between Wayfarer's Chapel and Palos Ver	40	1166	1166	0	70.4	66.8	64.9	71.3	67.7	65.8
Future With Project										
	Speed	Traffic Volumes			Leq			CNEL		
Roadway/Segment	MPH	AM	PM	ADT	ROW	25 Feet	50 Feet	ROW	25 Feet	50 Feet
Palos Verdes Dr West n/o Hawthorne Boulevard	45	988	988	0	69.8	66.8	65.1	70.7	67.7	66.0
Palos Verdes Dr South between Hawthron Blvd and Seacove Dr.	45	1189	1189	0	70.6	67.6	65.9	71.5	68.5	66.8
Palos Verdes Dr South between Seacove Dr and Point View Entry	45	1197	1197	0	70.6	67.7	65.9	71.6	68.6	66.8
Palos Verdes Dr South between Point View Entry St and Wayfarer	35	1138	1138	0	67.8	64.8	63.1	68.7	65.8	64.0
Palos Verdes Dr South between Wayfarer's Chapel and Palos Ver	40	1223	1223	0	70.6	67.0	65.1	71.5	67.9	66.0

	CNEL			
Summary	25 ft. from ROW		At ROW	
Roadway/Segment	Project Increment	Cumulative Increment	Project Increment	Cumulative Increment
Palos Verdes Dr West n/o Hawthorne Boulevard	0.1	0.2	0.1	0.2
Palos Verdes Dr South between Hawthron Blvd and Seacove Dr.	0.1	0.2	0.2	0.3
Palos Verdes Dr South between Seacove Dr and Point View Entry	0.4	0.5	0.4	0.5
Palos Verdes Dr South between Point View Entry St and Wayfarer	0.2	0.3	0.1	0.2
Palos Verdes Dr South between Wayfarer's Chapel and Palos Ver	0.2	0.3	0.2	0.3

	% of ADT			
Vehicle Type	Day	Eve	Night	Sub total
Auto	77.6%	11.6%	7.8%	97.0%
Medium Truck	1.6%	0.2%	0.2%	2.0%
Heavy Truck	0.8%	0.1%	0.1%	1.0%
	80.0%	12.0%	8.0%	100.0%

Project: Point View Master Plan (Saturday)

Existing										
	Speed	Traffic Volumes			Leq			CNEL		
Roadway/Segment	MPH	AM	PM	ADT	ROW	25 Feet	50 Feet	ROW	25 Feet	50 Feet
Palos Verdes Dr South s/o Palos Verdes Dr East	40	1147	1147	0	70.3	66.7	64.8	71.2	67.7	65.7
Hawthorne Boulevard e/o Via Rivera	45	1164	1164	0	70.5	67.5	65.8	71.4	68.5	66.7
Hawthorne Boulevard between Via Rivera and Palos Verdes Dr W	45	981	981	0	69.8	66.8	65.0	70.7	67.7	66.0
Via Rivera n/o Hawthorne Boulevard	30	162	162	0	60.3	56.2	54.1	61.2	57.1	55.0
Via Vicente w/o Palos Verdes Dr West	30	75	75	0	56.9	52.8	50.8	57.8	53.8	51.7
Future No Project										
	Speed	Traffic Volumes			Leq			CNEL		
Roadway/Segment	MPH	AM	PM	ADT	ROW	25 Feet	50 Feet	ROW	25 Feet	50 Feet
Palos Verdes Dr South s/o Palos Verdes Dr East	40	1171	1171	0	70.4	66.8	64.9	71.3	67.8	65.8
Hawthorne Boulevard e/o Via Rivera	45	1174	1174	0	70.6	67.6	65.8	71.5	68.5	66.7
Hawthorne Boulevard between Via Rivera and Palos Verdes Dr W	45	985	985	0	69.8	66.8	65.1	70.7	67.7	66.0
Via Rivera n/o Hawthorne Boulevard	30	162	162	0	60.3	56.2	54.1	61.2	57.1	55.0
Via Vicente w/o Palos Verdes Dr West	30	75	75	0	56.9	52.8	50.8	57.8	53.8	51.7
Future With Project										
	Speed	Traffic Volumes			Leq			CNEL		
Roadway/Segment	MPH	AM	PM	ADT	ROW	25 Feet	50 Feet	ROW	25 Feet	50 Feet
Palos Verdes Dr South s/o Palos Verdes Dr East	40	1222	1222	0	70.6	67.0	65.1	71.5	67.9	66.0
Hawthorne Boulevard e/o Via Rivera	45	1195	1195	0	70.6	67.6	65.9	71.6	68.6	66.8
Hawthorne Boulevard between Via Rivera and Palos Verdes Dr W	45	1006	1006	0	69.9	66.9	65.1	70.8	67.8	66.1
Via Rivera n/o Hawthorne Boulevard	30	162	162	0	60.3	56.2	54.1	61.2	57.1	55.0
Via Vicente w/o Palos Verdes Dr West	30	75	75	0	56.9	52.8	50.8	57.8	53.8	51.7

CNEL

Summary	25 ft. from ROW		At ROW	
Roadway/Segment	Project Increment	Cumulative Increment	Project Increment	Cumulative Increment
Palos Verdes Dr South s/o Palos Verdes Dr East	0.1	0.2	0.2	0.3
Hawthorne Boulevard e/o Via Rivera	0.1	0.1	0.1	0.2
Hawthorne Boulevard between Via Rivera and Palos Verdes Dr W	0.1	0.1	0.1	0.1
Via Rivera n/o Hawthorne Boulevard	0.0	0.0	0.0	0.0
Via Vicente w/o Palos Verdes Dr West	0.0	0.0	0.0	0.0

	% of ADT			
Vehicle Type	Day	Eve	Night	Sub total
Auto	77.6%	11.6%	7.8%	97.0%
Medium Truck	1.6%	0.2%	0.2%	2.0%
Heavy Truck	0.8%	0.1%	0.1%	1.0%
	80.0%	12.0%	8.0%	100.0%

Project: Point View Master Plan (Saturday)

Existing										
	Speed	Traffic Volumes			Leq			CNEL		
Roadway/Segment	MPH	AM	PM	ADT	ROW	25 Feet	50 Feet	ROW	25 Feet	50 Feet
Palos Verdes Dr East e/o Palos Verdes Dr South	40	230	230	0	64.2	60.1	58.1	65.1	61.1	59.0
0	0			0	-	-	-	-	-	-
0	0			0	-	-	-	-	-	-
0	0			0	-	-	-	-	-	-
0	0			0	-	-	-	-	-	-
Future No Project										
	Speed	Traffic Volumes			Leq			CNEL		
Roadway/Segment	MPH	AM	PM	ADT	ROW	25 Feet	50 Feet	ROW	25 Feet	50 Feet
Palos Verdes Dr East e/o Palos Verdes Dr South	40	236	236	0	64.3	60.2	58.2	65.2	61.2	59.1
0	0			0	-	-	-	-	-	-
0	0			0	-	-	-	-	-	-
0	0			0	-	-	-	-	-	-
0	0			0	-	-	-	-	-	-
Future With Project										
	Speed	Traffic Volumes			Leq			CNEL		
Roadway/Segment	MPH	AM	PM	ADT	ROW	25 Feet	50 Feet	ROW	25 Feet	50 Feet
Palos Verdes Dr East e/o Palos Verdes Dr South	40	242	242	0	64.4	60.3	58.3	65.3	61.3	59.2
0	0			0	-	-	-	-	-	-
0	0			0	-	-	-	-	-	-
0	0			0	-	-	-	-	-	-
0	0			0	-	-	-	-	-	-

	CNEL			
Summary	25 ft. from ROW		At ROW	
Roadway/Segment	Project Increment	Cumulative Increment	Project Increment	Cumulative Increment
Palos Verdes Dr East e/o Palos Verdes Dr South	0.1	0.2	0.1	0.2
0	-	-	-	-
0	-	-	-	-
0	-	-	-	-
0	-	-	-	-

	% of ADT			
Vehicle Type	Day	Eve	Night	Sub total
Auto	77.6%	11.6%	7.8%	97.0%
Medium Truck	1.6%	0.2%	0.2%	2.0%
Heavy Truck	0.8%	0.1%	0.1%	1.0%
	80.0%	12.0%	8.0%	100.0%

PCR

Project: Point View Master Plan (Saturday Existing with Project)

Roadway/Segment	Speed MPH	Traffic Volumes AM	PM	ADT	Leq ROW	Leq 25 Feet	Leq 50 Feet	CNEL ROW	CNEL 25 Feet	CNEL 50 Feet
Existing										
Palos Verdes Dr West n/o Hawthorne Boulevard	45	937	937	0	69.6	66.6	64.8	70.5	67.5	65.8
Palos Verdes Dr South between Hawthron Blvd and Seacove Dr.	45	1110	1110	0	70.3	67.3	65.6	71.2	68.2	66.5
Palos Verdes Dr South between Seacove Dr and Point View Entry	45	1065	1065	0	70.1	67.1	65.4	71.1	68.1	66.3
Palos Verdes Dr South between Point View Entry St and Wayfarer	35	1077	1077	0	67.6	64.6	62.8	68.5	65.5	63.8
Palos Verdes Dr South between Wayfarer's Chapel and Palos Ver	40	1137	1137	0	70.3	66.7	64.8	71.2	67.6	65.7
Existing with Project										
Palos Verdes Dr West n/o Hawthorne Boulevard	45	965	965	0	69.7	66.7	65.0	70.6	67.6	65.9
Palos Verdes Dr South between Hawthron Blvd and Seacove Dr.	45	1159	1159	0	70.5	67.5	65.8	71.4	68.4	66.7
Palos Verdes Dr South between Seacove Dr and Point View Entry	45	1169	1169	0	70.5	67.5	65.8	71.5	68.5	66.7
Palos Verdes Dr South between Point View Entry St and Wayfarer	35	1110	1110	0	67.7	64.7	63.0	68.6	65.7	63.9
Palos Verdes Dr South between Wayfarer's Chapel and Palos Ver	40	1195	1195	0	70.5	66.9	65.0	71.4	67.8	65.9
Future With Project										
Palos Verdes Dr West n/o Hawthorne Boulevard	45	988	988	0	69.8	66.8	65.1	70.7	67.7	66.0
Palos Verdes Dr South between Hawthron Blvd and Seacove Dr.	45	1187	1187	0	70.6	67.6	65.9	71.5	68.5	66.8
Palos Verdes Dr South between Seacove Dr and Point View Entry	45	1197	1197	0	70.6	67.7	65.9	71.6	68.6	66.8
Palos Verdes Dr South between Point View Entry St and Wayfarer	35	1138	1138	0	67.8	64.8	63.1	68.7	65.8	64.0
Palos Verdes Dr South between Wayfarer's Chapel and Palos Ver	40	1223	1223	0	70.6	67.0	65.1	71.5	67.9	66.0

CNEL

Summary	25 ft. from ROW		At ROW	
Roadway/Segment	Project Increment	Cumulative Increment	Project Increment	Cumulative Increment
Palos Verdes Dr West n/o Hawthorne Boulevard	0.1	0.2	0.1	0.2
Palos Verdes Dr South between Hawthron Blvd and Seacove Dr.	0.1	0.3	0.1	0.3
Palos Verdes Dr South between Seacove Dr and Point View Entry	0.1	0.5	0.1	0.5
Palos Verdes Dr South between Point View Entry St and Wayfarer	0.1	0.3	0.1	0.2
Palos Verdes Dr South between Wayfarer's Chapel and Palos Ver	0.1	0.3	0.1	0.3

	% of ADT			
Vehicle Type	Day	Eve	Night	Sub total
Auto	77.6%	11.6%	7.8%	97.0%
Medium Truck	1.6%	0.2%	0.2%	2.0%
Heavy Truck	0.8%	0.1%	0.1%	1.0%
	80.0%	12.0%	8.0%	100.0%

PCR

Project: Point View Master Plan (Saturday Existing with Project)

Existing										
	Speed	Traffic Volumes			Leq			CNEL		
Roadway/Segment	MPH	AM	PM	ADT	ROW	25 Feet	50 Feet	ROW	25 Feet	50 Feet
Palos Verdes Dr South s/o Palos Verdes Dr East	40	1147	1147	0	70.3	66.7	64.8	71.2	67.7	65.7
Hawthorne Boulevard e/o Via Rivera	45	1164	1164	0	70.5	67.5	65.8	71.4	68.5	66.7
Hawthorne Boulevard between Via Rivera and Palos Verdes Dr W	45	981	981	0	69.8	66.8	65.0	70.7	67.7	66.0
Via Rivera n/o Hawthorne Boulevard	30	162	162	0	60.3	56.2	54.1	61.2	57.1	55.0
Via Vicente w/o Palos Verdes Dr West	30	75	75	0	56.9	52.8	50.8	57.8	53.8	51.7
Existing With Project										
	Speed	Traffic Volumes			Leq			CNEL		
Roadway/Segment	MPH	AM	PM	ADT	ROW	25 Feet	50 Feet	ROW	25 Feet	50 Feet
Palos Verdes Dr South s/o Palos Verdes Dr East	40	1198	1198	0	70.5	66.9	65.0	71.4	67.9	65.9
Hawthorne Boulevard e/o Via Rivera	45	1185	1185	0	70.6	67.6	65.9	71.5	68.5	66.8
Hawthorne Boulevard between Via Rivera and Palos Verdes Dr W	45	1002	1002	0	69.9	66.9	65.1	70.8	67.8	66.1
Via Rivera n/o Hawthorne Boulevard	30	162	162	0	60.3	56.2	54.1	61.2	57.1	55.0
Via Vicente w/o Palos Verdes Dr West	30	75	75	0	56.9	52.8	50.8	57.8	53.8	51.7
Future With Project										
	Speed	Traffic Volumes			Leq			CNEL		
Roadway/Segment	MPH	AM	PM	ADT	ROW	25 Feet	50 Feet	ROW	25 Feet	50 Feet
Palos Verdes Dr South s/o Palos Verdes Dr East	40	1222	1222	0	70.6	67.0	65.1	71.5	67.9	66.0
Hawthorne Boulevard e/o Via Rivera	45	1195	1195	0	70.6	67.6	65.9	71.6	68.6	66.8
Hawthorne Boulevard between Via Rivera and Palos Verdes Dr W	45	1006	1006	0	69.9	66.9	65.1	70.8	67.8	66.1
Via Rivera n/o Hawthorne Boulevard	30	162	162	0	60.3	56.2	54.1	61.2	57.1	55.0
Via Vicente w/o Palos Verdes Dr West	30	75	75	0	56.9	52.8	50.8	57.8	53.8	51.7

Summary	CNEL 25 ft. from ROW		CNEL At ROW	
Roadway/Segment	Project Increment	Cumulative Increment	Project Increment	Cumulative Increment
Palos Verdes Dr South s/o Palos Verdes Dr East	0.0	0.2	0.1	0.3
Hawthorne Boulevard e/o Via Rivera	0.1	0.1	0.1	0.2
Hawthorne Boulevard between Via Rivera and Palos Verdes Dr W	0.0	0.1	0.0	0.1
Via Rivera n/o Hawthorne Boulevard	0.0	0.0	0.0	0.0
Via Vicente w/o Palos Verdes Dr West	0.0	0.0	0.0	0.0

	% of ADT			
Vehicle Type	Day	Eve	Night	Sub total
Auto	77.6%	11.6%	7.8%	97.0%
Medium Truck	1.6%	0.2%	0.2%	2.0%
Heavy Truck	0.8%	0.1%	0.1%	1.0%
	80.0%	12.0%	8.0%	100.0%

Project: Point View Master Plan (Saturday Existing with Project)

Existing										
	Speed	Traffic Volumes			Leq			CNEL		
Roadway/Segment	MPH	AM	PM	ADT	ROW	25 Feet	50 Feet	ROW	25 Feet	50 Feet
Palos Verdes Dr East e/o Palos Verdes Dr South	40	230	230	0	64.2	60.1	58.1	65.1	61.1	59.0
0	40			0	-	-	-	-	-	-
0	0			0	-	-	-	-	-	-
0	0			0	-	-	-	-	-	-
0	0			0	-	-	-	-	-	-
Existing With Project										
	Speed	Traffic Volumes			Leq			CNEL		
Roadway/Segment	MPH	AM	PM	ADT	ROW	25 Feet	50 Feet	ROW	25 Feet	50 Feet
Palos Verdes Dr East e/o Palos Verdes Dr South	40	238	238	0	64.3	60.3	58.2	65.3	61.2	59.1
0	40			0	-	-	-	-	-	-
0	0			0	-	-	-	-	-	-
0	0			0	-	-	-	-	-	-
0	0			0	-	-	-	-	-	-
Future With Project										
	Speed	Traffic Volumes			Leq			CNEL		
Roadway/Segment	MPH	AM	PM	ADT	ROW	25 Feet	50 Feet	ROW	25 Feet	50 Feet
Palos Verdes Dr East e/o Palos Verdes Dr South	40	242	242	0	64.4	60.3	58.3	65.3	61.3	59.2
0	40			0	-	-	-	-	-	-
0	0			0	-	-	-	-	-	-
0	0			0	-	-	-	-	-	-
0	0			0	-	-	-	-	-	-

CNEL

Summary	25 ft. from ROW		At ROW	
Roadway/Segment	Project Increment	Cumulative Increment	Project Increment	Cumulative Increment
Palos Verdes Dr East e/o Palos Verdes Dr South	0.1	0.2	0.0	0.2
0	-	-	-	-
0	-	-	-	-
0	-	-	-	-
0	-	-	-	-

	% of ADT			
Vehicle Type	Day	Eve	Night	Sub total
Auto	77.6%	11.6%	7.8%	97.0%
Medium Truck	1.6%	0.2%	0.2%	2.0%
Heavy Truck	0.8%	0.1%	0.1%	1.0%
	80.0%	12.0%	8.0%	100.0%

APPENDIX F

FEHR & PEERS TRAFFIC STUDY

TRAFFIC STUDY FOR THE POINT VIEW MASTER PLAN PROJECT

PREPARED FOR:
PCR Services Corporation

SUBMITTED BY:

FEHR PEERS

Santa Monica Office
201 Santa Monica Blvd., Suite 500
Santa Monica, CA 90401
310-458-9916

December 2011

TRAFFIC STUDY
FOR THE
POINT VIEW MASTER PLAN PROJECT

CITY OF RANCHO PALOS VERDES, CALIFORNIA

December 2011

Prepared for:

PCR SERVICE CORPORATION

Prepared by:

FEHR & PEERS
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Ref: 2454

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EXECUTIVE SUMMARY

Fehr & Peers evaluated the potential traffic and circulation impacts of the proposed Point View Master Plan Project (Project) at 6001 Palos Verdes Drive South (PVDS) in the Portuguese Bend area of the City of Rancho Palos Verdes (the "City"). The 94-acre site, also known as Lower Filiorum, is located immediately north of Abalone Cove Shoreline Park in the City of Rancho Palos Verdes. The following summarizes the results of this analysis:

- The Master Use Plan ("proposed project") contains three major components: 1) the expansion of agricultural uses on the property; 2) development of an executive private golf course and improvements to an existing event garden; and, 3) the provision of a paved internal driveway within the property. The private golf course operated by the property owner will only be available to guests of the owner. The proposed event garden for private parties will be limited to 300 guests, with additional service from up to 50 event staff and up to 30 public/private events per year on the property. It was assumed that up to two events per day could potentially occur on any single day, but primarily on weekends. A new paved driveway is proposed to provide primary vehicular access to the property via PVDS. The proposal also includes legalizing after-the-fact a driveway that was paved to provide secondary access to the site from the Narcissa Drive gate at the northeast corner of the site. The volume of vehicles accessing the project site from West Narcissa Drive would remain the same as under current conditions, and would be limited to the landowner, maintenance personnel, and emergency vehicles. Visitors to the event garden and the private golf course and the workers at the agriculture uses will use the main entrance via PVDS. Due to the existing configuration of PVDS, the main project entrance driveway would be limited to right-turn-in and right-turn-out only. Completion of the proposed project is anticipated by year 2012.

  As the project use that generates the highest quantity of daily traffic is the event garden use, the peak project trip generation would be driven by the arrival and departure traffic patterns of the guests and staff at the event garden. The event staff would typically carpool in private autos from their base of operation and would park in the on-site overflow area, if necessary. Additionally, during some events, guests may shuttle to the site using a van or bus. An example of this scenario would be when multiple guests are staying at a nearby hotel. For the purpose of this analysis, an average vehicle ridership (AVR) of 2.5 persons per vehicle was assumed to estimate the event traffic following consultation with City staff. The traffic to the other uses on the property (private golf course and agricultural use) would be minimal and would be relatively sporadic throughout any given day. To provide a conservative analysis, this report assumes that two wedding and/or banquets could occur on the property (one in the late morning followed by reception and another in the late afternoon followed by reception dinner, plus additional sporadic visits to the agricultural use and the private golf course. Based on consultation with City staff, to provide the most conservative analysis, this traffic study analyzes impacts as though the majority of the guests would be arriving or departing during the Friday afternoon peak period or Saturday midday peak period. Under this scenario, the property could generate approximately 313 daily vehicular trips on a typical Friday, including 104 trips in the Friday afternoon peak hour (100 inbound, four outbound). On a typical Saturday, the project is projected to generate approximately 315 trips throughout the day, including 107 trips in the Saturday midday peak hour (102 inbound and five outbound).

- Selection of the study intersections was confirmed based on consultation with the City staff. All six analyzed intersections currently operate at an acceptable level of service (LOS D or better) in the analyzed Friday afternoon peak hour and in Saturday midday peak hour under existing conditions. All six analyzed intersections would continue operating at an acceptable level of service (LOS D or better) under Existing plus Project Conditions and under Future (2012) Cumulative plus Project conditions. The existing intersection where the project access driveway joins PVDS would operate at LOS B in the two analyzed peak periods (Friday afternoon peak hour and Saturday midday peak hour). This internal driveway segment would not be used as a public roadway and vehicles queuing at the stop sign would be limited to the owners, employees, guests and event staff of the project site. The analyzed street segment of PVDS would remain operating at LOS A with and without the project under existing and under future conditions. Therefore, application of the City traffic impact guidelines indicated that the proposed Point View Master Plan project is not expected to significantly impact the City's street system in the study area.

- The project as proposed would provide a total of 140 parking spaces (including marked and unmarked spaces) designated for the event garden use, which would meet the parking demand of an event with up to 300 guests and up to 50 staff (assuming an average vehicle ridership (AVR) of 2.5 persons per vehicle, as the reasonably conservative approach). The workers at the agriculture uses (vineyard and orchards) and the visitors to the private golf course can park in the designated parking area adjacent to the event garden when there is no event on-site or use the overflow parking in the grass field to the west of the event garden or just parking on the paved driveway adjacent to the orchards/vineyards if needed. In the unusual circumstance that additional parking is required; it could be accommodated in the overflow parking area west of the event garden.

- The existing configuration of PVDS in the vicinity of the project site would limit access to the site to right-turns in and right-turns out. Based on consultation with the City staff, this study recommends that the design of the proposed Point View Internal Driveway should separate inbound and outbound vehicles near PVDS with either delineators or physical medians, and the outbound lane should be channelized to reduce the potential for wrong-way travel. In addition, to address an expressed concern for a potential "runaway" vehicle from project driveway, it is recommended that the project site driveway be modified to be rectilinear in its approach to PVDS (i.e., "right" angle). This would give motorists exiting the project site better visibility of the oncoming westbound traffic and cyclists on PVDS. Further, the two intersections where project-related traffic would make U-turn maneuvers (i.e., at Seacove, and at Wayfarers Chapel Driveway) were evaluated and no adverse impacts were identified.

- Analyses of potential impacts on the regional transportation system conducted in accordance with Congestion Management Program (CMP) requirements determined that the project would not have a significant impact on either the CMP monitored arterial highway network or the mainline freeway system.

CHAPTER 1. INTRODUCTION

Fehr & Peers evaluated the potential traffic and circulation impacts of the proposed Point View Master Plan Project (Project) at 6001 Palos Verdes Drive South (PVDS) in the Portuguese Bend area of the City of Rancho Palos Verdes (the "City"). The 94-acre site, also known as Lower Filiorum, is located immediately north of Abalone Cove Shoreline Park in the City of Rancho Palos Verdes. This report identifies the base assumptions, describes the methods, and summarizes the findings of the study.

PROJECT DESCRIPTION

The project property is bordered by undeveloped hills, terraces, and canyons to the north, the Portuguese Bend community and Wayfarers Chapel to the east, PVDS, and along the coast, Abalone Cove Shoreline Park to the south, and Upper Abalone Cove Community to the west and a wastewater pump station owned and maintained by the Los Angeles County Sanitation District.

The Master Use Plan ("proposed project") contains three major components: 1) the expansion of agricultural uses on the property; 2) development of an executive private golf course and improvements to an existing event garden; and, 3) the provision of a paved internal driveway through the property. The private golf course will be operated by the property owner and only be available to guests of the owner. The event garden for private parties will be limited to 300 people per event (not including event staff and security/safety personnel) and for up to 30 public/private events per year on the property. The proposed event garden could attract up to 750 people to an occasional special charity event. The City staff recognized that the special occasional events up to 750 attendants may only occur annually on weekends or may not occur at all. The project applicant will be required to submit a Special Use Permit for the City's approval prior to such events, and parking for these occasional events will be addressed in the Special Use Permit.

Figure 1 illustrates the conceptual site plan. A new paved driveway is proposed to provide primary vehicular access to the property via PVDS. The proposal also includes legalizing after-the-fact a driveway that was paved to provide secondary emergency access to the site from the Narcissa Drive gate at the northeast corner of the site. The volume of vehicles accessing the project site from West Narcissa Drive would remain the same as under current conditions, and would be limited to the landowner, maintenance personnel, and emergency vehicles. Visitors to the event garden and the private golf course and the workers at the agriculture uses will use the main entrance via PVDS. Due to the existing configuration of PVDS, the main project entrance driveway would be limited to right-turn-in and right-turn-out only. Completion of the proposed project is anticipated by year 2012.

STUDY SCOPE

The scope of work for this study was developed through discussion with City of Rancho Palos Verdes staff. The base assumptions and technical methodologies were discussed as part of the study approach. City staff recognized that the special occasional events up to 750 attendants may only occur annually on weekends or may not occur at all. The project applicant will be required to submit a Special Use Permit for City approval prior to such events and coordinate with the City staff to minimize any potential traffic effects in the study area. Therefore, the City's direction is that the focus of the traffic study should be to analyze the typical operations at the event gardens with up to 300 guests per event and that a traffic analysis for the occasional event with 750 guests is not required for the project.

The study, which analyzes potential project-generated traffic impacts on the adjacent street system, anticipates that the project will be completed by 2012. The following traffic scenarios have been developed and analyzed as part of this study:

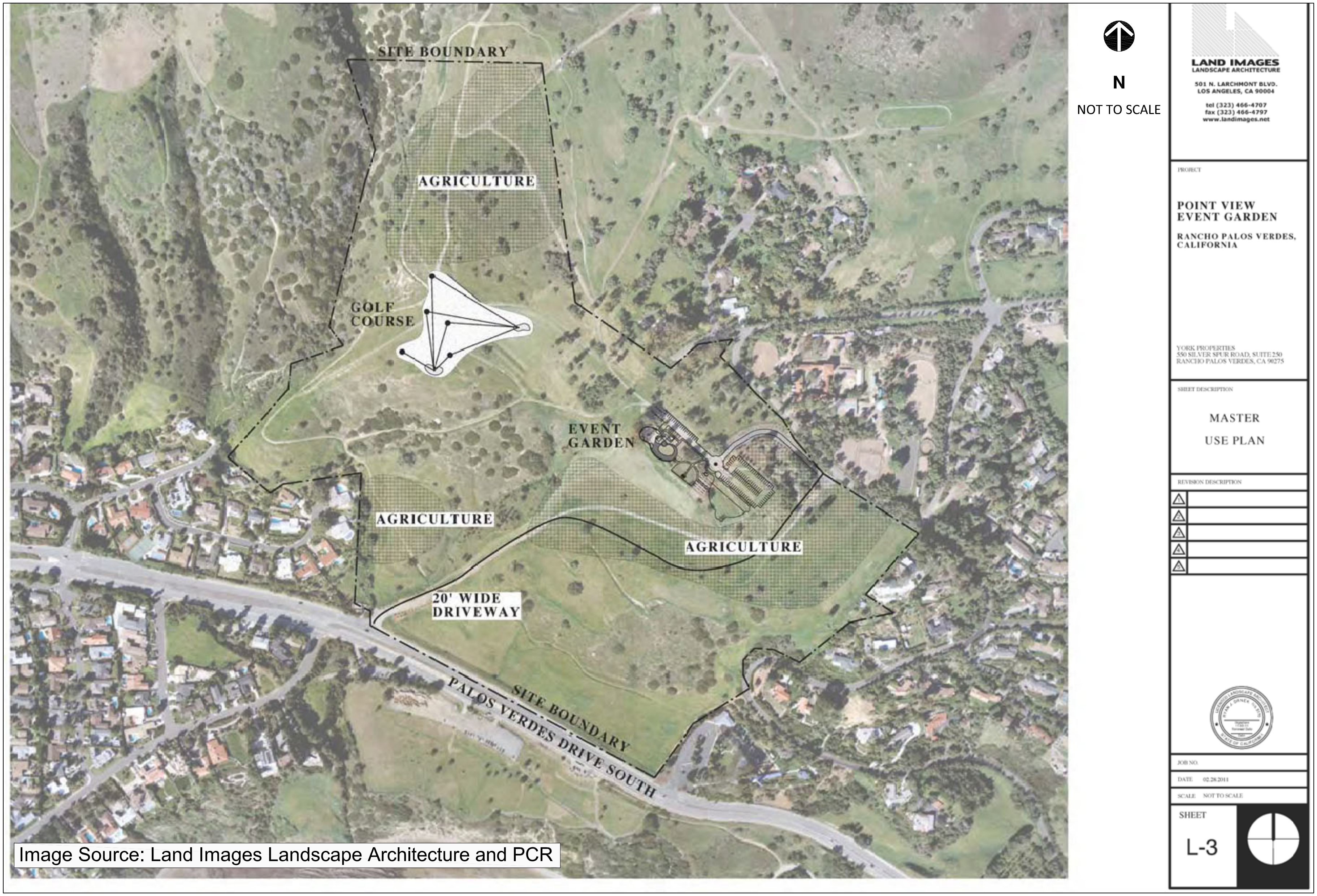

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FIGURE 1
PROPOSED CONCEPTUAL SITE PLAN

- Existing (2011) Conditions – Analysis of existing traffic conditions is intended to provide a basis for the remainder of the study. The existing conditions analysis includes an assessment of the street system serving the site, traffic volumes, and current operating conditions.

- Existing plus Project (2011) Conditions – This scenario includes traffic changes caused by the project under existing baseline conditions, assuming the project will be completed by the end of year 2011. An assessment will be made of projected existing and existing plus project operating conditions, and potential traffic impacts of the proposed project will be identified.

- Future Cumulative Base (i.e., No Project) (2012) Conditions – Future traffic conditions without the proposed project were developed for the year 2012. The objective of this analysis is to project future traffic growth and operating conditions that could be expected to result from regional growth and related projects in the vicinity of the project site by the year 2012.

- Future Cumulative Base plus Project (2012) Conditions – Future traffic conditions with the proposed project were developed for the year 2012. This traffic scenario provides projected traffic volumes and an assessment of operating conditions under future conditions with addition of project-generated traffic. The potential impacts of the proposed project on future traffic conditions were then identified.

We understand the proposed hours of operation for the most traffic-intensive use of the project, the event garden use, would be limited to 8:00 AM until 10:00 PM on any day, with the typical event lasting approximately three to five hours. Because the most intensive uses of the recreational use and special events normally occur on weekends, they are not expected to generate significant traffic on the surrounding street system during the morning peak period on a typical weekday. The potential vehicular traffic generated by the project could contribute traffic to the adjacent City street system on Fridays and on weekends. Therefore, based on consultation with the City staff, to provide the most conservative analysis, this traffic study analyzes impacts as though guests would be arriving or departing during the following two peak periods when intensive project vehicular activity are likely to occur, including:

- Friday afternoon peak period
- Saturday midday peak period

Selection of the study intersections was confirmed based on consultation with the City staff. Four intersections that provide regional and local access to the project were selected for the project traffic impact analysis, including:

- Via Rivera & Hawthorne Boulevard
- PVDW & Hawthorne Boulevard/Via Vicente
- PVDS & Palos Verdes Drive East (PVDE)
- PVDS & Point View Internal Driveway (future project driveway intersection)

In addition, site-access impacts were evaluated at the following two intersections nearest to the project site where some project-related traffic would be expected to make U-turns:

- PVDS & Seacove Drive
- PVDS & Wayfarers Chapel Internal Driveway

ORGANIZATION OF REPORT

This report is divided into five chapters. Chapter 2 consists of this introduction. Chapter 2 describes the existing conditions in the study area, including an inventory of the streets in the study area, a summary of existing traffic volumes, and an assessment of the operating conditions of these streets. The methodologies used to develop traffic forecasts are included in Chapter 3. Chapter 4 presents an assessment of potential project traffic, review of project site access and circulation analysis and the parking code analysis. Chapter 5 presents the regional Congestion Management Program analysis. Appendices to this report include details of the technical analysis.

CHAPTER 2. EXISTING CONDITIONS

A comprehensive data collection effort was undertaken to develop a detailed description of existing conditions within the study area. The assessment of conditions relevant to this study includes a description of the study area, an inventory of the local street system in the vicinity of the project site, a review of existing traffic volumes on these facilities and an assessment of their current operating conditions, and the existing transit service in the study area.

EXISTING STREET SYSTEM

As shown in Figure 2, access to the project site would be provided by the proposed Point View Internal Driveway. The study area for this analysis is bounded by PVDW on the west, Crest Road to the north, and PVDE to the east. Regional access to the site is provided by PVDS and Hawthorne Boulevard. Table 1 describes the physical characteristics of the key streets in the study area. Following is a quick summary of the major arterials in the study area:

- PVDS is an Arterial street within the City. This arterial is immediately adjacent to the project site and traverses the entire City in the northwest/southeast direction. The arterial provides two lanes of traffic in each direction, separated by a raised center median. East of Wayfarers Chapel or Narcissa Drive, PVDS generally provides one lane of traffic in each direction with opposing lanes of traffic separated by a landscaped median (or an earth median) or a double-yellow line. The posted speed limit on PVDS varies between 35 and 45 mph within the City limits.

- PVDE is currently identified as an Arterial located approximately 2.7 miles west of the proposed Point View project site. PVDE provides one lane of traffic in each direction, except for the section from Calle Aventura to Ganado Drive, which has four lanes of traffic. Opposing lanes of traffic are generally separated by a double yellow centerline, except on either side of Crest Road, where it is separated by a raised median. The posted speed limit is 40 mph on PVDE, except in the vicinity of Ganado Drive, where it is 35 mph and north of Miraleste Drive, where it is 30 mph within the City limits.

- Palos Verdes Drive West (PVDW) is identified as an Arterial located approximately two miles west of the proposed Point View project site. PVDW provides two lanes of traffic in each direction. Opposing lanes of traffic are separated by a raised median. The posted speed limit is 45 mph on PVDW within the City limits.

- Hawthorne Boulevard is an Arterial traversing the entire City. It provides two lanes of traffic in each direction separated by a raised center median in the study area. The posted speed limit on Hawthorne Boulevard varies between 40 mph and 45 mph within the City limits.

EXISTING TRAFFIC VOLUMES AND INTERSECTION LEVELS OF SERVICE

This section presents the existing peak hour turning movement traffic volumes for each of the intersections analyzed in the study, describes the methodology used to assess the traffic conditions at each intersection, and analyzes the resulting operating conditions at each intersection in terms of volume-to-capacity (V/C) ratios and average control delay in seconds (for unsignalized intersections) and the corresponding levels of service.

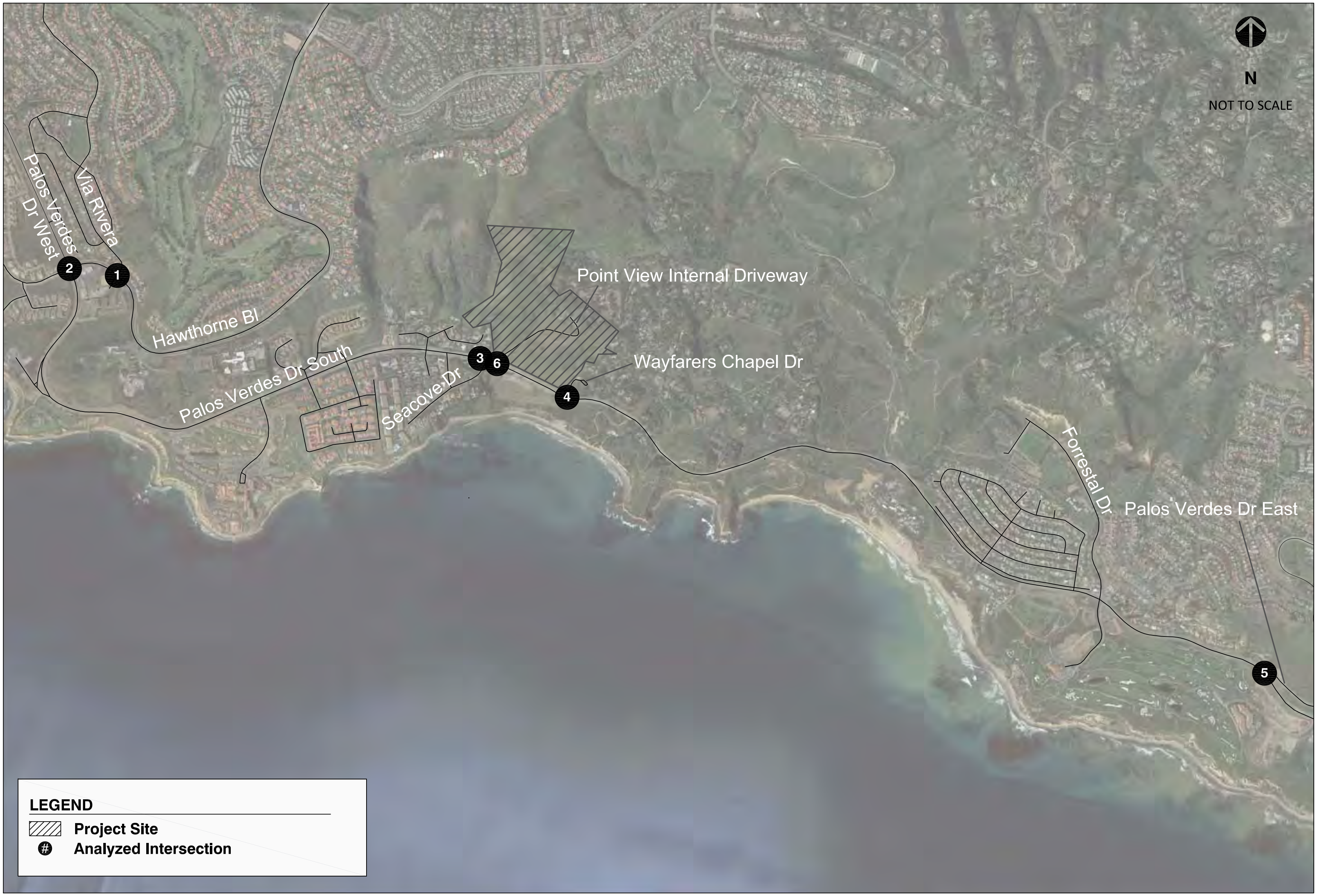

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FIGURE 2
PROJECT STUDY AREA AND ANALYZED INTERSECTIONS

TABLE 1
EXISTING SURFACE STREET CHARACTERISTICS

SEGMENT	FROM	TO	LANE NB/EB	LANE SB/WB	MEDIAN TYPE	PARKING RESTRICTIONS NB/EB	PARKING RESTRICTIONS SB/WB	SPEED LIMIT
Palos Verdes Drive South	East of Palos Verdes Drive East	Ocean Trails/Forrestal Drive	1	1	RM/2DY	NSAT	NSAT	40
	Ocean Trails/Forrestal Drive	Peppertree Drive	1	1	RM	NSAT	NSAT	40/35
	Peppertree Drive	Narcissa Drive	1	1	RM/2DY	NSAT	NSAT	35
	Narcissa Drive	Seacove Drive	2	2	RM	NSAT	NSAT	35/45
	Seacove Drive	Barkentine Road	2	2	RM	NSAT	NSAT	45
	Barkentine Road	Hawthorne Boulevard	2	2	RM	NSAT	NSAT	45
Palos Verdes Drive West	Hawthorne Boulevard	Alida Place	2	2	RM	NSAT	NSAT	45
Forrestal Drive	Palos Verdes Drive South	Pirate Drive	1	1	SDY	PA	PA	35
Ocean Trails Drive	Palos Verdes Drive South	Ocean Trails Drive terminus	1	1	UD/DY	PA	PA	25
Barkentine Road	northern terminus	Palos Verdes Drive South	1	1	UD/DY	NSAT,9a-5p,Permit Exempt	NSAT,Permit Exempt	25
	Palos Verdes Drive South	Seacove Drive	1	1	UD	NSAT,Permit Exempt	NSAT,Permit Exempt	25
Hawthorne Boulevard	Palos Verdes Drive South	Vallon Drive	2	2	RM	NSAT	NSAT	45
	Vallon Drive	Crest Road	2	2	RM	NSAT	NSAT	45
Via Vicente	Palos Verdes Drive West	Palos Verdes Drive West	1	1	RM/UD	NSAT	NSAT	30
Seacove Drive	Palos Verdes Drive South	Terminus	1	1	UD	NSAT,Permit Exempt	NSAT,Permit Exempt	25
Palos Verdes Drive East	Palos Verdes Drive South	Crest Road	1	1	DY	NSAT	NSAT	35/40

Notes:

MEDIAN TYPE: DY = Double Yellow Centerline
SDY = Single Dashed Yellow Centerline
RM = Raised Median
UD = Undivided Lane
2DY= Two Double Yellow Centerlines

PARKING: PA = Parking Allowed
NSAT = No Stopping Anytime

LANES: # = Number of lanes

Existing Traffic Volumes

Because the most intensive uses of the recreational use and special events normally occur on weekends, they are not expected to generate significant traffic to the surrounding street system during the morning peak period on a typical weekday. To provide a reasonably conservative analysis, traffic counts were taken on a weekend to capture the intensive traffic activities at nearby uses in the study area. Based on the event schedule information from Wayfarers Chapel staff, the City selected the three-day weekend between March 18 and 20 for the baseline data collection, as this data would represent the typical peak background traffic conditions for the study area when there were active operations at the adjacent Wayfarers Chapel and the tourist traffic to the beach area.

The activities during this three-day period at the Wayfarers Chapel included:

- One wedding at 6:00 PM on Friday, March 18, 2011
- Five weddings at 10:00 AM, noon, 2:00 PM, 4:00 PM and 6:00 PM on Saturday, March 19, 2011
- Three weddings at 2:00 PM, 4:00 PM and 6:00 PM on Sunday, March 20, 2011

New baseline intersection turning movement counts were collected at the six identified study locations (including the U-turns on Wayfarer Chapel driveway & PVDS and Seacove Drive & PVDS) for a two-hour afternoon peak period from 4:00 to 6:00 PM on Friday, March 18 and a two-hour Saturday midday peak period from noon to 2:00 PM.

One 24-hour machine count was collected on PVDS immediately adjacent to the project entrance driveway (between Seacove Drive and the Wayfarers Chapel driveway) for three continuous days for the same three-day period. A review of the machine count on PVDS over this three-day period indicated that there was minimal difference between the daily traffic volumes collected on Saturday March 19, 2011 and on Sunday March 20, 2011. Therefore, the City agreed that that traffic impact analysis for the Saturday peak hour would provide a reasonable baseline conditions to determine the potential project-related traffic impact for both Saturdays and Sundays.

Figure 3 illustrates the existing lane configuration of the study locations and the traffic volumes for the analyzed Friday afternoon peak hour and Saturday midday peak hour. Appendix A contains the detailed traffic count data.

Intersection Level of Service Methodology

Level of service (LOS) is a qualitative measure used to describe the condition of traffic flow on the street system, ranging from excellent conditions at LOS A to overloaded conditions at LOS F. LOS D is typically recognized as the minimum acceptable level of service in urban areas, while LOS E and F indicate a congested (unacceptable) situation. Of the existing analyzed intersections, only PVDW & Hawthorne Boulevard/Via Vicente Drive is currently controlled by traffic signal. The other five existing intersections are controlled by stop signs on the minor approaches.

The Intersection Capacity Utilization (ICU) method of intersection analysis was used to determine the intersection V/C ratio (i.e., ICU value) and corresponding LOS for the turning movements and intersection characteristics at signalized intersections. The lane capacity used for this ICU analysis was 1,600 vehicles per hour. Table 2 defines ICU-based levels of service for signalized intersections. In addition, 2000 *Highway Capacity Manual* (HCM) (Transportation Research Board, 2000) methodology was utilized to analyze the unsignalized intersections, based on the estimated vehicle delay times. An explanation of LOS as it relates to vehicle delay for the 2000 HCM analysis is provided in Table 3.

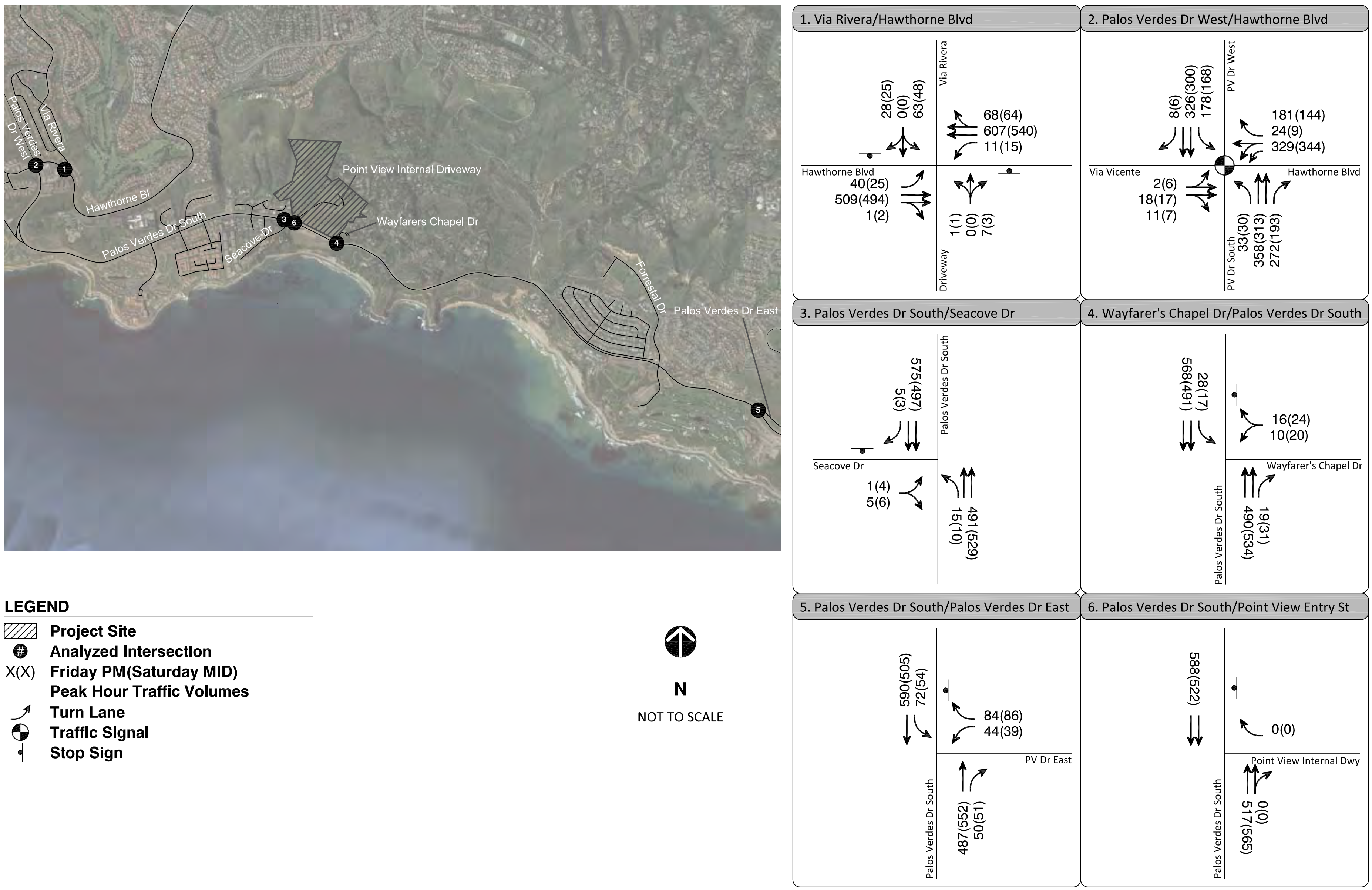

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FIGURE 3
EXISTING LANE CONFIGURATIONS AND PEAK HOUR TRAFFIC VOLUMES

TABLE 2
LEVEL OF SERVICE DEFINITIONS FOR SIGNALIZED INTERSECTIONS

LEVEL OF SERVICE	VOLUME/CAPACITY RATIO (V/C) or INTERSECTION CAPACITY UTILIZATION (ICU)	DEFINITION
A	≤ 0.600	EXCELLENT. No vehicle waits longer than one red light, and no approach phase is fully used.
B	$> 0.600 \leq 0.700$	VERY GOOD. An occasional approach phase is fully utilized; many drivers begin to feel somewhat restricted within groups of vehicles.
C	$> 0.700 \leq 0.800$	GOOD. Occasionally drivers may have to wait through more than one red light; backups may develop behind turning vehicles.
D	$> 0.800 \leq 0.900$	FAIR. Delays may be substantial during portions of the rush hours, but enough lower volume periods occur to permit clearing of developing lines, preventing excessive backups.
E	$> 0.900 \leq 1.000$	POOR. Represents the most vehicles intersection approaches can accommodate; may be long lines of waiting vehicles through several signal cycles.
F	> 1.000	FAILURE. Backups from nearby locations or on cross streets may restrict or prevent movement of vehicles out of the intersection approaches. Tremendous delays with continuously increasing queue lengths.

