ATTACHMENTS

Attachment A: Revised Visual Simulations

Attachment B: Air Quality Modeling Results

Attachment C: Supplemental Traffic Study

ATTACHMENT A

REVISED SIMULATIONS

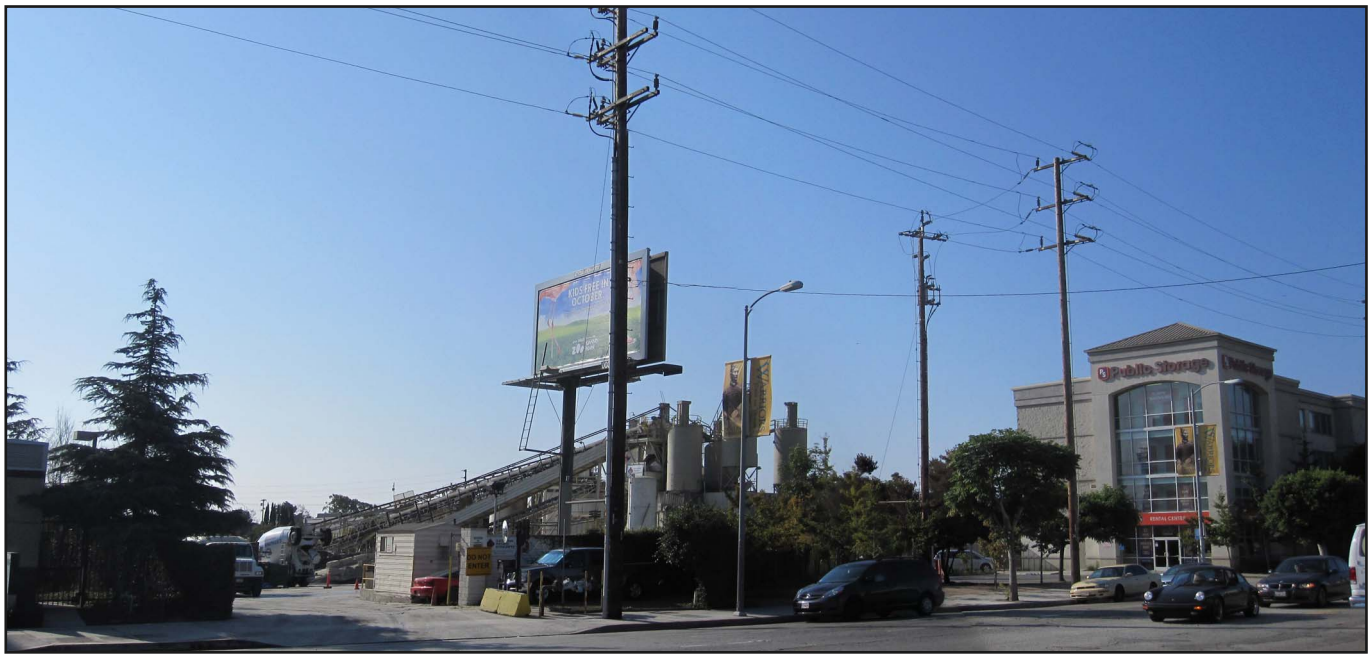
Existing view of the Project site from Pico Boulevard looking toward the sothwest.

Simulated view of the Project site from Pico Boulevard looking toward the sothwest.

Source: Van Tilburg, Banvard, & Soderbergh Architects, January 11, 2013.

CAJA Environmental Services, LLC

Figure IV.B-8
Simulated View of the Project from
Pico Boulevard A



Existing view of the Development Project and Add Area Project sites from Pico Boulevard looking toward the sothwest.

Simulated view of the Development Project from Pico Boulevard looking toward the sothwest.

Source: Van Tilburg, Banvard, & Soderbergh Architects, January 11, 2013.

CAJA Environmental Services, LLC

Figure IV.B-9
Simulated View of the Development Project from Pico Boulevard B

Existing view of the Development Project and Add Area Project sites from the intersection of Pico Boulevard and Sepulveda Boulevard looking toward the south.

Simulated view of the Development Project from the intersection of Pico Boulevard and Sepulveda Boulevard of the Development Project and the Expo Line station that will span Sepulveda Boulevard..

Source: Van Tilburg, Banvard, & Soderbergh Architects, January 11, 2013.

CAJA Environmental Services, LLC

Figure IV.B-10
Simulated View of the Development Project from Sepulveda Boulevard A

Existing view of the Development Project and Add Area Project sites from the intersection of Exposition Boulevard and Sepulveda Boulevard looking toward the northwest.

Simulated view of the Development Project from the intersection of Exposition Boulevard and Sepulveda Boulevard of the Development Project and the Expo Line station that will span Sepulveda Boulevard.

Source: Van Tilburg, Banvard, & Soderbergh Architects, January 11, 2013.

CAJA Environmental Services, LLC

Figure IV.B-11
Simulated View of the Development Project from Sepulveda Boulevard B

Existing view toward the Development Project and Add Area Project sites from the intersection of Pearl Street and Cotner Avenue looking toward the northwest. (Buildings on the Development Project and Add Area Project sites are not visible from this perspective.)

Simulated view of the Development Project from the intersection of Pearl Street and Cotner Avenue looking toward the northwest. The green wall of the simulated parking structure just behind the houses is not part of the Development Project and Add Area Project, but is the parking structure that will be constructed as part of the Expo line project.

Source: Van Tilburg, Banvard, & Soderbergh Architects, January 11, 2013.

CAJA Environmental Services, LLC

Figure IV.B-12
Simulated View of the Development Project from Cotner Avenue

ATTACHMENT B

AIR QUALITY MODELING RESULTS

Existing Project Site Air Quality Emissions

Casden Sepulveda

Los Angeles-South Coast County, Summer

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric
Home Improvement Superstore	6.5	1000sqft
General Light Industry	66.3	1000sqft

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Utility Company**	Los Angeles Department of Water & Power
Climate Zone	11	**Precipitation Freq (Days)**	33		

1.3 User Entered Comments

Project Characteristics -

Land Use - project site is 6.59 acres

Construction Phase - existing scenario.

Off-road Equipment - existing scenario

Off-road Equipment - existing scenario

Demolition -

Vehicle Trips - trip rates per traffic study

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	1.90	0.00	0.00	0.00		0.00	0.00		0.00	0.00		0.00		0.00		0.00
Energy	0.04	0.34	0.28	0.00		0.00	0.03		0.00	0.03		405.53		0.01	0.01	408.00
Mobile	5.90	14.19	59.66	0.07	7.73	0.51	8.24	0.27	0.51	0.78		7,849.10		0.44		7,858.39
Total	**7.84**	**14.53**	**59.94**	**0.07**	**7.73**	**0.51**	**8.27**	**0.27**	**0.51**	**0.81**		**8,254.63**		**0.45**	**0.01**	**8,266.39**

2.2 Overall Operational

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	1.90	0.00	0.00	0.00		0.00	0.00		0.00	0.00		0.00		0.00		0.00
Energy	0.04	0.34	0.28	0.00		0.00	0.03		0.00	0.03		405.53		0.01	0.01	408.00
Mobile	5.90	14.19	59.66	0.07	7.73	0.51	8.24	0.27	0.51	0.78		7,849.10		0.44		7,858.39
Total	**7.84**	**14.53**	**59.94**	**0.07**	**7.73**	**0.51**	**8.27**	**0.27**	**0.51**	**0.81**		**8,254.63**		**0.45**	**0.01**	**8,266.39**

3.0 Construction Detail

3.1 Mitigation Measures Construction

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	5.90	14.19	59.66	0.07	7.73	0.51	8.24	0.27	0.51	0.78		7,849.10		0.44		7,858.39
Unmitigated	5.90	14.19	59.66	0.07	7.73	0.51	8.24	0.27	0.51	0.78		7,849.10		0.44		7,858.39
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
General Light Industry	525.76	87.52	45.08	1,330,996	1,330,996
Home Improvement Superstore	235.30	368.68	362.70	414,030	414,030
Total	761.06	456.20	407.78	1,745,025	1,745,025

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
General Light Industry	8.90	13.30	7.40	59.00	28.00	13.00
Home Improvement Superstore	8.90	13.30	7.40	23.40	57.60	19.00

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	0.04	0.34	0.28	0.00		0.00	0.03		0.00	0.03		405.53		0.01	0.01	408.00
NaturalGas Unmitigated	0.04	0.34	0.28	0.00		0.00	0.03		0.00	0.03		405.53		0.01	0.01	408.00
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					
General Light Industry	3416.72	0.04	0.33	0.28	0.00		0.00	0.03		0.00	0.03		401.97		0.01	0.01	404.41
Home Improvement Superstore	30.274	0.00	0.00	0.00	0.00		0.00	0.00		0.00	0.00		3.56		0.00	0.00	3.58
Total		**0.04**	**0.33**	**0.28**	**0.00**		**0.00**	**0.03**		**0.00**	**0.03**		**405.53**		**0.01**	**0.01**	**407.99**

5.2 Energy by Land Use - NaturalGas

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU	lb/day										lb/day					
General Light Industry	3.41672	0.04	0.33	0.28	0.00		0.00	0.03		0.00	0.03		401.97		0.01	0.01	404.41
Home Improvement Superstore	0.030274	0.00	0.00	0.00	0.00		0.00	0.00		0.00	0.00		3.56		0.00	0.00	3.58
Total		**0.04**	**0.33**	**0.28**	**0.00**		**0.00**	**0.03**		**0.00**	**0.03**		**405.53**		**0.01**	**0.01**	**407.99**

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	1.90	0.00	0.00	0.00		0.00	0.00		0.00	0.00		0.00		0.00		0.00
Unmitigated	1.90	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	0.46					0.00	0.00		0.00	0.00						0.00
Consumer Products	1.44					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	**1.90**	**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	0.46					0.00	0.00		0.00	0.00						0.00
Consumer Products	1.44					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	**1.90**	**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

Casden Sepulveda

Los Angeles-South Coast County, Winter

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric
Home Improvement Superstore	6.5	1000sqft
General Light Industry	66.3	1000sqft

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Utility Company**	Los Angeles Department of Water & Power
Climate Zone	11	**Precipitation Freq (Days)**	33		

1.3 User Entered Comments

Project Characteristics -

Land Use - project site is 6.59 acres

Construction Phase - existing scenario.

Off-road Equipment - existing scenario

Off-road Equipment - existing scenario

Demolition -

Vehicle Trips - trip rates per traffic study

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	1.90	0.00	0.00	0.00		0.00	0.00		0.00	0.00		0.00		0.00		0.00
Energy	0.04	0.34	0.28	0.00		0.00	0.03		0.00	0.03		405.53		0.01	0.01	408.00
Mobile	6.32	15.45	59.65	0.07	7.73	0.52	8.24	0.27	0.52	0.79		7,364.57		0.45		7,373.97
Total	**8.26**	**15.79**	**59.93**	**0.07**	**7.73**	**0.52**	**8.27**	**0.27**	**0.52**	**0.82**		**7,770.10**		**0.46**	**0.01**	**7,781.97**

2.2 Overall Operational

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	1.90	0.00	0.00	0.00		0.00	0.00		0.00	0.00		0.00		0.00		0.00
Energy	0.04	0.34	0.28	0.00		0.00	0.03		0.00	0.03		405.53		0.01	0.01	408.00
Mobile	6.32	15.45	59.65	0.07	7.73	0.52	8.24	0.27	0.52	0.79		7,364.57		0.45		7,373.97
Total	**8.26**	**15.79**	**59.93**	**0.07**	**7.73**	**0.52**	**8.27**	**0.27**	**0.52**	**0.82**		**7,770.10**		**0.46**	**0.01**	**7,781.97**

3.0 Construction Detail

3.1 Mitigation Measures Construction

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	6.32	15.45	59.65	0.07	7.73	0.52	8.24	0.27	0.52	0.79		7,364.57		0.45		7,373.97
Unmitigated	6.32	15.45	59.65	0.07	7.73	0.52	8.24	0.27	0.52	0.79		7,364.57		0.45		7,373.97
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
General Light Industry	525.76	87.52	45.08	1,330,996	1,330,996
Home Improvement Superstore	235.30	368.68	362.70	414,030	414,030
Total	761.06	456.20	407.78	1,745,025	1,745,025

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
General Light Industry	8.90	13.30	7.40	59.00	28.00	13.00
Home Improvement Superstore	8.90	13.30	7.40	23.40	57.60	19.00

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	0.04	0.34	0.28	0.00		0.00	0.03		0.00	0.03		405.53		0.01	0.01	408.00
NaturalGas Unmitigated	0.04	0.34	0.28	0.00		0.00	0.03		0.00	0.03		405.53		0.01	0.01	408.00
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					
General Light Industry	3416.72	0.04	0.33	0.28	0.00		0.00	0.03		0.00	0.03		401.97		0.01	0.01	404.41
Home Improvement Superstore	30.274	0.00	0.00	0.00	0.00		0.00	0.00		0.00	0.00		3.56		0.00	0.00	3.58
Total		**0.04**	**0.33**	**0.28**	**0.00**		**0.00**	**0.03**		**0.00**	**0.03**		**405.53**		**0.01**	**0.01**	**407.99**

5.2 Energy by Land Use - NaturalGas

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU	lb/day										lb/day					
General Light Industry	3.41672	0.04	0.33	0.28	0.00		0.00	0.03		0.00	0.03		401.97		0.01	0.01	404.41
Home Improvement Superstore	0.030274	0.00	0.00	0.00	0.00		0.00	0.00		0.00	0.00		3.56		0.00	0.00	3.58
Total		**0.04**	**0.33**	**0.28**	**0.00**		**0.00**	**0.03**		**0.00**	**0.03**		**405.53**		**0.01**	**0.01**	**407.99**

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	1.90	0.00	0.00	0.00		0.00	0.00		0.00	0.00		0.00		0.00		0.00
Unmitigated	1.90	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	0.46					0.00	0.00		0.00	0.00						0.00
Consumer Products	1.44					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	**1.90**	**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	0.46					0.00	0.00		0.00	0.00						0.00
Consumer Products	1.44					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	**1.90**	**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

Revised Project Construction Air Quality Emissions

Casden Sepulveda - Revised Project

Los Angeles-South Coast County, Winter

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric
Apartments Mid Rise	566	Dwelling Unit
Congregate Care (Assisted Living)	72	Dwelling Unit
Free-Standing Discount Store	100	1000sqft
Regional Shopping Center	10	1000sqft
Supermarket	50	1000sqft

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Utility Company**	Los Angeles Department of Water & Power
Climate Zone	11	**Precipitation Freq (Days)**	33		

1.3 User Entered Comments

Project Characteristics - Revised Project

Land Use - custom project site size

Construction Phase - construction schedule.

Off-road Equipment - custom mix

Off-road Equipment - custom mix

Off-road Equipment - custom mix.

Off-road Equipment - existing scenario

Off-road Equipment - custom mix

Off-road Equipment - custom mix

Demolition -

Grading - custom

Vehicle Trips - trip rates per traffic study

Woodstoves - custom

Energy Use -

Construction Off-road Equipment Mitigation -

Area Mitigation -

Energy Mitigation -

Water Mitigation -

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					
2010	25.47	236.25	144.63	0.24	1,019.18	11.43	1,030.62	0.75	11.43	12.18						
2011	23.45	216.36	133.62	0.24	1,019.19	10.45	1,029.63	0.75	10.45	11.20						
2012	75.55	98.19	104.86	0.18	10.36	5.96	16.32	0.42	5.96	6.38						
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					
2010	33.60	228.33	145.20	0.24	1,019.03	10.39	1,029.42	0.73	10.39	11.12						
2011	32.01	211.07	134.34	0.24	1,019.03	9.60	1,028.63	0.73	9.60	10.33						
2012	77.12	75.32	105.42	0.18	10.36	4.44	14.80	0.42	4.44	4.86						
Total	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**

3.1 Mitigation Measures Construction

Use Cleaner Engines for Construction Equipment

Use DPF for Construction Equipment

Water Exposed Area

3.2 Demolition - 2010

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					0.47	0.00	0.47	0.00	0.00	0.00						
Off-Road	6.91	54.27	30.94	0.05		3.09	3.09		3.09	3.09						
Total	**6.91**	**54.27**	**30.94**	**0.05**	**0.47**	**3.09**	**3.56**	**0.00**	**3.09**	**3.09**						

3.2 Demolition - 2010

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	0.17	1.68	1.01	0.00	1.05	0.07	1.13	0.01	0.07	0.08						
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00						
Worker	0.12	0.13	1.25	0.00	0.20	0.01	0.21	0.01	0.01	0.01						
Total	**0.29**	**1.81**	**2.26**	**0.00**	**1.25**	**0.08**	**1.34**	**0.02**	**0.08**	**0.09**						

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					0.18	0.00	0.18	0.00	0.00	0.00						
Off-Road	15.48	37.22	27.72	0.05		1.84	1.84		1.84	1.84						
Total	**15.48**	**37.22**	**27.72**	**0.05**	**0.18**	**1.84**	**2.02**	**0.00**	**1.84**	**1.84**						

3.2 Demolition - 2010

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	0.17	1.68	1.01	0.00	1.05	0.07	1.13	0.01	0.07	0.08						
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00						
Worker	0.12	0.13	1.25	0.00	0.20	0.01	0.21	0.01	0.01	0.01						
Total	**0.29**	**1.81**	**2.26**	**0.00**	**1.25**	**0.08**	**1.34**	**0.02**	**0.08**	**0.09**						

3.3 Grading/Excavation - 2010

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					0.25	0.00	0.25	0.03	0.00	0.03						
Off-Road	5.32	38.19	23.79	0.04		2.75	2.75		2.75	2.75						
Total	**5.32**	**38.19**	**23.79**	**0.04**	**0.25**	**2.75**	**3.00**	**0.03**	**2.75**	**2.78**						

3.3 Grading/Excavation - 2010

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	19.99	197.88	119.12	0.20	1,018.65	8.68	1,027.33	0.70	8.68	9.38						
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00						
Worker	0.17	0.18	1.73	0.00	0.28	0.01	0.28	0.01	0.01	0.02						
Total	**20.16**	**198.06**	**120.85**	**0.20**	**1,018.93**	**8.69**	**1,027.61**	**0.71**	**8.69**	**9.40**						

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					0.10	0.00	0.10	0.01	0.00	0.01						
Off-Road	13.45	30.26	24.35	0.04		1.71	1.71		1.71	1.71						
Total	**13.45**	**30.26**	**24.35**	**0.04**	**0.10**	**1.71**	**1.81**	**0.01**	**1.71**	**1.72**						

3.3 Grading/Excavation - 2010

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	19.99	197.88	119.12	0.20	1,018.65	8.68	1,027.33	0.70	8.68	9.38						
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00						
Worker	0.17	0.18	1.73	0.00	0.28	0.01	0.28	0.01	0.01	0.02						
Total	**20.16**	**198.06**	**120.85**	**0.20**	**1,018.93**	**8.69**	**1,027.61**	**0.71**	**8.69**	**9.40**						

3.3 Grading/Excavation - 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					0.25	0.00	0.25	0.03	0.00	0.03						
Off-Road	4.89	35.56	23.63	0.04		2.56	2.56		2.56	2.56						
Total	**4.89**	**35.56**	**23.63**	**0.04**	**0.25**	**2.56**	**2.81**	**0.03**	**2.56**	**2.59**						

3.3 Grading/Excavation - 2011

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	18.41	180.64	108.40	0.20	1,018.66	7.88	1,026.54	0.71	7.88	8.58						
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00						
Worker	0.16	0.17	1.58	0.00	0.28	0.01	0.29	0.01	0.01	0.02						
Total	**18.57**	**180.81**	**109.98**	**0.20**	**1,018.94**	**7.89**	**1,026.83**	**0.72**	**7.89**	**8.60**						

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					0.10	0.00	0.10	0.01	0.00	0.01						
Off-Road	13.45	30.26	24.35	0.04		1.71	1.71		1.71	1.71						
Total	**13.45**	**30.26**	**24.35**	**0.04**	**0.10**	**1.71**	**1.81**	**0.01**	**1.71**	**1.72**						

3.3 Grading/Excavation - 2011

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	18.41	180.64	108.40	0.20	1,018.66	7.88	1,026.54	0.71	7.88	8.58						
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00						
Worker	0.16	0.17	1.58	0.00	0.28	0.01	0.29	0.01	0.01	0.02						
Total	**18.57**	**180.81**	**109.98**	**0.20**	**1,018.94**	**7.89**	**1,026.83**	**0.72**	**7.89**	**8.60**						

3.4 Building - 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					
Off-Road	8.37	59.91	31.07	0.06		3.61	3.61		3.61	3.61						
Total	**8.37**	**59.91**	**31.07**	**0.06**		**3.61**	**3.61**		**3.61**	**3.61**						

3.4 Building - 2011

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						
Vendor	1.96	20.00	14.28	0.02	0.88	0.72	1.59	0.07	0.72	0.79						
Worker	4.40	4.72	45.00	0.06	7.84	0.26	8.10	0.29	0.26	0.55						
Total	**6.36**	**24.72**	**59.28**	**0.08**	**8.72**	**0.98**	**9.69**	**0.36**	**0.98**	**1.34**						

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	10.88	42.96	32.09	0.06		2.53	2.53		2.53	2.53						
Total	**10.88**	**42.96**	**32.09**	**0.06**		**2.53**	**2.53**		**2.53**	**2.53**						

3.4 Building - 2011

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						
Vendor	1.96	20.00	14.28	0.02	0.88	0.72	1.59	0.07	0.72	0.79						
Worker	4.40	4.72	45.00	0.06	7.84	0.26	8.10	0.29	0.26	0.55						
Total	**6.36**	**24.72**	**59.28**	**0.08**	**8.72**	**0.98**	**9.69**	**0.36**	**0.98**	**1.34**						

3.4 Building - 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	7.77	55.45	30.42	0.06		3.27	3.27		3.27	3.27						
Total	**7.77**	**55.45**	**30.42**	**0.06**		**3.27**	**3.27**		**3.27**	**3.27**						

3.4 Building - 2012

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						
Vendor	1.78	18.31	12.91	0.02	0.88	0.65	1.53	0.07	0.65	0.72						
Worker	4.05	4.31	41.21	0.06	7.84	0.26	8.10	0.29	0.26	0.56						
Total	**5.83**	**22.62**	**54.12**	**0.08**	**8.72**	**0.91**	**9.63**	**0.36**	**0.91**	**1.28**						

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	10.80	41.54	31.77	0.06		2.47	2.47		2.47	2.47						
Total	**10.80**	**41.54**	**31.77**	**0.06**		**2.47**	**2.47**		**2.47**	**2.47**						

3.4 Building - 2012

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						
Vendor	1.78	18.31	12.91	0.02	0.88	0.65	1.53	0.07	0.65	0.72						
Worker	4.05	4.31	41.21	0.06	7.84	0.26	8.10	0.29	0.26	0.56						
Total	**5.83**	**22.62**	**54.12**	**0.08**	**8.72**	**0.91**	**9.63**	**0.36**	**0.91**	**1.28**						

3.5 Coating - 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					
Archit. Coating	57.94					0.00	0.00		0.00	0.00						
Off-Road	1.40	8.43	5.23	0.01		0.77	0.77		0.77	0.77						
Total	**59.34**	**8.43**	**5.23**	**0.01**		**0.77**	**0.77**		**0.77**	**0.77**						

3.5 Coating - 2012

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						
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00						
Worker	0.81	0.86	8.23	0.01	1.57	0.05	1.62	0.06	0.05	0.11						
Total	**0.81**	**0.86**	**8.23**	**0.01**	**1.57**	**0.05**	**1.62**	**0.06**	**0.05**	**0.11**						

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	57.94					0.00	0.00		0.00	0.00						
Off-Road	0.91	5.48	5.00	0.01		0.52	0.52		0.52	0.52						
Total	**58.85**	**5.48**	**5.00**	**0.01**		**0.52**	**0.52**		**0.52**	**0.52**						

3.5 Coating - 2012

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						
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00						
Worker	0.81	0.86	8.23	0.01	1.57	0.05	1.62	0.06	0.05	0.11						
Total	**0.81**	**0.86**	**8.23**	**0.01**	**1.57**	**0.05**	**1.62**	**0.06**	**0.05**	**0.11**						

3.6 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	1.76	10.79	6.46	0.01		0.94	0.94		0.94	0.94						
Paving	0.00					0.00	0.00		0.00	0.00						
Total	**1.76**	**10.79**	**6.46**	**0.01**		**0.94**	**0.94**		**0.94**	**0.94**						

3.6 Paving - 2012

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						
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00						
Worker	0.04	0.04	0.40	0.00	0.08	0.00	0.08	0.00	0.00	0.01						
Total	**0.04**	**0.04**	**0.40**	**0.00**	**0.08**	**0.00**	**0.08**	**0.00**	**0.00**	**0.01**						

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	0.80	4.78	5.90	0.01		0.48	0.48		0.48	0.48						
Paving	0.00					0.00	0.00		0.00	0.00						
Total	**0.80**	**4.78**	**5.90**	**0.01**		**0.48**	**0.48**		**0.48**	**0.48**						

3.6 Paving - 2012

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						
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00						
Worker	0.04	0.04	0.40	0.00	0.08	0.00	0.08	0.00	0.00	0.01						
Total	**0.04**	**0.04**	**0.40**	**0.00**	**0.08**	**0.00**	**0.08**	**0.00**	**0.00**	**0.01**						

4.0 Mobile Detail

4.1 Mitigation Measures Mobile

Revised Project Operational Air Quality Emissions

(With Mitigation and TOD/TDM Components)

Casden Sepulveda - Revised Project

Los Angeles-South Coast County, Summer

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric
Apartments Mid Rise	566	Dwelling Unit
Congregate Care (Assisted Living)	72	Dwelling Unit
Free-Standing Discount Store	100	1000sqft
Regional Shopping Center	10	1000sqft
Supermarket	50	1000sqft

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Utility Company**	Los Angeles Department of Water & Power
Climate Zone	11	**Precipitation Freq (Days)**	33		

1.3 User Entered Comments

Project Characteristics - Revised Project

Land Use - custom project site size

Construction Phase - construction schedule.

Off-road Equipment - custom mix

Off-road Equipment - custom mix

Off-road Equipment - custom mix.

Off-road Equipment - existing scenario

Off-road Equipment - custom mix

Off-road Equipment - custom mix

Demolition -

Grading - custom

Vehicle Trips - trip rates per traffic study

Woodstoves - custom

Energy Use -

Construction Off-road Equipment Mitigation -

Area Mitigation -

Energy Mitigation -

Water 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	87.97	3.78	266.56	0.51		0.00	34.02		0.00	34.02	4,502.19	11,579.93		17.93	0.28	16,544.08
Energy	0.29	2.49	1.21	0.02		0.00	0.20		0.00	0.20		3,151.71		0.06	0.06	3,170.89
Mobile	53.19	126.92	524.02	0.75	79.00	4.98	83.97	2.72	4.98	7.70		75,187.68		4.32		75,278.36
Total	**141.45**	**133.19**	**791.79**	**1.28**	**79.00**	**4.98**	**118.19**	**2.72**	**4.98**	**41.92**	**4,502.19**	**89,919.32**		**22.31**	**0.34**	**94,993.33**

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	21.18	0.66	55.44	0.00		0.00	1.06		0.00	1.05	0.00	12,255.46		0.34	0.22	12,331.74
Energy	0.25	2.19	1.07	0.01		0.00	0.18		0.00	0.18		2,772.25		0.05	0.05	2,789.12
Mobile	53.19	126.92	524.02	0.75	79.00	4.98	83.97	2.72	4.98	7.70		75,187.68		4.32		75,278.36
Total	**74.62**	**129.77**	**580.53**	**0.76**	**79.00**	**4.98**	**85.21**	**2.72**	**4.98**	**8.93**	**0.00**	**90,215.39**		**4.71**	**0.27**	**90,399.22**

3.0 Construction Detail

	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	53.19	126.92	524.02	0.75	79.00	4.98	83.97	2.72	4.98	7.70		75,187.68		4.32		75,278.36
Unmitigated	53.19	126.92	524.02	0.75	79.00	4.98	83.97	2.72	4.98	7.70		75,187.68		4.32		75,278.36
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
Apartments Mid Rise	2,854.34	2,854.34	2854.34	9,506,585	9,506,585
Congregate Care (Assisted Living)	158.04	158.04	158.04	526,364	526,364
Free-Standing Discount Store	3,426.00	3,426.00	3426.00	8,206,043	8,206,043
Regional Shopping Center	324.00	324.00	324.00	849,526	849,526
Supermarket	2,640.00	2,640.00	2640.00	4,777,504	4,777,504
Total	9,402.38	9,402.38	9,402.38	23,866,022	23,866,022

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
Apartments Mid Rise	12.70	7.00	9.50	40.20	19.20	40.60
Congregate Care (Assisted Living)	12.70	7.00	9.50	40.20	19.20	40.60

	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
Free-Standing Discount Store	8.90	13.30	7.40	12.20	68.80	19.00
Regional Shopping Center	8.90	13.30	7.40	16.30	64.70	19.00
Supermarket	8.90	13.30	7.40	6.50	74.50	19.00

5.0 Energy Detail

5.1 Mitigation Measures Energy

Exceed Title 24

Install Energy Efficient Appliances

	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	0.25	2.19	1.07	0.01		0.00	0.18		0.00	0.18		2,772.25		0.05	0.05	2,789.12
NaturalGas Unmitigated	0.29	2.49	1.21	0.02		0.00	0.20		0.00	0.20		3,151.71		0.06	0.06	3,170.89
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					
Apartments Mid Rise	20566.5	0.22	1.90	0.81	0.01		0.00	0.15		0.00	0.15		2,419.58		0.05	0.04	2,434.31
Congregate Care (Assisted Living)	2616.23	0.03	0.24	0.10	0.00		0.00	0.02		0.00	0.02		307.79		0.01	0.01	309.66
Free-Standing Discount Store	465.753	0.01	0.05	0.04	0.00		0.00	0.00		0.00	0.00		54.79		0.00	0.00	55.13
Regional Shopping Center	46.5753	0.00	0.00	0.00	0.00		0.00	0.00		0.00	0.00		5.48		0.00	0.00	5.51
Supermarket	3094.52	0.03	0.30	0.25	0.00		0.00	0.02		0.00	0.02		364.06		0.01	0.01	366.28
Total		**0.29**	**2.49**	**1.20**	**0.01**		**0.00**	**0.19**		**0.00**	**0.19**		**3,151.70**		**0.07**	**0.06**	**3,170.89**

5.2 Energy by Land Use - NaturalGas

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU	lb/day										lb/day					
Apartments Mid Rise	17.9422	0.19	1.65	0.70	0.01		0.00	0.13		0.00	0.13		2,110.85		0.04	0.04	2,123.70
Congregate Care (Assisted Living)	2.28241	0.02	0.21	0.09	0.00		0.00	0.02		0.00	0.02		268.52		0.01	0.00	270.15
Free-Standing Discount Store	0.416027	0.00	0.04	0.03	0.00		0.00	0.00		0.00	0.00		48.94		0.00	0.00	49.24
Regional Shopping Center	0.0416027	0.00	0.00	0.00	0.00		0.00	0.00		0.00	0.00		4.89		0.00	0.00	4.92
Supermarket	2.88185	0.03	0.28	0.24	0.00		0.00	0.02		0.00	0.02		339.04		0.01	0.01	341.10
Total		**0.24**	**2.18**	**1.06**	**0.01**		**0.00**	**0.17**		**0.00**	**0.17**		**2,772.24**		**0.06**	**0.05**	**2,789.11**

6.0 Area Detail

6.1 Mitigation Measures Area

Use Low VOC Paint - Residential Interior

Use Low VOC Paint - Residential Exterior

Use Low VOC Paint - Non-Residential Interior

Use Low VOC Paint - Non-Residential Exterior

Use only Natural Gas Hearths

	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	21.18	0.66	55.44	0.00		0.00	1.06		0.00	1.05	0.00	12,255.46		0.34	0.22	12,331.74
Unmitigated	87.97	3.78	266.56	0.51		0.00	34.02		0.00	34.02	4,502.19	11,579.93		17.93	0.28	16,544.08
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	2.38					0.00	0.00		0.00	0.00						0.00
Consumer Products	15.80					0.00	0.00		0.00	0.00						0.00
Hearth	67.91	3.11	211.18	0.51		0.00	33.74		0.00	33.73	4,502.19	11,484.00		17.82	0.28	16,445.88
Landscaping	1.89	0.66	55.37	0.00		0.00	0.29		0.00	0.29		95.93		0.11		98.20
Total	**87.98**	**3.77**	**266.55**	**0.51**		**0.00**	**34.03**		**0.00**	**34.02**	**4,502.19**	**11,579.93**		**17.93**	**0.28**	**16,544.08**

6.2 Area by SubCategory

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	2.38					0.00	0.00		0.00	0.00						0.00
Consumer Products	15.80					0.00	0.00		0.00	0.00						0.00
Hearth	1.11	0.00	0.06	0.00		0.00	0.77		0.00	0.76	0.00	12,159.53		0.23	0.22	12,233.53
Landscaping	1.89	0.66	55.37	0.00		0.00	0.29		0.00	0.29		95.93		0.11		98.20
Total	**21.18**	**0.66**	**55.43**	**0.00**		**0.00**	**1.06**		**0.00**	**1.05**	**0.00**	**12,255.46**		**0.34**	**0.22**	**12,331.73**

7.0 Water Detail

7.1 Mitigation Measures Water

Apply Water Conservation Strategy

8.0 Waste Detail

8.1 Mitigation Measures Waste

9.0 Vegetation

Casden Sepulveda - Revised Project

Los Angeles-South Coast County, Winter

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric
Apartments Mid Rise	566	Dwelling Unit
Congregate Care (Assisted Living)	72	Dwelling Unit
Free-Standing Discount Store	100	1000sqft
Regional Shopping Center	10	1000sqft
Supermarket	50	1000sqft

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Utility Company**	Los Angeles Department of Water & Power
Climate Zone	11	**Precipitation Freq (Days)**	33		

1.3 User Entered Comments

Project Characteristics - Revised Project

Land Use - custom project site size

Construction Phase - construction schedule.

Off-road Equipment - custom mix

Off-road Equipment - custom mix

Off-road Equipment - custom mix.

Off-road Equipment - existing scenario

Off-road Equipment - custom mix

Off-road Equipment - custom mix

Demolition -

Grading - custom

Vehicle Trips - trip rates per traffic study

Woodstoves - custom

Energy Use -

Construction Off-road Equipment Mitigation -

Area Mitigation -

Energy Mitigation -

Water 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	87.97	3.78	266.56	0.51		0.00	34.02		0.00	34.02	4,502.19	11,579.93		17.93	0.28	16,544.08
Energy	0.29	2.49	1.21	0.02		0.00	0.20		0.00	0.20		3,151.71		0.06	0.06	3,170.89
Mobile	56.43	137.49	523.48	0.71	79.00	5.03	84.02	2.72	5.03	7.75		70,586.54		4.46		70,680.20
Total	**144.69**	**143.76**	**791.25**	**1.24**	**79.00**	**5.03**	**118.24**	**2.72**	**5.03**	**41.97**	**4,502.19**	**85,318.18**		**22.45**	**0.34**	**90,395.17**

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	21.18	0.66	55.44	0.00		0.00	1.06		0.00	1.05	0.00	12,255.46		0.34	0.22	12,331.74
Energy	0.25	2.19	1.07	0.01		0.00	0.18		0.00	0.18		2,772.25		0.05	0.05	2,789.12
Mobile	56.43	137.49	523.48	0.71	79.00	5.03	84.02	2.72	5.03	7.75		70,586.54		4.46		70,680.20
Total	**77.86**	**140.34**	**579.99**	**0.72**	**79.00**	**5.03**	**85.26**	**2.72**	**5.03**	**8.98**	**0.00**	**85,614.25**		**4.85**	**0.27**	**85,801.06**

3.0 Construction Detail

	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	56.43	137.49	523.48	0.71	79.00	5.03	84.02	2.72	5.03	7.75		70,586.54		4.46		70,680.20
Unmitigated	56.43	137.49	523.48	0.71	79.00	5.03	84.02	2.72	5.03	7.75		70,586.54		4.46		70,680.20
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
Apartments Mid Rise	2,854.34	2,854.34	2854.34	9,506,585	9,506,585
Congregate Care (Assisted Living)	158.04	158.04	158.04	526,364	526,364
Free-Standing Discount Store	3,426.00	3,426.00	3426.00	8,206,043	8,206,043
Regional Shopping Center	324.00	324.00	324.00	849,526	849,526
Supermarket	2,640.00	2,640.00	2640.00	4,777,504	4,777,504
Total	9,402.38	9,402.38	9,402.38	23,866,022	23,866,022

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
Apartments Mid Rise	12.70	7.00	9.50	40.20	19.20	40.60
Congregate Care (Assisted Living)	12.70	7.00	9.50	40.20	19.20	40.60

	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
Free-Standing Discount Store	8.90	13.30	7.40	12.20	68.80	19.00
Regional Shopping Center	8.90	13.30	7.40	16.30	64.70	19.00
Supermarket	8.90	13.30	7.40	6.50	74.50	19.00

5.0 Energy Detail

5.1 Mitigation Measures Energy

Exceed Title 24

Install Energy Efficient Appliances

	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	0.25	2.19	1.07	0.01		0.00	0.18		0.00	0.18		2,772.25		0.05	0.05	2,789.12
NaturalGas Unmitigated	0.29	2.49	1.21	0.02		0.00	0.20		0.00	0.20		3,151.71		0.06	0.06	3,170.89
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					
Apartments Mid Rise	20566.5	0.22	1.90	0.81	0.01		0.00	0.15		0.00	0.15		2,419.58		0.05	0.04	2,434.31
Congregate Care (Assisted Living)	2616.23	0.03	0.24	0.10	0.00		0.00	0.02		0.00	0.02		307.79		0.01	0.01	309.66
Free-Standing Discount Store	465.753	0.01	0.05	0.04	0.00		0.00	0.00		0.00	0.00		54.79		0.00	0.00	55.13
Regional Shopping Center	46.5753	0.00	0.00	0.00	0.00		0.00	0.00		0.00	0.00		5.48		0.00	0.00	5.51
Supermarket	3094.52	0.03	0.30	0.25	0.00		0.00	0.02		0.00	0.02		364.06		0.01	0.01	366.28
Total		**0.29**	**2.49**	**1.20**	**0.01**		**0.00**	**0.19**		**0.00**	**0.19**		**3,151.70**		**0.07**	**0.06**	**3,170.89**

5.2 Energy by Land Use - NaturalGas

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU	lb/day										lb/day					
Apartments Mid Rise	17.9422	0.19	1.65	0.70	0.01		0.00	0.13		0.00	0.13		2,110.85		0.04	0.04	2,123.70
Congregate Care (Assisted Living)	2.28241	0.02	0.21	0.09	0.00		0.00	0.02		0.00	0.02		268.52		0.01	0.00	270.15
Free-Standing Discount Store	0.416027	0.00	0.04	0.03	0.00		0.00	0.00		0.00	0.00		48.94		0.00	0.00	49.24
Regional Shopping Center	0.0416027	0.00	0.00	0.00	0.00		0.00	0.00		0.00	0.00		4.89		0.00	0.00	4.92
Supermarket	2.88185	0.03	0.28	0.24	0.00		0.00	0.02		0.00	0.02		339.04		0.01	0.01	341.10
Total		**0.24**	**2.18**	**1.06**	**0.01**		**0.00**	**0.17**		**0.00**	**0.17**		**2,772.24**		**0.06**	**0.05**	**2,789.11**

6.0 Area Detail

6.1 Mitigation Measures Area

Use Low VOC Paint - Residential Interior

Use Low VOC Paint - Residential Exterior

Use Low VOC Paint - Non-Residential Interior

Use Low VOC Paint - Non-Residential Exterior

Use only Natural Gas Hearths

	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	21.18	0.66	55.44	0.00		0.00	1.06		0.00	1.05	0.00	12,255.46		0.34	0.22	12,331.74
Unmitigated	87.97	3.78	266.56	0.51		0.00	34.02		0.00	34.02	4,502.19	11,579.93		17.93	0.28	16,544.08
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	2.38					0.00	0.00		0.00	0.00						0.00
Consumer Products	15.80					0.00	0.00		0.00	0.00						0.00
Hearth	67.91	3.11	211.18	0.51		0.00	33.74		0.00	33.73	4,502.19	11,484.00		17.82	0.28	16,445.88
Landscaping	1.89	0.66	55.37	0.00		0.00	0.29		0.00	0.29		95.93		0.11		98.20
Total	**87.98**	**3.77**	**266.55**	**0.51**		**0.00**	**34.03**		**0.00**	**34.02**	**4,502.19**	**11,579.93**		**17.93**	**0.28**	**16,544.08**

6.2 Area by SubCategory

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	2.38					0.00	0.00		0.00	0.00						0.00
Consumer Products	15.80					0.00	0.00		0.00	0.00						0.00
Hearth	1.11	0.00	0.06	0.00		0.00	0.77		0.00	0.76	0.00	12,159.53		0.23	0.22	12,233.53
Landscaping	1.89	0.66	55.37	0.00		0.00	0.29		0.00	0.29		95.93		0.11		98.20
Total	**21.18**	**0.66**	**55.43**	**0.00**		**0.00**	**1.06**		**0.00**	**1.05**	**0.00**	**12,255.46**		**0.34**	**0.22**	**12,331.73**

7.0 Water Detail

7.1 Mitigation Measures Water

Apply Water Conservation Strategy

8.0 Waste Detail

8.1 Mitigation Measures Waste

9.0 Vegetation

Existing Project Site GHG Emissions

Casden Sepulveda

Los Angeles-South Coast County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric
Home Improvement Superstore	6.5	1000sqft
General Light Industry	66.3	1000sqft

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Utility Company**	Los Angeles Department of Water & Power
Climate Zone	11	**Precipitation Freq (Days)**	33		

1.3 User Entered Comments

Project Characteristics -

Land Use - project site is 6.59 acres

Construction Phase - existing scenario.

Off-road Equipment - existing scenario

Off-road Equipment - existing scenario

Demolition -

Vehicle Trips - trip rates per traffic study

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	0.35	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	0.01	0.06	0.05	0.00		0.00	0.00		0.00	0.00	0.00	571.35	571.35	0.01	0.01	573.40
Mobile	0.80	1.97	8.17	0.01	0.94	0.07	1.01	0.04	0.07	0.11	0.00	926.88	926.88	0.06	0.00	928.04
Waste						0.00	0.00		0.00	0.00	797.62	0.00	797.62	47.14	0.00	1,787.51
Water						0.00	0.00		0.00	0.00	0.00	2,393.66	2,393.66	10.02	0.27	2,687.30
Total	**1.16**	**2.03**	**8.22**	**0.01**	**0.94**	**0.07**	**1.01**	**0.04**	**0.07**	**0.11**	**797.62**	**3,891.89**	**4,689.51**	**57.23**	**0.28**	**5,976.25**

2.2 Overall Operational

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.35	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	0.01	0.06	0.05	0.00		0.00	0.00		0.00	0.00	0.00	571.35	571.35	0.01	0.01	573.40
Mobile	0.80	1.97	8.17	0.01	0.94	0.07	1.01	0.04	0.07	0.11	0.00	926.88	926.88	0.06	0.00	928.04
Waste						0.00	0.00		0.00	0.00	797.62	0.00	797.62	47.14	0.00	1,787.51
Water						0.00	0.00		0.00	0.00	0.00	2,393.66	2,393.66	10.02	0.27	2,687.30
Total	**1.16**	**2.03**	**8.22**	**0.01**	**0.94**	**0.07**	**1.01**	**0.04**	**0.07**	**0.11**	**797.62**	**3,891.89**	**4,689.51**	**57.23**	**0.28**	**5,976.25**

3.0 Construction Detail

3.1 Mitigation Measures Construction

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	0.80	1.97	8.17	0.01	0.94	0.07	1.01	0.04	0.07	0.11	0.00	926.88	926.88	0.06	0.00	928.04
Unmitigated	0.80	1.97	8.17	0.01	0.94	0.07	1.01	0.04	0.07	0.11	0.00	926.88	926.88	0.06	0.00	928.04
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
General Light Industry	525.76	87.52	45.08	1,330,996	1,330,996
Home Improvement Superstore	235.30	368.68	362.70	414,030	414,030
Total	761.06	456.20	407.78	1,745,025	1,745,025

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
General Light Industry	8.90	13.30	7.40	59.00	28.00	13.00
Home Improvement Superstore	8.90	13.30	7.40	23.40	57.60	19.00

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	504.21	504.21	0.01	0.00	505.85
Electricity Unmitigated						0.00	0.00		0.00	0.00	0.00	504.21	504.21	0.01	0.00	505.85
NaturalGas Mitigated	0.01	0.06	0.05	0.00		0.00	0.00		0.00	0.00	0.00	67.14	67.14	0.00	0.00	67.55
NaturalGas Unmitigated	0.01	0.06	0.05	0.00		0.00	0.00		0.00	0.00	0.00	67.14	67.14	0.00	0.00	67.55
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					
General Light Industry	1.2471e+006	0.01	0.06	0.05	0.00		0.00	0.00		0.00	0.00	0.00	66.55	66.55	0.00	0.00	66.96
Home Improvement Superstore	11050	0.00	0.00	0.00	0.00		0.00	0.00		0.00	0.00	0.00	0.59	0.59	0.00	0.00	0.59
Total		**0.01**	**0.06**	**0.05**	**0.00**		**0.00**	**0.00**		**0.00**	**0.00**	**0.00**	**67.14**	**67.14**	**0.00**	**0.00**	**67.55**

5.2 Energy by Land Use - NaturalGas

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU	tons/yr										MT/yr					
General Light Industry	1.2471e+006	0.01	0.06	0.05	0.00		0.00	0.00		0.00	0.00	0.00	66.55	66.55	0.00	0.00	66.96
Home Improvement Superstore	11050	0.00	0.00	0.00	0.00		0.00	0.00		0.00	0.00	0.00	0.59	0.59	0.00	0.00	0.59
Total		**0.01**	**0.06**	**0.05**	**0.00**		**0.00**	**0.00**		**0.00**	**0.00**	**0.00**	**67.14**	**67.14**	**0.00**	**0.00**	**67.55**

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			
General Light Industry	798915					448.82	0.01	0.00	450.27
Home Improvement Superstore	98605					55.39	0.00	0.00	55.57
Total						**504.21**	**0.01**	**0.00**	**505.84**

5.3 Energy by Land Use - Electricity

Mitigated

	Electricity Use	ROG	NOx	CO	SO2	Total CO2	CH4	N2O	CO2e
Land Use	kWh	tons/yr				MT/yr			
General Light Industry	798915					448.82	0.01	0.00	450.27
Home Improvement Superstore	98605					55.39	0.00	0.00	55.57
Total						**504.21**	**0.01**	**0.00**	**505.84**

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	0.35	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	0.35	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	0.08					0.00	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Consumer Products	0.26					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	**0.34**	**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	0.08					0.00	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Consumer Products	0.26					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	**0.34**	**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					2,393.66	10.02	0.27	2,687.30
Unmitigated					2,393.66	10.02	0.27	2,687.30
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			
General Light Industry	325.993 / 0					2,388.29	10.01	0.27	2,681.49
Home Improvement Superstore	0.481471 / 0.295095					5.37	0.01	0.00	5.81
Total						**2,393.66**	**10.02**	**0.27**	**2,687.30**

7.2 Water by Land Use

Mitigated

	Indoor/Outdoor Use	ROG	NOx	CO	SO2	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	tons/yr				MT/yr			
General Light Industry	325.993 / 0					2,388.29	10.01	0.27	2,681.49
Home Improvement Superstore	0.481471 / 0.295095					5.37	0.01	0.00	5.81
Total						**2,393.66**	**10.02**	**0.27**	**2,687.30**

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					797.62	47.14	0.00	1,787.51
Unmitigated					797.62	47.14	0.00	1,787.51
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			
General Light Industry	3857.25					782.99	46.27	0.00	1,754.72
Home Improvement Superstore	72.08					14.63	0.86	0.00	32.79
Total						**797.62**	**47.13**	**0.00**	**1,787.51**

Mitigated

	Waste Disposed	ROG	NOx	CO	SO2	Total CO2	CH4	N2O	CO2e
Land Use	tons	tons/yr				MT/yr			
General Light Industry	3857.25					782.99	46.27	0.00	1,754.72
Home Improvement Superstore	72.08					14.63	0.86	0.00	32.79
Total						**797.62**	**47.13**	**0.00**	**1,787.51**

9.0 Vegetation

Revised Project Annual Construction GHG Emissions

Casden Sepulveda - Revised Project

Los Angeles-South Coast County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric
Apartments Mid Rise	566	Dwelling Unit
Congregate Care (Assisted Living)	72	Dwelling Unit
Free-Standing Discount Store	100	1000sqft
Regional Shopping Center	10	1000sqft
Supermarket	50	1000sqft

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Utility Company**	Los Angeles Department of Water & Power
Climate Zone	11	**Precipitation Freq (Days)**	33		

1.3 User Entered Comments

Project Characteristics - Revised Project

Land Use - custom project site size

Construction Phase - construction schedule.

Off-road Equipment - custom mix

Off-road Equipment - custom mix

Off-road Equipment - custom mix.

Off-road Equipment - existing scenario

Off-road Equipment - custom mix

Off-road Equipment - custom mix

Demolition -

Grading - custom

Vehicle Trips - trip rates per traffic study

Woodstoves - custom

Energy Use -

Construction Off-road Equipment Mitigation -

Area Mitigation -

Energy Mitigation -

Water Mitigation -

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					
2010	1.47	12.95	8.19	0.01	50.00	0.66	50.66	0.04	0.66	0.70	0.00	1,293.92	1,293.92	0.08	0.00	1,295.57
2011	2.15	14.68	13.08	0.02	29.41	0.78	30.19	0.06	0.78	0.84	0.00	2,103.89	2,103.89	0.15	0.00	2,107.12
2012	6.21	10.81	11.61	0.02	1.03	0.62	1.64	0.05	0.62	0.67	0.00	1,889.61	1,889.61	0.15	0.00	1,892.82
Total	**9.83**	**38.44**	**32.88**	**0.05**	**80.44**	**2.06**	**82.49**	**0.15**	**2.06**	**2.21**	**0.00**	**5,287.42**	**5,287.42**	**0.38**	**0.00**	**5,295.51**

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					
2010	1.86	12.31	8.17	0.01	49.99	0.59	50.58	0.04	0.59	0.63	0.00	1,293.92	1,293.92	0.08	0.00	1,295.57
2011	2.40	11.15	12.64	0.02	29.39	0.58	29.98	0.06	0.58	0.64	0.00	2,103.89	2,103.89	0.15	0.00	2,107.12
2012	6.29	6.52	11.05	0.02	1.03	0.40	1.43	0.05	0.40	0.45	0.00	1,889.61	1,889.61	0.15	0.00	1,892.82
Total	**10.55**	**29.98**	**31.86**	**0.05**	**80.41**	**1.57**	**81.99**	**0.15**	**1.57**	**1.72**	**0.00**	**5,287.42**	**5,287.42**	**0.38**	**0.00**	**5,295.51**

Revised Project Annual Operational GHG Emissions

(With Mitigation and TOD/TDM Components)

Casden Sepulveda - Revised Project

Los Angeles-South Coast County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric
Apartments Mid Rise	566	Dwelling Unit
Congregate Care (Assisted Living)	72	Dwelling Unit
Free-Standing Discount Store	100	1000sqft
Regional Shopping Center	10	1000sqft
Supermarket	50	1000sqft

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Utility Company**	Los Angeles Department of Water & Power
Climate Zone	11	**Precipitation Freq (Days)**	33		

1.3 User Entered Comments

Project Characteristics - Revised Project

Land Use - custom project site size

Construction Phase - construction schedule.

Off-road Equipment - custom mix

Off-road Equipment - custom mix

Off-road Equipment - custom mix.