SOURCE: Transportation Research Board, *Transportation Research Circular No. 212, Interim Materials on Highway Capacity* , 1980.

TABLE 3
LEVEL OF SERVICE DEFINITIONS FOR STOP-CONTROLLED INTERSECTIONS

Level of Service	Control Delay (seconds/vehicle)
A	≤10.0
B	>10.0 and <15.0
C	>15.0 and <25.0
D	>25.0 and <35.0
E	>35.0 and <50.0
F	>50.0

* Source: Highway Capacity Manual, Transportation Research Board, 2000.

Existing Levels of Service

The traffic volumes presented in Figure 3 were analyzed using the methodologies described above to determine the current operating conditions at the study locations. Of the existing analyzed intersections, only the intersection of PVDW & Hawthorne Boulevard/Via Vicente Drive is currently controlled by a traffic signal. The other four existing intersections are controlled by stop signs on the minor approaches. Table 4 summarizes the results of this analysis, indicating the existing Friday afternoon peak hour and Saturday midday peak hour ICU value (also known as the V/C ratio for signalized intersections) or vehicle delay in seconds (for unsignalized intersections) and corresponding level of service at each of the analyzed locations. In addition, the ICU value was measured at the stop-controlled intersections for information only, per request of City staff.

As shown in Table 4, all six analyzed locations are operating at LOS D or better (meeting the City's minimum thresholds) during the Friday afternoon peak hour and the Saturday midday peak hour.

The only signalized study intersection at PVDW & Hawthorne Boulevard/Via Vicente is currently operating at excellent levels of service (LOS A) during the afternoon peak hour on a typical Friday and the midday peak hour on a typical Saturday. For unsignalized intersections, the average vehicle delay was reported for the worst-case movement. The HCM analysis indicated that the traffic on Hawthorne Boulevard currently runs free flow and the motorists exiting Via Rivera currently experience some delay (LOS D on Friday afternoon and LOS C on Saturday midday) before they can find a gap in the traffic on Hawthorne Boulevard and merge with through traffic on Hawthorne Boulevard. The other four study intersections on PVDS were reported to operate at good LOS C or better during the Friday afternoon peak hour and the Saturday midday peak hour.

EXISTING TRANSIT SERVICE

Bus transit service serving the immediate vicinity of the project site is provided by the Los Angeles County Metropolitan Transportation Authority (Metro) and the Palos Verdes Peninsula Transit Authority (PVPTA), as described below:

- Metro Line 344 – Line 344 runs between the City of Rancho Palos Verdes and the Harbor Gateway Communities. It travels between the intersection of PVDS and Seacove Drive and the Artesia Transit Center via PVDS, Hawthorne Boulevard, and Artesia Boulevard. Weekday headways are approximately 30 to 35 minutes each way in the weekday AM peak periods and approximately 40 minutes in the weekday PM peak hour. On Saturdays and holidays, this lines operates with the headway of approximately 40 minutes in each direction during the afternoon.

- PVPTA Gold Line – This line operates only on school days between Miraleste School on PVDE and Pt. Vicente School. It primarily travels on PVDE, PVDS and PVDW. As the service is provided mainly for the school students and employees on school days, this line only runs two outbound trips (westbound from the Reservoir to the Palos Verdes High School) between 6:20 and 8:00 AM and two inbound (eastbound) trips retuning to the Reservoir between 12:30 and 2:00 PM.

- PVPTA Orange Line – This line generally follows the PVPTA Gold Line but travels further between Palos Verdes High School and Palos Verdes Reservoir on school days. It travels on PVDW, PVDS, PVDE, 1st Street and Western Avenue. As the service is provided mainly for the school students and employees on school days, this line only runs two outbound trips (westbound from the Reservoir to the Palos Verdes High School) between 6:20 and 8:00 AM and two inbound (eastbound) trips returning to the reservoir between 12:30 and 2:00 PM.

TABLE 4
EXISTING (YEAR 2011) INTERSECTION OPERATING CONDITIONS

Intersection	Control Type	Peak Hour	Existing 2011 ICU	Existing 2011 Delay	Existing 2011 LOS
1. Via Rivera & Hawthorne Boulevard [1]	One-way Stop	Friday PM	0.373	26.3	D
		Sat Midday	0.332	19.9	C
2. Palos Verdes Drive West & Hawthorne Blvd/Via Vicente [2]	Signal	Friday PM	0.471	-	A
		Sat Midday	0.450	-	A
3. Palos Verdes Drive South & Seacove Drive [1]	One-way Stop	Friday PM	0.294	11.3	B
		Sat Midday	0.273	12.4	B
4. Palos Verdes Drive South & Wayfarers Chapel Drive [1]	One-way Stop	Friday PM	0.294	12.9	B
		Sat Midday	0.306	13.7	B
5. Palos Verdes Drive South & Palos Verdes Drive East [1]	One-way Stop	Friday PM	0.499	18.2	C
		Sat Midday	0.516	17.1	C
6. Palos Verdes Drive South & Point View Internal Driveway [1]	One-way Stop	Friday PM	0.284	*	A
		Sat Midday	0.277	*	A

Notes:
*Negligible.
[1] Intersection is controlled by stop sign(s) on minor approach(es) and was analyzed using the delay-based 2000 HCM unsignalized intersection methodology per the City's traffic study guidelines. The intersection LOS is determined based on the estimated vehicle delay. The ICU value was measured at these stop-controlled intersections for information only, per the request of City staff.

[2] Intersection is controlled by a signal and was analyzed based on the capacity-based ICU methodology per the City's traffic study guidelines. The LOS is determined based on the estimated ICU values.

EXISTING BICYCLE AND PEDESTRIAN FACILITIES

Bike lanes currently exist on PVDS in both directions in the vicinity of the study area. The study area has high bicycle activity on Fridays and on weekends. For example, the Palos Verdes Bicycle Club has a weekly 24-mile ride scheduled every Friday, starting around 9:15 AM, originating from the Rolling Hills City Hall, traveling east on Palos Verdes Drive North to either Western Avenue or PVDE, then to PVDS, stopping at the Golden Cove Center at about 10:15 AM, and traveling north back to Rolling Hills City Hall. This cycling group was often observed with approximately 100 to 150 cyclists traveling on PVDS during the early morning around 8:00 AM on weekends. Some casual riders may travel through PVDS on weekend afternoons.

There is no walkway on the north side of PVDS against the project frontage. The walkway on the south side of PVDS does exist, but only the segments immediately abutting homes are paved. Pedestrian activity is generally light during the weekdays. During weekend afternoons in good beach weather, tourist activities were often observed in the Abalone Cove Shoreline Park on the south side of PVDS and in the Wayfarers Chapel property when there are weddings or events on-site.

As the project event traffic would primarily occur later in the day, in the late morning period or late afternoon period (Friday or weekends), some pedestrians and bicycle activity on PVDS is likely to occur along PVDS in the study area, but is <u>not</u> expected to be significantly impacted by the typical project event traffic.

CHAPTER 3. TRAFFIC PROJECTIONS

In order to evaluate properly the potential impact of the proposed project on the local street system, it was necessary to develop estimates of projected baseline conditions both with and without the project. Traffic generated by the proposed project was then estimated and separately assigned to the surrounding street system assuming the project approval and project traffic were in place under both existing baseline conditions and under anticipated project build-out year 2012 conditions.

PROJECT TRAFFIC VOLUMES

The development of traffic generation estimates for the proposed project involves the use of a three-step process, including traffic generation, trip distribution, and traffic assignment.

Project Traffic Generation

Based on discussions with the City staff and project team, project trip generation were developed for the nominal events of up to 300 guests per event and periodical visits to the agricultural use and the private golf course use. Trip generation rates from standard sources such as the Institute of Transportation Engineers (ITE) do not lend themselves to the proposed project uses. Instead, project trip generation were estimated by direct application of appropriate mode split/vehicle occupancy ratios and in/out factors to the patronage estimates for the various events that could occur in the various project venues. Empirical mode split/vehicle occupancy rates were obtained from City staff or other similar studies and experience in the study area. The following describes the trip generation estimates for each of the project land uses.

<u>Event Garden</u>

Based on the project description prepared by PCR Services Corporation, the event garden has been used periodically over recent years for several purposes, including the Las Candalistas (Walk On The Wildside) charity event, the U.S. Pony Club, the filming of movies, television shows, and commercials, and for private parties hosted by the owner. Historically, there have been about 10 to 20 events held on the site per year. Under the proposed project, these uses would likely continue; however, the Master Use Plan would allow up to 30 events per year on the property, including five events reserved for non-profit organizations or public agencies. Events will include:

- Fund raising and charity events
- Private parties
- Public and community events
- Weddings and receptions
- Corporate parties
- Outdoor conferences
- Educational events

Given that there could be a variety of activity levels taking place in the proposed event garden, it is proposed that trip generation estimates be prepared for reasonably foreseeable event scenarios (e.g., an event with 300 guests and 50 event staff). For any other event that would generate over 300 people, the proposal includes requiring approval of a Special Use Permit by the Community Development Department, or other process as established by the Conditional Use Permit associated with the proposed project application proposal. While no two events are identical, based on historical and recent events at the project site, the traffic analysis assumed that each event could host up to 300 attendees plus additional 50 event staff (catering/security/florists, etc.).

During the event planning process, it is expected that a series of timed appointments with the property's sales team and typically one or two members may visit the project site. These meetings would likely involve a limited number of participants, typically no more than three to five guests at a time. All meetings would be by appointment only and due to their nature, would rarely overlap with other on-site activities. Hours for meetings would typically be between 10:00 AM and 6:00 PM, seven days a week. The day prior to an event would be when the setup would typically take place. The event planners and/or the wedding party, ranging from 10 to 30 people, could visit the site for rehearsals. Equipment would arrive at the site during the daylight hours and could include items regularly ordered for a wedding ceremony; a cocktail reception area; seating and tables for all guests; and beverage and bar service. The typical rental company would likely use two delivery vehicles for an event of this size.

The peak project trip generation would not be determined by this pre-event traffic, but instead would be driven by the arrival and departure traffic patterns of the guests and staff at the event garden on the day of the events (primarily Fridays or weekends). For events with 300 guests, a total of 30 to 50 staff is generally anticipated. Based on consultation with City staff, the traffic analysis assumed that up to two events could occur on any given day, with one wedding at 11:00 AM followed by a reception lunch and another wedding at 4:00 PM, followed by dinner reception. Each event may last for approximately three to five hours.

Because the most intensive uses of the recreational use and special events normally occur on weekends, they are not expected to generate significant traffic on the surrounding street system during the morning peak period on a typical weekday. Therefore, based on consultation with City staff, this study analyzed two peak periods when intensive project vehicular activity is likely to occur, the Friday afternoon peak period and the Saturday midday peak period. Table 5A and Table 5B summarize the traffic arrival and departure patterns for the assumed two events on any given weekday (primarily Fridays) and on a typical Saturday, respectively.

As shown in Table 5A and 5B, the event staff would typically carpool in private autos from their base of operation and would park in the on-site overflow area, if necessary. Additionally, during some events, guests may shuttle to the site using a van or bus. An example of this scenario would be when multiple guests are staying at a nearby hotel. For the purpose of this analysis, an average vehicle ridership (AVR) of 2.5 persons per vehicle was assumed to estimate the event traffic per the City's direction as the reasonably conservative approach. Therefore, an event of up to 300 guests and 50 event staff is projected to generate 120 vehicles. It is anticipated that about 10% of the event staff (supervisory staff and vendors) would arrive two to three hours prior to the start time of the event. As is often the case, it is anticipated that approximately 10% of the invited guests could arrive up to an hour and a half prior to start time. The remaining 90% of the guests would likely arrive starting about 35 to 40 minutes prior to the event with the largest flow about 20 minutes prior to the event and then trickle down to about 15 to 20 minutes after scheduled start time. The departure pattern is anticipated to be similar, beginning 1.5 hours before scheduled end time, and continue to the end of the event. There is rarely a large rush to depart social events such as those proposed for the project site. The event staff would leave the site approximately 45 minutes to one hour after the scheduled event end time.

Peak trip generation may not occur during Friday afternoon or Saturday midday, and actual events may not be held at the specific start time listed in Table 5A and 5B. However, based on consultation with the City staff, to provide most conservative analysis, this traffic study assumed the worst-case scenario that the majority of the guests would be arriving or departing during the Friday afternoon peak period or Saturday midday peak period. The analysis captured the reasonably conservative scenario on any typical weekend day when a few late departures from an earlier event overlapped with a few early arrivals to the next event on-site. As shown in Table 5A, the peak trip generation of the event garden that would occur during a Friday afternoon commute peak hour (5:00 to 6:00 PM) would be the inbound traffic (98 vehicles) to an evening event that day. The outbound traffic from the project site would be minimal during the commute peak hour. On a typical Saturday, Table 5B indicates that the peak trip generation (approximately 100 trips) that would occur during the Saturday midday period and would primarily be the

TABLE 5A
ASSUMED TRAFFIC ARRIVAL AND DEPARTURE PATTERNS AT THE EVENT GARDENS ON A TYPICAL FRIDAY

	Event Garden Use								
Potential Start Time for Event*	Late Morning Event (Assumed 11:00 AM)				Evening Event (Assumed 6:00 PM)				
	Guests		Event Staff		Guests		Event Staff		
No. of People (Maximum)	Max. 300		Max. 50		Max. 300		Max. 50		
AVR	2.50		2.50		2.50		2.50		
No. of Vehicles	120		20		120		20		
TIME OF ARRIVALS	% Arrival	Number of Arrived Vehicles	% Arrival	Number of Arrived Vehicles	% Arrival	Number of Arrived Vehicles	% Arrival	Number of Arrived Vehicles	Total Number of Arrived Vehicles by Time of Day
8-9 AM	0%	0	10%	2	0%	0	0%	0	2
9-10 AM	10%	12	80%	16	0%	0	0%	0	28
10-11 AM	80%	96	10%	2	0%	0	0%	0	98
11-12 AM	10%	12	0%	0	0%	0	0%	0	12
12-1 PM	0%	0	0%	0	0%	0	0%	0	0
1-2 PM	0%	0	0%	0	0%	0	0%	0	0
2-3 PM	0%	0	0%	0	0%	0	0%	0	0
3-4 PM	0%	0	0%	0	0%	0	10%	2	2
4-5 PM	0%	0	0%	0	10%	12	80%	16	28
5-6 PM	0%	0	0%	0	80%	96	10%	2	98
6-7 PM	0%	0	0%	0	10%	12	0%	0	12
7-8 PM	0%	0	0%	0	0%	0	0%	0	0
8-9 PM	0%	0	0%	0	0%	0	0%	0	0
9-10 PM	0%	0	0%	0	0%	0	0%	0	0
TOTAL	100%	120	100%	20	100%	120	100%	20	280
TIME OF DEPARTURES	% Departure	Number of Departed Vehicles	% Departure	Number of Departed Vehicles	% Departure	Number of Departed Vehicles	% Departure	Number of Departed Vehicles	Total Number of Departed Vehicles by Time of Day
8-9 AM	0%	0	0%	0	0%	0	0%	0	0
9-10 AM	0%	0	0%	0	0%	0	0%	0	0
10-11 AM	0%	0	0%	0	0%	0	0%	0	0
11-12 AM	0%	0	0%	0	0%	0	0%	0	0
12-1 PM	10%	12	0%	0	0%	0	0%	0	12
1-2 PM	80%	96	10%	2	0%	0	0%	0	98
2-3 PM	10%	12	90%	18	0%	0	0%	0	30
3-4 PM	0%	0	0%	0	0%	0	0%	0	0
4-5 PM	0%	0	0%	0	0%	0	0%	0	0
5-6 PM	0%	0	0%	0	0%	0	0%	0	0
6-7 PM	0%	0	0%	0	0%	0	0%	0	0
7-8 PM	0%	0	0%	0	0%	0	0%	0	0
8-9 PM	0%	0	0%	0	10%	12	0%	0	12
9-10 PM	0%	0	0%	0	90%	108	100%	20	128
TOTAL	100%	120	100%	20	100%	120	100%	20	280

Summary of Trip Generation by Hour	Inbound	Outbound	Total	
9-10 AM	28	0	28	
10-11 AM	98	0	98	
11-12 AM	12	0	12	
12-1 PM	0	12	12	
1-2 PM	0	98	98	
2-3 PM	0	30	30	
3-4 PM	2	0	2	
4-5 PM	28	0	28	
5-6 PM	98	0	98	*Highest trip generation during a typical Friday afternoon peak period
6-7 PM	12	0	12	

*Note: Peak trip generation may not occur during Friday afternoon or Saturday midday; and that actual events may not be held at the specific start time listed in this table. However, based on consultation with the City staff, to provide most conservative analysis, this traffic study assumed the worst-case scenario that the majority of guests would be arriving or departing during the Friday afternoon peak period or Saturday midday peak period. For the purpose of the analysis, assumed two wedding and/or banquets could occur on the property (one in the late morning followed by reception and another in the late afternoon followed by reception dinner, plus additional sporadic visits to the agricultural use and the private golf course. On a typical Friday, the analysis assumed a luncheon event starting at 11:00 AM, an evening event starting at 6:00 PM. The analysis assumed that each typical event last approximately three to five hours.

TABLE 5B
ASSUMED TRAFFIC ARRIVAL AND DEPARTURE PATTERNS AT THE EVENT GARDENS ON A TYPICAL SATURDAY

	Event Garden Use								
Potential Start Time for Event	**Late Morning Event (Assumed 11:00 AM)**				**Late Afternoon Event (Assumed 4:00 PM)**				
	Guests		**Event Staff**		**Guests**		**Event Staff**		
No. of People (Maximum)	Max. 300		Max. 50		Max. 300		Max. 50		
AVR	2.50		2.50		2.50		2.50		
No. of Vehicles	120		20		120		20		
TIME OF ARRIVALS	% Arrival	Number of Arrived Vehicles	% Arrival	Number of Arrived Vehicles	% Arrival	Number of Arrived Vehicles	% Arrival	Number of Arrived Vehicles	**Total Number of Arrived Vehicles by Time of Day**
8-9 AM	0%	0	**10%**	**2**	0%	0	0%	0	2
9-10 AM	**10%**	**12**	**80%**	**16**	0%	0	0%	0	28
10-11 AM	**80%**	**96**	**10%**	**2**	0%	0	0%	0	98
11-12 AM	**10%**	**12**	0%	0	0%	0	0%	0	12
12-1 PM	0%	0	0%	0	0%	0	0%	0	0
1-2 PM	0%	0	0%	0	0%	**0**	**10%**	**2**	**2**
2-3 PM	0%	0	0%	0	**10%**	**12**	**80%**	**16**	28
3-4 PM	0%	0	0%	0	**80%**	**96**	**10%**	**2**	**98**
4-5 PM	0%	0	0%	0	**10%**	**12**	0%	**0**	12
5-6 PM	0%	0	0%	0	0%	0	0%	0	0
6-7 PM	0%	0	0%	0	0%	0	0%	0	0
7-8 PM	0%	0	0%	0	0%	0	0%	0	0
8-9 PM	0%	0	0%	0	0%	0	0%	0	0
9-10 PM	0%	0	0%	0	0%	0	0%	0	0
TOTAL	**100%**	**120**	**100%**	**20**	**100%**	**120**	**100%**	**20**	**280**
TIME OF DEPARTURES	% Departure	Number of Departed Vehicles	% Departure	Number of Departed Vehicles	% Departure	Number of Departed Vehicles	% Departure	Number of Departed Vehicles	**Total Number of Departed Vehicles by Time of Day**
8-9 AM	0%	0	0%	0	0%	0	0%	0	0
9-10 AM	0%	0	0%	0	0%	0	0%	0	0
10-11 AM	0%	0	0%	0	0%	0	0%	0	0
11-12 AM	0%	0	0%	0	0%	0	0%	0	0
12-1 PM	**10%**	**12**	0%	0	0%	0	0%	0	12
1-2 PM	**80%**	**96**	**10%**	**2**	0%	0	0%	0	**98**
2-3 PM	**10%**	**12**	**90%**	**18**	0%	0	0%	0	30
3-4 PM	0%	0	0%	0	0%	0	0%	0	0
4-5 PM	0%	0	0%	0	0%	0	0%	0	0
5-6 PM	0%	0	0%	0	0%	0	0%	0	0
6-7 PM	0%	0	0%	0	0%	0	0%	0	0
7-8 PM	0%	0	0%	0	0%	**0**	0%	0	0
8-9 PM	0%	0	0%	0	**10%**	**12**	0%	0	12
9-10 PM	0%	0	0%	0	**90%**	**108**	**100%**	20	128
TOTAL	**100%**	**120**	**100%**	**20**	**100%**	**120**	**100%**	**20**	**280**

Summary of Trip Generation by Hour	**Inbound**	**Outbound**	**Total**	
9-10 AM	**28**	**0**	**28**	
10-11 AM	**98**	**0**	**98**	
11-12 AM	**12**	**0**	**12**	
12-1 PM	**0**	**12**	**12**	
1-2 PM	**2**	**98**	**100**	***Highest trip generation during a typical Saturday midday peak period**
2-3 PM	**28**	**30**	**58**	
3-4 PM	**98**	**0**	**98**	
4-5 PM	**12**	**0**	**12**	
5-6 PM	**0**	**0**	**0**	
6-7 PM	**0**	**0**	**0**	

*Note: Peak trip generation may not occur during Friday afternoon or Saturday midday; and that actual events may not be held at the specific start time listed in this table. However, based on consultation with the City staff, to provide most conservative analysis, this traffic study assumed the worst-case scenario that the majority of the guests would be arriving or departing during the Friday afternoon peak period or Saturday midday peak period. For the purpose of the analysis, assumed two wedding and/or banquets could occur on the property (one in the late morning followed by reception and another in the late afternoon followed by reception dinner, plus additional sporadic visits to the agricultural use and the private golf course. On a typical Saturday, the analysis assumed a luncheon event starting at 11:00 AM, an evening event starting at 4:00 PM. The analysis assumed that each typical event last approximately three to five hours. The actual start time and duration of the events may not be held at the exact times listed. The analysis captured the reasonably conservative scenario on any typical Saturday when a few late staff departures from an earlier event overlapped with a few early staff arrivals for the next event on-site.

guests (98 vehicles) leaving after the noon event plus a few early arrivals (about two vehicles) to the next event on-site.

Private Golf Course

The operation of the golf course will be limited to daylight hours only. The golf course will be operated and maintained by the land owner and will only be available to guests of the owner. The golf course will not have designated employees and will not have a clubhouse. The golf course will not have regular operating hours, but will be limited to daytime operations only. Finally, the golf course will not be operated as a commercial venture and will not open to the public. While the number of the owner's guests may vary, the trip generation rates for the golf course were based on *Trip Generation, 8th Edition* (ITE, 2008). Land Use 430 was used for the analysis, as the conservative scenario. The estimated trip generation for the golf course is 13 trips on a typical Friday and 15 trips on a typical Saturday. The vehicular trips to and from the site as a result of the golf course during the Friday afternoon peak hour and the Saturday midday peak hour are anticipated to be minimal.

Agriculture Use

Based on information from the project team, during the harvest season (which would occur three to five times annually), up to 20 workers could visit the site for one to two weeks. Approximately three workers could visit the site for two hours per week for regular maintenance. While no empirical trip generation rates are available for the agricultural land uses in *Trip Generation, 8th Edition,* the daily trip generation rate was developed, considering the operating characteristics of the vineyards and the orchards. Using the estimated daily person trips for the estimated number of workers and applying the conservative assumption of an average vehicle ridership of 1.135 (which has been used for agricultural uses in the City's General Plan traffic analysis and other traffic studies in the study area), the daily trip generation for the agricultural use was estimated to be 20 vehicles. The analysis assumed that 20% of these workers (i.e., five vehicles) would travel to or from the site in the analyzed peak hour on a Friday afternoon and a Saturday midday peak hour.

Table 5C summarizes the trip generation for the event garden and other uses on the property. The traffic to the other uses on the property (private golf course and agricultural use) would be minimal and would be relatively sporadic throughout any given day. Assuming two wedding and/or banquets could occur on the property (one in the late morning followed by reception and another in the late afternoon followed by reception dinner, plus additional sporadic visits to the agricultural use and the private golf course, the property could generate approximately 313 daily vehicular trips on a typical Friday, including 104 trips in the Friday afternoon peak hour (100 inbound, four outbound). On a typical Saturday, the project is projected to generate approximately 315 trips throughout the day, with the estimated 107 trips in a typical Saturday midday peak hour (five inbound and 102 outbound)

Project Traffic Distribution and Project Traffic Assignment

The geographic distribution of trips generated by the proposed project was derived from observed travel patterns and from the location of the project site relative to the surrounding regional development. Acknowledging that the project trips may come from any direction on PVDS, a population density map of the area was prepared for the study area (Appendix C) for the 10-mile buffer of the study area based on the recent available population data in and around the City. Previous traffic studies for projects in the study area were also reviewed to prepare a basis for trip distribution and trip assignment.

The overall trip distribution pattern for this project is:

- Approximately 45% traveling on PVDS originating from northwest
- Approximately 55% traveling on PVDS originating from southeast

TABLE 5C
SUMMARY OF POINTVIEW MASTER PLAN PROJECT TRIP GENERATION ESTIMATES

Land Use Description	Daily Employee or Patron Person Trips	Average Vehicle Ridership (AVR)	Weekday Daily Vehicular Trip	Friday PM Peak Hour			Saturday Daily Trip Ends Volumes [1]	Saturday Midday Peak Hour (See Table 5B)		
				Inbound	Outbound	Both		Inbound	Outbound	Both
Event Garden [1] - (See Table 5A and 5B)										
Up to 300 guests per event for about 2 events on any single day.	600	2.5	240	96	*	96	240	*	96	96
Up to 50 event staff/security/safety personnel per event	100	2.5	40	2	*	2	40	2	2	4
			280	**98**	*	**98**	**280**	**2**	**98**	**100**
Agricultural Use [2]										
20 workers for one to two week during harvest (for up to three times annually)	20	1.135	18	2	2	4	18	2	2	4
3 workers for two hours per week	3	1.135	3	0	1	1	3	0	1	1
			20	**2**	**3**	**5**	**20**	**2**	**3**	**5**
2.5-acre Private Golf Course (9-hole) [3]	-	n/a	**13**	**0**	**1**	**1**	**15**	**1**	**1**	**2**
Total			**313**	**100**	**4**	**104**	**315**	**5**	**102**	**107**

Notes:
*Negligible.

[1] Peak trip generation may not occur during Friday afternoon or Saturday midday; and that actual events may not be held at the specific start time listed in this table. However, based on consultation with the City staff, to provide most conservative analysis, this traffic study assumed the worst-case scenario that the majority of the guests would be arriving or departing during the Friday afternoon peak period or Saturday midday peak period. Based on consultation with the City staff, to provide most conservative analysis, this traffic study analyzes impacts as though the majority of the guests would be arriving or departing during the Friday afternoon peak period or Saturday midday peak period. For the purpose of the analysis, assumed two wedding and/or banquets could occur on the property (one in the late morning followed by reception and another in the late afternoon followed by reception dinner, plus additional sporadic visits to the agricultural use and the private golf course. On a typical Friday (as shown in Table 5A), the analysis assumed a luncheon event starting at 11:00 AM, an evening event starting at 6:00 PM. On a typical Saturday (as shown in Table 5B), this analysis assumed a morning event (e.g., a wedding) starting at 11:00 AM, an afternoon event (wedding) starting at 4:00 PM followed by cocktail/reception dinner on-site. The analysis assumed that each typical event last approximately three to five hours.

[2] No empirical trip generation rates are available for the agricultural land uses in *Trip Generation, 8th Edition*. The daily trip generation rate was developed based on the estimated person trips and the average vehicle ridership provided by the project applicant. The analysis assumed two daily trips per acre for the agricultural employees and that 20% of the daily trips would occur in the analysis peak hour for both the Friday afternoon peak hour and Saturday midday peak hour, as the conservative scenario.

[3] The golf course will be operated and maintained by the land owner; will not have designated employees; will not have a clubhouse; and will not be open to the public; will not have regular operating hours; will not be operated as a commercial venture and no green fees will be collected. The golf course will be available to guests of the landowner; play will be limited to daylight hours only. The trip generation rates for the golf course were based on *Trip Generation, 8th Edition* Land Use 430, as shown below:
Weekday Daily: 5.04 trips per acre (50% inbound, 50% outbound)
Friday PM peak hour: 0.3 trips per acre (34% inbound, 66% outbound)
Saturday Daily: 5.82 trips per acre (50% inbound, 50% outbound)
Saturday Midday peak hour: 0.64 trips per acre (52% inbound, 48% outbound)

The trip generation estimates shown in Table 6C and the distribution patterns described above were used to assign the project-generated traffic onto the surrounding street system. Figure 4 illustrates the project trip distribution pattern. Figure 5 shows the assignment of project-generated traffic at the analyzed intersections for the analyzed peak periods.

EXISTING PLUS PROJECT TRAFFIC PROJECTIONS

This scenario includes traffic changes caused by the project under existing baseline conditions, assuming the project will be completed by the end of year 2011. The project traffic estimated under the aforementioned project was added to the existing traffic volumes to estimate existing plus project traffic volumes. Figure 6 depicts the existing plus project scenario.

FUTURE (2012) CUMULATIVE BASE (NO PROJECT) TRAFFIC PROJECTIONS

The Cumulative Base traffic projections reflect planned changes in the existing street system and growth in traffic over existing conditions from two primary sources. The first source is the ambient growth in the existing traffic volumes, which reflects the effects of overall regional growth. The second source is the traffic generated by specific projects located within or in the vicinity of the study area. The methods and assumptions used to develop cumulative base traffic projections are described below.

Baseline Street System Improvements

A number of roadway and intersection improvements are planned by the City and by others that would be implemented by General Plan Buildout in 2035. Of these improvements, only one item could be implemented before the anticipated opening of the Point View Master Plan in year 2012. At PVDS & PVDE, the intersection would be modified to provide a two-stage gap acceptance design for southbound left-turning vehicles, including median refuge area and acceleration lane. The responsible entity is the City of Rancho Palos Verdes, with contribution from Marymount College. In addition, the City plans to resurface PVDS starting in October 2011. This roadway improvement would not change the existing lane geometry, turn pockets or crosswalks and therefore would not affect this traffic study.

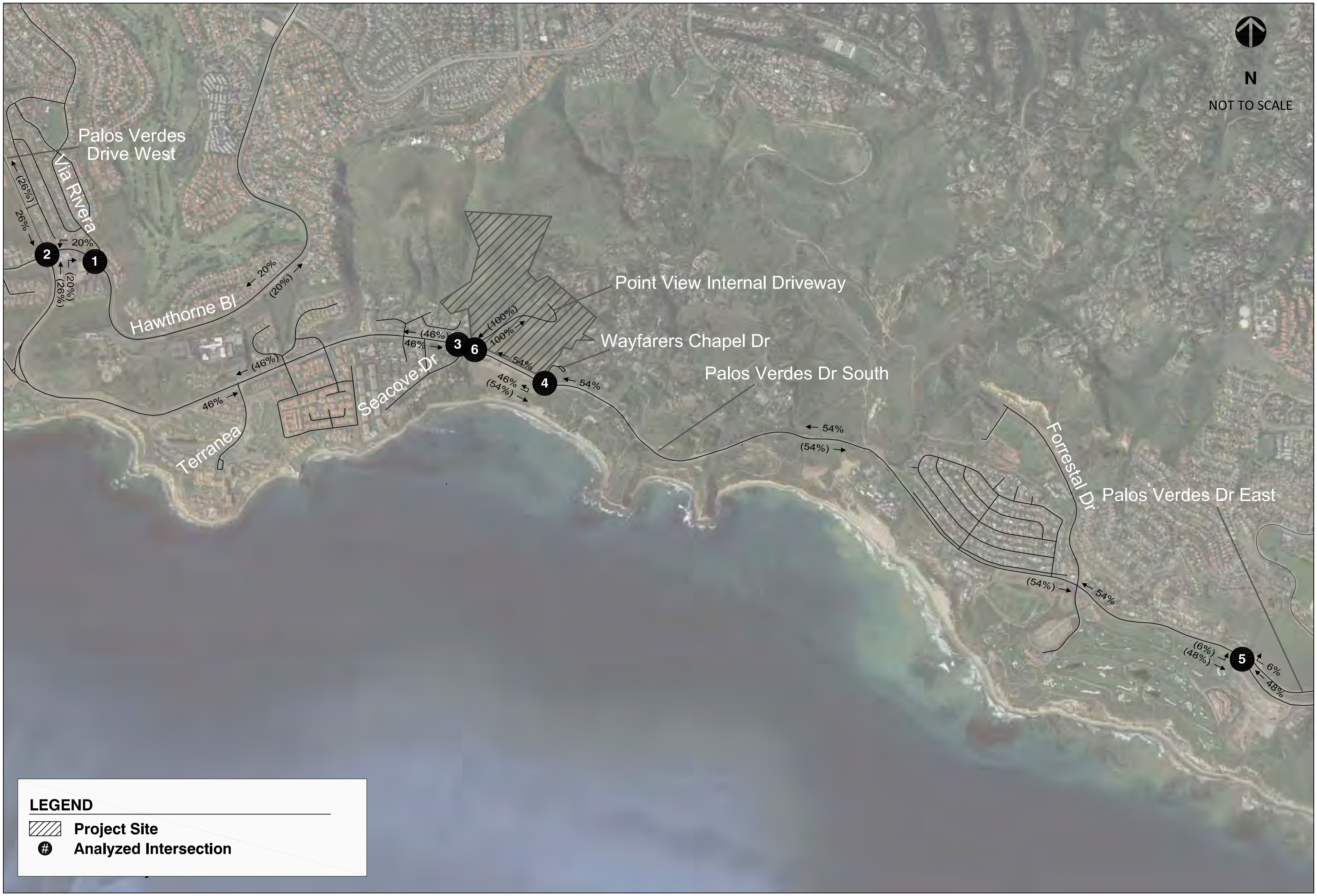

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FIGURE 4
PROJECT TRAFFIC DISTRIBUTION

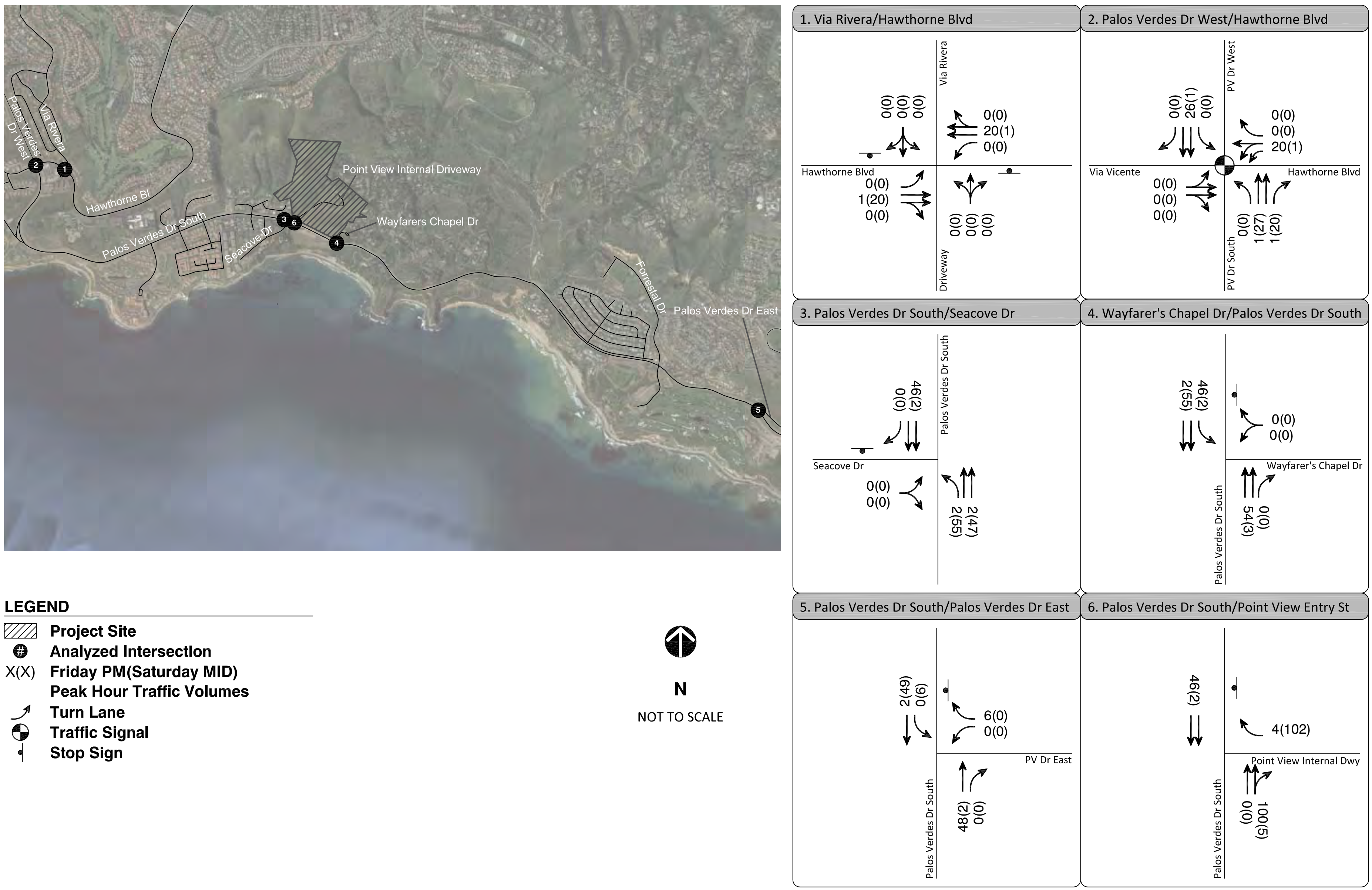

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FIGURE 5

PROJECT ONLY PEAK HOUR TRAFFIC VOLUMES

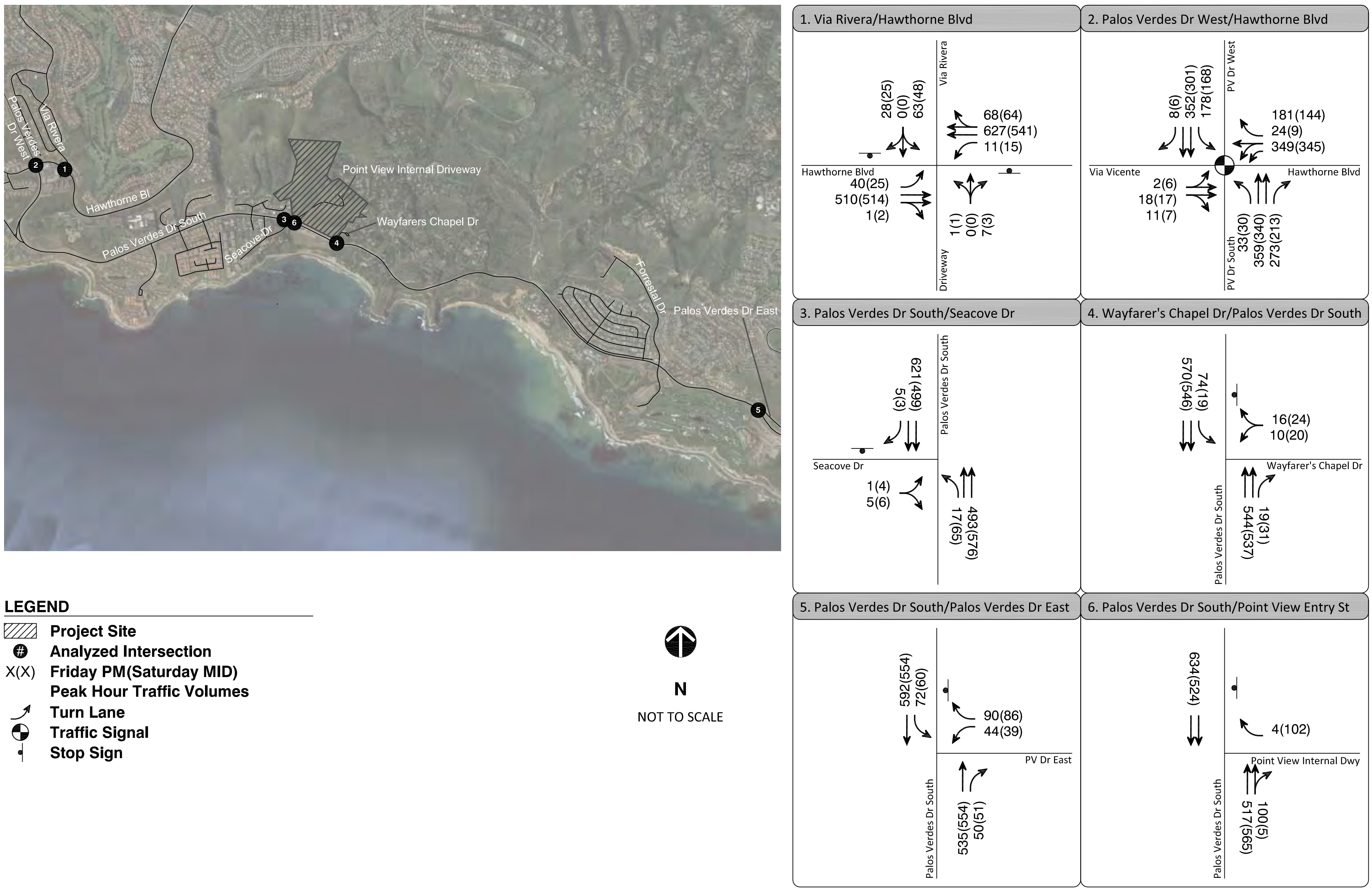

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FIGURE 6
EXISTING PLUS PROJECT PEAK HOUR TRAFFIC VOLUMES

Regional Growth and Cumulative Project Development

Peak hour traffic forecasts for the future horizon year of 2012 have been projected by increasing existing traffic volumes by an annual growth rate of 0.6% per year. In addition, the development of the cumulative base traffic forecasts takes into consideration of the effects of specific projects in the vicinity expected to be completed in the same general timeframe as the proposed project. Information on these cumulative projects was obtained from the City of Rancho Palos Verdes, and the adjacent City of Rolling Hills Estates and the City of Los Angeles. A total of 39 cumulative projects[1] are identified in Table 6 and their locations are shown in Figure 7. Trip generation estimates for the cumulative projects were prepared for the analyzed Friday PM peak hour and Saturday midday peak hour and were drawn from the trip generation rates contained in *Trip Generation, 8th Edition* or from traffic studies prepared for specific projects.

The geographic distribution of the traffic generated by the proposed cumulative projects would be dependent on several factors. These factors include the type and density of the proposed land uses, the geographic distribution of population from which the employees and potential patrons of the proposed developments would be drawn, and the location of the projects in relation to the surrounding street system. Using the trip generation estimates and trip distribution patterns described above, traffic generated by the list of cumulative projects was assigned to the street network. These volumes were then added to the existing traffic volumes, which were adjusted to reflect ambient growth. The resulting peak hour traffic volumes, which are illustrated in Figure 8, represent Future (2012) Cumulative Base conditions without the proposed project traffic conditions.

FUTURE (2012) CUMULATIVE PLUS PROJECT TRAFFIC PROJECTIONS

The objective of this analysis is to project future traffic growth and operating conditions that could be expected to result from regional growth and related projects in the vicinity of the project site by the year 2012. The project-generated traffic volumes from Figure 5 were added to the Cumulative Base traffic projections shown in Figure 8. The resulting projected Cumulative plus Project weekday morning and evening peak hour traffic volumes, representing conditions with the completion of the proposed project, are illustrated in Figure 9.

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[1] The Annenberg Projects at Lower Point Vicente (project number R13 in Table 6) was proposed when the related project list was developed and the project traffic analysis report was completed in September 2011, but is no longer proposed. Based on consultation with City staff, this traffic study has retained the Annenberg project traffic in the future background traffic conditions, as the most conservative approach. Removal of the Annenberg Project from the cumulative project list would not change the traffic analysis findings and conclusions from this traffic study.