Off-road Equipment - existing scenario

Off-road Equipment - custom mix

Off-road Equipment - custom mix

Demolition -

Grading - custom

Vehicle Trips - trip rates per traffic study

Woodstoves - custom

Energy Use -

Construction Off-road Equipment Mitigation -

Area Mitigation -

Energy Mitigation -

Water Mitigation -

2.0 Emissions Summary

	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	9.60	23.53	95.91	0.13	12.87	0.91	13.78	0.49	0.91	1.40	0.00	11,881.26	11,881.26	0.73	0.00	11,896.68
Unmitigated	9.60	23.53	95.91	0.13	12.87	0.91	13.78	0.49	0.91	1.40	0.00	11,881.26	11,881.26	0.73	0.00	11,896.68
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
Apartments Mid Rise	2,854.34	2,854.34	2854.34	9,506,585	9,506,585
Congregate Care (Assisted Living)	158.04	158.04	158.04	526,364	526,364
Free-Standing Discount Store	3,426.00	3,426.00	3426.00	8,206,043	8,206,043
Regional Shopping Center	324.00	324.00	324.00	849,526	849,526
Supermarket	2,640.00	2,640.00	2640.00	4,777,504	4,777,504
Total	9,402.38	9,402.38	9,402.38	23,866,022	23,866,022

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
Apartments Mid Rise	12.70	7.00	9.50	40.20	19.20	40.60
Congregate Care (Assisted Living)	12.70	7.00	9.50	40.20	19.20	40.60
Free-Standing Discount Store	8.90	13.30	7.40	12.20	68.80	19.00
Regional Shopping Center	8.90	13.30	7.40	16.30	64.70	19.00
Supermarket	8.90	13.30	7.40	6.50	74.50	19.00

5.0 Energy Detail

5.1 Mitigation Measures Energy

Exceed Title 24

Install Energy Efficient Appliances

	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	3,151.59	3,151.59	0.07	0.03	3,161.81
Electricity Unmitigated						0.00	0.00		0.00	0.00	0.00	3,269.86	3,269.86	0.08	0.03	3,280.48
NaturalGas Mitigated	0.05	0.40	0.19	0.00		0.00	0.03		0.00	0.03	0.00	458.98	458.98	0.01	0.01	461.77
NaturalGas Unmitigated	0.05	0.45	0.22	0.00		0.00	0.04		0.00	0.04	0.00	521.80	521.80	0.01	0.01	524.98
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					
Apartments Mid Rise	7.50676e+006	0.04	0.35	0.15	0.00		0.00	0.03		0.00	0.03	0.00	400.59	400.59	0.01	0.01	403.03
Congregate Care (Assisted Living)	954923	0.01	0.04	0.02	0.00		0.00	0.00		0.00	0.00	0.00	50.96	50.96	0.00	0.00	51.27
Free-Standing Discount Store	170000	0.00	0.01	0.01	0.00		0.00	0.00		0.00	0.00	0.00	9.07	9.07	0.00	0.00	9.13
Regional Shopping Center	17000	0.00	0.00	0.00	0.00		0.00	0.00		0.00	0.00	0.00	0.91	0.91	0.00	0.00	0.91
Supermarket	1.1295e+006	0.01	0.06	0.05	0.00		0.00	0.00		0.00	0.00	0.00	60.27	60.27	0.00	0.00	60.64
Total		**0.06**	**0.46**	**0.23**	**0.00**		**0.00**	**0.03**		**0.00**	**0.03**	**0.00**	**521.80**	**521.80**	**0.01**	**0.01**	**524.98**

5.2 Energy by Land Use - NaturalGas

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU	tons/yr										MT/yr					
Apartments Mid Rise	6.54892e+006	0.04	0.30	0.13	0.00		0.00	0.02		0.00	0.02	0.00	349.48	349.48	0.01	0.01	351.60
Congregate Care (Assisted Living)	833078	0.00	0.04	0.02	0.00		0.00	0.00		0.00	0.00	0.00	44.46	44.46	0.00	0.00	44.73
Free-Standing Discount Store	151850	0.00	0.01	0.01	0.00		0.00	0.00		0.00	0.00	0.00	8.10	8.10	0.00	0.00	8.15
Regional Shopping Center	15185	0.00	0.00	0.00	0.00		0.00	0.00		0.00	0.00	0.00	0.81	0.81	0.00	0.00	0.82
Supermarket	1.05188e+006	0.01	0.05	0.04	0.00		0.00	0.00		0.00	0.00	0.00	56.13	56.13	0.00	0.00	56.47
Total		**0.05**	**0.40**	**0.20**	**0.00**		**0.00**	**0.02**		**0.00**	**0.02**	**0.00**	**458.98**	**458.98**	**0.01**	**0.01**	**461.77**

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			
Apartments Mid Rise	1.94579e+006					1,093.11	0.03	0.01	1,096.66
Congregate Care (Assisted Living)	247521					139.05	0.00	0.00	139.50
Free-Standing Discount Store	1.517e+006					852.23	0.02	0.01	854.99
Regional Shopping Center	151700					85.22	0.00	0.00	85.50
Supermarket	1.9585e+006					1,100.25	0.03	0.01	1,103.82
Total						**3,269.86**	**0.08**	**0.03**	**3,280.47**

5.3 Energy by Land Use - Electricity

Mitigated

	Electricity Use	ROG	NOx	CO	SO2	Total CO2	CH4	N2O	CO2e
Land Use	kWh	tons/yr				MT/yr			
Apartments Mid Rise	1.85919e+006					1,044.46	0.02	0.01	1,047.85
Congregate Care (Assisted Living)	244929					137.60	0.00	0.00	138.04
Free-Standing Discount Store	1.4435e+006					810.93	0.02	0.01	813.57
Regional Shopping Center	144350					81.09	0.00	0.00	81.36
Supermarket	1.918e+006					1,077.50	0.03	0.01	1,081.00
Total						**3,151.58**	**0.07**	**0.03**	**3,161.82**

6.0 Area Detail

6.1 Mitigation Measures Area

Use Low VOC Paint - Residential Interior

Use Low VOC Paint - Residential Exterior

Use Low VOC Paint - Non-Residential Interior

Use Low VOC Paint - Non-Residential Exterior

Use only Natural Gas Hearths

	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	3.70	0.12	10.10	0.00		0.00	0.08		0.00	0.08	0.00	429.53	429.53	0.03	0.01	432.42
Unmitigated	5.78	0.17	14.11	0.01		0.00	0.68		0.00	0.68	67.77	406.55	474.32	0.23	0.01	481.95
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	0.43					0.00	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Consumer Products	2.88					0.00	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hearth	2.12	0.05	4.01	0.01		0.00	0.63		0.00	0.63	67.77	390.68	458.45	0.21	0.01	465.70
Landscaping	0.34	0.12	10.10	0.00		0.00	0.05		0.00	0.05	0.00	15.87	15.87	0.02	0.00	16.25
Total	**5.77**	**0.17**	**14.11**	**0.01**		**0.00**	**0.68**		**0.00**	**0.68**	**67.77**	**406.55**	**474.32**	**0.23**	**0.01**	**481.95**

6.2 Area by SubCategory

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	0.43					0.00	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Consumer Products	2.88					0.00	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hearth	0.04	0.00	0.00	0.00		0.00	0.03		0.00	0.03	0.00	413.66	413.66	0.01	0.01	416.18
Landscaping	0.34	0.12	10.10	0.00		0.00	0.05		0.00	0.05	0.00	15.87	15.87	0.02	0.00	16.25
Total	**3.69**	**0.12**	**10.10**	**0.00**		**0.00**	**0.08**		**0.00**	**0.08**	**0.00**	**429.53**	**429.53**	**0.03**	**0.01**	**432.43**

7.0 Water Detail

7.1 Mitigation Measures Water

Apply Water Conservation Strategy

	ROG	NOx	CO	SO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr				MT/yr			
Mitigated					523.43	1.38	0.04	564.27
Unmitigated					605.31	1.72	0.05	656.20
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			
Apartments Mid Rise	36.8772 / 23.2487					415.27	1.14	0.03	448.91
Congregate Care (Assisted Living)	4.69109 / 2.95743					52.83	0.14	0.00	57.11
Free-Standing Discount Store	7.40725 / 4.53993					82.60	0.23	0.01	89.36
Regional Shopping Center	0.740725 / 0.453993					8.26	0.02	0.00	8.94
Supermarket	6.16341 / 0.190621					46.34	0.19	0.01	51.89
Total						**605.30**	**1.72**	**0.05**	**656.21**

7.2 Water by Land Use

Mitigated

	Indoor/Outdoor Use	ROG	NOx	CO	SO2	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	tons/yr				MT/yr			
Apartments Mid Rise	29.5017 / 23.2487					361.24	0.91	0.03	388.25
Congregate Care (Assisted Living)	3.75287 / 2.95743					45.95	0.12	0.00	49.39
Free-Standing Discount Store	5.9258 / 4.53993					71.75	0.18	0.01	77.17
Regional Shopping Center	0.59258 / 0.453993					7.17	0.02	0.00	7.72
Supermarket	4.93073 / 0.190621					37.31	0.15	0.00	41.75
Total						**523.42**	**1.38**	**0.04**	**564.28**

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					212.86	12.58	0.00	477.04
Unmitigated					212.86	12.58	0.00	477.04
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			
Apartments Mid Rise	260.36					52.85	3.12	0.00	118.44
Congregate Care (Assisted Living)	65.7					13.34	0.79	0.00	29.89
Free-Standing Discount Store	430.07					87.30	5.16	0.00	195.65
Regional Shopping Center	10.5					2.13	0.13	0.00	4.78
Supermarket	282					57.24	3.38	0.00	128.29
Total						**212.86**	**12.58**	**0.00**	**477.05**

8.2 Waste by Land Use

Mitigated

	Waste Disposed	ROG	NOx	CO	SO2	Total CO2	CH4	N2O	CO2e
Land Use	tons	tons/yr				MT/yr			
Apartments Mid Rise	260.36					52.85	3.12	0.00	118.44
Congregate Care (Assisted Living)	65.7					13.34	0.79	0.00	29.89
Free-Standing Discount Store	430.07					87.30	5.16	0.00	195.65
Regional Shopping Center	10.5					2.13	0.13	0.00	4.78
Supermarket	282					57.24	3.38	0.00	128.29
Total						**212.86**	**12.58**	**0.00**	**477.05**

9.0 Vegetation

Revised Project Annual Operational GHG Emissions

(Without Mitigation or TOD/TDM Components)

Casden Sepulveda - Revised Project

Los Angeles-South Coast County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric
Apartments Mid Rise	566	Dwelling Unit
Congregate Care (Assisted Living)	72	Dwelling Unit
Free-Standing Discount Store	100	1000sqft
Regional Shopping Center	10	1000sqft
Supermarket	50	1000sqft

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Utility Company**	Los Angeles Department of Water & Power
Climate Zone	11	**Precipitation Freq (Days)**	33		

1.3 User Entered Comments

Project Characteristics - Revised Project

Land Use - custom project site size

Construction Phase - no construction

Off-road Equipment - custom mix

Off-road Equipment - custom mix.

Demolition -

Grading - custom

Vehicle Trips - trip rates per traffic study

Woodstoves - custom

Energy Use -

Construction Off-road Equipment Mitigation -

Area Mitigation -

Energy Mitigation -

Water Mitigation -

2.0 Emissions Summary

	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	15.27	37.18	151.94	0.21	20.22	1.43	21.65	0.78	1.43	2.21	0.00	18,685.78	18,685.78	1.16	0.00	18,710.11
Unmitigated	15.27	37.18	151.94	0.21	20.22	1.43	21.65	0.78	1.43	2.21	0.00	18,685.78	18,685.78	1.16	0.00	18,710.11
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
Apartments Mid Rise	3,763.90	3,763.90	3763.90	12,535,949	12,535,949
Congregate Care (Assisted Living)	251.06	251.06	251.06	836,187	836,187
Free-Standing Discount Store	5,724.00	5,724.00	5724.00	13,710,272	13,710,272
Regional Shopping Center	443.00	443.00	443.00	1,161,543	1,161,543
Supermarket	5,112.00	5,112.00	5112.00	9,250,985	9,250,985
Total	15,293.96	15,293.96	15,293.96	37,494,937	37,494,937

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
Apartments Mid Rise	12.70	7.00	9.50	40.20	19.20	40.60
Congregate Care (Assisted Living)	12.70	7.00	9.50	40.20	19.20	40.60

	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
Free-Standing Discount Store	8.90	13.30	7.40	12.20	68.80	19.00
Regional Shopping Center	8.90	13.30	7.40	16.30	64.70	19.00
Supermarket	8.90	13.30	7.40	6.50	74.50	19.00

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	3,269.86	3,269.86	0.08	0.03	3,280.48
Electricity Unmitigated						0.00	0.00		0.00	0.00	0.00	3,269.86	3,269.86	0.08	0.03	3,280.48
NaturalGas Mitigated	0.05	0.45	0.22	0.00		0.00	0.04		0.00	0.04	0.00	521.80	521.80	0.01	0.01	524.98
NaturalGas Unmitigated	0.05	0.45	0.22	0.00		0.00	0.04		0.00	0.04	0.00	521.80	521.80	0.01	0.01	524.98
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					
Apartments Mid Rise	7.50676e+006	0.04	0.35	0.15	0.00		0.00	0.03		0.00	0.03	0.00	400.59	400.59	0.01	0.01	403.03
Congregate Care (Assisted Living)	954923	0.01	0.04	0.02	0.00		0.00	0.00		0.00	0.00	0.00	50.96	50.96	0.00	0.00	51.27
Free-Standing Discount Store	170000	0.00	0.01	0.01	0.00		0.00	0.00		0.00	0.00	0.00	9.07	9.07	0.00	0.00	9.13
Regional Shopping Center	17000	0.00	0.00	0.00	0.00		0.00	0.00		0.00	0.00	0.00	0.91	0.91	0.00	0.00	0.91
Supermarket	1.1295e+006	0.01	0.06	0.05	0.00		0.00	0.00		0.00	0.00	0.00	60.27	60.27	0.00	0.00	60.64
Total		**0.06**	**0.46**	**0.23**	**0.00**		**0.00**	**0.03**		**0.00**	**0.03**	**0.00**	**521.80**	**521.80**	**0.01**	**0.01**	**524.98**

5.2 Energy by Land Use - NaturalGas

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU	tons/yr										MT/yr					
Apartments Mid Rise	7.50676e+006	0.04	0.35	0.15	0.00		0.00	0.03		0.00	0.03	0.00	400.59	400.59	0.01	0.01	403.03
Congregate Care (Assisted Living)	954923	0.01	0.04	0.02	0.00		0.00	0.00		0.00	0.00	0.00	50.96	50.96	0.00	0.00	51.27
Free-Standing Discount Store	170000	0.00	0.01	0.01	0.00		0.00	0.00		0.00	0.00	0.00	9.07	9.07	0.00	0.00	9.13
Regional Shopping Center	17000	0.00	0.00	0.00	0.00		0.00	0.00		0.00	0.00	0.00	0.91	0.91	0.00	0.00	0.91
Supermarket	1.1295e+006	0.01	0.06	0.05	0.00		0.00	0.00		0.00	0.00	0.00	60.27	60.27	0.00	0.00	60.64
Total		**0.06**	**0.46**	**0.23**	**0.00**		**0.00**	**0.03**		**0.00**	**0.03**	**0.00**	**521.80**	**521.80**	**0.01**	**0.01**	**524.98**

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			
Apartments Mid Rise	1.94579e+006					1,093.11	0.03	0.01	1,096.66
Congregate Care (Assisted Living)	247521					139.05	0.00	0.00	139.50
Free-Standing Discount Store	1.517e+006					852.23	0.02	0.01	854.99
Regional Shopping Center	151700					85.22	0.00	0.00	85.50
Supermarket	1.9585e+006					1,100.25	0.03	0.01	1,103.82
Total						**3,269.86**	**0.08**	**0.03**	**3,280.47**

5.3 Energy by Land Use - Electricity

Mitigated

	Electricity Use	ROG	NOx	CO	SO2	Total CO2	CH4	N2O	CO2e
Land Use	kWh	tons/yr				MT/yr			
Apartments Mid Rise	1.94579e+006					1,093.11	0.03	0.01	1,096.66
Congregate Care (Assisted Living)	247521					139.05	0.00	0.00	139.50
Free-Standing Discount Store	1.517e+006					852.23	0.02	0.01	854.99
Regional Shopping Center	151700					85.22	0.00	0.00	85.50
Supermarket	1.9585e+006					1,100.25	0.03	0.01	1,103.82
Total						**3,269.86**	**0.08**	**0.03**	**3,280.47**

6.0 Area Detail

6.1 Mitigation Measures Area

Use Low VOC Paint - Residential Interior

Use Low VOC Paint - Residential Exterior

Use Low VOC Paint - Non-Residential Interior

Use Low VOC Paint - Non-Residential Exterior

Use only Natural Gas Hearths

	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	3.70	0.12	10.10	0.00		0.00	0.08		0.00	0.08	0.00	429.53	429.53	0.03	0.01	432.42
Unmitigated	5.78	0.17	14.11	0.01		0.00	0.68		0.00	0.68	67.77	406.55	474.32	0.23	0.01	481.95
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	0.43					0.00	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Consumer Products	2.88					0.00	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hearth	2.12	0.05	4.01	0.01		0.00	0.63		0.00	0.63	67.77	390.68	458.45	0.21	0.01	465.70
Landscaping	0.34	0.12	10.10	0.00		0.00	0.05		0.00	0.05	0.00	15.87	15.87	0.02	0.00	16.25
Total	**5.77**	**0.17**	**14.11**	**0.01**		**0.00**	**0.68**		**0.00**	**0.68**	**67.77**	**406.55**	**474.32**	**0.23**	**0.01**	**481.95**

6.2 Area by SubCategory

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	0.43					0.00	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Consumer Products	2.88					0.00	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hearth	0.04	0.00	0.00	0.00		0.00	0.03		0.00	0.03	0.00	413.66	413.66	0.01	0.01	416.18
Landscaping	0.34	0.12	10.10	0.00		0.00	0.05		0.00	0.05	0.00	15.87	15.87	0.02	0.00	16.25
Total	**3.69**	**0.12**	**10.10**	**0.00**		**0.00**	**0.08**		**0.00**	**0.08**	**0.00**	**429.53**	**429.53**	**0.03**	**0.01**	**432.43**

7.0 Water Detail

7.1 Mitigation Measures Water

	ROG	NOx	CO	SO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr				MT/yr			
Mitigated					605.31	1.72	0.05	656.20
Unmitigated					605.31	1.72	0.05	656.20
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			
Apartments Mid Rise	36.8772 / 23.2487					415.27	1.14	0.03	448.91
Congregate Care (Assisted Living)	4.69109 / 2.95743					52.83	0.14	0.00	57.11
Free-Standing Discount Store	7.40725 / 4.53993					82.60	0.23	0.01	89.36
Regional Shopping Center	0.740725 / 0.453993					8.26	0.02	0.00	8.94
Supermarket	6.16341 / 0.190621					46.34	0.19	0.01	51.89
Total						**605.30**	**1.72**	**0.05**	**656.21**

7.2 Water by Land Use

Mitigated

	Indoor/Outdoor Use	ROG	NOx	CO	SO2	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	tons/yr				MT/yr			
Apartments Mid Rise	36.8772 / 23.2487					415.27	1.14	0.03	448.91
Congregate Care (Assisted Living)	4.69109 / 2.95743					52.83	0.14	0.00	57.11
Free-Standing Discount Store	7.40725 / 4.53993					82.60	0.23	0.01	89.36
Regional Shopping Center	0.740725 / 0.453993					8.26	0.02	0.00	8.94
Supermarket	6.16341 / 0.190621					46.34	0.19	0.01	51.89
Total						**605.30**	**1.72**	**0.05**	**656.21**

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					212.86	12.58	0.00	477.04
Unmitigated					212.86	12.58	0.00	477.04
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			
Apartments Mid Rise	260.36					52.85	3.12	0.00	118.44
Congregate Care (Assisted Living)	65.7					13.34	0.79	0.00	29.89
Free-Standing Discount Store	430.07					87.30	5.16	0.00	195.65
Regional Shopping Center	10.5					2.13	0.13	0.00	4.78
Supermarket	282					57.24	3.38	0.00	128.29
Total						**212.86**	**12.58**	**0.00**	**477.05**

8.2 Waste by Land Use

Mitigated

	Waste Disposed	ROG	NOx	CO	SO2	Total CO2	CH4	N2O	CO2e
Land Use	tons	tons/yr				MT/yr			
Apartments Mid Rise	260.36					52.85	3.12	0.00	118.44
Congregate Care (Assisted Living)	65.7					13.34	0.79	0.00	29.89
Free-Standing Discount Store	430.07					87.30	5.16	0.00	195.65
Regional Shopping Center	10.5					2.13	0.13	0.00	4.78
Supermarket	282					57.24	3.38	0.00	128.29
Total						**212.86**	**12.58**	**0.00**	**477.05**

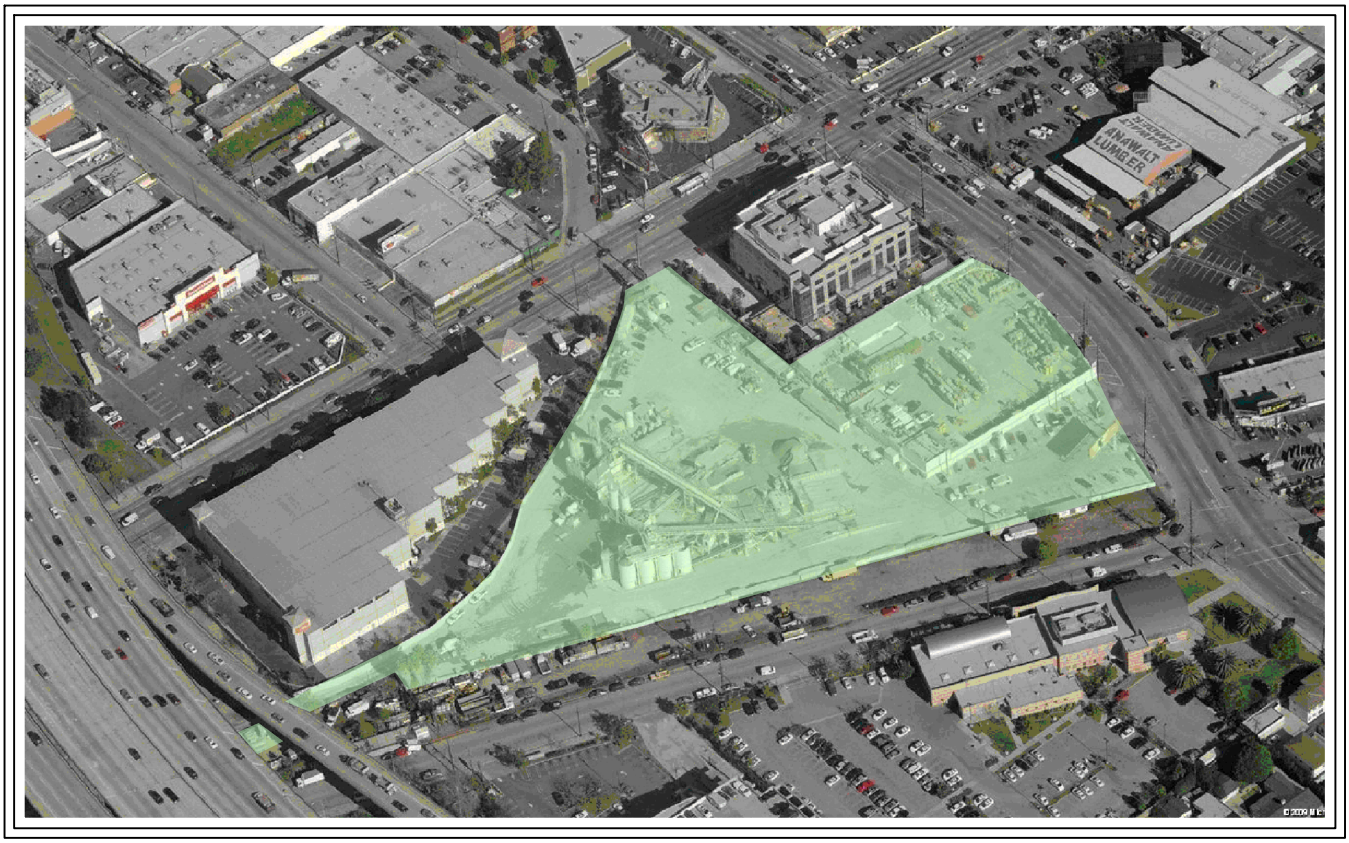
9.0 Vegetation

ATTACHMENT C

SUPPLEMENTAL TRAFFIC STUDY

TRAFFIC IMPACT ANALYSIS REPORT

Modified Mixed-Use Development
(638 Apartments, 110,000 Square Foot Retail
and 50,000 Square Foot Supermarket)
at Sepulveda Boulevard and Pico Boulevard
in Los Angeles, California



Prepared for:

Casden West LA
9090 Wilshire Boulevard
Third Floor
Beverly Hills, California 90211

Prepared by:

HIRSCH GREEN
Hirsch/Green Transportation Consulting, Inc.
13333 Ventura Boulevard, #204
Sherman Oaks, California 91423

REGISTERED PROFESSIONAL ENGINEER
RONALD R. HIRSCH
NO. 2318
6-30-2013
TRAFFIC
STATE OF CALIFORNIA

DECEMBER 2012

EXECUTIVE SUMMARY

This report summarizes the results of a supplemental traffic impact analysis prepared to identify and address the effects of proposed modifications to a new mixed-use residential and retail development located at the northwest corner of Sepulveda Boulevard and Exposition Boulevard, in the West Los Angeles community of the City of Los Angeles. The project site is located in the southwest quadrant of the intersection of Pico Boulevard and Sepulveda Boulevard, and is currently developed with an existing and active concrete batch plant and a building materials supply store, both of which will be removed to construct the proposed development. The second phase of the future Los Angeles County Metropolitan Transportation Authority's ("Metro") Exposition Light Rail ("Expo Line") project is also planned along the existing rail easement on the southern side of the site (fronting Exposition Boulevard).

The currently-proposed project, which is still under review by the City, contains a total of approximately 538 residential apartment units (including 59 low-income units), plus a total of approximately 266,800 square feet of site-serving, local-oriented, and subregional retail uses, including a 54,350 square foot supermarket and a 212,450 square foot Target (or similar) store. The proposed modifications to the originally-analyzed project will include an increase in the number of residential units to a total of approximately 638 units (now including a total of approximately 72 senior affordable units), although the commercial component of the project will be reduced by over 100,000 square feet, to a total of approximately 160,000 square feet. The anticipated uses within the commercial component of the modified project have also changed, and are envisioned to include an approximately 100,000 square foot Target (or similar) store, an approximately 50,000 square foot supermarket, and a total of approximately 10,000 square feet of general/local-serving retail area.

Parking for the modified project will be provided in an on-site six-level subterranean parking facility located beneath the entire site. The project's parking garage will contain a total of approximately 1,799 parking spaces, comprised of approximately 640 spaces designated for the project's commercial/retail uses, and an additional 1,159 resident-only and residential guest parking spaces, including a total of approximately 999 resident parking spaces (963 market-rate unit spaces and 36 senior affordable unit spaces) and 160 residential guest parking spaces. Circulation between the various parking levels for each of the project components will be provided by an internal ramping system, with separate access driveways for the commercial and residential uses, and where necessary, physical barriers to prevent commercial/retail-related vehicles and

residential guests from parking in the resident-only parking spaces. The amount of parking provided by the modified project will meet the current City of Los Angeles Municipal Code ("LAMC") parking requirements for both the residential and commercial components of the project, and as such, no significant off-site parking impacts or "spill over" parking into adjoining residential neighborhoods or commercial areas is anticipated.

Access to the modified project's on-site parking facilities will be provided via a total of five driveways, including one entry/exit driveway located along Pico Boulevard, two entry/exit driveways along Sepulveda Boulevard, one entry/exit driveway along Exposition Boulevard, and one commercial component exit-only driveway accessing Sawtelle Boulevard via an easement running under the I-405 Freeway (this driveway is exit-only for patrons of the project, although it also provides an entry lane to access the commercial loading docks on the site's ground floor); additionally, a new "fire access" driveway is also now proposed along Exposition Boulevard, between Sepulveda Boulevard and the residential access driveway. The Pico Boulevard, northernmost Sepulveda Boulevard, and Sawtelle Boulevard driveways will each provide access to or from the commercial/retail parking levels of the modified project's on-site parking facilities, while the southernmost Sepulveda Boulevard and Exposition Boulevard driveways will provide direct access to the residential parking levels.

Due to the lane configurations of the site-fronting streets and/or the proximity of the project's driveways to the adjacent intersections, both the Pico Boulevard and Sepulveda Boulevard commercial/retail access driveways are assumed to accommodate both left-turn and right-turn entry movements, although exiting movements from these driveways will likely be restricted to right-turn only movements. Additionally, the Sepulveda Boulevard residential driveway is expected to allow only right-turn entry/right-turn exit operations, while the Sawtelle Boulevard commercial/retail exit-only driveway is expected to be restricted to right-turn only moves; only the Exposition Boulevard residential access driveway is expected to exhibit "full service" access operations, with no entry or exit turn restrictions anticipated. None of the project access driveways are proposed to be traffic signal controlled.

The scope of this supplemental study is the same as for the traffic analyses prepared for the currently-proposed project ("Revised December 2009" plus additional analyses prepared as part of the project's Draft Environmental Impact Report), and includes detailed evaluation of both the existing and forecast future conditions, including the identification of potential incremental project-related impacts, at a total of 61 signalized intersections in the vicinity of the project during both the

AM and PM peak hours. Additionally, two other intersections within the project vicinity, the I-405 Freeway Northbound On-Ramp/Tennessee Avenue and Cotner Avenue, and Sawtelle Boulevard and Exposition Boulevard, were also evaluated. However, these additional intersections are each unsignalized, and are STOP sign controlled along the minor approaches (Tennessee Avenue, and Exposition Boulevard). These locations were examined to determine whether traffic signal installation is currently warranted, or if potential future traffic growth (including trips generated by the proposed project) would result in the need for a traffic signal at one or more of these intersections under the future forecast conditions.

The results of these supplemental analyses indicate that, once the existing on-site uses are removed and the new development is completed and occupied, the modified project would be expected to result in a total of approximately 9,953 net new daily trips, including 394 net new trips during the AM peak hour, and 992 net new trips during the PM peak hour. This represents a reduction in net site-related trips of 3,760 daily trips (approximately 27.4 percent) from the 13,713 daily trips produced by the currently-proposed project. The net peak hour trips would also be reduced by 51 trips (approximately 12.2 percent) from the 449 trips associated with the current project during the AM peak hour, and by 240 trips (approximately 19.5 percent) from the 1,232 trips generated by the current project during the PM peak hour.

Based on its reduced traffic generation, the analyses contained in this report indicate that the modified project could result in significant impacts a total of 23 of the 61 study intersections during one or both of the peak hours under the “Existing With Project” conditions, and a total of 25 of the 61 study intersections under the forecast “Future With Project” scenario. These values represent a reduction of six impacts (from a total of 29) under the “Existing With Project” and a reduction of two impacts (from a total of 25) under the forecast “Future With Project” in the number of intersections anticipated to be significantly impacted by the currently-proposed project conditions, as described in the prior analyses prepared for that project.

The City of Los Angeles has established the West Los Angeles Transportation Improvement and Mitigation (“WLA TIMP”) Specific Plan to address increasing traffic growth and congestion in the project vicinity and throughout the West Los Angeles area. The WLA TIMP identifies that new projects within its jurisdiction are subject to traffic impact assessment (“TIA”) fees, based on the number of new PM peak hour trips resulting from such projects. These fees are targeted toward a series of identified improvements as well as establishing funding for general roadway infrastructure and operational improvements. The WLA TIMP makes exception to the fees for

designated uses that are characterized as “local serving”, such as neighborhood or community retail developments, restaurants, and residential uses. These types of developments are considered by the WLA TIMP to aid in the goal of reducing traffic congestion by providing a better localized mix of housing, jobs, and service industries, which reduce or eliminate the need for longer trips to such facilities outside the WLA TIMP area.

The current WLA TIMP trip fee, effective January 1, 2012, is $3,184 per PM peak hour trip (note that the TIA fee at the time the “Revised December 2009” traffic study was completed was $3,097 per PM peak hour trip). Based on the current fee structure, the WLA TIMP traffic impact fees for the modified project would be a total gross trip fee assessment of approximately $1,461,456 (for comparison, if the $3,097 per PM peak hour trip TIA fee rate used in the “Revised December 2009” study were applied to the modified project, the resulting TIA fee would be approximately $1,421,523, or approximately one-half the $2,836,852 TIA fee amount noted in that study for the currently-proposed project). It is of note that, while TIA fee “credits” are available for the removal of trips associated with any existing on-site uses, both the existing building materials store and concrete batch plant are considered to be “local serving” uses, and as such, reductions in the assessed WLA TIMP traffic impact as a result of the removal of their associated traffic are not appropriate. Therefore, the modified project’s WLA TIMP TIA fee amount will remain at $1,461,456.

The WLA TIMP trip fees are designed to address cumulative traffic increases throughout the West Los Angeles area, including those from the proposed project as well as other ongoing or future development in the WLA TIMP vicinity and throughout the region, through the implementation of both local and regional traffic improvements. However, payment of the required WLA TIMP trip fees (including their use to fund and construct roadway and/or traffic signal improvements within the immediate project area) are not considered to be mitigation for any project-specific traffic impacts (such as those identified and described earlier in this report). Therefore, in addition to payment of the WLA TIMP trip fees, the City requires that private development projects mitigate their own impacts, to the extent feasible, in order to provide more immediate relief for project-specific traffic effects on the surrounding vicinity.

The “Revised December 2009” traffic study prepared for the currently-proposed project described a comprehensive traffic impact mitigation program that included both trip reduction measures and physical roadway and/or traffic signal improvements. While the modified project will result in fewer significant impacts than the currently-proposed project, all of the significant impacts

eliminated by the reduction in trips resulting from the modified project occur at intersections for which no physical roadway or traffic signal improvements were originally identified, and as a result, the traffic impact mitigation program recommended for the modified project is similar to that described in the "Revised December 2009" study. The recommended mitigation measures for the modified project are described below.

Signalized Study Intersection Impacts

Project Trip-Reduction Measures/Transportation Demand Management Program

The recommended trip reduction program for the modified project includes two components, the primarily residential-oriented transit-oriented design ("TOD") reductions, which are generally associated with the actual design of the project and its proximity to public transit facilities (such as the future Expo Line Sepulveda/Exposition Station), and the more commercial-oriented transportation demand management ("TDM") program, which is targeted toward increasing both project-specific and area-wide transit ridership by enhancing transit amenities such as bus stops or wayfinding/informational signage, and/or through incentives to potential transit riders.

The first of these additional elements, the TOD-related trip reductions, results from the development of the project immediately adjacent to the future Expo Line Sepulveda/Exposition station. The immediate proximity of these future transit facilities, including both the Expo Line itself as well as the anticipated expansion of Metro and other providers' bus service to the station location, will allow both project residents and employees and customers of the project's commercial and retail components to use these transit facilities to travel to and from the site without the use of single-occupancy vehicles. For purposes of the analysis of its effectiveness, LADOT has determined that a total trip reduction factor of 25 percent is appropriate to account for project resident (and guest) utilization of the future site-adjacent Expo Line.

The TOD-related trip reduction program is also expected to include a number of programs and/or features which could be incorporated into the project site that would provide incentives for additional transit utilization either by patrons of the project's commercial components, or would encourage the broader use by the surrounding community of the Expo Line and/or bus services available in the project vicinity. These programs included "First Mile/Last Mile" accommodation of persons using the Expo Line and/or bus services at the Sepulveda/Exposition station through the provision of short-term rental vehicles (automobiles), bicycles, or shuttle buses at or near transit stations for use by transit riders to reach destinations in the vicinity of the transit station that are not served directly by convenient transit facilities. Other measures include relocating bus layover

facilities from their existing locations to the project site, or rerouting existing UCLA/Santa Monica College ("SMC") shuttles to serve the new Sepulveda/Exposition station. Each of these programs could encourage additional transit ridership, including potential riders who are not specifically served by the current transit facilities and therefore choose not to utilize these alternative modes of transportation.

It is of also of note that the project will be required by City ordinance to implement a Transportation Demand Management ("TDM") program to reduce its trip generation. It is likely that the required TDM program will incorporate many of the trip-reduction measures identified above, although such measures are not required in order to implement an effective TDM program. An overview of the potential elements of the project TDM program is provided below.

Project Transportation Demand Management (TDM) Program – The project will implement a Transportation Demand Management program to reduce both daily and peak hour trips to and from the project site. This program shall be available to residents, visitors, employees, and patrons of the project. The program will be overseen by an on-site TDM coordinator, who will assist with the development, operation, and implementation of the various programs, including but not limited to carpool incentives, ride share matching, bicycle lockers, and variable work shifts. A menu of items to be included in the TDM program, developed specifically for the project or taken from the City's Transportation Demand Management Ordinance (Section 98.0411 of the LAMC), are described below; note that not all of these elements would apply to all of the site's component uses.

- On-site Transportation Coordinator, in charge of:
  - Carpool/Vanpool and Rideshare Matching
  - Preferential Vanpool/Carpool Parking
  - Transit Passes or Subsidies
  - Parking Cash-Out
  - Flex-Use Vehicles
  - Guaranteed Ride Home
- Bicycle Racks and Showers/Lockers
- Flexible Work Hours/Telecommute Opportunities
- Bus/Transit Stop Shelters and/or Amenities
- Wayfinding Information and Signage

Although the specific details of the proposed project TDM program cannot be fully identified at this time, due to the preliminary nature of the modified project (including uncertainties regarding potential tenants of the retail/commercial uses, which are primary contributors to the project traffic generation), the City typically requires that a draft TDM program, including target goals for trip reduction effectiveness, be submitted to LADOT for review prior to the issuance of any project construction permits, with a final detailed project TDM Plan prepared for LADOT review and approval prior to the issuance of any certificates of occupancy for the project. However, the TDM program is assumed to result in a 10 percent reduction in the number of hour trips generated by the "commercial" (retail and supermarket) components of the site.

The combined effects of the TOD/TDM trip reduction programs are expected to result in overall project trip reductions of approximately 1,312 trips per day, including a reduction of approximately 63 trips during the AM peak hour, and a reduction of approximately 121 trips during the PM peak hour. However, it is of note that these trip reduction measures are largely tied to the completion of the new Expo Line (Phase 2) project, including the new Sepulveda/Exposition station adjacent to the project site. Since Phase 2 of the Expo Line does not yet exist, the trip reduction-related mitigation measures identified to mitigate the project's impacts are not considered to be applicable to the "Existing With Project" conditions, and are therefore not assumed as mitigation for that scenario in this supplemental analysis.

Therefore, the effectiveness of the proposed TOD/TDM trip reduction measures was evaluated for the forecast "Future With Project" scenario. The anticipated trip reductions would reduce the impacts of the modified project to less-than-significant levels at a total of four of the 25 locations significantly impacted under the forecast "Future With Project" scenario; Wilshire Boulevard and Westwood Boulevard, Ohio Avenue and Sepulveda Boulevard, Pico Boulevard and Barrington Avenue, and Pico Boulevard and Overland Avenue, and as a result, no further mitigation measures are necessary at these locations. It is of note that the physical and/or traffic signal mitigation improvements previously recommended for the currently-proposed project at the intersections of Ohio Avenue and Sepulveda Boulevard (to widen the northwest corner of the intersection within the existing right-of-way to construct a new southbound right-turn only lane), and at Pico Boulevard and Barrington Avenue (to restripe the northbound approach of Barrington Avenue to provide an exclusive right-turn only lane, and to install new left-turn signal phasing for both the northbound and southbound approaches) are no longer necessary; no feasible improvements were available for the currently-proposed project at the intersections of Wilshire Boulevard and Westwood Boulevard or Pico Boulevard and Overland Avenue.

Recommended Physical/Traffic Signal Mitigation Improvements

While the recommended trip reduction programs would reduce the magnitudes of many of the project's significant impacts, only four of the impacts would be reduced to less-than-significant levels. Therefore, potential physical and/or traffic signal improvements at each of the remaining impacted intersections were explored. As described in the "Revised December 2009" traffic study, and supplemented by LADOT's September 28, 2010 assessment letter on the traffic study, a total of 15 of the intersections significantly impacted by the modified project (and not mitigated with the recommended TOD/TDM trip reductions measures) under either the "existing" or forecast "future" analysis scenarios exhibit conditions which render any potential roadway or traffic signal improvements infeasible. Five additional impacted intersections are locations at which any feasible improvements are already "assigned", leaving them potentially unavailable as mitigation for the proposed (modified) project, although these "other project" mitigation improvements were not assumed as part of the background future roadway conditions (prior to development of the proposed project), since their implementation within the study timeline cannot be guaranteed.

It is also of note that the City's ATCS traffic signal coordination software upgrades have not yet been installed at several intersections in the area, including four of the intersections significantly impacted by the modified project (Olympic Boulevard and Bundy Drive, Pico Boulevard and Centinela Avenue, Pico Boulevard and Bundy Drive, Pico Boulevard and Barrington Avenue, and Pico Boulevard and Gateway Boulevard). However, while LADOT has indicated that funding for the future installation of the ATCS upgrades within the study area has received a commitment of funding (via Proposition 1B monies) to begin construction in fiscal year 2011/2012, it is not certain whether sufficient funds to accomplish this goal will be available as anticipated. As such, LADOT has indicated that the installation of the ATCS signal coordination upgrades is not currently being considered as potential project-related impact mitigation measures.

As a result of this lack of feasible roadway or traffic signal improvements, project-related mitigation measures are available at only three of the significantly impacted intersections noted above. These locations, and their associated mitigation improvements, are described below.

Recommended Intersection Impact Mitigation Measures

18. Olympic Boulevard and Westwood Boulevard – Restripe the southbound approach of Westwood Boulevard at this location within the existing roadway width to install a new right-turn only lane.

21. Tennessee Avenue/I-405 SB Off-Ramp and Sawtelle Boulevard – Convert the existing through/right-turn lane of the Off-Ramp to a left-turn/through/right-turn lane, and reconfigure the traffic signal phasing to provide opposed east-west signal indications. This measure will require review and approval from Caltrans.

54. Venice Boulevard and Sepulveda Boulevard – Widen the east side of Sepulveda Boulevard north of Venice Boulevard, and restripe the northbound approach to convert the existing right-turn only lane to a shared through/right-turn lane. Additionally, restripe the north leg of Sepulveda Boulevard to provide a third northbound "receiving" lane, which will ultimately transition back to the two existing northbound travel lane configuration. This improvement will require the removal of two existing on-street parking spaces along the east side of Sepulveda Boulevard immediately north of Venice Boulevard, but all remaining existing on-street parking will be maintained.

The analyses of the effectiveness of these recommended physical/signal improvement measures indicates that, even after their implementation, the modified project could result in significant and unavoidable impacts at a total of 20 of the 61 study intersections under the "existing" conditions analyses (compared to a total of 24 significant and unavoidable intersection impacts resulting from the currently-proposed project). However, the implementation of the additional TOD/TDM trip reduction measures associated with the future completion of the Expo Line will reduce the number of trips generated by the project (as well as the associated magnitudes of its impacts), and in conjunction with the recommended physical mitigation improvements, reduce the number of significant and unavoidable impacts of the project to a total of 18 intersections, or four (4) fewer than the 22 unmitigated intersection impacts anticipated due to the currently-proposed project. These intersections, where the potential effects of the modified project's traffic cannot be fully mitigated for the "future" (2012) conditions are listed below.

6. Santa Monica Boulevard and Sepulveda Boulevard
14. Olympic Boulevard and Bundy Drive
16. Olympic Boulevard and Sawtelle Boulevard
17. Olympic Boulevard and Sepulveda Boulevard
24. Pico Boulevard and I-10 EB Off-Ramp/34th Street
25. Pico Boulevard and Centinela Avenue
26. Pico Boulevard and Bundy Drive
28. Pico Boulevard and Gateway Boulevard

29. Pico Boulevard and Sawtelle Boulevard
30. Pico Boulevard and Cotner Avenue
31. Pico Boulevard and Sepulveda Boulevard
33. Pico Boulevard and Westwood Boulevard
38. Pico Boulevard and Motor Avenue/Fox Studios Driveway
40. Exposition Boulevard and Sepulveda Boulevard
44. National Boulevard and Sawtelle Boulevard
47. National Boulevard and Sepulveda Boulevard
48. National Boulevard and Westwood Boulevard
49. I-10 WB On/Off-Ramps/National Boulevard and Overland Avenue

It is also of note that the three physical roadway/signal improvement measures identified earlier as mitigation for the impacts at the intersections of Olympic Boulevard and Westwood Boulevard, Tennessee Avenue/I-405 SB Off-Ramp and Sawtelle Boulevard, and Venice Boulevard and Sepulveda Boulevard, are the only feasible measures available. Should one or more of these measures not be approved, and if alternative and equally effective mitigation measures cannot be identified, the project's impacts at these locations would remain significant and unavoidable.

Conversely, however, should any of the currently assumed "unavailable" mitigation measures become available to the proposed (modified) project, the number of significant and unavoidable project impacts could be reduced. Specifically, should the ATCS traffic signal coordination upgrades become available as mitigation for the subject project, this measure alone would reduce the project's impacts at four of the currently-assumed "significant and unavoidable" locations; Olympic Boulevard and Bundy Drive, Pico Boulevard and Centinela Avenue, Pico Boulevard and Bundy Drive, and Pico Boulevard and Gateway Boulevard; to less-than-significant levels. Additionally, potential roadway improvements at the intersections of Sepulveda Boulevard and National Boulevard (new northbound and southbound right-turn lanes), and Olympic Boulevard and Bundy Drive (dual eastbound left-turn lanes) are currently assigned to other development projects in the study area, but would reduce the impacts of the modified project at both locations to less-than-significant levels if they were to become available as project mitigation measures. As a result, if these currently unavailable ATCS and/or physical roadway improvements were to be implemented by the project at these five intersections (the impact at Olympic Boulevard and Bundy Drive would be mitigated by either the ATCS or physical roadway improvements), the total number of "significant and unavoidable" project impacts would be reduced from 18 to 13.

Notwithstanding the lack of available physical/traffic signal mitigation to address project impacts, the City may decide that 18 significant and unavoidable intersection impacts is an unacceptable number for project approval, and determine that reductions in the size or scale of the project are needed in order to reduce the number of residual significant impacts. Should that action occur, it is worth noting that the majority of the project's trips are the result of the commercial (retail and supermarket) components of the development. Therefore, it is reasonable to conclude that the commercial components of the project contribute greatly to the majority of the project's significant traffic impacts, and that many of the impacts are likely the result of the trips generated by these commercial components alone.

Additionally, the commercial components of the project produce far more trips per unit size than do the proposed residential units, with 1,000 square feet of the various commercial uses generating the equivalent of between 10 and 20 market-rate residential units during the critical PM peak hour. As such, incremental reductions to the size of the commercial components of the project will have a larger effect on the number of trips and their associated impacts than reductions to the number of residential units, and if the City determines that the project's impacts should be reduced or mitigated by reducing the size of the project, it is recommended that such reductions occur primarily within the proposed commercial components.

Local/Residential Street Impacts

Although it is expected that some of the modified project's traffic will actually be generated within the neighborhoods surrounding the project site (particularly for the proposed specialty market and local-serving retail uses, and will naturally use the local streets to travel to and from the project, the magnitude of these potential "new" trips on any of the residential streets in the project vicinity will be less than significant. As a result, no significant impacts to any of the nearby local/residential roadways are anticipated as a result of development of the modified project, and as such, no mitigation for such impacts is necessary.

Congestion Management Program ("CMP") Impacts

The modified project will not generate sufficient net new traffic to result in significant impacts to any of the CMP arterial roadways, intersections, or freeway mainline segments in or around the study area. Therefore, no CMP-related traffic mitigation measures are warranted for any of the regionally-significant transportation facilities in the project vicinity, and none are recommended.

Transit Impacts

The modified project is anticipated to result in additional transit ridership, especially as a result of the proposed TOD/TDM trip reduction and traffic mitigation programs, as project residents, employees, and patrons shift travel modes from private vehicles to public transit. It is estimated that the TOD/TDM programs will result in approximately 1,574 new transit riders per day, including approximately 75 new riders during the AM peak hour and approximately 145 new riders during the PM peak hour. The project site is currently served by approximately 40 buses per hour, and the future Expo Line is expected to provide up to 12 trains per hour per direction during the morning and afternoon/evening peak commute periods. As such, the potential project-related utilization of these services is expected to increase ridership by an average of only about two or three new riders per bus or train during the morning and afternoon/evening peak commute periods. This level of new rider demand is not expected to result in any significant transit-related impacts to the transit service in the area, and therefore, no specific transit-related mitigation measures are warranted. Additionally, the future Expo Line Sepulveda/Exposition Station could result in increased bus service to the project site, as Metro and other transit providers provide additional buses and/or add new routes to accommodate the new Expo Line riders, further reducing the potential transit impacts of the modified project.

Traffic Signal Warrant Analysis

Two unsignalized intersections, the I-405 Freeway Northbound On-Ramp/Tennessee Avenue and Cotner Avenue, and Sawtelle Boulevard and Exposition Boulevard, were examined to determine whether the installation of a new traffic signal would be warranted at either location. The results of these analyses indicated that a new traffic signal at this intersection is not recommended for the intersection of Cotner Avenue and Tennessee Avenue/I-405 Northbound On-Ramp. However, the intersection of Sawtelle Boulevard and Exposition Boulevard meets the applicable technical warrants, and as such, it is recommended that a new signal be installed at this location. It should be noted that a new signal at this location is warranted based on the existing traffic conditions in the area, and is not required as a result of the modified project. However, a new traffic signal at this location would improve access to the project's Exposition Boulevard driveway to and from the west, easing future traffic demands along Sepulveda Boulevard. Therefore, if acceptable to LADOT, it is recommended that the project contribute fair share funding to the installation of a new traffic signal at Sawtelle Boulevard and Exposition Boulevard.

TABLE OF CONTENTS

	Page
INTRODUCTION	**1**
PROJECT DESCRIPTION	**2**
Project Traffic Generation	5
Project Geographic Trip Distribution	10
Project Traffic Assignment	10
Project Parking and Access	16
Parking Requirements	16
Vehicular Access and Operations	18
Project-Related Roadway Improvements	24
PROJECT IMPACT ANALYSIS STUDY AREA	**27**
Environmental Setting	27
STUDY AREA TRAFFIC CONDITIONS	**31**
Existing (Year 2009) Traffic Volumes	31
Existing (No Project) Conditions	31
Existing With Project Conditions	31
Future (Year 2012) Traffic Volumes	40
Future Without Project Traffic Forecasts	40
Future With Project Traffic Forecasts	45
ANALYSIS OF AREA TRAFFIC CONDITIONS	**50**
Existing Highway System Improvements	50
Ongoing or Programmed Future Highway System Improvements	50
Analysis Methodologies and Results	54
Summary of Existing (2009) Conditions	55
Summary of Future (2012) Conditions	64
Intersection Impact Significance Criteria	66
Existing Conditions Project Impacts	67
Future Conditions Project Impacts	69
Local/Residential Street Traffic Impact Analysis	71
Project Impacts on Regional Transportation System	73
Transit Impacts	74
Traffic Signal Warrant Analysis	75

TABLE OF CONTENTS (continued)

Page

MITIGATION MEASURES **77**

Signalized Study Intersection Impacts 79

Project Trip-Reduction Measures/Transportation Demand Management Program 79

Recommend Physical/Traffic Signal Mitigation Improvements 96

Local/Residential Street Impacts 107

Congestion Management Program (CMP) Impacts 108

Transit Impacts 108

Traffic Signal Warrant Analysis 108

APPENDICES

VOLUME I

A – Project General Geographic Trip Distribution Percentages (By Component)

B – Project Intersection Trip Assignment Percentages (By Component)

C – Project Intersection AM and PM Peak Hour Traffic Volumes (By Component)

D – Project Residential TOD and Commercial TDM Trip Reduction
AM and PM Peak Hour Traffic Volumes

E – Critical Movement Analysis Intersection Operations Calculation Worksheets

54 "Original" Study Intersections (from "Revised December 2009" traffic study)

- *Existing (2009) With Modified Project*
- *Existing (2009) With Modified Project Plus Physical Mitigation*

VOLUME II

E – Critical Movement Analysis Intersection Operations Calculation Worksheets (continued)

54 "Original" Study Intersections (from "Revised December 2009" traffic study)

- *Future (2012) With Modified Project*
- *Future (2012) With Modified Project Plus TOD/TDM Trip Reductions Only*
- *Future (2012) With Modified Project Plus Physical Mitigation*

7 Supplemental Study Intersections (from DEIR Analyses)

LIST OF FIGURES

Figure No.		Page
1	Site Vicinity Map	3
2	Project Site Plan	4
3	Total Net Project Traffic Volumes – AM Peak Hour	12
4	Total Net Project Traffic Volumes – PM Peak Hour	14
5	Project Driveway Volumes	20
6	Study Intersection Locations	28
7	Existing (2009) Traffic Volumes – AM Peak Hour	32
8	Existing (2009) Traffic Volumes – PM Peak Hour	32
9	Existing (2009) With Project Traffic Volumes – AM Peak Hour	36
10	Existing (2009) With Project Traffic Volumes – PM Peak Hour	38
11	Future (2012) "Without Project" Traffic Volumes – AM Peak Hour	41
12	Future (2012) "Without Project" Traffic Volumes – PM Peak Hour	43
13	Future (2012) "With Project" Traffic Volumes – AM Peak Hour	46
14	Future (2012) "With Project" Traffic Volumes – PM Peak Hour	48
15	Total TOD/TDM Program Trip Reduction Volumes – AM Peak Hour	84
16	Total TOD/TDM Program Trip Reduction Volumes – PM Peak Hour	86
17	Future (2012) “With Project Plus TOD/TDM” Traffic Volumes – AM Peak Hour	89
18	Future (2012) “With Project Plus TOD/TDM” Traffic Volumes – PM Peak Hour	91

LIST OF TABLES

Table No.		Page
1	Project Trip Generation Rates	6
2	Project Trip Generation	8
3	Geographic Project Directional Trip Distribution	10
4	Project Parking Requirements	17
5	Critical Movement Analysis Summary – Existing (2009) and Future (2012) Conditions	56
6	City of Los Angeles Significant Impact Criteria for Intersections	66
7	City of Santa Monica Significant Impact Criteria for Intersections	67
8	WLA TIMP Traffic Impact Fee Calculations	78
9	Critical Movement Analysis Summary – Future (2012) "With Project Plus TOD/TDM Trip-Reductions" Conditions	93
10	Critical Movement Analysis Summary – Existing (2009) "With Project Plus Physical Mitigation" Conditions	99
11	Critical Movement Analysis Summary – Future (2012) "With Project Plus TOD/TDM Trip-Reductions and Physical Mitigation" Conditions	102

INTRODUCTION

This report summarizes the results of a supplemental traffic impact analysis prepared to identify and address the effects of proposed modifications to a new mixed-use residential and retail development located at the northwest corner of Sepulveda Boulevard and Exposition Boulevard, in the West Los Angeles community of the City of Los Angeles. The originally-proposed project, for which a Draft Environmental Impact Report ("DEIR") has already been circulated for public comment, and whose Final EIR ("FEIR") is currently under review by the City, contains a total of approximately 538 residential apartment units (including 59 low-income units), plus a total of approximately 266,800 square feet of site-serving, local-oriented, and subregional retail uses, including a 54,350 square foot supermarket and a 212,450 square foot Target (or similar) store.

The proposed modifications to the originally-analyzed project will include an increase in the number of residential units to a total of approximately 638 units (now including a total of approximately 72 senior affordable units), although the commercial component of the project will be reduced by over 100,000 square feet, to a total of approximately 160,000 square feet. The anticipated uses within the commercial component of the modified project have also changed, and are envisioned to include an approximately 100,000 square foot Target (or similar) store, an approximately 50,000 square foot supermarket, and a total of approximately 10,000 square feet of general/local-serving retail area.

The details of the traffic impact analyses for the originally-proposed project are contained in a traffic study report (dated "Revised December 2009") and in several supplemental documents (including a technical letter dated September 7, 2010 to Mr. Eddie Guerrero, Jr., P. E. at LADOT summarizing changes in the original analysis for the intersection of Wilshire Boulevard and Sepulveda Boulevard, and an additional analysis prepared in December of 2011 expanding the scope of the original study from 54 intersections to a total of 61 intersections); the original traffic study and all subsequent analyses have been incorporated into the project's DEIR and/or FEIR. This supplemental analysis of the "modified" project utilizes the same data, assumptions, and analysis methodologies as were utilized in the analyses of the originally-proposed project, with the exception that the trip generation estimates, and associated impacts, have been updated to account for the proposed modifications in the project's description. Therefore, each of the traffic analysis documents described above prepared for the original project, including the results and conclusions of those previous analyses, as well as any additional information contained in the current project's DEIR/FEIR, are incorporated in their entirety into this supplemental document.

PROJECT DESCRIPTION

The project evaluated in this study is a new mixed-use development containing a total of approximately 638 residential apartment units, including 72 affordable senior units, and a total of approximately 160,000 square feet of site-serving, local-oriented, and subregional retail uses, including an approximately 100,000 square foot Target (or similar) store, an approximately 50,000 square foot supermarket, and a total of approximately 10,000 square feet of general local-serving retail. This proposed development scheme reflects potential modifications to a mixed-use residential and retail project currently under consideration by the City for this site, which is located at the northwest corner of Sepulveda Boulevard and Exposition Boulevard in the West Los Angeles community of the City of Los Angeles, as shown in Figure 1.

The current project proposal, for which a Draft Environmental Impact Report ("DEIR") has already been completed, and whose Final EIR ("FEIR") is under review by the City, contain a total of approximately 538 apartments (including 59 low-income units), plus a total of approximately 266,800 square feet of retail uses, including a 54,350 square foot supermarket and a 212,450 square foot Target (or similar) store. As such, the potential modifications to the current project would result in an increase of approximately 100 apartments, although the modified development would reduce the original project's retail/commercial component by a total of approximately 106,800 square feet, including a reduction of about 112,450 square feet for the Target store, and a reduction of approximately 4,350 square feet in the supermarket (note that the potential modifications also include approximately 10,000 square feet of new local-serving retail space, which was not included in the original project). The general site layout for the "modified" project is shown in Figure 2. As also shown in this figure, this project will provide vehicular access to the on-site parking facilities via driveways along Pico Boulevard, Sepulveda Boulevard, Exposition Boulevard, and Sawtelle Boulevard (exit only), similar to and consistent with the driveway locations and operations of the current development project.

The project site is currently developed with an existing and active concrete batch plant and a separate building materials supply store, and as with the current project proposal, both of these uses will be removed to construct the modified project. It is also of note that the Los Angeles County Metropolitan Transportation Authority ("Metro") is currently underway with construction of Phase 2 of its new Expo Line Light Rail project, which will include a new station adjacent to the project site (elevated above Sepulveda Boulevard); the potential "modified" project proposal will remain consistent with the current Expo Line and station plans.

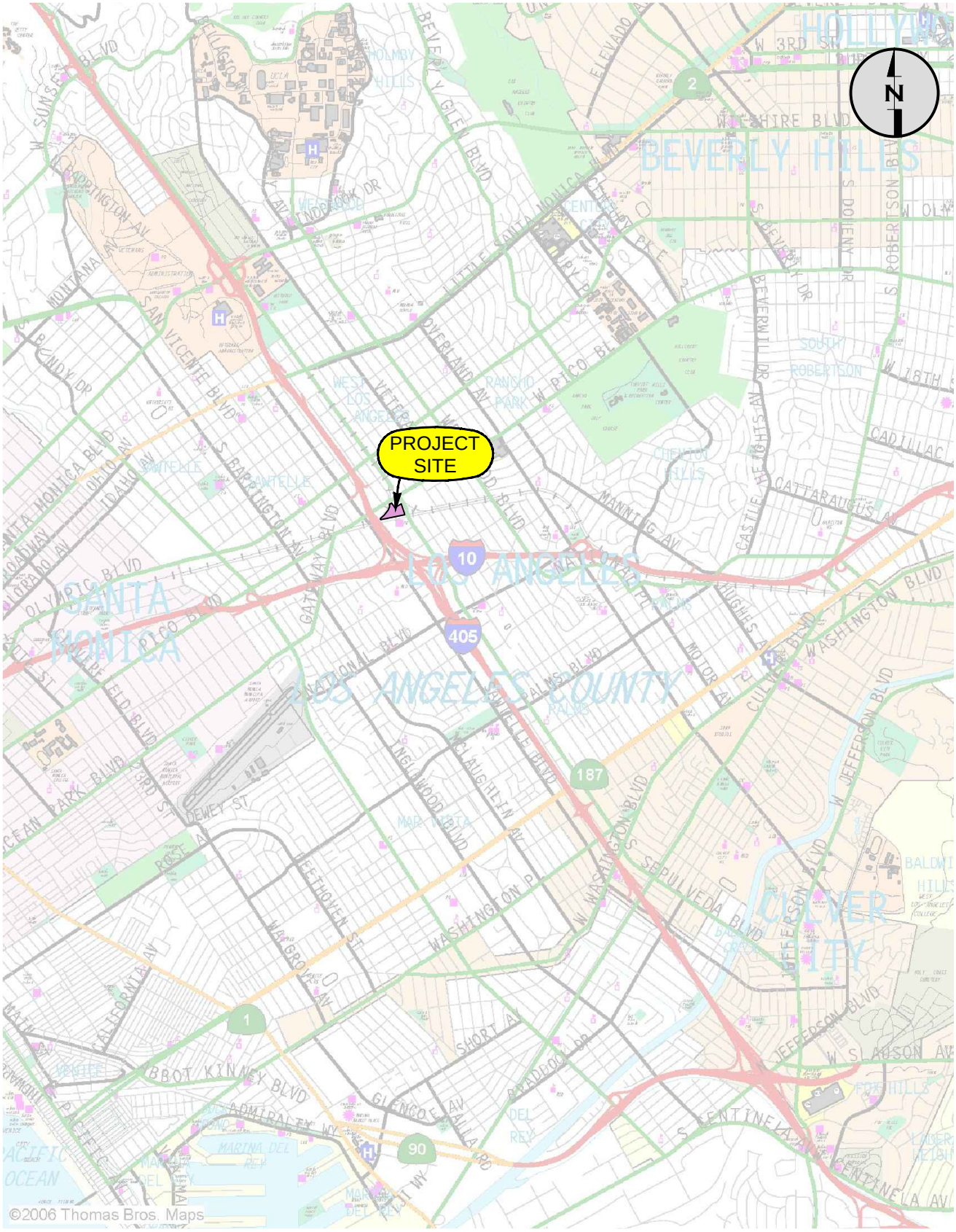


FIGURE 1

PROJECT SITE VICINITY

"MODIFIED PROJECT"
SITE LAYOUT

FIGURE 2

Hirsch/Green Transportation Consulting, Inc.

Project Traffic Generation

The traffic estimates for the modified project development scheme were developed using the same general trip generation rates, assumptions, and methodologies as in the traffic study prepared for the currently-proposed project (dated "Revised December 2009"). As described in detail in that document, the basic trip generation calculations are based on data and information documented in the Institute of Transportation Engineers' ("ITE") *Trip Generation* manual.[1] However, the project site lies within the area under the jurisdiction of the West Los Angeles Transportation Improvement and Mitigation Specific Plan ("WLA TIMP", City of Los Angeles Ordinance Number 171,492), which identifies PM peak hour trip generation rates for a variety of land uses, including the proposed residential, supermarket, and retail uses (both the Target and general local-serving components), as well as the building supply store use currently existing at the project site. LADOT requires the use of the WLA TIMP PM peak hour trip generation rates where applicable, and they were utilized for this analysis. Daily and AM peak hour trip generation rates are not identified in the TIMP document, and LADOT recommends using the applicable 8th Edition ITE rates and equations for the appropriate land uses to estimate trip generation during these time periods. Note, however, that as with the original project analyses, trip generation rates for the existing concrete batch plant are not contained in either the ITE or WLA TIMP trip generation rates, and as described in the "Revised December 2009" traffic study, the traffic generation for this unique use was determined based on empirical surveys (contained in the appendix of that study). The baseline ITE and/or WLA TIMP trip generation rates used in this supplemental analysis are summarized in Table 1.

It is of note that the project includes approximately 72 affordable senior residential units as part of the total 638 residential apartments envisioned for the site. The ITE *Trip Generation* rates used to develop the trip estimates for the project, as shown in Table 1, are based on traffic counts collected for typical "senior" residential units; the ITE data does not indicate whether these trip generation profiles include "affordable" units. While not extensively documented, it is generally acknowledged that low-income residential developments, particularly affordable units for seniors, generate traffic at a lower "per unit" ratio than do "market rate" developments, due primarily to lower per capita vehicle ownership and a higher reliance on public transit or other non-vehicular means of transportation. However, since no detailed or specific trip generation data is currently available for "affordable senior" residential units, for purposes of this project traffic assessment, the trip generation equations for typical (market rate) senior apartment use

[1] *Trip Generation*, 8h Edition, Institute of Transportation Engineers, Washington, D.C., 2008.

Table 1
Project Trip Generation Rates*

Proposed Uses

Apartment - per dwelling unit (ITE Land Use 220)

Daily Trips: T = 6.65 (U)
AM Peak Hour: T = 0.51 (U): I/B = 20%, O/B = 80%
PM Peak Hour:* T = 0.49 (U); I/B = 65%, O/B = 35%

Senior Residential (Attached) - per dwelling unit (ITE Land Use 252)

Daily Trips: T = 3.48 (U)
AM Peak Hour: T = 0.13 (U): I/B = 36%, O/B = 64%
PM Peak Hour:* T = 0.08 (U); I/B = 60%, O/B = 40%

Specialty Retail Center - per 1,000 gross square feet of floor area (ITE Land Use 814)

Daily Trips: T = 44.32 (A)
AM Peak Hour: T = 1.33 (A): I/B = 60%, O/B = 40% (3% of daily; I/B, O/B "splits" per SanDAG [1])
PM Peak Hour:* T = 5.00 (A); I/B = 44%, O/B = 56% (per WLA TIMP "specialty retail")

Free-Standing Discount Store - per 1,000 gross square feet of floor area (ITE Land Use 815)

Daily Trips: T = 57.24 (A)
AM Peak Hour: T = 1.06 (A): I/B = 68%, O/B = 32%
PM Peak Hour:* T = 6.56 (A); I/B = 49%, O/B = 51% (for 100,000 sq. ft. WLA TIMP "shopping center")

Specialty Market (Supermarket) - per 1,000 gross square feet of floor area (ITE Land Use 850)

Daily Trips: T = 102.24 (A)
AM Peak Hour: T = 3.59 (A); I/B = 61%, O/B = 39%
PM Peak Hour:* T = 10.34 (A); I/B = 51%, O/B = 49%

Existing Uses

Building Materials and Lumber Store - per 1,000 gross square feet of floor area (ITE Land Use 812)

Daily Trips: T = 45.16 (A)
AM Peak Hour: T = 2.60 (A); I/B = 67%, O/B = 33%
PM Peak Hour:* T = 3.27 (A); I/B = 47%, O/B = 53%

Where: T = Trip Ends
A = Building Area in 1,000 sq. ft.
U = Dwelling Units
I/B = Inbound Trip Percentage
O/B = Outbound Trip Percentage

* Notes:
PM peak hour trip generates specified by West Los Angeles Transportation Improvement Specific Plan (TIMP).
Daily and AM peak hour trip generation rates per 8th Ed. ITE Trip Generation, unless noted.

[1] San Diego Association of Governments, *(Not So) Brief Guide of Vehicular Traffic Generation Rates for the San Diego Region* , April 2002.

were used to calculate the potential trips resulting from the affordable senior residential units proposed as part of the project. This assumption is expected to produce a conservative assessment of the potential net new traffic from the senior residential component of the proposed project, and therefore, produce a conservative estimate of trips from the entire project.

Additionally, as in the original ("Revised December 2009") project traffic study, the "baseline" ITE and WLA TIMP trip generation rates shown in Table 1 were adjusted to account for several factors that influence the amount of "net" traffic generation for the development, including "internal interaction", "pass-by" traffic activity, and transit utilization. The trip generation adjustments used in the estimation of project traffic for the currently-proposed project included an approximately 30 percent pass-by trip reduction for the anchor retail (Target) component, and an approximately 40 percent pass-by reduction the specialty market use. Both of these components were also assumed to exhibit an approximately five percent reduction in trips due to "internal interaction" as a result of patronage by the project's residents. The modified project also includes a new local-serving retail component, which was not part of the original project analyses. Based on current LADOT policies, this new use was assumed to exhibit an approximately 10 percent pass-by trip reduction factor (applicable to "specialty retail" uses), as well as the same five percent "internal interaction" trip reductions as the anchor retail and specialty market uses. The existing building materials supply store was also assumed to experience approximately 20 percent of its traffic due to pass-by activity. Further, based on the availability of the existing public transit service, it was assumed that approximately 10 percent of the currently-proposed project's residential trips would occur via the bus routes serving the project site; this assumption was also expanded to include the newly-proposed senior affordable residential units contained in the modified project.

The final trip adjustments included the application of a passenger car equivalency ("pce") factor of 1.50 to the truck trips associated with the existing concrete batch plant activity. As described in the "Revised December 2009" traffic study, most of the vehicles accessing the batch plant are cement mixers or other large trucks, which exhibit different operating characteristics than do typical passenger vehicles, including reduced acceleration, longer stopping distances, and greater vehicle size. The 1.50 pce factor was used to account for these effects.

Therefore, using the "baseline" ITE and WLA TIMP trip generation rates shown in Table 1, and adjustments to account for the various trip generation adjustment factors discussed above, estimates of the amount of new traffic generated by the modified project, as well as estimates of traffic generated by the existing uses at the site, were derived and are summarized in Table 2.

Table 2
Project Trip Generation Estimates

Size/Use	Daily	AM Peak Hour In	AM Peak Hour Out	AM Peak Hour Total	PM Peak Hour In	PM Peak Hour Out	PM Peak Hour Total
Proposed Project							
566 -unit Apartments	3,764	58	231	289	180	97	277
(Less 10% Transit Utilization)	(376)	(6)	(23)	(29)	(18)	(10)	(28)
Subtotal Apartment Trips	3,388	52	208	260	162	87	249
72 -unit Senior Housing	251	3	6	9	4	2	6
(Less 10% Transit Utilization)	(25)	0	(1)	(1)	(1)	0	(1)
Subtotal Senior Housing Trips	226	3	5	8	3	2	5
100,000 sq. ft. Retail (Target or similar)	5,724	72	34	106	328	328	656
(Less 5% Internal Project Capture)	(286)	(3)	(2)	(5)	(16)	(17)	(33)
(Less 30% Pass-By Trips)	(1,631)	(20)	(10)	(30)	(93)	(94)	(187)
Subtotal Retail (Target) Trips	3,807	49	22	71	219	217	436
10,000 sq. ft. Local-Serving Retail	443	8	5	13	22	28	50
(Less 5% Internal Project Capture)	(22)	(1)	0	(1)	(1)	(2)	(3)
(Less 10% Pass-By Trips)	(42)	(1)	0	(1)	(2)	(3)	(5)
Subtotal Local-Serving Retail Trips	379	6	5	11	19	23	42
50,000 sq. ft. Supermarket	5,112	110	70	180	264	253	517
(Less 5% Internal Project Capture)	(256)	(5)	(4)	(9)	(13)	(13)	(26)
(Less 40% Pass-By Trips)	(1,942)	(41)	(27)	(68)	(100)	(96)	(196)
Subtotal Supermarket Trips	2,914	64	39	103	151	144	295
Subtotal Proposed Project Trips	*10,714*	*174*	*279*	*453*	*554*	*473*	*1,027*
Existing Site Uses (Removed)							
6,500 sq. ft. Building Materials Store	294	11	6	17	10	11	21
(Less 20% Pass-By Trips)	(59)	(2)	(1)	(3)	(2)	(2)	(4)
Subtotal Building Materials Store Trips	235	9	5	14	8	9	17
Catalina Pacific Cement Batch Plant ** With PCE Adjustment (1.50)	526	18	27	45	9	9	18
Subtotal Existing Site Uses Trips (PCE)	*761*	*27*	*32*	*59*	*17*	*18*	*35*
Total Net New Site Trips	***9,953***	***147***	***247***	***394***	***537***	***455***	***992***

Note:

** Existing site trips based on empirical counts.

As shown in Table 2, the modified project would be expected to result in a total of approximately 9,953 net new daily trips, including 394 (147 in, 247 out) net new trips during the AM peak hour, and 992 (537 in, 455 out) net new trips during the PM peak hour. This represents a reduction in net site-related trips of 3,760 daily trips (approximately 27.4 percent) from the 13,713 daily trips produced by the currently-proposed project. The net peak hour trips would also be reduced by 51 trips (approximately 12.2 percent) from the 449 trips associated with the current project during the AM peak hour, and by 240 trips (approximately 19.5 percent) from the 1,232 trips generated by the current project during the PM peak hour.

Of the traffic generated by the modified project, the retail components would produce the majority of the trips, with a total of approximately 6,339 net new trips per day (3,807 net trips for the anchor retail and 2,532 total net trips for the local-serving retail and specialty market uses), including 126 net trips (71 net trips for the anchor retail and 55 total net trips for the local-serving retail and specialty market uses) during the AM peak hour, and 738 net trips (436 net trips for the anchor retail and 302 total net trips for the local-serving retail and specialty market uses) during the PM peak hour, assuming that the trip "credits" for removal of the existing site commercial uses (building supply store and cement batch plant) are used as offsets for the local-serving/specialty market project component trips. The proposed 638-unit residential portion of the project (including the 72 senior affordable units) would result in a total of approximately 3,614 net new daily trips, including 268 net trips during the AM and 254 net trips during the PM peak hours. Note that while the net project "retail" component trips include reductions for internal interaction and pass-by traffic activity, no specific trip reductions were assumed in this analysis to account for "redirected" patronage of the project's retail, and/or supermarket uses from residents of the nearby neighborhoods, although this factor is expected to result in additional traffic reductions beyond those specifically identified in this report.

However, as described in the "Revised December 2009" project traffic study, per current LADOT policy, trip credits associated with the anticipated retail component pass-by activity are not applicable to the study intersections immediately adjacent to or closest to the project site. As such, net project traffic volumes at these locations are somewhat higher, at approximately 13,509 net daily trips, including 490 net trips during the AM peak hour, and 1,376 net trips during the PM peak hour. These higher trip generation values were used to estimate the potential traffic impacts of the modified project at each of the four site-adjacent intersections of Pico Boulevard and Sawtelle Boulevard, Pico Boulevard and Cotner Avenue, Pico Boulevard and Sepulveda Boulevard, and Sepulveda Boulevard and Exposition Boulevard.

By comparison, net project traffic associated with the currently-proposed project at the "adjacent intersections" is estimated at approximately 19,232 daily trips, including 584 net trips during the AM peak hour, and 1,746 net trips during the PM peak hour. Therefore, the reduced project represents a reduction of 5,723 net daily trips (approximately 29.8 percent), including reductions of 94 net trips (approximately 16.1 percent) during the AM peak hour, and of 370 net trips (approximately 21.2 percent) during the PM peak hour. Therefore, overall, despite the increase in the number of residential units proposed under the modified project development scheme as compared to the currently-proposed project, the reductions in the commercial component sizes, and the provision of local-serving retail uses, will result in substantial reductions in both the daily and peak hour traffic associated with the project site.

Project Geographic Trip Distribution

The general geographic distribution of the modified project's trips was assumed to be the same as for the currently-proposed project, with the exception that the trips associated with the new local-serving retail component, which was not a component of the current project, were assumed to have the same trip distribution characteristics as the "supermarket" trips, which is also considered to be a relatively local-serving use. The general geographic distribution of project-related trips for each of the modified project's component uses, by direction and type of transportation facility, is shown in Table 3.

Table 3
Geographic Project Trip Distribution Percentages

	Residential Use			"Anchor" Retail Use			Local-Serving and Supermarket Uses		
Direction	**Street**	**Freeway**	**Total**	**Street**	**Freeway**	**Total**	**Street**	**Freeway**	**Total**
North	18%	10%	28%	11%	10%	21%	25%	5%	30%
South	13%	10%	23%	12%	0%	12%	11%	5%	16%
East	17%	15%	32%	22%	15%	37%	23%	5%	28%
West	12%	5%	17%	25%	5%	30%	21%	5%	26%
Totals	60%	40%	100%	70%	30%	100%	80%	20%	100%

Project Traffic Assignment

The assignment of the project traffic general geographic distributions shown in Table 3 to the study area street and highway systems for the modified project utilized the same assumptions and procedures as described in detail for the current-proposed in the "Revised December 2009"

traffic study, including separate assignments for the "residential", "retail", and "supermarket" components of the project, although it is of note that the "retail" component of the modified project was assumed (as in the original traffic study) to include only the anchor tenant (Target or similar use), while the "supermarket" trip assignments were now assumed to also include the new local-serving project retail component, since both of these uses are anticipated to exhibit more locally-oriented trip characteristics. The resulting project trip assignment percentages to the key travel facilities for each of the modified project's uses are contained in Appendix A.

These general roadway trip assignments were then further refined to identify the anticipated intersection-level turning movements along the key travel routes to and from the project site. Again, separate travel pattern assumptions were identified for the residential, retail, and supermarket/local-serving retail components of the modified project, based on the varying percentages of traffic for each of these project components along the assumed travel routes. As in the "Revised December 2009" traffic study, this step considered such factors as turning movement restrictions at various intersections in the project area, and the locations of the proposed project's driveways in assigning project trip movements at the study intersections. A review of the site plan for the modified project, shown earlier in Figure 2, indicated that, while several of the site driveways have been relocated slightly from their original positions (particularly along Exposition Boulevard, where the driveway has moved somewhat closer to Sepulveda Boulevard than for the currently-proposed project), the operations of the driveways, including the uses served by each driveway and anticipated turn restrictions or prohibitions, are identical to those described in the "Revised December 2009" traffic study, and as such, no changes to the original intersection-level project component trip assignment percentages were assumed for the modified project. Therefore, based on these assumptions, the trip assignment percentages at each of the 61 study intersections are contained in Appendix B. Note that, as detailed in the original project traffic study, the existing building supply and concrete batch plant uses removed from the project site were assumed to exhibit the same general travel patterns as the "supermarket/local-serving retail" component of the modified project.

The net trip generation for each of the modified project components, shown earlier in Table 2, was used to calculate the incremental AM and PM peak hour traffic volumes added to each of the area study intersections; the individual modified project component AM and PM peak hour traffic volumes are shown in Appendix C. The total net project trips, representing the sum of the individual project component trips, are shown for each of the study intersections in Figures 3(a) and 3(b), and Figure 4(a) and 4(b) for the AM and PM peak hours, respectively. Note that, in

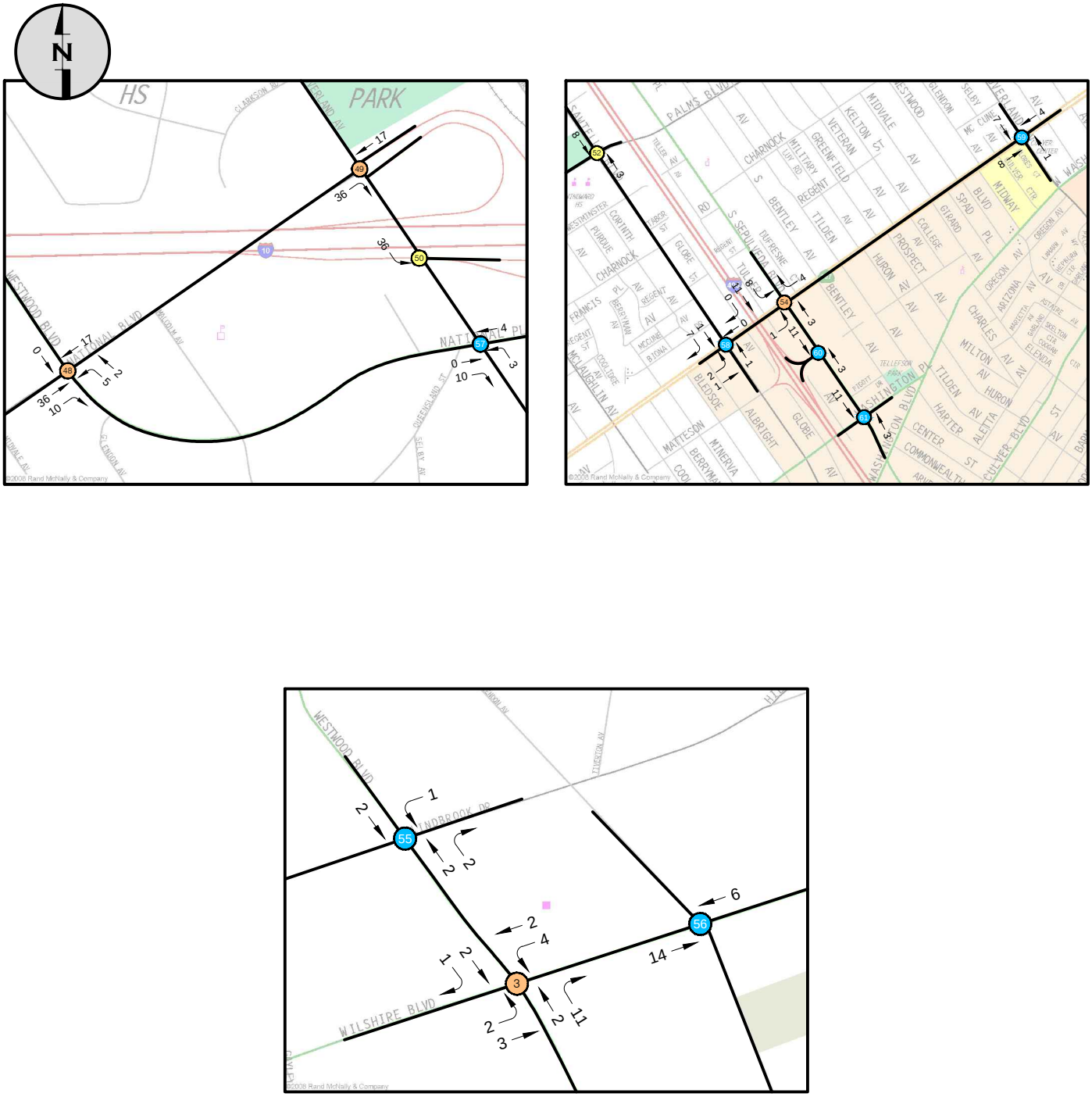
FIGURE 3(a)

PROJECT TRAFFIC VOLUMES
(TOTAL)
AM PEAK HOUR

PROJECT SITE

LEGEND
- SIGNALIZED INTERSECTION
- UNSIGNALIZED INTERSECTION

IRSCH GREEN
Hirsch/Green Transportation Consulting, Inc.



LEGEND

- (X) - ORIGINAL STUDY INTERSECTION
- (X) - PREVIOUSLY IDENTIFIED SIGNIFICANT IMPACT
- (X) - ADDITIONAL STUDY INTERSECTION PER EXPANDED STUDY AREA

XX - INBOUND

XX - OUTBOUND

FIGURE 3(b)

PROJECT TRAFFIC VOLUMES
ADDED STUDY INTERSECTIONS
(TOTAL)
AM PEAK HOUR

Hirsch/Green Transportation Consulting, Inc.

11/19/2012

FIGURE 4(a)

PROJECT TRAFFIC VOLUMES
(TOTAL)
PM PEAK HOUR

PROJECT SITE

LEGEND
- SIGNALIZED INTERSECTION
- UNSIGNALIZED INTERSECTION

Hirsch/Green Transportation Consulting, Inc.

LEGEND

- (X) - ORIGINAL STUDY INTERSECTION
- (X) - PREVIOUSLY IDENTIFIED SIGNIFICANT IMPACT
- (X) - ADDITIONAL STUDY INTERSECTION PER EXPANDED STUDY AREA

XX - INBOUND

XX - OUTBOUND

FIGURE 4(b)

PROJECT TRAFFIC VOLUMES
ADDED STUDY INTERSECTIONS
(TOTAL)
PM PEAK HOUR

HIRSCH GREEN
Hirsch/Green Transportation Consulting, Inc.

11/19/2012

order to provide consistency in the presentation of these total net modified project trips and ease of comparison with the volumes associated with the currently-proposed project, as contained in that project's EIR, Figures 3(a) and 4(a) identify the modified project trips at each of the 54 original study intersections evaluated in the "Revised December 2009" traffic study, while Figures 3(b) and 4(b) show the modified project volumes at the additional 7 intersections included for analysis in the current DEIR. The values shown in each of these figures represent the anticipated increases in peak hour traffic at each of the study intersections attributable to the modified project, and were used to identify the potential incremental project traffic impacts at each of the 61 study intersections analyzed for the currently-proposed project. Additionally, these trip calculations adhere to LADOT's policy that pass-by trips are not applicable for the site adjacent intersections, and as a result, the project component trip volumes shown in these figures at these and other nearby intersections may appear to be inconsistent, but do accurately reflect the net project traffic volumes consistent with LADOT traffic study policies.

Project Parking and Access

Parking Requirements

Parking for the modified project will be provided in an on-site six-level subterranean parking facility located beneath the entire site. The project's parking garage will contain a total of approximately 1,799 parking spaces, comprised of approximately 640 spaces designated for the project's commercial/retail uses, and an additional 1,159 resident-only and residential guest parking spaces, including a total of approximately 999 resident parking spaces (963 market-rate unit spaces and 36 senior affordable unit spaces) and 160 residential guest parking spaces. The commercial and residential guest parking spaces are located on the P-1 through P-4 levels, while the resident-only spaces will be located on the P-4 through P-6 levels (level P-4 provides parking for both the commercial and resident-only uses). Circulation between the various parking levels for each of the project components will be provided by an internal ramping system, with separate access driveways for the commercial and residential uses, and where necessary, physical barriers to prevent commercial/retail-related vehicles and residential guests from parking in the resident-only parking spaces.

The current City of Los Angeles Municipal Code ("LAMC") requires that "retail" developments, including both the proposed retail and supermarket components of the project, provide a minimum of 4.0 parking spaces for each 1,000 square feet of floor area. Parking requirements for the residential portions of the site are based on the current "stepped" requirements identified

in the LAMC, which identify the amount of parking per unit based on the number of "habitable rooms"; the generally accepted interpretation of these Code requirements call for the provision of a minimum of 1.0 spaces per unit for "bachelor" or "efficiency" apartments (one habitable room), 1.5 spaces per unit for one-bedroom units (two habitable rooms), to 2.0 spaces per unit for two-bedroom (three habitable rooms) or larger units. Senior affordable residential units, however, exhibit a reduced parking requirement of 0.5 space per unit. Additionally, although the LAMC does not specifically require guest parking spaces for residential developments, recent actions and historical recommendations by the Advisory Agency of the City of Los Angeles have identified guest parking requirements for "market-rate" residential uses of 0.25 spaces per unit. Based on these parking ratios, the amount of on-site parking required for the modified project was calculated, as summarized in Table 4.

Table 4
Modified Project Parking Requirements

Component	No. Units/Size	Parking Ratio	Parking Required
Residential			
Market-Rate Units			
Studio	62 units	1.00 /unit	62 spaces
1-Bedroom	215 units	1.50 /unit	323 spaces
2-Bedroom	272 units	2.00 /unit	544 spaces
3-Bedroom/PH	17 units	2.00 /unit	34 spaces
Subtotal Market-Rate Resident Parking Required			*963 spaces*
Senior Affordable Units			
1-Bedroom	63 units	0.50 /unit	32 spaces
2-Bedroom	9 units	0.50 /unit	4 spaces
Subtotal Senior Affordable Resident Parking Required			*36 spaces*
Total Resident-Only Parking Required			999 spaces
Guest Parking	638 units	0.25 /unit	160 spaces
Total Residential Parking Required			1,159 spaces
Commercial			
Total Retail [1]	160,000 sq. ft	4.00 /1,000 sq. ft.	640 spaces
Total Project Parking Required			***1,799 spaces***

Note:

[1] Includes 100,000 sq. ft. "anchor" retail, 50,000 sq. ft. market, and 10,000 sq. ft. local-serving retail.

As shown in Table 4, the modified project proposes to develop a total of 638 residential units, including 566 market-rate units (62 studio, 215 1-bedroom, 272 2-bedroom, and 17 3-bedroom units) plus 72 additional senior affordable units (63 1-bedroom and 9 2-bedroom units). Based on the applicable LAMC residential parking ratios identified previously, the market-rate units will require a total of approximately 963 resident-only parking spaces, while the 72 senior affordable units will require an additional 36 parking spaces, for a total project resident-only parking requirement of approximately 999 spaces. Additionally, while not required by the LAMC, pursuant to the anticipated recommendations of the Advisory Agency, the project could be required to provide an additional 160 residential guest parking spaces, assuming the typically requested ratio of 0.25 space per unit guest parking. As such, the total anticipated parking requirement for the residential component of the project will be 1,159 spaces, or equal to the total amount of residential parking provided.

Further, the project will also require a total of approximately 640 parking spaces to serve the total 160,000 square feet of commercial space proposed (100,000 square foot "anchor" retail, 50,000 square foot specialty market, and 10,000 square feet of local-serving retail), again equal to the amount of parking proposed for these uses, as described earlier.

Therefore, the amount of parking proposed for the modified project will exactly meet the current LAMC parking requirements (including provision of additional residential guest parking per the anticipated recommendations of the City's Advisory Agency) for both the residential and commercial components of the project, and as such, no significant off-site parking impacts or "spill over" parking into adjoining residential neighborhoods or commercial areas is anticipated.

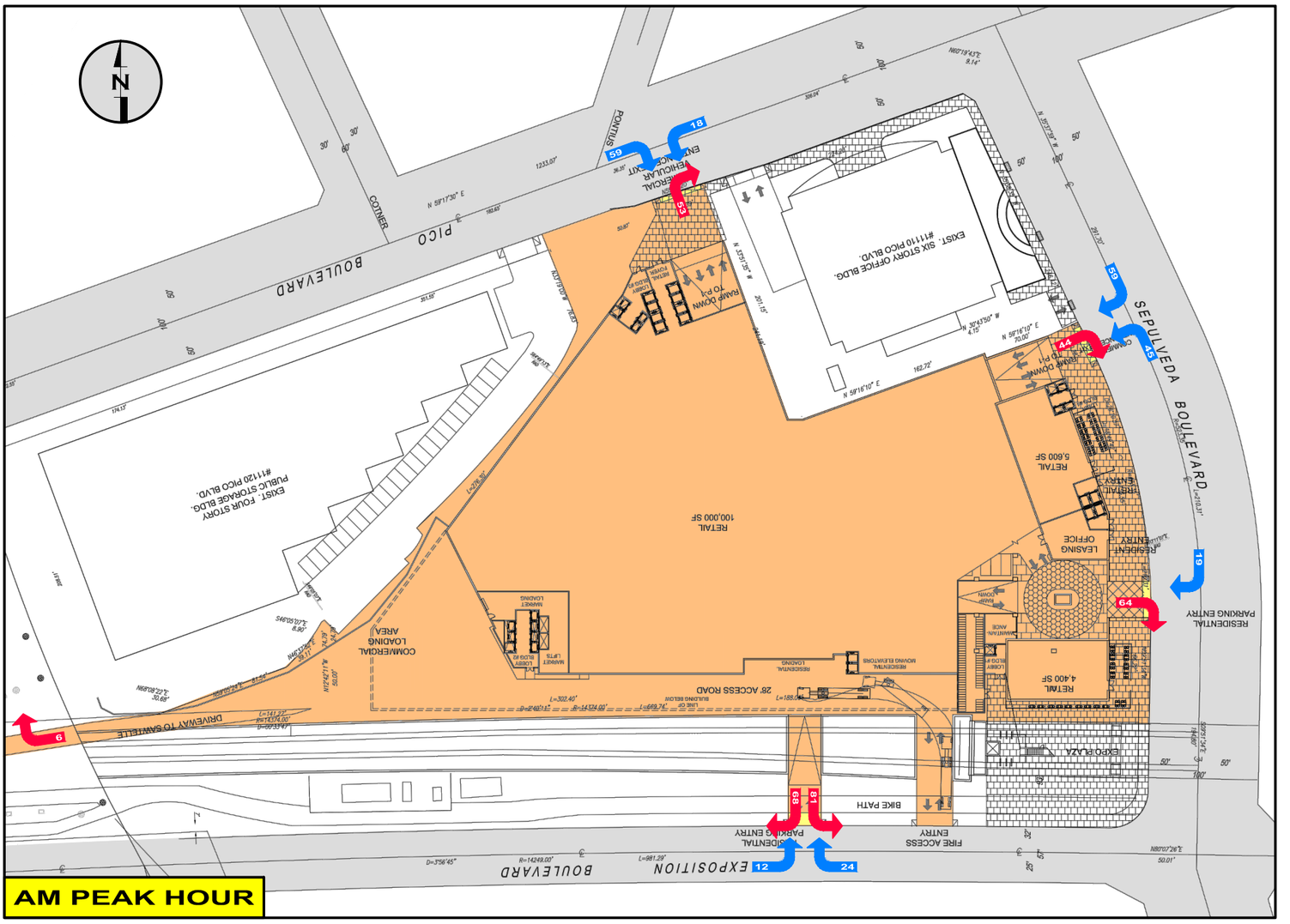
Vehicular Access and Operations

Similar to the currently-proposed project, access to the modified project's on-site parking facilities will be provided via a total of five driveways, including one entry/exit driveway located along Pico Boulevard, two entry/exit driveways along Sepulveda Boulevard, one entry/exit driveway along Exposition Boulevard, and one commercial component exit-only driveway accessing Sawtelle Boulevard via an easement running under the I-405 Freeway (this driveway is exit-only for patrons of the project, although it also provides an entry lane to access the commercial loading docks on the site's ground floor); additionally, a new "fire access" driveway is also now proposed along Exposition Boulevard, between Sepulveda Boulevard and the residential access driveway. The Pico Boulevard, northernmost Sepulveda Boulevard, and Sawtelle Boulevard driveways will each provide access to or from the commercial/retail parking

levels of the project's on-site parking facilities, while the southernmost Sepulveda Boulevard and Exposition Boulevard driveways will provide direct access to the residential parking levels. None of the project access driveways are proposed to be traffic signal controlled.

Due to the lane configurations of the site-fronting streets and/or the proximity of the project's driveways to the adjacent intersections, both the Pico Boulevard and Sepulveda Boulevard commercial/retail access driveways are assumed to accommodate both left-turn and right-turn entry movements, although exiting movements from these driveways will likely be restricted to right-turn only movements. Additionally, the Sepulveda Boulevard residential driveway is expected to allow only right-turn entry/right-turn exit operations, while the Sawtelle Boulevard commercial/retail exit-only driveway is expected to be restricted to right-turn only moves; only the Exposition Boulevard residential access driveway is expected to exhibit "full service" access operations, with no entry or exit turn restrictions anticipated. These access operations and turn restriction assumptions are the same as those identified in the "Revised December 2009" study.

The operations of the modified project's driveways were also examined to assure that adequate capacity will be available to accommodate the anticipated vehicular demands of the project. The traffic volumes at each of the project's driveways were determined by first identifying the individual residential and/or commercial/retail project component trips at each driveway, using the specific project component trip assignment percentages described earlier. As with the analysis of the driveway operations for the currently-proposed project, driveway volumes associated with the modified project do not include either pass-by trip discounts or "trip credits" for removal of the existing site development, although as noted in the "Revised December 2009" traffic study, "internal interaction" discounts are still considered applicable, since utilization of the project's on-site facilities and services by project residents and/or patronage of more than one of the proposed commercial uses ("multi-purpose trips") during a single trip by site visitors will result in the actual removal of trips to and from the project site. The individual project component volumes were added together to identify the total project traffic volumes at each of the site's driveways, as shown in Figure 5 for both the AM and PM peak hours. These values were then analyzed to assure that the project's driveway capacities were adequate to serve the anticipated traffic loads without resulting in vehicular queuing or traffic delays on the adjacent streets or within the project itself. Note that the values shown in this figure reflect the total driveway volumes at each location, and include the "anchor" retail, supermarket, local-serving retail, and residential guest component volumes at the "commercial access" driveways; the "residential access" driveways are assumed to serve only the resident-related traffic volumes.



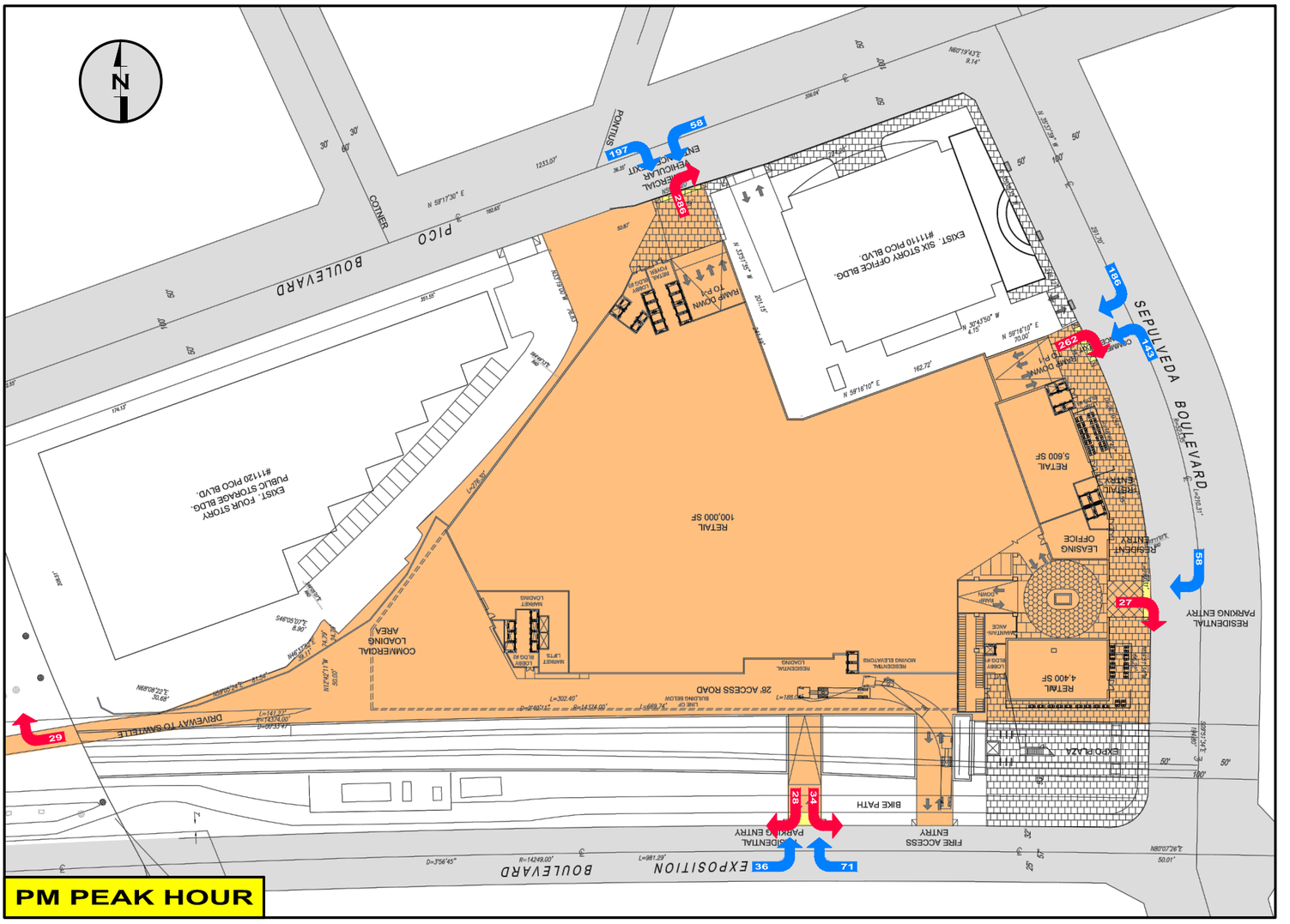


FIGURE 5

NET PROJECT DRIVEWAY VOLUMES
AM AND PM PEAK HOURS

HIRSCH GREEN
Hirsch/Green Transportation Consulting, Inc.

Based on the assumptions described previously, the modified project's driveways are expected to accommodate a total of approximately 14,329 trips per day, including 552 trips (236 inbound, 316 outbound) during the AM peak hour, and 1,415 trips (749 inbound, 666 outbound) during the PM peak hour. Of these total driveway volumes, 10,715 trips per day are associated with the proposed retail/commercial components, including 284 trips (181 inbound, 103 outbound) during the AM peak hour and 1,161 trips (584 inbound, 577 outbound) during the PM peak hour, and will utilize the two primary entry/exit commercial driveways (along Pico Boulevard and Sepulveda Boulevard), as well as the exit-only driveway on Sawtelle Boulevard. The remaining 3,614 daily trips, including 268 trips (55 inbound, 213 outbound) during the AM peak hour and 254 trips (165 inbound, 89 outbound) during the PM peak hour, are the result of the market-rate and senior affordable residential components of the project, and will access the site using the two residential driveways (on Sepulveda Boulevard and Exposition Boulevard).

Individually, for the project's commercial access driveways, the peak hour peak volumes at the Pico Boulevard driveway are expected to be approximately 77 inbound trips and 53 outbound trips during the AM peak hour, and approximately 255 inbound and 286 outbound trips during the PM peak hour, while the Sepulveda Boulevard driveway is expected to accommodate approximately 104 inbound and 44 outbound trips during the AM peak hour, and approximately 329 inbound and 262 outbound trips during the PM peak hour. The exit-only commercial access driveway on Sawtelle Boulevard is anticipated to serve approximately six (6) outbound trips during the AM peak hour and approximately 29 outbound trips during the PM peak hour. The project's residential access driveway along Sepulveda Boulevard is expected to exhibit approximately 19 inbound and 64 outbound trips during the AM peak hour, and approximately 58 inbound and 27 outbound trips during the PM peak hour, while the Exposition Boulevard driveway will serve approximately 36 inbound and 149 outbound trips during the AM peak hour and approximately 107 inbound and 62 outbound trips during the PM peak hour.

The modified project's site plans indicate that each of the three retail/commercial driveways (which also include access to the residential visitor parking spaces) will be equipped with access control devices such as ticket dispenser/gate arms and/or manned kiosks. The site plans show that these ticket dispenser/gate controls are expected to be located well within the project site at the actual entrances to the parking levels themselves, providing a minimum on-site storage length of approximately eight to 10 vehicles (per lane) at each location between the gate arms and the street entrances to the parking garage. Typically, ticket dispenser/gate arm controlled driveways can accommodate between approximately 600 and 700 entering vehicles

per hour per lane, and between 200 and 500 vehicles per hour per lane for exiting vehicles, depending on the method of payment upon exiting (variable rate versus flat rate, pay-at-gate versus pre-pay, etc.). However, the operations of the ticket dispensers/gate arms are not expected to substantially affect the capacities of the driveways themselves, due to rather substantial (internal) distances between the gates and the driveway interfaces with the adjacent streets. Therefore, the exit capacities for the project's retail/commercial access driveways will be controlled primarily by traffic conditions along the site-fronting roadways (Pico Boulevard, Sepulveda Boulevard, and Sawtelle Boulevard), particularly during the morning and afternoon/evening commute periods when street traffic is at its highest levels. Although each of the commercial driveways are expected to be restricted to right-turn only egress, the on-street traffic and congestion is expected to reduce actual exit capacities at these locations to approximately 350 to 400 vehicles per hour per lane.