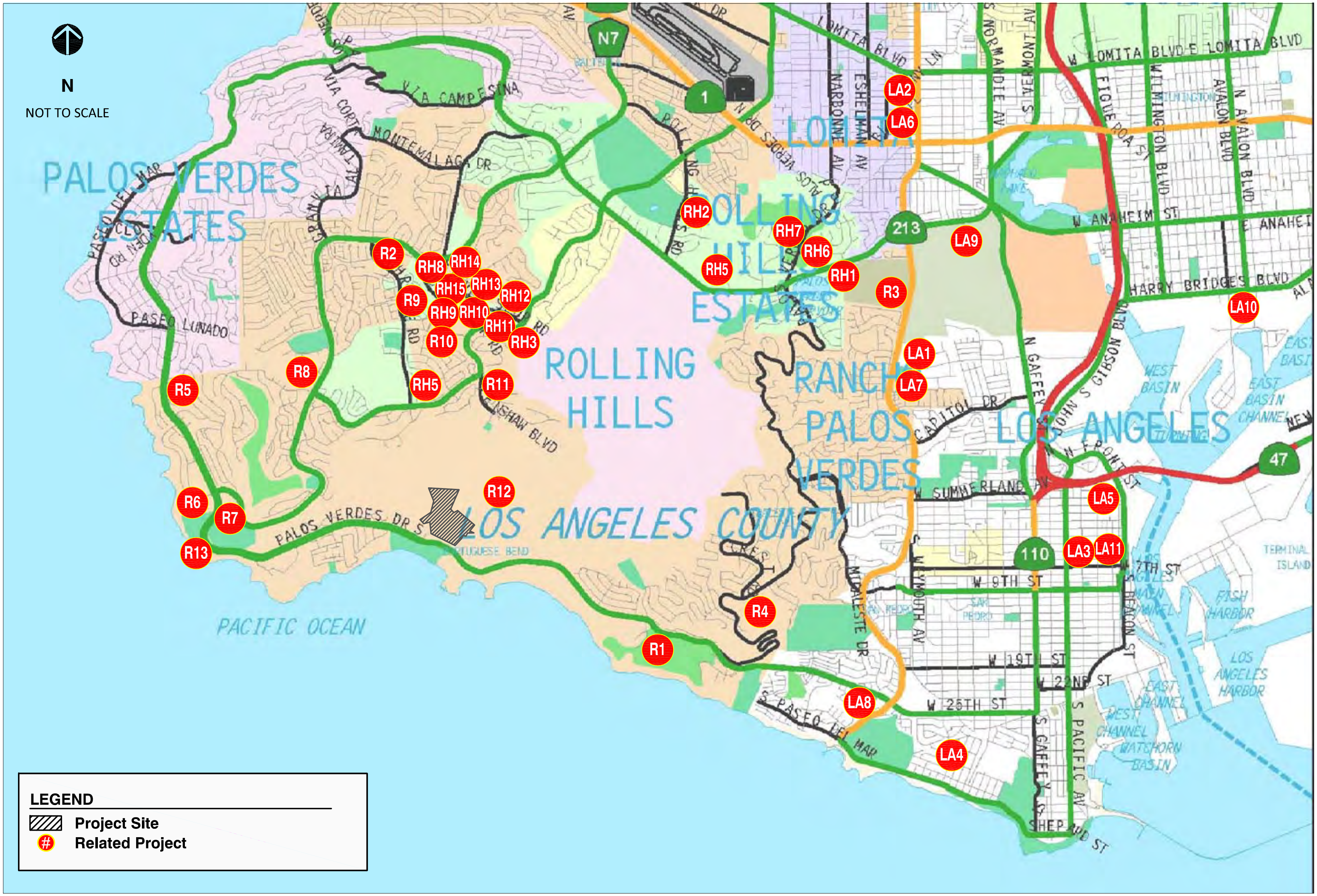

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FIGURE 7
RELATED PROJECT LOCATIONS

TABLE 6
TRIP GENERATION ESTIMATES FOR CUMULATIVE PROJECTS

No	City	Status	Project and Location*	Land Use	Data Source	Size	Units	WEEKDAY TRIP GENERATION ESTIMATES Daily Trips	AM Peak Hour In	AM Peak Hour Out	AM Peak Hour Total	PM Peak Hour In	PM Peak Hour Out	PM Peak Hour Total	SATURDAY TRIP GENERATION ESTIMATES Daily Trips	MIDDAY Peak Hour In	MIDDAY Peak Hour Out	MIDDAY Peak Hour Total
City of Rancho Palos Verdes																		
R1	RPV	Partially Built as of July 2010	Trump National Golf Club Project (Ocean Trails), Palos Verdes Drive South (west of Shoreline Park)	Single-Family Detached Housing Affordable Housing (5 of 59 homes built)	[a]	54 4	DU DU	517 38	10 1	31 2	41 3	35 3	20 1	55 4	544 40	27 2	23 2	50 4
R2	RPV	Approved	Chevron with Car Wash 27774 Hawthorne Blvd	Chevron station already has a car wash and a small ancillary convenience market. The project was approved to have an actual convenience store and an office.	[a]	6	VFP	917	37	35	72	43	41	84	1,210	61	60	121
R3	RPV	Proposed	Green Hills Memorial Park Master Plan Project 27501 South Western Ave	Cemetery	[a]	27.3	Acres	129	4	1	5	8	15	23	162	43	41	84
R4	RPV	Proposed	Marymount College Facilities Expansion, 20800 Palos Verdes Drive East (793 Student Enrollment Cap with 250-student Bachelor of Arts Degree Program and 150-student weekend enrollment)	Junior College Building Expansion (Demolish existing BA Degree Program (University) Junior College Junior College weekend enrollment increase	[a]	77,504 (18,022) 250 (250) 67	SF SF Students Students Students	1,931	149	51	200	83	92	175	888	65	47	112
R5	RPV	Partially Built as of July 2010	TTM No. 52666 Project 3200 Palos Verdes Drive West	Single-Family Detached Housing (10 of 13 homes built)	[a]	3	DU	29	1	1	2	2	1	3	30	2	1	3
R6	RPV	Partially Built as of July 2010	Ocean Front Estates Project Seaward side of Palos Verdes Drive West terminus of Hawthorne Blvd	Single-Family Detached Housing (74 of 79 homes built)	[a]	5	DU	48	1	3	4	3	2	5	50	3	2	5
R7	RPV	Built	Point Vincente Animal Hospital 31270 Palos Verdes Drive West	Animal Hospital	[a]	5,759	GSF	270	17	6	23	11	16	27	270	11	16	27
R8	RPV	Permit Expired September 2010	Hawthorne/Crest Office Project 29941 Hawthorne Boulevard	Office	[a]	7,232	GSF	80	10	1	11	2	9	11	17	2	1	3
R9	RPV	Approved	Highridge Condominium Project 28220 Highridge Road	Condominium	[a]	28	DU	163	2	10	12	10	5	15	159	7	6	13
R10	RPV	Suspended (as of March 2011)	Crestridge Estate LLC Project 5601 Crestridge Road	Senior Condominium Senior Center	[a]	90 10,000	DU KSF	542	11	14	28	14	15	29	317	20	18	38
R11	RPV	Approved	St. John Fisher Church Project 5488 Crest Road	Day Care Center Proposed new building area Existing to be demolished	[a]	40 32,426 (10,329)	Students GSF GSF	380	24	20	44	22	23	45	245	59	23	82
R12	RPV	Proposed	Zone 2 Landslide Moratorium Ordinance Revision North of Palos Verdes Drive btw Narcissa Dr. and Peppertree Dr.	Single-Family Detached Housing	[b]	47	DU	450	9	26	35	30	17	47	474	23	21	44
R13	RPV	[j]	Annenberg Projects at Lower Point Vicente, 31501 Palos Verdes Drive West	Multi-Use Educational and Interpretive Center	[b]	35,200	SFU	596	81	30	111	51	59	110	297	5	14	19
City of Rolling Hills Estates																		
RH1	RHS	Pending Approval	Rolling Hills Covenant Church Project 2221-2222 Palos Verdes Drive North	16,232 square foot expansion to the South Campus plus a 1,068 sf deck expansion. No addition to sanctuary seating.	[d][f]	n/a	n/a	nominal	nominal	nominal	nominal	nominal	nominal	nominal	nominal	nominal	nominal	nominal
RH2	RHS	Approved (February 2011)	Tanglewood Subdivision Project Northeast corner of Rolling Hills/Tanglewood Lane	2 Single-Family Detached Housing units	[d]	2	DU	20	1	1	2	1	1	2	20	1	1	2
RH3	RHS	Built/ Partially Occupied	Silver Spur Court Project 981 Silver Spur Road	Condominium	[a], [d], [d]	18	DU	105	1	7	8	6	3	9	102	4	4	8
RH4	RHS	Built/ Partially Occupied	Rolling Hills Villas Project 901 Deep Valley Drive	Senior Condominium Retail	[a], [c], [d]	41 1,526	DU GSF	209	3	4	7	7	6	13	179	10	9	19

TABLE 6
TRIP GENERATION ESTIMATES FOR CUMULATIVE PROJECTS

No	City	Status	Project and Location*	Land Use	Date Source:	Size	Units	WEEKDAY TRIP GENERATION ESTIMATES Daily Trips	AM Peak Hour In	AM Peak Hour Out	AM Peak Hour Total	PM Peak Hour In	PM Peak Hour Out	PM Peak Hour Total	SATURDAY TRIP GENERATION ESTIMATES Daily Trips	MIDDAY Peak Hour In	MIDDAY Peak Hour Out	MIDDAY Peak Hour Total
(Continued) City of Rolling Hills Estates																		
RH5	RHS	Proposed	2901 Palos Verdes Drive North	Single Family Detached Housing	[a],[d]	3	DU	29	1	1	2	2	1	3	30	2	1	3
RH6	RHS	Approved	Butcher Ranch Subdivision Project Palos Verdes Drive North and Montecillo Drive	Single-Family Detached Housing	[d]	11	DU	89	2	5	7	6	3	9	94	4	4	8
RH7	RHS	Pending Approval (as of June 2011)	Chandler Ranch/Rolling Hills	Single-Family Detached Housing		114	DU	1486	24	42	66	152	70	222	1,149	56	50	106
			Country Club Project 26311 & 27000 Palos Verdes Drive East	Quality Restaurant	[b],[d]	338	Seats								950	66	46	112
				Health/Fitness Club		7,150	GSF								149	9	11	20
				Tennis Courts (TC)		5	TC								139	8	7	15
				New Social Club Members		100	Members								80	3	4	7
RH8	RHS	Approved	627 Deep Valley Drive	Condominium		58	DU	636	(2)	15	16	30	21	51	250	9	11	20
				Retail	[b],[d]	5,810	GSF								290	15	13	28
				10% Pass-By											(29)	(2)	(1)	(3)
				10% Internal Capture											(219)	(2)	(1)	(3)
				Existing Car Wash		(13,608)	SF								(1,920)	(96)	(96)	(192)
				Existing Auto Repair		(13,608)	SF								(900)	(41)	(49)	(90)
RH9	RHS	Pending Approval	Brickwalk LLC Residential Project 655-683 Deep Valley Drive and 924-950 Indian Peak Road	Condominium	[a], [d]	148	DU	860	11	54	65	52	25	77	839	38	32	70
				Retail		14,200	GLSF	610	9	5	14	26	27	53	710	36	33	69
RH10	RHS	Approved	827 Deep Valley Drive	Senior Condominium Retail	[a],[d]	16	DU	93	1	6	7	5	3	8	91	4	4	8
RH11	RHS	Approved	Mediterranean Village Project	Condominium	[a],[d]	75	DU	436	6	27	33	26	13	39	425	19	16	35
			927 Deep Valley Drive	Retail		2,000	GLSF	86	1	1	2	3	4	7	100	5	5	10
RH12	RHS	Approved	Silverdes Medical Office Project	Medical Office	[a],[d]	24,518	GSF	886	48	13	61	25	66	91	220	51	38	89
			828 Silver Spur Road	Office		5,124	GSF	56	7	1	8	1	7	8	12	1	1	2
RH13	RHS	Proposed	Continental Development Project	Condominium	[a],[d]	70	DU	407	5	26	31	24	12	36	397	18	15	33
			627 Silver Spur Road	Commercial		30,000	GLSF	330	41	6	47	8	37	45	71	6	6	12
RH14	RHS	Approved	Silver Center Project 449 Silver Spur Road	Retail/Commercial	[a],[d]	4,745	GLSF	204	3	2	5	9	9	18	237	12	11	23
RH15	RHS	Proposed	Promenade Peninsula Project	Condominium	[a],[d]	66	DU	383	5	24	29	23	11	34	374	17	14	31
			520-580 Deep Valley Drive	Retail		16,620	GLSF	714	10	7	17	30	32	62	831	42	39	81
City of Los Angeles																		
LA1	LA	Built, not fully occupied (as of Feb 2011)	Seaport Condos Project 28000 S. Western Avenue	Condominium	[e]	140	DU	813	11	51	62	49	24	73	794	36	30	66
LA2	LA	Proposed	1717 255th St, Harbor City	Proposed 225-student K-8th private school. Existing 47-student K-8th private school, 20-student day care center and 6 single family dwelling units to be replaced.	[e]	225 (-47) (-20) (-6)	Students Students Students DU	1,063	76	64	140	(10)	(12)	(22)	nominal	nominal	nominal	nominal
LA3	LA	Under construction [i]	425 S Palos Verdes St. San Pedro Waterfront Development of the Port of Los Angeles, Berths 45 to 95.	Expand the number of cruise ship berths from 2 to 4, redevelop/expand the retail/restaurant uses to a total of 300ksf, and build a new 75 ksf conference center	[e]	300 75	KSF KSF	n/a	945	604	1,549	703	732	1,435	n/a	978	903	1,881

TABLE 6
TRIP GENERATION ESTIMATES FOR CUMULATIVE PROJECTS

No	City	Status	Project and Location*	Land Use	Date Source:	Size	Units	WEEKDAY TRIP GENERATION ESTIMATES							SATURDAY TRIP GENERATION ESTIMATES			
								Daily	AM Peak Hour			PM Peak Hour			Daily	MIDDAY Peak Hour		
								Trips	In	Out	Total	In	Out	Total	Trips	In	Out	Total
(Continued) City of Los Angeles																		
LA4	LA	Approved	3200 S Alma St, San Pedro	810-student high school	[e]	810	students	1,926	221	95	316	55	113	168	nominal	nominal	nominal	nominal
LA5	LA	Approved	327 N Harbor Blvd, San Pedro	54 units at 327 Harbor and 40 units at 407 Harbor	[e]	94	DU	550	8	33	41	32	17	49	601	26	22	49
LA6	LA	Approved	25621 S. Normandie Ave.	84-student child daycare	[e]	84	students	376	36	31	67	32	37	69	nominal	nominal	nominal	nominal
LA7	LA LA LA	Proposed	Ponte Vista Project 26900-27812 South Western Avenue	single family Condominium Apartment	[a]	143 600 396	DU DU DU	7468	166	405	571	426	273	699	8,307	391	333	725
LA8	LA	Proposed	1603 W 25th St, San Pedro, CA 90732-4301	Bank	[e]	3,700 1,046	GSF GSF	398	20	14	34	33	39	72	nominal	nominal	nominal	nominal
LA9	LA	Proposed	1524 Palos Verdes Drive	Proposed 76-unit naval housing	[e]	76	DU	7,468	166	405	571	426	273	699	766	21	18	40
LA10	LA	Under construction [i]	100 E Harry Bridges Boulevard. Wilmington Water Front Development	Phase 1: 58ksf retail, 75ksf light industrial & 9.75 acre park space. Phase 2: 12 ksf restaurant, 75ksf light industrial & 5.7 acre park space.	[g]	12 150 58 15.45	KSF KSF KSF acre	5,140	99	32	131	206	296	502	5,003	250	407	657
LA11	LA	Proposed	511 S Harbor Boulevard	Proposed 158-du high-rise condominium & 5 ksf retail. Existing 4 ksf high-turn over restaurant to be removed.	[e]	158 5 (4)	DU KSF KSF	453	7	16	23	23	14	37	297	7	17	23

Prepared by: Fehr & Peers

Notes: KSF = thousands of square feet. GSF: Gross Square Feet. GLSF: Gross Leasable Square Feet. DU = dwelling units. SFR = single-family residential. AFF = affordable housing. RPV = Rancho Palos Verdes. RHE = Rolling Hills Estates. LA: City of Los Angeles. VFP: Vehicle Fueling Positions.

[a] Source: The Weekday trip generation forecasts were obtained from the Revised Long Point Resort Project Traffic Impact Analysis (Urban Crossroads, January 2001).

[b] Source: The Weekday trip generation forecasts were obtained from the Revised Long Point Resort Project Traffic Impact Analysis (Urban Crossroads, January 2001). Saturday trip generation forecasts were obtained from the Annenberg Project at Lower Point Vicente EIR Appendix D Traffic Impact Study (Linscott, Law & Greenspan, Engineers (LLG), July 13, 2010), which was estimated based on ITE Trip Generation Manual trip generation rates for Saturday.

[c] Source: Zone 2 Landslide Moratorium - Portuguese Bend Project - Traffic Impact Study (Linscott, Law & Greenspan, Engineers, July 13, 2010)

[d] Source: City of Rolling Hills Estates Planning Department staff (as of February 2011)

[e] City of Los Angeles related Projects database (as of June 15, 2011).

[f] Memorandum: Analysis of Transportation/Traffic Impacts of the Rolling Hills Covenant Church Improvements, Wildan Engineering, December 2010. Using a worst case scenario, these 43 trips would be generated on a Sunday during a single peak hour of the Sunday School. The study estimated 43 trips for the proposed project will occur during the weekend (Sunday). It was assumed that none of these new trips would occur during the typical weekday peak hour or a Saturday afternoon peak hour.

[g] Wilmington Redevelopment Plan Amendment/Expansion Project Draft Transportation Impact Analysis Report, Fehr & Peers, June 2011. Trip generation data for the Saturday midday peak hour was estimated based on ITE Trip Generation 8th Edition (2008).

[h] This project was withdrawn as of February 2011 per the City of Rancho Palos Verdes staff. The estimated project trip generation data was included on this list for information only. No trip was assigned to the study intersections for the traffic analysis for the Point

[i] This project is a multi-phase development and is under construction. The expected opening year for the first phase is year 2015 or later. None of the estimated project trips were distributed to the study area of the proposed Point View Master Plan under year 2012 conditions.

[j] The Annenberg Project at Lower Point Vicente (project number R13) was proposed when the related project list was developed and the project traffic analysis report was completed in September 2011, but is no longer proposed. Based on consultation with City staff, this traffic study has retained the Annenberg project traffic in the future background traffic conditions, as the most conservative approach. Removal of the Annenberg Project from the cumulative project list would not change the traffic analysis findings and conclusions from this traffic study.

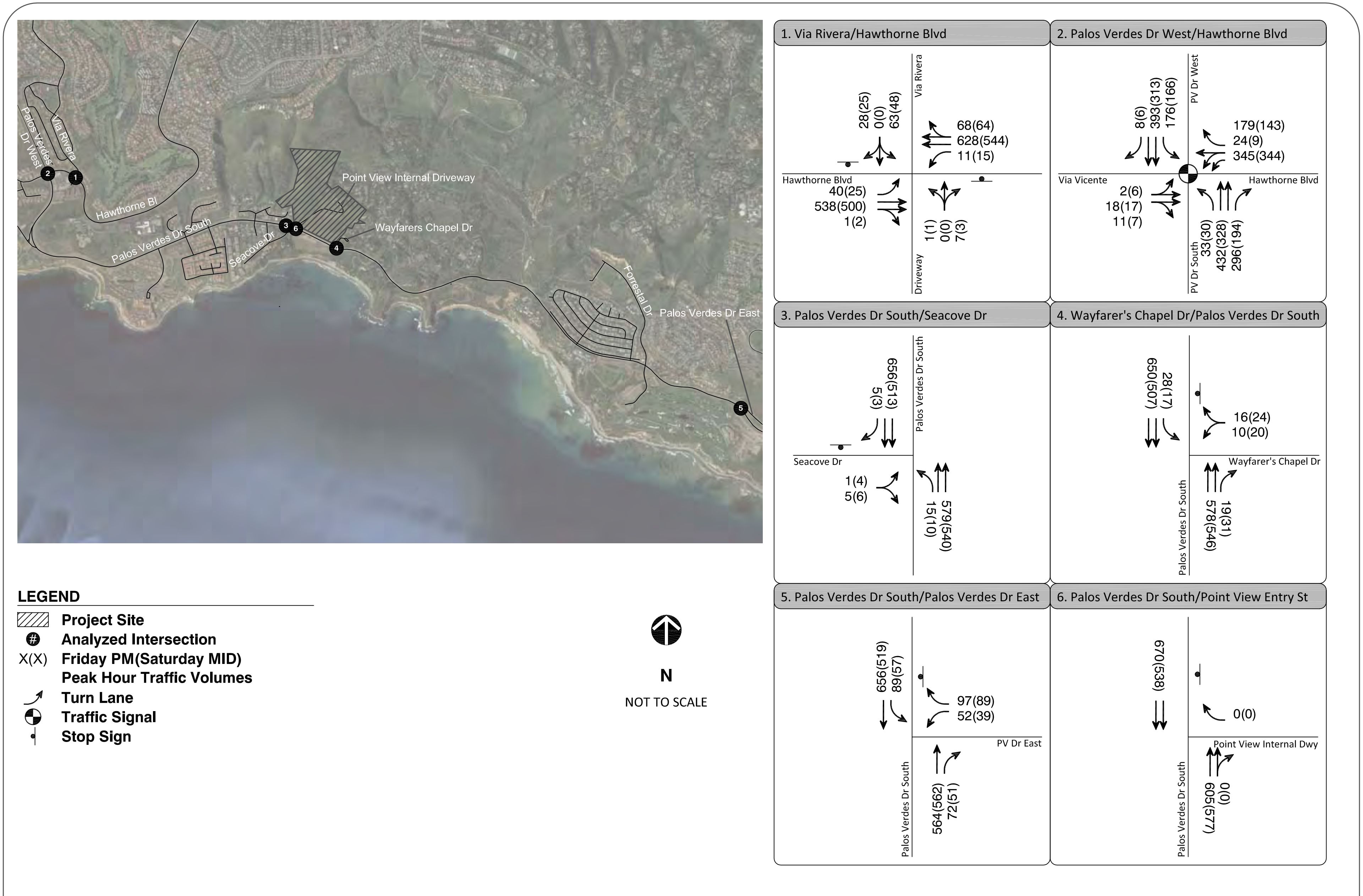

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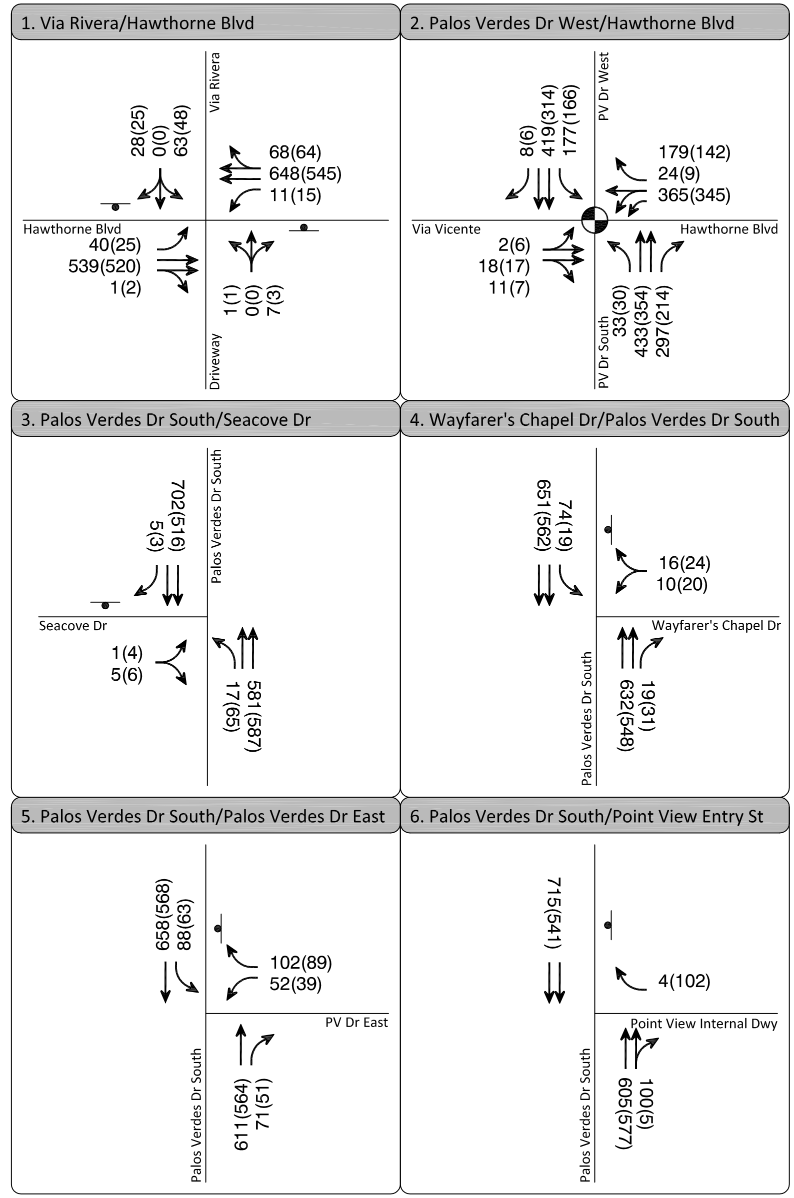
FIGURE 8
FUTURE (2012) WITHOUT PROJECT PEAK HOUR TRAFFIC VOLUMES



LEGEND

- Project Site
- \# Analyzed Intersection
- X(X) Friday PM(Saturday MID) Peak Hour Traffic Volumes
- Turn Lane
- Traffic Signal
- Stop Sign

N

NOT TO SCALE

FEHR & PEERS

FIGURE 9

FUTURE (2012) WITH PROJECT PEAK HOUR TRAFFIC VOLUMES

CHAPTER 4. PROJECT TRAFFIC IMPACT ANALYSIS

The traffic impact analysis compares the projected levels of service at each study intersection under the existing as well as future conditions to estimate the incremental increase in the V/C ratio caused by the proposed project. This provides the information needed to assess the potential impact of the project using significance criteria established by the City of Rancho Palos Verdes.

CRITERIA FOR DETERMINATION OF SIGNIFICANT TRAFFIC IMPACT

The City of Rancho Palos Verdes uses the County of Los Angeles *Traffic Impact Analysis Report Guidelines* (Los Angeles County Department of Public Works, January 1997) as the traffic thresholds of significance for signalized intersections. The impact criteria are used to determine if a project has a significant traffic impact at an intersection. A project impact would be considered significant if the following conditions are met:

Intersection Conditions with Project Traffic		Project-Related Increase
LOS	V/C Ratio	in V/C Ratio
C	0.71 – 0.80	equal to or greater than 0.04
D	0.81 – 0.90	equal to or greater than 0.02
E, F	> 0.91	equal to or greater than 0.01

Using these criteria, for example, a project would not have a significant impact at an intersection if it is operating at LOS C after the addition of project traffic and the incremental change in the V/C ratio is less than 0.04. If, however, the intersection is operating at a LOS F after the addition of project traffic and the incremental change in the V/C ratio is 0.01 or greater the project would be considered to have a significant impact at this location.

For unsignalized intersection, the City of Rancho Palos Verdes has established the following thresholds of significance:

- A significant impact would occur at an unsignalized intersection when the addition of project-generated trips causes the peak hour level of service of the intersection to change from acceptable operation (LOS D or better) to deficient operation (LOS E or F); or,
- A significant impact would occur at an unsignalized intersection if the peak hour level of service of the intersection is LOS E or F and the addition of project-generated trips changes the delay by 2.0 seconds or more.

EXISTING (2011) PLUS PROJECT INTERSECTION IMPACT ANALYSIS

The forecast 2011 Existing plus Project peak hour traffic volumes, illustrated in Figure 6, were analyzed to determine future operating conditions and potential traffic impacts with the addition of project-generated traffic. Table 7 presents the results of this analysis. As shown, the project would slightly increase the peak hour V/C ratios or delays in year 2011 at the study intersections. Utilizing the significance criteria established by the City, however, no significant traffic impacts would occur. Thus, no mitigation measures are required or recommended.

TABLE 7
PROJECT INTERSECTION IMPACT ANALYSIS

			Existing (Year 2011) No Project			Existing (Year 2011) plus Project						Future (Year 2012) Cumulative Base			Future (Year 2012) Cumulative plus Project					
Intersection	Control Type	Peak Hour	ICU	Delay	LOS	ICU	Delay	LOS	Changes in ICU (Signalized) or Delay (Unsignalized)	Impact Thresholds	Significant Impact	ICU	Delay	LOS	ICU	Delay	LOS	Changes in ICU (Signalized) or Delay (Unsignalized)	Impact Thresholds	Significant Impact
1. Via Rivera &	One-way	Friday PM	0.373	26.3	D	0.379	27.3	D	1.0	LOS change to E/F	NO	0.379	28.1	D	0.386	29.3	D	1.2	LOS change to E/F	NO
Hawthorne Boulevard [1]	Stop	Sat Midday	0.332	19.9	C	0.332	20.2	C	0.3	LOS change to E/F	NO	0.333	20.1	C	0.333	20.4	C	0.3	LOS change to E/F	NO
2. Palos Verdes Drive West &	Signal	Friday PM	0.471	-	A	0.479	-	A	0.008	>0.04 for LOS D	NO	0.499	-	A	0.508	-	A	0.009	>0.04 for LOS C	NO
Hawthorne Blvd/Via Vicente [2]		Sat Midday	0.450	-	A	0.458	-	A	0.008	>0.04 for LOS D	NO	0.454	-	A	0.462	-	A	0.008	>0.04 for LOS C	NO
3. Palos Verdes Drive South &	One-way	Friday PM	0.294	11.3	B	0.311	11.6	B	0.3	LOS change to E/F	NO	0.320	12.0	B	0.336	12.4	B	0.4	LOS change to E/F	NO
Seacove Drive [1]	Stop	Sat Midday	0.273	12.4	B	0.304	13.6	B	1.2	LOS change to E/F	NO	0.277	12.6	B	0.309	13.9	B	1.3	LOS change to E/F	NO
4. Palos Verdes Drive South &	One-way	Friday PM	0.294	12.9	B	0.332	14.5	B	1.6	LOS change to E/F	NO	0.319	14.1	B	0.360	16.1	C	2.0	LOS change to E/F	NO
Wayfarers Chapel Drive [1]	Stop	Sat Midday	0.306	13.7	B	0.308	14.0	B	0.3	LOS change to E/F	NO	0.310	13.9	B	0.311	14.2	B	0.3	LOS change to E/F	NO
5. Palos Verdes Drive South &	One-way	Friday PM	0.499	18.2	C	0.513	19.1	C	0.9	LOS change to E/F	NO	0.543	23.6	C	0.573	25.2	D	1.6	LOS change to E/F	NO
Palos Verdes Drive East [1]	Stop	Sat Midday	0.516	17.1	C	0.519	18.0	C	0.9	LOS change to E/F	NO	0.525	17.5	C	0.528	18.4	C	0.9	LOS change to E/F	NO
6. Palos Verdes Drive South &	One-way	Friday PM	0.284	*	A	0.301	10.2	B	10.2	LOS change to E/F	NO	0.309	*	A	0.326	10.6	B	10.6	LOS change to E/F	NO
Point View Internal Driveway [1]	Stop	Sat Midday	0.277	*	A	0.342	10.8	B	10.8	LOS change to E/F	NO	0.280	*	A	0.346	10.9	B	10.9	LOS change to E/F	NO

Notes:
*Negligible.
[1] Intersection is controlled by stop sign(s) on minor approach(es) and was analyzed using the delay-based 2000 Highway Capacity Manual Unsignalized Intersection Methodology. The intersection LOS is determined based on the estimated vehicle delay. The intersection capacity utilization (ICU) value was measured at these stop-controlled intersections for information only per the request of City staff. For unsignalized intersections, the City of Rancho Palos Verdes has established the following two thresholds: 1) A significant impact would occur at unsignalized intersection when the addition of project-generated trips cause the peak hour LOS of the intersection to change from acceptable operations (LOS D or better) to deficient operation (LOS E or F); or 2) A significant impact would occur at an unsignalized intersection if the peak hour LOS of the intersection is LOS E or F and the addition of project-generated trips changes the delay by 2.0 seconds or more.
[2] Intersection is controlled by a signal and was analyzed based on the capacity-based ICU methodology per City's traffic study guidelines. The intersection LOS is determined based on the estimated ICU values. The City of Rancho Palos Verdes utilizes the County of Los Angeles traffic thresholds of significance for signalized intersections. (Source: *Los Angeles County Traffic Impact Analysis Report Guidelines*, Los Angeles County Department of Public Works, January 1, 1997). A project would result in a significant impact if the project-related traffic increase in ICU value is 0.04 or greater for LOS C , 0.02 or greater for LOS D, and 0.01 or greater for LOS E and F, respectively, for signalized intersections.

The intersection of PVDS & Point View Internal Driveway will be controlled by a stop sign on the southbound approach (Point View Internal Driveway). Projected traffic volumes at this intersection with the addition of project-related traffic were analyzed based on the proposed lane configurations. As indicated in Table 7, the most constrained stop-controlled approach to this intersection (the southbound approach) is projected to operate at LOS B in the Friday afternoon peak hour and Saturday midday peak hour. This project internal driveway segment would not be used as a public roadway and vehicles queuing at the stop sign would be limited to the owners, employees, guests and event staff of the project site.

FUTURE (2012) CUMULATIVE BASE (NO PROJECT) CONDITIONS

This section presents an analysis of potential traffic conditions under Year 2012 cumulative base conditions. The year 2012 cumulative base traffic volumes shown in Figure 7 were analyzed using the level of service methodologies described in Chapter 2 to forecast cumulative base peak hour levels of service at the analyzed intersections. Table 7 summarizes the results of this analysis. As shown in Table 7, very good operating conditions (LOS B or better) are projected at the study intersections during the two analyzed peak periods under Future (2012) No Project conditions.

FUTURE (2012) CUMULATIVE PLUS PROJECT INTERSECTION IMPACT ANALYSIS

The forecast 2012 Cumulative plus Project peak hour traffic volumes, illustrated in Figure 9 were analyzed to determine future operating conditions and potential traffic impacts with the addition of project-generated traffic. Table 7 presents the results of this analysis. As shown, the project would slightly increase the peak hour V/C ratios or delays in year 2012 at the study intersections. Utilizing the significance criteria established by the City; however, no significant traffic impacts would occur. Thus, no mitigation measures are required or recommended.

The future intersection of PVDS & Point View Internal Driveway will be controlled by a stop sign on the southbound approach (Point View Internal Driveway). Projected traffic volumes at this future intersection with the addition of project-related traffic were analyzed based on the proposed lane configurations. As indicated in Table 7, the most constrained stop-controlled approach to this intersection (the southbound approach) is projected to operate at LOS B in the Friday afternoon peak hour and Saturday midday peak hour. This project internal driveway segment would not be used as a public roadway and vehicles queuing at the stop sign would be limited to the owners, employees, guests and event staff of the project site.

STREET SEGMENT ANALYSIS

Based on direction from City of Rancho Palos Verdes Public Works Department staff, roadway LOS of service analyses were prepared for the segment of PVDS adjacent to the project site between Seacove Drive and Wayfarers Chapel Drive.

One 24-hour machine count was collected on PVDS immediately adjacent to the project entrance driveway (between Seacove Drive and the Wayfarers Chapel driveway) for three continuous days between Friday, March 18 and Sunday, March 20, 2011. A review of the intersection turning movement count on Friday PM peak hour and Saturday midday peak hour for the analyzed intersections and the machine count on PVDS over this three-day period indicated that there was minimal difference between the daily traffic volumes collected on these three days. Therefore, the City agreed that that traffic impact analysis for the Saturday peak hour would provide reasonable baseline conditions to determine the potential project-related traffic impact for both Saturdays and Sundays. No additional analysis of the project traffic impact on a typical Sunday is required.

The significance of the potential impacts of project generated traffic at the study street segments was identified using the two-lane roadway criteria set forth in *Traffic Impact Analysis Report Guidelines*. According to *Traffic Impact Analysis Report Guidelines*, an impact is considered significant if the project related increase in passenger car per hour (PCPH) equals or exceeds the thresholds: 4% for LOS C, 2% for LOS D, and 1% for LOS E and F, respectively.

Table 8 indicates that analyzed segment of PVDS currently operated at LOS A during the two analyzed peak periods and is projected to continue operating at LOS A with the additional traffic to and from the proposed Point View Project site. The proposed project Friday PM and Saturday midday trips will add marginal traffic volumes on the analyzed street segment of PVDS by no more than 9% over the existing conditions and no more than 12% over the future conditions. Application of the County's two-lane roadway threshold criteria for street segment analysis indicates that the proposed project is not anticipated to significantly impact the analyzed street segments. Thus, no mitigation measures are required or recommended.

TRAFFIC MITIGATION MEASURES

The traffic impact analysis described above determined that development of the proposed project would not create significant traffic impacts at any of the analyzed locations in the study area (under existing plus project conditions or under future plus project conditions). Therefore, no mitigation is necessary.

SITE ACCESS ANALYSIS

Vehicular Access

Primary access to the project site will be provided by the proposed Point View Internal Driveway, a two-way gated street located at the southwest corner of the project site. As shown in Figure 1, the inbound and outbound lanes will be separated by approximately 200 feet where they connect to PVDS. Due to the existing configuration of PVDS at this location, the eastbound and westbound travel lanes lie on different grades and are separated by an earthen median. Thus, the proposed Point View Internal Driveway will be limited to right-turns in/right-turns out only. The future intersection is projected to operate at LOS B, as shown in Table 7.

The design of the entry lane should be designed to allow vehicles to decelerate prior to reaching the entry gate and would provide approximately 200 feet of vehicle storage. As the most traffic-intensive use of the project site is for event and recreational uses, the project peak traffic volume would occur when approximately 100 vehicles are arriving the site prior to the start time of an event or approximately 102 vehicles exiting the site after the event in a single peak hour. This is equivalent to an average of about two inbound or two outbound vehicle per minute, or four vehicles inbound vehicles per minute or four outbound vehicles per minute, if using the worst-case traffic peak hour factor of 0.50 (which means that most of the traffic would be entering the site approximately 15 to 30 minute prior to the event). Assuming an average length of 22 feet per vehicle, the maximum queue length would be approximately 88 feet, less than the driveway storage capacity of 200 feet. The proposed configuration of the Point View Internal Driveway would be designed to accommodate this volume without impeding westbound through movements on PVDS.

In addition, the Point View Internal Driveway this intersection should be designed to channelize the southbound exit lane to limit the possibility of wrong-way travel. In addition, to address an expressed concern about the potential "runaway" vehicles from project driveway, it is recommended that the project site driveway be modified to be rectilinear in its approach to PVDS (i.e., "right" angle), so that the motorist existing the project site would have better visibility of the oncoming westbound traffic and cyclists on PVDS.

TABLE 8
ROADWAY SEGMENTS LEVEL OF SERVICE SUMMARY

Roadway Segment	Analysis Time Period	Directional Split [1]	Total Capacity (PCPH) [2]	Existing (2011) No Project			Existing (2011) plus Project					
				Peak Hour Volumes (Both Directions)	V/C	LOS	Project Only Peak Hour Volumes	Existing plus Project Peak Hour Volumes	V/C	LOS	Project-Related Increase (%)	Significant Impact?
1. Palos Verdes Drive South between Seacove Drive and Wayfarers Chapel Drive	Friday PM	45/55	2,755	1,102	0.400	A	102	1,204	0.437	A	9%	NO
	Saturday Midday	45/55	2,755	1,066	0.387	A	60	1,126	0.409	A	6%	NO
				Future (2012) Cumulative Base No Project			**Future (2012) Cumulative plus Project**					
	Analysis Time Period	**Directional Split [1]**	**Total Capacity (PCPH) [2]**	**Peak Hour Volumes (Both Directions)**	**V/C**	**LOS**	**Project Only Peak Hour Volumes**	**Future plus Project Peak Hour Volumes**	**V/C**	**LOS**	**Project-Related Increase (%)**	**Significant Impact?**
	Friday PM	45/55	2,755	1,272	0.462	A	102	1,426	0.518	A	12%	NO
	Saturday Midday	45/55	2,755	1,094	0.397	A	60	1,218	0.442	A	11%	NO

Notes:

[1]

[2] Total capacity, in passenger cars per hour (PCPH), based on existing roadway directional split per County of Los Angeles Department of Public Work's Traffic Impact Analysis Report Guidelines. The estimated capacity for 45/55 split was based on average of the capacity values for 50/50 splits and for 40/60 splits.

[3] Intersection turning movement counts conducted by Wiltec in May 2011.

[4] An ambient growth rate of 0.6% per year was assumed to derive the year 2012 traffic volumes based on the 2004 CMP Los Angeles County document and consultation with City of Ranchro Palos Verdes Public Works staff.

[5] Represents net new project trips based on the project trip generation and trip distribution for the proposed Point View Master Plan.

[6] Derived by combining the future pre-project traffic volumes and the proposed project volumes.

[7] According to the County of Los Angeles Department of Public Works' *Traffic Impact Analysis Report Guidelines*, an impact is considered significant if the project related increase in PCPH equals or exceeds the thresholds: 4% for LOS C , 2% for LOS D, and 1% for LOS E and F, respectively.

The two intersections where project-related traffic would make U-turn maneuvers (i.e., at Seacove, and at Wayfarers Chapel were evaluated and no adverse impacts were identified. Because the proposed Point View Internal Driveway will be limited to right-turns in and right-turns out only, some project-related traffic is expected to make U-turn maneuvers to access the site. The nearest locations for these maneuvers are the intersections of PVDS & Seacove Drive and PVDS & Wayfarers Chapel Driveway.

Traffic exiting the project site seeking to travel east is expected to use the existing intersection of PVDS and Seacove Drive to U-turn. With the addition of cumulative and project-related traffic, this intersection is expected to continue operating at LOS B or better during the analyzed Friday peak hour or Saturday midday peak hour. This project internal driveway segment would not be used as a public roadway and vehicles queuing at the stop sign would be limited to the owners, employees, guests and event staff of the project site. This intersection is approximately 250 feet west of the point at which the proposed Point View Internal Driveway would join PVDS. Based on the project trip generation estimates and trip distribution pattern described in Chapter 3, U-turns here would be made by approximately half of the inbound peak hour trips or half of the outbound peak hour trip, about 50 vehicles per hour (meaning one vehicle per minute in average). These vehicles would yield to westbound traffic on PVDS until a suitable gap in both travel lanes occurs and then proceed to the westbound left-turn pocket at Seacove Drive.

Assuming the worst-case scenario when an intensive outbound traffic flow of 100 vehicles is exiting the project site and half of them are arriving at this U-turn location in 15 minutes, the vehicle arrival rate is about four to five vehicles per minute at any given time. Assuming a vehicle design length of 22 feet per vehicle, the suggested queue length would be approximately 88 feet to 110 feet. This westbound left-turn pocket on PVDS & Seacove Drive is approximately 120 feet long and is adequate to accommodate the total projected volume of left-turning and U-turning vehicles. The vertical curve on PVDS at this point limits westward visibility to approximately 650 feet near the intersection with Clipper Drive. Given this distance and the relatively moderate eastbound traffic flow at this point, U-turns at this location would not be difficult and no adverse impact is identified.

Similarly, project-related traffic approaching the site from the west is expected to make U-turn maneuvers at the existing intersection of PVDS and Wayfarers Chapel Driveway. With the addition of project traffic, this intersection is projected to continue operating at LOS C or better in both analyzed peak hours. The eastbound left-turn pocket at this intersection is approximately 150 feet long and can accommodate up to about seven vehicles queuing at any given time. This left turn storage is adequate to accommodate the total projected volume of left-turning and U-turning vehicles (74 in the Friday PM peak hour and 19 in the Saturday midday peak hour under future plus project conditions) with the maximum queue lengths of five vehicle at any given time (given the worst-case peak hour factor of 0.25). Because PVDS east of this regional traffic analysis intersection is nearly level and eastward visibility is good, U-turns at this location would not be difficult and no adverse impact is identified.

Non-Motorized Access

As described in Chapter 2, the majority of the cyclists travel on PVDS in the early morning between 8:00 and 10:00 AM on weekdays and weekends. As the project event traffic would primarily occur later in a given day, the bicycle activity on PVDS is not expected to be significantly impacted by the typical project event traffic. Given the sporadic pedestrian activity on PVDS, the proposed Point View project is not expected to impact the pedestrian access in and around the project vicinity.

PARKING ANALYSIS

Table 9 summarizes the parking code analysis for the proposed project parking supply. The event staff would typically carpool in private autos from their base of operation and would park in the on-site overflow area, if necessary. Additionally, during some events, guests may shuttle to the site using a van or bus. An example of this scenario would be when multiple guests are staying at a nearby hotel. For the purpose of this analysis, an AVR of 2.5 persons per vehicle was assumed to estimate the event traffic, per City staff direction (as the reasonably conservative approach). The project as proposed would provide a total of 140 spaces, designated for the event garden use, which would meet the parking demand of 140 vehicles generated by a nominal event with up to 300 guests and up to 50 event staff. In the unusual circumstance that additional parking is required, it could be accommodated in the overflow parking area west of the event garden. When there is no event on-site, the employees to the agriculture uses (vineyard and orchards) and the visitors to the private golf course can park in the designated parking area, or use the overflow parking in the open grass field to the west of the event garden or park on the paved driveway adjacent to the orchards/vineyards if needed.

In addition, City staff recognized that the special occasional events up to 750 attendants could occur once annually on weekends or may not occur at all. The project applicant will be required to submit a Special Use Permit for City's approval prior to such events and coordinate with the City staff to minimize any potential traffic issues and to accommodate any overflow parking demand by providing off-site parking spaces and transferring the project patrons using shuttles or vans. The proposed parking plan is shown in Figure 10.

TABLE 9
PARKING CODE ANALYSIS

Land Use	Size	Parking Ratio [a]	Parking Demand	Parking Supply
Event Garden Use				
Up to 300 guests per event	300 guests per event	1 space per 2.5 persons (i.e., AVR of 2.5)	120	119 spaces (marked)
Up to 50 event staff/security/safety personnel per event	50 person per event	1 space per 2.5 persons (i.e., AVR of 2.5)	20	21 spaces (unpaved parking area)
	350 persons		140	140
Agricultural Use [1]				
20 workers for one to two week during harvest for up to three times annually	20 workers	1 space per 1.135 persons (i.e., AVR of 1.135)	18	Use designated marked parking area and the unpaved parking area (unless there is an event on site) or use the overflow parking in the grass field to the west of the event garden or just parking on paved roadway adjacent to the orchards/vineyards (if there is an event on-site)
3 workers for two hours per week	6 workers	1 space per 1.135 persons (i.e., AVR of 1.135)	5	
			23	
2.5-acre Private Golf Course [2]	9 hole	6 space per hole (per City's Code)	54	Use designated marked parking area and the unpaved parking area (unless there is an event on site) or use the overflow parking in the grass field to the west of the event garden or just parking on paved roadway adjacent to the orchards/vineyards (if there is an event on-site)

Notes:
AVR: Average Vehicle Ridership

[1] The City does not have specific code requirement for the proposed agricultural land use. No empirical trip generation rates are available for the agricultural in *Trip Generation, 8th Edition*. The daily trip generation rate of two vehicular trips per acre per day from *Brief Guide of Vehicular Traffic Generation Rates for the San Diego Region* (SANDAG, April 2002) was reasonable for the similar project use and was therefore applied. The analysis assumed two daily trips per acre for the agricultural employees and that 20% of the daily trips would occur in the analysis peak hour for both the Friday afternoon peak hour and Saturday midday peak hour, as the conservative scenario.

[2] The golf course will be operated and maintained by the land owner; will not have designated employees will not have a clubhouse; and will not be open to the public; will not have regular operating hours; will not be operated as a commercial venture and no green feels will be collected. The golf course will be available to guests of the landowner; play will be limited to daylight hours only.

FIGURE 10
PROPOSED PARKING PLAN FOR THE EVENT GARDEN

CHAPTER 5. CONGESTION MANAGEMENT PROGRAM TRAFFIC ASSESSMENT

Congestion Management Program for Los Angeles County (CMP) (County of Los Angeles Metropolitan Transportation Authority, 2010) indicates that if a proposed development project would add 150 or more trips, in either direction, during either the morning or evening peak hour to the mainline freeway monitoring location, then a CMP freeway analysis must be conducted. If a proposed project would add 50 or more peak hour trips (total of both directions) to a CMP arterial intersection (including monitored freeway on- or off-ramp intersections), then a CMP arterial intersection analysis must be conducted.

For the purpose of a CMP TIA, a project impact is considered to be significant if the proposed project increases traffic demand on a CMP facility by 2% of capacity (V/C > 0.02), causing or worsening LOS F (V/C > 1.00). Under this criteria, a project would not be considered to have a regionally-significant impact if the analyzed facility is operating at LOS is E or better after the addition of project traffic regardless of the increase in V/C ratio caused by the project. However, if the facility is operating at LOS F with project traffic and the incremental change in the V/C ratio caused by the project is 0.02 or greater, the project would be considered to have a significant impact.

CMP FREEWAY AND ARTERIAL INTERSECTION ANALYSIS

The CMP monitoring stations closest to the project site are:

- Freeway No. 1045 – Harbor Freeway (I-110) south of C Street
- Freeway No. 1068 – San Diego Freeway (I-405) north of Inglewood Avenue at Compton Boulevard
- Intersection No. 58 – Pacific Coast Highway & Western Avenue
- Intersection No. 84 – Western Avenue & 9th Street
- Intersection No. 128 – Western Avenue & Toscanini Drive
- Intersection No. 151 – Pacific Coast Highway & Crenshaw Boulevard
- Intersection No. 152 – Pacific Coast Highway & Hawthorne Boulevard
- Intersection No. 153 – Pacific Coast Highway & Palos Verdes Boulevard

As the project use that generates the highest quantity of daily tips to the proposed project site would more likely to occur on weekends, the project is not expected to generate more than 150 trips to the two Freeway monitoring locations nor 50 trips to the two CMP freeway monitoring locations during the typical weekday morning and afternoon commute peak hours. In the project trip generation and distribution (Figure 5) described in Chapter 3, the proposed project is not expected to add more than 50 trips to these arterial intersections during either the weekday AM or PM peak hours and, thus, no further traffic analysis would be required.