While both the Pico Boulevard and Sepulveda Boulevard retail/commercial driveways provide multiple entry and exit lanes at the ticket dispenser/gate arm locations, due to the right-turn only exit operations of these two driveways, each is expected to provide only one exit lane, although two entry lanes (one for left-turn entry and one for right-turn entry) can be accommodated. As such, based on the "per lane" driveway capacity values identified above for the various driveway/access control combinations, each of these commercial driveways will provide a total of approximately 1,200 to 1,400 entering vehicles per hour, but only about 350 to 400 exiting vehicles per hour during the peak hours. A comparison of the project driveway traffic volumes shown in Figure 6 against the expected driveway capacities indicates that, in general, the proposed project's access design provides more than adequate capacity to accommodate the anticipated demands for both entry and exit operations without significant delays or vehicular queuing during both the AM and PM peak hours, as described below.

As described earlier, the Pico Boulevard commercial driveway is expected to accommodate a total of approximately 77 inbound trips and 53 outbound trips during the AM peak hour, and approximately 255 inbound and 286 outbound trips during the PM peak hour, while the Sepulveda Boulevard commercial driveway is expected to exhibit a total traffic volume of approximately 104 inbound and 44 outbound trips during the AM peak hour, and approximately 329 inbound and 262 outbound trips during the PM peak hour. These anticipated traffic loads are well within the assumed driveway capacities of between 1,200 and 1,400 entering vehicles per hour, and between 350 and 400 exiting vehicles per hour for each of the driveways. As a result, the project will provide adequate entry and exit capacities at all times for the commercial

components of the project, and no significant vehicular access impacts are anticipated. Further, it is of note that the assessment of the project's commercial driveway capacities does not take into account the additional exit-only driveway to Sawtelle Boulevard. While this driveway will provide supplemental exit capacity for the primary Sepulveda Boulevard and Pico Boulevard commercial driveways, it is not expected to be as heavily used as either of these other driveways, as it provides a less convenient exit route from the parking structure, and requires a right-turn only exit to northbound Sawtelle Boulevard only. However, this driveway accesses the same parking level (P-1) as the two primary commercial driveways on Pico Boulevard and Sepulveda Boulevard, and with its expected exit capacity of between 350 and 400 vehicles per hour, it is anticipated to supplement the primary commercial driveway exit capacities and further ensure that adequate commercial driveway capacity is provided for the project.

The residential-only access driveways are also anticipated to be equipped with security gates operated via card key or vehicle transponders that automatically open the gates for vehicles so equipped (such as for the project's residents). These security gates will likely be located near the street entrances to the parking garage to prevent intrusion by unauthorized vehicles into the residential parking areas, although it is recommended that, per typical LADOT requirements, a minimum 40-foot vehicle "reservoir" space be provided between the project property line (typically at the back of the sidewalk) and the location of the security gate, in order to minimize vehicular queuing across the sidewalks or onto the adjacent streets.

Typically, automated or card key activated security gates such as those anticipated for the two residential access driveways exhibit entry capacities of between 400 and 500 vehicles per hour per lane, based on the actual operational capabilities of the gates themselves. Conversely, although exit capacities for such facilities are also a function of the actual physical operations of the gate mechanisms, they are more dependent upon the amount of traffic/congestion on the frontage streets, which generally control the number of vehicles that can enter into the traffic flow on the site adjacent streets. As such, the proposed residential access driveway along Sepulveda Boulevard is expected to exhibit an exit capacity of between 350 and 400 vehicles per hour per lane, although the right-turn only exit restrictions for the driveway will tend to allow for exit capacities at the higher end of the range, since the elimination of any left-turn exits results in fewer conflicts with oncoming vehicles. The Exposition Boulevard residential access driveway is expected provide a basic exit capacity of approximately 500 vehicles per hour even though it is proposed as a "full service" (left- and right-turn) exit location, due primarily to lower overall traffic volumes and reduced on-street congestion along Exposition Boulevard. Since the

site plans indicate that each of the proposed residential driveways is anticipated to be configured as one entry and one exit lane, the "per lane" driveway capacity values identified above represent the entire capacities of each of these two access locations.

As also described previously, the project's Sepulveda Boulevard residential access driveway is expected to exhibit approximately 19 inbound and 64 outbound trips during the AM peak hour, and approximately 58 inbound and 27 outbound trips during the PM peak hour, while the Exposition Boulevard driveway is anticipated to accommodate approximately 36 inbound and 149 outbound trips during the AM peak hour, and approximately 107 inbound and 62 outbound trips during the PM peak hour. These residential driveway demands are well within the 400 to 500 vehicles per hour entry capacities and 350 to 400 vehicles per hour exit capacities for each driveway, and therefore, no significant residential access issues are foreseen.

It should be also be noted that, at the time the "Revised December 2009" project traffic study was prepared, the anticipated Expo Line (Phase 2) light rail tracks were proposed to exhibit an at-grade configuration along the north side of Exposition Boulevard between Sawtelle Boulevard and Sepulveda Boulevard, adjacent to the project site. However, since that time, an elevated station and rail configuration for this section of the Expo Line has been adopted. As a result, the detailed discussion of potential blockages of the residential driveway on Exposition Boulevard by Expo Line trains and the associated delays and potential vehicular queuing resulting from such blockages, including the recommendation that on-street parking be removed along segments of both sides of Exposition Boulevard in order to install a new eastbound left-turn lane (approximately 50-foot pocket plus appropriate transitions) and a new westbound right-turn lane (approximately 100-foot pocket plus appropriate transitions), is no longer applicable or necessary to the operations of the modified project's Exposition Boulevard driveway.

Project-Related Roadway Improvements

As described in detail in the "Revised December 2009" project traffic study, and similar to the currently-proposed project, the modified project will be required to improve the roadways and other transportation facilities adjacent to their respective sites to the rights-of-way and street widths appropriate to each street's designation as noted in the Transportation Element of the City of Los Angeles General Plan, and per LADOT and City of Los Angeles Bureau of Engineering standards. These roadway dedication and street improvement (widening) requirements will remain the same for the modified project as those identified in the original "Revised December 2009" study, and are summarized below.

The modified project will be required to provide an additional two-foot dedication along its entire frontage of Sepulveda Boulevard, as well as complete the necessary roadway improvements to provide a 40-foot half roadway width, including curb-and-gutter and appropriate transitions to the existing roadway improvements both north and south of the project site. Additionally, it is of note that approximately the northern 100 feet of the project's Sepulveda Boulevard frontage lies within the "transition" length of the typical Major Highway flare section, which is utilized to provide additional right-of-way width to construct dual left-turn lanes. While dual left-turn lanes are not currently provided on northbound Sepulveda Boulevard at Pico Boulevard, it is possible that LADOT could determine that such an improvement is desirable, and could require the additional variable dedication in order to accommodate future dual left-turn lanes. However, the existing building immediately north of the project site, at the southwest corner of Pico Boulevard and Sepulveda Boulevard, is relatively new, and it is unlikely that any additional roadway dedications or improvements could be obtained along its Sepulveda Boulevard frontage in the foreseeable future. As a result, while a variable flare section dedication may be requested, any widening along the modified project's Sepulveda Boulevard frontage should be deferred until such time as the full length of any potential flare section improvements can be accommodated.

Along its Pico Boulevard frontage, the modified project would be required to provide a two-foot dedication, and to widen the roadway itself by approximately five feet to complete the standard 40-foot half roadway. However, as with the Sepulveda Boulevard frontage described earlier, the project's Pico Boulevard frontage is also located within the standard flare section "transition" area, between 150 and 300 feet from the intersection with Sepulveda Boulevard; a portion of which has already been completed. As such, the City may also require the additional variable dedication necessary to implement future roadway improvements to accommodate dual eastbound left-turn lanes. However, the existing roadway flare section was implemented without the requirement of additional dedications, and as such, a variable dedication along the project site to implement a flare section is unnecessary. Further, the project's Pico Boulevard frontage is sandwiched between two existing buildings, both relatively new, and additional dedications to the east of the project site are not likely in the foreseeable future. Therefore, while it is appropriate to require the necessary two-foot dedication needed to complete the typical Major Highway rights-of-way along the project frontage, no additional "flare section" dedications appear to be applicable. Further, no widening of Pico Boulevard along the project frontage is recommended until such time as the full length of any potential flare section improvements can be accommodated.

Finally, although the project proposes to provide an exit-only driveway to Sawtelle Boulevard, which is designated as a Secondary Highway in the project vicinity, this access is provided via an easement through the adjoining property, and as such, the project does not actually exhibit any frontage along Sawtelle Boulevard. Additionally, while the modified project provides both a residential access driveway and emergency vehicle "fire lane" access to Exposition Boulevard, which is classified as a Local Street between Sepulveda Boulevard and Sawtelle Boulevard in the immediate project vicinity, such access is also provided via easements across the Expo Line property, and the project site itself does not exhibit any frontage on Exposition Boulevard. Therefore, no project-related dedications or widenings to these two roadways are warranted.

TRAFFIC IMPACT ANALYSIS STUDY AREA

Environmental Setting

The original "Revised December 2009" project traffic study contained detailed traffic analyses at a total of 54 signalized intersections in the project vicinity. However, following the completion of that document and its associated analyses, an additional seven (7) study intersections were added, as described in the project's Draft Environmental Impact Report ("DEIR"), in order to assure that all potential project-related impacts were contained within the study area. Therefore, for consistency with the total scope of analysis prepared for the currently-proposed project, this supplemental analysis of the modified project includes all 61 study intersections; these study locations are listed below and shown in relation to the project site in Figure 6.

1. Wilshire Boulevard and Sepulveda Boulevard
2. Wilshire Boulevard and Veteran Avenue
3. Wilshire Boulevard and Westwood Boulevard
4. Ohio Avenue and Sepulveda Boulevard
5. Santa Monica Boulevard and Barrington Avenue
6. Santa Monica Boulevard and Sepulveda Boulevard
7. Santa Monica Boulevard and Westwood Boulevard
8. Santa Monica Boulevard and Overland Avenue
9. Santa Monica Boulevard and Beverly Glen Boulevard
10. Nebraska Avenue and Sepulveda Boulevard
11. La Grange Avenue and Sepulveda Boulevard
12. Olympic Boulevard and Centinela Avenue (west intersection)
13. Olympic Boulevard and Centinela Avenue (east intersection)
14. Olympic Boulevard and Bundy Drive
15. Olympic Boulevard and Barrington Avenue
16. Olympic Boulevard and Sawtelle Boulevard
17. Olympic Boulevard and Sepulveda Boulevard
18. Olympic Boulevard and Westwood Boulevard
19. Olympic Boulevard and Overland Avenue

PROJECT SITE

LEGEND
X - ORIGINAL STUDY INTERSECTION
X - ADDITIONAL STUDY INTERSECTION PER EXPANDED STUDY AREA

FIGURE 6

PROJECT STUDY INTERSECTION LOCATIONS

Hirsch/Green Transportation Consulting, Inc.

20. Olympic Boulevard and Beverly Glen Boulevard
21. I-405 Freeway Southbound Off-Ramp/Tennessee Avenue and Sawtelle Boulevard
22. Pico Boulevard and Cloverfield Boulevard (City of Santa Monica)
23. Pico Boulevard and Stewart Street/28th Street (City of Santa Monica)
24. Pico Boulevard and I-10 Freeway Eastbound Off-Ramp/34th Street
25. Pico Boulevard and Centinela Avenue
26. Pico Boulevard and Bundy Drive
27. Pico Boulevard and Barrington Avenue
28. Pico Boulevard and Exposition Boulevard/Gateway Boulevard
29. Pico Boulevard and Sawtelle Boulevard
30. Pico Boulevard and Cotner Avenue
31. Pico Boulevard and Sepulveda Boulevard
32. Pico Boulevard and Veteran Avenue
33. Pico Boulevard and Westwood Boulevard
34. Pico Boulevard and Overland Avenue
35. Pico Boulevard and Manning Avenue
36. Pico Boulevard and Patricia Avenue
37. Pico Boulevard and Beverly Glen Boulevard
38. Pico Boulevard and Motor Avenue
39. Pico Boulevard and Avenue of the Stars
40. Exposition Boulevard and Sepulveda Boulevard
41. Barrington Avenue and Gateway Boulevard
42. Bundy Drive and Gateway Boulevard
43. National Boulevard and Barrington Avenue
44. National Boulevard and Sawtelle Boulevard
45. National Boulevard and I-405 Freeway Southbound On-Ramp
46. National Boulevard and I-405 Freeway Northbound Off-Ramp
47. National Boulevard and Sepulveda Boulevard
48. National Boulevard and Westwood Boulevard

49. National Boulevard/I-10 Freeway Westbound On/Off-Ramps and Overland Avenue
50. Overland Avenue and I-10 Freeway Eastbound On -Ramp
51. Queensland Avenue and Sepulveda Boulevard
52. Palms Boulevard and Sawtelle Boulevard
53. Palms Boulevard and Sepulveda Boulevard
54. Venice Boulevard and Sepulveda Boulevard
55. Lindbrook Drive and Westwood Boulevard
56. Wilshire Boulevard and Glendon Avenue
57. Overland Avenue and National Place
58. Venice Boulevard and Sawtelle Boulevard
59. Venice Boulevard and Overland Avenue
60. Sepulveda Boulevard and I-405 Northbound On/Off-Ramps
61. Sepulveda Boulevard and Washington Place

STUDY AREA TRAFFIC VOLUMES

Existing (Year 2009) Traffic Volumes

Existing (No Project) Conditions

In order to provide a viable comparison between the potential impacts of the modified project proposal and the currently-proposed site development scheme, the traffic volume database used in the "Revised December 2009" traffic study and supplemental study area expansion analyses were again used as the basis for this evaluation. As described in detail in those previous analyses, the traffic volume information from the "Revised December 2009" impact analyses were based on data collected in 2007 and 2008, while the traffic data for the additional seven-intersection expansion of the traffic study scope were collected in 2011. However, primarily due to the current economic downturn, traffic volumes in the study area have generally remained relatively stable since the preparation of original project traffic study, and a comparison of the 2011 traffic counts for the seven supplemental intersections with the 2007/2008 traffic volumes indicated a good correlation in the data. As such, the 2011 traffic data are comparable to those used in the "Revised December 2009" analyses. Therefore, in order to avoid confusion, for purposes of this study, the "existing" traffic volumes for all 62 of the study intersections are identified simply as representing "year 2009" conditions. The "existing" traffic volumes for the 62 study intersections are shown in Figures 7(a) and 7(b) for the original 54 study intersections and seven additional intersections, respectively, for AM peak hour conditions, and in Figures 8(a) and 8(b) for these same locations for PM peak hour conditions.

Existing With Project Conditions

LADOT's current traffic study policies require an analysis of potential project-related impacts on existing conditions in the study, in order to identify any "immediate" traffic impacts within the project vicinity which may result from development of the proposed project alone. The traffic volumes for this scenario were developed by adding the modified project's net traffic volumes, shown previously in Figures 3(a) and 3(b) for the AM peak hour and Figures 4(a) and 4(b) for the PM peak hour, to the appropriate "existing" traffic volumes described above and shown in Figures 7(a) and 7(b) for the AM peak hour and Figures 8(a) and 8(b) for the PM peak hour. The resulting "Existing (2009) With Modified Project" scenario traffic volume forecasts are shown for the AM peak hour for each of the 62 study intersections in Figures 9(a) and 9(b) and for the PM peak hour in Figures 10(a) and 10(b).

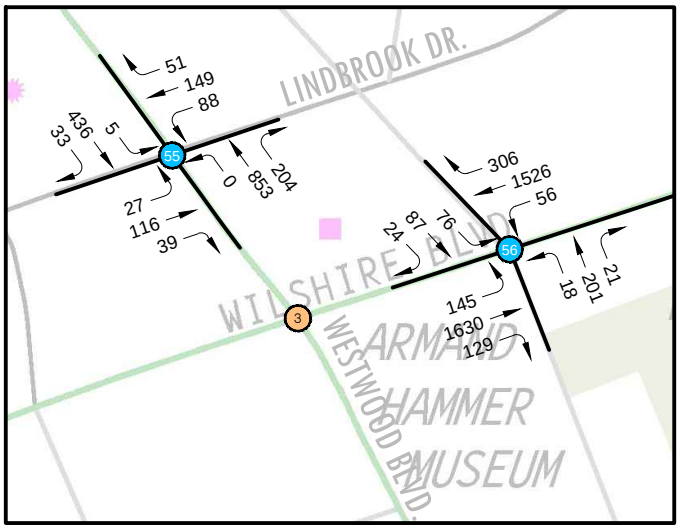
FIGURE 7(a)

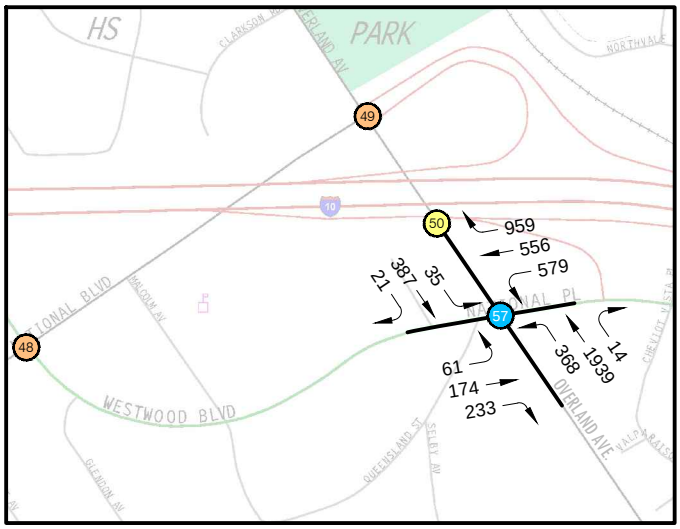
EXISTING (2009) TRAFFIC VOLUMES
AM PEAK HOUR

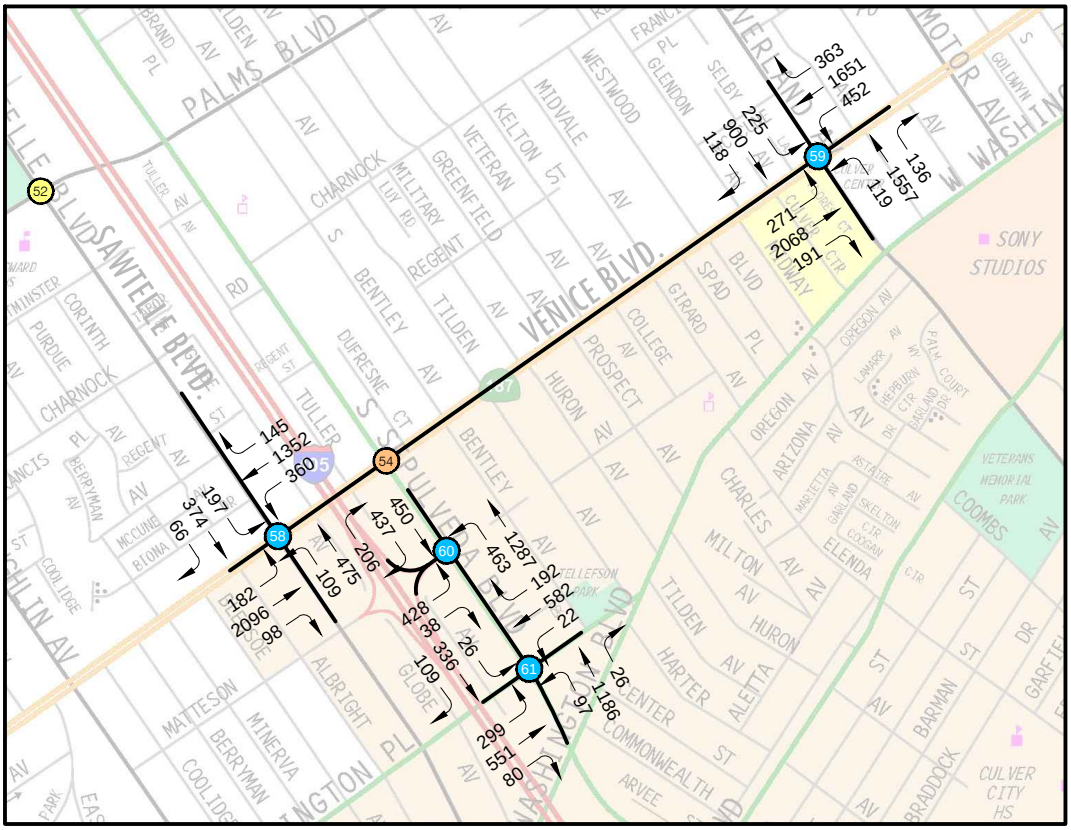
PROJECT SITE

LEGEND
- X - SIGNALIZED INTERSECTION
- X - UNSIGNALIZED INTERSECTION

Hirsch/Green Transportation Consulting, Inc.







LEGEND
- (X) - ORIGINAL STUDY INTERSECTION
- (X) - PREVIOUSLY IDENTIFIED SIGNIFICANT IMPACT
- (X) - ADDITIONAL STUDY INTERSECTION PER EXPANDED STUDY AREA

N

FIGURE 7(b)

HIRSCH GREEN
Hirsch/Green Transportation Consulting, Inc.

EXISTING TRAFFIC VOLUMES
AM PEAK HOUR

FIGURE 8(a)

EXISTING (2009) TRAFFIC VOLUMES
PM PEAK HOUR

PROJECT SITE

LEGEND
- SIGNALIZED INTERSECTION
- UNSIGNALIZED INTERSECTION

Hirsch/Green Transportation Consulting, Inc.

LEGEND
- X - ORIGINAL STUDY INTERSECTION
- X - PREVIOUSLY IDENTIFIED SIGNIFICANT IMPACT
- X - ADDITIONAL STUDY INTERSECTION PER EXPANDED STUDY AREA

N

FIGURE 8(b)

12/4/2012

HIRSCH GREEN
Hirsch/Green Transportation Consulting, Inc.

EXISTING TRAFFIC VOLUMES
PM PEAK HOUR

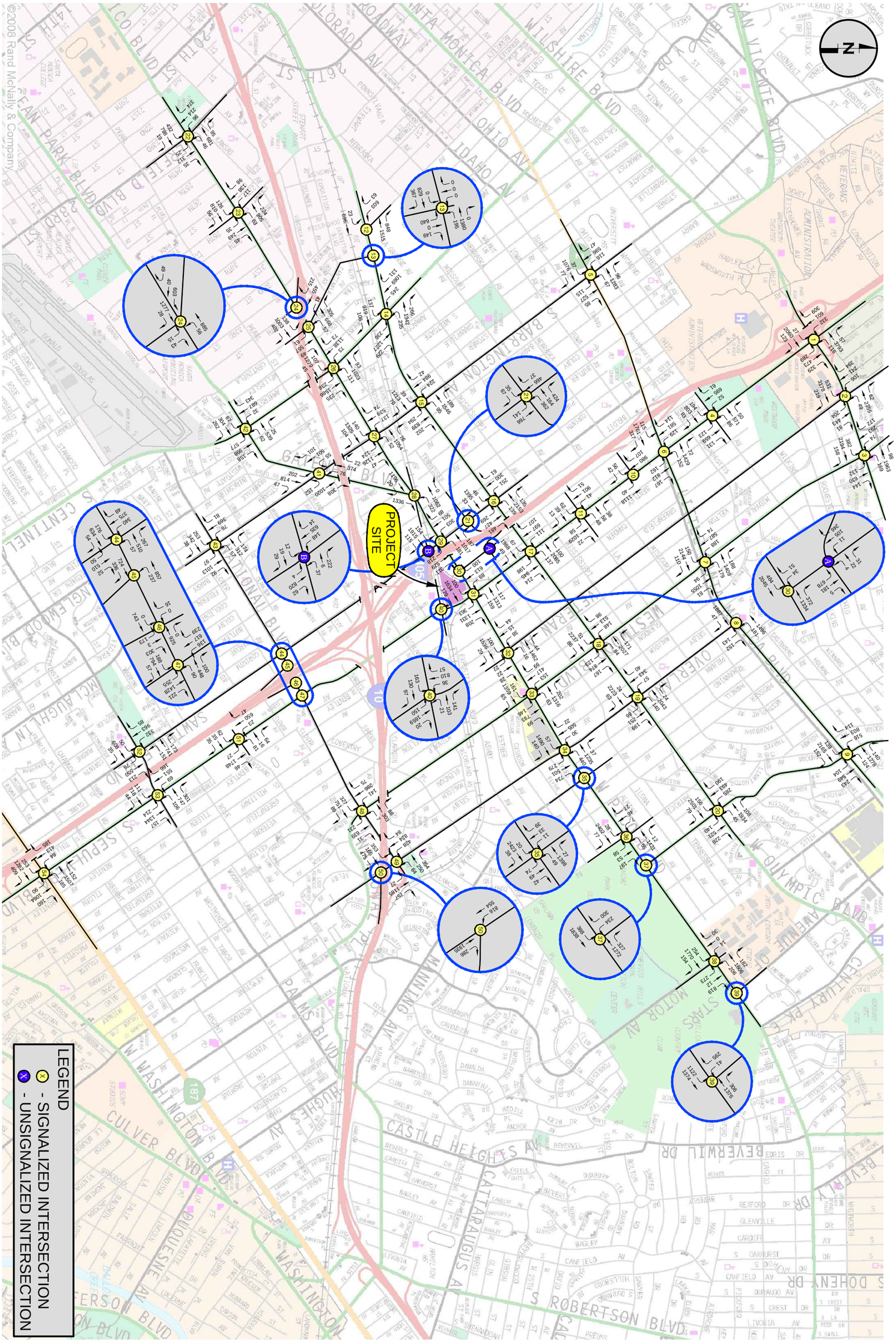


FIGURE 9(a)

EXISTING (2009) TRAFFIC VOLUMES
WITH PROJECT
AM PEAK HOUR

HIRSCH GREEN
Hirsch/Green Transportation Consulting, Inc.

LEGEND
- X - ORIGINAL STUDY INTERSECTION
- X - PREVIOUSLY IDENTIFIED SIGNIFICANT IMPACT
- X - ADDITIONAL STUDY INTERSECTION PER EXPANDED STUDY AREA

N

FIGURE 9(b)

12/4/2012

HIRSCH GREEN
Hirsch/Green Transportation Consulting, Inc.

EXISTING TRAFFIC VOLUMES
WITH PROJECT
AM PEAK HOUR

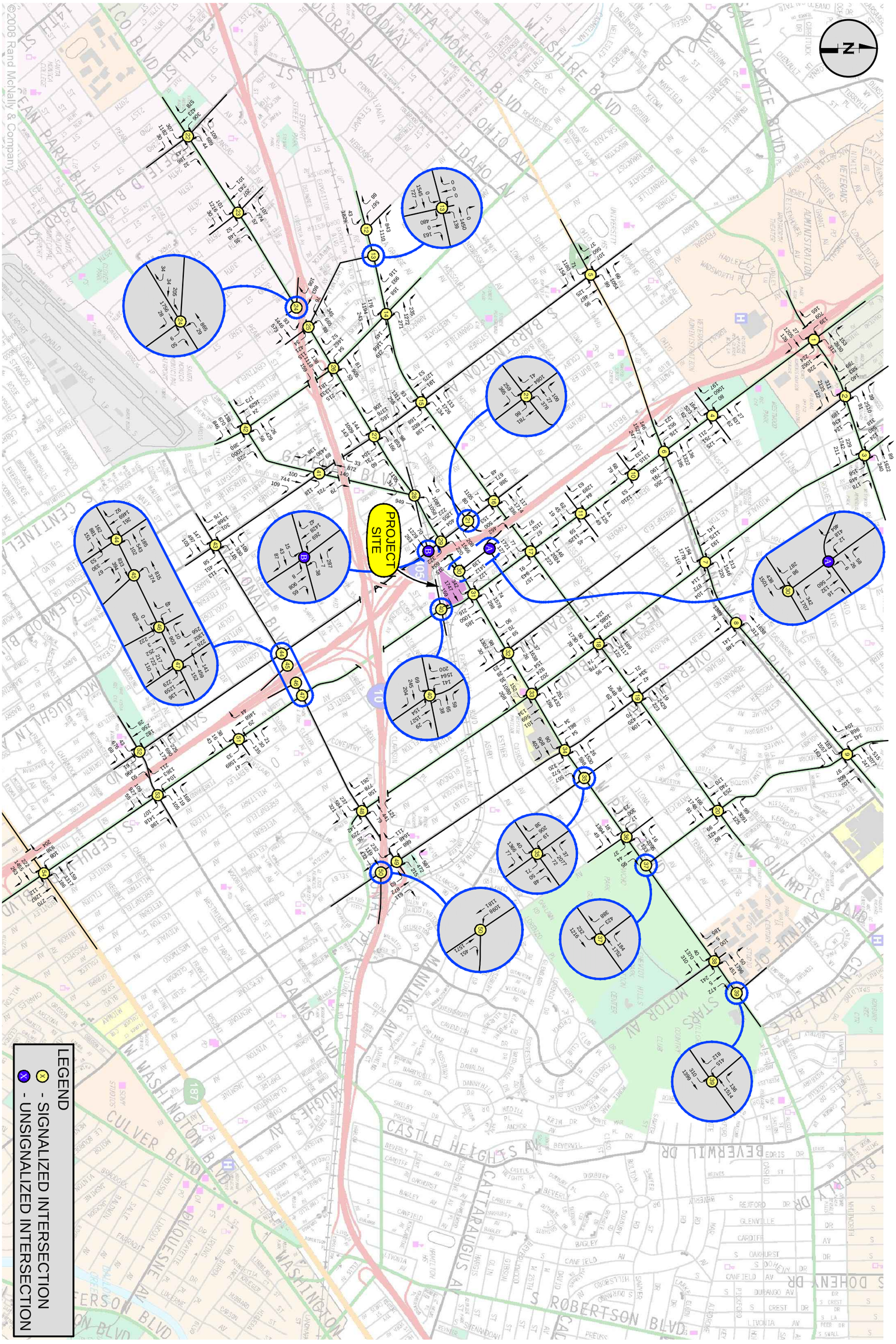


FIGURE 10(a)

EXISTING (2009) TRAFFIC VOLUMES
WITH PROJECT
PM PEAK HOUR

HIRSCH GREEN
Hirsch/Green Transportation Consulting, Inc.

LEGEND

- X - ORIGINAL STUDY INTERSECTION
- X - PREVIOUSLY IDENTIFIED SIGNIFICANT IMPACT
- X - ADDITIONAL STUDY INTERSECTION PER EXPANDED STUDY AREA

N

FIGURE 10(b)

12/4/2012

IRSCH REEN
Hirsch/Green Transportation Consulting, Inc.

EXISTING TRAFFIC VOLUMES
WITH PROJECT
PM PEAK HOUR

Future (Year 2012) Traffic Volumes

In addition to the "Existing With Project" analyses, the effects of the project on future conditions in the area were also examined, with the future study year reflecting the project's expected completion date. As with the original project analyzed in the "Revised December 2009" traffic study, and similar to the analyses of the "existing" conditions, this supplemental analysis utilizes the same forecast future year of 2012 as the baseline for evaluating the potential impacts of the modified project. While it is recognized that 2012 is no longer a "future" year, this date was maintained in order to provide a consistent baseline for comparison of the potential impacts associated with the currently-proposed project with those of the modified project.

Additionally, it should be noted that the methodology for forecasting the anticipated "future year" conditions includes both a general "ambient traffic growth" component as well as the inclusion of traffic that could be generated by other ongoing and proposed development projects within the study area. As such, the forecasting methodology essentially results in the identification of potential traffic volumes at some point in the future from the "existing" year; in the case of the subject project, three years. Further, as described earlier in the discussion of the "existing" year 2007/2008 versus 2011 intersection volumes, it was noted that the newer traffic data collected at the seven "additional" study intersections were reasonably consistent with the prior data collected for the original 54 study intersections examined in the "Revised December 2009" traffic study. As a result, it is expected that the "year 2009" traffic data continues to reflect an acceptable estimate of current (year 2011 or 2012) traffic conditions in the project vicinity, and therefore, application of the future traffic forecasting procedures would produce reasonable estimates of traffic three years in the future from those dates, or the year 2014 or 2015. Nonetheless, for the purposes of this supplemental study, the future analysis year continues to be identified as "year 2012" as assumed in the "Revised December 2009" traffic study.

Future Without Project Forecasts

The future year 2012 traffic volume forecasts for this analysis utilized the same assumptions and forecasting procedures as detailed in the "Revised December 2009" traffic analyses, including the use of the 1.0 percent annual "ambient traffic growth factor" and additional traffic assumed to result from the 42 individual "related projects" identified for that study, which are incorporated herein by reference. The assumed "future 2012" traffic volumes for the 62 study intersections are shown in Figures 11(a) and 11(b) for the AM peak hour conditions, and in Figures 12(a) and 12(b) for the PM peak hour conditions.

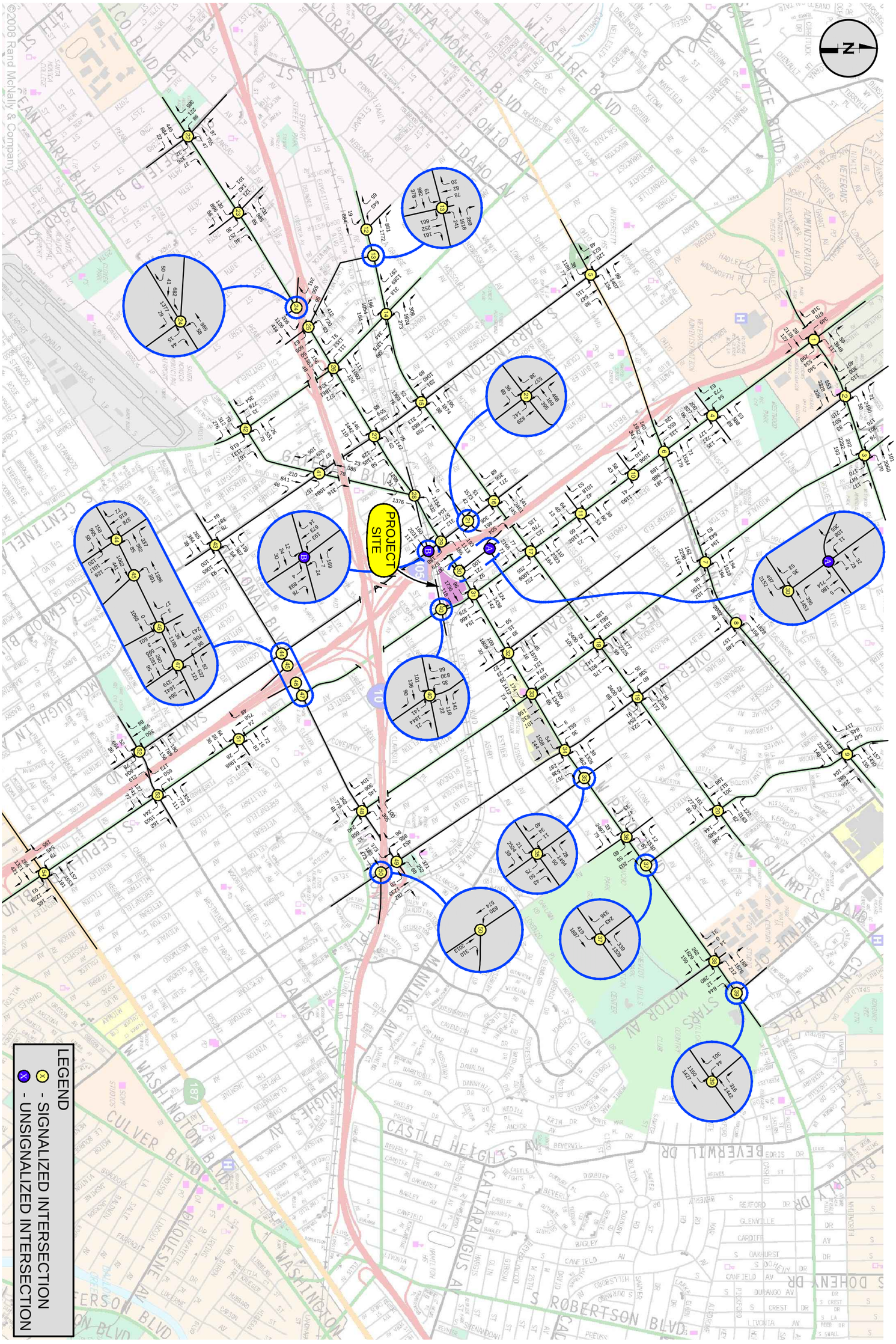
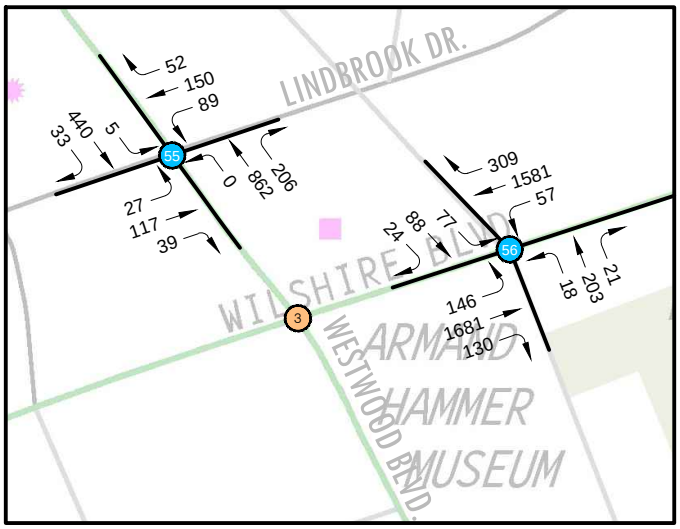
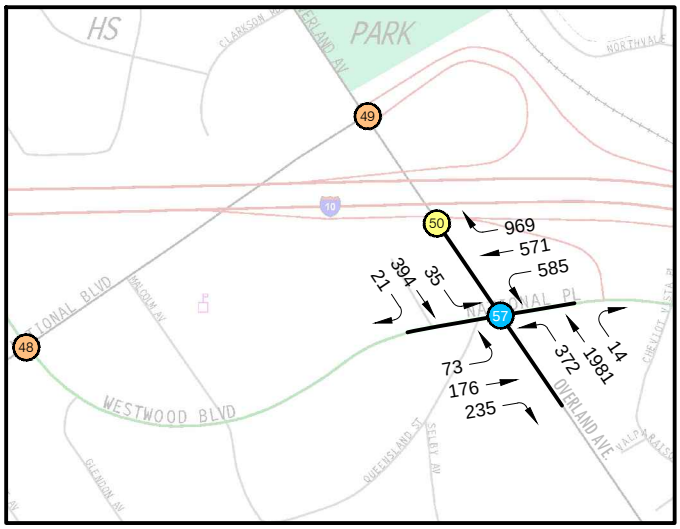


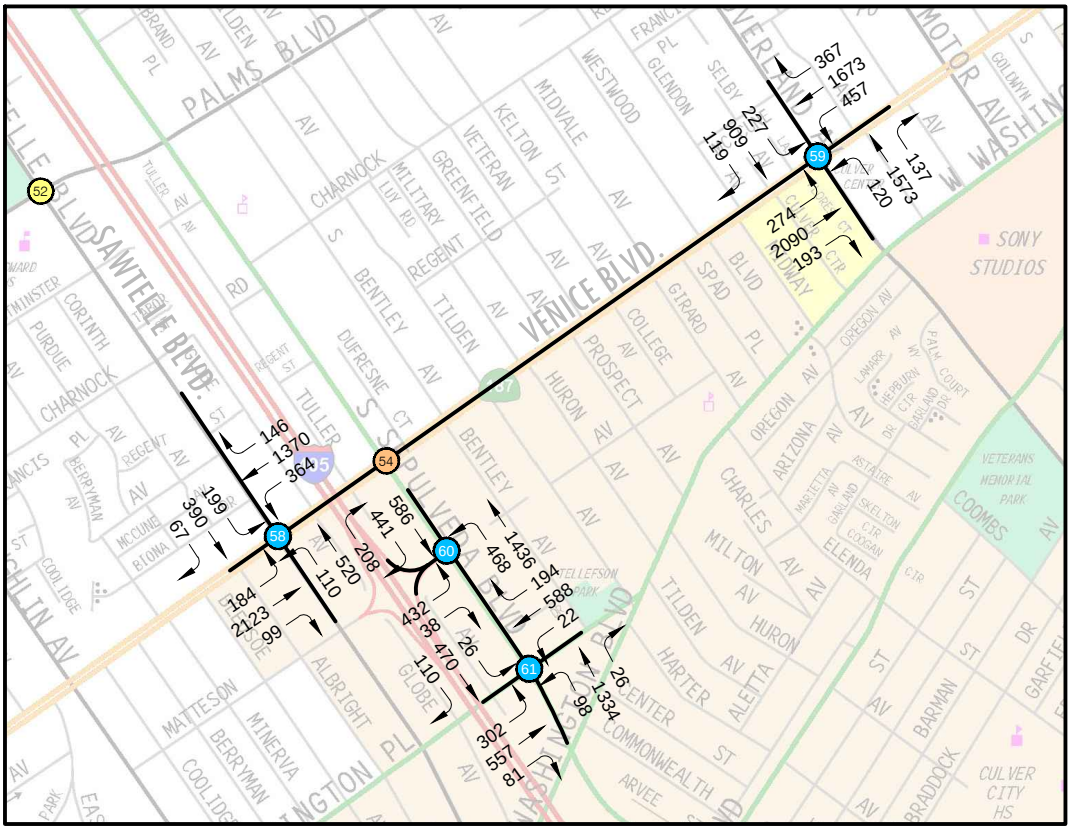
FIGURE 11(a)

HIRSCH GREEN
Hirsch/Green Transportation Consulting, Inc.

FUTURE (2012) TRAFFIC VOLUMES
WITHOUT PROJECT
AM PEAK HOUR







LEGEND
- X - ORIGINAL STUDY INTERSECTION
- X - PREVIOUSLY IDENTIFIED SIGNIFICANT IMPACT
- X - ADDITIONAL STUDY INTERSECTION PER EXPANDED STUDY AREA

N

FIGURE 11(b)

12/4/2012

HIRSCH GREEN
Hirsch/Green Transportation Consulting, Inc.

FUTURE (2012) TRAFFIC VOLUMES
WITHOUT PROJECT
AM PEAK HOUR

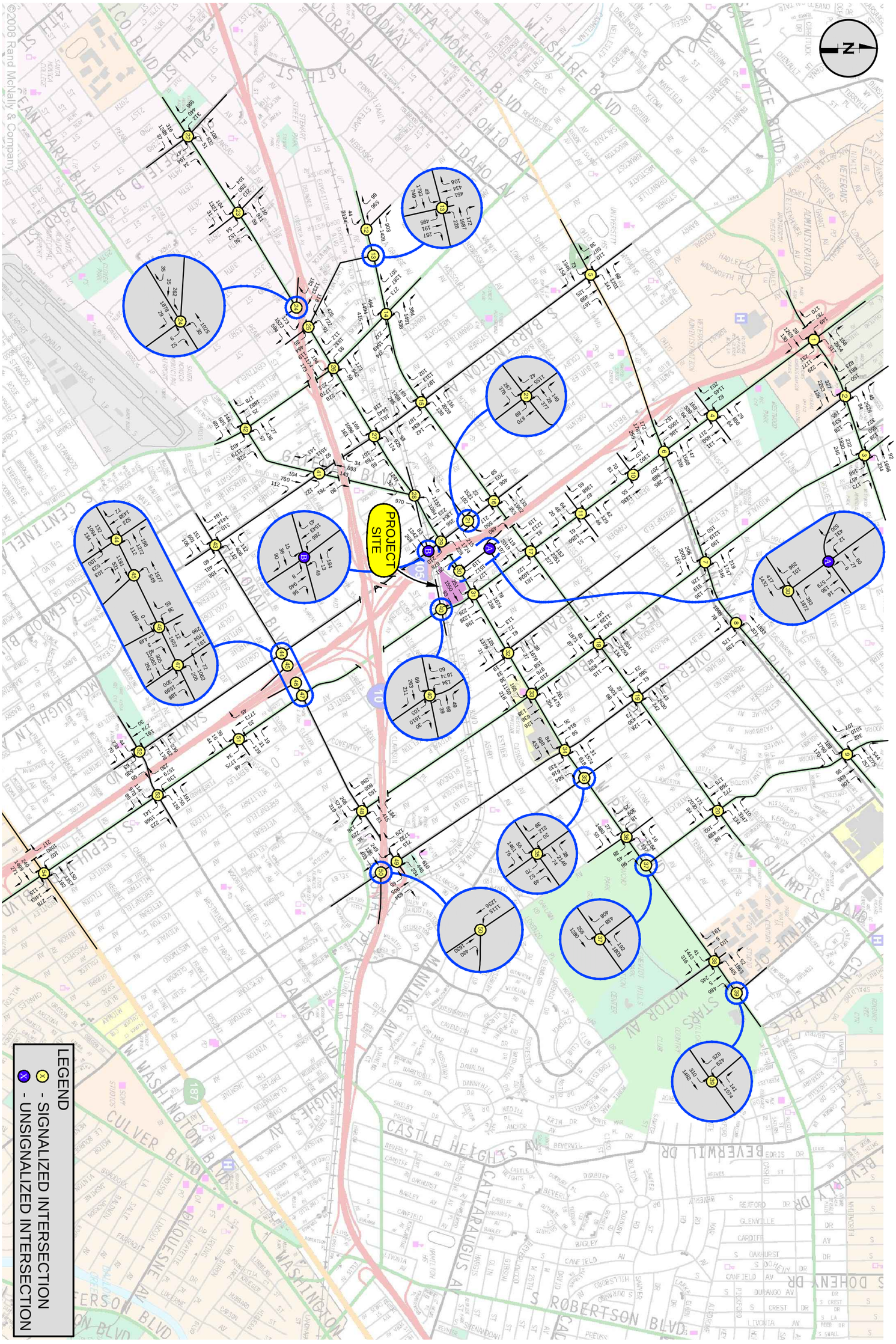


FIGURE 12(a)

HIRSCH GREEN
Hirsch/Green Transportation Consulting, Inc.

FUTURE (2012) TRAFFIC VOLUMES
WITHOUT PROJECT
PM PEAK HOUR

LEGEND
- (X) - ORIGINAL STUDY INTERSECTION
- (X) - PREVIOUSLY IDENTIFIED SIGNIFICANT IMPACT
- (X) - ADDITIONAL STUDY INTERSECTION PER EXPANDED STUDY AREA

N

FIGURE 12(b)

12/4/2012

HIRSCH GREEN
Hirsch/Green Transportation Consulting, Inc.

FUTURE (2012) TRAFFIC VOLUMES
WITHOUT PROJECT
PM PEAK HOUR

Future With Project Forecasts

Finally, the modified project's net traffic volumes shown previously in Figures 3(a) and 3(b) and Figures 4(a) and 4(b) were combined with their respective forecast future "Without Project" benchmark volumes, shown in Figures 11(a) and 11 (b), and Figures 12(a) and 12(b). The resulting "Future (2012) With Modified Project" traffic volume estimates at each of the 61 study intersections are shown in Figures 13(a) and 13(b) for the anticipated AM peak hour conditions and in Figures 14(a) and 14(b) for the anticipated PM peak hour conditions. These traffic volume forecasts were to identify the potential incremental effects of the modified project at each of the study locations at the time of its completion and occupancy.

The methodologies and assumptions used in the analysis of the intersection operations for both the "existing" (year 2009) and forecast future (year 2012) evaluation scenarios are described in detail in the following section of this report, including summaries of the "without project" traffic conditions (representing intersection operations prior to development of the proposed project) and "with project" conditions at each of the 61 study intersections, as well as identification and discussion of the potential project-related traffic impacts at these locations.

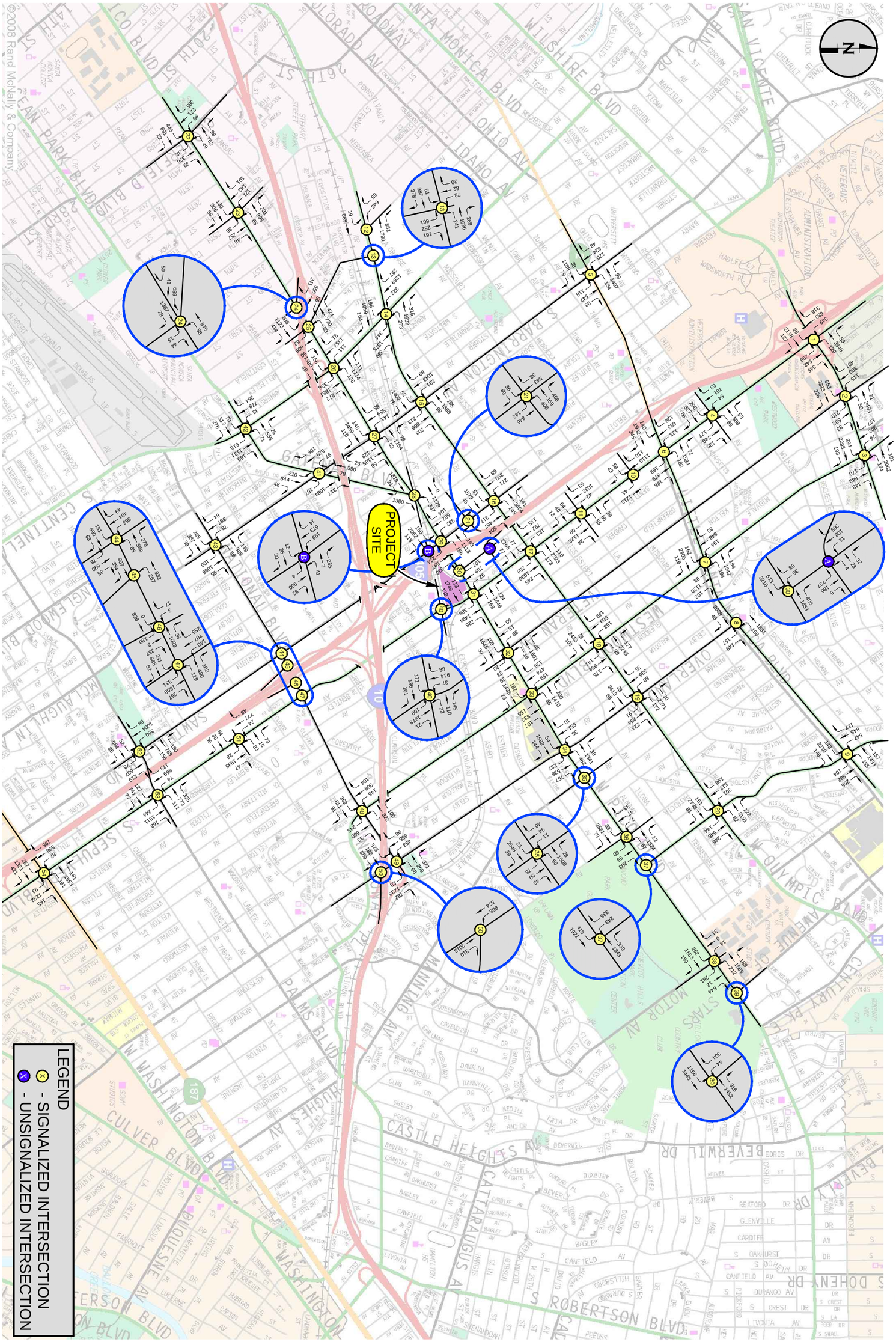
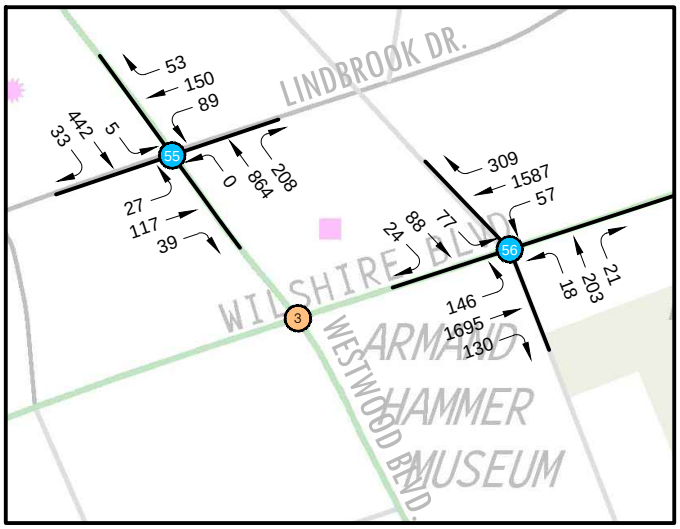
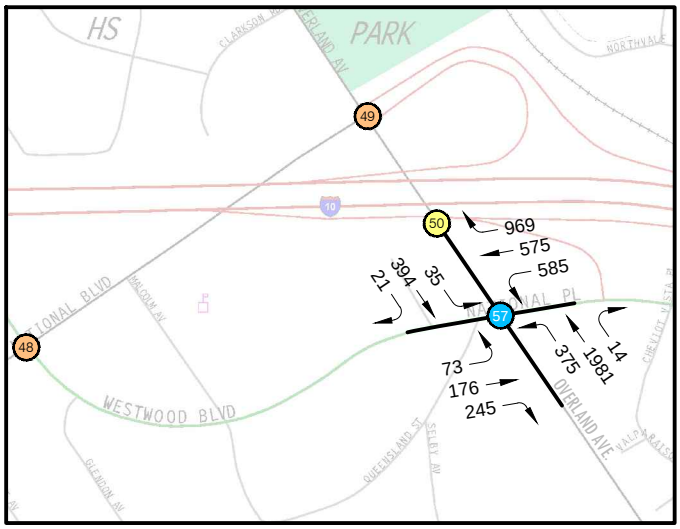


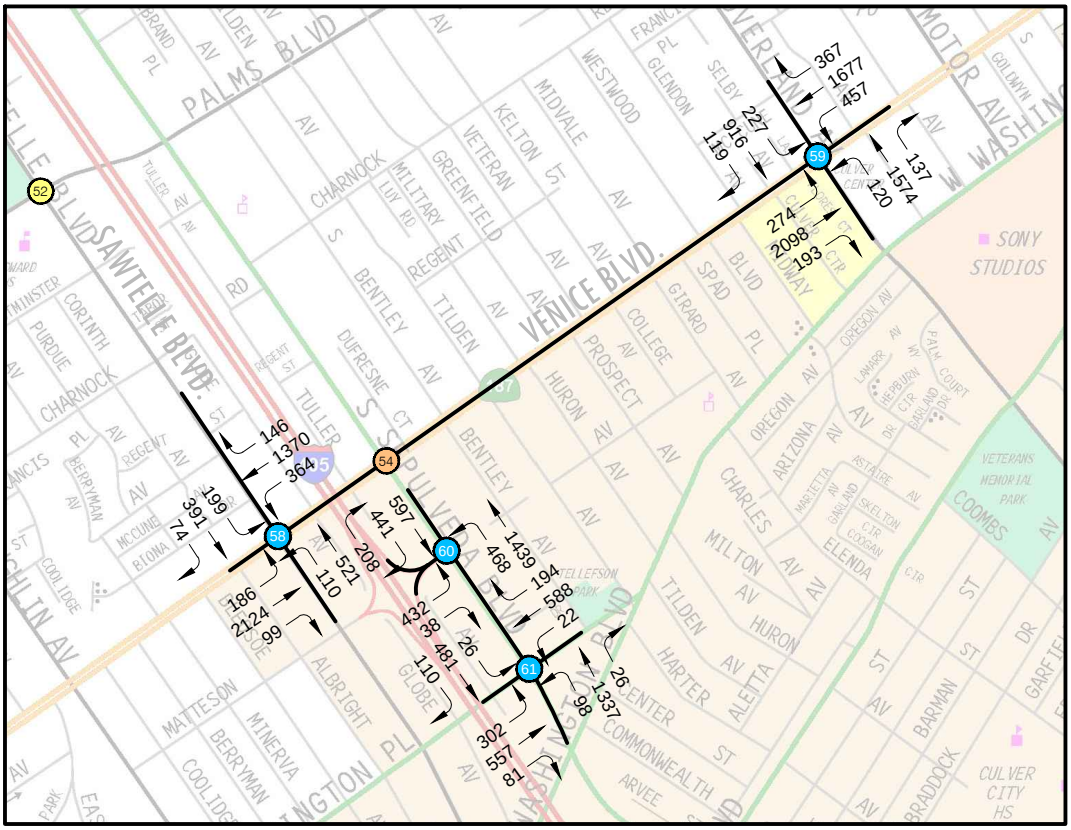
FIGURE 13(a)

HIRSCH GREEN
Hirsch/Green Transportation Consulting, Inc.