CMP TRANSIT IMPACT ANALYSIS

The primary mode of travel to the project property is expected to be by private autos due to convenience of access to weddings, special events, agricultural use, and the private golf course operated by the project applicant. With the current 40-minute headways operated by Metro Line 344, and school-day only service by the Palos Verdes Transit Gold Line and the Orange Line, the patrons of the project are not likely to use the current transit services during the typical weekday morning and afternoon commute peak periods; and if there is any, would be negligible. Therefore, the proposed project is not expected to create a significant impact to the county's CMP monitored transit system.

REFERENCES

2000 Highway Capacity Manual, Transportation Research Board, 2000

Brief Guide of Vehicular Traffic Generation Rates for the San Diego Region, SANDAG, April 2002

Congestion Management Program for Los Angeles County, Los Angeles County Metropolitan Transportation Authority, 2010

The Annenberg Project at Lower Point Vicente EIR Appendix D Traffic Impact Study, Linscott, Law & Greenspan, Engineers, July 13, 2010

Traffic Impact Analysis Report Guidelines, Los Angeles County Department of Public Works, January 1997

Trip Generation, 8th Edition, Institute of Transportation Engineers, December 2008

Zone 2 Landslide Moratorium - Portuguese Bend Project - Traffic Impact Study, Linscott, Law & Greenspan, Engineers, July 13, 2010

Appendix A

Traffic Count Data

WILTEC

Phone: (626) 564-1944 Fax: (626) 564-0969

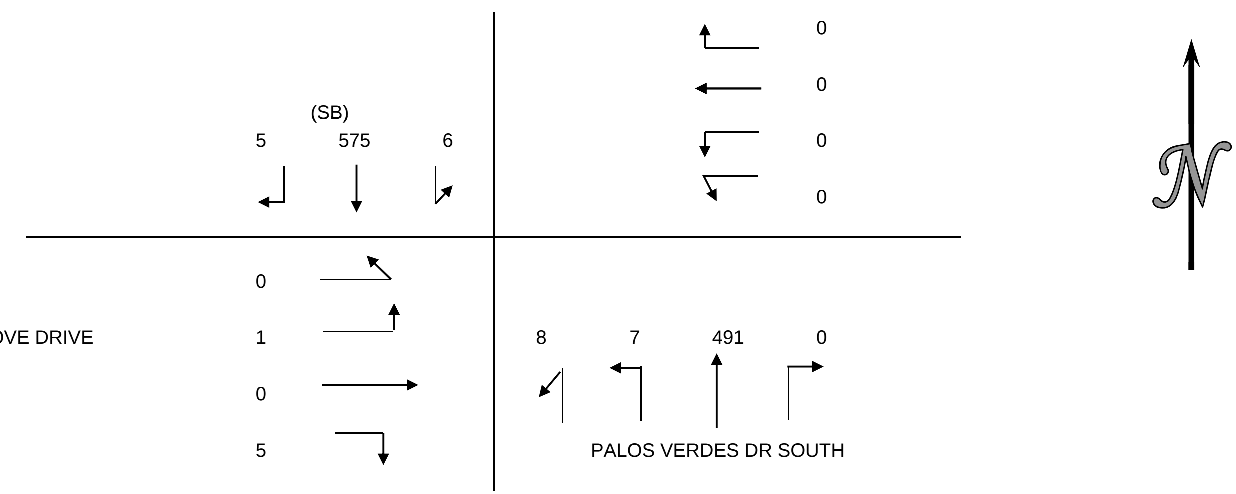
INTERSECTION TURNING MOVEMENT COUNT SUMMARY

CLIENT:		FEHR AND PEERS
PROJECT:		PALOS VERDES TRAFFIC COUNTS
DATE:		FRIDAY APRIL 29,2011
PERIOD:		4:00 PM TO 6:00 PM
INTERSECTION:	N/S	PALOS VERDES DR SOUTH
	E/W	SEACOVE DRIVE

VEHICLE COUNTS

PERIOD 15 MIN COUNTS	1 SBRT	2 SBTH	3 SBLT	3U SBUT	4 WBRT	5 WBTH	6 WBLT	6U WBUT	7 NBRT	8 NBTH	9 NBLT	9U NBUT	10 EBRT	11 EBTH	12 EBLT	12U EBUT	TOTAL
400-415	1	148	0	1	0	0	0	0	0	108	0	1	2	0	1	0	262
415-430	0	129	0	2	0	0	0	0	0	117	1	0	1	0	0	0	250
430-445	2	148	0	0	0	0	0	0	0	119	3	1	3	0	0	0	276
445-500	0	146	0	2	0	0	0	0	0	143	2	5	1	0	0	0	299
500-515	2	148	0	2	0	0	0	0	0	112	2	0	0	0	0	0	266
515-530	1	133	0	2	0	0	0	0	0	117	0	2	1	0	1	0	257
530-545	1	152	0	0	0	0	0	0	0	108	0	2	1	0	1	0	265
545-600	3	129	0	1	0	0	0	0	0	104	0	1	0	0	1	0	239
HOUR TOTALS																	
400-500	3	571	0	5	0	0	0	0	0	487	6	7	7	0	1	0	1087
415-515	4	571	0	6	0	0	0	0	0	491	8	6	5	0	0	0	1091
430-530	5	575	0	6	0	0	0	0	0	491	7	8	5	0	1	0	1098
445-545	4	579	0	6	0	0	0	0	0	480	4	9	3	0	2	0	1087
500-600	7	562	0	5	0	0	0	0	0	441	2	5	2	0	3	0	1027

PM PEAK HOUR
430-530



WILTEC

TEL: (626) 564-1944 FAX: (626) 564-0969

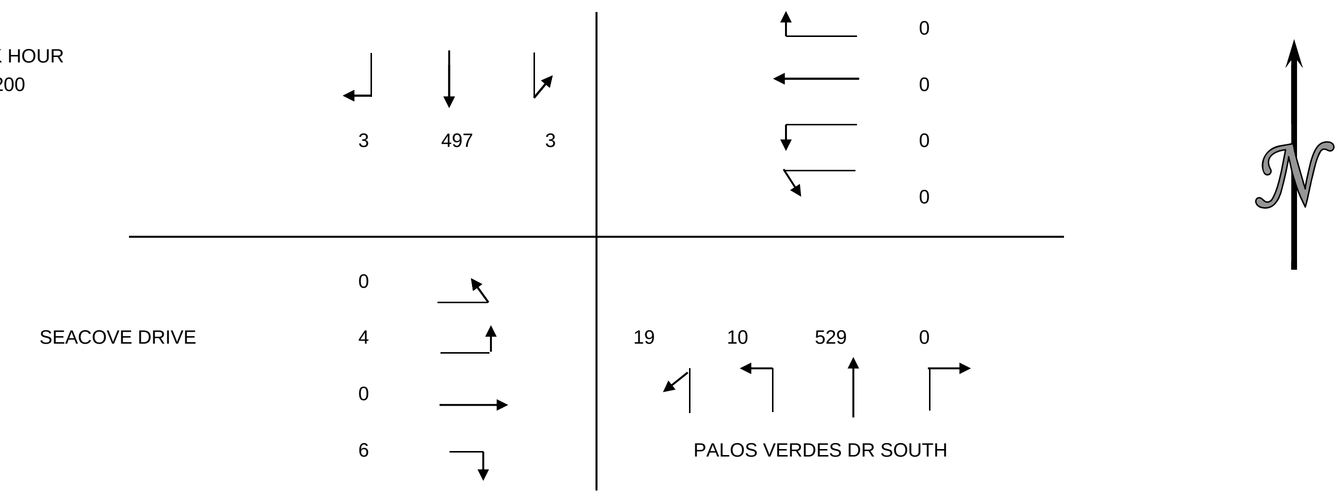
INTERSECTION TURNING MOVEMENT COUNT SUMMARY

CLIENT: FEHR AND PEERS
PROJECT: PALOS VERDES TRAFFIC COUNTS
DATE: SATURDAY APRIL 30, 2011
PERIOD: 12:00 PM TO 2:00 PM
INTERSECTION: N/S PALOS VERDES DR SOUTH
E/W SEACOVE DRIVE

VEHICLE COUNTS

PERIOD	1 SBRT	2 SBTH	3 SBLT	3U SBUT	4 WBRT	5 WBTH	6 WBLT	6U WBUT	7 NBRT	8 NBTH	9 NBLT	9U NBUT	10 EBRT	11 EBTH	12 EBLT	12U EBUT	TOTAL
15 MIN COUNTS																	
1200-1215	3	116	0	0	0	0	0	0	0	131	2	3	3	0	1	0	259
1215-1230	1	98	0	1	0	0	0	0	0	118	0	2	0	0	2	0	222
1230-1245	0	114	0	1	0	0	0	0	0	117	0	6	0	0	0	0	238
1245-100	0	126	0	0	0	0	0	0	0	113	1	5	0	0	0	0	245
100-115	1	125	0	1	0	0	0	0	0	133	3	4	3	0	1	0	271
115-130	0	115	0	1	0	0	0	0	0	136	0	3	1	0	1	0	257
130-145	1	135	0	0	0	0	0	0	0	141	2	3	2	0	0	0	284
145-200	1	122	0	1	0	0	0	0	0	119	5	9	0	0	2	0	259
HOUR TOTALS																	
1200-100	4	454	0	2	0	0	0	0	0	479	3	16	3	0	3	0	964
1215-115	2	463	0	3	0	0	0	0	0	481	4	17	3	0	3	0	976
1230-130	1	480	0	3	0	0	0	0	0	499	4	18	4	0	2	0	1011
1245-145	2	501	0	2	0	0	0	0	0	523	6	15	6	0	2	0	1057
100-200	3	497	0	3	0	0	0	0	0	529	10	19	6	0	4	0	1071

MD PEAK HOUR
100-200



WILTEC

Phone: (626) 564-1944 Fax: (626) 564-0969

INTERSECTION TURNING MOVEMENT COUNT SUMMARY

CLIENT: FEHR AND PEERS
PROJECT: PALOS VERDES TRAFFIC COUNTS
DATE: FRIDAY APRIL 29,2011
PERIOD: 4:00 PM TO 6:00 PM
INTERSECTION: N/S PALOS VERDES DR SOUTH
E/W WAYFARER CHAPEL DRIVEWAY

VEHICLE COUNTS

PERIOD 15 MIN COUNTS	1 SBRT	2 SBTH	3 SBLT	3U SBUT	4 WBRT	5 WBTH	6 WBLT	6U WBUT	7 NBRT	8 NBTH	9 NBLT	9U NBUT	10 EBRT	11 EBTH	12 EBLT	12U EBUT	TOTAL
400-415	0	156	1	1	2	0	3	0	2	100	0	0	0	0	0	0	265
415-430	0	117	1	2	2	0	1	0	1	107	0	0	0	0	0	0	231
430-445	0	148	3	4	1	0	4	0	2	127	0	0	0	0	0	0	289
445-500	0	142	5	3	5	0	1	0	6	141	0	0	0	0	0	0	303
500-515	0	140	9	2	4	0	4	0	5	101	0	0	0	0	0	0	265
515-530	0	138	0	2	6	0	1	0	6	121	0	0	0	0	0	0	274
530-545	0	163	1	2	2	0	0	0	2	109	0	0	0	0	0	0	279
545-600	0	121	0	0	0	0	0	0	6	100	0	0	0	0	0	0	227
HOUR TOTALS																	
400-500	0	563	10	10	10	0	9	0	11	475	0	0	0	0	0	0	1088
415-515	0	547	18	11	12	0	10	0	14	476	0	0	0	0	0	0	1088
430-530	0	568	17	11	16	0	10	0	19	490	0	0	0	0	0	0	1131
445-545	0	583	15	9	17	0	6	0	19	472	0	0	0	0	0	0	1121
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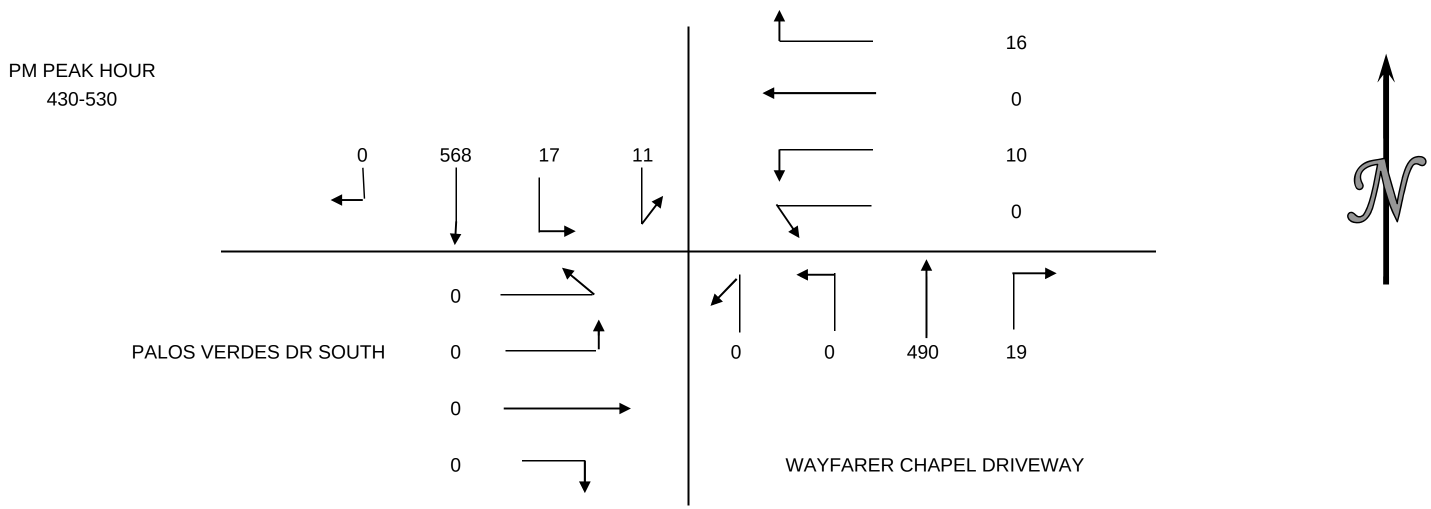


WILTEC

TEL: (626) 564-1944 FAX: (626) 564-0969

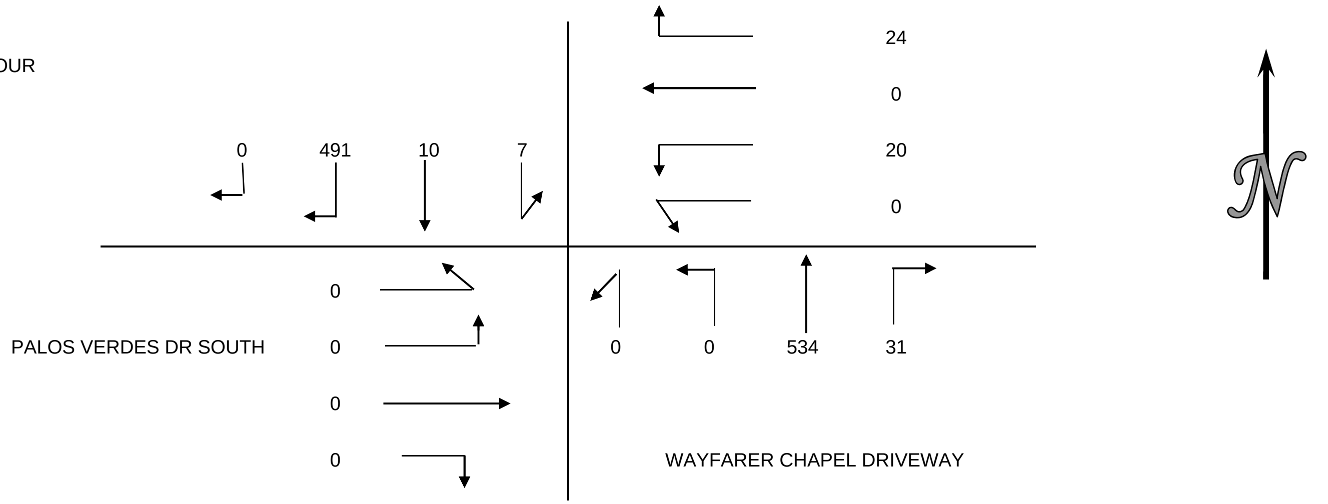
INTERSECTION TURNING MOVEMENT COUNT SUMMARY

CLIENT: FEHR AND PEERS
PROJECT: PALOS VERDES TRAFFIC COUNTS
DATE: SATURDAY APRIL 30, 2011
PERIOD: 12:00 PM TO 2:00 PM
INTERSECTION: N/S PALOS VERDES DR SOUTH
E/W WAYFARER CHAPEL DRIVEWAY

VEHICLE COUNTS

PERIOD 15 MIN COUNTS	1 SBRT	2 SBTH	3 SBLT	3U SBUT	4 WBRT	5 WBTH	6 WBLT	6U WBUT	7 NBRT	8 NBTH	9 NBLT	9U NBUT	10 EBRT	11 EBTH	12 EBLT	12U EBUT	TOTAL
1200-1215	0	111	4	2	5	0	0	0	7	124	0	0	0	0	0	0	253
1215-1230	0	95	4	2	2	0	3	0	6	119	0	0	0	0	0	0	231
1230-1245	0	108	3	2	9	0	11	0	4	115	0	0	0	0	0	0	252
1245-100	0	125	3	2	0	0	5	0	5	106	0	0	0	0	0	0	246
100-115	0	123	0	3	9	0	8	0	8	136	0	0	0	0	0	0	287
115-130	0	122	5	0	5	0	7	0	8	135	0	0	0	0	0	0	282
130-145	0	115	3	1	1	0	3	0	7	136	0	0	0	0	0	0	266
145-200	0	131	2	3	9	0	2	0	8	127	0	0	0	0	0	0	282
HOUR TOTALS																	
1200-100	0	439	14	8	16	0	19	0	22	464	0	0	0	0	0	0	982
1215-115	0	451	10	9	20	0	27	0	23	476	0	0	0	0	0	0	1016
1230-130	0	478	11	7	23	0	31	0	25	492	0	0	0	0	0	0	1067
1245-145	0	485	11	6	15	0	23	0	28	513	0	0	0	0	0	0	1081
100-200	0	491	10	7	24	0	20	0	31	534	0	0	0	0	0	0	1117

MD PEAK HOUR
100-200



WILTEC

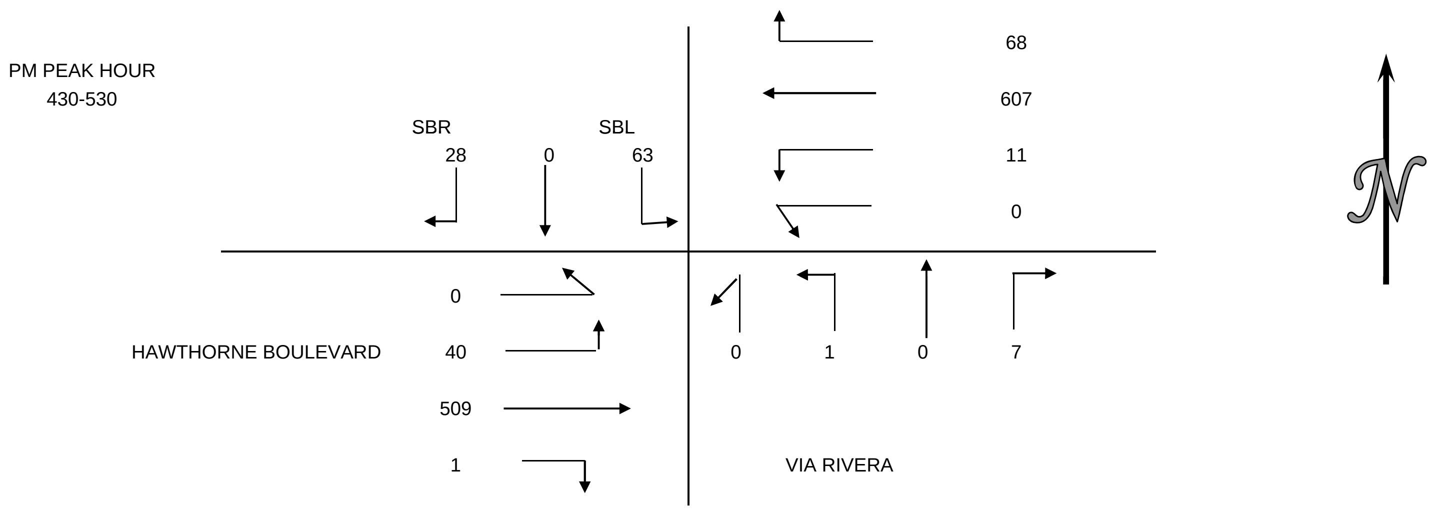
Phone: (626) 564-1944 Fax: (626) 564-0969

INTERSECTION TURNING MOVEMENT COUNT SUMMARY

CLIENT: FEHR AND PEERS
PROJECT: PALOS VERDES TRAFFIC COUNTS
DATE: FRIDAY APRIL 29,2011
PERIOD: 4:00 PM TO 6:00 PM
INTERSECTION: N/S VIA RIVERA
E/W HAWTHORNE BOULEVARD

VEHICLE COUNTS

PERIOD	1 SBRT	2 SBTH	3 SBLT	3U SBUT	4 WBRT	5 WBTH	6 WBLT	6U WBUT	7 NBRT	8 NBTH	9 NBLT	9U NBUT	10 EBRT	11 EBTH	12 EBLT	12U EBUT	TOTAL
15 MIN COUNTS																	
400-415	7	0	6	0	13	127	2	0	1	0	0	0	1	115	6	0	278
415-430	7	0	16	0	16	148	5	0	0	0	0	0	0	110	11	0	313
430-445	7	0	18	0	21	147	3	0	2	0	0	0	0	121	12	0	331
445-500	4	0	18	0	20	131	2	0	2	0	0	0	0	128	10	0	315
500-515	9	0	13	0	14	173	2	0	2	0	0	0	0	141	11	0	365
515-530	8	0	14	0	13	156	4	0	1	0	1	0	1	119	7	0	324
530-545	5	0	9	0	21	128	8	0	2	0	0	0	0	107	8	0	288
545-600	6	1	12	0	14	110	1	0	0	0	0	0	2	102	5	0	253
HOUR TOTALS																	
400-500	25	0	58	0	70	553	12	0	5	0	0	0	1	474	39	0	1237
415-515	27	0	65	0	71	599	12	0	6	0	0	0	0	500	44	0	1324
430-530	28	0	63	0	68	607	11	0	7	0	1	0	1	509	40	0	1335
445-545	26	0	54	0	68	588	16	0	7	0	1	0	1	495	36	0	1292
500-600	28	1	48	0	62	567	15	0	5	0	1	0	3	469	31	0	1230



WILTEC

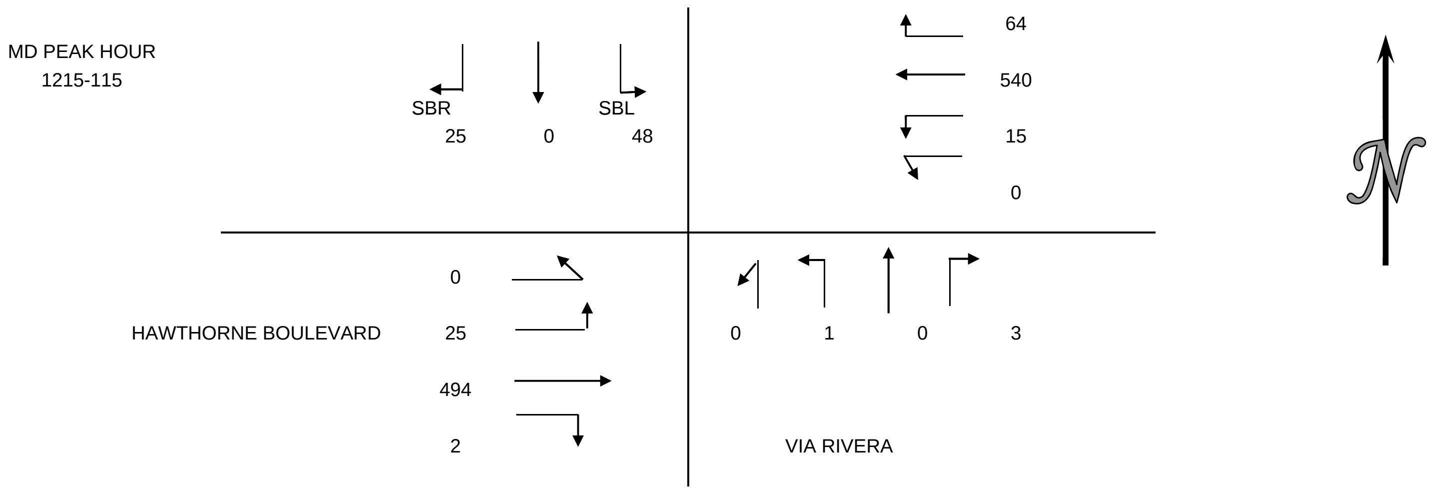
TEL: (626) 564-1944 FAX: (626) 564-0969

INTERSECTION TURNING MOVEMENT COUNT SUMMARY

CLIENT: FEHR AND PEERS
PROJECT: PALOS VERDES TRAFFIC COUNTS
DATE: SATURDAY APRIL 30, 2011
PERIOD: 12:00 PM TO 2:00 PM
INTERSECTION: N/S VIA RIVERA
E/W HAWTHORNE BOULEVARD

VEHICLE COUNTS

PERIOD	1 SBRT	2 SBTH	3 SBLT	3U SBUT	4 WBRT	5 WBTH	6 WBLT	6U WBUT	7 NBRT	8 NBTH	9 NBLT	9U NBUT	10 EBRT	11 EBTH	12 EBLT	12U EBUT	TOTAL
15 MIN COUNTS																	
1200-1215	4	0	11	0	11	102	0	0	1	0	0	0	0	120	8	0	257
1215-1230	6	0	11	0	14	136	2	0	1	0	0	0	0	130	4	0	304
1230-1245	7	0	16	0	22	132	5	0	2	0	0	0	1	115	5	0	305
1245-100	5	0	13	0	14	115	2	0	0	0	0	0	0	119	7	0	275
100-115	7	0	8	0	14	157	6	0	0	0	1	0	1	130	9	0	333
115-130	4	1	7	0	5	117	2	0	5	0	0	0	1	104	6	0	252
130-145	5	0	9	0	13	135	2	0	3	0	0	0	0	121	5	0	293
145-200	5	1	21	0	10	115	3	0	2	0	0	0	1	120	9	0	287
HOUR TOTALS																	
1200-100	22	0	51	0	61	485	9	0	4	0	0	0	1	484	24	0	1141
1215-115	25	0	48	0	64	540	15	0	3	0	1	0	2	494	25	0	1217
1230-130	23	1	44	0	55	521	15	0	7	0	1	0	3	468	27	0	1165
1245-145	21	1	37	0	46	524	12	0	8	0	1	0	2	474	27	0	1153
100-200	21	2	45	0	42	524	13	0	10	0	1	0	3	475	29	0	1165



WILTEC

Phone: (626) 564-1944 Fax: (626) 564-0969

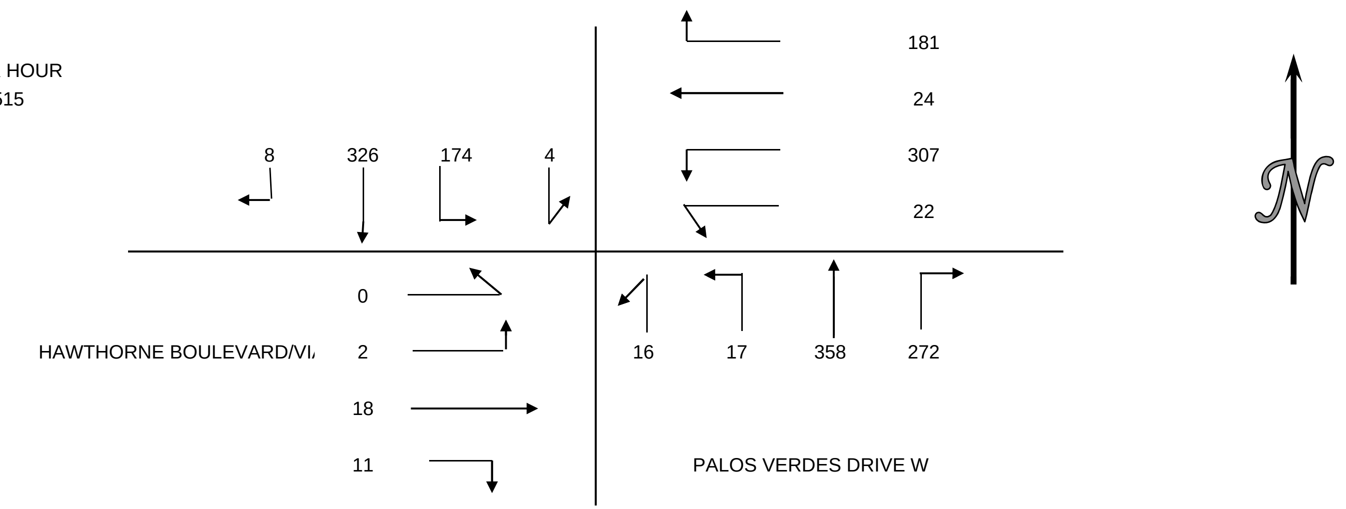
INTERSECTION TURNING MOVEMENT COUNT SUMMARY

CLIENT: FEHR AND PEERS
PROJECT: PALOS VERDES TRAFFIC COUNTS
DATE: FRIDAY APRIL 29,2011
PERIOD: 4:00 PM TO 6:00 PM
INTERSECTION: N/S PALOS VERDES DRIVE W
E/W HAWTHORNE BOULEVARD/VIA VICENTE

VEHICLE COUNTS

PERIOD	1	2	3	3U	4	5	6	6U	7	8	9	9U	10	11	12	12U	
15 MIN COUNTS	SBRT	SBTH	SBLT	SBUT	WBRT	WBTH	WBLT	WBUT	NBRT	NBTH	NBLT	NBUT	EBRT	EBTH	EBLT	EBUT	TOTAL
400-415	2	61	43	0	47	3	77	4	67	62	3	4	1	9	3	0	386
415-430	4	85	54	1	42	6	82	4	69	78	5	3	0	4	0	0	437
430-445	1	76	35	0	40	5	73	4	58	93	2	4	6	9	1	0	407
445-500	1	80	41	2	38	4	80	7	72	96	5	4	1	2	1	0	434
500-515	2	85	44	1	61	9	72	7	73	91	5	5	4	3	0	0	462
515-530	4	66	49	1	44	5	73	2	63	49	15	2	3	2	0	0	378
530-545	0	76	44	0	26	8	79	4	71	80	2	4	7	2	2	0	405
545-600	0	81	46	0	38	9	82	3	57	68	3	5	5	7	1	0	405
HOUR TOTALS																	
400-500	8	302	173	3	167	18	312	19	266	329	15	15	8	24	5	0	1664
415-515	8	326	174	4	181	24	307	22	272	358	17	16	11	18	2	0	1740
430-530	8	307	169	4	183	23	298	20	266	329	27	15	14	16	2	0	1681
445-545	7	307	178	4	169	26	304	20	279	316	27	15	15	9	3	0	1679
500-600	6	308	183	2	169	31	306	16	264	288	25	16	19	14	3	0	1650

PM PEAK HOUR
415-515



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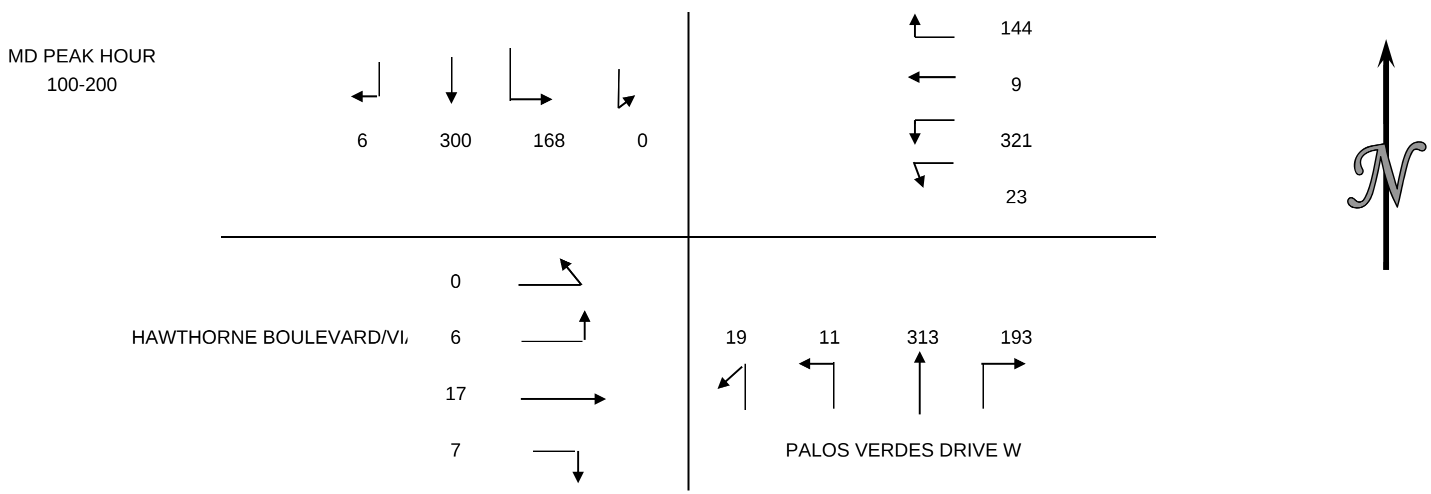
TEL: (626) 564-1944 FAX: (626) 564-0969

INTERSECTION TURNING MOVEMENT COUNT SUMMARY

CLIENT: FEHR AND PEERS
PROJECT: PALOS VERDES TRAFFIC COUNTS
DATE: SATURDAY APRIL 30, 2011
PERIOD: 12:00 PM TO 2:00 PM
INTERSECTION: N/S PALOS VERDES DRIVE W
E/W HAWTHORNE BOULEVARD/VIA VICENTE

VEHICLE COUNTS

PERIOD	1	2	3	3U	4	5	6	6U	7	8	9	9U	10	11	12	12U	
15 MIN COUNTS	SBRT	SBTH	SBLT	SBUT	WBRT	WBTH	WBLT	WBUT	NBRT	NBTH	NBLT	NBUT	EBRT	EBTH	EBLT	EBUT	TOTAL
1200-1215	4	63	58	0	37	5	75	1	53	82	5	4	1	9	2	0	399
1215-1230	0	60	47	0	37	2	62	2	56	93	4	3	5	6	0	0	377
1230-1245	0	69	39	0	46	1	68	3	53	78	3	6	1	2	1	0	370
1245-100	1	75	44	0	31	1	71	6	68	58	5	8	1	5	3	0	377
100-115	4	64	43	0	39	1	88	8	43	73	2	4	1	6	4	0	380
115-130	0	66	42	0	34	2	77	3	40	69	3	2	1	4	1	0	344
130-145	1	77	35	0	39	1	84	4	56	79	1	5	2	4	1	0	389
145-200	1	93	48	0	32	5	72	8	54	92	5	8	3	3	0	0	424
HOUR TOTALS																	
1200-100	5	267	188	0	151	9	276	12	230	311	17	21	8	22	6	0	1523
1215-115	5	268	173	0	153	5	289	19	220	302	14	21	8	19	8	0	1504
1230-130	5	274	168	0	150	5	304	20	204	278	13	20	4	17	9	0	1471
1245-145	6	282	164	0	143	5	320	21	207	279	11	19	5	19	9	0	1490
100-200	6	300	168	0	144	9	321	23	193	313	11	19	7	17	6	0	1537



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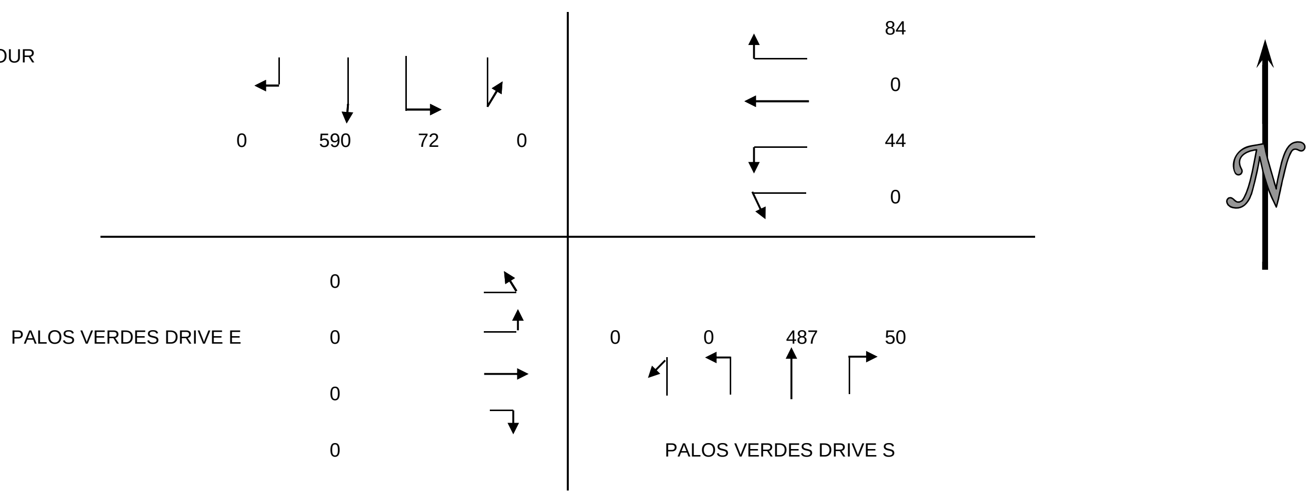
INTERSECTION TURNING MOVEMENT COUNT SUMMARY

CLIENT: FEHR AND PEERS
PROJECT: PALOS VERDES TRAFFIC COUNTS
DATE: FRIDAY APRIL 29,2011
PERIOD: 4:00 PM TO 6:00 PM
INTERSECTION: N/S PALOS VERDES DRIVE S
E/W PALOS VERDES DRIVE E

VEHICLE COUNTS

PERIOD	1	2	3	3U	4	5	6	6U	7	8	9	9U	10	11	12	12U	
15 MIN COUNTS	SBRT	SBTH	SBLT	SBUT	WBRT	WBTH	WBLT	WBUT	NBRT	NBTH	NBLT	NBUT	EBRT	EBTH	EBLT	EBUT	TOTAL
400-415	0	166	18	0	31	0	13	0	10	110	0	0	0	0	0	0	348
415-430	0	145	15	0	22	0	10	0	9	127	0	0	0	0	0	0	328
430-445	0	151	24	0	19	0	13	0	21	145	0	0	0	0	0	0	373
445-500	0	128	15	0	12	0	8	0	10	105	0	0	0	0	0	0	278
500-515	0	145	20	0	22	0	10	0	6	112	0	0	0	0	0	0	315
515-530	0	125	17	0	21	0	10	0	5	120	0	0	0	0	0	0	298
530-545	0	149	24	0	15	0	10	0	16	104	0	0	0	0	0	0	318
545-600	0	149	14	0	19	0	11	0	7	103	0	0	0	0	0	0	303
HOUR TOTALS																	
400-500	0	590	72	0	84	0	44	0	50	487	0	0	0	0	0	0	1327
415-515	0	569	74	0	75	0	41	0	46	489	0	0	0	0	0	0	1294
430-530	0	549	76	0	74	0	41	0	42	482	0	0	0	0	0	0	1264
445-545	0	547	76	0	70	0	38	0	37	441	0	0	0	0	0	0	1209
500-600	0	568	75	0	77	0	41	0	34	439	0	0	0	0	0	0	1234

PM PEAK HOUR
400-500



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TEL: (626) 564-1944 FAX: (626) 564-0969

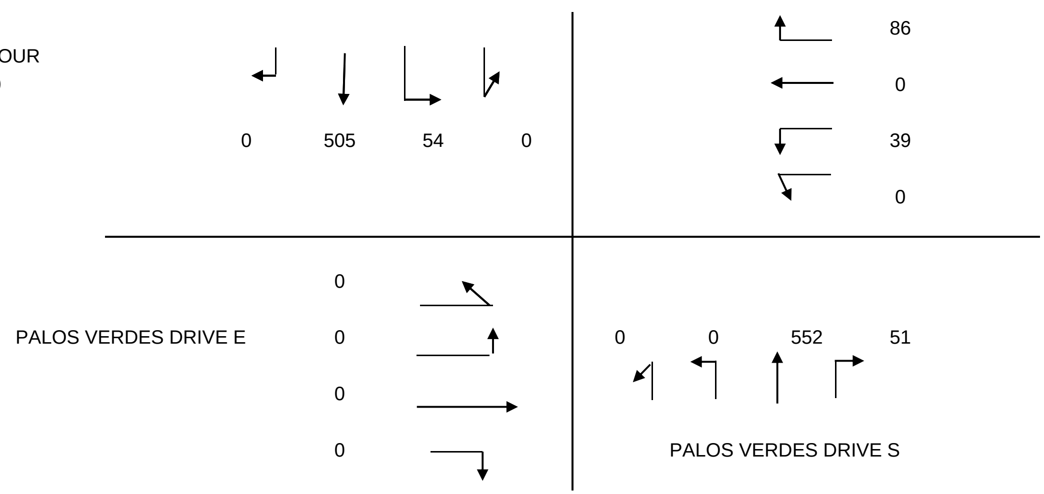
INTERSECTION TURNING MOVEMENT COUNT SUMMARY

CLIENT: FEHR AND PEERS
PROJECT: PALOS VERDES TRAFFIC COUNTS
DATE: SATURDAY APRIL 30, 2011
PERIOD: 12:00 PM TO 2:00 PM
INTERSECTION: N/S PALOS VERDES DRIVE S
E/W PALOS VERDES DRIVE E

VEHICLE COUNTS

PERIOD	1	2	3	3U	4	5	6	6U	7	8	9	9U	10	11	12	12U	
15 MIN COUNTS	SBRT	SBTH	SBLT	SBUT	WBRT	WBTH	WBLT	WBUT	NBRT	NBTH	NBLT	NBUT	EBRT	EBTH	EBLT	EBUT	TOTAL
1200-1215	0	92	17	0	20	0	9	0	10	115	0	0	0	0	0	0	263
1215-1230	0	98	11	0	25	0	11	0	16	109	0	0	0	0	0	0	270
1230-1245	0	100	9	0	17	0	5	0	11	142	0	0	0	0	0	0	284
1245-100	0	114	19	0	16	0	7	0	9	120	0	0	0	0	0	0	285
100-115	0	123	11	0	17	0	10	0	11	141	0	0	0	0	0	0	313
115-130	0	137	9	0	25	0	6	0	20	129	0	0	0	0	0	0	326
130-145	0	130	16	0	22	0	10	0	14	146	0	0	0	0	0	0	338
145-200	0	115	18	0	22	0	13	0	6	136	0	0	0	0	0	0	310
HOUR TOTALS																	
1200-100	0	404	56	0	78	0	32	0	46	486	0	0	0	0	0	0	1102
1215-115	0	435	50	0	75	0	33	0	47	512	0	0	0	0	0	0	1152
1230-130	0	474	48	0	75	0	28	0	51	532	0	0	0	0	0	0	1208
1245-145	0	504	55	0	80	0	33	0	54	536	0	0	0	0	0	0	1262
100-200	0	505	54	0	86	0	39	0	51	552	0	0	0	0	0	0	1287

MD PEAK HOUR
100-200



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24-HOUR ADT COUNT SUMMARY

CLIENT: FEHR & PEERS
PROJECT: PALOS VERDES TRAFFIC COUNTS
LOCATION: PALOS VERDES DRIVE SOUTH BETWEEN
SEACOVE DRIVE AND WAYFARERS CHAPEL DRIVEWAY
DATE: FRIDAY APRIL 29, 2011

DIRECTION:	NB				
TIME	00-15	15-30	30-45	45-60	HOUR TOTALS
0:00	5	6	5	5	21
1:00	4	3	7	0	14
2:00	n/a	n/a	n/a	n/a	n/a
3:00	n/a	n/a	n/a	n/a	n/a
4:00	n/a	n/a	n/a	n/a	n/a
5:00	n/a	n/a	n/a	n/a	n/a
6:00	n/a	n/a	n/a	n/a	n/a
7:00	n/a	n/a	n/a	n/a	n/a
8:00	n/a	n/a	n/a	n/a	n/a
9:00	n/a	n/a	n/a	n/a	n/a
10:00	n/a	n/a	n/a	n/a	n/a
11:00	n/a	n/a	n/a	n/a	n/a
12:00	n/a	n/a	n/a	n/a	n/a
13:00	n/a	n/a	n/a	n/a	n/a
14:00	n/a	n/a	n/a	n/a	n/a
15:00	n/a	n/a	n/a	n/a	n/a
16:00	n/a	n/a	n/a	n/a	n/a
17:00	n/a	n/a	n/a	n/a	n/a
18:00	n/a	n/a	n/a	n/a	n/a
19:00	n/a	n/a	n/a	n/a	n/a
20:00	n/a	n/a	n/a	n/a	n/a
21:00	n/a	n/a	n/a	n/a	n/a
22:00	n/a	n/a	n/a	n/a	n/a
23:00	n/a	n/a	n/a	n/a	n/a
				TOTAL	n/a
AM PEAK HOUR		0000-0100			
VOLUME		n/a			
PM PEAK HOUR		1200-1300			
VOLUME		n/a			

DIRECTION:	SB				
TIME	00-15	15-30	30-45	45-60	HOUR TOTALS
0:00	6	8	5	4	23
1:00	4	6	3	5	18
2:00	4	4	4	0	12
3:00	5	2	1	2	10
4:00	1	4	2	3	10
5:00	8	11	7	12	38
6:00	23	23	32	41	119
7:00	53	54	79	128	314
8:00	104	104	96	95	399
9:00	82	74	61	76	293
10:00	82	72	80	79	313
11:00	69	98	84	98	349
12:00	92	80	92	93	357
13:00	108	126	97	111	442
14:00	114	124	140	146	524
15:00	186	197	140	136	659
16:00	150	134	138	160	582
17:00	147	139	138	142	566
18:00	140	138	126	100	504
19:00	112	93	82	62	349
20:00	64	50	48	58	220
21:00	55	58	40	45	198
22:00	44	57	36	30	167
23:00	38	29	29	27	123
				TOTAL	6589
AM PEAK HOUR			0745-0845		
VOLUME			432		
PM PEAK HOUR			1430-1530		
VOLUME			669		

TOTAL BI-DIRECTIONAL VOLUME	n/a

*The northboun (westbound) data was not available due to an unexpected incident.