FUTURE (2012) TRAFFIC VOLUMES
WITH PROJECT
AM PEAK HOUR







LEGEND
- (X) - ORIGINAL STUDY INTERSECTION
- (X) - PREVIOUSLY IDENTIFIED SIGNIFICANT IMPACT
- (X) - ADDITIONAL STUDY INTERSECTION PER EXPANDED STUDY AREA

FIGURE 13(b)

Hirsch/Green Transportation Consulting, Inc.

FUTURE (2012) TRAFFIC VOLUMES
WITH PROJECT
AM PEAK HOUR

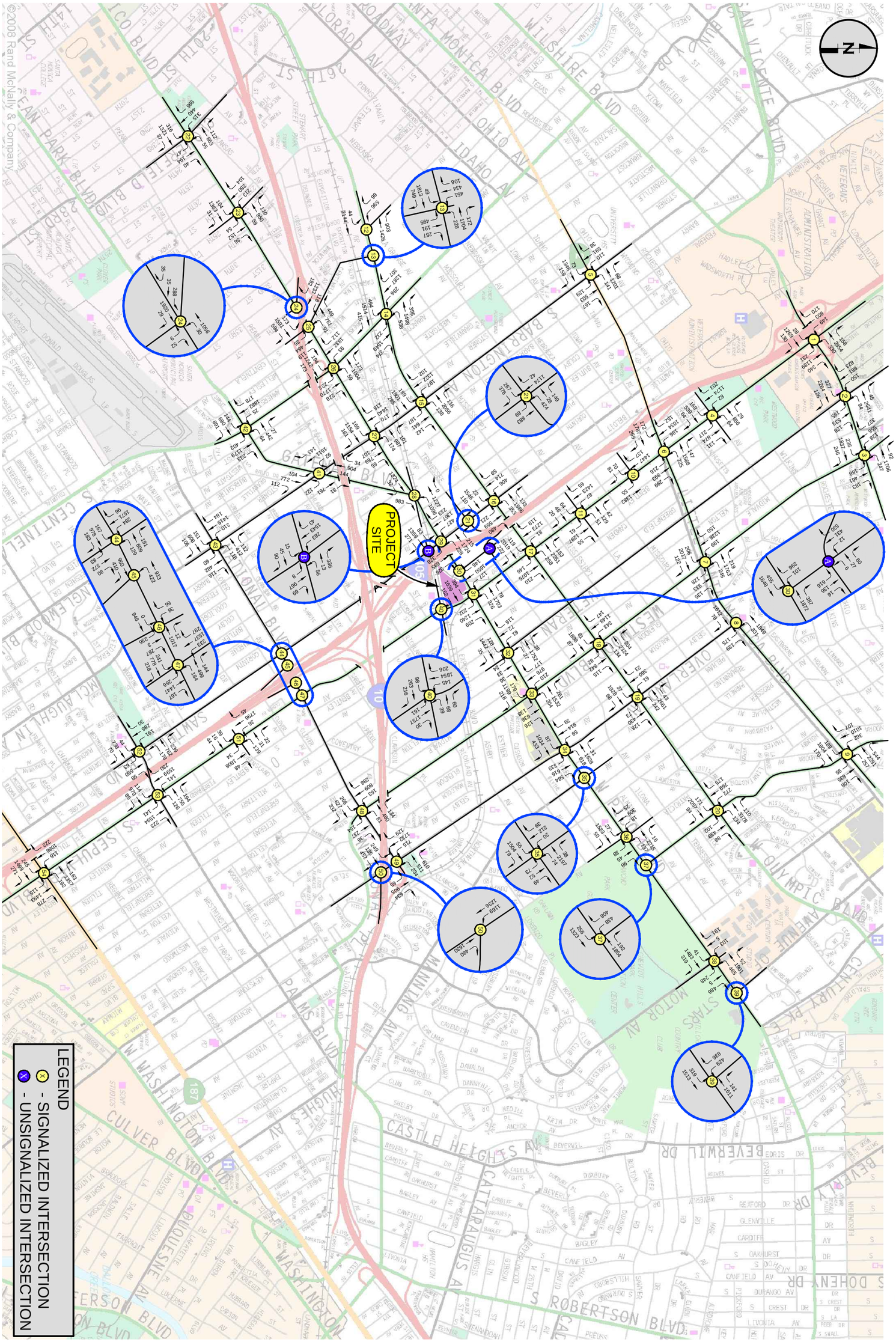
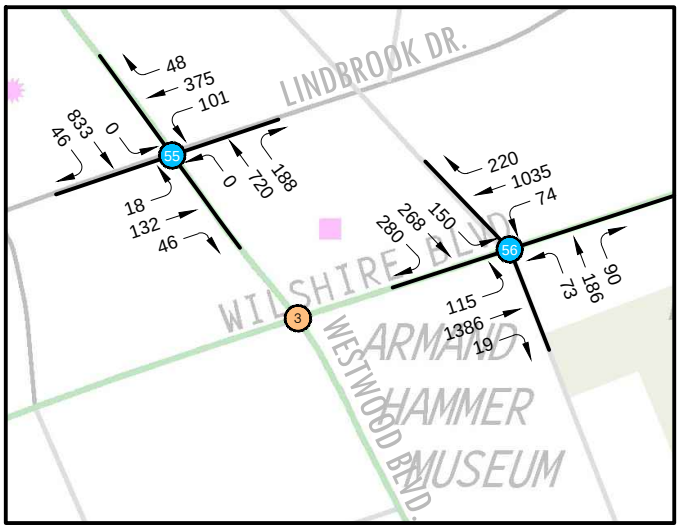
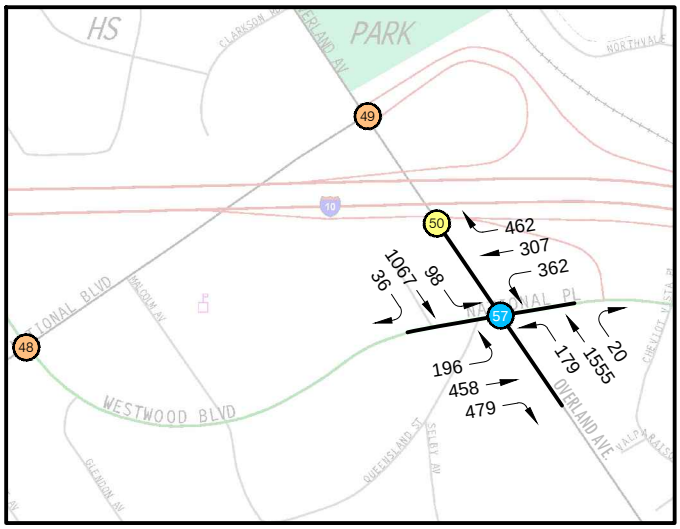


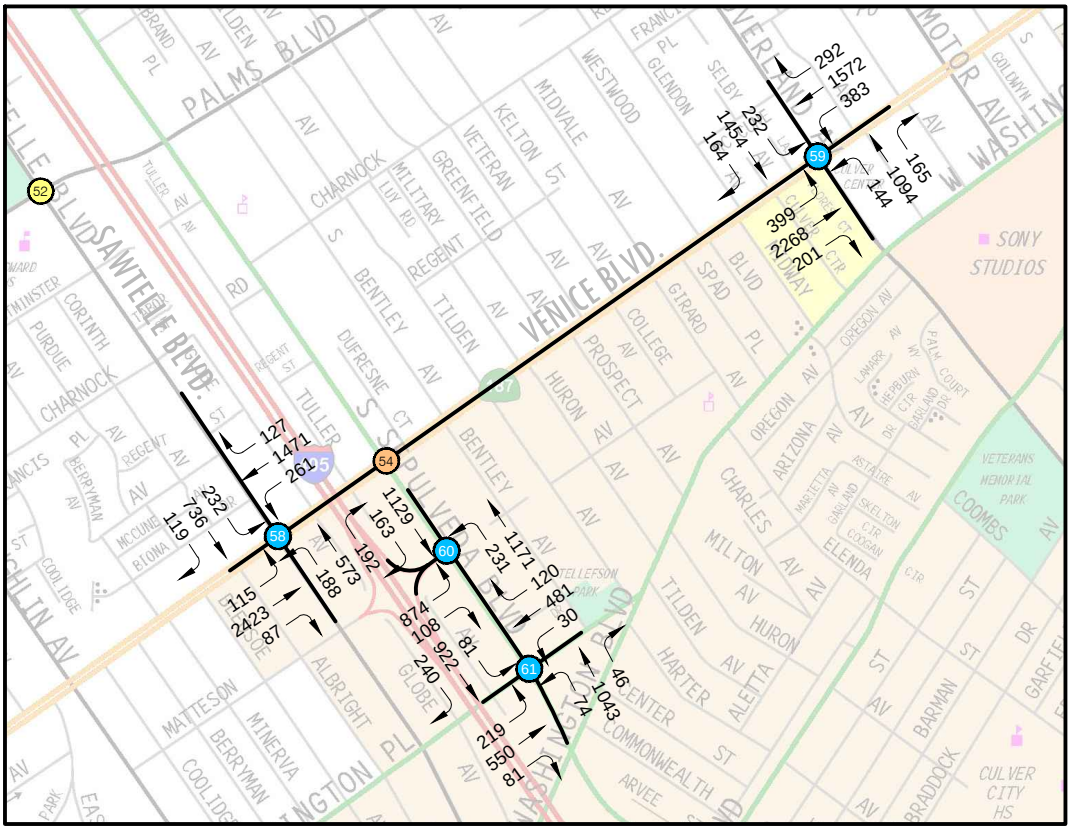
FIGURE 14(a)

HIRSCH GREEN
Hirsch/Green Transportation Consulting, Inc.

FUTURE (2012) TRAFFIC VOLUMES
WITH PROJECT
PM PEAK HOUR







LEGEND
- (X) - ORIGINAL STUDY INTERSECTION
- (X) - PREVIOUSLY IDENTIFIED SIGNIFICANT IMPACT
- (X) - ADDITIONAL STUDY INTERSECTION PER EXPANDED STUDY AREA

N

FIGURE 14(b)

12/4/2012

IRSCH REEN
Hirsch/Green Transportation Consulting, Inc.

FUTURE (2012) TRAFFIC VOLUMES
WITH PROJECT
PM PEAK HOUR

ANALYSIS OF AREA TRAFFIC CONDITIONS

Detailed analyses of the "existing" (year 2009) and forecast future (year 2012) traffic conditions in the study area were performed at a total of 61 signalized intersections located in the vicinity of the proposed project, listed and shown in relation to the proposed project site in the preceding section. Those intersections are the locations considered by LADOT to be the most likely to be affected by traffic generated by the proposed project, and as indicated earlier in this report, are the same study intersections evaluated for the currently-proposed project.

Existing Highway System Improvements

As described in the "Revised December 2009" and other supplemental analyses prepared for the currently-proposed project, the 61 study intersections are each controlled by traffic signals, and all are equipped with LADOT's Automated Traffic Surveillance and Control ("ATSAC") traffic signal coordination software, with the exception of the three intersections located wholly within the City of Santa Monica, Pico Boulevard and Cloverfield Boulevard (no. 22), Pico Boulevard and Stewart Street/28th Street (no. 23), and Pico Boulevard and the I-10 Freeway Eastbound Off-Ramp/34th Street (no. 24); the City of Santa Monica currently has no city-wide traffic signal coordination system. Further, in addition to the ATSAC signal improvements, most of the study intersections located within the City of Los Angeles, including all of the intersections east of Sawtelle Boulevard and north of National Boulevard, inclusive, (except Westwood Boulevard and Lindbrook Avenue) are also upgraded with LADOT's next-generation Adaptive Traffic Control System ("ATCS") signal coordination equipment and software. The ATSAC/ATCS systems enhance the overall capacity of a network of interconnected traffic signals by monitoring the traffic flow from adjacent ATSAC/ATCS intersections and adjusting signal timing and phasing in real time to maximize vehicular throughput and minimize delay.

Ongoing or Programmed Future Highway System Improvements

The existing roadway network serving the study area is already improved with a variety of measures to enhance traffic flow and reduce travel delays, including left-turn and/or right-turn channelization at key intersections, prohibition of on-street parking during peak commute traffic periods to provide additional traffic lanes, and installation of the City's ATSAC traffic signal coordination systems at all of the signalized study intersections in the project vicinity. As such, as described in detail in the "Revised December 2009" project traffic study, there are few notable highway system improvements anticipated in the project vicinity.

One such programmed improvement is LADOT's planned completion of the installation of the ATCS traffic signal coordination upgrades throughout the study area; as noted earlier, several of the study intersections, particularly those west of Sawtelle Boulevard, have not yet been improved with the ATCS signal coordination upgrades. According to LADOT, the ATCS traffic signal coordination upgrades within the study area are slated for construction as part of the Westwood/West Los Angeles area signal improvement project in fiscal year 2011/2012. However, LADOT also noted that although implementation of the ATCS upgrades have received a commitment of funding (via Proposition 1B monies) for completion both within the immediate study area as well as throughout the remainder of the City, due to current economic conditions, it is not certain whether sufficient funds to accomplish this goal will be available as anticipated. Therefore, as also assumed in the analyses contained in the "Revised December 2009" study, since the funding necessary to complete the ATCS upgrade installations cannot be guaranteed by the future horizon year assumed for this analysis, the analysis of the future (year 2012) roadway conditions contained in this study did not include any ATCS upgrades (or their potential benefits) at any intersections where it has not already been installed.

In addition to the programmed traffic signal coordination upgrades, several street and highway improvements are also planned for the project vicinity within the study timeline. LADOT plans to restripe Overland Avenue at the National Boulevard/I-10 Westbound On/Off-Ramps to provide one left-turn lane, three through lanes, and one right-turn only lane for the northbound approach, replacing the current configuration of one left-turn lane, one through lane, one shared through/right-turn lane, and one right-turn only lane; this improvement will also install an additional (third) northbound through lane at the adjacent study intersection of Overland Avenue and the I-10 Eastbound On-Ramp. The southbound approaches of both intersections will also be restriped to align the new lanes, although no changes in lane operations are planned. It should be noted that this improvement has already been completed, and as such, its inclusion in the assumed future roadway analyses is appropriate. However, in order to remain consistent with the analysis assumptions used in the "Revised December 2009" traffic study, this improvement has not been assumed in the analysis of the "existing" area traffic conditions.

Additionally, Caltrans is currently underway with construction to extend the carpool lanes in both the northbound and southbound directions of the San Diego (I-405) Freeway through the study area, to connect the existing carpool lanes north of the study area (north of the Sepulveda Pass) to those to the south of the Santa Monica (I-10) Freeway into Orange County. While these improvements will add much needed capacity to the I-405 Freeway, and generally enhance

surface street access through the study area with improved ramp facilities, they also result in changes to the configuration or operations of the National Boulevard/I-405 On- and Off-Ramps, as well as to the adjacent intersections of National Boulevard and Sawtelle Boulevard, and National Boulevard and Sepulveda Boulevard. As with the improvements described earlier for the intersection of Overland Avenue at National Boulevard/I-10 Westbound On/Off-Ramps, these improvements have also been completed, although again, in order to remain consistent with the analyses contained in the "Revised December 2009" traffic study, they have not been assumed in the analysis of the "existing" area traffic conditions for this study.

Construction is also now underway on the City's Sepulveda Boulevard Reversible Lane project, which is being implemented in conjunction with Caltrans' I-405 widening/carpool lane project described above. In addition to the provision of additional travel lanes in both directions of Sepulveda Boulevard through the Sepulveda Pass area (generally between Wilshire Boulevard and Skirball Center Drive), the Reversible Lane project includes the installation of new northbound and southbound right-turn only lanes on the Sepulveda Boulevard approach at the intersection of Wilshire Boulevard and Sepulveda Boulevard. This project, as well as Caltrans' I-405 widening project noted earlier, is anticipated to be completed by the end of 2013.

Details of other potential future roadway improvements affecting the study area, including the proposed the "Olympic/Pico Plan"[2], which envisions additional peak hour travel lanes along a seven-mile stretch of both Pico Boulevard and Olympic Boulevard between Fairfax Avenue and Centinela Avenue, and the ongoing "Phase 2" extension of the existing Expo Line light rail facility from its current western terminus near Venice Boulevard and Robertson Boulevard in Culver City to near Colorado Avenue and 4th Street in the City of Santa Monica, which will provide uninterrupted service between the Pacific Ocean and downtown Los Angeles, including a new station at Sepulveda Boulevard and Exposition adjacent to the site of the proposed project, are contained in the "Revised December 2009" traffic study. The effects of these two programs on the future roadway system and traffic conditions in the study area described in the original project traffic study are again incorporated into this supplemental analysis in order to provide a consistent basis for analysis of the currently-proposed and modified projects' impacts.

However, it should be noted, as described earlier in this report, that the analyses contained in the "Revised December 2009" study were prepared at a time when the Expo Line Phase 2 extension project anticipated an at-grade track and station configuration along the segment

[2] *Initial Study for the Olympic West – Pico East Initiative*, City of Los Angeles, City of Los Angeles Department of Transportation, and City of Los Angeles Bureau of Engineering, March 2009.

adjacent to the project site, between Sepulveda Boulevard and Sawtelle Boulevard. As such, those analyses assumed that the at-grade alignment could result in substantial delays to the northbound and southbound through traffic flows on Sepulveda Boulevard due to blockages of that street to accommodate train traffic, and affect the operations of the intersections of both Sepulveda Boulevard and Pico Boulevard, and Sepulveda Boulevard and Exposition Boulevard.

However, the approved elevated Expo Line station and associated grade separated rail crossing of Sepulveda Boulevard would not affect the operations of the roadway or either of the nearby intersections, since there would be no conflicts between the Expo Line trains and vehicles on Sepulveda Boulevard or other nearby streets. As a result, the at-grade Expo Line station and at-grade Sepulveda Boulevard crossing scenario assumed in the "Revised December 2009" and also incorporated into this supplemental study will produce "worst case" evaluations of future intersection and roadway operations in the project vicinity, including potential project impacts at the two subject intersections noted earlier. Further, the grade-separated Expo Line alignment would not result in additional or otherwise unidentified impacts as compared to the at-grade alternative analyzed, and as a result, the lesser impacts associated with an elevated Expo Line station/crossing configuration were not specifically evaluated for this supplemental analysis.

No other significant highway improvements within the study area were identified for implementation by the anticipated completion date of the modified project. Therefore, the analysis of "Future (2012) Without Project" conditions assumed that the future roadway network geometries and capacities would generally remain unchanged from the current conditions assumed in the analysis of "Existing (2009)" traffic conditions, with the exception of the specific roadway improvement projects described in the preceding pages.

Finally, it should be noted that, in addition to the roadway improvements described in the preceding paragraphs, some or all of the related projects identified for this analysis may be required to implement localized roadway or traffic signal improvements to mitigate specific traffic-related impacts resulting from those projects. As a result, some of the study intersections analyzed in this report may receive future improvements that cannot presently be identified, but which could improve local and/or regional traffic conditions. However, as with the original "Revised December 2009" traffic study, in order to provide a "worst case" assessment of potential future (year 2012) traffic conditions in the study area, no such related projects "mitigation" improvements are assumed in this analysis.

Analysis Methodology and Results

For consistency with the previous analyses conducted for the currently-proposed project, this supplemental analysis utilizes the Critical Movement Analysis ("CMA") methodology, as detailed in Circular Number 212 published by the Transportation Research Board ("TRB")[3], for the analysis and evaluation of traffic operations at all of the signalized intersections within the City of Los Angeles, pursuant to LADOT's current traffic study policies. This analysis technique describes the operating characteristics of an intersection in terms of the "Level of Service", based on a number of factors which determine both the quantity of traffic that can move through an intersection ("Capacity") and the quality of that traffic flow ("Level of Service"). However, the City of Santa Monica prefers to evaluate the operations of signalized intersections within its jurisdiction based on the signalized intersection analysis methodologies described in the Highway Capacity Manual ("HCM")[4]. This document, also published by the TRB, identifies analysis techniques similar to the CMA methodology, but bases the intersection level of service assessments primarily on vehicle approach delays rather than volume-to-capacity utilization. Because the City of Santa Monica uses this alternative intersection operations evaluation methodology, LADOT recommended that, in addition to the CMA analysis, the three City of Santa Monica intersections also be evaluated using the HCM criteria in order to provide supplemental information regarding the operations of these locations. The details of the CMA and HCM analysis methodologies are described in the "Revised December 2009" traffic study, and are incorporated herein by reference.

Using the analysis procedures and assumptions described earlier, the "basic" CMA and/or intersection vehicular delay values and corresponding LOS were calculated for both the AM and PM peak hours at each of the 61 study intersections for those scenarios affected by the proposed modifications in the project description, specifically the "Existing (2009) With Project", and "Future (2012) With Project" scenarios. Additionally, as with the analyses contained in the "Revised December 2009" traffic study for the currently-proposed project, these "baseline" calculations were then adjusted to account for the operational improvements resulting from the existing ATSAC and/or ATCS traffic signal coordination enhancements described earlier, which are not considered in the basic CMA analysis methodology. Per LADOT policy, the baseline CMA values were reduced by 0.070 for intersections equipped with ATSAC, and by 0.100 for locations improved with ATSAC/ATCS, in order to estimate the effectiveness of the resulting

[3] Interim Materials on Highway Capacity, Circular Number 212, Transportation Research Board, Washington, D.C., 1980.

[4] Highway Capacity Manual, Transportation Research Board, Washington, D.C., 2000.

increases in intersection capacity. The three study intersections within the City of Santa Monica exhibit no signal synchronization system, and therefore, no ATSAC or ATCS adjustments are appropriate at these locations, although the HCM analyses of these three intersections assumed that the traffic signal operations at each location were optimized.

The results of the analyses, including identification of the incremental project-related impacts at each of the 61 study intersections, are summarized in Table 5. Note that the "pre-project" "Existing (2009) (no project)", and "Future (2012) Without Project" values shown in this table are assumed to be identical to those shown in the "Revised December 2009" traffic study and other analyses conducted for the currently-proposed project, and were not recalculated for this study.

Summary of Existing (2009) Conditions

As shown in Table 5, a total of 34 of the 61 study intersections currently (year 2009) operate at acceptable levels of service (LOS A through D) during both the AM and PM peak hours, with the remaining 27 intersections exhibiting undesirable LOS E (11 locations) or LOS F (16 locations) operations during their highest traffic congestion periods. Of the 16 intersections operating at LOS F during one of the peak hours, seven exhibit LOS E conditions during the "non-critical" peak hour, while six additional locations exhibit LOS F operations during both peak hours; the three remaining "LOS F" intersections exhibit LOS D or better conditions during the non-critical peak period. The LOS E/LOS F intersections are generally located along primary transportation corridors in the study area (Wilshire Boulevard, Santa Monica Boulevard, Olympic Boulevard, Pico Boulevard, and Sepulveda Boulevard), or are at or near high congestion areas such as freeway on- and off-ramp terminus intersections or the intersection of two major arterials.

Additionally, as described earlier in this report, the traffic conditions at the three study intersections located within the City of Santa Monica (intersections no. 22, 23, and 24) were also evaluated using the HCM delay-based analysis methodology, to provide supplemental information on the operations of those locations. As also shown in Table 5, the HCM analyses generally identified LOS conditions at these locations that are identical to or better than those resulting from the CMA analyses, with the exception of the intersection of Pico Boulevard and the I-10 Freeway Eastbound Off-ramp/34th Street (intersection no. 24), which operates at LOS F during the AM peak hour using the HCM methodology but exhibits LOS C conditions using the CMA methodology. A review of the HCM analysis worksheets reveals that this difference is primarily due to delays experienced by left-turning vehicles using the off-ramp; both approaches of Pico Boulevard operate at LOS B as indicated in the CMA analyses.

Table 5
Critical Movement Analysis Summary
Existing (2009) and Future (2012) Without and With Modified Project Conditions

Int. No.	Intersection	Peak Hour	Year 2009 Conditions: Existing (No Project) CMA	LOS	Existing With Project CMA	LOS	Impact	Year 2012 Conditions: Without Project CMA	LOS	With Project CMA	LOS	Impact
1	Wilshire Boulevard	AM	1.019	F	1.021	F	0.002	0.966	E	0.968	E	0.002
	and Sepulveda Boulevard	PM	0.915	E	0.923	E	0.008	0.909	E	0.913	E	0.004
2	Wilshire Boulevard	AM	0.790	C	0.790	C	0.000	0.853	D	0.853	D	0.000
	and Veteran Avenue	PM	0.879	D	0.881	D	0.002	0.925	E	0.928	E	0.003
3	Wilshire Boulevard	AM	0.665	B	0.669	B	0.004	0.695	B	0.700	B	0.005
	and Westwood Boulevard	PM	0.830	D	0.840	D	0.010	0.899	D	0.910	E	0.011 *
4	Ohio Avenue	AM	0.879	D	0.882	D	0.003	0.931	E	0.934	E	0.003
	and Sepulveda Boulevard	PM	1.002	F	1.011	F	0.009	1.063	F	1.073	F	0.010 *
5	Santa Monica Boulevard	AM	0.764	C	0.767	C	0.003	0.825	D	0.827	D	0.002
	and Barrington Avenue	PM	0.767	C	0.774	C	0.007	0.857	D	0.864	D	0.007
6	Santa Monica Boulevard	AM	0.820	D	0.827	D	0.007	0.910	E	0.917	E	0.007
	and Sepulveda Boulevard	PM	0.868	D	0.896	D	0.028 *	1.001	F	1.030	F	0.029 *
7	Santa Monica Boulevard	AM	1.034	F	1.041	F	0.007	1.115	F	1.121	F	0.006
	and Westwood Boulevard	PM	0.919	E	0.930	E	0.011 *	1.021	F	1.030	F	0.009
8	Santa Monica Boulevard	AM	0.609	B	0.611	B	0.002	0.633	B	0.635	B	0.002
	and Overland Avenue	PM	0.587	A	0.589	A	0.002	0.675	B	0.677	B	0.002
9	Santa Monica Boulevard	AM	0.878	D	0.880	D	0.002	0.947	E	0.949	E	0.002
	and Beverly Glen Boulevard	PM	0.864	D	0.867	D	0.003	0.932	E	0.936	E	0.004
10	Nebraska Avenue	AM	0.344	A	0.349	A	0.005	0.393	A	0.398	A	0.005
	and Sepulveda Boulevard	PM	0.473	A	0.493	A	0.020	0.524	A	0.544	A	0.020

Table 5 (continued)
Critical Movement Analysis Summary
Existing (2009) and Future (2012) Without and With Modified Project Conditions

Int. No.	Intersection	Peak Hour	Year 2009 Conditions: Existing (No Project) CMA	LOS	Existing With Project CMA	LOS	Impact	Year 2012 Conditions: Without Project CMA	LOS	With Project CMA	LOS	Impact
11	La Grange Avenue	AM	0.407	A	0.415	A	0.008	0.447	A	0.455	A	0.008
	and Sepulveda Boulevard	PM	0.553	A	0.575	A	0.022	0.605	B	0.627	B	0.022
12	Olympic Boulevard	AM	0.669	B	0.672	B	0.003	0.769	C	0.772	C	0.003
	and Centinela Avenue (west intersection)	PM	0.741	C	0.747	C	0.006	0.857	D	0.863	D	0.006
13	Olympic Boulevard	AM	0.506	A	0.507	A	0.001	0.863	D	0.865	D	0.002
	and Centinela Avenue (east intersection)	PM	0.615	B	0.615	B	0.000	1.256	F	1.260	F	0.004
14	Olympic Boulevard	AM	0.975	E	0.979	E	0.004	1.198	F	1.203	F	0.005
	and Bundy Drive	PM	0.899	D	0.913	E	0.014 *	1.410	F	1.423	F	0.013 *
15	Olympic Boulevard	AM	0.866	D	0.870	D	0.004	0.990	E	0.994	E	0.004
	and Barrington Avenue	PM	0.955	E	0.964	E	0.009	1.129	F	1.138	F	0.009
16	Olympic Boulevard	AM	0.837	D	0.843	D	0.006	0.942	E	0.947	E	0.005
	and Sawtelle Boulevard	PM	1.063	F	1.077	F	0.014 *	1.245	F	1.260	F	0.015 *
17	Olympic Boulevard	AM	0.878	D	0.894	D	0.016	1.038	F	1.053	F	0.015 *
	and Sepulveda Boulevard	PM	0.925	E	0.991	E	0.066 *	1.131	F	1.196	F	0.065 *
18	Olympic Boulevard	AM	1.003	F	1.010	F	0.007	1.088	F	1.096	F	0.008
	and Westwood Boulevard	PM	0.907	E	0.920	E	0.013 *	0.996	E	1.010	F	0.014 *
19	Olympic Boulevard	AM	0.886	D	0.889	D	0.003	0.988	E	0.991	E	0.003
	and Overland Avenue	PM	0.851	D	0.857	D	0.006	0.965	E	0.971	E	0.006
20	Olympic Boulevard	AM	0.952	E	0.955	E	0.003	1.042	F	1.045	F	0.003
	and Beverly Glen Boulevard	PM	0.936	E	0.942	E	0.006	1.011	F	1.016	F	0.005

Table 5 (continued)
Critical Movement Analysis Summary
Existing (2009) and Future (2012) Without and With Modified Project Conditions

Int. No.	Intersection	Peak Hour	Year 2009 Conditions: Existing (No Project) CMA	LOS	Year 2009 Conditions: Existing With Project CMA	LOS	Impact	Year 2012 Conditions: Without Project CMA	LOS	Year 2012 Conditions: With Project CMA	LOS	Impact
21	Tennessee Avenue/I-405 SB Off-Ramp	AM	0.442	A	0.454	A	0.012	0.504	A	0.515	A	0.011
	and Sawtelle Boulevard	PM	0.807	D	0.846	D	0.039 *	0.880	D	0.920	E	0.040 *
22	Pico Boulevard	AM	0.722	C	0.726	C	0.004	0.768	C	0.772	C	0.004
	and Cloverfield Boulevard	delay (sec)	26.6	C	26.6	C	0.0	27.4	C	27.5	C	0.1
		V/C	0.67		0.67		0.00	0.71		0.71		0.00
		PM	0.791	C	0.804	D	0.013	0.866	D	0.880	D	0.014
		delay (sec)	26.1	C	26.4	C	0.3	28.0	C	28.6	C	0.6
		V/C	0.66		0.67		0.01	0.73		0.74		0.01
23	Pico Boulevard	AM	0.701	C	0.704	C	0.003	0.744	C	0.747	C	0.003
	and Stewart Street/28th Street	delay (sec)	16.8	B	16.9	B	0.1	18.4	B	18.6	B	0.2
		V/C	0.56		0.57		0.01	0.66		0.67		0.01
		PM	0.703	C	0.717	C	0.014	0.762	C	0.776	C	0.014
		delay (sec)	17.2	B	17.3	B	0.1	18.2	B	18.5	B	0.3
		V/C	0.59		0.60		0.01	0.64		0.65		0.01
24	Pico Boulevard	AM	0.758	C	0.764	C	0.006	0.829	D	0.835	D	0.006
	and I-10 EB Off-Ramp/34th Street	delay (sec)	380.9	F	390.4	F	9.5	505.5	F	515.4	F	9.9
		V/C	0.87		0.88		0.01 *	0.96		0.97		0.01 *
		PM	0.747	C	0.771	C	0.024	0.837	D	0.861	D	0.024 *
		delay (sec)	17.6	B	18.6	B	1.0	22.8	C	27.0	C	4.2
		V/C	0.74		0.77		0.03	0.85		0.88		0.03
25	Pico Boulevard	AM	0.829	D	0.835	D	0.006	0.919	E	0.925	E	0.006
	and Centinela Avenue	PM	0.971	E	0.993	E	0.022 *	1.130	F	1.153	F	0.023 *

Table 5 (continued)
Critical Movement Analysis Summary
Existing (2009) and Future (2012) Without and With Reduced Project Conditions

Int. No.	Intersection	Peak Hour	Year 2009 Conditions: Existing (No Project) CMA	LOS	Existing With Project CMA	LOS	Impact	Year 2012 Conditions: Without Project CMA	LOS	With Project CMA	LOS	Impact
26	Pico Boulevard	AM	1.116	F	1.122	F	0.006	1.238	F	1.246	F	0.008
	and Bundy Drive	PM	1.071	F	1.096	F	0.025 *	1.158	F	1.173	F	0.015 *
27	Pico Boulevard	AM	0.915	E	0.923	E	0.008	0.939	E	0.950	E	0.011 *
	and Barrington Avenue	PM	0.972	E	0.995	E	0.023 *	0.741	C	0.755	C	0.014
28	Pico Boulevard	AM	0.908	E	0.919	E	0.011 *	0.818	D	0.825	D	0.007
	and Gateway Boulevard	PM	0.964	E	0.999	E	0.035 *	0.883	D	0.909	E	0.026 *
29	Pico Boulevard	AM	1.013	F	1.050	F	0.037 *	1.105	F	1.143	F	0.038 *
	and Sawtelle Boulevard	PM	0.992	E	1.112	F	0.120 *	1.077	F	1.197	F	0.120 *
30	Pico Boulevard	AM	0.649	B	0.663	B	0.014	0.706	C	0.719	C	0.013
	and Cotner Avenue	PM	0.728	C	0.755	C	0.027	0.791	C	0.819	D	0.028 *
31	Pico Boulevard	AM	0.992	E	1.037	F	0.045 *	1.394	F	1.449	F	0.055 *
	and Sepulveda Boulevard	PM	1.096	F	1.271	F	0.175 *	1.608	F	1.825	F	0.217 *
32	Pico Boulevard	AM	0.369	A	0.375	A	0.006	0.407	A	0.412	A	0.005
	and Veteran Avenue	PM	0.417	A	0.439	A	0.022	0.465	A	0.488	A	0.023
33	Pico Boulevard	AM	0.722	C	0.736	C	0.014	0.783	C	0.796	C	0.013
	and Westwood Boulevard	PM	0.816	D	0.847	D	0.031 *	0.891	D	0.921	E	0.030 *
34	Pico Boulevard	AM	0.851	D	0.857	D	0.006	0.914	E	0.920	E	0.006
	and Overland Avenue	PM	0.901	E	0.912	E	0.011 *	0.983	E	0.994	E	0.011 *
35	Pico Boulevard	AM	0.627	B	0.633	B	0.006	0.660	B	0.666	B	0.006
	and Manning Avenue	PM	0.647	B	0.664	B	0.017	0.689	B	0.704	C	0.015

Table 5 (continued)
Critical Movement Analysis Summary
Existing (2009) and Future (2012) Without and With Modified Project Conditions

Int. No.	Intersection	Peak Hour	Year 2009 Conditions: Existing (No Project) CMA	LOS	Year 2009 Conditions: Existing With Project CMA	LOS	Impact	Year 2012 Conditions: Without Project CMA	LOS	Year 2012 Conditions: With Project CMA	LOS	Impact
36	Pico Boulevard	AM	0.734	C	0.739	C	0.005	0.771	C	0.776	C	0.005
	and Patricia Avenue	PM	0.749	C	0.765	C	0.016	0.703	C	0.715	C	0.012
37	Pico Boulevard	AM	0.633	B	0.637	B	0.004	0.678	B	0.682	B	0.004
	and Beverly Glen Boulevard	PM	0.694	B	0.706	C	0.012	0.743	C	0.755	C	0.012
38	Pico Boulevard	AM	0.764	C	0.767	C	0.003	0.798	C	0.803	D	0.005
	and Motor Avenue/Fox Studios Driveway	PM	0.936	E	0.948	E	0.012 *	0.984	E	0.998	E	0.014 *
39	Pico Boulevard	AM	0.594	A	0.598	A	0.004	0.624	B	0.628	B	0.004
	and Avenue of the Stars	PM	0.558	A	0.571	A	0.013	0.591	A	0.603	B	0.012
40	Exposition Boulevard	AM	0.707	C	0.769	C	0.062 *	1.164	F	1.253	F	0.089 *
	and Sepulveda Boulevard	PM	0.811	D	0.961	E	0.150 *	1.297	F	1.373	F	0.076 *
41	Gateway Boulevard	AM	0.731	C	0.731	C	0.000	0.767	C	0.768	C	0.001
	and Barrington Avenue	PM	0.896	D	0.899	D	0.003	0.941	E	0.945	E	0.004
42	Ocean Park Boulevard	AM	0.820	D	0.821	D	0.001	0.886	D	0.888	D	0.002
	and Bundy Drive	PM	1.129	F	1.134	F	0.005	1.256	F	1.261	F	0.005
43	National Boulevard	AM	0.717	C	0.719	C	0.002	0.776	C	0.777	C	0.001
	and Barrington Avenue	PM	0.797	C	0.804	D	0.007	0.860	D	0.867	D	0.007
44	National Boulevard	AM	1.193	F	1.202	F	0.009	1.014	F	1.019	F	0.005
	and Sawtelle Boulevard	PM	1.165	F	1.174	F	0.009	1.108	F	1.124	F	0.016 *
45	National Boulevard	AM	0.529	D[1]	0.541	D[1]	0.012	0.397	A	0.404	A	0.007
	and I-405 SB On-Ramp	PM	0.693	D[1]	0.705	D[1]	0.012	0.499	A	0.505	A	0.006

Table 5 (continued)
Critical Movement Analysis Summary
Existing (2009) and Future (2012) Without and With Modified Project Conditions

Int. No.	Intersection	Peak Hour	Year 2009 Conditions: Existing (No Project) CMA	LOS	Existing With Project CMA	LOS	Impact	Year 2012 Conditions: Without Project CMA	LOS	With Project CMA	LOS	Impact
46	National Boulevard	AM	0.819	F[1]	0.836	F[1]	0.017 *	0.720	C	0.727	C	0.007
	and I-405 NB Off-Ramp	PM	0.789	E[1]	0.827	E[1]	0.038 *	0.824	D	0.838	D	0.014
47	National Boulevard	AM	1.076	F	1.133	F	0.057 *	1.251	F	1.288	F	0.037 *
	and Sepulveda Boulevard	PM	1.131	F	1.227	F	0.096 *	1.477	F	1.499	F	0.022 *
48	National Boulevard	AM	0.584	A	0.593	A	0.009	0.640	B	0.649	B	0.009
	and Westwood Boulevard	PM	0.830	D	0.867	D	0.037 *	0.887	D	0.924	E	0.037 *
49	I-10 WB On/Off-Ramps/National Boulevard	AM	0.982	E	1.008	F	0.026 *	0.984	E	1.010	F	0.026 *
	and Overland Avenue	PM	1.080	F	1.127	F	0.047 *	1.141	F	1.203	F	0.062 *
50	I-10 EB On-Ramp	AM	0.679	B	0.693	B	0.014	0.591	A	0.605	B	0.014
	and Overland Avenue	PM	0.732	C	0.752	C	0.020	0.661	B	0.681	B	0.020
51	Queensland Avenue	AM	0.688	B	0.692	B	0.004	0.780	C	0.784	C	0.004
	and Sepulveda Boulevard	PM	0.637	B	0.649	B	0.012	0.719	C	0.731	C	0.012
52	Palms Boulevard	AM	0.743	C	0.744	C	0.001	0.795	C	0.796	C	0.001
	and Sawtelle Boulevard	PM	0.606	B	0.611	B	0.005	0.656	B	0.661	B	0.005
53	Palms Boulevard	AM	1.045	F	1.048	F	0.003	1.133	F	1.136	F	0.003
	and Sepulveda Boulevard	PM	1.079	F	1.090	F	0.011 *	1.206	F	1.213	F	0.007
54	Venice Boulevard	AM	0.919	E	0.927	E	0.008	1.004	F	1.012	F	0.008
	and Sepulveda Boulevard	PM	0.954	E	0.965	E	0.011 *	1.051	F	1.064	F	0.013 *
55	Westwood Boulevard	AM	0.337	A	0.338	A	0.001	0.341	A	0.342	A	0.001
	and Lindbrook Avenue	PM	0.402	A	0.406	A	0.004	0.407	A	0.410	A	0.003

Table 5 (continued)
Critical Movement Analysis Summary
Existing (2009) and Future (2012) Without and With Modified Project Conditions

Int. No.	Intersection	Peak Hour	Year 2009 Conditions: Existing (No Project) CMA	LOS	Year 2009 Conditions: Existing With Project CMA	LOS	Impact	Year 2012 Conditions: Without Project CMA	LOS	Year 2012 Conditions: With Project CMA	LOS	Impact
56	Glendon Avenue	AM	0.499	A	0.501	A	0.002	0.512	A	0.513	A	0.001
	and Westwood Boulevard	PM	0.532	A	0.535	A	0.003	0.546	A	0.548	A	0.002
57	Overland Avenue	AM	0.910	E	0.910	E	0.000	0.925	E	0.925	E	0.000
	and National Place	PM	0.965	E	0.970	E	0.005	0.984	E	0.988	E	0.004
58	Sawtelle Boulevard	AM	1.085	F	1.085	F	0.000	1.113	F	1.114	F	0.001
	and Venice Boulevard	PM	1.112	F	1.117	F	0.005	1.142	F	1.147	F	0.005
59	Overland Avenue	AM	1.359	F	1.361	F	0.002	1.373	F	1.376	F	0.003
	and Venice Boulevard	PM	1.266	F	1.270	F	0.004	1.281	F	1.285	F	0.004
60	Sepulveda Boulevard	AM	0.754	C	0.754	C	0.000	0.762	C	0.762	C	0.000
	and I-405 Freeway NB On/Off-Ramps	PM	0.811	D	0.814	D	0.003	0.864	D	0.866	D	0.002
61	Sepulveda Boulevard	AM	0.809	D	0.810	D	0.001	0.863	D	0.864	D	0.001
	and Washington Place	PM	0.666	B	0.668	B	0.002	0.711	C	0.713	C	0.002

Notes:

[1] Intersection under construction. Level of Service based on observed peak hour conditions.

"*" Significant impact per City of Los Angeles Department of Transportation (LADOT) *Traffic Study Policies and Procedures*, May 2012.

"*" Significant impact per City of Santa Monica criteria. Provided for informational purposes only.
Values in blue indicate total intersection delay (in seconds) and intersection volume-to-capacity values, per City of Santa Monica HCM methodology.

As also shown in Table 5, the development of the modified project and the addition of its associated traffic to the study area will result in incremental increases in the CMA values at each of the study intersections to varying degrees, depending upon the intersection's proximity to the project site, its location along the anticipated project traffic travel routes, or the specific geometries and/or operating characteristics of the intersection. Further, Table 5 shows that the additional traffic resulting from development of the modified project could potentially produce changes to the operating conditions (LOS) at a total of eight of the study intersections during either the AM or PM peak hour analysis periods. Project-related traffic increases are anticipated to reduce the LOS at the intersections of Pico Boulevard and Cloverfield Boulevard, and National Boulevard and Barrington Avenue from their "existing" high LOS C operations to low LOS D conditions and at the intersection of Pico Boulevard and Beverly Glen Boulevard from high LOS B to low LOS C conditions, all during the PM peak hour, although each of these locations will continue to operate at acceptable levels of service during both peak hours. Additionally, the modified project could reduce the LOS at three additional intersections from already-undesirable LOS E to LOS F conditions (Pico Boulevard and Sepulveda Boulevard, and National Boulevard/I-10 Freeway Westbound On-and Off-Ramps during the AM peak hour, and Pico Boulevard and Sawtelle Boulevard during the PM peak hour during the PM peak hour). The incremental traffic resulting from the development of the modified project is expected to result in a deterioration in LOS from acceptable to undesirable levels only at the site-adjacent intersection of Exposition Boulevard and Sepulveda Boulevard, which would change from the "existing" LOS D to LOS E operations during the PM peak hour.

Overall, following the anticipated development of the modified project, the total number of intersections operating at acceptable LOS A through LOS D would be 33, or one fewer than without the project. The number of locations exhibiting undesirable LOS E conditions as their highest congestion level increase by one, to a total of 12 intersections, while the number of intersections operating at LOS F would remain at 16, including four exhibiting LOS E conditions during the "non-critical" peak hour (three fewer than the "without project" conditions), and nine exhibiting LOS F conditions during both peak hours (an increase of three), with the three remaining "LOS F" intersections exhibiting LOS D or better conditions during the non-critical peak period (same as the "without project" conditions).

In comparison, the currently-proposed project would result in changes in the intersection LOS at a total of 12 locations (four more than the modified project), including four locations that would be expected to deteriorate from acceptable LOS D to undesirable LOS E operations, and an

additional six locations that would change from already undesirable LOS E to LOS F conditions. Further, the currently-proposed project would result in a total of 30 of the 61 intersections operating at undesirable LOS E or LOS F operations, two more than are anticipated due to the modified project. Of these 30 intersections, 11 would operate at LOS E during their highest congestion period (one fewer than with the modified project), while of the remaining 19 "LOS F" locations (three more than with the modified project), six would exhibit LOS E conditions during the "non-critical" peak hour (two more than the modified project), and nine would exhibit LOS F conditions during both peak hours (same as with the modified project). The four remaining "LOS F" intersections would exhibit LOS D or better conditions during the non-critical peak period (one more than with the modified project).

Summary of Future (2012) Conditions

As further indicated in Table 5, traffic increases anticipated due to ambient traffic growth and from other ongoing or proposed development are expected to result in worsening traffic conditions throughout the study area at all of the study intersections by the year 2012, although a total of only 32 of the 61 study locations forecast to exhibit LOS E or F during one or both of the peak hours under the forecast future (year 2012) "Without Project" scenario, two fewer than currently exhibit such operational levels. This slight reduction in the number of intersections exhibiting undesirable levels of service is due to the anticipated implementation of the area roadway and/or intersection improvements described earlier (several of which have already been completed). However, while the total number of intersections expected to operate at these poor levels of service could be slightly reduced, the congestion levels at the intersections exhibiting LOS E/LOS F could change substantially from current conditions.

Under the forecast future year 2012 "Without Project" conditions shown in Table 5, a total of nine of the 61 study intersections are expected to exhibit LOS E operations during their highest traffic congestion periods, two fewer than currently exhibit such conditions. However, a total of 23 intersections are forecast to exhibit LOS F conditions during at least one of the peak hours, an increase of seven intersections as compared to the existing conditions. Of the 23 "LOS F" intersections, seven locations are forecast to exhibit LOS E operations during their "non-critical" peak hour, the same as for the existing (2009) conditions, while 14 additional intersections are anticipated to operate at LOS F during both the AM and PM peak hours, eight more than currently exhibit this condition. The two remaining "LOS F" intersections, one fewer than the existing conditions, would operate at LOS D or better during the non-critical peak period.

Once developed, traffic generated by the modified project will add to the cumulative traffic increases expected in the project vicinity, which could further effect the operations of the study intersections. As also shown in Table 5, and as with the "existing" conditions analyses described in the preceding pages, the modified project is again expected to result in incremental increases in the CMA values at each of the study intersections, and could potentially produce changes to the forecast "without project" levels of service at 12 locations during the AM and/or PM peak hours. Many of these project-related changes in the intersection LOS occur at intersections with sufficient available capacity (LOS A, B, or C) such that they will continue to exhibit acceptable LOS D or better operations even after the addition of project traffic, including changes from LOS A to LOS B at the intersection of Pico Boulevard and Avenue of the Stars during the PM peak hour and at the I-10 Freeway Eastbound On-Ramp and Overland Avenue during the AM peak hour, a change from LOS B to LOS C at the intersection of Pico Boulevard and Manning Avenue during the PM peak hour, and changes from LOS C to LOS D during the PM peak hour at the intersections of Pico Boulevard and Cotner Avenue, and Pico Boulevard and Motor Avenue/Fox Studios Driveway.