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Phone: (626) 564-1944 Fax: (626) 564-0969

24-HOUR ADT COUNT SUMMARY

CLIENT: FEHR & PEERS
PROJECT: PALOS VERDES TRAFFIC COUNTS
LOCATION: PALOS VERDES DRIVE SOUTH BETWEEN SEACOVE DRIVE AND WAYFARERS CHAPEL DRIVEWAY
DATE: SATURDAY APRIL 30, 2011

DIRECTION:	NB				
TIME	00-15	15-30	30-45	45-60	HOUR TOTALS
0:00	n/a	n/a	n/a	n/a	n/a
1:00	n/a	n/a	n/a	n/a	n/a
2:00	n/a	n/a	n/a	n/a	n/a
3:00	n/a	n/a	n/a	n/a	n/a
4:00	n/a	n/a	n/a	n/a	n/a
5:00	n/a	n/a	n/a	n/a	n/a
6:00	n/a	n/a	n/a	n/a	n/a
7:00	n/a	n/a	n/a	n/a	n/a
8:00	n/a	n/a	n/a	n/a	n/a
9:00	n/a	n/a	n/a	n/a	n/a
10:00	n/a	n/a	n/a	n/a	n/a
11:00	n/a	n/a	n/a	n/a	n/a
12:00	n/a	n/a	n/a	n/a	n/a
13:00	n/a	n/a	n/a	n/a	n/a
14:00	n/a	n/a	n/a	n/a	n/a
15:00	n/a	n/a	n/a	n/a	n/a
16:00	n/a	n/a	n/a	n/a	n/a
17:00	n/a	n/a	n/a	n/a	n/a
18:00	n/a	n/a	n/a	n/a	n/a
19:00	n/a	n/a	n/a	n/a	n/a
20:00	n/a	n/a	n/a	n/a	n/a
21:00	n/a	n/a	n/a	n/a	n/a
22:00	n/a	n/a	n/a	n/a	n/a
23:00	n/a	n/a	n/a	n/a	n/a
				TOTAL	0

AM PEAK HOUR	0000-0100
VOLUME	n/a
PM PEAK HOUR	1200-1300
VOLUME	n/a

DIRECTION:	SB				
TIME	00-15	15-30	30-45	45-60	HOUR TOTALS
0:00	34	16	13	9	72
1:00	8	13	10	23	54
2:00	8	5	6	2	21
3:00	0	6	3	6	15
4:00	6	2	3	3	14
5:00	4	4	8	8	24
6:00	12	12	18	25	67
7:00	20	28	39	46	133
8:00	55	50	66	63	234
9:00	81	60	78	92	311
10:00	81	88	112	123	404
11:00	108	135	120	113	476
12:00	118	100	114	126	458
13:00	130	117	122	134	503
14:00	132	144	120	152	548
15:00	123	194	160	128	605
16:00	144	148	151	150	593
17:00	154	146	143	128	571
18:00	102	113	102	82	399
19:00	102	86	64	101	353
20:00	65	62	46	44	217
21:00	49	48	56	72	225
22:00	50	42	52	41	185
23:00	43	38	38	34	153
				TOTAL	6635

AM PEAK HOUR	1045-1145
VOLUME	486
PM PEAK HOUR	1445-1545
VOLUME	629

TOTAL BI-DIRECTIONAL VOLUME	n/a

*The northboun (westbound) data was not available due to an unexpected incident.

WILTEC Phone: (626) 564-1944 Fax: (626) 564-0969

24-HOUR ADT COUNT SUMMARY

CLIENT: FEHR & PEERS
PROJECT: PALOS VERDES TRAFFIC COUNTS
LOCATION: PALOS VERDES DRIVE SOUTH BETWEEN SEACOVE DRIVE AND WAYFARERS CHAPEL DRIVEWAY
DATE: SUNDAY MAY 1, 2011

DIRECTION:	NB				
TIME	00-15	15-30	30-45	45-60	HOUR TOTALS
0:00	0	9	11	5	25
1:00	10	4	5	2	21
2:00	6	1	5	1	13
3:00	5	1	2	3	11
4:00	1	2	0	2	5
5:00	3	10	4	16	33
6:00	6	8	9	14	37
7:00	20	23	22	28	93
8:00	22	30	32	54	138
9:00	46	50	40	56	192
10:00	58	44	54	79	235
11:00	71	74	74	85	304
12:00	68	84	70	95	317
13:00	86	79	70	84	319
14:00	82	84	86	64	316
15:00	82	76	83	76	317
16:00	88	80	62	92	322
17:00	73	84	58	74	289
18:00	50	42	43	36	171
19:00	47	40	38	29	154
20:00	31	18	22	22	93
21:00	24	21	22	21	88
22:00	19	22	15	18	74
23:00	6	4	4	5	19
				TOTAL	3586

AM PEAK HOUR	1100-1200
VOLUME	304
PM PEAK HOUR	1345-1445
VOLUME	336

DIRECTION:	SB				
TIME	00-15	15-30	30-45	45-60	HOUR TOTALS
0:00	40	21	19	15	95
1:00	15	16	16	12	59
2:00	9	6	1	1	17
3:00	6	4	4	10	24
4:00	5	2	0	4	11
5:00	4	5	6	12	27
6:00	8	15	12	20	55
7:00	9	19	36	45	109
8:00	40	43	38	60	181
9:00	44	60	90	75	269
10:00	94	103	103	88	388
11:00	101	122	92	114	429
12:00	106	178	120	155	559
13:00	128	162	145	122	557
14:00	142	175	142	132	591
15:00	160	166	170	152	648
16:00	142	158	162	163	625
17:00	139	161	161	163	624
18:00	123	122	98	110	453
19:00	80	86	74	98	338
20:00	88	64	46	42	240
21:00	48	53	36	33	170
22:00	40	32	27	35	134
23:00	22	15	18	15	70
				TOTAL	6673

AM PEAK HOUR	1100-1200
VOLUME	429
PM PEAK HOUR	1500-1600
VOLUME	648

TOTAL BI-DIRECTIONAL VOLUME	10259

Appendix B

Intersection Level Of Service Worksheets

Existing (2011) Conditions

Project Title: Pointview Master Plan
Intersection: Palos Verdes Drive South & Point View Internal Driveway
Description: EXISTING CONDITIONS

Date/Time: FRIDAY PM PEAK HOUR (4:30-5:30)

Thru Lane:	1600 vph	N-S Split Phase :	N
Left Lane:	1600 vph	E-W Split Phase :	N
Double Lt Penalty:	20 %	Lost Time (% of cycle) :	10
ITS:	0 %	V/C Round Off (decs.) :	3
OLA Movements :			
FF Movements:			

APPROACH	MVMT	LANES	VOLUME	CAPACITY	V/C	ICU ANALYSIS	
Southbound	RT	0.00	0	0	0.000	N-S(1):	0.162
	TH	2.00	588	3,200	0.184 *	N-S(2):	0.184 *
	LT	0.00	0	0	0.000	E-W(1):	0.000 *
Westbound	RT	0.00	0	0	0.000	E-W(2):	0.000 *
	TH	1.00	0	1,600	0.000 *		
	LT	0.00	0	0	0.000 *	V/C:	0.184
Northbound	RT	0.00	0	0	0.000	Lost Time:	0.100
	TH	2.00	517	3,200	0.162	ITS:	0.000
	LT	0.00	0	0	0.000 *		
Eastbound	RT	0.00	0	0	0.000	ICU:	0.284
	TH	0.00	0	0	0.000 *		
	LT	0.00	0	0	0.000 *	LOS:	A

Date/Time: SATURDAY MIDDAY PEAK HOUR (12:15-1:15)

APPROACH	MVMT	LANES	VOLUME	CAPACITY	V/C	ICU ANALYSIS	
Southbound	RT	0.00	0	0	0.000	N-S(1):	0.177 *
	TH	2.00	522	3,200	0.163	N-S(2):	0.163
	LT	0.00	0	0	0.000 *	E-W(1):	0.000 *
Westbound	RT	0.00	0	0	0.000	E-W(2):	0.000 *
	TH	1.00	0	1,600	0.000 *		
	LT	0.00	0	0	0.000 *	V/C:	0.177
Northbound	RT	0.00	0	0	0.000	Lost Time:	0.100
	TH	2.00	565	3,200	0.177 *	ITS:	0.000
	LT	0.00	0	0	0.000		
Eastbound	RT	0.00	0	0	0.000	ICU:	0.277
	TH	0.00	0	0	0.000 *		
	LT	0.00	0	0	0.000 *	LOS:	A

* - Denotes critical movement

Project Title: **Pointview Master Plan**
Intersection: **Palos Verdes Drive South & Palos Verdes Drive East**
Description: **EXISTING CONDITIONS**

Date/Time: **FRIDAY PM PEAK HOUR (4:30-5:30)**

Thru Lane:	1600 vph	N-S Split Phase :	N
Left Lane:	1600 vph	E-W Split Phase :	N
Double Lt Penalty:	20 %	Lost Time (% of cycle) :	10
ITS:	0 %	V/C Round Off (decs.) :	3
OLA Movements :			
FF Movements:			

APPROACH	MVMT	LANES	VOLUME	CAPACITY	V/C	ICU ANALYSIS	
Southbound	RT	0.00	0	0	0.000	N-S(1):	0.349
	TH	1.00	590	1,600	0.369 *	N-S(2):	0.369 *
	LT	1.00	72	1,600	0.045	E-W(1):	0.028
Westbound	RT	1.00	84	1,600	0.030 *	E-W(2):	0.030 *
	TH	0.00	0	0	0.000		
	LT	1.00	44	1,600	0.028	V/C:	0.399
Northbound	RT	1.00	50	1,600	0.031	Lost Time:	0.100
	TH	1.00	487	1,600	0.304	ITS:	0.000
	LT	0.00	0	0	0.000 *		
Eastbound	RT	0.00	0	0	0.000	ICU:	0.499
	TH	0.00	0	0	0.000		
	LT	0.00	0	0	0.000 *	LOS:	A

Date/Time: **SATURDAY MIDDAY PEAK HOUR (12:15-1:15)**

APPROACH	MVMT	LANES	VOLUME	CAPACITY	V/C	ICU ANALYSIS	
Southbound	RT	0.00	0	0	0.000	N-S(1):	0.379 *
	TH	1.00	505	1,600	0.316	N-S(2):	0.316
	LT	1.00	54	1,600	0.034 *	E-W(1):	0.024
Westbound	RT	1.00	86	1,600	0.037 *	E-W(2):	0.037 *
	TH	0.00	0	0	0.000		
	LT	1.00	39	1,600	0.024	V/C:	0.416
Northbound	RT	1.00	51	1,600	0.032	Lost Time:	0.100
	TH	1.00	552	1,600	0.345 *	ITS:	0.000
	LT	0.00	0	0	0.000		
Eastbound	RT	0.00	0	0	0.000	ICU:	0.516
	TH	0.00	0	0	0.000		
	LT	0.00	0	0	0.000 *	LOS:	A

* - Denotes critical movement

Project Title: Pointview Master Plan
Intersection: Palos Verdes Drive South & Wayfarer's Chapel Drive
Description: EXISTING CONDITIONS

Date/Time: FRIDAY PM PEAK HOUR (4:30-5:30)

Thru Lane:	1600 vph	N-S Split Phase :	N
Left Lane:	1600 vph	E-W Split Phase :	N
Double Lt Penalty:	20 %	Lost Time (% of cycle) :	10
ITS:	0 %	V/C Round Off (decs.) :	3
OLA Movements :			
FF Movements:			

APPROACH	MVMT	LANES	VOLUME	CAPACITY	V/C		ICU ANALYSIS		
Southbound	RT	0.00	0	0	0.000		N-S(1):	0.171	
	TH	2.00	568	3,200	0.178	*	N-S(2):	0.178	*
	LT	1.00	28	1,600	0.018		E-W(1):	0.006	
Westbound	RT	0.00	16	0	0.000		E-W(2):	0.016	*
	TH	1.00	0	1,600	0.016	*			
	LT	0.00	10	1,600	0.006		V/C:	0.194	
Northbound	RT	1.00	19	1,600	0.012		Lost Time:	0.100	
	TH	2.00	490	3,200	0.153		ITS:	0.000	
	LT	0.00	0	0	0.000	*			
Eastbound	RT	0.00	0	0	0.000		ICU:	0.294	
	TH	0.00	0	0	0.000				
	LT	0.00	0	0	0.000	*	LOS:	A	

Date/Time: SATURDAY MIDDAY PEAK HOUR (12:15-1:15)

APPROACH	MVMT	LANES	VOLUME	CAPACITY	V/C		ICU ANALYSIS		
Southbound	RT	0.00	0	0	0.000		N-S(1):	0.178	*
	TH	2.00	491	3,200	0.153		N-S(2):	0.153	
	LT	1.00	17	1,600	0.011	*	E-W(1):	0.013	
Westbound	RT	0.00	24	0	0.000		E-W(2):	0.028	*
	TH	1.00	0	1,600	0.028	*			
	LT	0.00	20	1,600	0.013		V/C:	0.206	
Northbound	RT	1.00	31	1,600	0.019		Lost Time:	0.100	
	TH	2.00	534	3,200	0.167	*	ITS:	0.000	
	LT	0.00	0	0	0.000				
Eastbound	RT	0.00	0	0	0.000		ICU:	0.306	
	TH	0.00	0	0	0.000				
	LT	0.00	0	0	0.000	*	LOS:	A	

* - Denotes critical movement

Project Title: **Pointview Master Plan**
Intersection: **Palos Verdes Drive South & Seacove Drive**
Description: **EXISTING CONDITIONS**

Date/Time: **FRIDAY PM PEAK HOUR (4:30-5:30)**

Thru Lane:	1600 vph	N-S Split Phase :	N
Left Lane:	1600 vph	E-W Split Phase :	N
Double Lt Penalty:	20 %	Lost Time (% of cycle) :	10
ITS:	0 %	V/C Round Off (decs.) :	3
OLA Movements :			
FF Movements:			

APPROACH	MVMT	LANES	VOLUME	CAPACITY	V/C	ICU ANALYSIS	
Southbound	RT	0.00	5	0	0.000	N-S(1):	0.157
	TH	2.00	575	3,200	0.181 *	N-S(2):	0.190 *
	LT	1.00	6	1,600	0.004	E-W(1):	0.004 *
Westbound	RT	0.00	0	0	0.000	E-W(2):	0.001
	TH	0.00	0	0	0.000		
	LT	0.00	0	0	0.000 *	V/C:	0.194
Northbound	RT	0.00	0	0	0.000	Lost Time:	0.100
	TH	2.00	491	3,200	0.153	ITS:	0.000
	LT	1.00	15	1,600	0.009 *		
Eastbound	RT	0.00	5	0	0.000	ICU:	0.294
	TH	1.00	0	1,600	0.004 *		
	LT	0.00	1	1,600	0.001	LOS:	A

Date/Time: **SATURDAY MIDDAY PEAK HOUR (12:15-1:15)**

APPROACH	MVMT	LANES	VOLUME	CAPACITY	V/C	ICU ANALYSIS	
Southbound	RT	0.00	3	0	0.000	N-S(1):	0.167 *
	TH	2.00	497	3,200	0.156	N-S(2):	0.162
	LT	1.00	3	1,600	0.002 *	E-W(1):	0.006 *
Westbound	RT	0.00	0	0	0.000	E-W(2):	0.003
	TH	0.00	0	0	0.000		
	LT	0.00	0	0	0.000 *	V/C:	0.173
Northbound	RT	0.00	0	0	0.000	Lost Time:	0.100
	TH	2.00	529	3,200	0.165 *	ITS:	0.000
	LT	1.00	10	1,600	0.006		
Eastbound	RT	0.00	6	0	0.000	ICU:	0.273
	TH	1.00	0	1,600	0.006 *		
	LT	0.00	4	1,600	0.003	LOS:	A

* - Denotes critical movement

Project Title: **Pointview Master Plan**
Intersection: **Palos Verdes Drive West & Hawthorne Blvd/Via Vicente**
Description: **EXISTING CONDITIONS**

Date/Time: **FRIDAY PM PEAK HOUR (4:30-5:30)**

Thru Lane:	1600 vph	N-S Split Phase :	N
Left Lane:	1600 vph	E-W Split Phase :	N
Double Lt Penalty:	20 %	Lost Time (% of cycle) :	10
ITS:	0 %	V/C Round Off (decs.) :	3
OLA Movements :			
FF Movements:			

APPROACH	MVMT	LANES	VOLUME	CAPACITY	V/C	ICU ANALYSIS	
Southbound	RT	0.00	8	0	0.000	N-S(1):	0.223 *
	TH	2.00	326	3,200	0.104	N-S(2):	0.125
	LT	1.00	178	1,600	0.111 *	E-W(1):	0.148 *
Westbound	RT	1.00	181	1,600	0.058	E-W(2):	0.111
	TH	0.14	24	218	0.110		
	LT	1.86	329	2,386	0.138 *	V/C:	0.371
Northbound	RT	1.00	272	1,600	0.101	Lost Time:	0.100
	TH	2.00	358	3,200	0.112 *	ITS:	0.000
	LT	1.00	33	1,600	0.021		
Eastbound	RT	0.00	11	0	0.000	ICU:	0.471
	TH	2.00	18	3,200	0.010 *		
	LT	0.00	2	1,600	0.001	LOS:	A

Date/Time: **SATURDAY MIDDAY PEAK HOUR (12:15-1:15)**

APPROACH	MVMT	LANES	VOLUME	CAPACITY	V/C	ICU ANALYSIS	
Southbound	RT	0.00	6	0	0.000	N-S(1):	0.203 *
	TH	2.00	300	3,200	0.096	N-S(2):	0.115
	LT	1.00	168	1,600	0.105 *	E-W(1):	0.147 *
Westbound	RT	1.00	144	1,600	0.038	E-W(2):	0.114
	TH	0.05	9	82	0.110		
	LT	1.95	344	2,495	0.138 *	V/C:	0.350
Northbound	RT	1.00	193	1,600	0.052	Lost Time:	0.100
	TH	2.00	313	3,200	0.098 *	ITS:	0.000
	LT	1.00	30	1,600	0.019		
Eastbound	RT	0.00	7	0	0.000	ICU:	0.450
	TH	2.00	17	3,200	0.009 *		
	LT	0.00	6	1,600	0.004	LOS:	A

* - Denotes critical movement

Project Title: **Pointview Master Plan**
Intersection: **Via Rivera & Hawthorne Boulevard**
Description: **EXISTING CONDITIONS**

Date/Time: **FRIDAY PM PEAK HOUR (4:30-5:30)**

Thru Lane:	1600 vph	N-S Split Phase :	N
Left Lane:	1600 vph	E-W Split Phase :	N
Double Lt Penalty:	20 %	Lost Time (% of cycle) :	10
ITS:	0 %	V/C Round Off (decs.) :	3
OLA Movements :			
FF Movements:			

APPROACH	MVMT	LANES	VOLUME	CAPACITY	V/C	ICU ANALYSIS	
Southbound	RT	0.00	28	0	0.000	N-S(1):	0.044
	TH	1.00	0	1,600	0.057 *	N-S(2):	0.058 *
	LT	0.00	63	1,600	0.039	E-W(1):	0.166
Westbound	RT	1.00	68	1,600	0.023	E-W(2):	0.215 *
	TH	2.00	607	3,200	0.190 *		
	LT	1.00	11	1,600	0.007	V/C:	0.273
Northbound	RT	0.00	7	0	0.000	Lost Time:	0.100
	TH	1.00	0	1,600	0.005	ITS:	0.000
	LT	0.00	1	1,600	0.001 *		
Eastbound	RT	0.00	1	0	0.000	ICU:	0.373
	TH	2.00	509	3,200	0.159		
	LT	1.00	40	1,600	0.025 *	LOS:	A

Date/Time: **SATURDAY MIDDAY PEAK HOUR (12:15-1:15)**

APPROACH	MVMT	LANES	VOLUME	CAPACITY	V/C	ICU ANALYSIS	
Southbound	RT	0.00	25	0	0.000	N-S(1):	0.033
	TH	1.00	0	1,600	0.046 *	N-S(2):	0.047 *
	LT	0.00	48	1,600	0.030	E-W(1):	0.164
Westbound	RT	1.00	64	1,600	0.025	E-W(2):	0.185 *
	TH	2.00	540	3,200	0.169 *		
	LT	1.00	15	1,600	0.009	V/C:	0.232
Northbound	RT	0.00	3	0	0.000	Lost Time:	0.100
	TH	1.00	0	1,600	0.003	ITS:	0.000
	LT	0.00	1	1,600	0.001 *		
Eastbound	RT	0.00	2	0	0.000	ICU:	0.332
	TH	2.00	494	3,200	0.155		
	LT	1.00	25	1,600	0.016 *	LOS:	A

* - Denotes critical movement

```
--------------------------------------------------------------------------------
--------------------------------------------------------------------------------
                   Level Of Service Computation Report
          2000 HCM Unsignalized Method (Base Volume Alternative)
********************************************************************************
Intersection #1 1
********************************************************************************
Average Delay (sec/veh):      2.2      Worst Case Level Of Service: D[ 26.3]
********************************************************************************
Street Name:                VIA RIVERA                       HAWTHORNE BLVD
Approach:      North Bound       South Bound       East Bound        West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:        Stop Sign         Stop Sign       Uncontrolled      Uncontrolled
Rights:           Include           Include          Include           Include
Lanes:        0  0  1! 0  0    0  0  1! 0  0    1  0  1  1  0    1  0  2  0  1
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:       1    0     7    63    0    28    40  509     1    11  607    68
Growth Adj:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Initial Bse:    1    0     7    63    0    28    40  509     1    11  607    68
User Adj:    1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Volume:     1    0     7    63    0    28    40  509     1    11  607    68
Reduct Vol:     0    0     0     0    0     0     0    0     0     0    0     0
FinalVolume:    1    0     7    63    0    28    40  509     1    11  607    68
------------|---------------||---------------||---------------||---------------|
Critical Gap Module:
Critical Gp:  7.5  6.5   6.9   7.5  6.5   6.9   4.1 xxxx xxxxx   4.1 xxxx xxxxx
FollowUpTim:  3.5  4.0   3.3   3.5  4.0   3.3   2.2 xxxx xxxxx   2.2 xxxx xxxxx
------------|---------------||---------------||---------------||---------------|
Capacity Module:
Cnflict Vol:  915 1287   255   964 1219   304   675 xxxx xxxxx   510 xxxx xxxxx
Potent Cap.:  231  166   750   213  182   699   926 xxxx xxxxx  1065 xxxx xxxxx
Move Cap.:    213  157   750   202  172   699   926 xxxx xxxxx  1065 xxxx xxxxx
Volume/Cap:  0.00 0.00  0.01  0.31 0.00  0.04  0.04 xxxx  xxxx  0.01 xxxx  xxxx
------------|---------------||---------------||---------------||---------------|
Level Of Service Module:
2Way95thQ:   xxxx xxxx xxxxx  xxxx xxxx xxxxx   0.1 xxxx xxxxx   0.0 xxxx xxxxx
Control Del:xxxxx xxxx xxxxx xxxxx xxxx xxxxx   9.1 xxxx xxxxx   8.4 xxxx xxxxx
LOS by Move:    *    *     *     *    *     *     A    *     *     A    *     *
Movement:     LT - LTR - RT    LT - LTR - RT    LT - LTR - RT    LT - LTR - RT
Shared Cap.: xxxx  570 xxxxx  xxxx  259 xxxxx  xxxx xxxx xxxxx  xxxx xxxx xxxxx
SharedQueue:xxxxx  0.0 xxxxx xxxxx  1.5 xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx
Shrd ConDel:xxxxx 11.4 xxxxx xxxxx 26.3 xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx
Shared LOS:     *    B     *     *    D     *     *    *     *     *    *     *
ApproachDel:       11.4              26.3            xxxxxx            xxxxxx
ApproachLOS:          B                 D                 *                 *
********************************************************************************
Note: Queue reported is the number of cars per lane.
********************************************************************************
```

```
--------------------------------------------------------------------------------
--------------------------------------------------------------------------------
                      Level Of Service Computation Report
            2000 HCM Unsignalized Method (Base Volume Alternative)
********************************************************************************
Intersection #3 3
********************************************************************************
Average Delay (sec/veh):      0.2      Worst Case Level Of Service: B[ 11.3]
********************************************************************************
Street Name:     PALOS VERDES DRIVE SOUTH                  SEACOVE DR
Approach:      North Bound      South Bound      East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:       Uncontrolled     Uncontrolled      Stop Sign        Stop Sign
Rights:           Include          Include          Include          Include
Lanes:        1  0  1  1  0    1  0  1  1  0    0  0  1! 0  0    0  0  0  0  0
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:      15  491     0     6  575     5     1     0     5     0     0     0
Growth Adj:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Initial Bse:   15  491     0     6  575     5     1     0     5     0     0     0
User Adj:    1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Volume:    15  491     0     6  575     5     1     0     5     0     0     0
Reduct Vol:     0    0     0     0    0     0     0     0     0     0     0     0
FinalVolume:   15  491     0     6  575     5     1     0     5     0     0     0
------------|---------------||---------------||---------------||---------------|
Critical Gap Module:
Critical Gp:  4.1 xxxx xxxxx   4.1 xxxx xxxxx   6.8  6.5   6.9 xxxxx xxxx xxxxx
FollowUpTim:  2.2 xxxx xxxxx   2.2 xxxx xxxxx   3.5  4.0   3.3 xxxxx xxxx xxxxx
------------|---------------||---------------||---------------||---------------|
Capacity Module:
Cnflict Vol:  580 xxxx xxxxx   491 xxxx xxxxx   865 1111   290  xxxx xxxx xxxxx
Potent Cap.: 1004 xxxx xxxxx  1083 xxxx xxxxx   297  211   713  xxxx xxxx xxxxx
Move Cap.:   1004 xxxx xxxxx  1083 xxxx xxxxx   292  207   713  xxxx xxxx xxxxx
Volume/Cap:  0.01 xxxx  xxxx  0.01 xxxx  xxxx  0.00 0.00  0.01  xxxx xxxx  xxxx
------------|---------------||---------------||---------------||---------------|
Level Of Service Module:
2Way95thQ:    0.0 xxxx xxxxx   0.0 xxxx xxxxx  xxxx xxxx xxxxx  xxxx xxxx xxxxx
Control Del:  8.6 xxxx xxxxx   8.3 xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx
LOS by Move:    A    *     *     A    *     *     *    *     *     *    *     *
Movement:     LT - LTR - RT    LT - LTR - RT    LT - LTR - RT    LT - LTR - RT
Shared Cap.: xxxx xxxx xxxxx  xxxx xxxx xxxxx  xxxx  575 xxxxx  xxxx xxxx xxxxx
SharedQueue:xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx  0.0 xxxxx xxxxx xxxx xxxxx
Shrd ConDel:xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx 11.3 xxxxx xxxxx xxxx xxxxx
Shared LOS:     *    *     *     *    *     *     *    B     *     *    *     *
ApproachDel:     xxxxxx           xxxxxx             11.3            xxxxxx
ApproachLOS:        *                *                 B                *
********************************************************************************
Note: Queue reported is the number of cars per lane.
********************************************************************************
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                     Level Of Service Computation Report
          2000 HCM Unsignalized Method (Base Volume Alternative)
********************************************************************************
Intersection #4 4
********************************************************************************
Average Delay (sec/veh):      0.5      Worst Case Level Of Service: B[ 12.9]
********************************************************************************
Street Name:     PALOS VERDES DRIVE SOUTH        WAYFARER'S CHAPEL DRIVE
Approach:      North Bound      South Bound      East Bound       West Bound
Movement:     L  -  T  -  R   L  -  T  -  R   L  -  T  -  R   L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:       Uncontrolled     Uncontrolled      Stop Sign        Stop Sign
Rights:           Include          Include          Include          Include
Lanes:        0  0  2  0  1   1  0  2  0  0   0  0  0  0  0   0  0  1! 0  0
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:       0  490    19    28  568     0     0    0     0    10    0    16
Growth Adj:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Initial Bse:    0  490    19    28  568     0     0    0     0    10    0    16
User Adj:    1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Volume:     0  490    19    28  568     0     0    0     0    10    0    16
Reduct Vol:     0    0     0     0    0     0     0    0     0     0    0     0
FinalVolume:    0  490    19    28  568     0     0    0     0    10    0    16
------------|---------------||---------------||---------------||---------------|
Critical Gap Module:
Critical Gp:xxxxx xxxx xxxxx   4.1 xxxx xxxxx xxxxx xxxx xxxxx   6.8  6.5   6.9
FollowUpTim:xxxxx xxxx xxxxx   2.2 xxxx xxxxx xxxxx xxxx xxxxx   3.5  4.0   3.3
------------|---------------||---------------||---------------||---------------|
Capacity Module:
Cnflict Vol: xxxx xxxx xxxxx   509 xxxx xxxxx  xxxx xxxx xxxxx   830 1114   245
Potent Cap.: xxxx xxxx xxxxx  1066 xxxx xxxxx  xxxx xxxx xxxxx   313  210   762
Move Cap.:   xxxx xxxx xxxxx  1066 xxxx xxxxx  xxxx xxxx xxxxx   306  204   762
Volume/Cap:  xxxx xxxx  xxxx  0.03 xxxx  xxxx  xxxx xxxx  xxxx  0.03 0.00  0.02
------------|---------------||---------------||---------------||---------------|
Level Of Service Module:
2Way95thQ:   xxxx xxxx xxxxx   0.1 xxxx xxxxx  xxxx xxxx xxxxx  xxxx xxxx xxxxx
Control Del:xxxxx xxxx xxxxx   8.5 xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx
LOS by Move:    *    *     *     A    *     *     *    *     *     *    *     *
Movement:     LT - LTR - RT    LT - LTR - RT    LT - LTR - RT    LT - LTR - RT
Shared Cap.: xxxx xxxx xxxxx  xxxx xxxx xxxxx  xxxx xxxx xxxxx  xxxx  485 xxxxx
SharedQueue:xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx  0.2 xxxxx
Shrd ConDel:xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx 12.9 xxxxx
Shared LOS:     *    *     *     *    *     *     *    *     *     *    B     *
ApproachDel:    xxxxxx           xxxxxx           xxxxxx             12.9
ApproachLOS:       *                *                *                B
********************************************************************************
Note: Queue reported is the number of cars per lane.
********************************************************************************
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                      Level Of Service Computation Report
            2000 HCM Unsignalized Method (Base Volume Alternative)
********************************************************************************
Intersection #5 5
********************************************************************************
Average Delay (sec/veh):      2.2       Worst Case Level Of Service: C[ 18.2]
********************************************************************************
Street Name:     PALOS VERDES DRIVE SOUTH          PALOS VERDES DRIVE EAST
Approach:      North Bound      South Bound      East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:       Uncontrolled     Uncontrolled      Stop Sign        Stop Sign
Rights:           Include          Include          Include          Include
Lanes:        0  0  1  0  1    1  0  1  0  0    0  0  0  0  0    1  0  0  0  1
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:       0  487    50    72  590     0     0    0     0    44    0    84
Growth Adj:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Initial Bse:    0  487    50    72  590     0     0    0     0    44    0    84
User Adj:    1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Volume:     0  487    50    72  590     0     0    0     0    44    0    84
Reduct Vol:     0    0     0     0    0     0     0    0     0     0    0     0
FinalVolume:    0  487    50    72  590     0     0    0     0    44    0    84
------------|---------------||---------------||---------------||---------------|
Critical Gap Module:
Critical Gp:xxxxx xxxx xxxxx   4.1 xxxx xxxxx xxxxx xxxx xxxxx   6.4 xxxx   6.2
FollowUpTim:xxxxx xxxx xxxxx   2.2 xxxx xxxxx xxxxx xxxx xxxxx   3.5 xxxx   3.3
------------|---------------||---------------||---------------||---------------|
Capacity Module:
Cnflict Vol: xxxx xxxx xxxxx   537 xxxx xxxxx  xxxx xxxx xxxxx  1221 xxxx   487
Potent Cap.: xxxx xxxx xxxxx  1041 xxxx xxxxx  xxxx xxxx xxxxx   200 xxxx   585
Move Cap.:   xxxx xxxx xxxxx  1041 xxxx xxxxx  xxxx xxxx xxxxx   190 xxxx   585
Volume/Cap:  xxxx xxxx  xxxx  0.07 xxxx  xxxx  xxxx xxxx  xxxx  0.23 xxxx  0.14
------------|---------------||---------------||---------------||---------------|
Level Of Service Module:
2Way95thQ:   xxxx xxxx xxxxx   0.2 xxxx xxxxx  xxxx xxxx xxxxx   0.9 xxxx   0.5
Control Del:xxxxx xxxx xxxxx   8.7 xxxx xxxxx xxxxx xxxx xxxxx  29.6 xxxx  12.2
LOS by Move:    *    *     *     A    *     *     *    *     *     D    *     B
Movement:     LT - LTR - RT    LT - LTR - RT    LT - LTR - RT    LT - LTR - RT
Shared Cap.: xxxx xxxx xxxxx  xxxx xxxx xxxxx  xxxx xxxx xxxxx  xxxx xxxx xxxxx
SharedQueue:xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx
Shrd ConDel:xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx
Shared LOS:     *    *     *     *    *     *     *    *     *     *    *     *
ApproachDel:    xxxxxx           xxxxxx           xxxxxx             18.2
ApproachLOS:         *                *                *                C
********************************************************************************
Note: Queue reported is the number of cars per lane.
********************************************************************************
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                      Level Of Service Computation Report
            2000 HCM Unsignalized Method (Base Volume Alternative)
********************************************************************************
Intersection #6 6
********************************************************************************
Average Delay (sec/veh):      0.0       Worst Case Level Of Service: A[  0.0]
********************************************************************************
Street Name:     PALOS VERDES DRIVE SOUTH        POINT VIEW INTERNAL DRIVEWAY
Approach:      North Bound      South Bound      East Bound       West Bound
Movement:     L  -  T  -  R   L  -  T  -  R   L  -  T  -  R   L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:       Uncontrolled     Uncontrolled      Stop Sign        Stop Sign
Rights:           Include          Include          Include          Include
Lanes:        0  0  2  0  0   0  0  2  0  0   0  0  0  0  0   0  0  1! 0  0
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:       0  517     0     0  588     0     0    0     0     0    0     0
Growth Adj:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Initial Bse:    0  517     0     0  588     0     0    0     0     0    0     0
User Adj:    1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Volume:     0  517     0     0  588     0     0    0     0     0    0     0
Reduct Vol:     0    0     0     0    0     0     0    0     0     0    0     0
FinalVolume:    0  517     0     0  588     0     0    0     0     0    0     0
------------|---------------||---------------||---------------||---------------|
Critical Gap Module:
Critical Gp:xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx   6.8  6.5   6.9
FollowUpTim:xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx   3.5  4.0   3.3
------------|---------------||---------------||---------------||---------------|
Capacity Module:
Cnflict Vol: xxxx xxxx xxxxx  xxxx xxxx xxxxx  xxxx xxxx xxxxx   811 1105   259
Potent Cap.: xxxx xxxx xxxxx  xxxx xxxx xxxxx  xxxx xxxx xxxxx   321  213   747
Move Cap.:   xxxx xxxx xxxxx  xxxx xxxx xxxxx  xxxx xxxx xxxxx   321  213   747
Volume/Cap:  xxxx xxxx  xxxx  xxxx xxxx  xxxx  xxxx xxxx  xxxx  0.00 0.00  0.00
------------|---------------||---------------||---------------||---------------|
Level Of Service Module:
2Way95thQ:   xxxx xxxx xxxxx  xxxx xxxx xxxxx  xxxx xxxx xxxxx  xxxx xxxx xxxxx
Control Del:xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx
LOS by Move:    *    *     *     *    *     *     *    *     *     *    *     *
Movement:     LT - LTR - RT    LT - LTR - RT    LT - LTR - RT    LT - LTR - RT
Shared Cap.: xxxx xxxx xxxxx  xxxx xxxx xxxxx  xxxx xxxx xxxxx  xxxx    0 xxxxx
SharedQueue:xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx
Shrd ConDel:xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx
Shared LOS:     *    *     *     *    *     *     *    *     *     *    *     *
ApproachDel:    xxxxxx           xxxxxx           xxxxxx           xxxxxx
ApproachLOS:         *                *                *                *
********************************************************************************
Note: Queue reported is the number of cars per lane.
********************************************************************************
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                      Level Of Service Computation Report
            2000 HCM Unsignalized Method (Base Volume Alternative)
********************************************************************************
Intersection #1 1
********************************************************************************
Average Delay (sec/veh):      1.5       Worst Case Level Of Service: C[ 19.9]
********************************************************************************
Street Name:                VIA RIVERA                      HAWTHORNE BLVD
Approach:       North Bound      South Bound       East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:        Stop Sign        Stop Sign       Uncontrolled     Uncontrolled
Rights:           Include          Include          Include          Include
Lanes:        0  0  1! 0  0    0  0  1! 0  0    1  0  1  1  0    1  0  2  0  1
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:       1    0     3    48    0    25    25  494     2    15  540    64
Growth Adj:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Initial Bse:    1    0     3    48    0    25    25  494     2    15  540    64
User Adj:    1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Volume:     1    0     3    48    0    25    25  494     2    15  540    64
Reduct Vol:     0    0     0     0    0     0     0    0     0     0    0     0
FinalVolume:    1    0     3    48    0    25    25  494     2    15  540    64
------------|---------------||---------------||---------------||---------------|
Critical Gap Module:
Critical Gp:  7.5  6.5   6.9   7.5  6.5   6.9   4.1 xxxx xxxxx   4.1 xxxx xxxxx
FollowUpTim:  3.5  4.0   3.3   3.5  4.0   3.3   2.2 xxxx xxxxx   2.2 xxxx xxxxx
------------|---------------||---------------||---------------||---------------|
Capacity Module:
Cnflict Vol:  845 1179   248   867 1116   270   604 xxxx xxxxx   496 xxxx xxxxx
Potent Cap.:  259  192   758   250  209   734   984 xxxx xxxxx  1078 xxxx xxxxx
Move Cap.:    243  185   758   242  201   734   984 xxxx xxxxx  1078 xxxx xxxxx
Volume/Cap:  0.00 0.00  0.00  0.20 0.00  0.03  0.03 xxxx  xxxx  0.01 xxxx  xxxx
------------|---------------||---------------||---------------||---------------|
Level Of Service Module:
2Way95thQ:   xxxx xxxx xxxxx  xxxx xxxx xxxxx   0.1 xxxx xxxxx   0.0 xxxx xxxxx
Control Del:xxxxx xxxx xxxxx xxxxx xxxx xxxxx   8.8 xxxx xxxxx   8.4 xxxx xxxxx
LOS by Move:    *    *     *     *    *     *     A    *     *     A    *     *
Movement:     LT - LTR - RT    LT - LTR - RT    LT - LTR - RT    LT - LTR - RT
Shared Cap.: xxxx  496 xxxxx  xxxx  314 xxxxx  xxxx xxxx xxxxx  xxxx xxxx xxxxx
SharedQueue:xxxxx  0.0 xxxxx xxxxx  0.9 xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx
Shrd ConDel:xxxxx 12.3 xxxxx xxxxx 19.9 xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx
Shared LOS:     *    B     *     *    C     *     *    *     *     *    *     *
ApproachDel:      12.3             19.9            xxxxxx           xxxxxx
ApproachLOS:         B                C                *                *
********************************************************************************
Note: Queue reported is the number of cars per lane.
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                      Level Of Service Computation Report
            2000 HCM Unsignalized Method (Base Volume Alternative)
********************************************************************************
Intersection #3 3
********************************************************************************
Average Delay (sec/veh):      0.2      Worst Case Level Of Service: B[ 12.4]
********************************************************************************
Street Name:     PALOS VERDES DRIVE SOUTH                   SEACOVE DR
Approach:      North Bound      South Bound      East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:       Uncontrolled     Uncontrolled      Stop Sign        Stop Sign
Rights:           Include          Include          Include          Include
Lanes:        1  0  1  1  0    1  0  1  1  0    0  0  1! 0  0    0  0  0  0  0
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:      10  529     0     3  497     3     4     0     6     0     0     0
Growth Adj:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Initial Bse:   10  529     0     3  497     3     4     0     6     0     0     0
User Adj:    1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Volume:    10  529     0     3  497     3     4     0     6     0     0     0
Reduct Vol:     0    0     0     0    0     0     0     0     0     0     0     0
FinalVolume:   10  529     0     3  497     3     4     0     6     0     0     0
------------|---------------||---------------||---------------||---------------|
Critical Gap Module:
Critical Gp:  4.1 xxxx xxxxx   4.1 xxxx xxxxx   6.8  6.5   6.9 xxxxx xxxx xxxxx
FollowUpTim:  2.2 xxxx xxxxx   2.2 xxxx xxxxx   3.5  4.0   3.3 xxxxx xxxx xxxxx
------------|---------------||---------------||---------------||---------------|
Capacity Module:
Cnflict Vol:  500 xxxx xxxxx   529 xxxx xxxxx   789 1054   250  xxxx xxxx xxxxx
Potent Cap.: 1075 xxxx xxxxx  1048 xxxx xxxxx   332  228   756  xxxx xxxx xxxxx
Move Cap.:   1075 xxxx xxxxx  1048 xxxx xxxxx   329  225   756  xxxx xxxx xxxxx
Volume/Cap:  0.01 xxxx  xxxx  0.00 xxxx  xxxx  0.01 0.00  0.01  xxxx xxxx  xxxx
------------|---------------||---------------||---------------||---------------|
Level Of Service Module:
2Way95thQ:    0.0 xxxx xxxxx   0.0 xxxx xxxxx  xxxx xxxx xxxxx  xxxx xxxx xxxxx
Control Del:  8.4 xxxx xxxxx   8.4 xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx
LOS by Move:    A    *     *     A    *     *     *    *     *     *    *     *
Movement:     LT - LTR - RT    LT - LTR - RT    LT - LTR - RT    LT - LTR - RT
Shared Cap.: xxxx xxxx xxxxx  xxxx xxxx xxxxx  xxxx  497 xxxxx  xxxx xxxx xxxxx
SharedQueue:xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx  0.1 xxxxx xxxxx xxxx xxxxx
Shrd ConDel:xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx 12.4 xxxxx xxxxx xxxx xxxxx
Shared LOS:     *    *     *     *    *     *     *    B     *     *    *     *
ApproachDel:     xxxxxx           xxxxxx            12.4            xxxxxx
ApproachLOS:        *                *                B                *
********************************************************************************
Note: Queue reported is the number of cars per lane.
********************************************************************************
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                      Level Of Service Computation Report
            2000 HCM Unsignalized Method (Base Volume Alternative)
********************************************************************************
Intersection #4 4
********************************************************************************
Average Delay (sec/veh):      0.7       Worst Case Level Of Service: B[ 13.7]
********************************************************************************
Street Name:     PALOS VERDES DRIVE SOUTH         WAYFARER'S CHAPEL DRIVE
Approach:      North Bound      South Bound      East Bound       West Bound
Movement:     L  -  T  -  R   L  -  T  -  R   L  -  T  -  R   L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:       Uncontrolled     Uncontrolled      Stop Sign        Stop Sign
Rights:           Include          Include          Include          Include
Lanes:        0  0  2  0  1   1  0  2  0  0   0  0  0  0  0   0  0  1! 0  0
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:       0  534    31    17  491     0     0    0     0    20    0    24
Growth Adj:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Initial Bse:    0  534    31    17  491     0     0    0     0    20    0    24
User Adj:    1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Volume:     0  534    31    17  491     0     0    0     0    20    0    24
Reduct Vol:     0    0     0     0    0     0     0    0     0     0    0     0
FinalVolume:    0  534    31    17  491     0     0    0     0    20    0    24
------------|---------------||---------------||---------------||---------------|
Critical Gap Module:
Critical Gp:xxxxx xxxx xxxxx   4.1 xxxx xxxxx xxxxx xxxx xxxxx   6.8  6.5   6.9
FollowUpTim:xxxxx xxxx xxxxx   2.2 xxxx xxxxx xxxxx xxxx xxxxx   3.5  4.0   3.3
------------|---------------||---------------||---------------||---------------|
Capacity Module:
Cnflict Vol: xxxx xxxx xxxxx   565 xxxx xxxxx  xxxx xxxx xxxxx   814 1059   267
Potent Cap.: xxxx xxxx xxxxx  1017 xxxx xxxxx  xxxx xxxx xxxxx   320  226   737
Move Cap.:   xxxx xxxx xxxxx  1017 xxxx xxxxx  xxxx xxxx xxxxx   316  222   737
Volume/Cap:  xxxx xxxx  xxxx  0.02 xxxx  xxxx  xxxx xxxx  xxxx  0.06 0.00  0.03
------------|---------------||---------------||---------------||---------------|
Level Of Service Module:
2Way95thQ:   xxxx xxxx xxxxx   0.1 xxxx xxxxx  xxxx xxxx xxxxx  xxxx xxxx xxxxx
Control Del:xxxxx xxxx xxxxx   8.6 xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx
LOS by Move:    *    *     *     A    *     *     *    *     *     *    *     *
Movement:     LT - LTR - RT    LT - LTR - RT    LT - LTR - RT    LT - LTR - RT
Shared Cap.: xxxx xxxx xxxxx  xxxx xxxx xxxxx  xxxx xxxx xxxxx  xxxx  459 xxxxx
SharedQueue:xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx  0.3 xxxxx
Shrd ConDel:xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx 13.7 xxxxx
Shared LOS:     *    *     *     *    *     *     *    *     *     *    B     *
ApproachDel:    xxxxxx           xxxxxx           xxxxxx             13.7
ApproachLOS:         *                *                *                B
********************************************************************************
Note: Queue reported is the number of cars per lane.
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                      Level Of Service Computation Report
            2000 HCM Unsignalized Method (Base Volume Alternative)
********************************************************************************
Intersection #5 5
********************************************************************************
Average Delay (sec/veh):      2.0       Worst Case Level Of Service: C[ 17.1]
********************************************************************************
Street Name:     PALOS VERDES DRIVE SOUTH          PALOS VERDES DRIVE EAST
Approach:      North Bound      South Bound       East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:       Uncontrolled     Uncontrolled       Stop Sign        Stop Sign
Rights:           Include          Include          Include          Include
Lanes:        0  0  1  0  1    1  0  1  0  0    0  0  0  0  0    1  0  0  0  1
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:       0  552    51    54  505     0     0    0     0    39    0    86
Growth Adj:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Initial Bse:    0  552    51    54  505     0     0    0     0    39    0    86
User Adj:    1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Volume:     0  552    51    54  505     0     0    0     0    39    0    86
Reduct Vol:     0    0     0     0    0     0     0    0     0     0    0     0
FinalVolume:    0  552    51    54  505     0     0    0     0    39    0    86
------------|---------------||---------------||---------------||---------------|
Critical Gap Module:
Critical Gp:xxxxx xxxx xxxxx   4.1 xxxx xxxxx xxxxx xxxx xxxxx   6.4 xxxx   6.2
FollowUpTim:xxxxx xxxx xxxxx   2.2 xxxx xxxxx xxxxx xxxx xxxxx   3.5 xxxx   3.3
------------|---------------||---------------||---------------||---------------|
Capacity Module:
Cnflict Vol: xxxx xxxx xxxxx   603 xxxx xxxxx  xxxx xxxx xxxxx  1165 xxxx   552
Potent Cap.: xxxx xxxx xxxxx   984 xxxx xxxxx  xxxx xxxx xxxxx   217 xxxx   537
Move Cap.:   xxxx xxxx xxxxx   984 xxxx xxxxx  xxxx xxxx xxxxx   208 xxxx   537
Volume/Cap:  xxxx xxxx  xxxx  0.05 xxxx  xxxx  xxxx xxxx  xxxx  0.19 xxxx  0.16
------------|---------------||---------------||---------------||---------------|
Level Of Service Module:
2Way95thQ:   xxxx xxxx xxxxx   0.2 xxxx xxxxx  xxxx xxxx xxxxx   0.7 xxxx   0.6
Control Del:xxxxx xxxx xxxxx   8.9 xxxx xxxxx xxxxx xxxx xxxxx  26.3 xxxx  13.0
LOS by Move:    *    *     *     A    *     *     *    *     *     D    *     B
Movement:     LT - LTR - RT    LT - LTR - RT    LT - LTR - RT    LT - LTR - RT
Shared Cap.: xxxx xxxx xxxxx  xxxx xxxx xxxxx  xxxx xxxx xxxxx  xxxx xxxx xxxxx
SharedQueue:xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx
Shrd ConDel:xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx
Shared LOS:     *    *     *     *    *     *     *    *     *     *    *     *
ApproachDel:    xxxxxx           xxxxxx           xxxxxx             17.1
ApproachLOS:         *                *                *                C
********************************************************************************
Note: Queue reported is the number of cars per lane.
********************************************************************************
```

```
--------------------------------------------------------------------------------
--------------------------------------------------------------------------------
                       Level Of Service Computation Report
            2000 HCM Unsignalized Method (Base Volume Alternative)
********************************************************************************
Intersection #6 6
********************************************************************************
Average Delay (sec/veh):      0.0       Worst Case Level Of Service: A[  0.0]
********************************************************************************
Street Name:     PALOS VERDES DRIVE SOUTH        POINT VIEW INTERNAL DRIVEWAY
Approach:      North Bound      South Bound      East Bound       West Bound
Movement:     L  -  T  -  R   L  -  T  -  R   L  -  T  -  R   L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:       Uncontrolled     Uncontrolled      Stop Sign        Stop Sign
Rights:           Include          Include          Include          Include
Lanes:        0  0  2  0  0   0  0  2  0  0   0  0  0  0  0   0  0  1! 0  0
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:       0  565     0     0  522     0     0    0     0     0    0     0
Growth Adj:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Initial Bse:    0  565     0     0  522     0     0    0     0     0    0     0
User Adj:    1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Volume:     0  565     0     0  522     0     0    0     0     0    0     0
Reduct Vol:     0    0     0     0    0     0     0    0     0     0    0     0
FinalVolume:    0  565     0     0  522     0     0    0     0     0    0     0
------------|---------------||---------------||---------------||---------------|
Critical Gap Module:
Critical Gp:xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx   6.8  6.5   6.9
FollowUpTim:xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx   3.5  4.0   3.3
------------|---------------||---------------||---------------||---------------|
Capacity Module:
Cnflict Vol: xxxx xxxx xxxxx  xxxx xxxx xxxxx  xxxx xxxx xxxxx   826 1087   283
Potent Cap.: xxxx xxxx xxxxx  xxxx xxxx xxxxx  xxxx xxxx xxxxx   314  218   721
Move Cap.:   xxxx xxxx xxxxx  xxxx xxxx xxxxx  xxxx xxxx xxxxx   314  218   721
Volume/Cap:  xxxx xxxx  xxxx  xxxx xxxx  xxxx  xxxx xxxx  xxxx  0.00 0.00  0.00
------------|---------------||---------------||---------------||---------------|
Level Of Service Module:
2Way95thQ:   xxxx xxxx xxxxx  xxxx xxxx xxxxx  xxxx xxxx xxxxx  xxxx xxxx xxxxx
Control Del:xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx
LOS by Move:    *    *     *     *    *     *     *    *     *     *    *     *
Movement:     LT - LTR - RT    LT - LTR - RT    LT - LTR - RT    LT - LTR - RT
Shared Cap.: xxxx xxxx xxxxx  xxxx xxxx xxxxx  xxxx xxxx xxxxx  xxxx    0 xxxxx
SharedQueue:xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx
Shrd ConDel:xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx
Shared LOS:     *    *     *     *    *     *     *    *     *     *    *     *
ApproachDel:     xxxxxx           xxxxxx           xxxxxx           xxxxxx
ApproachLOS:          *                *                *                *
********************************************************************************
Note: Queue reported is the number of cars per lane.
********************************************************************************
```

Existing (2011) Plus Project Conditions

Project Title: **Pointview Master Plan**
Intersection: **Palos Verdes Drive South & Point View Internal Driveway**
Description: **EXISTING PLUS PROJECT CONDITIONS**

Date/Time: **FRIDAY PM PEAK HOUR (4:30-5:30)**

Thru Lane:	1600 vph	N-S Split Phase :	N
Left Lane:	1600 vph	E-W Split Phase :	N
Double Lt Penalty:	20 %	Lost Time (% of cycle) :	10
ITS:	0 %	V/C Round Off (decs.) :	3
OLA Movements :			
FF Movements:			

APPROACH	MVMT	LANES	VOLUME	CAPACITY	V/C	ICU ANALYSIS	
Southbound	RT	0.00	0	0	0.000	N-S(1):	0.193
	TH	2.00	634	3,200	0.198 *	N-S(2):	0.198 *
	LT	0.00	0	0	0.000	E-W(1):	0.000
Westbound	RT	0.00	4	0	0.000	E-W(2):	0.003 *
	TH	1.00	0	1,600	0.003 *		
	LT	0.00	0	0	0.000	V/C:	0.201
Northbound	RT	0.00	100	0	0.000	Lost Time:	0.100
	TH	2.00	517	3,200	0.193	ITS:	0.000
	LT	0.00	0	0	0.000 *		
Eastbound	RT	0.00	0	0	0.000	ICU:	0.301
	TH	0.00	0	0	0.000		
	LT	0.00	0	0	0.000 *	LOS:	A

Date/Time: **SATURDAY MIDDAY PEAK HOUR (12:15-1:15)**

APPROACH	MVMT	LANES	VOLUME	CAPACITY	V/C	ICU ANALYSIS	
Southbound	RT	0.00	0	0	0.000	N-S(1):	0.178 *
	TH	2.00	524	3,200	0.164	N-S(2):	0.164
	LT	0.00	0	0	0.000 *	E-W(1):	0.000
Westbound	RT	0.00	102	0	0.000	E-W(2):	0.064 *
	TH	1.00	0	1,600	0.064 *		
	LT	0.00	0	0	0.000	V/C:	0.242
Northbound	RT	0.00	5	0	0.000	Lost Time:	0.100
	TH	2.00	565	3,200	0.178 *	ITS:	0.000
	LT	0.00	0	0	0.000		
Eastbound	RT	0.00	0	0	0.000	ICU:	0.342
	TH	0.00	0	0	0.000		
	LT	0.00	0	0	0.000 *	LOS:	A

* - Denotes critical movement

Project Title: **Pointview Master Plan**
Intersection: **Palos Verdes Drive South & Palos Verdes Drive East**
Description: **EXISTING PLUS PROJECT CONDITIONS**

Date/Time: **FRIDAY PM PEAK HOUR (4:30-5:30)**

Thru Lane:	1600 vph	N-S Split Phase :	N
Left Lane:	1600 vph	E-W Split Phase :	N
Double Lt Penalty:	20 %	Lost Time (% of cycle) :	10
ITS:	0 %	V/C Round Off (decs.) :	3
OLA Movements :			
FF Movements:			

APPROACH	MVMT	LANES	VOLUME	CAPACITY	V/C	ICU ANALYSIS	
Southbound	RT	0.00	0	0	0.000	N-S(1):	0.379 *
	TH	1.00	592	1,600	0.370	N-S(2):	0.370
	LT	1.00	72	1,600	0.045 *	E-W(1):	0.028
Westbound	RT	1.00	90	1,600	0.034 *	E-W(2):	0.034 *
	TH	0.00	0	0	0.000		
	LT	1.00	44	1,600	0.028	V/C:	0.413
Northbound	RT	1.00	50	1,600	0.031	Lost Time:	0.100
	TH	1.00	535	1,600	0.334 *	ITS:	0.000
	LT	0.00	0	0	0.000		
Eastbound	RT	0.00	0	0	0.000	ICU:	0.513
	TH	0.00	0	0	0.000		
	LT	0.00	0	0	0.000 *	LOS:	A

Date/Time: **SATURDAY MIDDAY PEAK HOUR (12:15-1:15)**

APPROACH	MVMT	LANES	VOLUME	CAPACITY	V/C	ICU ANALYSIS	
Southbound	RT	0.00	0	0	0.000	N-S(1):	0.384 *
	TH	1.00	554	1,600	0.346	N-S(2):	0.346
	LT	1.00	60	1,600	0.038 *	E-W(1):	0.024
Westbound	RT	1.00	86	1,600	0.035 *	E-W(2):	0.035 *
	TH	0.00	0	0	0.000		
	LT	1.00	39	1,600	0.024	V/C:	0.419
Northbound	RT	1.00	51	1,600	0.032	Lost Time:	0.100
	TH	1.00	554	1,600	0.346 *	ITS:	0.000
	LT	0.00	0	0	0.000		
Eastbound	RT	0.00	0	0	0.000	ICU:	0.519
	TH	0.00	0	0	0.000		
	LT	0.00	0	0	0.000 *	LOS:	A

* - Denotes critical movement

Project Title: **Pointview Master Plan**
Intersection: **Palos Verdes Drive South & Wayfarer's Chapel Drive**
Description: **EXISTING PLUS PROJECT CONDITIONS**

Date/Time: **FRIDAY PM PEAK HOUR (4:30-5:30)**

Thru Lane:	1600 vph	N-S Split Phase :	N
Left Lane:	1600 vph	E-W Split Phase :	N
Double Lt Penalty:	20 %	Lost Time (% of cycle) :	10
ITS:	0 %	V/C Round Off (decs.) :	3
OLA Movements :			
FF Movements:			

APPROACH	MVMT	LANES	VOLUME	CAPACITY	V/C	ICU ANALYSIS	
Southbound	RT	0.00	0	0	0.000	N-S(1):	0.216 *
	TH	2.00	570	3,200	0.178	N-S(2):	0.178
	LT	1.00	74	1,600	0.046 *	E-W(1):	0.006
Westbound	RT	0.00	16	0	0.000	E-W(2):	0.016 *
	TH	1.00	0	1,600	0.016 *		
	LT	0.00	10	1,600	0.006	V/C:	0.232
Northbound	RT	1.00	19	1,600	0.012	Lost Time:	0.100
	TH	2.00	544	3,200	0.170 *	ITS:	0.000
	LT	0.00	0	0	0.000		
Eastbound	RT	0.00	0	0	0.000	ICU:	0.332
	TH	0.00	0	0	0.000		
	LT	0.00	0	0	0.000 *	LOS:	A

Date/Time: **SATURDAY MIDDAY PEAK HOUR (12:15-1:15)**

APPROACH	MVMT	LANES	VOLUME	CAPACITY	V/C	ICU ANALYSIS	
Southbound	RT	0.00	0	0	0.000	N-S(1):	0.180 *
	TH	2.00	546	3,200	0.171	N-S(2):	0.171
	LT	1.00	19	1,600	0.012 *	E-W(1):	0.013
Westbound	RT	0.00	24	0	0.000	E-W(2):	0.028 *
	TH	1.00	0	1,600	0.028 *		
	LT	0.00	20	1,600	0.013	V/C:	0.208
Northbound	RT	1.00	31	1,600	0.019	Lost Time:	0.100
	TH	2.00	537	3,200	0.168 *	ITS:	0.000
	LT	0.00	0	0	0.000		
Eastbound	RT	0.00	0	0	0.000	ICU:	0.308
	TH	0.00	0	0	0.000		
	LT	0.00	0	0	0.000 *	LOS:	A

* - Denotes critical movement

Project Title: **Pointview Master Plan**
Intersection: **Palos Verdes Drive South & Seacove Drive**
Description: **EXISTING PLUS PROJECT CONDITIONS**

Date/Time: **FRIDAY PM PEAK HOUR (4:30-5:30)**

Thru Lane:	1600 vph	N-S Split Phase : N
Left Lane:	1600 vph	E-W Split Phase : N
Double Lt Penalty:	20 %	Lost Time (% of cycle) : 10
ITS:	0 %	V/C Round Off (decs.) : 3
OLA Movements :		
FF Movements:		

APPROACH	MVMT	LANES	VOLUME	CAPACITY	V/C	ICU ANALYSIS	
Southbound	RT	0.00	5	0	0.000	N-S(1):	0.158
	TH	2.00	621	3,200	0.196 *	N-S(2):	0.207 *
	LT	1.00	6	1,600	0.004	E-W(1):	0.004 *
Westbound	RT	0.00	0	0	0.000	E-W(2):	0.001
	TH	0.00	0	0	0.000		
	LT	0.00	0	0	0.000 *	V/C:	0.211
Northbound	RT	0.00	0	0	0.000	Lost Time:	0.100
	TH	2.00	493	3,200	0.154	ITS:	0.000
	LT	1.00	17	1,600	0.011 *		
Eastbound	RT	0.00	5	0	0.000	ICU:	0.311
	TH	1.00	0	1,600	0.004 *		
	LT	0.00	1	1,600	0.001	LOS:	A

Date/Time: **SATURDAY MIDDAY PEAK HOUR (12:15-1:15)**

APPROACH	MVMT	LANES	VOLUME	CAPACITY	V/C	ICU ANALYSIS	
Southbound	RT	0.00	3	0	0.000	N-S(1):	0.182
	TH	2.00	499	3,200	0.157 *	N-S(2):	0.198 *
	LT	1.00	3	1,600	0.002	E-W(1):	0.006 *
Westbound	RT	0.00	0	0	0.000	E-W(2):	0.003
	TH	0.00	0	0	0.000		
	LT	0.00	0	0	0.000 *	V/C:	0.204
Northbound	RT	0.00	0	0	0.000	Lost Time:	0.100
	TH	2.00	576	3,200	0.180	ITS:	0.000
	LT	1.00	65	1,600	0.041 *		
Eastbound	RT	0.00	6	0	0.000	ICU:	0.304
	TH	1.00	0	1,600	0.006 *		
	LT	0.00	4	1,600	0.003	LOS:	A

* - Denotes critical movement

Project Title: **Pointview Master Plan**
Intersection: **Palos Verdes Drive West & Hawthorne Blvd/Via Vicente**
Description: **EXISTING PLUS PROJECT CONDITIONS**

Date/Time: **FRIDAY PM PEAK HOUR (4:30-5:30)**

Thru Lane:	1600 vph	N-S Split Phase :	N
Left Lane:	1600 vph	E-W Split Phase :	N
Double Lt Penalty:	20 %	Lost Time (% of cycle) :	10
ITS:	0 %	V/C Round Off (decs.) :	3
OLA Movements :			
FF Movements:			

APPROACH	MVMT	LANES	VOLUME	CAPACITY	V/C	ICU ANALYSIS	
Southbound	RT	0.00	8	0	0.000	N-S(1):	0.223 *
	TH	2.00	352	3,200	0.113	N-S(2):	0.134
	LT	1.00	178	1,600	0.111 *	E-W(1):	0.156 *
Westbound	RT	1.00	181	1,600	0.058	E-W(2):	0.118
	TH	0.13	24	206	0.117		
	LT	1.87	349	2,395	0.146 *	V/C:	0.379
Northbound	RT	1.00	273	1,600	0.098	Lost Time:	0.100
	TH	2.00	359	3,200	0.112 *	ITS:	0.000
	LT	1.00	33	1,600	0.021		
Eastbound	RT	0.00	11	0	0.000	ICU:	0.479
	TH	2.00	18	3,200	0.010 *		
	LT	0.00	2	1,600	0.001	LOS:	A

Date/Time: **SATURDAY MIDDAY PEAK HOUR (12:15-1:15)**

APPROACH	MVMT	LANES	VOLUME	CAPACITY	V/C	ICU ANALYSIS	
Southbound	RT	0.00	6	0	0.000	N-S(1):	0.211 *
	TH	2.00	301	3,200	0.096	N-S(2):	0.115
	LT	1.00	168	1,600	0.105 *	E-W(1):	0.147 *
Westbound	RT	1.00	144	1,600	0.038	E-W(2):	0.115
	TH	0.05	9	81	0.111		
	LT	1.95	345	2,495	0.138 *	V/C:	0.358
Northbound	RT	1.00	213	1,600	0.064	Lost Time:	0.100
	TH	2.00	340	3,200	0.106 *	ITS:	0.000
	LT	1.00	30	1,600	0.019		
Eastbound	RT	0.00	7	0	0.000	ICU:	0.458
	TH	2.00	17	3,200	0.009 *		
	LT	0.00	6	1,600	0.004	LOS:	A

* - Denotes critical movement

Project Title: **Pointview Master Plan**
Intersection: **Via Rivera & Hawthorne Boulevard**
Description: **EXISTING PLUS PROJECT CONDITIONS**

Date/Time: **FRIDAY PM PEAK HOUR (4:30-5:30)**

Thru Lane:	1600 vph	N-S Split Phase :	N
Left Lane:	1600 vph	E-W Split Phase :	N
Double Lt Penalty:	20 %	Lost Time (% of cycle) :	10
ITS:	0 %	V/C Round Off (decs.) :	3
OLA Movements :			
FF Movements:			

APPROACH	MVMT	LANES	VOLUME	CAPACITY	V/C	ICU ANALYSIS	
Southbound	RT	0.00	28	0	0.000	N-S(1):	0.044
	TH	1.00	0	1,600	0.057 *	N-S(2):	0.058 *
	LT	0.00	63	1,600	0.039	E-W(1):	0.167
Westbound	RT	1.00	68	1,600	0.023	E-W(2):	0.221 *
	TH	2.00	627	3,200	0.196 *		
	LT	1.00	11	1,600	0.007	V/C:	0.279
Northbound	RT	0.00	7	0	0.000	Lost Time:	0.100
	TH	1.00	0	1,600	0.005	ITS:	0.000
	LT	0.00	1	1,600	0.001 *		
Eastbound	RT	0.00	1	0	0.000	ICU:	0.379
	TH	2.00	510	3,200	0.160		
	LT	1.00	40	1,600	0.025 *	LOS:	A

Date/Time: **SATURDAY MIDDAY PEAK HOUR (12:15-1:15)**

APPROACH	MVMT	LANES	VOLUME	CAPACITY	V/C	ICU ANALYSIS	
Southbound	RT	0.00	25	0	0.000	N-S(1):	0.033
	TH	1.00	0	1,600	0.046 *	N-S(2):	0.047 *
	LT	0.00	48	1,600	0.030	E-W(1):	0.170
Westbound	RT	1.00	64	1,600	0.025	E-W(2):	0.185 *
	TH	2.00	541	3,200	0.169 *		
	LT	1.00	15	1,600	0.009	V/C:	0.232
Northbound	RT	0.00	3	0	0.000	Lost Time:	0.100
	TH	1.00	0	1,600	0.003	ITS:	0.000
	LT	0.00	1	1,600	0.001 *		
Eastbound	RT	0.00	2	0	0.000	ICU:	0.332
	TH	2.00	514	3,200	0.161		
	LT	1.00	25	1,600	0.016 *	LOS:	A

* - Denotes critical movement

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--------------------------------------------------------------------------------
--------------------------------------------------------------------------------
                      Level Of Service Computation Report
            2000 HCM Unsignalized Method (Base Volume Alternative)
********************************************************************************
Intersection #1 1
********************************************************************************
Average Delay (sec/veh):      2.2      Worst Case Level Of Service: D[ 27.3]
********************************************************************************
Street Name:                VIA RIVERA                     HAWTHORNE BLVD
Approach:      North Bound      South Bound      East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:        Stop Sign        Stop Sign       Uncontrolled     Uncontrolled
Rights:           Include          Include          Include          Include
Lanes:        0  0  1! 0  0    0  0  1! 0  0    1  0  1  1  0    1  0  2  0  1
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:        1    0     7    63    0    28    40  510     1    11  627    68
Growth Adj:   1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Initial Bse:     1    0     7    63    0    28    40  510     1    11  627    68
User Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Adj:      1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Volume:      1    0     7    63    0    28    40  510     1    11  627    68
Reduct Vol:      0    0     0     0    0     0     0    0     0     0    0     0
FinalVolume:     1    0     7    63    0    28    40  510     1    11  627    68
------------|---------------||---------------||---------------||---------------|
Critical Gap Module:
Critical Gp:  7.5  6.5   6.9   7.5  6.5   6.9   4.1 xxxx xxxxx   4.1 xxxx xxxxx
FollowUpTim:  3.5  4.0   3.3   3.5  4.0   3.3   2.2 xxxx xxxxx   2.2 xxxx xxxxx
------------|---------------||---------------||---------------||---------------|
Capacity Module:
Cnflict Vol:  926 1308   256   984 1240   314   695 xxxx xxxxx   511 xxxx xxxxx
Potent Cap.:  227  161   750   206  177   688   910 xxxx xxxxx  1065 xxxx xxxxx
Move Cap.:    208  152   750   195  167   688   910 xxxx xxxxx  1065 xxxx xxxxx
Volume/Cap:  0.00 0.00  0.01  0.32 0.00  0.04  0.04 xxxx  xxxx  0.01 xxxx  xxxx
------------|---------------||---------------||---------------||---------------|
Level Of Service Module:
2Way95thQ:   xxxx xxxx xxxxx  xxxx xxxx xxxxx   0.1 xxxx xxxxx   0.0 xxxx xxxxx
Control Del:xxxxx xxxx xxxxx xxxxx xxxx xxxxx   9.1 xxxx xxxxx   8.4 xxxx xxxxx
LOS by Move:     *    *     *     *    *     *     A    *     *     A    *     *
Movement:     LT - LTR - RT    LT - LTR - RT    LT - LTR - RT    LT - LTR - RT
Shared Cap.: xxxx  566 xxxxx  xxxx  251 xxxxx  xxxx xxxx xxxxx  xxxx xxxx xxxxx
SharedQueue:xxxxx  0.0 xxxxx xxxxx  1.6 xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx
Shrd ConDel:xxxxx 11.5 xxxxx xxxxx 27.3 xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx
Shared LOS:      *    B     *     *    D     *     *    *     *     *    *     *
ApproachDel:        11.5             27.3            xxxxxx           xxxxxx
ApproachLOS:          B                D                *                *
********************************************************************************
Note: Queue reported is the number of cars per lane.
********************************************************************************
```

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--------------------------------------------------------------------------------
--------------------------------------------------------------------------------
                      Level Of Service Computation Report
            2000 HCM Unsignalized Method (Base Volume Alternative)
********************************************************************************
Intersection #3 3
********************************************************************************
Average Delay (sec/veh):      0.2       Worst Case Level Of Service: B[ 11.6]
********************************************************************************
Street Name:     PALOS VERDES DRIVE SOUTH                  SEACOVE DR
Approach:      North Bound      South Bound       East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:       Uncontrolled     Uncontrolled      Stop Sign        Stop Sign
Rights:           Include          Include          Include          Include
Lanes:        1  0  1  1  0    1  0  1  1  0    0  0  1! 0  0    0  0  0  0  0
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:      17  493     0     6  621     5     1     0     5     0     0     0
Growth Adj:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Initial Bse:   17  493     0     6  621     5     1     0     5     0     0     0
User Adj:    1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Volume:    17  493     0     6  621     5     1     0     5     0     0     0
Reduct Vol:     0    0     0     0    0     0     0     0     0     0     0     0
FinalVolume:   17  493     0     6  621     5     1     0     5     0     0     0
------------|---------------||---------------||---------------||---------------|
Critical Gap Module:
Critical Gp:  4.1 xxxx xxxxx   4.1 xxxx xxxxx   6.8  6.5   6.9 xxxxx xxxx xxxxx
FollowUpTim:  2.2 xxxx xxxxx   2.2 xxxx xxxxx   3.5  4.0   3.3 xxxxx xxxx xxxxx
------------|---------------||---------------||---------------||---------------|
Capacity Module:
Cnflict Vol:  626 xxxx xxxxx   493 xxxx xxxxx   916 1163   313  xxxx xxxx xxxxx
Potent Cap.:  965 xxxx xxxxx  1081 xxxx xxxxx   275  197   689  xxxx xxxx xxxxx
Move Cap.:    965 xxxx xxxxx  1081 xxxx xxxxx   271  192   689  xxxx xxxx xxxxx
Volume/Cap:  0.02 xxxx  xxxx  0.01 xxxx  xxxx  0.00 0.00  0.01  xxxx xxxx  xxxx
------------|---------------||---------------||---------------||---------------|
Level Of Service Module:
2Way95thQ:    0.1 xxxx xxxxx   0.0 xxxx xxxxx  xxxx xxxx xxxxx  xxxx xxxx xxxxx
Control Del:  8.8 xxxx xxxxx   8.3 xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx
LOS by Move:    A    *     *     A    *     *     *    *     *     *    *     *
Movement:     LT - LTR - RT    LT - LTR - RT    LT - LTR - RT    LT - LTR - RT
Shared Cap.: xxxx xxxx xxxxx  xxxx xxxx xxxxx  xxxx  548 xxxxx  xxxx xxxx xxxxx
SharedQueue:xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx  0.0 xxxxx xxxxx xxxx xxxxx
Shrd ConDel:xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx 11.6 xxxxx xxxxx xxxx xxxxx
Shared LOS:     *    *     *     *    *     *     *    B     *     *    *     *
ApproachDel:     xxxxxx           xxxxxx             11.6            xxxxxx
ApproachLOS:        *                *                 B                *
********************************************************************************
Note: Queue reported is the number of cars per lane.
********************************************************************************
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                      Level Of Service Computation Report
            2000 HCM Unsignalized Method (Base Volume Alternative)
********************************************************************************
Intersection #4 4
********************************************************************************
Average Delay (sec/veh):      0.8       Worst Case Level Of Service: B[ 14.5]
********************************************************************************
Street Name:     PALOS VERDES DRIVE SOUTH          WAYFARER'S CHAPEL DRIVE
Approach:      North Bound      South Bound      East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:       Uncontrolled     Uncontrolled      Stop Sign        Stop Sign
Rights:           Include          Include          Include          Include
Lanes:        0  0  2  0  1    1  0  2  0  0    0  0  0  0  0    0  0  1! 0  0
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:       0  544    19    74  570     0     0    0     0    10    0    16
Growth Adj:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Initial Bse:    0  544    19    74  570     0     0    0     0    10    0    16
User Adj:    1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Volume:     0  544    19    74  570     0     0    0     0    10    0    16
Reduct Vol:     0    0     0     0    0     0     0    0     0     0    0     0
FinalVolume:    0  544    19    74  570     0     0    0     0    10    0    16
------------|---------------||---------------||---------------||---------------|
Critical Gap Module:
Critical Gp:xxxxx xxxx xxxxx   4.1 xxxx xxxxx xxxxx xxxx xxxxx   6.8  6.5   6.9
FollowUpTim:xxxxx xxxx xxxxx   2.2 xxxx xxxxx xxxxx xxxx xxxxx   3.5  4.0   3.3
------------|---------------||---------------||---------------||---------------|
Capacity Module:
Cnflict Vol: xxxx xxxx xxxxx   563 xxxx xxxxx  xxxx xxxx xxxxx   977 1262   272
Potent Cap.: xxxx xxxx xxxxx  1019 xxxx xxxxx  xxxx xxxx xxxxx   252  171   732
Move Cap.:   xxxx xxxx xxxxx  1019 xxxx xxxxx  xxxx xxxx xxxxx   238  159   732
Volume/Cap:  xxxx xxxx  xxxx  0.07 xxxx  xxxx  xxxx xxxx  xxxx  0.04 0.00  0.02
------------|---------------||---------------||---------------||---------------|
Level Of Service Module:
2Way95thQ:   xxxx xxxx xxxxx   0.2 xxxx xxxxx  xxxx xxxx xxxxx  xxxx xxxx xxxxx
Control Del:xxxxx xxxx xxxxx   8.8 xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx
LOS by Move:    *    *     *     A    *     *     *    *     *     *    *     *
Movement:     LT - LTR - RT    LT - LTR - RT    LT - LTR - RT    LT - LTR - RT
Shared Cap.: xxxx xxxx xxxxx  xxxx xxxx xxxxx  xxxx xxxx xxxxx  xxxx  407 xxxxx
SharedQueue:xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx  0.2 xxxxx
Shrd ConDel:xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx 14.5 xxxxx
Shared LOS:     *    *     *     *    *     *     *    *     *     *    B     *
ApproachDel:    xxxxxx           xxxxxx           xxxxxx             14.5
ApproachLOS:         *                *                *                B
********************************************************************************
Note: Queue reported is the number of cars per lane.
********************************************************************************
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                      Level Of Service Computation Report
            2000 HCM Unsignalized Method (Base Volume Alternative)
********************************************************************************
Intersection #5 5
********************************************************************************
Average Delay (sec/veh):      2.3       Worst Case Level Of Service: C[ 19.1]
********************************************************************************
Street Name:     PALOS VERDES DRIVE SOUTH          PALOS VERDES DRIVE EAST
Approach:      North Bound      South Bound      East Bound       West Bound
Movement:     L  -  T  -  R   L  -  T  -  R   L  -  T  -  R   L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:       Uncontrolled     Uncontrolled      Stop Sign        Stop Sign
Rights:           Include          Include          Include          Include
Lanes:        0  0  1  0  1   1  0  1  0  0   0  0  0  0  0   1  0  0  0  1
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:       0  535    50    72  592     0     0    0     0    44    0    90
Growth Adj:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Initial Bse:    0  535    50    72  592     0     0    0     0    44    0    90
User Adj:    1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Volume:     0  535    50    72  592     0     0    0     0    44    0    90
Reduct Vol:     0    0     0     0    0     0     0    0     0     0    0     0
FinalVolume:    0  535    50    72  592     0     0    0     0    44    0    90
------------|---------------||---------------||---------------||---------------|
Critical Gap Module:
Critical Gp:xxxxx xxxx xxxxx   4.1 xxxx xxxxx xxxxx xxxx xxxxx   6.4 xxxx   6.2
FollowUpTim:xxxxx xxxx xxxxx   2.2 xxxx xxxxx xxxxx xxxx xxxxx   3.5 xxxx   3.3
------------|---------------||---------------||---------------||---------------|
Capacity Module:
Cnflict Vol: xxxx xxxx xxxxx   585 xxxx xxxxx  xxxx xxxx xxxxx  1271 xxxx   535
Potent Cap.: xxxx xxxx xxxxx  1000 xxxx xxxxx  xxxx xxxx xxxxx   187 xxxx   549
Move Cap.:   xxxx xxxx xxxxx  1000 xxxx xxxxx  xxxx xxxx xxxxx   177 xxxx   549
Volume/Cap:  xxxx xxxx  xxxx  0.07 xxxx  xxxx  xxxx xxxx  xxxx  0.25 xxxx  0.16
------------|---------------||---------------||---------------||---------------|
Level Of Service Module:
2Way95thQ:   xxxx xxxx xxxxx   0.2 xxxx xxxxx  xxxx xxxx xxxxx   0.9 xxxx   0.6
Control Del:xxxxx xxxx xxxxx   8.9 xxxx xxxxx xxxxx xxxx xxxxx  32.0 xxxx  12.8
LOS by Move:    *    *     *     A    *     *     *    *     *     D    *     B
Movement:     LT - LTR - RT   LT - LTR - RT   LT - LTR - RT   LT - LTR - RT
Shared Cap.: xxxx xxxx xxxxx  xxxx xxxx xxxxx  xxxx xxxx xxxxx  xxxx xxxx xxxxx
SharedQueue:xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx
Shrd ConDel:xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx
Shared LOS:     *    *     *     *    *     *     *    *     *     *    *     *
ApproachDel:    xxxxxx           xxxxxx           xxxxxx            19.1
ApproachLOS:         *                *                *                C
********************************************************************************
Note: Queue reported is the number of cars per lane.
********************************************************************************
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                   Level Of Service Computation Report
          2000 HCM Unsignalized Method (Base Volume Alternative)
********************************************************************************
Intersection #6 6
********************************************************************************
Average Delay (sec/veh):      0.0       Worst Case Level Of Service: B[ 10.2]
********************************************************************************
Street Name:     PALOS VERDES DRIVE SOUTH       POINT VIEW INTERNAL DRIVEWAY
Approach:      North Bound      South Bound      East Bound       West Bound
Movement:     L  -  T  -  R   L  -  T  -  R   L  -  T  -  R   L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:       Uncontrolled     Uncontrolled      Stop Sign        Stop Sign
Rights:           Include          Include          Include          Include
Lanes:        0  0  1  1  0   0  0  2  0  0   0  0  0  0  0   0  0  0  0  1
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:        0  517   100     0  634     0     0    0     0     0    0     4
Growth Adj:   1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Initial Bse:     0  517   100     0  634     0     0    0     0     0    0     4
User Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Adj:      1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Volume:      0  517   100     0  634     0     0    0     0     0    0     4
Reduct Vol:      0    0     0     0    0     0     0    0     0     0    0     0
FinalVolume:     0  517   100     0  634     0     0    0     0     0    0     4
------------|---------------||---------------||---------------||---------------|
Critical Gap Module:
Critical Gp:xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx   6.9
FollowUpTim:xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx   3.3
------------|---------------||---------------||---------------||---------------|
Capacity Module:
Cnflict Vol: xxxx xxxx xxxxx  xxxx xxxx xxxxx  xxxx xxxx xxxxx  xxxx xxxx   309
Potent Cap.: xxxx xxxx xxxxx  xxxx xxxx xxxxx  xxxx xxxx xxxxx  xxxx xxxx   693
Move Cap.:   xxxx xxxx xxxxx  xxxx xxxx xxxxx  xxxx xxxx xxxxx  xxxx xxxx   693
Volume/Cap:  xxxx xxxx  xxxx  xxxx xxxx  xxxx  xxxx xxxx  xxxx  xxxx xxxx  0.01
------------|---------------||---------------||---------------||---------------|
Level Of Service Module:
2Way95thQ:   xxxx xxxx xxxxx  xxxx xxxx xxxxx  xxxx xxxx xxxxx  xxxx xxxx   0.0
Control Del:xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx  10.2
LOS by Move:     *    *     *     *    *     *     *    *     *     *    *     B
Movement:     LT - LTR - RT    LT - LTR - RT    LT - LTR - RT    LT - LTR - RT
Shared Cap.: xxxx xxxx xxxxx  xxxx xxxx xxxxx  xxxx xxxx xxxxx  xxxx xxxx xxxxx
SharedQueue:xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx
Shrd ConDel:xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx
Shared LOS:      *    *     *     *    *     *     *    *     *     *    *     *
ApproachDel:     xxxxxx           xxxxxx           xxxxxx             10.2
ApproachLOS:        *                *                *                 B
********************************************************************************
Note: Queue reported is the number of cars per lane.
********************************************************************************
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                      Level Of Service Computation Report
            2000 HCM Unsignalized Method (Base Volume Alternative)
********************************************************************************
Intersection #1 1
********************************************************************************
Average Delay (sec/veh):      1.5       Worst Case Level Of Service: C[ 20.2]
********************************************************************************
Street Name:                VIA RIVERA                      HAWTHORNE BLVD
Approach:      North Bound      South Bound       East Bound        West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:        Stop Sign        Stop Sign       Uncontrolled      Uncontrolled
Rights:           Include          Include          Include           Include
Lanes:        0  0  1! 0  0    0  0  1! 0  0    1  0  1  1  0    1  0  2  0  1
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:        1    0     3    48    0    25    25  514     2    15  541    64
Growth Adj:   1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Initial Bse:     1    0     3    48    0    25    25  514     2    15  541    64
User Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Adj:      1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Volume:      1    0     3    48    0    25    25  514     2    15  541    64
Reduct Vol:      0    0     0     0    0     0     0    0     0     0    0     0
FinalVolume:     1    0     3    48    0    25    25  514     2    15  541    64
------------|---------------||---------------||---------------||---------------|
Critical Gap Module:
Critical Gp:  7.5  6.5   6.9   7.5  6.5   6.9   4.1 xxxx xxxxx   4.1 xxxx xxxxx
FollowUpTim:  3.5  4.0   3.3   3.5  4.0   3.3   2.2 xxxx xxxxx   2.2 xxxx xxxxx
------------|---------------||---------------||---------------||---------------|
Capacity Module:
Cnflict Vol:  866 1200   258   878 1137   271   605 xxxx xxxxx   516 xxxx xxxxx
Potent Cap.:  251  187   747   246  203   733   983 xxxx xxxxx  1060 xxxx xxxxx
Move Cap.:    235  179   747   237  195   733   983 xxxx xxxxx  1060 xxxx xxxxx
Volume/Cap:  0.00 0.00  0.00  0.20 0.00  0.03  0.03 xxxx  xxxx  0.01 xxxx  xxxx
------------|---------------||---------------||---------------||---------------|
Level Of Service Module:
2Way95thQ:   xxxx xxxx xxxxx  xxxx xxxx xxxxx   0.1 xxxx xxxxx   0.0 xxxx xxxxx
Control Del:xxxxx xxxx xxxxx xxxxx xxxx xxxxx   8.8 xxxx xxxxx   8.4 xxxx xxxxx
LOS by Move:     *    *     *     *    *     *     A    *     *     A    *     *
Movement:     LT - LTR - RT    LT - LTR - RT    LT - LTR - RT    LT - LTR - RT
Shared Cap.: xxxx  484 xxxxx  xxxx  309 xxxxx  xxxx xxxx xxxxx  xxxx xxxx xxxxx
SharedQueue:xxxxx  0.0 xxxxx xxxxx  0.9 xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx
Shrd ConDel:xxxxx 12.5 xxxxx xxxxx 20.2 xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx
Shared LOS:      *    B     *     *    C     *     *    *     *     *    *     *
ApproachDel:        12.5             20.2            xxxxxx            xxxxxx
ApproachLOS:           B                C                 *                 *
********************************************************************************
Note: Queue reported is the number of cars per lane.
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                     Level Of Service Computation Report
            2000 HCM Unsignalized Method (Base Volume Alternative)
********************************************************************************
Intersection #3 3
********************************************************************************
Average Delay (sec/veh):      0.6       Worst Case Level Of Service: B[ 13.6]
********************************************************************************
Street Name:     PALOS VERDES DRIVE SOUTH                   SEACOVE DR
Approach:      North Bound      South Bound       East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:       Uncontrolled     Uncontrolled       Stop Sign        Stop Sign
Rights:           Include          Include          Include          Include
Lanes:        1  0  1  1  0    1  0  1  1  0    0  0  1! 0  0    0  0  0  0  0
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:      65  576     0     3  499     3     4     0     6     0     0     0
Growth Adj:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Initial Bse:   65  576     0     3  499     3     4     0     6     0     0     0
User Adj:    1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Volume:    65  576     0     3  499     3     4     0     6     0     0     0
Reduct Vol:     0    0     0     0    0     0     0     0     0     0     0     0
FinalVolume:   65  576     0     3  499     3     4     0     6     0     0     0
------------|---------------||---------------||---------------||---------------|
Critical Gap Module:
Critical Gp:  4.1 xxxx xxxxx   4.1 xxxx xxxxx   6.8  6.5   6.9 xxxxx xxxx xxxxx
FollowUpTim:  2.2 xxxx xxxxx   2.2 xxxx xxxxx   3.5  4.0   3.3 xxxxx xxxx xxxxx
------------|---------------||---------------||---------------||---------------|
Capacity Module:
Cnflict Vol:  502 xxxx xxxxx   576 xxxx xxxxx   925 1213   251  xxxx xxxx xxxxx
Potent Cap.: 1073 xxxx xxxxx  1007 xxxx xxxxx   272  184   755  xxxx xxxx xxxxx
Move Cap.:   1073 xxxx xxxxx  1007 xxxx xxxxx   259  172   755  xxxx xxxx xxxxx
Volume/Cap:  0.06 xxxx  xxxx  0.00 xxxx  xxxx  0.02 0.00  0.01  xxxx xxxx  xxxx
------------|---------------||---------------||---------------||---------------|
Level Of Service Module:
2Way95thQ:    0.2 xxxx xxxxx   0.0 xxxx xxxxx  xxxx xxxx xxxxx  xxxx xxxx xxxxx
Control Del:  8.6 xxxx xxxxx   8.6 xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx
LOS by Move:    A    *     *     A    *     *     *    *     *     *    *     *
Movement:     LT - LTR - RT    LT - LTR - RT    LT - LTR - RT    LT - LTR - RT
Shared Cap.: xxxx xxxx xxxxx  xxxx xxxx xxxxx  xxxx  427 xxxxx  xxxx xxxx xxxxx
SharedQueue:xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx  0.1 xxxxx xxxxx xxxx xxxxx
Shrd ConDel:xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx 13.6 xxxxx xxxxx xxxx xxxxx
Shared LOS:     *    *     *     *    *     *     *    B     *     *    *     *
ApproachDel:     xxxxxx           xxxxxx             13.6            xxxxxx
ApproachLOS:        *                *                 B                *
********************************************************************************
Note: Queue reported is the number of cars per lane.
********************************************************************************
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                      Level Of Service Computation Report
            2000 HCM Unsignalized Method (Base Volume Alternative)
********************************************************************************
Intersection #4 4
********************************************************************************
Average Delay (sec/veh):      0.7       Worst Case Level Of Service: B[ 14.0]
********************************************************************************
Street Name:     PALOS VERDES DRIVE SOUTH         WAYFARER'S CHAPEL DRIVE
Approach:      North Bound      South Bound      East Bound       West Bound
Movement:     L  -  T  -  R   L  -  T  -  R   L  -  T  -  R   L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:       Uncontrolled     Uncontrolled      Stop Sign        Stop Sign
Rights:           Include          Include          Include          Include
Lanes:        0  0  2  0  1   1  0  2  0  0   0  0  0  0  0   0  0  1! 0  0
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:       0  537    31    19  546     0     0    0     0    20    0    24
Growth Adj:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Initial Bse:    0  537    31    19  546     0     0    0     0    20    0    24
User Adj:    1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Volume:     0  537    31    19  546     0     0    0     0    20    0    24
Reduct Vol:     0    0     0     0    0     0     0    0     0     0    0     0
FinalVolume:    0  537    31    19  546     0     0    0     0    20    0    24
------------|---------------||---------------||---------------||---------------|
Critical Gap Module:
Critical Gp:xxxxx xxxx xxxxx   4.1 xxxx xxxxx xxxxx xxxx xxxxx   6.8  6.5   6.9
FollowUpTim:xxxxx xxxx xxxxx   2.2 xxxx xxxxx xxxxx xxxx xxxxx   3.5  4.0   3.3
------------|---------------||---------------||---------------||---------------|
Capacity Module:
Cnflict Vol: xxxx xxxx xxxxx   568 xxxx xxxxx  xxxx xxxx xxxxx   848 1121   269
Potent Cap.: xxxx xxxx xxxxx  1014 xxxx xxxxx  xxxx xxxx xxxxx   304  208   736
Move Cap.:   xxxx xxxx xxxxx  1014 xxxx xxxxx  xxxx xxxx xxxxx   300  204   736
Volume/Cap:  xxxx xxxx  xxxx  0.02 xxxx  xxxx  xxxx xxxx  xxxx  0.07 0.00  0.03
------------|---------------||---------------||---------------||---------------|
Level Of Service Module:
2Way95thQ:   xxxx xxxx xxxxx   0.1 xxxx xxxxx  xxxx xxxx xxxxx  xxxx xxxx xxxxx
Control Del:xxxxx xxxx xxxxx   8.6 xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx
LOS by Move:    *    *     *     A    *     *     *    *     *     *    *     *
Movement:     LT - LTR - RT    LT - LTR - RT    LT - LTR - RT    LT - LTR - RT
Shared Cap.: xxxx xxxx xxxxx  xxxx xxxx xxxxx  xxxx xxxx xxxxx  xxxx  443 xxxxx
SharedQueue:xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx  0.3 xxxxx
Shrd ConDel:xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx 14.0 xxxxx
Shared LOS:     *    *     *     *    *     *     *    *     *     *    B     *
ApproachDel:     xxxxxx           xxxxxx           xxxxxx             14.0
ApproachLOS:        *                *                *                 B
********************************************************************************
Note: Queue reported is the number of cars per lane.
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                      Level Of Service Computation Report
            2000 HCM Unsignalized Method (Base Volume Alternative)
********************************************************************************
Intersection #5 5
********************************************************************************
Average Delay (sec/veh):      2.1       Worst Case Level Of Service: C[ 18.0]
********************************************************************************
Street Name:     PALOS VERDES DRIVE SOUTH          PALOS VERDES DRIVE EAST
Approach:      North Bound      South Bound      East Bound       West Bound
Movement:     L  -  T  -  R   L  -  T  -  R   L  -  T  -  R   L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:       Uncontrolled     Uncontrolled      Stop Sign        Stop Sign
Rights:           Include          Include          Include          Include
Lanes:        0  0  1  0  1   1  0  1  0  0   0  0  0  0  0   1  0  0  0  1
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:       0  554    51    60  554     0     0    0     0    39    0    86
Growth Adj:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Initial Bse:    0  554    51    60  554     0     0    0     0    39    0    86
User Adj:    1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Volume:     0  554    51    60  554     0     0    0     0    39    0    86
Reduct Vol:     0    0     0     0    0     0     0    0     0     0    0     0
FinalVolume:    0  554    51    60  554     0     0    0     0    39    0    86
------------|---------------||---------------||---------------||---------------|
Critical Gap Module:
Critical Gp:xxxxx xxxx xxxxx   4.1 xxxx xxxxx xxxxx xxxx xxxxx   6.4 xxxx   6.2
FollowUpTim:xxxxx xxxx xxxxx   2.2 xxxx xxxxx xxxxx xxxx xxxxx   3.5 xxxx   3.3
------------|---------------||---------------||---------------||---------------|
Capacity Module:
Cnflict Vol: xxxx xxxx xxxxx   605 xxxx xxxxx  xxxx xxxx xxxxx  1228 xxxx   554
Potent Cap.: xxxx xxxx xxxxx   983 xxxx xxxxx  xxxx xxxx xxxxx   199 xxxx   536
Move Cap.:   xxxx xxxx xxxxx   983 xxxx xxxxx  xxxx xxxx xxxxx   189 xxxx   536
Volume/Cap:  xxxx xxxx  xxxx  0.06 xxxx  xxxx  xxxx xxxx  xxxx  0.21 xxxx  0.16
------------|---------------||---------------||---------------||---------------|
Level Of Service Module:
2Way95thQ:   xxxx xxxx xxxxx   0.2 xxxx xxxxx  xxxx xxxx xxxxx   0.7 xxxx   0.6
Control Del:xxxxx xxxx xxxxx   8.9 xxxx xxxxx xxxxx xxxx xxxxx  28.9 xxxx  13.0
LOS by Move:    *    *     *     A    *     *     *    *     *     D    *     B
Movement:     LT - LTR - RT    LT - LTR - RT    LT - LTR - RT    LT - LTR - RT
Shared Cap.: xxxx xxxx xxxxx  xxxx xxxx xxxxx  xxxx xxxx xxxxx  xxxx xxxx xxxxx
SharedQueue:xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx
Shrd ConDel:xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx
Shared LOS:     *    *     *     *    *     *     *    *     *     *    *     *
ApproachDel:    xxxxxx           xxxxxx           xxxxxx             18.0
ApproachLOS:         *                *                *                C
********************************************************************************
Note: Queue reported is the number of cars per lane.
********************************************************************************
```

```
--------------------------------------------------------------------------------
--------------------------------------------------------------------------------
                      Level Of Service Computation Report
            2000 HCM Unsignalized Method (Base Volume Alternative)
********************************************************************************
Intersection #6 6
********************************************************************************
Average Delay (sec/veh):      0.9       Worst Case Level Of Service: B[ 10.8]
********************************************************************************
Street Name:     PALOS VERDES DRIVE SOUTH       POINT VIEW INTERNAL DRIVEWAY
Approach:      North Bound      South Bound      East Bound       West Bound
Movement:     L  -  T  -  R   L  -  T  -  R   L  -  T  -  R   L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:       Uncontrolled     Uncontrolled      Stop Sign        Stop Sign
Rights:           Include          Include          Include          Include
Lanes:        0  0  1  1  0   0  0  2  0  0   0  0  0  0  0   0  0  0  0  1
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:       0  565     5     0  524     0     0    0     0     0    0   102
Growth Adj:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Initial Bse:    0  565     5     0  524     0     0    0     0     0    0   102
User Adj:    1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Volume:     0  565     5     0  524     0     0    0     0     0    0   102
Reduct Vol:     0    0     0     0    0     0     0    0     0     0    0     0
FinalVolume:    0  565     5     0  524     0     0    0     0     0    0   102
------------|---------------||---------------||---------------||---------------|
Critical Gap Module:
Critical Gp:xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx   6.9
FollowUpTim:xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx   3.3
------------|---------------||---------------||---------------||---------------|
Capacity Module:
Cnflict Vol: xxxx xxxx xxxxx  xxxx xxxx xxxxx  xxxx xxxx xxxxx  xxxx xxxx   285
Potent Cap.: xxxx xxxx xxxxx  xxxx xxxx xxxxx  xxxx xxxx xxxxx  xxxx xxxx   718
Move Cap.:   xxxx xxxx xxxxx  xxxx xxxx xxxxx  xxxx xxxx xxxxx  xxxx xxxx   718
Volume/Cap:  xxxx xxxx  xxxx  xxxx xxxx  xxxx  xxxx xxxx  xxxx  xxxx xxxx  0.14
------------|---------------||---------------||---------------||---------------|
Level Of Service Module:
2Way95thQ:   xxxx xxxx xxxxx  xxxx xxxx xxxxx  xxxx xxxx xxxxx  xxxx xxxx   0.5
Control Del:xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx  10.8
LOS by Move:    *    *     *     *    *     *     *    *     *     *    *     B
Movement:     LT - LTR - RT    LT - LTR - RT    LT - LTR - RT    LT - LTR - RT
Shared Cap.: xxxx xxxx xxxxx  xxxx xxxx xxxxx  xxxx xxxx xxxxx  xxxx xxxx xxxxx
SharedQueue:xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx
Shrd ConDel:xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx
Shared LOS:     *    *     *     *    *     *     *    *     *     *    *     *
ApproachDel:    xxxxxx           xxxxxx           xxxxxx            10.8
ApproachLOS:         *                *                *                B
********************************************************************************
Note: Queue reported is the number of cars per lane.
********************************************************************************
```