However, a total of five additional intersections, Wilshire Boulevard and Westwood Boulevard, Tennessee Avenue/I-405 Southbound Off-Ramp and Sawtelle Boulevard, Pico Boulevard and Gateway Boulevard, Pico Boulevard and Westwood Boulevard, and National Boulevard and Westwood Boulevard, could deteriorate during the PM peak hour from acceptable LOS D forecast "without project" conditions to undesirable LOS E operations due to the addition of project-related traffic. Two additional locations, Olympic Boulevard and Westwood Boulevard, and the I-10 Freeway Westbound On/Off-Ramps/National Boulevard and Overland Avenue, would also be expected to change from already-unacceptable LOS E to LOS F operations, again during the PM peak hour only at each of these intersections.

Overall, following the development of the modified project, a total of 24 intersections would operate at acceptable LOS A through LOS D during the forecast "future" (2012) conditions, or five fewer than prior to completion of the project, while the number of locations exhibiting undesirable LOS E conditions as their highest congestion level would increase accordingly, to a total of 14 intersections. The total number of intersections exhibiting LOS F operations would be unchanged at 23, with five exhibiting LOS E conditions during the "non-critical" peak hour (two fewer than "without project" conditions), and 16 others exhibiting LOS F conditions during both peak hours (an increase of two). The two other locations would exhibit LOS D or better conditions during the non-critical peak period (same as the "without project" conditions).

In comparison, the currently-proposed project would result in changes in the intersection LOS at a total of 13 locations (one more than the modified project), including five locations that would be expected to deteriorate from acceptable LOS D to undesirable LOS E operations, and three additional locations that would change from already undesirable LOS E to LOS F conditions. Further, the currently-proposed project would result in a total of 37 of the 61 intersections operating at undesirable LOS E or LOS F operations, the same as are anticipated due to the modified project. However, of these locations, 13 would operate at LOS E during their highest congestion period (one fewer than with the modified project), while of the remaining 24 "LOS F" locations (one more than with the modified project), five would exhibit LOS E conditions during the "non-critical" peak hour (same as the modified project), and 17 would operate at LOS F conditions during both peak hours (one more than with the modified project), while the two remaining "LOS F" intersections would exhibit LOS D or better conditions during the non-critical peak period (same as with the modified project).

Intersection Impact Significance Criteria

However, potential changes to intersection levels of service alone are not the sole standard for evaluating the "significance" of a project's incremental impacts. As described in detail in the "Revised December 2009" traffic study, for intersections within the City of Los Angeles, a significant impact is identified as an increase in the CMA value, due to project-related traffic, of 0.010 or more when the final ("With Project") intersection Level of Service is LOS E or F, a CMA increase of 0.020 or more when the final Level of Service is LOS D, or an increase of 0.040 or more at LOS C. No significant impacts are deemed to occur at LOS A or B, as these operating conditions exhibit sufficient surplus capacities to accommodate traffic increases with little effect on traffic delays. These intersection impact criteria are summarized in Table 6.

Table 6
City of Los Angeles
Significant Traffic Impact Criteria

LOS	Final (With Project) CMA Value	Project-Related Increase in CMA Value
A or B	$\leq$ 0.700	No Impacts
C	> 0.700 $\leq$ 0.800	$\geq$ 0.040
D	> 0.800 $\leq$ 0.900	$\geq$ 0.020
E or F	> 0.900	$\geq$ 0.010

The City of Santa Monica also utilizes a variable significance threshold to evaluate the significance of a project's incremental impact, although that jurisdiction's criteria are based on increases in intersection delay, rather than on increases in the volume-to-capacity ratios used by LADOT. Therefore, for the three study intersections located within the City of Santa Monica, a significant impact is identified as an increase in either the intersection delay or the level of service, and is also dependent on the classifications of the streets comprising the intersection. Additionally, unlike the LADOT significance criteria, the City of Santa Monica does identify the potential for significant impacts at intersections operating at LOS A and B. The intersection impact criteria for the City of Santa Monica are summarized in Table 7.

Table 7
City of Santa Monica
Significant Traffic Impact Criteria

Without Project Level of Service	Roadway Classification	With Project Condition - Impact Significant If:
A,B, or C	Collector	Average vehicle delay increases by 15 seconds or more; OR if LOS becomes D, E, or F
	Arterial	Average vehicle delay increases by 15 seconds or more; OR if LOS becomes E or F
D	Collector	Any net increase in average vehicle delay
	Arterial	Average vehicle delay increases by 15 seconds or more; OR if LOS becomes E or F
E	Collector or Arterial	Any net increase in average vehicle delay
F	Collector or Arterial	HCM V/C increase of 0.005 or more

Existing Conditions Project Impacts

Based on the appropriate traffic impact evaluation criteria shown in Tables 6 and 7, the incremental traffic impacts of the modified project under the "Existing With Modified Project" scenario summarized in Table 5 are considered to be "significant" at a total of 23 of the 61 study intersections, five fewer than the total of 28 significantly impacted locations identified for the currently-proposed project for this same analysis scenario. (Note that the use of the City of Santa Monica criteria indicates a significant impact during the AM peak hour at Pico Boulevard and the I-10 Eastbound Off-Ramp/34th Street. However, the as City of Los Angeles is the lead agency in the determination of significant impacts, this information is provided for informational purposes only, and the location is not counted as one of the "significant" impact locations.)

The reduction in project-related traffic for the modified project as compared with that of the currently-proposed project will completely eliminate the previously-identified significant impacts at the intersections of Wilshire Boulevard and Sepulveda Boulevard, Ohio Avenue and Sepulveda Boulevard, Olympic Boulevard and Barrington Avenue, and Pico Boulevard and Cotner Avenue, each of which occurred during the PM peak hour only, as well as at the intersection of National Boulevard and Sawtelle Boulevard, which was previously impacted during both the AM and PM peak hours. Additionally, the modified project would eliminate the previous AM peak hour impacts at several other intersections, including Olympic Boulevard and Sepulveda Boulevard, Pico Boulevard and Bundy Drive, Pico Boulevard and Barrington Avenue, and Venice Boulevard and Sepulveda Boulevard, although each of these four intersections will continue to be significantly impacted during the PM peak hour.

Each of the 23 intersections expected to be significantly impacted by the modified project under the "Existing With Project" scenario, along with the time periods of the impacts, is listed below:

AM peak hour only (none)

PM peak hour only (16 locations)

6. Santa Monica Boulevard and Sepulveda Boulevard
7. Santa Monica Boulevard and Westwood Boulevard
14. Olympic Boulevard and Bundy Drive
16. Olympic Boulevard and Sawtelle Boulevard
17. Olympic Boulevard and Sepulveda Boulevard
18. Olympic Boulevard and Westwood Boulevard
21. Tennessee Avenue/I-405 Southbound Off-Ramp and Sawtelle Boulevard
25. Pico Boulevard and Centinela Avenue
26. Pico Boulevard and Bundy Drive
27. Pico Boulevard and Barrington Avenue
33. Pico Boulevard and Westwood Boulevard
34. Pico Boulevard and Overland Avenue
38. Pico Boulevard and Motor Avenue/Fox Studios Driveway
48. National Boulevard and Westwood Boulevard
53. Palms Boulevard and Sepulveda Boulevard
54. Venice Boulevard and Sepulveda Boulevard

AM and PM peak hours (7 locations)

28. Pico Boulevard and Gateway Boulevard
29. Pico Boulevard and Sawtelle Boulevard
31. Pico Boulevard and Sepulveda Boulevard
40. Exposition Boulevard and Sepulveda Boulevard
46. National Boulevard and I-405 Northbound Off-Ramp
47. National Boulevard and Sepulveda Boulevard
49. I-10 Westbound On/Off-Ramps/National Boulevard and Overland Avenue

It is also of note that the majority of the potential significant impacts (17 of the 23 impacts) are expected to occur at intersections that already operate at LOS E or LOS F conditions prior to the development of the proposed project. As described in the "Revised December 2009" project traffic study, since such intersections exhibit the lowest thresholds for significant impacts, and are therefore the locations most likely to be impacted, relatively nominal project-related increases in the total traffic at these intersections can easily produce significant impacts. Measures to address these potential "Existing With Project" scenario significant intersection impacts are described in detail later in the "Mitigation" section of this report.

Future Conditions Project Impacts

Once again using the appropriate intersection impact significance criteria shown previously in Tables 6 and 7, the modified project would be expected to result in significant impacts at a total of 25 of the 61 study intersections under the forecast "Future With Modified Project" scenario, or two fewer than are expected with the currently-proposed project (again, not counting the City of Santa Monica-based AM peak hour significant impact at the intersection of Pico Boulevard and the I-10 Eastbound Off-Ramp/34th Street, as in the "Revised December 2009" traffic study). The trip reductions associated with the modified project would completely eliminate the significant impacts of the currently-proposed at the intersections of Santa Monica Boulevard and Westwood Boulevard, and Olympic Boulevard and Barrington Avenue, both of which occurred during the PM peak hour only, and would also eliminate the previous AM peak hour impacts at the intersections of Pico Boulevard and Centinela Avenue, and Venice Boulevard and Sepulveda Boulevard, although both of these intersections will continue to be significantly impacted during the PM peak hour. Further, similar to the "Existing With Project" scenario, most of these "Future With Project" scenario impacts (18 of the 25 impacts) occur at intersections forecast to operate at LOS E or LOS F prior to development of the modified project.

Each of the 25 study intersections expected to be significantly impacted by the modified project under the forecast "Future With Project" analysis scenario, along with the time periods during which the impacts occur, is listed below:

AM peak hour only (1 location)

27. Pico Boulevard and Barrington Avenue

PM peak hour only (18 locations)

3. Wilshire Boulevard and Westwood Boulevard
4. Ohio Avenue and Sepulveda Boulevard
6. Santa Monica Boulevard and Sepulveda Boulevard
14. Olympic Boulevard and Bundy Drive
16. Olympic Boulevard and Sawtelle Boulevard
18. Olympic Boulevard and Westwood Boulevard
21. Tennessee Avenue/I-405 Southbound Off-Ramp and Sawtelle Boulevard
24. Pico Boulevard and I-10 Eastbound Off-Ramp/34th Street
25. Pico Boulevard and Centinela Avenue
26. Pico Boulevard and Bundy Drive
28. Pico Boulevard and Gateway Boulevard
30. Pico Boulevard and Cotner Avenue
33. Pico Boulevard and Westwood Boulevard
34. Pico Boulevard and Overland Avenue
38. Pico Boulevard and Motor Avenue/Fox Studios Driveway
44. National Boulevard and Sawtelle Boulevard
48. National Boulevard and Westwood Boulevard
54. Venice Boulevard and Sepulveda Boulevard

AM and PM peak hours (6 locations)

17. Olympic Boulevard and Sepulveda Boulevard
29. Pico Boulevard and Sawtelle Boulevard
31. Pico Boulevard and Sepulveda Boulevard
40. Exposition Boulevard and Sepulveda Boulevard
47. National Boulevard and Sepulveda Boulevard
49. I-10 Westbound On/Off-Ramps/National Boulevard and Overland Avenue

(It is again of note that the City of Santa Monica criteria indicates a significant impact during the AM peak hour at Pico Boulevard and the I-10 Eastbound Off-Ramp/34th Street, although as shown in Table 5, the modified project is also anticipated to significantly impact this intersection under the forecast "Future With Project" scenario using LADOT's impact criteria. Therefore, under this analysis scenario, the intersection is identified as a "significantly impacted" location, with the City of Santa Monica criteria impact identified for informational purposes only.)

A comparison of the significantly-impacted intersections identified for the "Existing With Project" and forecast "Future With Project" scenarios indicates that, while a total of two additional locations would be impacted, several of the "Existing With Project" impact locations would not be expected to be significantly impacted under the "Future With Project" scenario. These locations include the intersections of Wilshire Boulevard and Sepulveda Boulevard, and National Boulevard and the I-405 Northbound Off-Ramp (due to the assumed "future" installation of the programmed intersection improvements described earlier in this document, both of which are either currently underway or already completed), and Palms Boulevard and Sepulveda Boulevard, and Santa Monica Boulevard and Westwood Boulevard (due to changes in the intersection's critical lane operations in the future as compared to those for the existing conditions, primarily as a result of the anticipated additional traffic resulting from ambient growth and cumulative development). Additionally, the PM peak hour impact identified under the "Existing With Project" scenario for the intersection of Pico Boulevard and Barrington Avenue is eliminated (but replaced by a PM peak hour impact), as is the "existing" AM peak hour impact at Pico Boulevard and Gateway Boulevard (although the PM peak hour impact remains); these changes are also due primarily to changes in the operations of these intersections.

Measures to address these potential significant "Future With Project" scenario intersection impacts are also described in detail later in the "Mitigation" section of this report.

Local/Residential Street Traffic Impact Analysis

As detailed in the "Revised December 2009" traffic study, the currently-proposed project is not expected to significantly impact any of the local/residential streets in the project vicinity, since no local/residential streets serve the project site, nor are there any local/residential roadways that provide direct or convenient access to the immediate project vicinity from more distant areas. As such, very little project-related traffic is anticipated to utilize any of the nearby residential roadways as "cut-through" routes to and from the site, since none provide convenient alternative routes to the Major and/or Secondary Highways serving the project vicinity, and in fact, few

provide connections between such facilities at all. This lack of connectivity would generally require project-oriented drivers to travel out of their way to utilize such routes, unless such trips originate within the local residential areas served by these facilities. Only Richland Avenue, south of the site, provides a connection between Sepulveda Boulevard and the next closest arterial, Westwood Boulevard, and then only via its connections to Ayres Avenue and Brookhaven Avenue, two other discontinuous local/residential streets. However, based on these assumptions and as noted in the "Revised December 2009" analyses, Richland Avenue could be reasonably anticipated to exhibit some degree of project-related traffic, and as a result, the potential traffic impacts to this local/residential street were once again evaluated.

A review of the modified project's anticipated trip distributions (contained in Appendix A) shows that neither the residential or anchor retail (Target or similar) components of the project are expected to utilize any of the nearby residential roadways, including Richland Avenue, as travel routes to and from the project site. However, Richland Avenue could be expected to experience approximately two percent (2%) of the project's "market/local-serving retail" component traffic. As in the "Revised December 2009" traffic study for the currently-proposed project, in order to provide for a "worst case" assessment of potential daily traffic additions to this street from the modified project, it was assumed that all of the project's market/local retail-related trips using Richland Avenue would be primary trips, and that neither pass-by trip utilization factors nor adjustment of these trips to account for removal of the existing site-related trips were applicable. As such, only the internal capture reduction was considered appropriate, resulting in a net market/local-retail component estimate of approximately 5,277 trips per day (or two trips per day fewer than are associated with the currently-proposed project's market component alone).

Using this analysis approach, the assumed two percent project market/local-serving retail component use of Richland Avenue could potentially add approximately 106 net new daily trips to this roadway (2% x 5,277 = 105.5). Given the intended local-serving nature of the proposed specialty market and (local) retail components of the modified project, it is likely that much of this traffic will actually originate from within the neighborhoods surrounding the project site, or will be a diversion of existing trips from other market or retail uses to the project site, and actual project-related traffic additions to Richland Avenue are expected to be substantially less. However, while such locally-generated trips would not necessarily be considered to result in additional traffic on Richland Avenue or other local/residential roadways in the project vicinity, for purposes of providing a "worst case" analysis of the potential impacts of the modified project, the 106 daily trips noted above were evaluated as if they were new trips.

As described in detail in the "Revised December 2009" traffic study, based on the applicable LADOT and WLA TIMP analysis methodologies and criteria, the project must add a minimum of 120 net new vehicles per day ("vpd") to any of the nearby local/residential streets in order to produce a significant impact. Therefore, based on this assessment, the project's potential "worst case" addition of approximately 106 new trips per day to Richland Avenue or other local/residential streets in the nearby vicinity would not be considered to be significant regardless of the existing or future traffic levels on these streets. As such, no neighborhood traffic intrusion mitigation measures are warranted for the modified project.

Project Impacts on Regional Transportation System

The "Revised December 2009" traffic study also evaluated the currently-proposed project's potential impacts on the area's regionally-significant arterial intersections and freeway facilities, as required by the Los Angeles County Congestion Management Program ("CMP"). As noted in the "Revised December 2009" study, the CMP requires a detailed analysis of all CMP arterial monitoring intersections where the project could add a total of 50 or more trips during either peak hour, and at all freeway segments where a project could add 150 or more trips in either direction during the peak hours.

Those previous analyses indicated that there are 10 arterial monitoring intersections located within the general study area (an approximately 3.0-mile radius from the project site), including two intersections (Wilshire Boulevard and Sepulveda Boulevard, and Santa Monica Boulevard and Westwood Boulevard) that are already included in the preceding 61-intersection analyses. The analyses contained in the "Revised December 2009" study concluded that none of the arterial monitoring intersections (outside the 61 study intersections) would meet the CMP's minimum 50-peak hour trip impact threshold, and as such, the currently-proposed project would not result in significant impacts to the CMP arterial roadway network. Since the modified project will generate fewer trips during both the AM and PM peak hours than the originally-analyzed project, its trip additions to the nearby CMP arterial monitoring intersections would also be less, and therefore, would not result in any significant impacts to these facilities. As such, no further CMP arterial monitoring intersection analyses for the modified project are warranted.

The "Revised December 2009" traffic study also included an examination of the potential for project-related freeway impacts due to the currently-proposed project on in the project vicinity, including two segments of the I-405 Freeway (north of Tennessee Avenue, and south of National Boulevard) and two segments of the I-10 Freeway (west of Centinela Avenue, and east

of Overland Avenue). As described in the original traffic study, while the currently-proposed project would generate substantially more than 150 directional vehicles per hour during both the AM and PM peak hours, only a small percentage of the project's trips are expected to utilize the area freeways in their travel paths to and from the site. Accordingly, the resulting analyses identified that net project-related traffic additions to any of the selected the freeway segments would be well below the thresholds identified in the CMP, with a maximum increase in freeway traffic of approximately one-half the 150-trip analysis threshold identified in the CMP. As a result, the "Revised December 2009" traffic study concluded that no significant impacts to the area freeways due to the currently-proposed project would occur.

Again, similar to the previous discussion regarding the CMP arterial monitoring intersection impacts, since the anticipated freeway utilization percentages for each of the modified project's component uses are assumed to be the same as for the currently-proposed project, and since the modified project will generate fewer trips during both the AM and PM peak hours than the originally-analyzed project, its incremental trip additions to the nearby I-405 and I-10 freeways will also be less. Therefore, no significant impacts to the area freeway facilities are expected due to the modified project, and no further CMP freeway impact analyses are warranted.

Additionally, as described earlier, Caltrans is currently completing construction of new on its new high-occupancy vehicle lanes in both directions on the I-405 Freeway through the study area (between the I-10 Freeway interchange and the US-110 (Ventura) Freeway interchange), in order to address the increasing congestion along this key regional transportation corridor. These new lanes will add capacity to these study segments, and as a result, the project's incremental impacts to the I-10 Freeway through these segments will be further reduced.

Transit Impacts

As described earlier in this report, in order to present the most conservative analysis of the potential traffic impacts of the modified project to the nearby study intersections, no significant use of public transportation by project employees and visitors, beyond that intrinsically included in the ITE/WLA TIMP trip generation rates, was assumed. However, a 10 percent reduction in trips generated by the project's residential components (including both the market-rate and senior residential units) due to utilization of the site-adjacent and nearby public transit service was assumed. As shown earlier in Table 2, the assumed transit utilization results in total residential component trip reduction of approximately 401 vehicle trips per day, including approximately 30 vehicle trips (six inbound, 24 outbound) during the AM peak hour, and

approximately 29 vehicle trips (19 inbound, 10 outbound) during the PM peak hour. Note that these transit utilization assumptions and trip reduction estimates do not include the potential use of the future site-adjacent Expo Line (Phase 2) facilities, which for "worst case" traffic impact analysis purposes, were not assumed to be completed at the time of project occupancy.

In order to estimate the potential new transit ridership resulting from the modified project, the vehicle trips identified above were converted to "person trips" by applying a vehicle occupancy ratio of 1.2 persons per vehicle (which is typical of local conditions). Further assuming that the entire 10 percent residential trip discount is due to new bus ridership, the modified project could result in a maximum increase in area transit ridership of approximately 481 persons per day, including about 36 persons (seven inbound to the project, 29 outbound from the project) during the AM peak hour, and about 35 persons (23 inbound, 12 outbound) during the PM peak hour.

Based on the current bus service schedules, as described in the "Revised December 2009" traffic study, a total of approximately 40 buses per hour currently serve the site during both the AM and PM peak periods; as such, project additions to bus ridership would be an average of about 12 persons per bus per day, with an average of less than one new rider per bus during the peak hours. This level of new rider demand will not result in any significant transit-related impacts to the existing level of bus service in the area.

It is also of note that the proposed Expo Line Sepulveda/Exposition Station is likely to result in increased bus service to the area immediately surrounding the project site, as Metro and other transit providers increase the number of buses and/or add new routes to accommodate the new Expo Line riders. As such, the potential "baseline" bus ridership impacts described above will be even further reduced. However, it is anticipated that the completion of the Expo Line and assumed new bus service to the area will increase the number of project residents, employees, patrons, and guests using these services. The effects of this increased transit utilization are described later in the "Mitigation" section of this report.

Traffic Signal Warrant Analysis

Finally, as detailed in the "Revised December 2009" traffic study, in addition to the 61 signalized study locations discussed earlier in this report, which were evaluated in order to determine whether potential project-related significant traffic impacts could occur, two other intersections in the immediate project vicinity; the I-405 Freeway Northbound On-Ramp/Tennessee Avenue and Cotner Avenue, and Sawtelle Boulevard and Exposition Boulevard, were also evaluated.

However, each of these two additional locations are unsignalized, and are STOP sign controlled along the minor approaches (Tennessee Avenue, and Exposition Boulevard). Per LADOT's current traffic study analysis procedures, these locations were analyzed to determine whether traffic signal installation is currently warranted, or if potential future traffic growth (including trips generated by the proposed project) would result in the need for a traffic signal at one or more of these intersections under the future forecast conditions.

The signal warrant analyses contained in the "Revised December 2009" study prepared for the currently-proposed project, and incorporated herein by reference, indicated that the intersection of the I-405 Freeway Northbound On-Ramp/Tennessee Avenue and Cotner Avenue would not meet the criteria for installation of a new traffic signal under either the "existing" or forecast "future" (including project-related traffic) conditions. Since both the "existing (no project)" and forecast "future without project" conditions from that previous study remain unchanged for this supplemental analysis, and since the modified project will result in fewer net new trips than the originally-analyzed project, traffic demands and potential vehicular delays at this intersection would be lower than those identified in the original analyses. Therefore, this intersection would still not meet the minimum signal warrant criteria, and as such, the installation of a new traffic signal at this location remains neither warranted nor recommended.

Conversely, the original signal warrant analyses of the intersection of Sawtelle Boulevard and Exposition Boulevard described in the "Revised December 2009" study indicated that this intersection would meet the requirements for new traffic signal installation for both the "existing" and forecast "future" conditions (including both the "without project" and "with project" scenario). Therefore, as also described in the original project's traffic study, if acceptable to LADOT, it is recommended that a new traffic signal be installed at the intersection of Exposition Boulevard and Sawtelle Boulevard. Such a signal would improve overall traffic circulation in the area, and enhance access to both the project site and the new Expo Line Sepulveda/Exposition Station from the west, easing future traffic demands along the already congested Sepulveda Boulevard corridor by improving to and from Exposition Boulevard via Sawtelle Boulevard. It is important to note, however, that as described above, a new signal at this intersection is warranted based on the existing traffic conditions in the area, and is not required as a result of the proposed development of the Pico/Sepulveda Mixed-Use project, although as described later in the "Mitigation" section of this report, it is further recommended that the proposed (modified) project contribute fair share funding to the installation of any new signal.

MITIGATION MEASURES

As described in the preceding report, the modified project could potentially result in significant impacts at a total of 29 of the 61 intersections analyzed under the "Existing With Project" conditions, and 27 of the study intersections under the forecast "Future With Project" scenario, prior to implementation of any measures to mitigate those impacts.

First, as described in the "Revised December 2009" traffic study, the project will be required to pay traffic impact assessment ("TIA") fees as identified in WLA TIMP. These fees are used to establish funding for general roadway infrastructure and other operational improvements needed within the Specific Plan area to address increasing traffic growth and congestion in the project vicinity and throughout the West Los Angeles area. The current WLA TIMP trip fee, effective January 1, 2012, is $3,184 per PM peak hour trip (note that the TIA fee at the time the "Revised December 2009" traffic study was completed was $3,097 per PM peak hour trip). The WLA TIMP TIA fees are generally based on the number of new PM peak hour trips generated by the project, as shown earlier in Table 2. However, the WLA TIMP exempts uses characterized as "local serving", such as neighborhood/community-oriented retail developments, restaurants, and residential uses, from the fees, as are the first 30,000 square feet of floor area for retail (shopping center) uses such as the "anchor retail" component of the modified project. Finally, LADOT does not allow the use of such trip-reducing factors as "internal" or "mixed-use" interaction, pass-by trips, or transit utilization for purposes of the TIA fee calculations.

Based on these requirements and procedures, the WLA TIMP TIA fees for the modified project were calculated, and are summarized in Table 8. As shown in this table, the project's residential components (both the market-rate and senior affordable units), as well as the specialty (grocery) market and local-serving retail uses, are exempt from the TIA fees, since each is identified in the WLA TIMP (Appendix "B") as a "local serving" use. Additionally, as noted above, the first 30,000 square feet of floor area the proposed anchor retail component are also exempt from the TIA fee calculations, and as such, the number of trips associated with that use applicable to the TIA fee was recalculated. Note that the PM peak hour trip generation rate used to estimate the trips generated by the project's anchor retail component was derived from the variable "shopping center" trip generation rates contained in Appendix "A" of the WLA TIMP, based on the total 100,000 square foot floor area for the anchor retail component. For purposes of this study, this same trip generation rate was also used to estimate the trips generated by the 70,000 square feet of "anchor retail" floor area applicable to the TIA fee calculations.

Table 8
West Los Angeles Transportation Improvement and Mitigation Specific Plan
Traffic Impact Assessment (TIA) Fee Calculations

Size/Use			PM Peak Hour In	PM Peak Hour Out	PM Peak Hour Total	WLA TIMP Per Trip Fee	WLA TIMP TIA Fee Amount
Proposed(Modified) Project							
566	-unit	Market-Rate Apartments	180	97	277	Exempt [1]	$0.00
72	-unit	Senior Affordable Apartments	4	2	6	Exempt [1]	$0.00
70,000	sq. ft.	Anchor Retail *	230	229	459	$3,184.00	$1,461,456.00
10,000	sq. ft.	Local-Serving ("specialty") Retail	22	28	50	Exempt [2]	$0.00
50,000	sq. ft.	Specialty Market	264	253	517	Exempt [2]	$0.00
						Total Project TIA Fees	**$1,461,456.00**
Existing Site Development Removed							
6,500	sq. ft.	Building Materials Store	10	11	21	Exempt [4]	$0.00
Portland Cement Batch Plant [3]			6	7	13	Exempt [4]	$0.00
						Existing Uses TIA Fee Credits	**$0.00**
						Net Project TIA Fees	***$1,461,456.00***

Notes:

* Per the WLA TIMP, the first 30,000 square feet of shopping center uses are exempt from the Trip Fees. Trip Fees based on total 100,000 sq. ft. anchor retail component less the 30,000 sq. ft. exemption area.

[1] Residential development is exempt from the WLA TIMP Trip Fees.

[2] Exempt from the WLA TIMP Trip Fees; considered "local-serving" use.

[3] Trips based on empirical data; trips do not include PCE adjustments.

[4] No trip fee credits from the WLA TIMP Trip Fees; considered to be "local-serving" uses.

Based on this fee calculation policy, the modified project itself exhibits a total of approximately 459 net new WLA TIMP-applicable PM peak hour trips (all anchor retail-related trips), for a total project trip fee assessment of approximately $1,461,456, using the current TIA fee amount of $3,184 per PM peak hour trip (for comparison, if the $3,097 per PM peak hour trip TIA fee rate used in the “Revised December 2009” study were applied to the modified project, the resulting TIA fee would be approximately $1,421,523, or approximately one-half the $2,836,852 TIA fee amount noted in that study for the currently-proposed project). As also shown in Table 8, while TIA fee “credits” for the removal of trips associated with any existing on-site uses, both the existing building materials store and concrete batch plant are considered to be “local serving” uses, and as such, reductions in the assessed WLA TIMP traffic impact as a result of the removal of their associated traffic are not appropriate. Therefore, the as shown in Table 8, the modified project’s WLA TIMP TIA fee amount will remain at $1,461,456.

Signalized Study Intersection Impacts

As noted earlier, the WLA TIMP trip fees are designed to address cumulative traffic increases throughout the West Los Angeles area, including those from the proposed project as well as other ongoing or future development in the WLA TIMP vicinity and throughout the region, through the implementation of both local and regional traffic improvements; a list both localized and regional roadway, intersection, and traffic signal improvements funded by the WLA TIMP fees are contained in Appendix C of the WLA TIMP Specific Plan document. However, payment of the required WLA TIMP trip fees (including their use to fund and construct roadway and/or traffic signal improvements within the immediate project area) are not considered to be mitigation for any project-specific traffic impacts (such as those identified and described earlier in this report). Therefore, in addition to payment of the WLA TIMP trip fees, the City requires that private development projects mitigate their own impacts, to the extent feasible, in order to provide more immediate relief for project-specific traffic effects on the surrounding vicinity.

The "Revised December 2009" traffic study prepared for the currently-proposed project described a comprehensive traffic impact mitigation program that included both trip reduction measures and physical roadway and/or traffic signal improvements. Although as described earlier in this supplemental report the modified project will result in fewer significant impacts than the currently-proposed project, all of the significant impacts eliminated by the reduction in trips resulting from the modified project occur at intersections for which no physical roadway or traffic signal improvements were originally identified, and as a result, the traffic impact mitigation program recommended for the modified project will be very similar to the mitigation package described in the "Revised December 2009" study. The mitigation measures recommended for the modified project, and a summary of their effectiveness, are described in the following pages.

Project Trip-Reduction Measures/Transportation Demand Management Program

As detailed in the "Revised December 2009" traffic study, the trip reduction program envisioned for the currently-proposed project includes two components, the primarily residential-oriented transit-oriented design ("TOD") reductions, which are generally associated with the actual design of the project and its proximity to public transit facilities (such as the future Expo Line Sepulveda/Exposition Station), and the more commercial-oriented transportation demand management ("TDM") program, which is targeted toward increasing both project-specific and area-wide transit ridership by enhancing transit amenities such as bus stops or wayfinding and informational signage, and/or through incentives provided to potential transit riders.

As described earlier in this report, the analysis of the modified project's traffic impacts is based on a number of conservative assumptions regarding its trip generation potential, which do not include any significant use of the existing or future transit services in the project vicinity. As shown earlier in Table 2, only 10 percent of the project's residents (including seniors) were assumed to take advantage of the current bus service serving the site or nearby vicinity, while no transit use was assumed for either the proposed retail or market components, although it is likely that some of the project's employees would use public transit to travel to and from work. As such, the "baseline" transit-related trip adjustments shown in Table 2 do not preclude the implementation of other trip reducing elements or programs.

The first of these additional elements, the TOD-related trip reductions, results from the development of the project immediately adjacent to the future Expo Line Sepulveda/Exposition station. The immediate proximity of these future transit facilities, including both the Expo Line itself as well as the anticipated expansion of Metro and other providers' bus service to the station location, will allow both project residents and employees and customers of the project's commercial and retail components to use these transit facilities to travel to and from the site without the use of single-occupancy vehicles. As described in the "Revised December 2009" traffic study, LADOT agreed that a total trip reduction factor of 25 percent was appropriate to account for project resident (and guest) utilization of the future site-adjacent Expo Line.

As noted above, the trip generation calculations for the project's residential components already include an approximately 10 percent reduction to account for use of the existing bus service in the project vicinity. Therefore, based on the total 25 percent reduction in residential trips recommended by LADOT, an additional 15 percent reduction in the project's residential component trips was calculated. These additional TOD-related increases in transit ridership are expected to result in approximately 602 fewer residential-related vehicular trips per day, including approximately 45 fewer trips (nine inbound, 36 outbound) during the AM peak hour, and approximately 43 fewer trips (28 inbound, 15 outbound) during the PM peak hour, as compared to the total net residential component trips shown earlier in Table 2.

These anticipated (additional) TOD-related trip reductions were then distributed through each of the 61 study intersections using the "residential" component traffic assignment percentages contained in Appendix B, in a manner similar to the assignment of the residential component trips themselves. The resulting residential TOD-related trip reduction volumes at each intersection are contained in Appendix D of this report.

TOD-related trip reductions are also considered applicable for the project's retail/commercial components, although it is generally recognized that utilization of transit services by employees and patrons of such uses is more difficult to encourage, since many retail job shifts/hours do not coincide with typical transit schedules, and many retail patrons find transporting shopping purchases, particularly larger or bulkier items available at many big-box retailers (such as Target or similar stores), to be a disincentive to the use of buses or light rail facilities. However, LADOT identified a number of potential programs and/or features which could be incorporated into the project site that would provide incentives for additional transit utilization either by the project patrons themselves, or would encourage the broader use by the surrounding community of the Expo Line and/or bus services available in the project vicinity. These programs included "First Mile/Last Mile" accommodation of persons using the Expo Line and/or bus services at the Sepulveda/Exposition station through the provision of short-term rental vehicles (automobiles), bicycles, or shuttle buses at or near transit stations for use by transit riders to reach destinations in the vicinity of the transit station that are not served directly by convenient transit facilities. Other measures include relocating bus layover facilities from their existing locations to the project site, or rerouting existing UCLA/Santa Monica College ("SMC") shuttles to serve the new Sepulveda/Exposition station. Each of these programs could encourage additional transit ridership, including potential riders who are not specifically served by the current transit facilities and therefore choose not to utilize these alternative modes of transportation.

However, whether or not any of the trip-reduction measures identified above are implemented, the project will be required by City ordinance to implement a TDM program in order to reduce its own trip generation. It is anticipated that the required TDM program would incorporate many of the potential trip-reduction measures identified above, further enhancing its effectiveness, although such measures are not required in order to implement an effective TDM program. The project's TDM program, unlike several of the trip-reduction measures noted earlier, which are aimed toward increasing overall area transit-use by both project-related and non-project riders, will be primarily targeted toward utilization of the new Sepulveda/Exposition Expo Line station by residents, visitors, and patrons of the proposed project itself, and include programs to encourage ridership on both the Expo Line light rail trains as well as use of the increased bus service anticipated to serve the site once the Expo Line station is operational. The proposed project TDM program will also include a number of other elements to encourage carpooling and ride sharing, bicycle ridership, telecommuting, and other trip-reducing programs. An overview of the potential elements of the project TDM program is provided below.

Project Transportation Demand Management (TDM) Program – The project will implement a Transportation Demand Management program to reduce both daily and peak hour trips to and from the project site. This program shall be available to residents, visitors, employees, and patrons of the project. The program will be overseen by an on-site TDM coordinator, who will assist with the development, operation, and implementation of the various programs, including but not limited to carpool incentives, ride share matching, bicycle lockers, and variable work shifts. A menu of items to be included in the TDM program, developed specifically for the project or taken from the City's Transportation Demand Management Ordinance (Section 98.0411 of the LAMC), are described below; note that not all of these elements would apply to all of the site's component uses.

- On-site Transportation Coordinator, in charge of:
  - Carpool/Vanpool and Rideshare Matching
  - Preferential Vanpool/Carpool Parking
  - Transit Passes or Subsidies
  - Parking Cash-Out
  - Flex-Use Vehicles
  - Guaranteed Ride Home
- Bicycle Racks and Showers/Lockers
- Flexible Work Hours/Telecommute Opportunities
- Bus/Transit Stop Shelters and/or Amenities
- Wayfinding Information and Signage

At a minimum, the proposed project will provide those trip-reduction programs and services, as feasible or applicable to the specific project elements, identified in the City's current TDM Ordinance and trip reduction requirements of the WLA TIMP. The specific details of the proposed project TDM program cannot be fully identified at this time, due to the preliminary nature of the project development and a number of uncertainties regarding potential tenants of the retail/commercial uses, which are primary contributors to the project traffic generation. However, the City typically requires that a draft TDM program, including target goals for trip reduction effectiveness, be submitted to LADOT for review prior to the issuance of any project construction permits, with a final detailed project TDM Plan prepared for LADOT review and approval prior to the issuance of any certificates of occupancy for the project.

As detailed in the "Revised December 2009" traffic study, the project-specific TDM program is assumed to result in a 10 percent reduction in the number of peak hour trips generated by the "commercial" (retail and supermarket) components of the site. Based on these previous assumptions, these modest trip reductions result in a reduction in trips for the modified project of approximately 710 trips per day, including approximately 18 trips during the AM peak hour and approximately 78 trips during the PM peak hour, although achievement of larger trip reduction percentages for the commercial components of the project will be the encouraged.

Specifically, the project's "anchor retail" component is expected to experience TDM-related trip reductions of approximately 381 trips per day, including approximately seven trips (five inbound, two outbound) during the AM peak hour, and approximately 44 trips (22 inbound, 22 outbound) during the PM peak hour, while the combined supermarket and local-serving retail components would are anticipated to exhibit net TDM-related trip reductions of approximately 329 daily trips, including 11 trips (7 inbound, 4 outbound) during the AM peak hour, and 34 trips (17 inbound, 17 outbound) during the PM peak hour. As with the residential-oriented TOD trip reductions discussed earlier, these individual project commercial-component TDM-related trip reductions were then assigned to the 61 study area intersections using the appropriate trip assignment percentages for the anchor retail and supermarket/local-serving retail uses, respectively, as also shown in Appendix B. The results of the individual retail and market/local-serving retail component peak hour TDM-related trip reduction assignments are contained in Appendix D, along with the residential TOD-related trip reductions described previously.

It is of note that, while the TDM program trip reductions discussed above focus on the project's commercial components, the TDM program will also contain elements applicable to the project's residential components. However, any such residential-oriented TDM elements would not be expected to significantly increase the use of any of the nearby transit facilities or services beyond the additional 15 percent trip TOD-related residential trip reduction credit already identified, and therefore, no further residential component TDM-related trip reductions assumed. Therefore, the combined effects of the 15 percent TOD-related residential component trip reductions and the 10 percent TDM-related commercial component trip reductions are expected to result in overall project trip reductions of approximately 1,312 trips per day, including approximately 63 trips (21 inbound, 42 outbound) during the AM peak hour, and approximately 121 trips (67 inbound, 54 outbound) during the PM peak hour. The total trip reductions for the TOD/TDM programs at each of the 61 study intersections are shown in Figures 15(a) and 15(b) for the AM peak hour, and Figures 16(a) and 16(b) and PM peak hour.

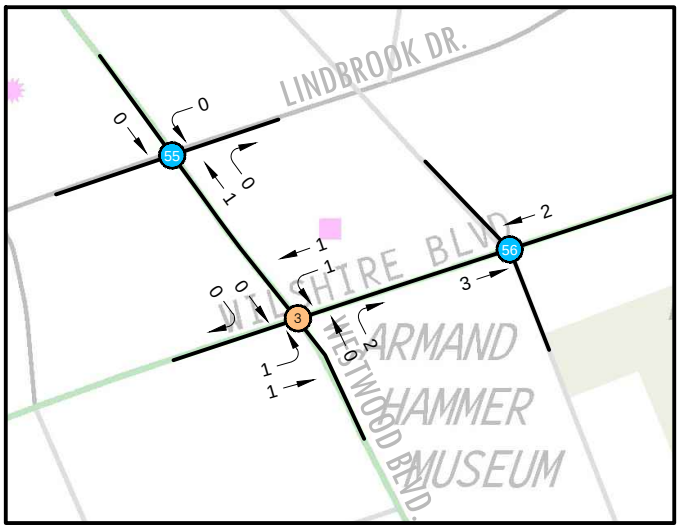
FIGURE 15(a)

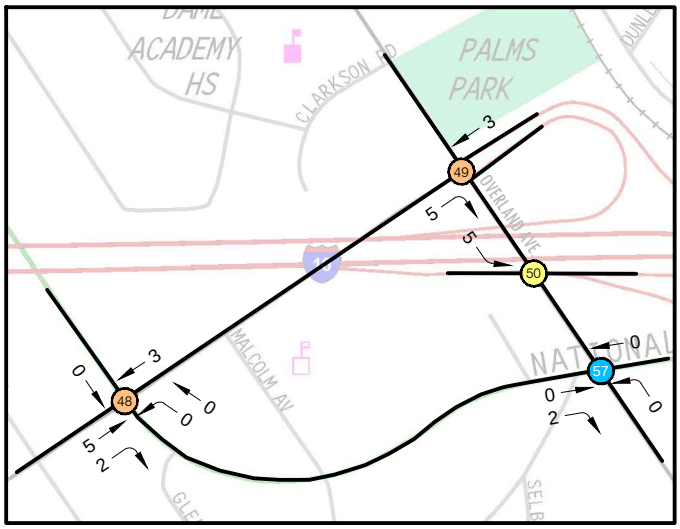
PROJECT TRIP REDUCTIONS (TDM)
(TOTAL)
AM PEAK HOUR

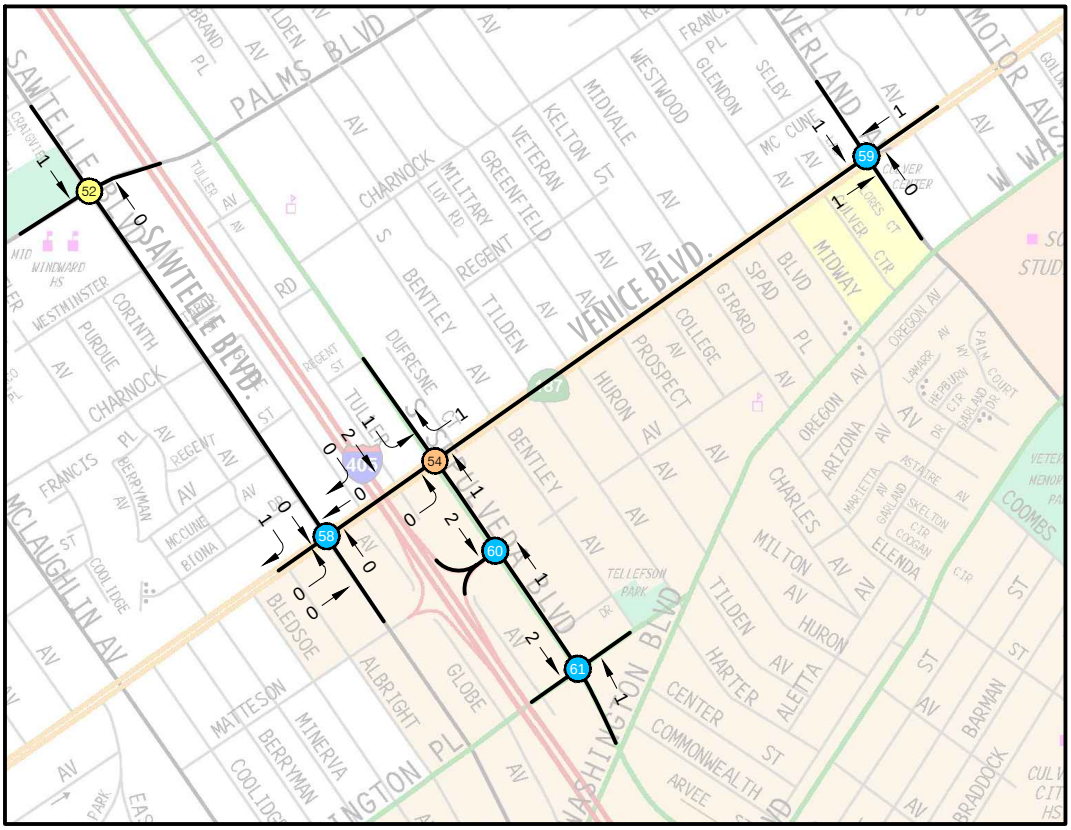
PROJECT SITE

LEGEND
- SIGNALIZED INTERSECTION
- UNSIGNALIZED INTERSECTION

IRSCH REEN
Hirsch/Green Transportation Consulting, Inc.







LEGEND

- (X) - ORIGINAL STUDY INTERSECTION
- (X) - PREVIOUSLY IDENTIFIED SIGNIFICANT IMPACT
- (X) - ADDITIONAL STUDY INTERSECTION PER EXPANDED STUDY AREA

XX - INBOUND
XX - OUTBOUND

N

FIGURE 15(b)

HIRSCH GREEN
Hirsch/Green Transportation Consulting, Inc.

PROJECT TRIP REDUCTIONS (TDM)
ADDED STUDY INTERSECTIONS
(TOTAL)
AM PEAK HOUR

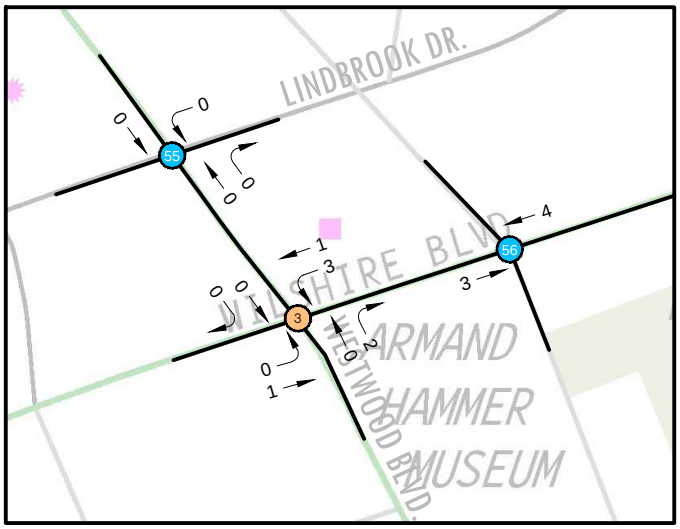
FIGURE 16(a)

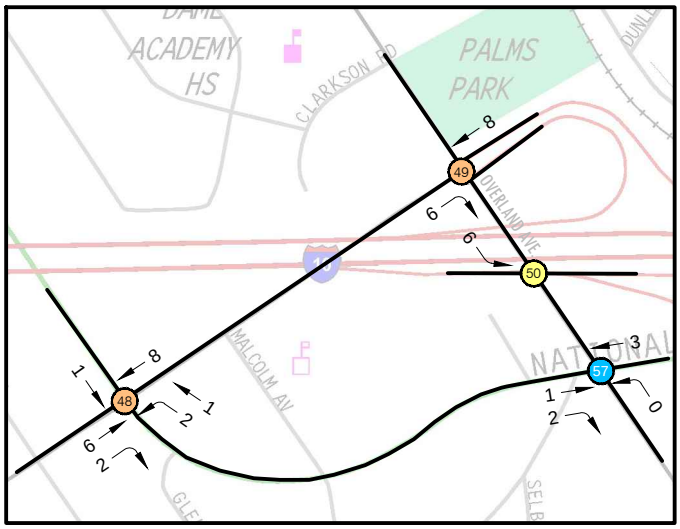
PROJECT TRIP REDUCTIONS (TDM)
(TOTAL)
PM PEAK HOUR

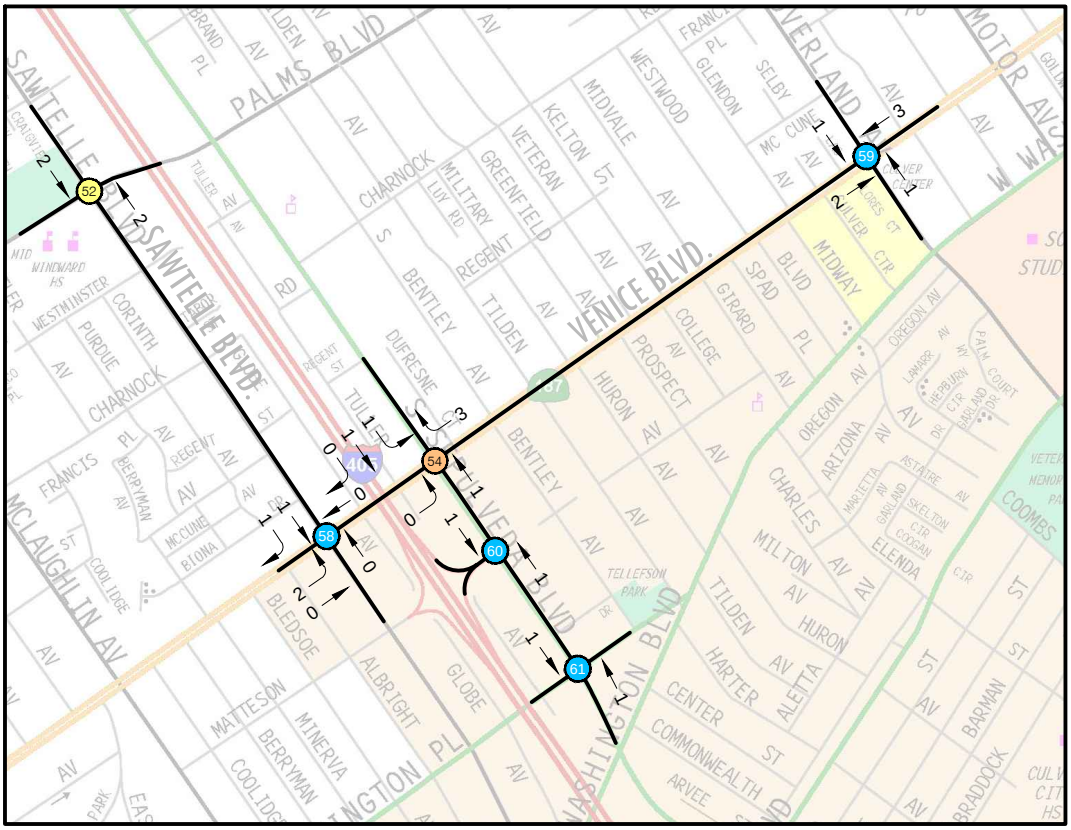
PROJECT SITE

LEGEND
X - SIGNALIZED INTERSECTION
X - UNSIGNALIZED INTERSECTION

IRSCH REEN
Hirsch/Green Transportation Consulting, Inc.







LEGEND

- (X) - ORIGINAL STUDY INTERSECTION
- (X) - PREVIOUSLY IDENTIFIED SIGNIFICANT IMPACT
- (X) - ADDITIONAL STUDY INTERSECTION PER EXPANDED STUDY AREA

XX - INBOUND
XX - OUTBOUND

N

FIGURE 16(b)

PROJECT TRIP REDUCTIONS (TDM)
ADDED STUDY INTERSECTIONS
(TOTAL)
PM PEAK HOUR

Hirsch/Green Transportation Consulting, Inc.

12/4/2012

The TOD/TDM trip reductions shown in Figures 15(a) and 15(b) and Figures 16(a) and 16(b) were then added to the forecast "Future With Modified Project" volumes shown previously in Figures 13(a) and 13(b), and Figures 14(a) and 14(b) to produce the anticipated "Future With Modified Project Plus TOD/TDM Trip Reductions" scenario traffic volumes, which are shown in for the AM peak hour conditions in Figures 17(a) and 17(b), and for the PM peak hours in Figures 18(a) and 18(b). The effects of the combination of the 15 percent residential-oriented TOD-related trip reductions and the 10 percent commercial (retail and supermarket) component TDM program trip reductions were evaluated using the same CMA analysis techniques and methodologies described earlier in this report, to determine their effectiveness in addressing the project's anticipated significant impacts. However, it is of note that the trip reduction measures described earlier are largely tied to the completion of the new Expo Line (Phase 2) project, including the new Sepulveda/Exposition station adjacent to the project site. Since Phase 2 of the Expo Line does not yet exist, the trip reduction-related mitigation measures identified to mitigate the project's impacts are not considered to be applicable to the "Existing With Project" conditions, and are therefore not assumed as mitigation in this supplemental analysis. As such, the effectiveness of the proposed TOD/TDM trip reduction measures are evaluated only for the project-related impacts under the forecast "Future With Project" scenario. The results of the "With Project Plus TOD/TDM Trip Reduction Programs" scenario for the future (2012) conditions are summarized in Table 9.

As shown in this table, the combined effects of the anticipated residential and commercial component trip reductions are expected to reduce the potential impacts of the modified project to less-than-significant levels at a total of four of the 25 locations impacted under the forecast "Future With Project" scenario; Wilshire Boulevard and Westwood Boulevard, Ohio Avenue and Sepulveda Boulevard, Pico Boulevard and Barrington Avenue, and Pico Boulevard and Overland Avenue. As a result, no further mitigation measures are necessary at these locations, and the physical and/or traffic signal mitigation improvements previously recommended for the currently-proposed project at the two intersections of Ohio Avenue and Sepulveda Boulevard, to widen the northwest corner of the intersection within the existing right-of-way to construct a new southbound right-turn only lane, and at Pico Boulevard and Barrington Avenue, to restripe the northbound approach of Barrington Avenue to provide an exclusive right-turn only lane, and to install new left-turn signal phasing (protected/permissive) for both the northbound and southbound approaches, are no longer necessary; no feasible physical or signal improvements were available for the currently-proposed project at the intersections of Wilshire Boulevard and Westwood Boulevard or Pico Boulevard and Overland Avenue.

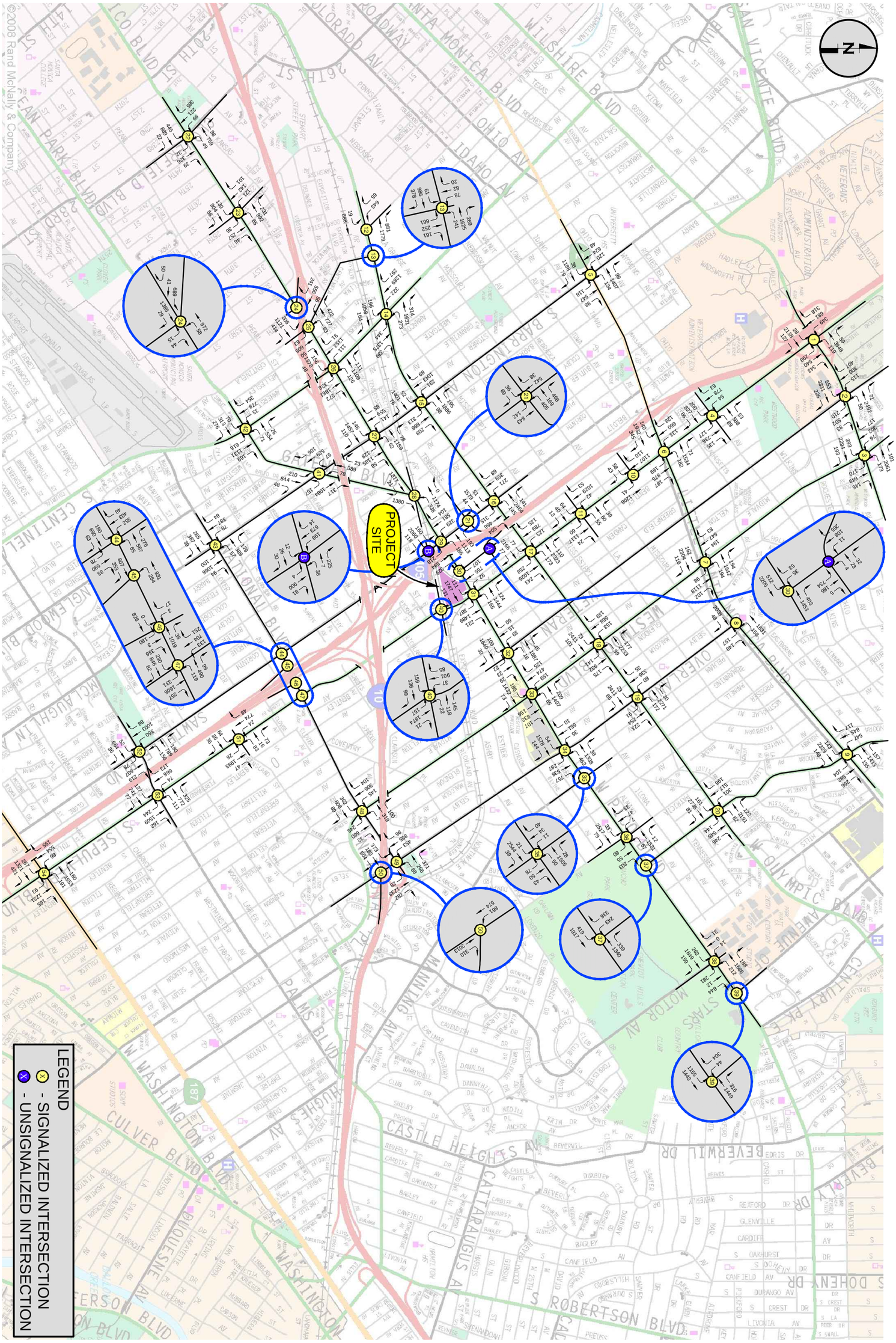
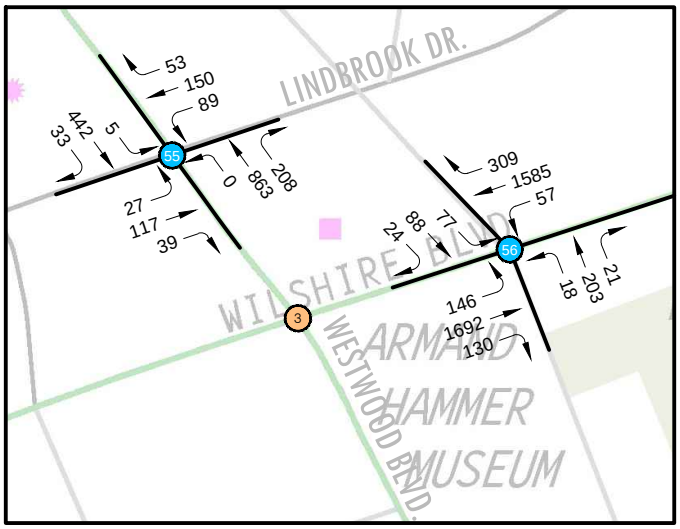
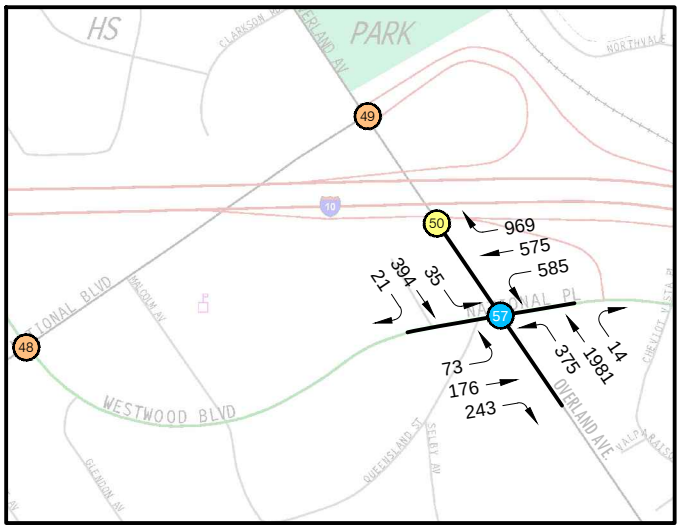


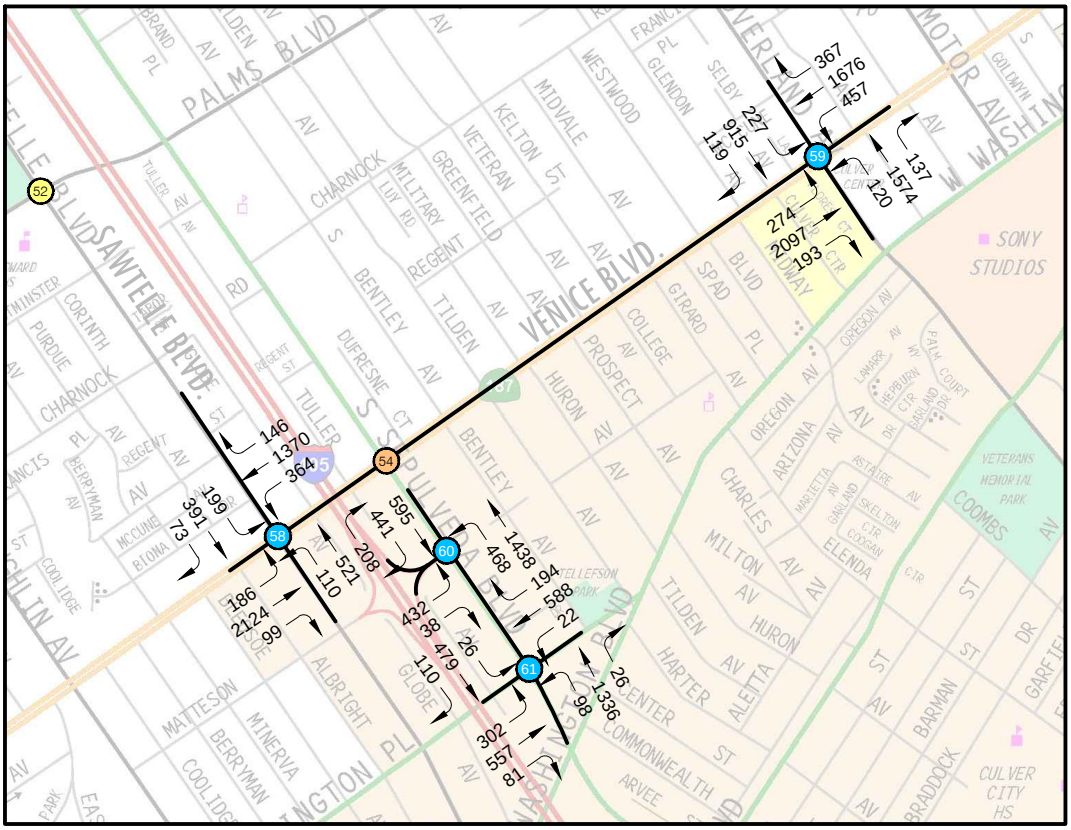
FIGURE 17(a)

HIRSCH GREEN
Hirsch/Green Transportation Consulting, Inc.

FUTURE (2012) TRAFFIC VOLUMES
WITH PROJECT PLUS TDM
AM PEAK HOUR







LEGEND
- (X) - ORIGINAL STUDY INTERSECTION
- (X) - PREVIOUSLY IDENTIFIED SIGNIFICANT IMPACT
- (X) - ADDITIONAL STUDY INTERSECTION PER EXPANDED STUDY AREA

N

FIGURE 17(b)

12/4/2012

IRSCH REEN
Hirsch/Green Transportation Consulting, Inc.

FUTURE (2012) TRAFFIC VOLUMES
WITH PROJECT PLUS TDM
AM PEAK HOUR

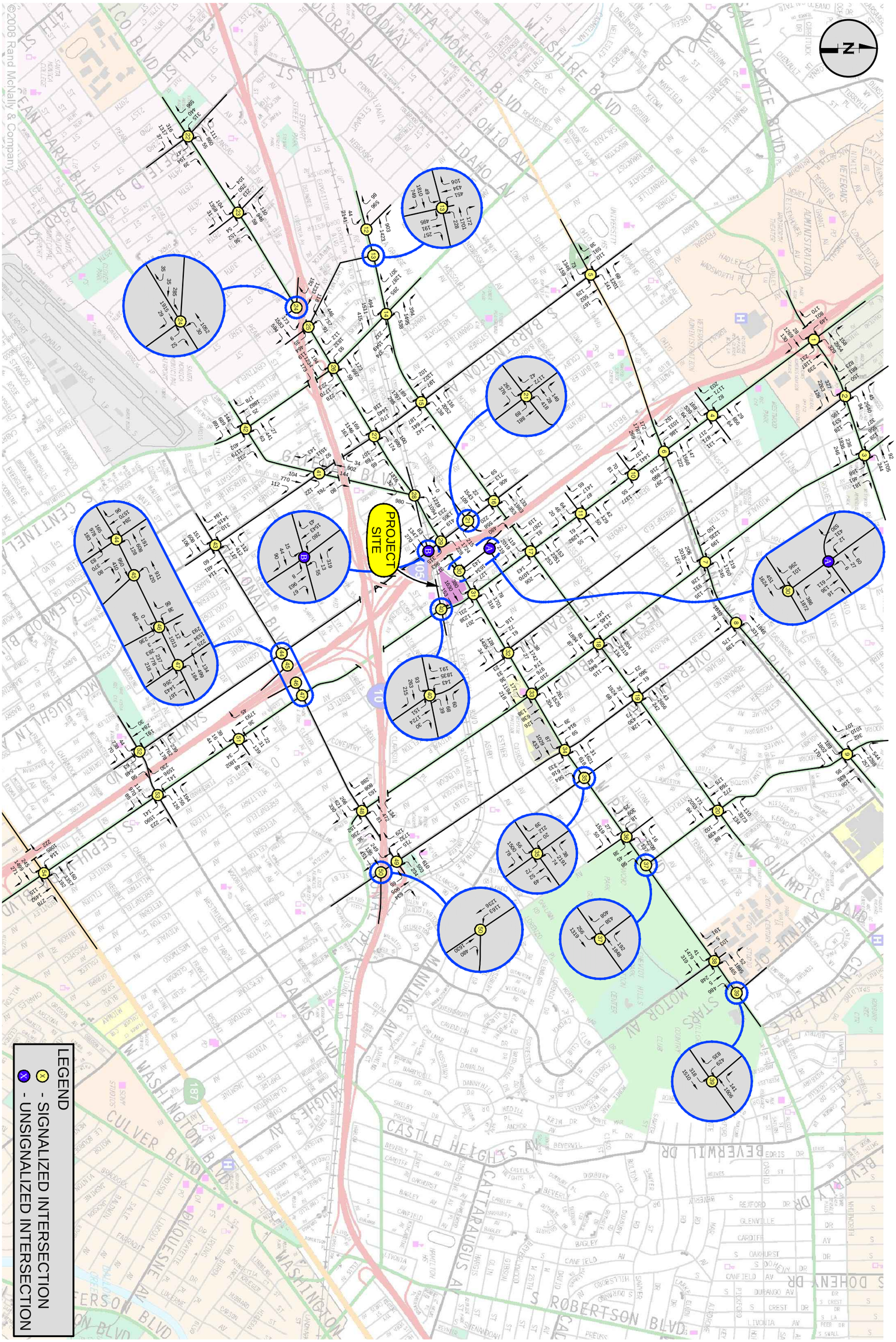
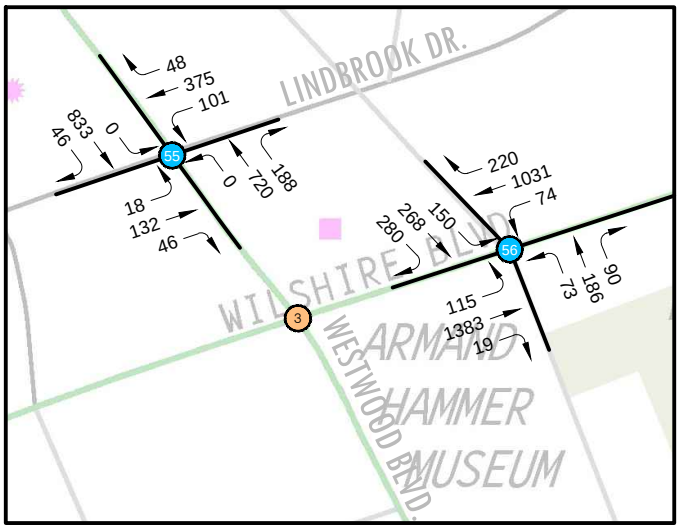
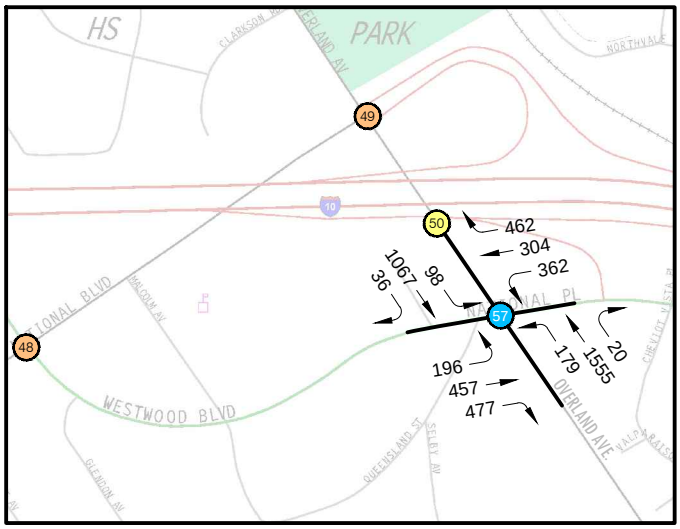


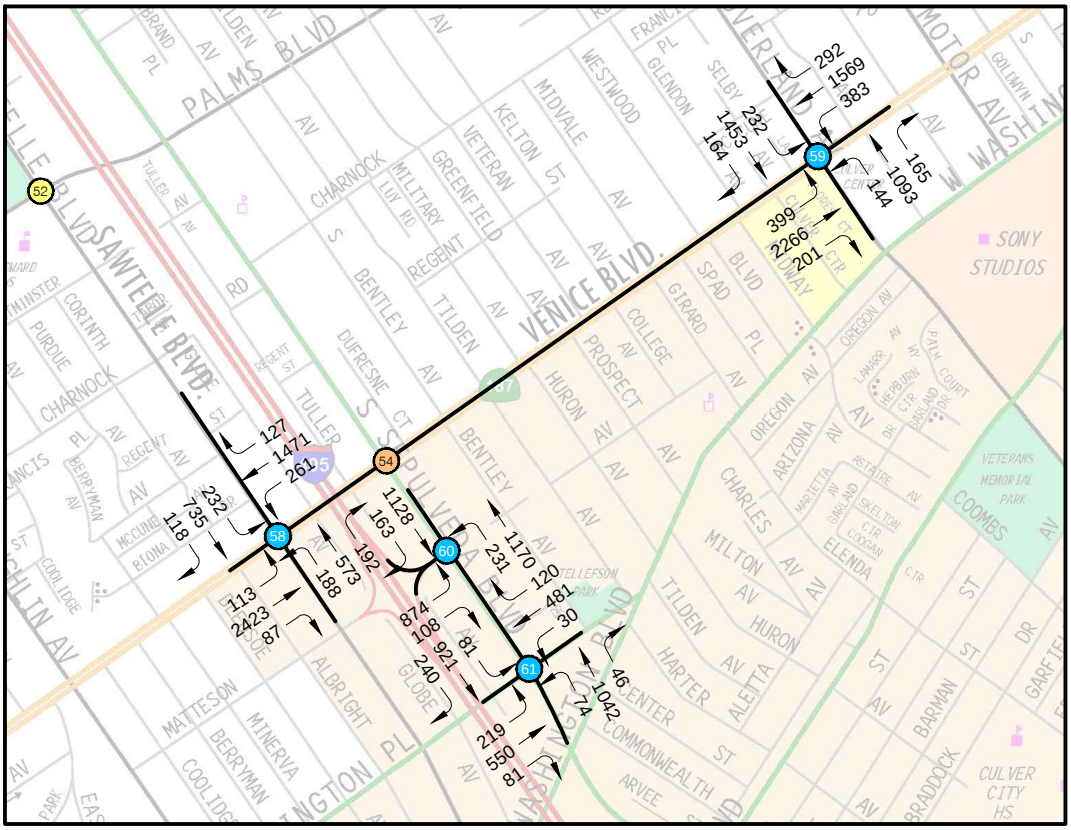
FIGURE 18(a)

HIRSCH GREEN
Hirsch/Green Transportation Consulting, Inc.

FUTURE (2012) TRAFFIC VOLUMES
WITH PROJECT PLUS TDM
PM PEAK HOUR







LEGEND
- (X) - ORIGINAL STUDY INTERSECTION
- (X) - PREVIOUSLY IDENTIFIED SIGNIFICANT IMPACT
- (X) - ADDITIONAL STUDY INTERSECTION PER EXPANDED STUDY AREA

N

FIGURE 18(b)

12/4/2012

IRSCH REEN
Hirsch/Green Transportation Consulting, Inc.

FUTURE (2012) TRAFFIC VOLUMES
WITH PROJECT PLUS TDM
PM PEAK HOUR

Table 9
Critical Movement Analysis Summary
Future (2012) Without and With Project Plus Residential TOD (15%) and Commercial TDM (10%) Trip Reductions

Int. No.	Intersection	Peak Hour	Without Project		With Project			With Project Plus TOD/TDM Reductions		
			CMA	LOS	CMA	LOS	Impact	CMA	LOS	Impact
3	Wilshire Boulevard	AM	0.695	B	0.700	B	0.005	0.698	B	0.003
	and Westwood Boulevard	PM	0.899	D	0.910	E	0.011 *	0.907	E	0.008
4	Ohio Avenue	AM	0.931	E	0.934	E	0.003	0.933	E	0.002
	and Sepulveda Boulevard	PM	1.063	F	1.073	F	0.010 *	1.072	F	0.009
6	Santa Monica Boulevard	AM	0.910	E	0.917	E	0.007	0.916	E	0.006
	and Sepulveda Boulevard	PM	1.001	F	1.030	F	0.029 *	1.027	F	0.026 *
14	Olympic Boulevard	AM	1.198	F	1.203	F	0.005	1.203	F	0.005
	and Bundy Drive	PM	1.410	F	1.423	F	0.013 *	1.422	F	0.012 *
16	Olympic Boulevard	AM	0.942	E	0.947	E	0.005	0.947	E	0.005
	and Sawtelle Boulevard	PM	1.245	F	1.260	F	0.015 *	1.259	F	0.014 *
17	Olympic Boulevard	AM	1.038	F	1.053	F	0.015 *	1.052	F	0.014 *
	and Sepulveda Boulevard	PM	1.131	F	1.196	F	0.065 *	1.188	F	0.057 *
18	Olympic Boulevard	AM	1.088	F	1.096	F	0.008	1.095	F	0.007
	and Westwood Boulevard	PM	0.996	E	1.010	F	0.014 *	1.007	F	0.011 *
21	Tennessee Avenue/I-405 SB Off-Ramp	AM	0.504	A	0.515	A	0.011	0.513	A	0.009
	and Sawtelle Boulevard	PM	0.880	D	0.920	E	0.040 *	0.915	E	0.035 *
24	Pico Boulevard	AM	0.829	D	0.835	D	0.006	0.834	D	0.005
	and I-10 EB Off-Ramp/34th Street	delay (sec)	505.5	F	515.4	F	9.9	516.2	F	10.7
		V/C	0.96		0.97		0.01 *	0.97		0.01 *
		PM	0.837	D	0.861	D	0.024 *	0.858	D	0.021 *
		delay (sec)	22.8	C	27.0	C	4.2	26.3	C	3.5
		V/C	0.85		0.88		0.03	0.88		0.03

Table 9 (continued)
Critical Movement Analysis Summary
Future (2012) Without and With Project Plus Residential TOD (15%) and Commercial TDM (10%) Trip Reductions

Int. No.	Intersection	Peak Hour	Without Project		With Project			With Project Plus TOD/TDM Reductions		
			CMA	LOS	CMA	LOS	Impact	CMA	LOS	Impact
25	Pico Boulevard	AM	0.919	E	0.925	E	0.006	0.925	E	0.006
	and Centinela Avenue	PM	1.130	F	1.153	F	0.023 *	1.150	F	0.020 *
26	Pico Boulevard	AM	1.238	F	1.246	F	0.008	1.244	F	0.006
	and Bundy Drive	PM	1.158	F	1.173	F	0.015 *	1.171	F	0.013 *
27	Pico Boulevard	AM	0.939	E	0.950	E	0.011 *	0.948	E	0.009
	and Barrington Avenue	PM	0.741	C	0.755	C	0.014	0.754	C	0.013
28	Pico Boulevard	AM	0.818	D	0.825	D	0.007	0.825	D	0.007
	and Gateway Boulevard	PM	0.883	D	0.909	E	0.026 *	0.906	E	0.023 *
29	Pico Boulevard	AM	1.105	F	1.143	F	0.038 *	1.139	F	0.034 *
	and Sawtelle Boulevard	PM	1.077	F	1.197	F	0.120 *	1.183	F	0.106 *
30	Pico Boulevard	AM	0.706	C	0.719	C	0.013	0.718	C	0.012
	and Cotner Avenue	PM	0.791	C	0.819	D	0.028 *	0.816	D	0.025 *
31	Pico Boulevard	AM	1.394	F	1.449	F	0.055 *	1.440	F	0.046 *
	and Sepulveda Boulevard	PM	1.608	F	1.825	F	0.217 *	1.802	F	0.194 *
33	Pico Boulevard	AM	0.783	C	0.796	C	0.013	0.794	C	0.011
	and Westwood Boulevard	PM	0.891	D	0.921	E	0.030 *	0.917	E	0.026 *
34	Pico Boulevard	AM	0.914	E	0.920	E	0.006	0.919	E	0.005
	and Overland Avenue	PM	0.983	E	0.994	E	0.011 *	0.992	E	0.009
38	Pico Boulevard	AM	0.798	C	0.803	D	0.005	0.801	D	0.003
	and Motor Avenue/Fox Studios Driveway	PM	0.984	E	0.998	E	0.014 *	0.997	E	0.013 *

Table 9 (continued)
Critical Movement Analysis Summary
Future (2012) Without and With Project Plus Residential TOD (15%) and Commercial TDM (10%) Trip Reductions

Int. No.	Intersection	Peak Hour	Without Project		With Project			With Project Plus TOD/TDM Reductions		
			CMA	LOS	CMA	LOS	Impact	CMA	LOS	Impact
40	Exposition Boulevard	AM	1.164	F	1.253	F	0.089 *	1.240	F	0.076 *
	and Sepulveda Boulevard	PM	1.297	F	1.373	F	0.076 *	1.364	F	0.067 *
44	National Boulevard	AM	1.014	F	1.019	F	0.005	1.019	F	0.005
	and Sawtelle Boulevard	PM	1.108	F	1.124	F	0.016 *	1.122	F	0.014 *
47	National Boulevard	AM	1.251	F	1.288	F	0.037 *	1.282	F	0.031 *
	and Sepulveda Boulevard	PM	1.477	F	1.499	F	0.022 *	1.496	F	0.019 *
48	National Boulevard	AM	0.640	B	0.649	B	0.009	0.649	B	0.009
	and Westwood Boulevard	PM	0.887	D	0.924	E	0.037 *	0.919	E	0.032 *
49	I-10 WB On/Off-Ramps/National Boulevard	AM	0.984	E	1.010	F	0.026 *	1.006	F	0.022 *
	and Overland Avenue	PM	1.141	F	1.203	F	0.062 *	1.196	F	0.055 *
54	Venice Boulevard	AM	1.004	F	1.012	F	0.008	1.011	F	0.007
	and Sepulveda Boulevard	PM	1.051	F	1.064	F	0.013 *	1.063	F	0.012 *

Notes:

"*" Significant impact per City of Los Angeles Department of Transportation (LADOT) *Traffic Study Policies and Procedures* , May 2012.

"*" Significant impact per City of Santa Monica criteria. Provided for informational purposes only.
Values in blue indicate total intersection delay (in seconds) and intersection volume-to-capacity values, per City of Santa Monica HCM methodology.

It should be noted, as shown earlier in Table 5, that the intersection of Pico Boulevard and Barrington Avenue also exhibits a significant impact under the "Existing With Project" analysis scenario, which as noted earlier, is not assumed to be addressed by the recommended TOD/TDM trip reduction measures. However, the previously recommended physical mitigation improvement for this location is also ineffective in mitigating this impact, and as such, is still deemed unnecessary. Further, the intersection of Pico Boulevard and Overland Avenue is also anticipated to be significantly impacted under the "Existing With Project" conditions; again, the TOD/TDM trip reductions are not considered to be applicable and mitigation for these "immediate" project-related impacts, and no feasible physical or traffic signal improvements are available at this location. However, since both impacts will be reduced to less-than-significant levels under the "future" forecast conditions, this impact, along with the "existing" significant impact at Pico Boulevard and Overland Avenue, is considered by LADOT to be "temporary".

Recommended Physical/Traffic Signal Mitigation Improvements

As described in the preceding section, while the recommended trip reduction programs would reduce the magnitudes of many of the project's significant impacts, only four of the impacts would actually be reduced to less-than-significant levels. Therefore, potential physical and/or traffic signal improvements at each of the remaining impacted intersections were explored. The details of the investigation of potential physical and/or traffic signal improvements in the project vicinity are described in the "Revised December 2009" traffic study. As noted in that document, and supplemented by LADOT's September 28, 2010 assessment letter on the traffic study, a total of 15 of the intersections significantly impacted by the modified project (and not mitigated with the recommended TOD/TDM trip reductions measures) under either the "existing" or forecast "future" analysis scenarios exhibit conditions which render any potential roadway or traffic signal improvements infeasible. These locations are listed below:

Intersections With No Feasible Mitigation

6. Santa Monica Boulevard and Sepulveda Boulevard
7. Santa Monica Boulevard and Westwood Boulevard
16. Olympic Boulevard and Sawtelle Boulevard
24. Pico Boulevard and I-10 EB Off-Ramp/34th Street
26. Pico Boulevard and Bundy Drive
28. Pico Boulevard and Gateway Boulevard
30. Pico Boulevard and Cotner Avenue

31. Pico Boulevard and Sepulveda Boulevard
33. Pico Boulevard and Westwood Boulevard
34. Pico Boulevard and Overland Avenue
38. Pico Boulevard and Motor Avenue/Fox Studios Driveway
40. Exposition Boulevard and Sepulveda Boulevard
44. National Boulevard and Sawtelle Boulevard
48. National Boulevard and Westwood Boulevard
49. I-10 WB On/Off-Ramps/National Boulevard and Overland Avenue

Five additional impacted intersections, listed below, are locations at which any feasible improvements are already "assigned", leaving them potentially unavailable as mitigation for the proposed (modified) project. Note that, as described in the "Revised December 2009" traffic study, the "other project" mitigation improvements at these five locations were not assumed as part of the background future roadway conditions (prior to development of the proposed project), since their implementation within the study timeline cannot be guaranteed.

Intersections With Available Mitigation Already Assigned to Other Projects

14. Olympic Boulevard and Bundy Drive
17. Olympic Boulevard and Sepulveda Boulevard
25. Pico Boulevard and Centinela Avenue
29. Pico Boulevard and Sawtelle Boulevard
47. National Boulevard and Sepulveda Boulevard

Additionally, although not described specifically in the summary of mitigation measures already assigned to other approved or pending development projects in the study vicinity, it is of note that the City's ATCS traffic signal coordination software upgrades have not yet been installed at several intersections in the area, including four of the intersections significantly impacted by the proposed (modified) project (Olympic Boulevard and Bundy Drive, Pico Boulevard and Centinela Avenue, Pico Boulevard and Bundy Drive, Pico Boulevard and Barrington Avenue, and Pico Boulevard and Gateway Boulevard). However, as described earlier in this report, LADOT has indicated that funding for the future implementation of the ATCS upgrades within the study area have received a commitment of funding (via Proposition 1B monies) to begin construction in fiscal year 2011/2012. Therefore, although due to current economic conditions, it is not certain whether sufficient funds to accomplish this goal will be available as anticipated,

for purposes of identifying potential project-related impact mitigation measures, LADOT has indicated that the installation of the ATCS signal coordination upgrades (or contributions toward its installation) are not currently being considered.

As a result of this lack of feasible roadway or traffic signal improvements, project-related mitigation measures are available at only three of the significantly impacted intersections noted above. These locations, and their associated mitigation improvements, are described below.

Recommended Intersection Impact Mitigation Measures

18. Olympic Boulevard and Westwood Boulevard – Restripe the southbound approach of Westwood Boulevard at this location within the existing roadway width to install a new right-turn only lane.

21. Tennessee Avenue/I-405 SB Off-Ramp and Sawtelle Boulevard – Convert the existing through/right-turn lane of the Off-Ramp to a left-turn/through/right-turn lane, and reconfigure the traffic signal phasing to provide opposed east-west signal indications. This measure will require review and approval from Caltrans.

54. Venice Boulevard and Sepulveda Boulevard – Widen the east side of Sepulveda Boulevard north of Venice Boulevard, and restripe the northbound approach to convert the existing right-turn only lane to a shared through/right-turn lane. Additionally, restripe the north leg of Sepulveda Boulevard to provide a third northbound "receiving" lane, which will ultimately transition back to the two existing northbound travel lane configuration. This improvement will require the removal of two existing on-street parking spaces along the east side of Sepulveda Boulevard immediately north of Venice Boulevard, but all remaining existing on-street parking will be maintained.

The three mitigation measures described above are identical to the improvements described in the "Revised December 2009" traffic study to address the impacts of the currently-proposed project at these same locations. The effectiveness of the recommended mitigation measures identified above were evaluated using the same Critical Movement Analysis methodologies and procedures described earlier in this report, with the exception that the proposed improvements were assumed to be "in place. The results of the supplemental analyses are summarized in Table 10 for the "Existing With Project Plus Physical Mitigation" scenario (which as noted earlier does not include the effects of the recommended TOD/TDM trip reduction measures), and in Table 11 for the forecast "Future With Project Plus Physical Mitigation" scenario. Note that, for

Table 10
Critical Movement Analysis Summary
Existing (2009) Without and With Project Plus Physical/Traffic Signal Mitigation Conditions

Int. No.	Intersection	Peak Hour	Without Project CMA	Without Project LOS	With Project CMA	With Project LOS	With Project Impact	With Project Plus Physical Mitigation CMA	With Project Plus Physical Mitigation LOS	With Project Plus Physical Mitigation Impact
6	Santa Monica Boulevard	AM	0.820	D	0.827	D	0.007	Unchanged [2]		
	and Sepulveda Boulevard	PM	0.868	D	0.896	D	0.028 *			
7	Santa Monica Boulevard	AM	1.034	F	1.041	F	0.007	Unchanged [2]		
	and Westwood Boulevard	PM	0.919	E	0.930	E	0.011 *			
14	Olympic Boulevard	AM	0.975	E	0.979	E	0.004	Unchanged [2]		
	and Bundy Drive	PM	0.899	D	0.913	E	0.014 *			
16	Olympic Boulevard	AM	0.837	D	0.843	D	0.006	Unchanged [2]		
	and Sawtelle Boulevard	PM	1.063	F	1.077	F	0.014 *			
17	Olympic Boulevard	AM	0.878	D	0.894	D	0.016	Unchanged [2]		
	and Sepulveda Boulevard	PM	0.925	E	0.991	E	0.066 *			
18	Olympic Boulevard	AM	1.003	F	1.010	F	0.007	1.010	F	0.007
	and Westwood Boulevard	PM	0.907	E	0.920	E	0.013 *	0.911	E	0.004
21	Tennessee Avenue/I-405 SB Off-Ramp	AM	0.442	A	0.454	A	0.012	0.421	A	-0.021
	and Sawtelle Boulevard	PM	0.807	D	0.846	D	0.039 *	0.722	C	-0.085
24	Pico Boulevard	AM	0.758	C	0.764	C	0.006	Not Applicable		
	and I-10 EB Off-Ramp/34th Street	delay (sec)	380.9	F	390.4	F	9.5			
		V/C	0.87		0.88		0.01 *			
		PM	0.747	C	0.771	C	0.024			
		delay (sec)	17.6	B	18.6	B	1.0			
		V/C	0.74		0.77		0.03			

Table 10 (continued)
Critical Movement Analysis Summary
Existing (2009) Without and With Project Plus Physical/Traffic Signal Mitigation Conditions

Int. No.	Intersection	Peak Hour	Without Project CMA	Without Project LOS	With Project CMA	With Project LOS	With Project Impact	With Project Plus Physical Mitigation CMA	With Project Plus Physical Mitigation LOS	With Project Plus Physical Mitigation Impact
25	Pico Boulevard and Centinela Avenue	AM	0.829	D	0.835	D	0.006	Unchanged [2]		
		PM	0.971	E	0.993	E	0.022 *			
26	Pico Boulevard and Bundy Drive	AM	1.116	F	1.122	F	0.006	Unchanged [2]		
		PM	1.071	F	1.096	F	0.025 *			
27	Pico Boulevard and Barrington Avenue	AM	0.915	E	0.923	E	0.008	Not Applicable (future impact mitigated by TOD/TDM programs)		
		PM	0.972	E	0.995	E	0.023 *			
28	Pico Boulevard and Gateway Boulevard	AM	0.908	E	0.919	E	0.011 *	Unchanged [2]		
		PM	0.964	E	0.999	E	0.035 *			
29	Pico Boulevard and Sawtelle Boulevard	AM	1.013	F	1.050	F	0.037 *	Unchanged [2]		
		PM	0.992	E	1.112	F	0.120 *			
31	Pico Boulevard and Sepulveda Boulevard	AM	0.992	E	1.037	F	0.045 *	Unchanged [2]		
		PM	1.096	F	1.271	F	0.175 *			
33	Pico Boulevard and Westwood Boulevard	AM	0.722	C	0.736	C	0.014	Unchanged [2]		
		PM	0.816	D	0.847	D	0.031 *			
34	Pico Boulevard and Overland Avenue	AM	0.851	D	0.857	D	0.006	Unchanged [2]		
		PM	0.901	E	0.912	E	0.011 *			
38	Pico Boulevard and Motor Avenue/Fox Studios Driveway	AM	0.764	C	0.767	C	0.003	Unchanged [2]		
		PM	0.936	E	0.948	E	0.012 *			
40	Exposition Boulevard and Sepulveda Boulevard	AM	0.707	C	0.769	C	0.062 *	Unchanged [2]		
		PM	0.811	D	0.961	E	0.150 *			

Table 10 (continued)
Critical Movement Analysis Summary
Existing (2009) Without and With Project Plus Physical/Traffic Signal Mitigation Conditions

Int. No.	Intersection	Peak Hour	Without Project CMA	Without Project LOS	With Project CMA	With Project LOS	With Project Impact	With Project Plus Physical Mitigation CMA	With Project Plus Physical Mitigation LOS	With Project Plus Physical Mitigation Impact
46	National Boulevard and I-405 NB Off-Ramp	AM	0.819	F[1]	0.836	F[1]	0.017 *	Unchanged [2]		
		PM	0.789	E[1]	0.827	E[1]	0.038 *			
47	National Boulevard and Sepulveda Boulevard	AM	1.076	F	1.133	F	0.057 *	Unchanged [2]		
		PM	1.131	F	1.227	F	0.096 *			
48	National Boulevard and Westwood Boulevard	AM	0.584	A	0.593	A	0.009	Unchanged [2]		
		PM	0.830	D	0.867	D	0.037 *			
49	I-10 WB On/Off-Ramps/National Boulevard and Overland Avenue	AM	0.982	E	1.008	F	0.026 *	Unchanged [2]		
		PM	1.080	F	1.127	F	0.047 *			
53	Palms Boulevard and Sepulveda Boulevard	AM	1.045	F	1.048	F	0.003	Unchanged [2]		
		PM	1.079	F	1.090	F	0.011 *			
54	Venice Boulevard and Sepulveda Boulevard	AM	0.919	E	0.927	E	0.008	0.837	D	-0.082
		PM	0.954	E	0.965	E	0.011 *	0.874	D	-0.080

Notes:

[1] Intersection under construction. Level of Service based on observed peak hour conditions.

"*" Significant impact per City of Los Angeles Department of Transportation (LADOT) *Traffic Study Policies and Procedures* , Revised March 2002.

"*" Significant impact per City of Santa Monica criteria. Provided for informational purposes only.
Values in blue indicate total intersection delay (in seconds) and intersection volume-to-capacity values, per City of Santa Monica HCM methodology.

[2] LADOT review indicated no feasible physical or signal improvements beyond programmed or anticipated future improvements.

Table 11
Critical Movement Analysis Summary
Future (2012) Without and With Project Plus Physical/Traffic Signal Mitigation Conditions

Int. No.	Intersection	Peak Hour	Without Project CMA	Without Project LOS	With Project CMA	With Project LOS	With Project Impact	With Project Plus TOD/TDM Reductions CMA	With Project Plus TOD/TDM Reductions LOS	With Project Plus TOD/TDM Reductions Impact	With Project Plus Physical Mitigation CMA	With Project Plus Physical Mitigation LOS	With Project Plus Physical Mitigation Impact
3	Wilshire Boulevard	AM	0.695	B	0.700	B	0.005	0.698	B	0.003	Not Applicable		
	and Westwood Boulevard	PM	0.899	D	0.910	E	0.011 *	0.907	E	0.008			
4	Ohio Avenue	AM	0.931	E	0.934	E	0.003	0.933	E	0.002	Not Applicable		
	and Sepulveda Boulevard	PM	1.063	F	1.073	F	0.010 *	1.072	F	0.009			
6	Santa Monica Boulevard	AM	0.910	E	0.917	E	0.007	0.916	E	0.006	Unchanged [1]		
	and Sepulveda Boulevard	PM	1.001	F	1.030	F	0.029 *	1.027	F	0.026 *			
14	Olympic Boulevard	AM	1.198	F	1.203	F	0.005	1.203	F	0.005	Unchanged [1]		
	and Bundy Drive	PM	1.410	F	1.423	F	0.013 *	1.422	F	0.012 *			
16	Olympic Boulevard	AM	0.942	E	0.947	E	0.005	0.947	E	0.005	Unchanged [1]		
	and Sawtelle Boulevard	PM	1.245	F	1.260	F	0.015 *	1.259	F	0.014 *			
17	Olympic Boulevard	AM	1.038	F	1.053	F	0.015 *	1.052	F	0.014 *	Unchanged [1]		
	and Sepulveda Boulevard	PM	1.131	F	1.196	F	0.065 *	1.188	F	0.057 *			
18	Olympic Boulevard	AM	1.088	F	1.096	F	0.008	1.095	F	0.007	1.095	F	0.007
	and Westwood Boulevard	PM	0.996	E	1.010	F	0.014 *	1.007	F	0.011 *	1.003	F	0.007
21	Tennessee Avenue/I-405 SB Off-Ramp	AM	0.504	A	0.515	A	0.011	0.513	A	0.009	0.471	A	-0.033
	and Sawtelle Boulevard	PM	0.880	D	0.920	E	0.040 *	0.915	E	0.035 *	0.778	C	-0.102
24	Pico Boulevard	AM	0.829	D	0.835	D	0.006	0.834	D	0.005			
	and I-10 EB Off-Ramp/34th Street	delay (sec)	505.5	F	515.4	F	9.9	516.2	F	10.7			
		V/C	0.96		0.97		0.01 *	0.97		0.01 *	Unchanged [1]		
		PM	0.837	D	0.861	D	0.024 *	0.858	D	0.021 *			
		delay (sec)	22.8	C	27.0	C	4.2	26.3	C	3.5			
		V/C	0.85		0.88		0.03	0.88		0.03			

Table 11 (continued)
Critical Movement Analysis Summary
Future (2012) Without and With Project Plus Physical/Traffic Signal Mitigation Conditions

Int. No.	Intersection	Peak Hour	Without Project CMA	Without Project LOS	With Project CMA	With Project LOS	With Project Impact	With Project Plus TOD/TDM Reductions CMA	With Project Plus TOD/TDM Reductions LOS	With Project Plus TOD/TDM Reductions Impact	With Project Plus Physical Mitigation CMA	With Project Plus Physical Mitigation LOS	With Project Plus Physical Mitigation Impact
25	Pico Boulevard	AM	0.919	E	0.925	E	0.006	0.925	E	0.006	Unchanged [1]		
	and Centinela Avenue	PM	1.130	F	1.153	F	0.023 *	1.150	F	0.020 *			
26	Pico Boulevard	AM	1.238	F	1.246	F	0.008	1.244	F	0.006	Unchanged [1]		
	and Bundy Drive	PM	1.158	F	1.173	F	0.015 *	1.171	F	0.013 *			
27	Pico Boulevard	AM	0.939	E	0.950	E	0.011 *	0.948	E	0.009	0.928	E	-0.011
	and Barrington Avenue	PM	0.741	C	0.755	C	0.014	0.754	C	0.013	0.754	C	0.013
28	Pico Boulevard	AM	0.818	D	0.825	D	0.007	0.825	D	0.007	Unchanged [1]		
	and Gateway Boulevard	PM	0.883	D	0.909	E	0.026 *	0.906	E	0.023 *			
29	Pico Boulevard	AM	1.105	F	1.143	F	0.038 *	1.139	F	0.034 *	Unchanged [1]		
	and Sawtelle Boulevard	PM	1.077	F	1.197	F	0.120 *	1.183	F	0.106 *			
30	Pico Boulevard	AM	0.706	C	0.719	C	0.013	0.718	C	0.012	Unchanged [1]		
	and Cotner Avenue	PM	0.791	C	0.819	D	0.028 *	0.816	D	0.025 *			
31	Pico Boulevard	AM	1.394	F	1.449	F	0.055 *	1.440	F	0.046 *	Unchanged [1]		
	and Sepulveda Boulevard	PM	1.608	F	1.825	F	0.217 *	1.802	F	0.194 *			
33	Pico Boulevard	AM	0.783	C	0.796	C	0.013	0.794	C	0.011	Unchanged [1]		
	and Westwood Boulevard	PM	0.891	D	0.921	E	0.030 *	0.917	E	0.026 *			
34	Pico Boulevard	AM	0.914	E	0.920	E	0.006	0.919	E	0.005	Not Applicable		
	and Overland Avenue	PM	0.983	E	0.994	E	0.011 *	0.992	E	0.009			
38	Pico Boulevard	AM	0.798	C	0.803	D	0.005	0.801	D	0.003	Unchanged [1]		
	and Motor Avenue/Fox Studios Driveway	PM	0.984	E	0.998	E	0.014 *	0.997	E	0.013 *			

Table 11 (continued)
Critical Movement Analysis Summary
Future (2012) Without and With Project Plus Physical/Traffic Signal Mitigation Conditions

Int. No.	Intersection	Peak Hour	Without Project CMA	Without Project LOS	With Project CMA	With Project LOS	With Project Impact	With Project Plus TOD/TDM Reductions CMA	With Project Plus TOD/TDM Reductions LOS	With Project Plus TOD/TDM Reductions Impact	With Project Plus Physical Mitigation CMA	With Project Plus Physical Mitigation LOS	With Project Plus Physical Mitigation Impact
40	Exposition Boulevard	AM	1.164	F	1.253	F	0.089 *	1.240	F	0.076 *	Unchanged [1]		
	and Sepulveda Boulevard	PM	1.297	F	1.373	F	0.076 *	1.364	F	0.067 *			
44	National Boulevard	AM	1.014	F	1.019	F	0.005	1.019	F	0.005	Unchanged [1]		
	and Sawtelle Boulevard	PM	1.108	F	1.124	F	0.016 *	1.122	F	0.014 *			
47	National Boulevard	AM	1.251	F	1.288	F	0.037 *	1.282	F	0.031 *	Unchanged [1]		
	and Sepulveda Boulevard	PM	1.477	F	1.499	F	0.022 *	1.496	F	0.019 *			
48	National Boulevard	AM	0.640	B	0.649	B	0.009	0.649	B	0.009	Unchanged [1]		
	and Westwood Boulevard	PM	0.887	D	0.924	E	0.037 *	0.919	E	0.032 *			
49	I-10 WB On/Off-Ramps/National Boulevard	AM	0.984	E	1.010	F	0.026 *	1.006	F	0.022 *	Unchanged [1]		
	and Overland Avenue	PM	1.141	F	1.203	F	0.062 *	1.196	F	0.055 *			
54	Venice Boulevard	AM	1.004	F	1.012	F	0.008	1.011	F	0.007	0.902	E	-0.102
	and Sepulveda Boulevard	PM	1.051	F	1.064	F	0.013 *	1.063	F	0.012 *	0.949	E	-0.102

Notes:

"*" Significant impact per City of Los Angeles Department of Transportation (LADOT) *Traffic Study Policies and Procedures* , May 2012.

"*" Significant impact per City of Santa Monica criteria. Provided for informational purposes only.
Values in blue indicate total intersection delay (in seconds) and intersection volume-to-capacity values, per City of Santa Monica HCM methodology.

[1] LADOT review indicated no feasible physical or signal improvements beyond programmed or anticipated future improvements.

convenience, Table 11 also contains a reiteration of the effects of the TOD/TDM trip reduction program at each of the 25 intersections significantly impacted under the "Future With Project" conditions (shown previously in Table 9).

Note that the values summarized in Table 11 related to the effectiveness of the recommended physical mitigation improvements include both the capacity-enhancing benefits of the proposed roadway/signal improvements as well as the effects of the anticipated TOD/TDM trip reduction programs described previously, and whose own effects are summarized in Table 9.

A review of Tables 10 and 11 indicates that, even with the implementation of the recommended physical mitigation improvements, the modified project would still result in significant and unavoidable impacts at a total of 20 of the 61 study intersections under the "existing" conditions analyses. By comparison, the currently-proposed project would result in a total of 24 significant and unavoidable intersection impacts following the implementation of the physical and/or traffic signal mitigation measures recommended for that project (once again, without consideration of the effects of the TOD/TDM program trip reduction measures for the "existing" conditions). However, the availability of the additional TOD/TDM trip reduction measures as a result of the future completion of the Expo Line and its associated site-adjacent station will reduce the number of trips generated by the project (as well as the associated magnitudes of its impacts), and in conjunction with the recommended physical mitigation improvements, will reduce the number of significant and unavoidable impacts of the project to a total of 18 intersections, or four (4) fewer than the 22 unmitigated intersection impacts anticipated to result from the currently-proposed project, as described in the "Revised December 2009" traffic study. The 18 study intersection locations where the potential effects of the modified project's traffic cannot be fully mitigated (reduced to less-than-significant levels) for the "future" (2012) conditions are listed below.

6. Santa Monica Boulevard and Sepulveda Boulevard
14. Olympic Boulevard and Bundy Drive
16. Olympic Boulevard and Sawtelle Boulevard
17. Olympic Boulevard and Sepulveda Boulevard
24. Pico Boulevard and I-10 EB Off-Ramp/34th Street
25. Pico Boulevard and Centinela Avenue
26. Pico Boulevard and Bundy Drive
28. Pico Boulevard and Gateway Boulevard
29. Pico Boulevard and Sawtelle Boulevard

30. Pico Boulevard and Cotner Avenue
31. Pico Boulevard and Sepulveda Boulevard
33. Pico Boulevard and Westwood Boulevard
38. Pico Boulevard and Motor Avenue/Fox Studios Driveway
40. Exposition Boulevard and Sepulveda Boulevard
44. National Boulevard and Sawtelle Boulevard
47. National Boulevard and Sepulveda Boulevard
48. National Boulevard and Westwood Boulevard
49. I-10 WB On/Off-Ramps/National Boulevard and Overland Avenue

It is also of note that the three physical roadway/signal improvement measures identified as mitigation for the impacts at the intersections of Olympic Boulevard and Westwood Boulevard, Tennessee Avenue/I-405 SB Off-Ramp and Sawtelle Boulevard, and Venice Boulevard and Sepulveda Boulevard are the only feasible measures identified, and should one or more of these improvements ultimately not be approved by LADOT or otherwise not be constructed, and if no other acceptable and equally effective mitigation measures can be identified, the project's impacts at any such locations would also remain significant and unavoidable.

Conversely, however, should any of the currently assumed "unavailable" mitigation measures become available to the proposed (modified) project, the number of significant and unavoidable project impacts could be reduced. Specifically, should the ATCS traffic signal coordination upgrades become available as mitigation for the subject project, this measure alone would reduce the project's impacts at four of the currently-assumed "significant and unavoidable" locations; Olympic Boulevard and Bundy Drive, Pico Boulevard and Centinela Avenue, Pico Boulevard and Bundy Drive, and Pico Boulevard and Gateway Boulevard; to less-than-significant levels. Additionally, potential roadway improvements at the intersections of Sepulveda Boulevard and National Boulevard (new northbound and southbound right-turn lanes), and Olympic Boulevard and Bundy Drive (dual eastbound left-turn lanes) are currently assigned to other development projects in the study area, but would reduce the impacts of the modified project at both locations to less-than-significant levels if they were to become available as project mitigation measures. As a result, if these currently unavailable ATCS and/or physical roadway improvements were to be implemented by the project at these five intersections (the impact at Olympic Boulevard and Bundy Drive would be mitigated by either the ATCS or physical roadway improvements), the total number of "significant and unavoidable" project impacts would be reduced from 18 to 13.