Future (2012) No Project Conditions

Project Title: **Pointview Master Plan**
Intersection: **Palos Verdes Drive South & Point View Internal Driveway**
Description: **FUTURE NO PROJECT CONDITIONS**

Date/Time: **FUTURE (2012) WITH PROJECT CONDITIONS**

Thru Lane:	1600 vph		N-S Split Phase :	N
Left Lane:	1600 vph		E-W Split Phase :	N
Double Lt Penalty:	20 %		Lost Time (% of cycle) :	10
ITS:	0 %		V/C Round Off (decs.) :	3
OLA Movements :				
FF Movements:				

APPROACH	MVMT	LANES	VOLUME	CAPACITY	V/C	ICU ANALYSIS	
Southbound	RT	0.00	0	0	0.000	N-S(1):	0.220
	TH	2.00	715	3,200	0.223 *	N-S(2):	0.223 *
	LT	0.00	0	0	0.000	E-W(1):	0.000
Westbound	RT	0.00	4	0	0.000	E-W(2):	0.003 *
	TH	1.00	0	1,600	0.003 *		
	LT	0.00	0	0	0.000	V/C:	0.226
Northbound	RT	0.00	100	0	0.000	Lost Time:	0.100
	TH	2.00	605	3,200	0.220	ITS:	0.000
	LT	0.00	0	0	0.000 *		
Eastbound	RT	0.00	0	0	0.000	ICU:	0.326
	TH	0.00	0	0	0.000		
	LT	0.00	0	0	0.000 *	LOS:	A

Date/Time: **SATURDAY MIDDAY PEAK HOUR (12:15-1:15)**

APPROACH	MVMT	LANES	VOLUME	CAPACITY	V/C	ICU ANALYSIS	
Southbound	RT	0.00	0	0	0.000	N-S(1):	0.182 *
	TH	2.00	541	3,200	0.169	N-S(2):	0.169
	LT	0.00	0	0	0.000 *	E-W(1):	0.000
Westbound	RT	0.00	102	0	0.000	E-W(2):	0.064 *
	TH	1.00	0	1,600	0.064 *		
	LT	0.00	0	0	0.000	V/C:	0.246
Northbound	RT	0.00	5	0	0.000	Lost Time:	0.100
	TH	2.00	577	3,200	0.182 *	ITS:	0.000
	LT	0.00	0	0	0.000		
Eastbound	RT	0.00	0	0	0.000	ICU:	0.346
	TH	0.00	0	0	0.000		
	LT	0.00	0	0	0.000 *	LOS:	A

* - Denotes critical movement

Project Title: **Pointview Master Plan**
Intersection: **Palos Verdes Drive South & Palos Verdes Drive East**
Description: **FUTURE NO PROJECT CONDITIONS**

Date/Time: **FRIDAY PM PEAK HOUR (4:30-5:30)**

Thru Lane:	1600 vph	N-S Split Phase :	N
Left Lane:	1600 vph	E-W Split Phase :	N
Double Lt Penalty:	20 %	Lost Time (% of cycle) :	10
ITS:	0 %	V/C Round Off (decs.) :	3
OLA Movements :			
FF Movements:			

APPROACH	MVMT	LANES	VOLUME	CAPACITY	V/C		ICU ANALYSIS		
Southbound	RT	0.00	0	0	0.000		N-S(1):	0.409	
	TH	1.00	656	1,600	0.410	*	N-S(2):	0.410	*
	LT	1.00	89	1,600	0.056		E-W(1):	0.033	*
Westbound	RT	1.00	97	1,600	0.033	*	E-W(2):	0.033	*
	TH	0.00	0	0	0.000				
	LT	1.00	52	1,600	0.033	*	V/C:	0.443	
Northbound	RT	1.00	72	1,600	0.045		Lost Time:	0.100	
	TH	1.00	564	1,600	0.353		ITS:	0.000	
	LT	0.00	0	0	0.000	*			
Eastbound	RT	0.00	0	0	0.000		ICU:	0.543	
	TH	0.00	0	0	0.000	*			
	LT	0.00	0	0	0.000	*	LOS:	A	

Date/Time: **SATURDAY MIDDAY PEAK HOUR (12:15-1:15)**

APPROACH	MVMT	LANES	VOLUME	CAPACITY	V/C		ICU ANALYSIS		
Southbound	RT	0.00	0	0	0.000		N-S(1):	0.387	*
	TH	1.00	519	1,600	0.324		N-S(2):	0.324	
	LT	1.00	57	1,600	0.036	*	E-W(1):	0.024	
Westbound	RT	1.00	89	1,600	0.038	*	E-W(2):	0.038	*
	TH	0.00	0	0	0.000				
	LT	1.00	39	1,600	0.024		V/C:	0.425	
Northbound	RT	1.00	51	1,600	0.032		Lost Time:	0.100	
	TH	1.00	562	1,600	0.351	*	ITS:	0.000	
	LT	0.00	0	0	0.000				
Eastbound	RT	0.00	0	0	0.000		ICU:	0.525	
	TH	0.00	0	0	0.000				
	LT	0.00	0	0	0.000	*	LOS:	A	

* - Denotes critical movement

Project Title: **Pointview Master Plan**
Intersection: **Palos Verdes Drive South & Wayfarer's Chapel Drive**
Description: **FUTURE NO PROJECT CONDITIONS**

Date/Time: **FRIDAY PM PEAK HOUR (4:30-5:30)**

Thru Lane:	1600 vph	N-S Split Phase :	N
Left Lane:	1600 vph	E-W Split Phase :	N
Double Lt Penalty:	20 %	Lost Time (% of cycle) :	10
ITS:	0 %	V/C Round Off (decs.) :	3
OLA Movements :			
FF Movements:			

APPROACH	MVMT	LANES	VOLUME	CAPACITY	V/C	ICU ANALYSIS	
Southbound	RT	0.00	0	0	0.000	N-S(1):	0.199
	TH	2.00	650	3,200	0.203 *	N-S(2):	0.203 *
	LT	1.00	28	1,600	0.018	E-W(1):	0.006
Westbound	RT	0.00	16	0	0.000	E-W(2):	0.016 *
	TH	1.00	0	1,600	0.016 *		
	LT	0.00	10	1,600	0.006	V/C:	0.219
Northbound	RT	1.00	19	1,600	0.012	Lost Time:	0.100
	TH	2.00	578	3,200	0.181	ITS:	0.000
	LT	0.00	0	0	0.000 *		
Eastbound	RT	0.00	0	0	0.000	ICU:	0.319
	TH	0.00	0	0	0.000		
	LT	0.00	0	0	0.000 *	LOS:	A

Date/Time: **SATURDAY MIDDAY PEAK HOUR (12:15-1:15)**

APPROACH	MVMT	LANES	VOLUME	CAPACITY	V/C	ICU ANALYSIS	
Southbound	RT	0.00	0	0	0.000	N-S(1):	0.182 *
	TH	2.00	507	3,200	0.158	N-S(2):	0.158
	LT	1.00	17	1,600	0.011 *	E-W(1):	0.013
Westbound	RT	0.00	24	0	0.000	E-W(2):	0.028 *
	TH	1.00	0	1,600	0.028 *		
	LT	0.00	20	1,600	0.013	V/C:	0.210
Northbound	RT	1.00	31	1,600	0.019	Lost Time:	0.100
	TH	2.00	546	3,200	0.171 *	ITS:	0.000
	LT	0.00	0	0	0.000		
Eastbound	RT	0.00	0	0	0.000	ICU:	0.310
	TH	0.00	0	0	0.000		
	LT	0.00	0	0	0.000 *	LOS:	A

* - Denotes critical movement

Project Title: Pointview Master Plan
Intersection: Palos Verdes Drive South & Seacove Drive
Description: FUTURE NO PROJECT CONDITIONS

Date/Time: FRIDAY PM PEAK HOUR (4:30-5:30)

Thru Lane:	1600 vph	N-S Split Phase :	N
Left Lane:	1600 vph	E-W Split Phase :	N
Double Lt Penalty:	20 %	Lost Time (% of cycle) :	10
ITS:	0 %	V/C Round Off (decs.) :	3
OLA Movements :			
FF Movements:			

APPROACH	MVMT	LANES	VOLUME	CAPACITY	V/C	ICU ANALYSIS	
Southbound	RT	0.00	5	0	0.000	N-S(1):	0.185
	TH	2.00	656	3,200	0.207 *	N-S(2):	0.216 *
	LT	1.00	6	1,600	0.004	E-W(1):	0.004 *
Westbound	RT	0.00	0	0	0.000	E-W(2):	0.001
	TH	0.00	0	0	0.000		
	LT	0.00	0	0	0.000 *	V/C:	0.220
Northbound	RT	0.00	0	0	0.000	Lost Time:	0.100
	TH	2.00	579	3,200	0.181	ITS:	0.000
	LT	1.00	15	1,600	0.009 *		
Eastbound	RT	0.00	5	0	0.000	ICU:	0.320
	TH	1.00	0	1,600	0.004 *		
	LT	0.00	1	1,600	0.001	LOS:	A

Date/Time: SATURDAY MIDDAY PEAK HOUR (12:15-1:15)

APPROACH	MVMT	LANES	VOLUME	CAPACITY	V/C	ICU ANALYSIS	
Southbound	RT	0.00	3	0	0.000	N-S(1):	0.171 *
	TH	2.00	513	3,200	0.161	N-S(2):	0.167
	LT	1.00	3	1,600	0.002 *	E-W(1):	0.006 *
Westbound	RT	0.00	0	0	0.000	E-W(2):	0.003
	TH	0.00	0	0	0.000		
	LT	0.00	0	0	0.000 *	V/C:	0.177
Northbound	RT	0.00	0	0	0.000	Lost Time:	0.100
	TH	2.00	540	3,200	0.169 *	ITS:	0.000
	LT	1.00	10	1,600	0.006		
Eastbound	RT	0.00	6	0	0.000	ICU:	0.277
	TH	1.00	0	1,600	0.006 *		
	LT	0.00	4	1,600	0.003	LOS:	A

* - Denotes critical movement

Project Title: **Pointview Master Plan**
Intersection: **Palos Verdes Drive West & Hawthorne Blvd/Via Vicente**
Description: **FUTURE NO PROJECT CONDITIONS**

Date/Time: **FRIDAY PM PEAK HOUR (4:30-5:30)**

Thru Lane:	1600 vph	N-S Split Phase :	N
Left Lane:	1600 vph	E-W Split Phase :	N
Double Lt Penalty:	20 %	Lost Time (% of cycle) :	10
ITS:	0 %	V/C Round Off (decs.) :	3
OLA Movements :			
FF Movements:			

APPROACH	MVMT	LANES	VOLUME	CAPACITY	V/C		ICU ANALYSIS		
Southbound	RT	0.00	8	0	0.000		N-S(1):	0.245	*
	TH	2.00	393	3,200	0.125		N-S(2):	0.146	
	LT	1.00	176	1,600	0.110	*	E-W(1):	0.154	*
Westbound	RT	1.00	179	1,600	0.057		E-W(2):	0.116	
	TH	0.13	24	208	0.115				
	LT	1.87	345	2,393	0.144	*	V/C:	0.399	
Northbound	RT	1.00	296	1,600	0.113		Lost Time:	0.100	
	TH	2.00	432	3,200	0.135	*	ITS:	0.000	
	LT	1.00	33	1,600	0.021				
Eastbound	RT	0.00	11	0	0.000		ICU:	0.499	
	TH	2.00	18	3,200	0.010	*			
	LT	0.00	2	1,600	0.001		LOS:	A	

Date/Time: **SATURDAY MIDDAY PEAK HOUR (12:15-1:15)**

APPROACH	MVMT	LANES	VOLUME	CAPACITY	V/C		ICU ANALYSIS		
Southbound	RT	0.00	6	0	0.000		N-S(1):	0.207	*
	TH	2.00	313	3,200	0.100		N-S(2):	0.119	
	LT	1.00	166	1,600	0.104	*	E-W(1):	0.147	*
Westbound	RT	1.00	143	1,600	0.038		E-W(2):	0.114	
	TH	0.05	9	82	0.110				
	LT	1.95	344	2,495	0.138	*	V/C:	0.354	
Northbound	RT	1.00	194	1,600	0.052		Lost Time:	0.100	
	TH	2.00	328	3,200	0.103	*	ITS:	0.000	
	LT	1.00	30	1,600	0.019				
Eastbound	RT	0.00	7	0	0.000		ICU:	0.454	
	TH	2.00	17	3,200	0.009	*			
	LT	0.00	6	1,600	0.004		LOS:	A	

* - Denotes critical movement

Printed: 7/22/2011
Revised: 2/4/00

2454 K-ICU_2011-07-16.xls

Project Title: **Pointview Master Plan**
Intersection: **Via Rivera & Hawthorne Boulevard**
Description: **FUTURE NO PROJECT CONDITIONS**

Date/Time: **FRIDAY PM PEAK HOUR (4:30-5:30)**

Thru Lane:	1600	vph
Left Lane:	1600	vph
Double Lt Penalty:	20	%
ITS:	0	%
OLA Movements :		
FF Movements:		

N-S Split Phase :	N
E-W Split Phase :	N
Lost Time (% of cycle) :	10
V/C Round Off (decs.) :	3

APPROACH	MVMT	LANES	VOLUME	CAPACITY	V/C	ICU ANALYSIS	
Southbound	RT	0.00	28	0	0.000	N-S(1):	0.044
	TH	1.00	0	1,600	0.057 *	N-S(2):	0.058 *
	LT	0.00	63	1,600	0.039	E-W(1):	0.175
Westbound	RT	1.00	68	1,600	0.023	E-W(2):	0.221 *
	TH	2.00	628	3,200	0.196 *		
	LT	1.00	11	1,600	0.007	V/C:	0.279
Northbound	RT	0.00	7	0	0.000	Lost Time:	0.100
	TH	1.00	0	1,600	0.005	ITS:	0.000
	LT	0.00	1	1,600	0.001 *		
Eastbound	RT	0.00	1	0	0.000	ICU:	0.379
	TH	2.00	538	3,200	0.168		
	LT	1.00	40	1,600	0.025 *	LOS:	A

Date/Time: **SATURDAY MIDDAY PEAK HOUR (12:15-1:15)**

APPROACH	MVMT	LANES	VOLUME	CAPACITY	V/C	ICU ANALYSIS	
Southbound	RT	0.00	25	0	0.000	N-S(1):	0.033
	TH	1.00	0	1,600	0.046 *	N-S(2):	0.047 *
	LT	0.00	48	1,600	0.030	E-W(1):	0.166
Westbound	RT	1.00	64	1,600	0.025	E-W(2):	0.186 *
	TH	2.00	544	3,200	0.170 *		
	LT	1.00	15	1,600	0.009	V/C:	0.233
Northbound	RT	0.00	3	0	0.000	Lost Time:	0.100
	TH	1.00	0	1,600	0.003	ITS:	0.000
	LT	0.00	1	1,600	0.001 *		
Eastbound	RT	0.00	2	0	0.000	ICU:	0.333
	TH	2.00	500	3,200	0.157		
	LT	1.00	25	1,600	0.016 *	LOS:	A

* - Denotes critical movement

```
--------------------------------------------------------------------------------
--------------------------------------------------------------------------------
                      Level Of Service Computation Report
            2000 HCM Unsignalized Method (Base Volume Alternative)
********************************************************************************
Intersection #1 1
********************************************************************************
Average Delay (sec/veh):      2.2       Worst Case Level Of Service: D[ 28.1]
********************************************************************************
Street Name:                VIA RIVERA                      HAWTHORNE BLVD
Approach:       North Bound      South Bound       East Bound       West Bound
Movement:      L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:         Stop Sign        Stop Sign       Uncontrolled     Uncontrolled
Rights:            Include          Include          Include          Include
Lanes:         0  0  1! 0  0    0  0  1! 0  0    1  0  1  1  0    1  0  2  0  1
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:        1    0     7    63    0    28    40  538     1    11  628    68
Growth Adj:   1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Initial Bse:     1    0     7    63    0    28    40  538     1    11  628    68
User Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Adj:      1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Volume:      1    0     7    63    0    28    40  538     1    11  628    68
Reduct Vol:      0    0     0     0    0     0     0    0     0     0    0     0
FinalVolume:     1    0     7    63    0    28    40  538     1    11  628    68
------------|---------------||---------------||---------------||---------------|
Critical Gap Module:
Critical Gp:   7.5  6.5   6.9   7.5  6.5   6.9   4.1 xxxx xxxxx   4.1 xxxx xxxxx
FollowUpTim:   3.5  4.0   3.3   3.5  4.0   3.3   2.2 xxxx xxxxx   2.2 xxxx xxxxx
------------|---------------||---------------||---------------||---------------|
Capacity Module:
Cnflict Vol:   955 1337   270   999 1269   314   696 xxxx xxxxx   539 xxxx xxxxx
Potent Cap.:   216  155   735   201  170   688   909 xxxx xxxxx  1040 xxxx xxxxx
Move Cap.:     199  146   735   190  161   688   909 xxxx xxxxx  1040 xxxx xxxxx
Volume/Cap:   0.01 0.00  0.01  0.33 0.00  0.04  0.04 xxxx  xxxx  0.01 xxxx  xxxx
------------|---------------||---------------||---------------||---------------|
Level Of Service Module:
2Way95thQ:    xxxx xxxx xxxxx  xxxx xxxx xxxxx   0.1 xxxx xxxxx   0.0 xxxx xxxxx
Control Del:xxxxx xxxx xxxxx xxxxx xxxx xxxxx   9.1 xxxx xxxxx   8.5 xxxx xxxxx
LOS by Move:     *    *     *     *    *     *     A    *     *     A    *     *
Movement:      LT - LTR - RT    LT - LTR - RT    LT - LTR - RT    LT - LTR - RT
Shared Cap.: xxxx  549 xxxxx  xxxx  245 xxxxx  xxxx xxxx xxxxx  xxxx xxxx xxxxx
SharedQueue:xxxxx  0.0 xxxxx xxxxx  1.6 xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx
Shrd ConDel:xxxxx 11.6 xxxxx xxxxx 28.1 xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx
Shared LOS:      *    B     *     *    D     *     *    *     *     *    *     *
ApproachDel:        11.6             28.1            xxxxxx           xxxxxx
ApproachLOS:          B                D                *                *
********************************************************************************
Note: Queue reported is the number of cars per lane.
********************************************************************************
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--------------------------------------------------------------------------------
--------------------------------------------------------------------------------
                      Level Of Service Computation Report
            2000 HCM Unsignalized Method (Base Volume Alternative)
********************************************************************************
Intersection #3 3
********************************************************************************
Average Delay (sec/veh):      0.2       Worst Case Level Of Service: B[ 12.0]
********************************************************************************
Street Name:     PALOS VERDES DRIVE SOUTH                 SEACOVE DR
Approach:      North Bound      South Bound       East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:       Uncontrolled     Uncontrolled      Stop Sign        Stop Sign
Rights:           Include          Include          Include          Include
Lanes:        1  0  1  1  0    1  0  1  1  0    0  0  1! 0  0    0  0  0  0  0
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:      15  579     0     6  656     5     1     0     5     0     0     0
Growth Adj:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Initial Bse:   15  579     0     6  656     5     1     0     5     0     0     0
User Adj:    1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Volume:    15  579     0     6  656     5     1     0     5     0     0     0
Reduct Vol:     0    0     0     0    0     0     0     0     0     0     0     0
FinalVolume:   15  579     0     6  656     5     1     0     5     0     0     0
------------|---------------||---------------||---------------||---------------|
Critical Gap Module:
Critical Gp:  4.1 xxxx xxxxx   4.1 xxxx xxxxx   6.8  6.5   6.9 xxxxx xxxx xxxxx
FollowUpTim:  2.2 xxxx xxxxx   2.2 xxxx xxxxx   3.5  4.0   3.3 xxxxx xxxx xxxxx
------------|---------------||---------------||---------------||---------------|
Capacity Module:
Cnflict Vol:  661 xxxx xxxxx   579 xxxx xxxxx   990 1280   331  xxxx xxxx xxxxx
Potent Cap.:  937 xxxx xxxxx  1005 xxxx xxxxx   247  167   671  xxxx xxxx xxxxx
Move Cap.:    937 xxxx xxxxx  1005 xxxx xxxxx   243  164   671  xxxx xxxx xxxxx
Volume/Cap:  0.02 xxxx  xxxx  0.01 xxxx  xxxx  0.00 0.00  0.01  xxxx xxxx  xxxx
------------|---------------||---------------||---------------||---------------|
Level Of Service Module:
2Way95thQ:    0.0 xxxx xxxxx   0.0 xxxx xxxxx  xxxx xxxx xxxxx  xxxx xxxx xxxxx
Control Del:  8.9 xxxx xxxxx   8.6 xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx
LOS by Move:    A    *     *     A    *     *     *    *     *     *    *     *
Movement:     LT - LTR - RT    LT - LTR - RT    LT - LTR - RT    LT - LTR - RT
Shared Cap.: xxxx xxxx xxxxx  xxxx xxxx xxxxx  xxxx  519 xxxxx  xxxx xxxx xxxxx
SharedQueue:xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx  0.0 xxxxx xxxxx xxxx xxxxx
Shrd ConDel:xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx 12.0 xxxxx xxxxx xxxx xxxxx
Shared LOS:     *    *     *     *    *     *     *    B     *     *    *     *
ApproachDel:     xxxxxx           xxxxxx             12.0             xxxxxx
ApproachLOS:        *                *                 B                *
********************************************************************************
Note: Queue reported is the number of cars per lane.
********************************************************************************
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--------------------------------------------------------------------------------
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                     Level Of Service Computation Report
           2000 HCM Unsignalized Method (Base Volume Alternative)
********************************************************************************
Intersection #4 4
********************************************************************************
Average Delay (sec/veh):      0.5      Worst Case Level Of Service: B[ 14.1]
********************************************************************************
Street Name:     PALOS VERDES DRIVE SOUTH         WAYFARER'S CHAPEL DRIVE
Approach:      North Bound      South Bound       East Bound       West Bound
Movement:     L  -  T  -  R   L  -  T  -  R   L  -  T  -  R   L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:       Uncontrolled     Uncontrolled      Stop Sign        Stop Sign
Rights:           Include          Include          Include          Include
Lanes:        0  0  2  0  1   1  0  2  0  0   0  0  0  0  0   0  0  1! 0  0
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:       0  578    19    28  650     0     0    0     0    10    0    16
Growth Adj:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Initial Bse:    0  578    19    28  650     0     0    0     0    10    0    16
User Adj:    1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Volume:     0  578    19    28  650     0     0    0     0    10    0    16
Reduct Vol:     0    0     0     0    0     0     0    0     0     0    0     0
FinalVolume:    0  578    19    28  650     0     0    0     0    10    0    16
------------|---------------||---------------||---------------||---------------|
Critical Gap Module:
Critical Gp:xxxxx xxxx xxxxx   4.1 xxxx xxxxx xxxxx xxxx xxxxx   6.8  6.5   6.9
FollowUpTim:xxxxx xxxx xxxxx   2.2 xxxx xxxxx xxxxx xxxx xxxxx   3.5  4.0   3.3
------------|---------------||---------------||---------------||---------------|
Capacity Module:
Cnflict Vol: xxxx xxxx xxxxx   597 xxxx xxxxx  xxxx xxxx xxxxx   959 1284   289
Potent Cap.: xxxx xxxx xxxxx   989 xxxx xxxxx  xxxx xxxx xxxxx   258  166   714
Move Cap.:   xxxx xxxx xxxxx   989 xxxx xxxxx  xxxx xxxx xxxxx   253  162   714
Volume/Cap:  xxxx xxxx  xxxx  0.03 xxxx  xxxx  xxxx xxxx  xxxx  0.04 0.00  0.02
------------|---------------||---------------||---------------||---------------|
Level Of Service Module:
2Way95thQ:   xxxx xxxx xxxxx   0.1 xxxx xxxxx  xxxx xxxx xxxxx  xxxx xxxx xxxxx
Control Del:xxxxx xxxx xxxxx   8.7 xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx
LOS by Move:    *    *     *     A    *     *     *    *     *     *    *     *
Movement:     LT - LTR - RT    LT - LTR - RT    LT - LTR - RT    LT - LTR - RT
Shared Cap.: xxxx xxxx xxxxx  xxxx xxxx xxxxx  xxxx xxxx xxxxx  xxxx  420 xxxxx
SharedQueue:xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx  0.2 xxxxx
Shrd ConDel:xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx 14.1 xxxxx
Shared LOS:     *    *     *     *    *     *     *    *     *     *    B     *
ApproachDel:     xxxxxx           xxxxxx           xxxxxx            14.1
ApproachLOS:        *                *                *                B
********************************************************************************
Note: Queue reported is the number of cars per lane.
********************************************************************************
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                       Level Of Service Computation Report
            2000 HCM Unsignalized Method (Base Volume Alternative)
********************************************************************************
Intersection #5 5
********************************************************************************
Average Delay (sec/veh):      2.8       Worst Case Level Of Service: C[ 23.6]
********************************************************************************
Street Name:      PALOS VERDES DRIVE SOUTH          PALOS VERDES DRIVE EAST
Approach:       North Bound      South Bound       East Bound        West Bound
Movement:      L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:        Uncontrolled     Uncontrolled       Stop Sign         Stop Sign
Rights:            Include          Include           Include           Include
Lanes:         0  0  1  0  1    1  0  1  0  0    0  0  0  0  0    1  0  0  0  1
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:        0  564    72    89  656     0     0    0     0    52    0    97
Growth Adj:   1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Initial Bse:     0  564    72    89  656     0     0    0     0    52    0    97
User Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Adj:      1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Volume:      0  564    72    89  656     0     0    0     0    52    0    97
Reduct Vol:      0    0     0     0    0     0     0    0     0     0    0     0
FinalVolume:     0  564    72    89  656     0     0    0     0    52    0    97
------------|---------------||---------------||---------------||---------------|
Critical Gap Module:
Critical Gp:xxxxx xxxx xxxxx   4.1 xxxx xxxxx xxxxx xxxx xxxxx   6.4 xxxx   6.2
FollowUpTim:xxxxx xxxx xxxxx   2.2 xxxx xxxxx xxxxx xxxx xxxxx   3.5 xxxx   3.3
------------|---------------||---------------||---------------||---------------|
Capacity Module:
Cnflict Vol: xxxx xxxx xxxxx   636 xxxx xxxxx  xxxx xxxx xxxxx  1398 xxxx   564
Potent Cap.: xxxx xxxx xxxxx   957 xxxx xxxxx  xxxx xxxx xxxxx   157 xxxx   529
Move Cap.:   xxxx xxxx xxxxx   957 xxxx xxxxx  xxxx xxxx xxxxx   146 xxxx   529
Volume/Cap:  xxxx xxxx  xxxx  0.09 xxxx  xxxx  xxxx xxxx  xxxx  0.36 xxxx  0.18
------------|---------------||---------------||---------------||---------------|
Level Of Service Module:
2Way95thQ:   xxxx xxxx xxxxx   0.3 xxxx xxxxx  xxxx xxxx xxxxx   1.5 xxxx   0.7
Control Del:xxxxx xxxx xxxxx   9.1 xxxx xxxxx xxxxx xxxx xxxxx  42.9 xxxx  13.3
LOS by Move:    *    *     *     A    *     *     *    *     *     E    *     B
Movement:      LT - LTR - RT    LT - LTR - RT    LT - LTR - RT    LT - LTR - RT
Shared Cap.: xxxx xxxx xxxxx  xxxx xxxx xxxxx  xxxx xxxx xxxxx  xxxx xxxx xxxxx
SharedQueue:xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx
Shrd ConDel:xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx
Shared LOS:     *    *     *     *    *     *     *    *     *     *    *     *
ApproachDel:    xxxxxx           xxxxxx            xxxxxx             23.6
ApproachLOS:         *                *                 *                C
********************************************************************************
Note: Queue reported is the number of cars per lane.
********************************************************************************
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                     Level Of Service Computation Report
           2000 HCM Unsignalized Method (Base Volume Alternative)
********************************************************************************
Intersection #6 6
********************************************************************************
Average Delay (sec/veh):      0.0       Worst Case Level Of Service: A[  0.0]
********************************************************************************
Street Name:     PALOS VERDES DRIVE SOUTH       POINT VIEW INTERNAL DRIVEWAY
Approach:      North Bound      South Bound      East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:       Uncontrolled     Uncontrolled      Stop Sign        Stop Sign
Rights:           Include          Include          Include          Include
Lanes:        0  0  2  0  0    0  0  2  0  0    0  0  0  0  0    0  0  1! 0  0
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:       0  605     0     0  670     0     0    0     0     0    0     0
Growth Adj:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Initial Bse:    0  605     0     0  670     0     0    0     0     0    0     0
User Adj:    1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Volume:     0  605     0     0  670     0     0    0     0     0    0     0
Reduct Vol:     0    0     0     0    0     0     0    0     0     0    0     0
FinalVolume:    0  605     0     0  670     0     0    0     0     0    0     0
------------|---------------||---------------||---------------||---------------|
Critical Gap Module:
Critical Gp:xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx   6.8  6.5   6.9
FollowUpTim:xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx   3.5  4.0   3.3
------------|---------------||---------------||---------------||---------------|
Capacity Module:
Cnflict Vol: xxxx xxxx xxxxx  xxxx xxxx xxxxx  xxxx xxxx xxxxx   940 1275   303
Potent Cap.: xxxx xxxx xxxxx  xxxx xxxx xxxxx  xxxx xxxx xxxxx   266  168   700
Move Cap.:   xxxx xxxx xxxxx  xxxx xxxx xxxxx  xxxx xxxx xxxxx   266  168   700
Volume/Cap:  xxxx xxxx  xxxx  xxxx xxxx  xxxx  xxxx xxxx  xxxx  0.00 0.00  0.00
------------|---------------||---------------||---------------||---------------|
Level Of Service Module:
2Way95thQ:   xxxx xxxx xxxxx  xxxx xxxx xxxxx  xxxx xxxx xxxxx  xxxx xxxx xxxxx
Control Del:xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx
LOS by Move:    *    *     *     *    *     *     *    *     *     *    *     *
Movement:     LT - LTR - RT    LT - LTR - RT    LT - LTR - RT    LT - LTR - RT
Shared Cap.: xxxx xxxx xxxxx  xxxx xxxx xxxxx  xxxx xxxx xxxxx  xxxx    0 xxxxx
SharedQueue:xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx
Shrd ConDel:xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx
Shared LOS:     *    *     *     *    *     *     *    *     *     *    *     *
ApproachDel:     xxxxxx           xxxxxx           xxxxxx           xxxxxx
ApproachLOS:        *                *                *                *
********************************************************************************
Note: Queue reported is the number of cars per lane.
********************************************************************************
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Level Of Service Computation Report

2000 HCM Unsignalized Method (Base Volume Alternative)

Intersection #1 1

Average Delay (sec/veh): 1.5 Worst Case Level Of Service: C[20.1]

Street Name:	VIA RIVERA						HAWTHORNE BLVD					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Uncontrolled			Uncontrolled		
Rights:	Include			Include			Include			Include		
Lanes:	0 0	1!	0 0	0 0	1!	0 0	1 0	1	1 0	1 0	2	0 1
Volume Module:												
Base Vol:	1	0	3	48	0	25	25	500	2	15	544	64
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	1	0	3	48	0	25	25	500	2	15	544	64
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	1	0	3	48	0	25	25	500	2	15	544	64
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
FinalVolume:	1	0	3	48	0	25	25	500	2	15	544	64
Critical Gap Module:												
Critical Gp:	7.5	6.5	6.9	7.5	6.5	6.9	4.1	xxxx	xxxxx	4.1	xxxx	xxxxx
FollowUpTim:	3.5	4.0	3.3	3.5	4.0	3.3	2.2	xxxx	xxxxx	2.2	xxxx	xxxxx
Capacity Module:												
Cnflict Vol:	853	1189	251	874	1126	272	608	xxxx	xxxxx	502	xxxx	xxxxx
Potent Cap.:	256	190	755	247	207	732	980	xxxx	xxxxx	1073	xxxx	xxxxx
Move Cap.:	240	182	755	239	198	732	980	xxxx	xxxxx	1073	xxxx	xxxxx
Volume/Cap:	0.00	0.00	0.00	0.20	0.00	0.03	0.03	xxxx	xxxx	0.01	xxxx	xxxx
Level Of Service Module:												
2Way95thQ:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	0.1	xxxx	xxxxx	0.0	xxxx	xxxxx
Control Del:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	8.8	xxxx	xxxxx	8.4	xxxx	xxxxx
LOS by Move:	*	*	*	*	*	*	A	*	*	A	*	*
Movement:	LT	LTR	RT	LT	LTR	RT	LT	LTR	RT	LT	LTR	RT
Shared Cap.:	xxxx	491	xxxxx	xxxx	310	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
SharedQueue:	xxxxx	0.0	xxxxx	xxxxx	0.9	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shrd ConDel:	xxxxx	12.4	xxxxx	xxxxx	20.1	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shared LOS:	*	B	*	*	C	*	*	*	*	*	*	*
ApproachDel:		12.4			20.1			xxxxxx			xxxxxx	
ApproachLOS:		B			C			*			*	

Note: Queue reported is the number of cars per lane.

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                      Level Of Service Computation Report
            2000 HCM Unsignalized Method (Base Volume Alternative)
********************************************************************************
Intersection #3 3
********************************************************************************
Average Delay (sec/veh):      0.2       Worst Case Level Of Service: B[ 12.6]
********************************************************************************
Street Name:     PALOS VERDES DRIVE SOUTH                     SEACOVE DR
Approach:      North Bound      South Bound      East Bound       West Bound
Movement:     L  -  T  -  R   L  -  T  -  R   L  -  T  -  R   L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:       Uncontrolled     Uncontrolled      Stop Sign        Stop Sign
Rights:           Include          Include          Include          Include
Lanes:        1  0  1  1  0   1  0  1  1  0   0  0  1! 0  0   0  0  0  0  0
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:      10  540     0     3  513     3     4     0     6     0     0     0
Growth Adj:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Initial Bse:   10  540     0     3  513     3     4     0     6     0     0     0
User Adj:    1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Volume:    10  540     0     3  513     3     4     0     6     0     0     0
Reduct Vol:     0    0     0     0    0     0     0     0     0     0     0     0
FinalVolume:   10  540     0     3  513     3     4     0     6     0     0     0
------------|---------------||---------------||---------------||---------------|
Critical Gap Module:
Critical Gp:  4.1 xxxx xxxxx   4.1 xxxx xxxxx   6.8  6.5   6.9 xxxxx xxxx xxxxx
FollowUpTim:  2.2 xxxx xxxxx   2.2 xxxx xxxxx   3.5  4.0   3.3 xxxxx xxxx xxxxx
------------|---------------||---------------||---------------||---------------|
Capacity Module:
Cnflict Vol:  516 xxxx xxxxx   540 xxxx xxxxx   811 1081   258  xxxx xxxx xxxxx
Potent Cap.: 1060 xxxx xxxxx  1039 xxxx xxxxx   322  220   747  xxxx xxxx xxxxx
Move Cap.:   1060 xxxx xxxxx  1039 xxxx xxxxx   319  217   747  xxxx xxxx xxxxx
Volume/Cap:  0.01 xxxx  xxxx  0.00 xxxx  xxxx  0.01 0.00  0.01  xxxx xxxx  xxxx
------------|---------------||---------------||---------------||---------------|
Level Of Service Module:
2Way95thQ:    0.0 xxxx xxxxx   0.0 xxxx xxxxx  xxxx xxxx xxxxx  xxxx xxxx xxxxx
Control Del:  8.4 xxxx xxxxx   8.5 xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx
LOS by Move:    A    *     *     A    *     *     *    *     *     *    *     *
Movement:     LT - LTR - RT    LT - LTR - RT    LT - LTR - RT    LT - LTR - RT
Shared Cap.: xxxx xxxx xxxxx  xxxx xxxx xxxxx  xxxx  486 xxxxx  xxxx xxxx xxxxx
SharedQueue:xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx  0.1 xxxxx xxxxx xxxx xxxxx
Shrd ConDel:xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx 12.6 xxxxx xxxxx xxxx xxxxx
Shared LOS:     *    *     *     *    *     *     *    B     *     *    *     *
ApproachDel:     xxxxxx           xxxxxx             12.6            xxxxxx
ApproachLOS:        *                *                 B                *
********************************************************************************
Note: Queue reported is the number of cars per lane.
********************************************************************************
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                      Level Of Service Computation Report
            2000 HCM Unsignalized Method (Base Volume Alternative)
********************************************************************************
Intersection #4 4
********************************************************************************
Average Delay (sec/veh):      0.7       Worst Case Level Of Service: B[ 13.9]
********************************************************************************
Street Name:     PALOS VERDES DRIVE SOUTH         WAYFARER'S CHAPEL DRIVE
Approach:      North Bound      South Bound      East Bound       West Bound
Movement:     L  -  T  -  R   L  -  T  -  R   L  -  T  -  R   L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:       Uncontrolled     Uncontrolled      Stop Sign        Stop Sign
Rights:           Include          Include          Include          Include
Lanes:        0  0  2  0  1   1  0  2  0  0   0  0  0  0  0   0  0  1! 0  0
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:       0  546    31    17  507     0     0    0     0    20    0    24
Growth Adj:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Initial Bse:    0  546    31    17  507     0     0    0     0    20    0    24
User Adj:    1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Volume:     0  546    31    17  507     0     0    0     0    20    0    24
Reduct Vol:     0    0     0     0    0     0     0    0     0     0    0     0
FinalVolume:    0  546    31    17  507     0     0    0     0    20    0    24
------------|---------------||---------------||---------------||---------------|
Critical Gap Module:
Critical Gp:xxxxx xxxx xxxxx   4.1 xxxx xxxxx xxxxx xxxx xxxxx   6.8  6.5   6.9
FollowUpTim:xxxxx xxxx xxxxx   2.2 xxxx xxxxx xxxxx xxxx xxxxx   3.5  4.0   3.3
------------|---------------||---------------||---------------||---------------|
Capacity Module:
Cnflict Vol: xxxx xxxx xxxxx   577 xxxx xxxxx  xxxx xxxx xxxxx   834 1087   273
Potent Cap.: xxxx xxxx xxxxx  1006 xxxx xxxxx  xxxx xxxx xxxxx   311  218   731
Move Cap.:   xxxx xxxx xxxxx  1006 xxxx xxxxx  xxxx xxxx xxxxx   307  214   731
Volume/Cap:  xxxx xxxx  xxxx  0.02 xxxx  xxxx  xxxx xxxx  xxxx  0.07 0.00  0.03
------------|---------------||---------------||---------------||---------------|
Level Of Service Module:
2Way95thQ:   xxxx xxxx xxxxx   0.1 xxxx xxxxx  xxxx xxxx xxxxx  xxxx xxxx xxxxx
Control Del:xxxxx xxxx xxxxx   8.6 xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx
LOS by Move:    *    *     *     A    *     *     *    *     *     *    *     *
Movement:     LT - LTR - RT    LT - LTR - RT    LT - LTR - RT    LT - LTR - RT
Shared Cap.: xxxx xxxx xxxxx  xxxx xxxx xxxxx  xxxx xxxx xxxxx  xxxx  449 xxxxx
SharedQueue:xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx  0.3 xxxxx
Shrd ConDel:xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx 13.9 xxxxx
Shared LOS:     *    *     *     *    *     *     *    *     *     *    B     *
ApproachDel:     xxxxxx           xxxxxx           xxxxxx            13.9
ApproachLOS:        *                *                *                B
********************************************************************************
Note: Queue reported is the number of cars per lane.
********************************************************************************
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--------------------------------------------------------------------------------
--------------------------------------------------------------------------------
                     Level Of Service Computation Report
            2000 HCM Unsignalized Method (Base Volume Alternative)
********************************************************************************
Intersection #5 5
********************************************************************************
Average Delay (sec/veh):      2.1       Worst Case Level Of Service: C[ 17.5]
********************************************************************************
Street Name:     PALOS VERDES DRIVE SOUTH         PALOS VERDES DRIVE EAST
Approach:      North Bound      South Bound      East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:       Uncontrolled     Uncontrolled      Stop Sign        Stop Sign
Rights:           Include          Include          Include          Include
Lanes:        0  0  1  0  1    1  0  1  0  0    0  0  0  0  0    1  0  0  0  1
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:       0  562    51    57  519     0     0    0     0    39    0    89
Growth Adj:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Initial Bse:    0  562    51    57  519     0     0    0     0    39    0    89
User Adj:    1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Volume:     0  562    51    57  519     0     0    0     0    39    0    89
Reduct Vol:     0    0     0     0    0     0     0    0     0     0    0     0
FinalVolume:    0  562    51    57  519     0     0    0     0    39    0    89
------------|---------------||---------------||---------------||---------------|
Critical Gap Module:
Critical Gp:xxxxx xxxx xxxxx   4.1 xxxx xxxxx xxxxx xxxx xxxxx   6.4 xxxx   6.2
FollowUpTim:xxxxx xxxx xxxxx   2.2 xxxx xxxxx xxxxx xxxx xxxxx   3.5 xxxx   3.3
------------|---------------||---------------||---------------||---------------|
Capacity Module:
Cnflict Vol: xxxx xxxx xxxxx   613 xxxx xxxxx  xxxx xxxx xxxxx  1195 xxxx   562
Potent Cap.: xxxx xxxx xxxxx   976 xxxx xxxxx  xxxx xxxx xxxxx   208 xxxx   530
Move Cap.:   xxxx xxxx xxxxx   976 xxxx xxxxx  xxxx xxxx xxxxx   199 xxxx   530
Volume/Cap:  xxxx xxxx  xxxx  0.06 xxxx  xxxx  xxxx xxxx  xxxx  0.20 xxxx  0.17
------------|---------------||---------------||---------------||---------------|
Level Of Service Module:
2Way95thQ:   xxxx xxxx xxxxx   0.2 xxxx xxxxx  xxxx xxxx xxxxx   0.7 xxxx   0.6
Control Del:xxxxx xxxx xxxxx   8.9 xxxx xxxxx xxxxx xxxx xxxxx  27.5 xxxx  13.2
LOS by Move:    *    *     *     A    *     *     *    *     *     D    *     B
Movement:     LT - LTR - RT    LT - LTR - RT    LT - LTR - RT    LT - LTR - RT
Shared Cap.: xxxx xxxx xxxxx  xxxx xxxx xxxxx  xxxx xxxx xxxxx  xxxx xxxx xxxxx
SharedQueue:xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx
Shrd ConDel:xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx
Shared LOS:     *    *     *     *    *     *     *    *     *     *    *     *
ApproachDel:    xxxxxx           xxxxxx           xxxxxx             17.5
ApproachLOS:         *                *                *                C
********************************************************************************
Note: Queue reported is the number of cars per lane.
********************************************************************************
```

```
--------------------------------------------------------------------------------
--------------------------------------------------------------------------------
                     Level Of Service Computation Report
           2000 HCM Unsignalized Method (Base Volume Alternative)
********************************************************************************
Intersection #6 6
********************************************************************************
Average Delay (sec/veh):      0.0       Worst Case Level Of Service: A[  0.0]
********************************************************************************
Street Name:     PALOS VERDES DRIVE SOUTH       POINT VIEW INTERNAL DRIVEWAY
Approach:      North Bound      South Bound      East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:       Uncontrolled     Uncontrolled      Stop Sign        Stop Sign
Rights:           Include          Include          Include          Include
Lanes:        0  0  2  0  0    0  0  2  0  0    0  0  0  0  0    0  0  1! 0  0
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:       0  577     0      0  538     0      0    0     0      0    0     0
Growth Adj:  1.00 1.00  1.00   1.00 1.00  1.00   1.00 1.00  1.00   1.00 1.00  1.00
Initial Bse:    0  577     0      0  538     0      0    0     0      0    0     0
User Adj:    1.00 1.00  1.00   1.00 1.00  1.00   1.00 1.00  1.00   1.00 1.00  1.00
PHF Adj:     1.00 1.00  1.00   1.00 1.00  1.00   1.00 1.00  1.00   1.00 1.00  1.00
PHF Volume:     0  577     0      0  538     0      0    0     0      0    0     0
Reduct Vol:     0    0     0      0    0     0      0    0     0      0    0     0
FinalVolume:    0  577     0      0  538     0      0    0     0      0    0     0
------------|---------------||---------------||---------------||---------------|
Critical Gap Module:
Critical Gp:xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx   6.8  6.5   6.9
FollowUpTim:xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx   3.5  4.0   3.3
------------|---------------||---------------||---------------||---------------|
Capacity Module:
Cnflict Vol: xxxx xxxx xxxxx  xxxx xxxx xxxxx  xxxx xxxx xxxxx   846 1115   289
Potent Cap.: xxxx xxxx xxxxx  xxxx xxxx xxxxx  xxxx xxxx xxxxx   305  210   714
Move Cap.:   xxxx xxxx xxxxx  xxxx xxxx xxxxx  xxxx xxxx xxxxx   305  210   714
Volume/Cap:  xxxx xxxx  xxxx  xxxx xxxx  xxxx  xxxx xxxx  xxxx  0.00 0.00  0.00
------------|---------------||---------------||---------------||---------------|
Level Of Service Module:
2Way95thQ:   xxxx xxxx xxxxx  xxxx xxxx xxxxx  xxxx xxxx xxxxx  xxxx xxxx xxxxx
Control Del:xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx
LOS by Move:    *    *     *      *    *     *      *    *     *      *    *     *
Movement:     LT - LTR - RT    LT - LTR - RT    LT - LTR - RT    LT - LTR - RT
Shared Cap.: xxxx xxxx xxxxx  xxxx xxxx xxxxx  xxxx xxxx xxxxx  xxxx    0 xxxxx
SharedQueue:xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx
Shrd ConDel:xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx
Shared LOS:     *    *     *      *    *     *      *    *     *      *    *     *
ApproachDel:    xxxxxx           xxxxxx           xxxxxx           xxxxxx
ApproachLOS:       *                *                *                *
********************************************************************************
Note: Queue reported is the number of cars per lane.
********************************************************************************
```

Future (2012) Plus Project Conditions

Project Title: **Pointview Master Plan**
Intersection: **Palos Verdes Drive South & Point View Internal Driveway**
Description: **FUTURE (2012) WITH PROJECT CONDITIONS**

Date/Time: **FRIDAY PM PEAK HOUR (4:30-5:30)**

Thru Lane:	1600 vph	N-S Split Phase :	N
Left Lane:	1600 vph	E-W Split Phase :	N
Double Lt Penalty:	20 %	Lost Time (% of cycle) :	10
ITS:	0 %	V/C Round Off (decs.) :	3
OLA Movements :			
FF Movements:			

APPROACH	MVMT	LANES	VOLUME	CAPACITY	V/C	ICU ANALYSIS	
Southbound	RT	0.00	0	0	0.000	N-S(1):	0.220
	TH	2.00	715	3,200	0.223 *	N-S(2):	0.223 *
	LT	0.00	0	0	0.000	E-W(1):	0.000
Westbound	RT	0.00	4	0	0.000	E-W(2):	0.003 *
	TH	1.00	0	1,600	0.003 *		
	LT	0.00	0	0	0.000	V/C:	0.226
Northbound	RT	0.00	100	0	0.000	Lost Time:	0.100
	TH	2.00	605	3,200	0.220	ITS:	0.000
	LT	0.00	0	0	0.000 *		
Eastbound	RT	0.00	0	0	0.000	ICU:	0.326
	TH	0.00	0	0	0.000		
	LT	0.00	0	0	0.000 *	LOS:	A

Date/Time: **SATURDAY MIDDAY PEAK HOUR (12:15-1:15)**

APPROACH	MVMT	LANES	VOLUME	CAPACITY	V/C	ICU ANALYSIS	
Southbound	RT	0.00	0	0	0.000	N-S(1):	0.182 *
	TH	2.00	541	3,200	0.169	N-S(2):	0.169
	LT	0.00	0	0	0.000 *	E-W(1):	0.000
Westbound	RT	0.00	102	0	0.000	E-W(2):	0.064 *
	TH	1.00	0	1,600	0.064 *		
	LT	0.00	0	0	0.000	V/C:	0.246
Northbound	RT	0.00	5	0	0.000	Lost Time:	0.100
	TH	2.00	577	3,200	0.182 *	ITS:	0.000
	LT	0.00	0	0	0.000		
Eastbound	RT	0.00	0	0	0.000	ICU:	0.346
	TH	0.00	0	0	0.000		
	LT	0.00	0	0	0.000 *	LOS:	A

* - Denotes critical movement

Project Title: **Pointview Master Plan**
Intersection: **Palos Verdes Drive South & Palos Verdes Drive East**
Description: **FUTURE (2012) WITH PROJECT CONDITIONS**

Date/Time: **FRIDAY PM PEAK HOUR (4:30-5:30)**

Thru Lane:	1600 vph		N-S Split Phase :	N
Left Lane:	1600 vph		E-W Split Phase :	N
Double Lt Penalty:	20 %		Lost Time (% of cycle) :	10
ITS:	0 %		V/C Round Off (decs.) :	3
OLA Movements :				
FF Movements:				

APPROACH	MVMT	LANES	VOLUME	CAPACITY	V/C	ICU ANALYSIS	
Southbound	RT	0.00	0	0	0.000	N-S(1):	0.437 *
	TH	1.00	658	1,600	0.411	N-S(2):	0.411
	LT	1.00	88	1,600	0.055 *	E-W(1):	0.033
Westbound	RT	1.00	102	1,600	0.036 *	E-W(2):	0.036 *
	TH	0.00	0	0	0.000		
	LT	1.00	52	1,600	0.033	V/C:	0.473
Northbound	RT	1.00	71	1,600	0.044	Lost Time:	0.100
	TH	1.00	611	1,600	0.382 *	ITS:	0.000
	LT	0.00	0	0	0.000		
Eastbound	RT	0.00	0	0	0.000	ICU:	0.573
	TH	0.00	0	0	0.000		
	LT	0.00	0	0	0.000 *	LOS:	A

Date/Time: **SATURDAY MIDDAY PEAK HOUR (12:15-1:15)**

APPROACH	MVMT	LANES	VOLUME	CAPACITY	V/C	ICU ANALYSIS	
Southbound	RT	0.00	0	0	0.000	N-S(1):	0.392 *
	TH	1.00	568	1,600	0.355	N-S(2):	0.355
	LT	1.00	63	1,600	0.039 *	E-W(1):	0.024
Westbound	RT	1.00	89	1,600	0.036 *	E-W(2):	0.036 *
	TH	0.00	0	0	0.000		
	LT	1.00	39	1,600	0.024	V/C:	0.428
Northbound	RT	1.00	51	1,600	0.032	Lost Time:	0.100
	TH	1.00	564	1,600	0.353 *	ITS:	0.000
	LT	0.00	0	0	0.000		
Eastbound	RT	0.00	0	0	0.000	ICU:	0.528
	TH	0.00	0	0	0.000		
	LT	0.00	0	0	0.000 *	LOS:	A

* - Denotes critical movement

Project Title: Pointview Master Plan
Intersection: Palos Verdes Drive South & Wayfarer's Chapel Drive
Description: FUTURE (2012) WITH PROJECT CONDITIONS

Date/Time: FRIDAY PM PEAK HOUR (4:30-5:30)

Thru Lane:	1600 vph	N-S Split Phase :	N
Left Lane:	1600 vph	E-W Split Phase :	N
Double Lt Penalty:	20 %	Lost Time (% of cycle) :	10
ITS:	0 %	V/C Round Off (decs.) :	3
OLA Movements :			
FF Movements:			

APPROACH	MVMT	LANES	VOLUME	CAPACITY	V/C		ICU ANALYSIS		
Southbound	RT	0.00	0	0	0.000		N-S(1):	0.244	*
	TH	2.00	651	3,200	0.203		N-S(2):	0.203	
	LT	1.00	74	1,600	0.046	*	E-W(1):	0.006	
Westbound	RT	0.00	16	0	0.000		E-W(2):	0.016	*
	TH	1.00	0	1,600	0.016	*			
	LT	0.00	10	1,600	0.006		V/C:	0.260	
Northbound	RT	1.00	19	1,600	0.012		Lost Time:	0.100	
	TH	2.00	632	3,200	0.198	*	ITS:	0.000	
	LT	0.00	0	0	0.000				
Eastbound	RT	0.00	0	0	0.000		ICU:	0.360	
	TH	0.00	0	0	0.000				
	LT	0.00	0	0	0.000	*	LOS:	A	

Date/Time: SATURDAY MIDDAY PEAK HOUR (12:15-1:15)

APPROACH	MVMT	LANES	VOLUME	CAPACITY	V/C		ICU ANALYSIS		
Southbound	RT	0.00	0	0	0.000		N-S(1):	0.183	*
	TH	2.00	562	3,200	0.176		N-S(2):	0.176	
	LT	1.00	19	1,600	0.012	*	E-W(1):	0.013	
Westbound	RT	0.00	24	0	0.000		E-W(2):	0.028	*
	TH	1.00	0	1,600	0.028	*			
	LT	0.00	20	1,600	0.013		V/C:	0.211	
Northbound	RT	1.00	31	1,600	0.019		Lost Time:	0.100	
	TH	2.00	548	3,200	0.171	*	ITS:	0.000	
	LT	0.00	0	0	0.000				
Eastbound	RT	0.00	0	0	0.000		ICU:	0.311	
	TH	0.00	0	0	0.000				
	LT	0.00	0	0	0.000	*	LOS:	A	

* - Denotes critical movement

Printed: 9/7/2011
Revised: 2/4/00

2454 K-ICU_2011-09-07.xls

Project Title: Pointview Master Plan
Intersection: Palos Verdes Drive South & Seacove Drive
Description: FUTURE (2012) WITH PROJECT CONDITIONS

Date/Time: FRIDAY PM PEAK HOUR (4:30-5:30)

Thru Lane:	1600 vph	N-S Split Phase :	N
Left Lane:	1600 vph	E-W Split Phase :	N
Double Lt Penalty:	20 %	Lost Time (% of cycle) :	10
ITS:	0 %	V/C Round Off (decs.) :	3
OLA Movements :			
FF Movements:			

APPROACH	MVMT	LANES	VOLUME	CAPACITY	V/C	ICU ANALYSIS	
Southbound	RT	0.00	5	0	0.000	N-S(1):	0.186
	TH	2.00	702	3,200	0.221 *	N-S(2):	0.232 *
	LT	1.00	6	1,600	0.004	E-W(1):	0.004 *
Westbound	RT	0.00	0	0	0.000	E-W(2):	0.001
	TH	0.00	0	0	0.000		
	LT	0.00	0	0	0.000 *	V/C:	0.236
Northbound	RT	0.00	0	0	0.000	Lost Time:	0.100
	TH	2.00	581	3,200	0.182	ITS:	0.000
	LT	1.00	17	1,600	0.011 *		
Eastbound	RT	0.00	5	0	0.000	ICU:	0.336
	TH	1.00	0	1,600	0.004 *		
	LT	0.00	1	1,600	0.001	LOS:	A

Date/Time: SATURDAY MIDDAY PEAK HOUR (12:15-1:15)

APPROACH	MVMT	LANES	VOLUME	CAPACITY	V/C	ICU ANALYSIS	
Southbound	RT	0.00	3	0	0.000	N-S(1):	0.185
	TH	2.00	516	3,200	0.162 *	N-S(2):	0.203 *
	LT	1.00	3	1,600	0.002	E-W(1):	0.006 *
Westbound	RT	0.00	0	0	0.000	E-W(2):	0.003
	TH	0.00	0	0	0.000		
	LT	0.00	0	0	0.000 *	V/C:	0.209
Northbound	RT	0.00	0	0	0.000	Lost Time:	0.100
	TH	2.00	587	3,200	0.183	ITS:	0.000
	LT	1.00	65	1,600	0.041 *		
Eastbound	RT	0.00	6	0	0.000	ICU:	0.309
	TH	1.00	0	1,600	0.006 *		
	LT	0.00	4	1,600	0.003	LOS:	A

* - Denotes critical movement

Project Title: **Pointview Master Plan**
Intersection: **Palos Verdes Drive West & Hawthorne Blvd/Via Vicente**
Description: **FUTURE (2012) WITH PROJECT CONDITIONS**

Date/Time: **FRIDAY PM PEAK HOUR (4:30-5:30)**

Thru Lane:	1600 vph	N-S Split Phase :	N
Left Lane:	1600 vph	E-W Split Phase :	N
Double Lt Penalty:	20 %	Lost Time (% of cycle) :	10
ITS:	0 %	V/C Round Off (decs.) :	3
OLA Movements :			
FF Movements:			

APPROACH	MVMT	LANES	VOLUME	CAPACITY	V/C	ICU ANALYSIS	
Southbound	RT	0.00	8	0	0.000	N-S(1):	0.246 *
	TH	2.00	419	3,200	0.133	N-S(2):	0.154
	LT	1.00	177	1,600	0.111 *	E-W(1):	0.162 *
Westbound	RT	1.00	179	1,600	0.057	E-W(2):	0.123
	TH	0.12	24	197	0.122		
	LT	1.88	365	2,402	0.152 *	V/C:	0.408
Northbound	RT	1.00	297	1,600	0.110	Lost Time:	0.100
	TH	2.00	433	3,200	0.135 *	ITS:	0.000
	LT	1.00	33	1,600	0.021		
Eastbound	RT	0.00	11	0	0.000	ICU:	0.508
	TH	2.00	18	3,200	0.010 *		
	LT	0.00	2	1,600	0.001	LOS:	A

Date/Time: **SATURDAY MIDDAY PEAK HOUR (12:15-1:15)**

APPROACH	MVMT	LANES	VOLUME	CAPACITY	V/C	ICU ANALYSIS	
Southbound	RT	0.00	6	0	0.000	N-S(1):	0.215 *
	TH	2.00	314	3,200	0.100	N-S(2):	0.119
	LT	1.00	166	1,600	0.104 *	E-W(1):	0.147 *
Westbound	RT	1.00	142	1,600	0.037	E-W(2):	0.115
	TH	0.05	9	81	0.111		
	LT	1.95	345	2,495	0.138 *	V/C:	0.362
Northbound	RT	1.00	214	1,600	0.065	Lost Time:	0.100
	TH	2.00	354	3,200	0.111 *	ITS:	0.000
	LT	1.00	30	1,600	0.019		
Eastbound	RT	0.00	7	0	0.000	ICU:	0.462
	TH	2.00	17	3,200	0.009 *		
	LT	0.00	6	1,600	0.004	LOS:	A

* - Denotes critical movement

Project Title: **Pointview Master Plan**
Intersection: **Via Rivera & Hawthorne Boulevard**
Description: **FUTURE (2012) WITH PROJECT CONDITIONS**

Date/Time: **FRIDAY PM PEAK HOUR (4:30-5:30)**

Thru Lane:	1600 vph		N-S Split Phase :	N
Left Lane:	1600 vph		E-W Split Phase :	N
Double Lt Penalty:	20 %		Lost Time (% of cycle) :	10
ITS:	0 %		V/C Round Off (decs.) :	3
OLA Movements :				
FF Movements:				

APPROACH	MVMT	LANES	VOLUME	CAPACITY	V/C	ICU ANALYSIS	
Southbound	RT	0.00	28	0	0.000	N-S(1):	0.044
	TH	1.00	0	1,600	0.057 *	N-S(2):	0.058 *
	LT	0.00	63	1,600	0.039	E-W(1):	0.176
Westbound	RT	1.00	68	1,600	0.023	E-W(2):	0.228 *
	TH	2.00	648	3,200	0.203 *		
	LT	1.00	11	1,600	0.007	V/C:	0.286
Northbound	RT	0.00	7	0	0.000	Lost Time:	0.100
	TH	1.00	0	1,600	0.005	ITS:	0.000
	LT	0.00	1	1,600	0.001 *		
Eastbound	RT	0.00	1	0	0.000	ICU:	0.386
	TH	2.00	539	3,200	0.169		
	LT	1.00	40	1,600	0.025 *	LOS:	A

Date/Time: **SATURDAY MIDDAY PEAK HOUR (12:15-1:15)**

APPROACH	MVMT	LANES	VOLUME	CAPACITY	V/C	ICU ANALYSIS	
Southbound	RT	0.00	25	0	0.000	N-S(1):	0.033
	TH	1.00	0	1,600	0.046 *	N-S(2):	0.047 *
	LT	0.00	48	1,600	0.030	E-W(1):	0.172
Westbound	RT	1.00	64	1,600	0.025	E-W(2):	0.186 *
	TH	2.00	545	3,200	0.170 *		
	LT	1.00	15	1,600	0.009	V/C:	0.233
Northbound	RT	0.00	3	0	0.000	Lost Time:	0.100
	TH	1.00	0	1,600	0.003	ITS:	0.000
	LT	0.00	1	1,600	0.001 *		
Eastbound	RT	0.00	2	0	0.000	ICU:	0.333
	TH	2.00	520	3,200	0.163		
	LT	1.00	25	1,600	0.016 *	LOS:	A

* - Denotes critical movement

```
--------------------------------------------------------------------------------
--------------------------------------------------------------------------------
                  Level Of Service Computation Report
          2000 HCM Unsignalized Method (Base Volume Alternative)
********************************************************************************
Intersection #1 1
********************************************************************************
Average Delay (sec/veh):      2.3      Worst Case Level Of Service: D[ 29.3]
********************************************************************************
Street Name:              VIA RIVERA                      HAWTHORNE BLVD
Approach:       North Bound       South Bound       East Bound        West Bound
Movement:      L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:         Stop Sign         Stop Sign        Uncontrolled      Uncontrolled
Rights:            Include           Include           Include           Include
Lanes:         0  0  1! 0  0    0  0  1! 0  0    1  0  1  1  0    1  0  2  0  1
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:        1    0     7    63    0    28    40  539     1    11  648    68
Growth Adj:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Initial Bse:     1    0     7    63    0    28    40  539     1    11  648    68
User Adj:    1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Volume:      1    0     7    63    0    28    40  539     1    11  648    68
Reduct Vol:      0    0     0     0    0     0     0    0     0     0    0     0
FinalVolume:     1    0     7    63    0    28    40  539     1    11  648    68
------------|---------------||---------------||---------------||---------------|
Critical Gap Module:
Critical Gp:  7.5  6.5   6.9   7.5  6.5   6.9   4.1 xxxx xxxxx   4.1 xxxx xxxxx
FollowUpTim:  3.5  4.0   3.3   3.5  4.0   3.3   2.2 xxxx xxxxx   2.2 xxxx xxxxx
------------|---------------||---------------||---------------||---------------|
Capacity Module:
Cnflict Vol:  966 1358   270  1020 1290   324   716 xxxx xxxxx   540 xxxx xxxxx
Potent Cap.:  212  150   734   194  165   678   894 xxxx xxxxx  1039 xxxx xxxxx
Move Cap.:    195  142   734   184  156   678   894 xxxx xxxxx  1039 xxxx xxxxx
Volume/Cap:  0.01 0.00  0.01  0.34 0.00  0.04  0.04 xxxx  xxxx  0.01 xxxx  xxxx
------------|---------------||---------------||---------------||---------------|
Level Of Service Module:
2Way95thQ:   xxxx xxxx xxxxx  xxxx xxxx xxxxx   0.1 xxxx xxxxx   0.0 xxxx xxxxx
Control Del:xxxxx xxxx xxxxx xxxxx xxxx xxxxx   9.2 xxxx xxxxx   8.5 xxxx xxxxx
LOS by Move:    *    *     *     *    *     *     A    *     *     A    *     *
Movement:      LT - LTR - RT    LT - LTR - RT    LT - LTR - RT    LT - LTR - RT
Shared Cap.: xxxx  545 xxxxx  xxxx  237 xxxxx  xxxx xxxx xxxxx  xxxx xxxx xxxxx
SharedQueue:xxxxx  0.0 xxxxx xxxxx  1.7 xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx
Shrd ConDel:xxxxx 11.7 xxxxx xxxxx 29.3 xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx
Shared LOS:     *    B     *     *    D     *     *    *     *     *    *     *
ApproachDel:      11.7              29.3             xxxxxx            xxxxxx
ApproachLOS:         B                 D                 *                 *
********************************************************************************
Note: Queue reported is the number of cars per lane.
********************************************************************************
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                      Level Of Service Computation Report
            2000 HCM Unsignalized Method (Base Volume Alternative)
********************************************************************************
Intersection #3 3
********************************************************************************
Average Delay (sec/veh):      0.2       Worst Case Level Of Service: B[ 12.4]
********************************************************************************
Street Name:     PALOS VERDES DRIVE SOUTH                  SEACOVE DR
Approach:      North Bound      South Bound      East Bound       West Bound
Movement:     L  -  T  -  R   L  -  T  -  R   L  -  T  -  R   L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:       Uncontrolled     Uncontrolled      Stop Sign        Stop Sign
Rights:           Include          Include          Include          Include
Lanes:        1  0  1  1  0   1  0  1  1  0   0  0  1! 0  0   0  0  0  0  0
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:      17  581     0     6  702     5     1     0     5     0     0     0
Growth Adj:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Initial Bse:   17  581     0     6  702     5     1     0     5     0     0     0
User Adj:    1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Volume:    17  581     0     6  702     5     1     0     5     0     0     0
Reduct Vol:     0    0     0     0    0     0     0     0     0     0     0     0
FinalVolume:   17  581     0     6  702     5     1     0     5     0     0     0
------------|---------------||---------------||---------------||---------------|
Critical Gap Module:
Critical Gp:  4.1 xxxx xxxxx   4.1 xxxx xxxxx   6.8  6.5   6.9 xxxxx xxxx xxxxx
FollowUpTim:  2.2 xxxx xxxxx   2.2 xxxx xxxxx   3.5  4.0   3.3 xxxxx xxxx xxxxx
------------|---------------||---------------||---------------||---------------|
Capacity Module:
Cnflict Vol:  707 xxxx xxxxx   581 xxxx xxxxx  1041 1332   354  xxxx xxxx xxxxx
Potent Cap.:  901 xxxx xxxxx  1003 xxxx xxxxx   229  156   649  xxxx xxxx xxxxx
Move Cap.:    901 xxxx xxxxx  1003 xxxx xxxxx   225  152   649  xxxx xxxx xxxxx
Volume/Cap:  0.02 xxxx  xxxx  0.01 xxxx  xxxx  0.00 0.00  0.01  xxxx xxxx  xxxx
------------|---------------||---------------||---------------||---------------|
Level Of Service Module:
2Way95thQ:    0.1 xxxx xxxxx   0.0 xxxx xxxxx  xxxx xxxx xxxxx  xxxx xxxx xxxxx
Control Del:  9.1 xxxx xxxxx   8.6 xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx
LOS by Move:    A    *     *     A    *     *     *    *     *     *    *     *
Movement:     LT - LTR - RT    LT - LTR - RT    LT - LTR - RT    LT - LTR - RT
Shared Cap.: xxxx xxxx xxxxx  xxxx xxxx xxxxx  xxxx  493 xxxxx  xxxx xxxx xxxxx
SharedQueue:xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx  0.0 xxxxx xxxxx xxxx xxxxx
Shrd ConDel:xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx 12.4 xxxxx xxxxx xxxx xxxxx
Shared LOS:     *    *     *     *    *     *     *    B     *     *    *     *
ApproachDel:     xxxxxx           xxxxxx             12.4            xxxxxx
ApproachLOS:        *                *                 B                *
********************************************************************************
Note: Queue reported is the number of cars per lane.
********************************************************************************
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-------------------------------------------------------------------------------
-------------------------------------------------------------------------------
                      Level Of Service Computation Report
            2000 HCM Unsignalized Method (Base Volume Alternative)
*******************************************************************************
Intersection #4 4
*******************************************************************************
Average Delay (sec/veh):      0.8       Worst Case Level Of Service: C[ 16.1]
*******************************************************************************
Street Name:     PALOS VERDES DRIVE SOUTH         WAYFARER'S CHAPEL DRIVE
Approach:      North Bound      South Bound      East Bound       West Bound
Movement:     L  -  T  -  R   L  -  T  -  R   L  -  T  -  R   L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:       Uncontrolled     Uncontrolled      Stop Sign        Stop Sign
Rights:           Include          Include          Include          Include
Lanes:        0  0  2  0  1   1  0  2  0  0   0  0  0  0  0   0  0  1! 0  0
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:       0  632    19    74  651     0     0    0     0    10    0    16
Growth Adj:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Initial Bse:    0  632    19    74  651     0     0    0     0    10    0    16
User Adj:    1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Volume:     0  632    19    74  651     0     0    0     0    10    0    16
Reduct Vol:     0    0     0     0    0     0     0    0     0     0    0     0
FinalVolume:    0  632    19    74  651     0     0    0     0    10    0    16
------------|---------------||---------------||---------------||---------------|
Critical Gap Module:
Critical Gp:xxxxx xxxx xxxxx   4.1 xxxx xxxxx xxxxx xxxx xxxxx   6.8  6.5   6.9
FollowUpTim:xxxxx xxxx xxxxx   2.2 xxxx xxxxx xxxxx xxxx xxxxx   3.5  4.0   3.3
------------|---------------||---------------||---------------||---------------|
Capacity Module:
Cnflict Vol: xxxx xxxx xxxxx   651 xxxx xxxxx  xxxx xxxx xxxxx  1106 1431   316
Potent Cap.: xxxx xxxx xxxxx   945 xxxx xxxxx  xxxx xxxx xxxxx   208  136   686
Move Cap.:   xxxx xxxx xxxxx   945 xxxx xxxxx  xxxx xxxx xxxxx   196  125   686
Volume/Cap:  xxxx xxxx  xxxx  0.08 xxxx  xxxx  xxxx xxxx  xxxx  0.05 0.00  0.02
------------|---------------||---------------||---------------||---------------|
Level Of Service Module:
2Way95thQ:   xxxx xxxx xxxxx   0.3 xxxx xxxxx  xxxx xxxx xxxxx  xxxx xxxx xxxxx
Control Del:xxxxx xxxx xxxxx   9.1 xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx
LOS by Move:    *    *     *     A    *     *     *    *     *     *    *     *
Movement:     LT - LTR - RT    LT - LTR - RT    LT - LTR - RT    LT - LTR - RT
Shared Cap.: xxxx xxxx xxxxx  xxxx xxxx xxxxx  xxxx xxxx xxxxx  xxxx  349 xxxxx
SharedQueue:xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx  0.2 xxxxx
Shrd ConDel:xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx 16.1 xxxxx
Shared LOS:     *    *     *     *    *     *     *    *     *     *    C     *
ApproachDel:     xxxxxx           xxxxxx           xxxxxx            16.1
ApproachLOS:        *                *                *                C
*******************************************************************************
Note: Queue reported is the number of cars per lane.
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                       Level Of Service Computation Report
              2000 HCM Unsignalized Method (Base Volume Alternative)
********************************************************************************
Intersection #5 5
********************************************************************************
Average Delay (sec/veh):      3.0       Worst Case Level Of Service: D[ 25.2]
********************************************************************************
Street Name:     PALOS VERDES DRIVE SOUTH          PALOS VERDES DRIVE EAST
Approach:      North Bound      South Bound       East Bound        West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:       Uncontrolled     Uncontrolled       Stop Sign         Stop Sign
Rights:           Include          Include           Include           Include
Lanes:        0  0  1  0  1    1  0  1  0  0    0  0  0  0  0    1  0  0  0  1
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:       0  611    71    88  658     0     0    0     0    52    0   102
Growth Adj:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Initial Bse:    0  611    71    88  658     0     0    0     0    52    0   102
User Adj:    1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Volume:     0  611    71    88  658     0     0    0     0    52    0   102
Reduct Vol:     0    0     0     0    0     0     0    0     0     0    0     0
FinalVolume:    0  611    71    88  658     0     0    0     0    52    0   102
------------|---------------||---------------||---------------||---------------|
Critical Gap Module:
Critical Gp:xxxxx xxxx xxxxx   4.1 xxxx xxxxx xxxxx xxxx xxxxx   6.4 xxxx   6.2
FollowUpTim:xxxxx xxxx xxxxx   2.2 xxxx xxxxx xxxxx xxxx xxxxx   3.5 xxxx   3.3
------------|---------------||---------------||---------------||---------------|
Capacity Module:
Cnflict Vol: xxxx xxxx xxxxx   682 xxxx xxxxx  xxxx xxxx xxxxx  1445 xxxx   611
Potent Cap.: xxxx xxxx xxxxx   920 xxxx xxxxx  xxxx xxxx xxxxx   147 xxxx   497
Move Cap.:   xxxx xxxx xxxxx   920 xxxx xxxxx  xxxx xxxx xxxxx   136 xxxx   497
Volume/Cap:  xxxx xxxx  xxxx  0.10 xxxx  xxxx  xxxx xxxx  xxxx  0.38 xxxx  0.21
------------|---------------||---------------||---------------||---------------|
Level Of Service Module:
2Way95thQ:   xxxx xxxx xxxxx   0.3 xxxx xxxxx  xxxx xxxx xxxxx   1.6 xxxx   0.8
Control Del:xxxxx xxxx xxxxx   9.3 xxxx xxxxx xxxxx xxxx xxxxx  47.0 xxxx  14.1
LOS by Move:    *    *     *     A    *     *     *    *     *     E    *     B
Movement:     LT - LTR - RT    LT - LTR - RT    LT - LTR - RT    LT - LTR - RT
Shared Cap.: xxxx xxxx xxxxx  xxxx xxxx xxxxx  xxxx xxxx xxxxx  xxxx xxxx xxxxx
SharedQueue:xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx
Shrd ConDel:xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx
Shared LOS:     *    *     *     *    *     *     *    *     *     *    *     *
ApproachDel:    xxxxxx           xxxxxx           xxxxxx             25.2
ApproachLOS:         *                *                *                D
********************************************************************************
Note: Queue reported is the number of cars per lane.
********************************************************************************
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                     Level Of Service Computation Report
            2000 HCM Unsignalized Method (Base Volume Alternative)
********************************************************************************
Intersection #6 6
********************************************************************************
Average Delay (sec/veh):      0.0       Worst Case Level Of Service: B[ 10.6]
********************************************************************************
Street Name:     PALOS VERDES DRIVE SOUTH       POINT VIEW INTERNAL DRIVEWAY
Approach:      North Bound      South Bound      East Bound       West Bound
Movement:     L  -  T  -  R   L  -  T  -  R   L  -  T  -  R   L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:       Uncontrolled     Uncontrolled      Stop Sign        Stop Sign
Rights:           Include          Include          Include          Include
Lanes:        0  0  1  1  0   0  0  2  0  0   0  0  0  0  0   0  0  0  0  1
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:       0  605   100     0  715     0     0    0     0     0    0     4
Growth Adj:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Initial Bse:    0  605   100     0  715     0     0    0     0     0    0     4
User Adj:    1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Volume:     0  605   100     0  715     0     0    0     0     0    0     4
Reduct Vol:     0    0     0     0    0     0     0    0     0     0    0     0
FinalVolume:    0  605   100     0  715     0     0    0     0     0    0     4
------------|---------------||---------------||---------------||---------------|
Critical Gap Module:
Critical Gp:xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx   6.9
FollowUpTim:xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx   3.3
------------|---------------||---------------||---------------||---------------|
Capacity Module:
Cnflict Vol: xxxx xxxx xxxxx  xxxx xxxx xxxxx  xxxx xxxx xxxxx  xxxx xxxx   353
Potent Cap.: xxxx xxxx xxxxx  xxxx xxxx xxxxx  xxxx xxxx xxxxx  xxxx xxxx   650
Move Cap.:   xxxx xxxx xxxxx  xxxx xxxx xxxxx  xxxx xxxx xxxxx  xxxx xxxx   650
Volume/Cap:  xxxx xxxx  xxxx  xxxx xxxx  xxxx  xxxx xxxx  xxxx  xxxx xxxx  0.01
------------|---------------||---------------||---------------||---------------|
Level Of Service Module:
2Way95thQ:   xxxx xxxx xxxxx  xxxx xxxx xxxxx  xxxx xxxx xxxxx  xxxx xxxx   0.0
Control Del:xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx  10.6
LOS by Move:    *    *     *     *    *     *     *    *     *     *    *     B
Movement:     LT - LTR - RT    LT - LTR - RT    LT - LTR - RT    LT - LTR - RT
Shared Cap.: xxxx xxxx xxxxx  xxxx xxxx xxxxx  xxxx xxxx xxxxx  xxxx xxxx xxxxx
SharedQueue:xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx
Shrd ConDel:xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx
Shared LOS:     *    *     *     *    *     *     *    *     *     *    *     *
ApproachDel:    xxxxxx           xxxxxx           xxxxxx            10.6
ApproachLOS:       *                *                *                B
********************************************************************************
Note: Queue reported is the number of cars per lane.
********************************************************************************
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                      Level Of Service Computation Report
            2000 HCM Unsignalized Method (Base Volume Alternative)
********************************************************************************
Intersection #1 1
********************************************************************************
Average Delay (sec/veh):      1.5      Worst Case Level Of Service: C[ 20.4]
********************************************************************************
Street Name:               VIA RIVERA                      HAWTHORNE BLVD
Approach:      North Bound      South Bound      East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:        Stop Sign        Stop Sign       Uncontrolled     Uncontrolled
Rights:           Include          Include          Include          Include
Lanes:        0  0  1! 0  0    0  0  1! 0  0    1  0  1  1  0    1  0  2  0  1
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:       1    0     3    48    0    25    25  520     2    15  545    64
Growth Adj:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Initial Bse:    1    0     3    48    0    25    25  520     2    15  545    64
User Adj:    1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Volume:     1    0     3    48    0    25    25  520     2    15  545    64
Reduct Vol:     0    0     0     0    0     0     0    0     0     0    0     0
FinalVolume:    1    0     3    48    0    25    25  520     2    15  545    64
------------|---------------||---------------||---------------||---------------|
Critical Gap Module:
Critical Gp:  7.5  6.5   6.9   7.5  6.5   6.9   4.1 xxxx xxxxx   4.1 xxxx xxxxx
FollowUpTim:  3.5  4.0   3.3   3.5  4.0   3.3   2.2 xxxx xxxxx   2.2 xxxx xxxxx
------------|---------------||---------------||---------------||---------------|
Capacity Module:
Cnflict Vol:  874 1210   261   885 1147   273   609 xxxx xxxxx   522 xxxx xxxxx
Potent Cap.:  247  184   744   243  201   731   979 xxxx xxxxx  1055 xxxx xxxxx
Move Cap.:    232  177   744   234  193   731   979 xxxx xxxxx  1055 xxxx xxxxx
Volume/Cap:  0.00 0.00  0.00  0.20 0.00  0.03  0.03 xxxx  xxxx  0.01 xxxx  xxxx
------------|---------------||---------------||---------------||---------------|
Level Of Service Module:
2Way95thQ:   xxxx xxxx xxxxx  xxxx xxxx xxxxx   0.1 xxxx xxxxx   0.0 xxxx xxxxx
Control Del:xxxxx xxxx xxxxx xxxxx xxxx xxxxx   8.8 xxxx xxxxx   8.5 xxxx xxxxx
LOS by Move:    *    *     *     *    *     *     A    *     *     A    *     *
Movement:     LT - LTR - RT    LT - LTR - RT    LT - LTR - RT    LT - LTR - RT
Shared Cap.: xxxx  479 xxxxx  xxxx  306 xxxxx  xxxx xxxx xxxxx  xxxx xxxx xxxxx
SharedQueue:xxxxx  0.0 xxxxx xxxxx  0.9 xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx
Shrd ConDel:xxxxx 12.6 xxxxx xxxxx 20.4 xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx
Shared LOS:     *    B     *     *    C     *     *    *     *     *    *     *
ApproachDel:      12.6             20.4            xxxxxx           xxxxxx
ApproachLOS:         B                C                 *                *
********************************************************************************
Note: Queue reported is the number of cars per lane.
********************************************************************************
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--------------------------------------------------------------------------------
--------------------------------------------------------------------------------
                      Level Of Service Computation Report
            2000 HCM Unsignalized Method (Base Volume Alternative)
********************************************************************************
Intersection #3 3
********************************************************************************
Average Delay (sec/veh):      0.6       Worst Case Level Of Service: B[ 13.9]
********************************************************************************
Street Name:     PALOS VERDES DRIVE SOUTH                 SEACOVE DR
Approach:      North Bound      South Bound       East Bound        West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:       Uncontrolled     Uncontrolled       Stop Sign         Stop Sign
Rights:           Include          Include          Include           Include
Lanes:        1  0  1  1  0    1  0  1  1  0    0  0  1! 0  0    0  0  0  0  0
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:      65  587     0     3  516     3     4     0     6     0     0     0
Growth Adj:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Initial Bse:   65  587     0     3  516     3     4     0     6     0     0     0
User Adj:    1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Volume:    65  587     0     3  516     3     4     0     6     0     0     0
Reduct Vol:     0    0     0     0    0     0     0     0     0     0     0     0
FinalVolume:   65  587     0     3  516     3     4     0     6     0     0     0
------------|---------------||---------------||---------------||---------------|
Critical Gap Module:
Critical Gp:  4.1 xxxx xxxxx   4.1 xxxx xxxxx   6.8  6.5   6.9 xxxxx xxxx xxxxx
FollowUpTim:  2.2 xxxx xxxxx   2.2 xxxx xxxxx   3.5  4.0   3.3 xxxxx xxxx xxxxx
------------|---------------||---------------||---------------||---------------|
Capacity Module:
Cnflict Vol:  519 xxxx xxxxx   587 xxxx xxxxx   947 1241   260  xxxx xxxx xxxxx
Potent Cap.: 1057 xxxx xxxxx   998 xxxx xxxxx   263  177   745  xxxx xxxx xxxxx
Move Cap.:   1057 xxxx xxxxx   998 xxxx xxxxx   250  165   745  xxxx xxxx xxxxx
Volume/Cap:  0.06 xxxx  xxxx  0.00 xxxx  xxxx  0.02 0.00  0.01  xxxx xxxx  xxxx
------------|---------------||---------------||---------------||---------------|
Level Of Service Module:
2Way95thQ:    0.2 xxxx xxxxx   0.0 xxxx xxxxx  xxxx xxxx xxxxx  xxxx xxxx xxxxx
Control Del:  8.6 xxxx xxxxx   8.6 xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx
LOS by Move:    A    *     *     A    *     *     *    *     *     *    *     *
Movement:     LT - LTR - RT    LT - LTR - RT    LT - LTR - RT    LT - LTR - RT
Shared Cap.: xxxx xxxx xxxxx  xxxx xxxx xxxxx  xxxx  416 xxxxx  xxxx xxxx xxxxx
SharedQueue:xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx  0.1 xxxxx xxxxx xxxx xxxxx
Shrd ConDel:xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx 13.9 xxxxx xxxxx xxxx xxxxx
Shared LOS:     *    *     *     *    *     *     *    B     *     *    *     *
ApproachDel:     xxxxxx           xxxxxx             13.9            xxxxxx
ApproachLOS:        *                *                 B                *
********************************************************************************
Note: Queue reported is the number of cars per lane.
********************************************************************************
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                     Level Of Service Computation Report
           2000 HCM Unsignalized Method (Base Volume Alternative)
********************************************************************************
Intersection #4 4
********************************************************************************
Average Delay (sec/veh):      0.7       Worst Case Level Of Service: B[ 14.2]
********************************************************************************
Street Name:     PALOS VERDES DRIVE SOUTH         WAYFARER'S CHAPEL DRIVE
Approach:      North Bound      South Bound       East Bound       West Bound
Movement:     L  -  T  -  R   L  -  T  -  R   L  -  T  -  R   L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:       Uncontrolled     Uncontrolled       Stop Sign        Stop Sign
Rights:           Include          Include          Include          Include
Lanes:        0  0  2  0  1   1  0  2  0  0   0  0  0  0  0   0  0  1! 0  0
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:       0  548    31    19  562     0     0    0     0    20    0    24
Growth Adj:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Initial Bse:    0  548    31    19  562     0     0    0     0    20    0    24
User Adj:    1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Volume:     0  548    31    19  562     0     0    0     0    20    0    24
Reduct Vol:     0    0     0     0    0     0     0    0     0     0    0     0
FinalVolume:    0  548    31    19  562     0     0    0     0    20    0    24
------------|---------------||---------------||---------------||---------------|
Critical Gap Module:
Critical Gp:xxxxx xxxx xxxxx   4.1 xxxx xxxxx xxxxx xxxx xxxxx   6.8  6.5   6.9
FollowUpTim:xxxxx xxxx xxxxx   2.2 xxxx xxxxx xxxxx xxxx xxxxx   3.5  4.0   3.3
------------|---------------||---------------||---------------||---------------|
Capacity Module:
Cnflict Vol: xxxx xxxx xxxxx   579 xxxx xxxxx  xxxx xxxx xxxxx   867 1148   274
Potent Cap.: xxxx xxxx xxxxx  1005 xxxx xxxxx  xxxx xxxx xxxxx   296  200   730
Move Cap.:   xxxx xxxx xxxxx  1005 xxxx xxxxx  xxxx xxxx xxxxx   292  197   730
Volume/Cap:  xxxx xxxx  xxxx  0.02 xxxx  xxxx  xxxx xxxx  xxxx  0.07 0.00  0.03
------------|---------------||---------------||---------------||---------------|
Level Of Service Module:
2Way95thQ:   xxxx xxxx xxxxx   0.1 xxxx xxxxx  xxxx xxxx xxxxx  xxxx xxxx xxxxx
Control Del:xxxxx xxxx xxxxx   8.7 xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx
LOS by Move:    *    *     *     A    *     *     *    *     *     *    *     *
Movement:     LT - LTR - RT    LT - LTR - RT    LT - LTR - RT    LT - LTR - RT
Shared Cap.: xxxx xxxx xxxxx  xxxx xxxx xxxxx  xxxx xxxx xxxxx  xxxx  434 xxxxx
SharedQueue:xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx  0.3 xxxxx
Shrd ConDel:xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx 14.2 xxxxx
Shared LOS:     *    *     *     *    *     *     *    *     *     *    B     *
ApproachDel:    xxxxxx           xxxxxx           xxxxxx             14.2
ApproachLOS:         *                *                *                B
********************************************************************************
Note: Queue reported is the number of cars per lane.
********************************************************************************
```

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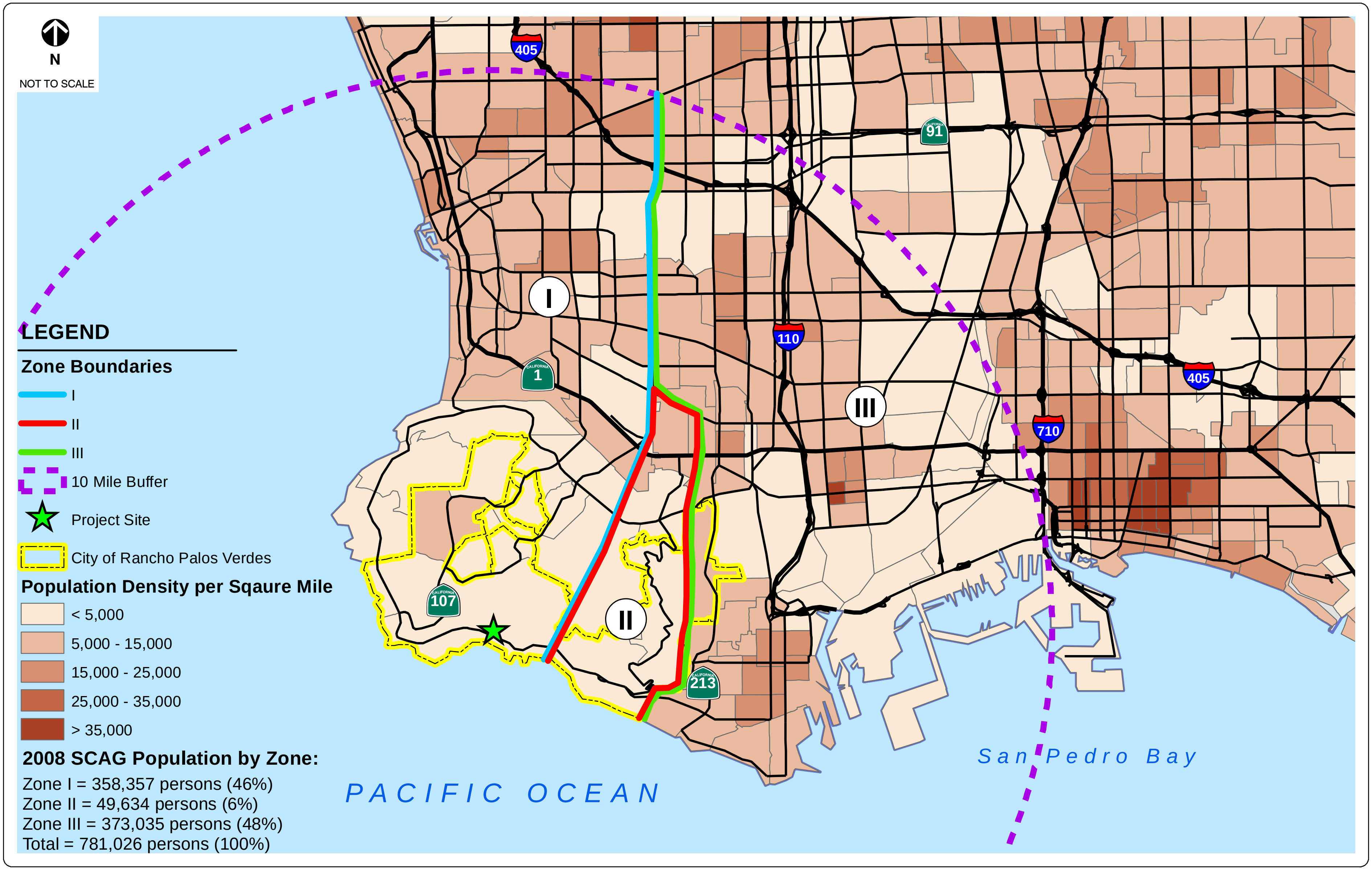
--------------------------------------------------------------------------------
--------------------------------------------------------------------------------
                   Level Of Service Computation Report
          2000 HCM Unsignalized Method (Base Volume Alternative)
********************************************************************************
Intersection #5 5
********************************************************************************
Average Delay (sec/veh):     2.1      Worst Case Level Of Service: C[ 18.4]
********************************************************************************
Street Name:     PALOS VERDES DRIVE SOUTH         PALOS VERDES DRIVE EAST
Approach:      North Bound      South Bound      East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:       Uncontrolled     Uncontrolled      Stop Sign        Stop Sign
Rights:           Include          Include          Include          Include
Lanes:        0  0  1  0  1    1  0  1  0  0    0  0  0  0  0    1  0  0  0  1
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:       0  564    51    63  568     0     0    0     0    39    0    89
Growth Adj:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Initial Bse:    0  564    51    63  568     0     0    0     0    39    0    89
User Adj:    1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Volume:     0  564    51    63  568     0     0    0     0    39    0    89
Reduct Vol:     0    0     0     0    0     0     0    0     0     0    0     0
FinalVolume:    0  564    51    63  568     0     0    0     0    39    0    89
------------|---------------||---------------||---------------||---------------|
Critical Gap Module:
Critical Gp:xxxxx xxxx xxxxx   4.1 xxxx xxxxx xxxxx xxxx xxxxx   6.4 xxxx   6.2
FollowUpTim:xxxxx xxxx xxxxx   2.2 xxxx xxxxx xxxxx xxxx xxxxx   3.5 xxxx   3.3
------------|---------------||---------------||---------------||---------------|
Capacity Module:
Cnflict Vol: xxxx xxxx xxxxx   615 xxxx xxxxx  xxxx xxxx xxxxx  1258 xxxx   564
Potent Cap.: xxxx xxxx xxxxx   974 xxxx xxxxx  xxxx xxxx xxxxx   190 xxxx   529
Move Cap.:   xxxx xxxx xxxxx   974 xxxx xxxxx  xxxx xxxx xxxxx   181 xxxx   529
Volume/Cap:  xxxx xxxx  xxxx  0.06 xxxx  xxxx  xxxx xxxx  xxxx  0.22 xxxx  0.17
------------|---------------||---------------||---------------||---------------|
Level Of Service Module:
2Way95thQ:   xxxx xxxx xxxxx   0.2 xxxx xxxxx  xxxx xxxx xxxxx   0.8 xxxx   0.6
Control Del:xxxxx xxxx xxxxx   8.9 xxxx xxxxx xxxxx xxxx xxxxx  30.3 xxxx  13.2
LOS by Move:    *    *     *     A    *     *     *    *     *     D    *     B
Movement:     LT - LTR - RT    LT - LTR - RT    LT - LTR - RT    LT - LTR - RT
Shared Cap.: xxxx xxxx xxxxx  xxxx xxxx xxxxx  xxxx xxxx xxxxx  xxxx xxxx xxxxx
SharedQueue:xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx
Shrd ConDel:xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx
Shared LOS:     *    *     *     *    *     *     *    *     *     *    *     *
ApproachDel:    xxxxxx           xxxxxx           xxxxxx            18.4
ApproachLOS:         *                *                *                C
********************************************************************************
Note: Queue reported is the number of cars per lane.
********************************************************************************
```

```
--------------------------------------------------------------------------------
--------------------------------------------------------------------------------
                    Level Of Service Computation Report
          2000 HCM Unsignalized Method (Base Volume Alternative)
********************************************************************************
Intersection #6 6
********************************************************************************
Average Delay (sec/veh):      0.9       Worst Case Level Of Service: B[ 10.9]
********************************************************************************
Street Name:     PALOS VERDES DRIVE SOUTH       POINT VIEW INTERNAL DRIVEWAY
Approach:      North Bound      South Bound      East Bound       West Bound
Movement:     L  -  T  -  R   L  -  T  -  R   L  -  T  -  R   L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:       Uncontrolled     Uncontrolled      Stop Sign        Stop Sign
Rights:           Include          Include          Include          Include
Lanes:        0  0  1  1  0   0  0  2  0  0   0  0  0  0  0   0  0  0  0  1
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:       0  577     5     0  541     0     0    0     0     0    0   102
Growth Adj:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Initial Bse:    0  577     5     0  541     0     0    0     0     0    0   102
User Adj:    1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Volume:     0  577     5     0  541     0     0    0     0     0    0   102
Reduct Vol:     0    0     0     0    0     0     0    0     0     0    0     0
FinalVolume:    0  577     5     0  541     0     0    0     0     0    0   102
------------|---------------||---------------||---------------||---------------|
Critical Gap Module:
Critical Gp:xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx   6.9
FollowUpTim:xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx   3.3
------------|---------------||---------------||---------------||---------------|
Capacity Module:
Cnflict Vol: xxxx xxxx xxxxx  xxxx xxxx xxxxx  xxxx xxxx xxxxx  xxxx xxxx   291
Potent Cap.: xxxx xxxx xxxxx  xxxx xxxx xxxxx  xxxx xxxx xxxxx  xxxx xxxx   712
Move Cap.:   xxxx xxxx xxxxx  xxxx xxxx xxxxx  xxxx xxxx xxxxx  xxxx xxxx   712
Volume/Cap:  xxxx xxxx  xxxx  xxxx xxxx  xxxx  xxxx xxxx  xxxx  xxxx xxxx  0.14
------------|---------------||---------------||---------------||---------------|
Level Of Service Module:
2Way95thQ:   xxxx xxxx xxxxx  xxxx xxxx xxxxx  xxxx xxxx xxxxx  xxxx xxxx   0.5
Control Del:xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx  10.9
LOS by Move:    *    *     *     *    *     *     *    *     *     *    *     B
Movement:     LT - LTR - RT    LT - LTR - RT    LT - LTR - RT    LT - LTR - RT
Shared Cap.: xxxx xxxx xxxxx  xxxx xxxx xxxxx  xxxx xxxx xxxxx  xxxx xxxx xxxxx
SharedQueue:xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx
Shrd ConDel:xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx
Shared LOS:     *    *     *     *    *     *     *    *     *     *    *     *
ApproachDel:    xxxxxx           xxxxxx           xxxxxx             10.9
ApproachLOS:         *                *                *                B
********************************************************************************
Note: Queue reported is the number of cars per lane.
********************************************************************************
```

Appendix C

Population Density Map



FEHR PEERS

POPULATION DENSITY DISTRIBUTION WITHIN 10 MILE BUFFER OF THE STUDY AREA

FIGURE C-1

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