Notwithstanding the lack of available physical/traffic signal mitigation to address project impacts, the City may decide that 18 significant and unavoidable intersection impacts is an unacceptable number for project approval, and determine that reductions in the size or scale of the project are needed in order to reduce the number of residual significant impacts. Should that action occur, it is worth noting, as shown previously in Table 2, that the majority of the project's trips are the result of the commercial (retail and supermarket) components of the development, which together produce approximately 75 percent of the daily project traffic, and over 80 percent of the project's traffic during the critical PM peak hour period. (Note that the residential component produces approximately 50 percent of the project's AM peak hour trips, but as the project results in only seven impacts during that time period, it is not considered as critical as the PM peak hour.)

Therefore, it is reasonable to conclude that the commercial components of the project contribute greatly to the majority of the project's significant traffic impacts, and that many of the impacts are likely the result of the trips generated by these commercial components alone. Additionally, the commercial components of the project produce far more trips per unit size than do the proposed residential units. As indicated by the project trip generation rates shown in Table 1 earlier in this report, 1,000 square feet of "anchor retail" floor area generates the PM peak hour trip equivalent of more than 13 market-rate residential units. Similarly, 1,000 square feet of market floor area produces the same amount of PM peak hour trips as approximately 21 residential units, while 1,000 square feet of local-serving retail generates the equivalent of more than 10 residential units during the critical PM peak hour. As such, incremental reductions to the size of the commercial components of the project will have a larger effect on the number of trips and their associated impacts than reductions to the number of residential units, and if the City determines that the project's impacts should be reduced or mitigated by reducing the size of the project, it is recommended that such reductions occur primarily within the proposed commercial components.

Local/Residential Street Impacts

Although it is expected that some of the modified project's traffic will actually be generated within the neighborhoods surrounding the project site (particularly for the proposed specialty market and local-serving retail uses, and will naturally use the local streets to travel to and from the project, the magnitude of these potential "new" trips on any of the residential streets in the project vicinity will be less than significant. As a result, no significant impacts to any of the nearby local/residential roadways are anticipated as a result of development of the modified project, and as such, no mitigation for such impacts is necessary.

Congestion Management Program ("CMP") Impacts

As described in the preceding analyses, the modified project will not generate sufficient net new traffic to result in significant impacts to any of the CMP arterial roadways, intersections, or freeway mainline segments in or around the study area. Therefore, no CMP-related traffic mitigation measures are warranted for any of the regionally-significant transportation facilities in the project vicinity, and none are recommended.

Transit Impacts

The modified project is anticipated to result in additional transit ridership, especially as a result of the proposed TOD/TDM trip reduction and traffic mitigation programs. As described earlier in this report, these programs are expected to reduce the number of vehicle trips generated by the project by approximately 1,312 trips per day, including about 63 trips during the AM peak hour and 121 trips during the PM peak hour. Using the previously-assumed average vehicle occupancy factor of 1.2 persons per vehicle, this would translate to approximately 1,574 new transit riders per day, including approximately 75 new transit riders (25 inbound to the project site and 50 outbound from the site) during the AM peak hour and approximately 145 new transit riders (80 inbound and 65 outbound) during the PM peak hour. However, the project site is currently served by a total of approximately 40 buses per hour, while the future Expo Line facility is expected to provide up to 12 trains per hour per direction (total of 24 trains per hour) during the morning and afternoon/evening peak commute periods. As such, the potential project utilization of these services is expected to increase ridership by an average of only about two or three new riders per bus or train during the morning and afternoon/evening peak commute periods. This level of new rider demand is not expected to result in any significant transit-related impacts to the existing level of bus service in the area, and therefore, no specific transit-related mitigation measures are warranted. Additionally, the future Expo Line Sepulveda/Exposition Station could result in increased bus service to the project site, as Metro and other transit providers provide additional buses and/or add new routes to accommodate the new Expo Line riders. If this occurs, the potential transit ridership impacts described above would be even further reduced.

Traffic Signal Warrant Analysis

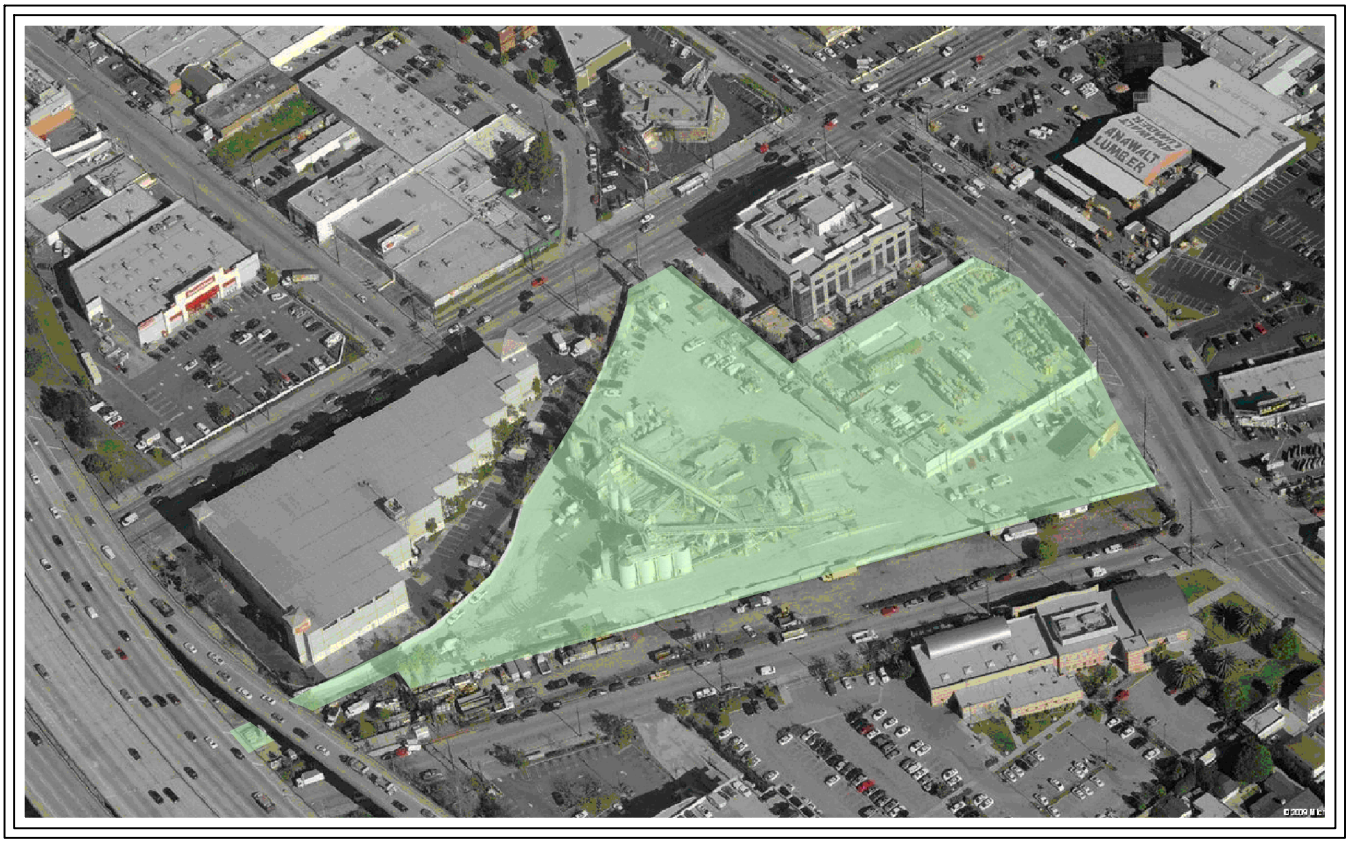
Finally, in addition to the 61 signalized intersections analyzed in this study, two unsignalized intersections, the I-405 Freeway Northbound On-Ramp/Tennessee Avenue and Cotner Avenue, and Sawtelle Boulevard and Exposition Boulevard, were also examined to determine whether the

installation of a new traffic signal would be warranted at either location. The results of the signal warrant analyses for these locations indicated that the intersection of Cotner Avenue and Tennessee Avenue/I-405 Northbound On-Ramp does not meet any of the applicable warrants, and therefore, a new traffic signal at this intersection is not recommended. However, the intersection of Sawtelle Boulevard and Exposition Boulevard currently warrants the installation of a new traffic signal, and as such, it is recommended that a new signal be installed at this location. It should be noted that a new signal at this location is warranted based on the existing traffic conditions in the area, and is not required as a result of the development of the modified project. However, a new traffic signal at this location would improve overall traffic circulation in the area, including access to the project's Exposition Boulevard driveway to and from the west, easing future traffic demands along the already congested Sepulveda Boulevard corridor. Therefore, if acceptable to LADOT, it is recommended that the project contribute fair share funding to the installation of a new traffic signal at Sawtelle Boulevard and Exposition Boulevard.

APPENDICES

TRAFFIC IMPACT ANALYSIS REPORT - APPENDIX VOLUME I

Modified Mixed-Use Development
(638 Apartments, 110,000 Square Foot Retail
and 50,000 Square Foot Supermarket)
at Sepulveda Boulevard and Pico Boulevard
in Los Angeles, California



Prepared for:

Casden West LA
9090 Wilshire Boulevard
Third Floor
Beverly Hills, California 90211

Prepared by:

HIRSCH GREEN
Hirsch/Green Transportation Consulting, Inc.
13333 Ventura Boulevard, #204
Sherman Oaks, California 91423

REGISTERED PROFESSIONAL ENGINEER
RONALD R. HIRSCH
NO. 2318
6-30-2013
TRAFFIC
STATE OF CALIFORNIA

DECEMBER 2012

APPENDICES

TABLE OF CONTENTS

VOLUME I

A – Project General Geographic Trip Distribution Percentages (By Component)

B – Project Intersection Trip Assignment Percentages (By Component)

C – Project Intersection AM and PM Peak Hour Traffic Volumes (By Component)

D – Project Residential TOD and Commercial TDM Trip Reduction
AM and PM Peak Hour Traffic Volumes

E – Critical Movement Analysis Intersection Operations Calculation Worksheets

54 "Original" Study Intersections (from "Revised December 2009" traffic study)

- *Existing (2009) With Modified Project*
- *Existing (2009) With Modified Project Plus Physical Mitigation*

VOLUME II

E – Critical Movement Analysis Intersection Operations Calculation Worksheets (continued)

54 "Original" Study Intersections (from "Revised December 2009" traffic study)

- *Future (2012) With Modified Project*
- *Future (2012) With Modified Project Plus TOD/TDM Trip Reductions Only*
- *Future (2012) With Modified Project Plus Physical Mitigation*

7 Supplemental Study Intersections (from DEIR Analyses)

APPENDIX A
PROJECT GENERAL GEOGRAPHIC TRIP DISTRIBUTION PERCENTAGES
(BY COMPONENT USE)

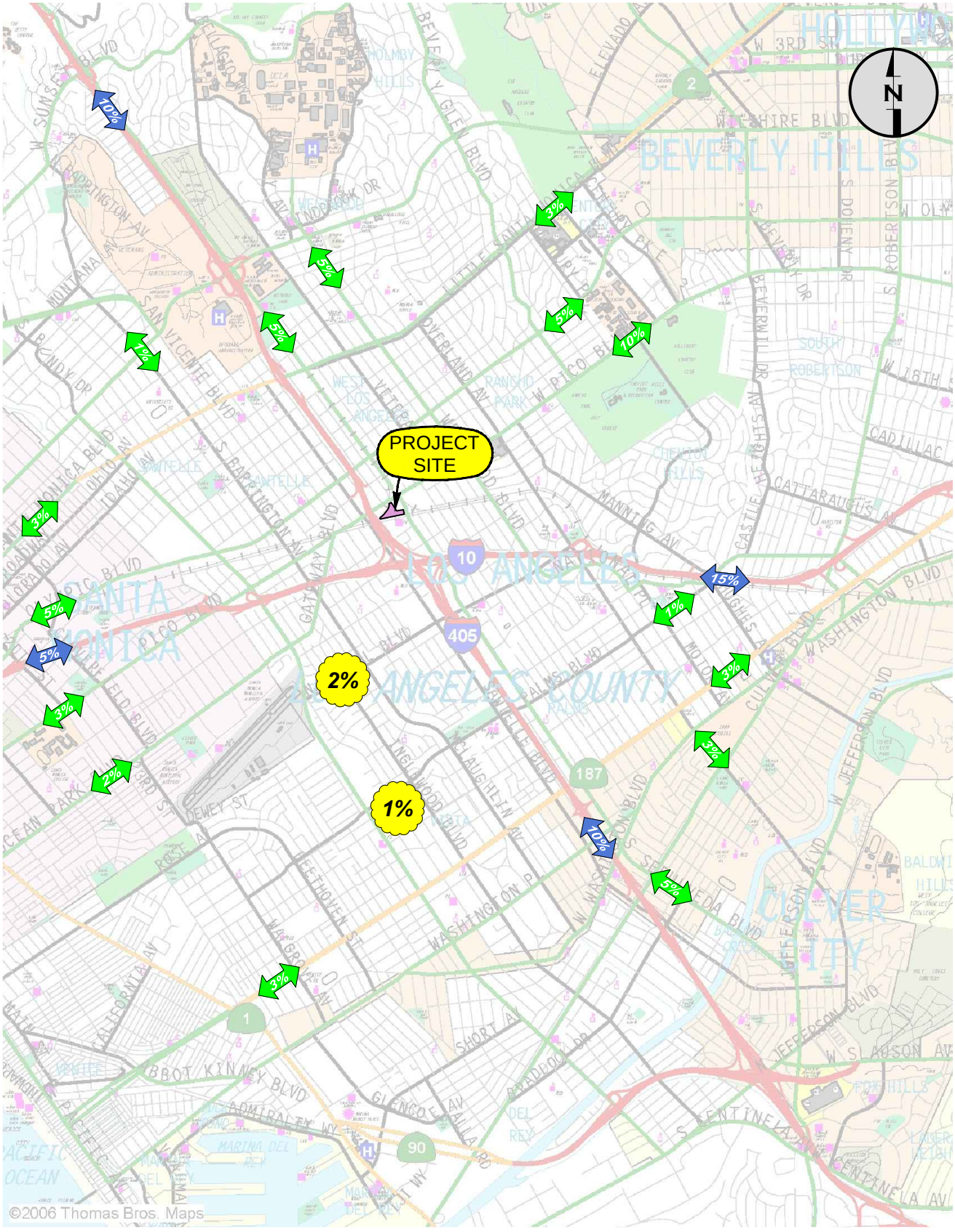


FIGURE A-1

GENERAL GEOGRAPHIC TRIP DISTRIBUTIONS
(RESIDENTIAL)

Hirsch/Green Transportation Consulting, Inc.

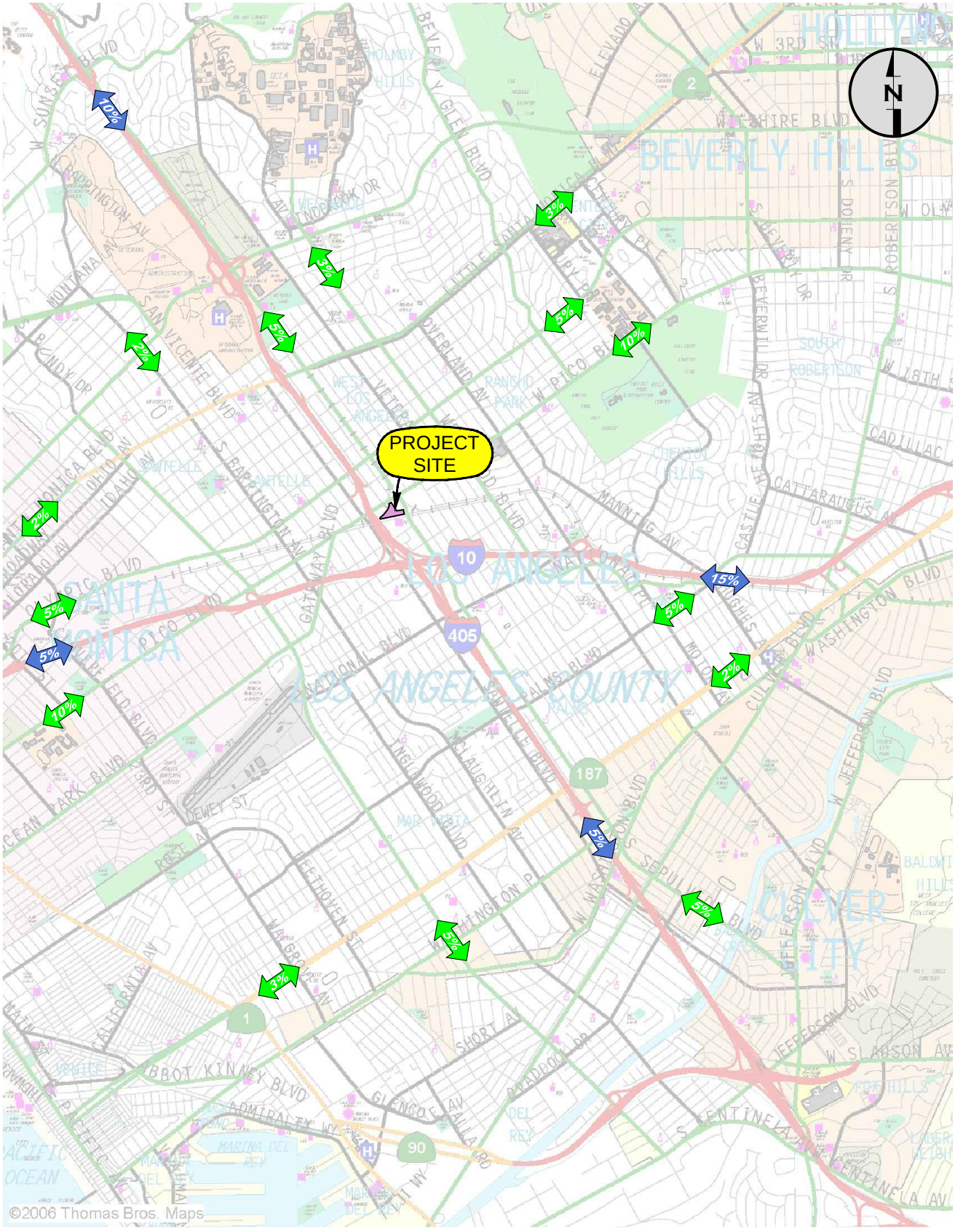


FIGURE A-2

GENERAL GEOGRAPHIC TRIP DISTRIBUTIONS
(TARGET)

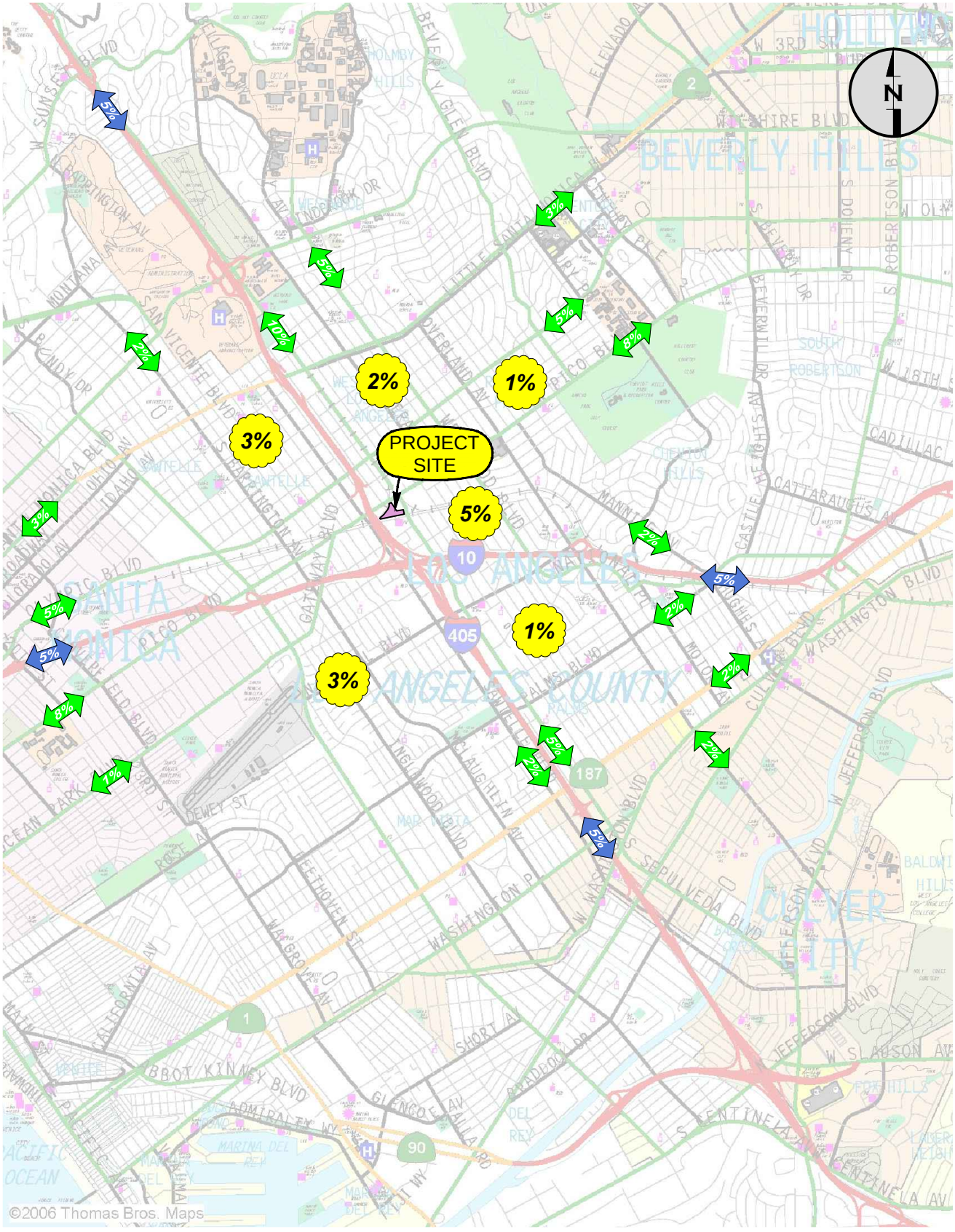


FIGURE A-3

GENERAL GEOGRAPHIC TRIP DISTRIBUTIONS
(MARKET)

Hirsch/Green Transportation Consulting, Inc.

3/2/2009

APPENDIX B
PROJECT INTERSECTION TRIP ASSIGNMENT PERCENTAGES
(BY COMPONENT USE)

PROJECT SITE

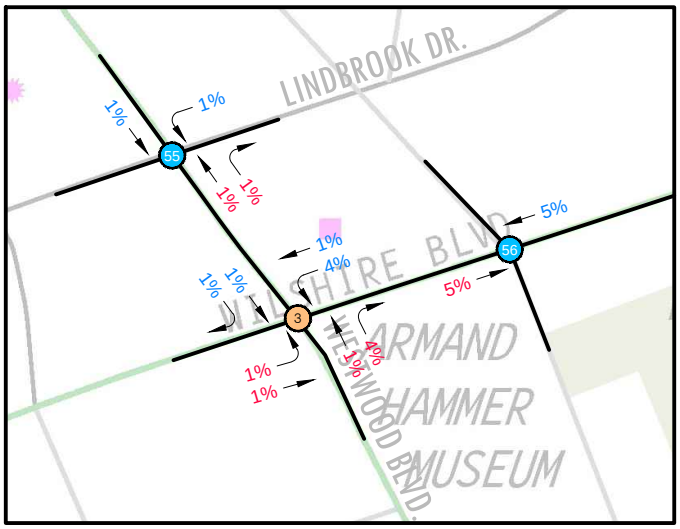
DRIVEWAY PERCENTAGES

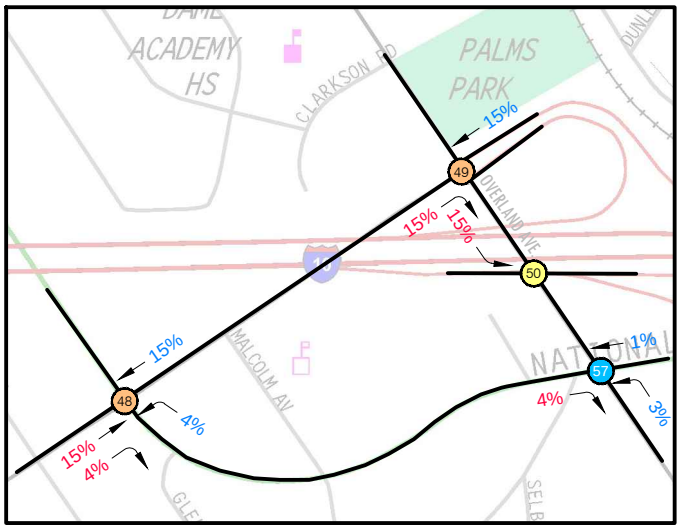
LEGEND
- X - SIGNALIZED INTERSECTION
- X - UNSIGNALIZED INTERSECTION
- XX - INBOUND
- XX - OUTBOUND

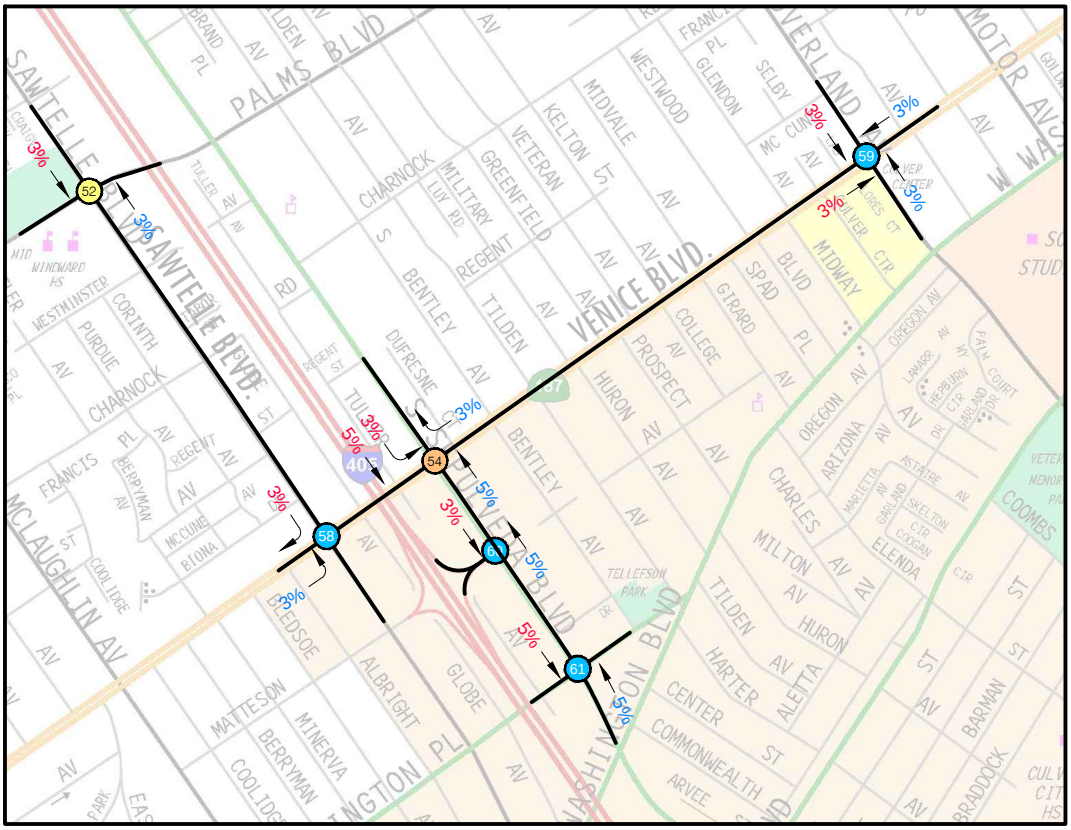
FIGURE B-1(a)

PROJECT TRIP ASSIGNMENT PERCENTAGES
(RESIDENTIAL COMPONENT ONLY)

Hirsch/Green Transportation Consulting, Inc.







LEGEND

- (X) - ORIGINAL STUDY INTERSECTION
- (X) - PREVIOUSLY IDENTIFIED SIGNIFICANT IMPACT
- (X) - ADDITIONAL STUDY INTERSECTION PER EXPANDED STUDY AREA

XX - INBOUND
XX - OUTBOUND

N

B-1(b)

IRSCH GREEN
Hirsch/Green Transportation Consulting, Inc.

PROJECT TRIP ASSIGNMENT PERCENTAGES
ADDED STUDY INTERSECTIONS
(RESIDENTIAL COMPONENT ONLY)

PROJECT TRIP ASSIGNMENT PERCENTAGES
(TARGET/REGIONAL RETAIL COMPONENT ONLY)

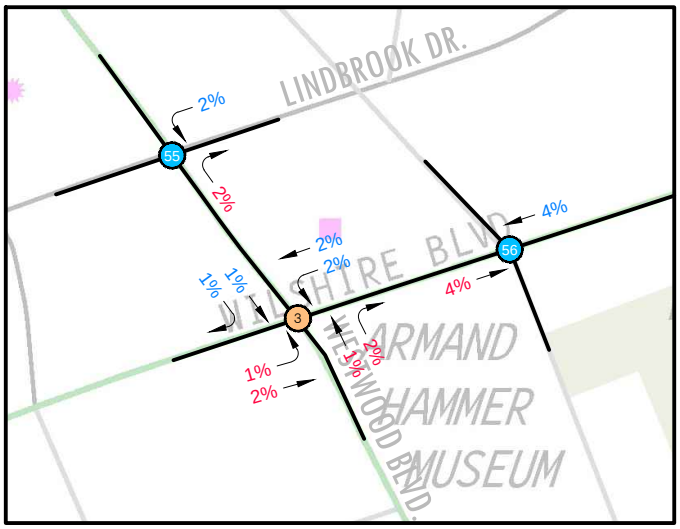
FIGURE B-2(a)

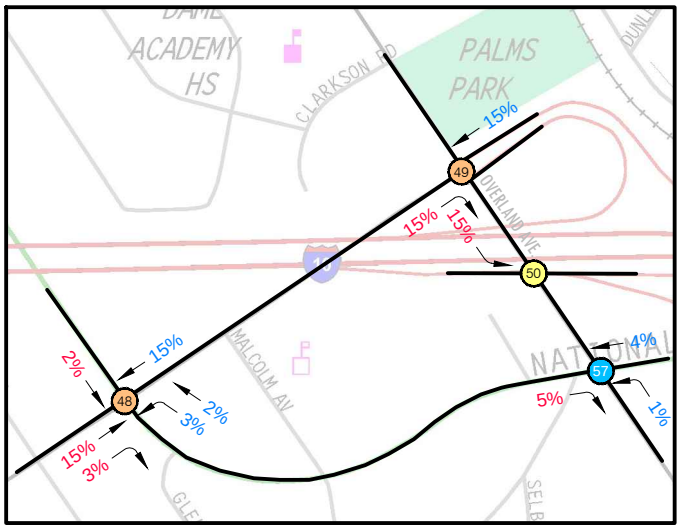
PROJECT SITE

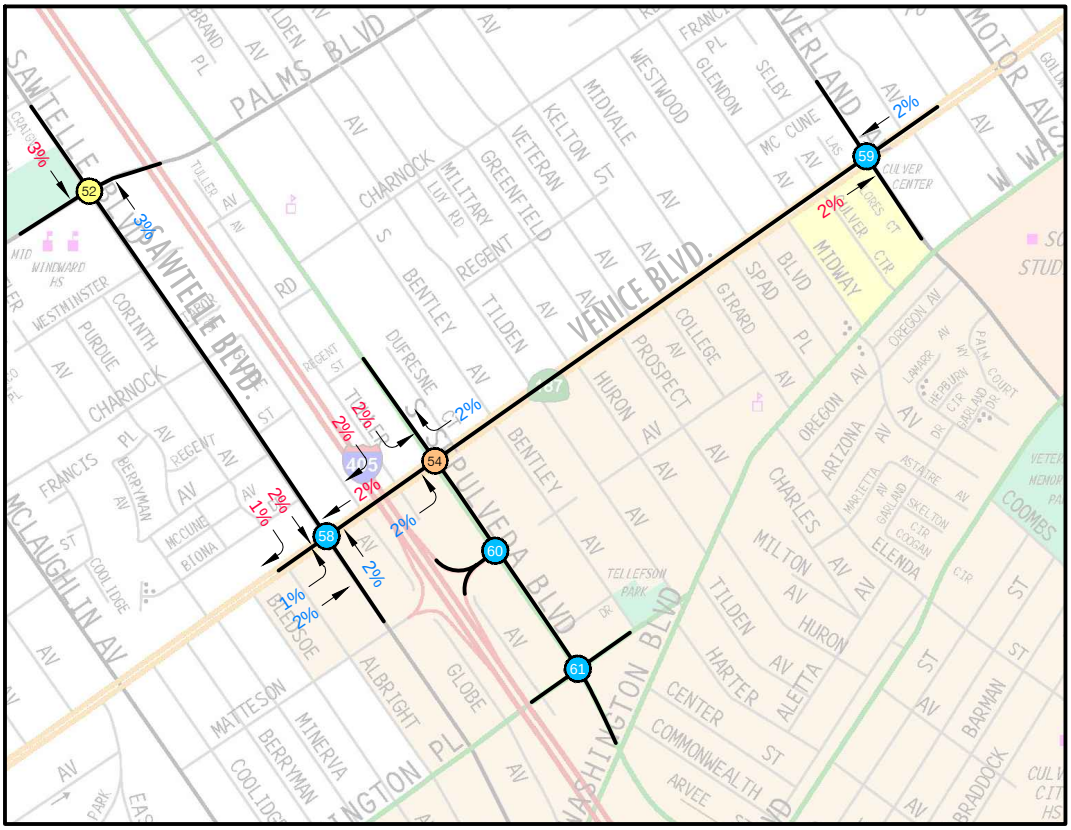
DRIVEWAY PERCENTAGES

LEGEND
- X - SIGNALIZED INTERSECTION
- X - UNSIGNALIZED INTERSECTION
- XX - INBOUND
- XX - OUTBOUND

Hirsch/Green Transportation Consulting, Inc.







LEGEND

- (X) - ORIGINAL STUDY INTERSECTION
- (X) - PREVIOUSLY IDENTIFIED SIGNIFICANT IMPACT
- (X) - ADDITIONAL STUDY INTERSECTION PER EXPANDED STUDY AREA

XX - INBOUND
XX - OUTBOUND

N

FIGURE B-2(b)

IRSCH GREEN
Hirsch/Green Transportation Consulting, Inc.

PROJECT TRIP ASSIGNMENT PERCENTAGES
ADDED STUDY INTERSECTIONS
(TARGET/REGIONAL RETAIL COMPONENT ONLY)

FIGURE B-3(a)

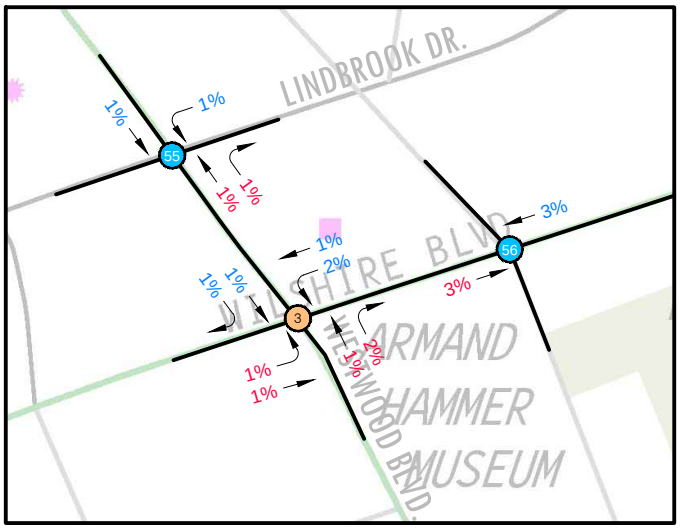
PROJECT TRIP ASSIGNMENT PERCENTAGES
(MARKET/LOCAL SERVING RETAIL COMPONENT ONLY)

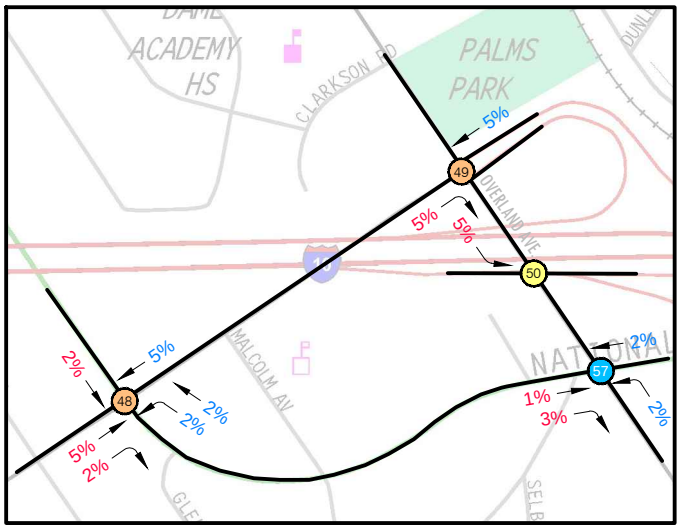
PROJECT SITE

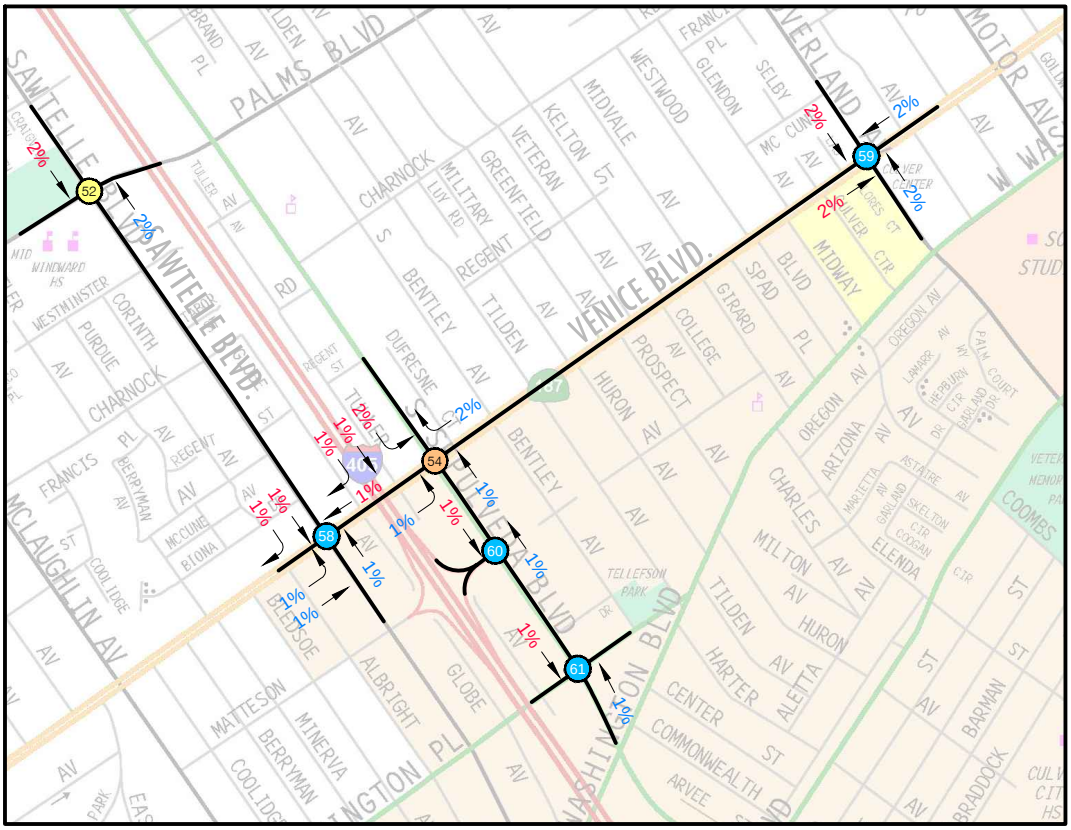
DRIVEWAY PERCENTAGES

LEGEND
- X - SIGNALIZED INTERSECTION
- X - UNSIGNALIZED INTERSECTION
- XX - INBOUND
- XX - OUTBOUND

Hirsch/Green Transportation Consulting, Inc.







LEGEND

- (X) - ORIGINAL STUDY INTERSECTION
- (X) - PREVIOUSLY IDENTIFIED SIGNIFICANT IMPACT
- (X) - ADDITIONAL STUDY INTERSECTION PER EXPANDED STUDY AREA

XX - INBOUND
XX - OUTBOUND

N

FIGURE B-3(b)

IRSCH REEN
Hirsch/Green Transportation Consulting, Inc.

PROJECT TRIP ASSIGNMENT PERCENTAGES
ADDED STUDY INTERSECTIONS
(MARKET/LOCAL SERVING RETAIL COMPONENT ONLY)

APPENDIX C

PROJECT INTERSECTION AM AND PM PEAK HOUR TRAFFIC VOLUMES

(BY COMPONENT USE)

AM Peak Hour

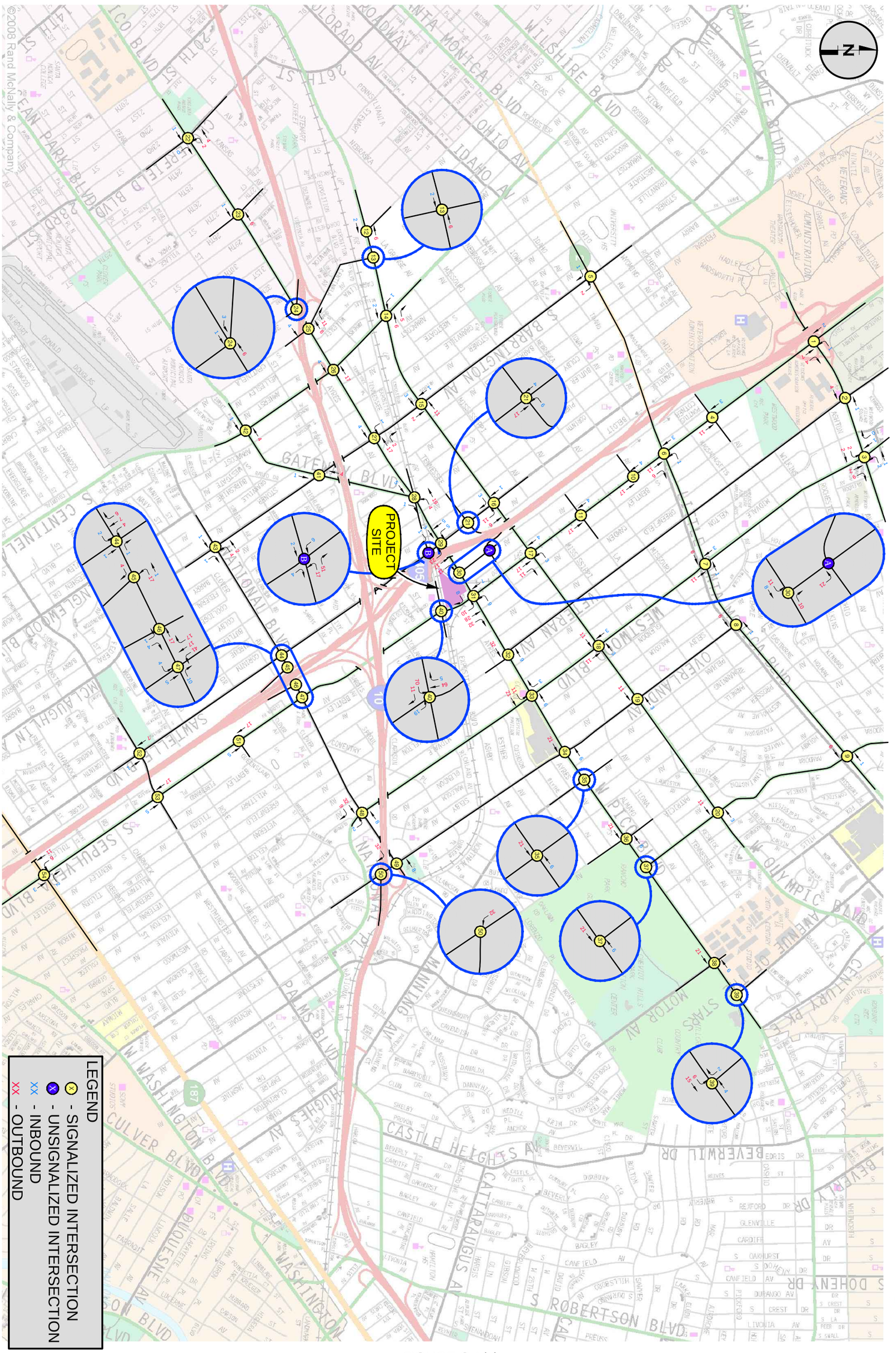


FIGURE C-1(a)

PROJECT TRAFFIC VOLUMES
(RESIDENTIAL COMPONENT ONLY)
AM PEAK HOUR

HIRSCH GREEN
Hirsch/Green Transportation Consulting, Inc.

LEGEND

- (X) - ORIGINAL STUDY INTERSECTION
- (X) - PREVIOUSLY IDENTIFIED SIGNIFICANT IMPACT
- (X) - ADDITIONAL STUDY INTERSECTION PER EXPANDED STUDY AREA

XX - INBOUND
XX - OUTBOUND

N

FIGURE C-1(b)

IRSCH REEN
Hirsch/Green Transportation Consulting, Inc.

PROJECT TRAFFIC VOLUMES
ADDED STUDY INTERSECTIONS
(RESIDENTIAL COMPONENT ONLY)
AM PEAK HOUR

12/4/2012

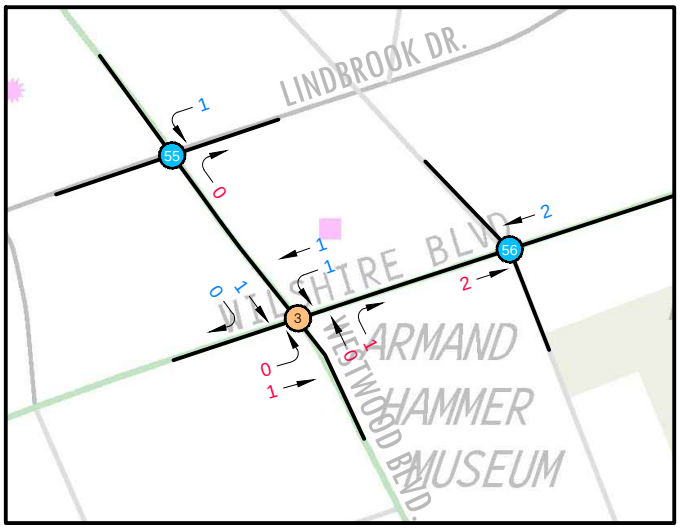
FIGURE C-2(a)

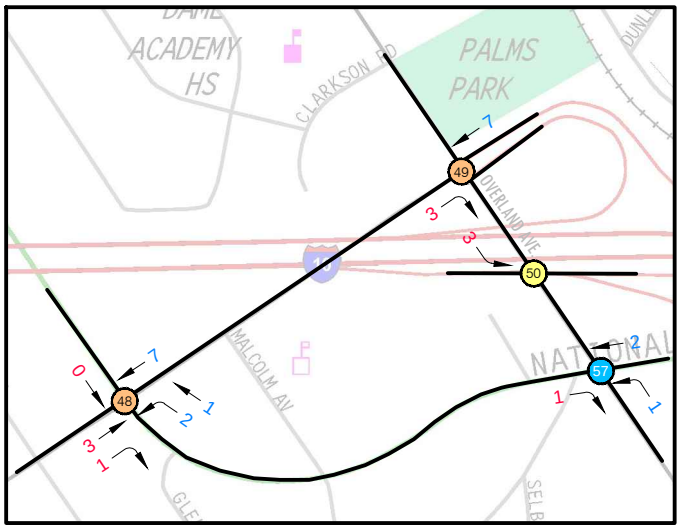
PROJECT TRAFFIC VOLUMES
(TARGET/REGIONAL COMPONENT ONLY)
AM PEAK HOUR

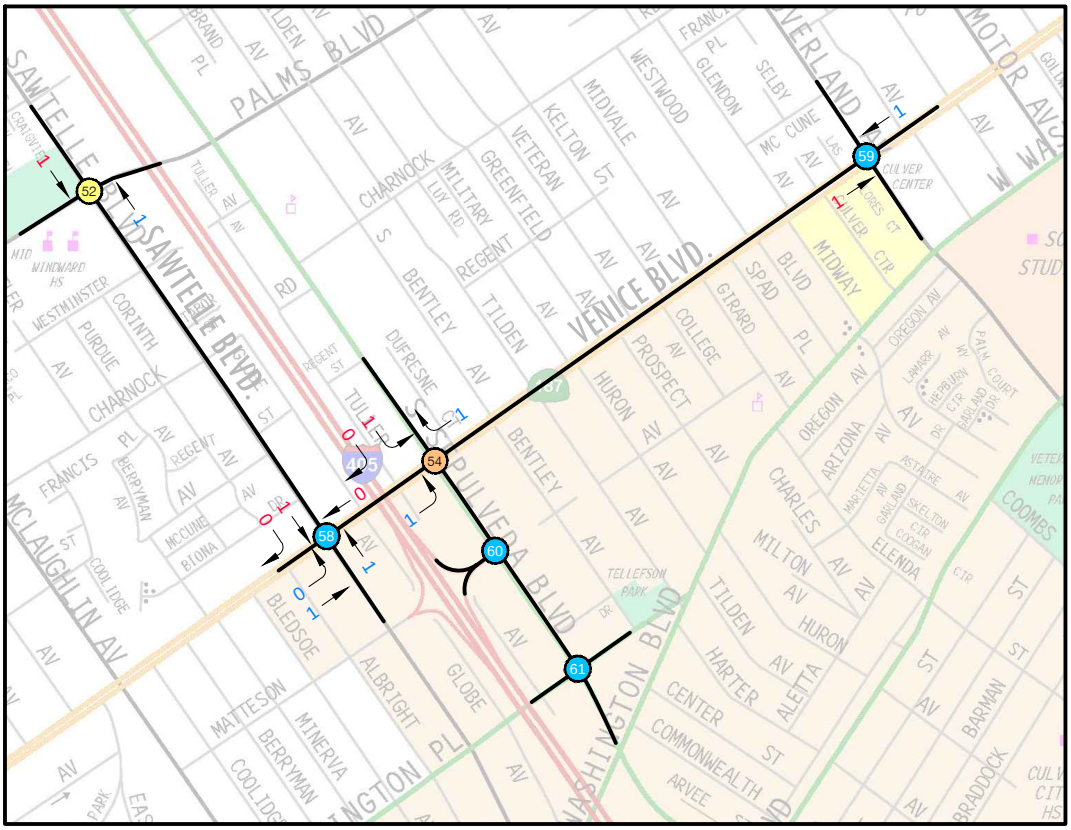
PROJECT SITE

LEGEND
- X - SIGNALIZED INTERSECTION
- X - UNSIGNALIZED INTERSECTION
- XX - INBOUND
- XX - OUTBOUND

Hirsch/Green Transportation Consulting, Inc.







LEGEND

- (X) - ORIGINAL STUDY INTERSECTION
- (X) - PREVIOUSLY IDENTIFIED SIGNIFICANT IMPACT
- (X) - ADDITIONAL STUDY INTERSECTION PER EXPANDED STUDY AREA

XX - INBOUND
XX - OUTBOUND

N

FIGURE C-2(b)

PROJECT TRAFFIC VOLUMES
ADDED STUDY INTERSECTIONS
(TARGET/REGIONAL RETAIL COMPONENT ONLY)
AM PEAK HOUR

IRSCH GREEN
Hirsch/Green Transportation Consulting, Inc.

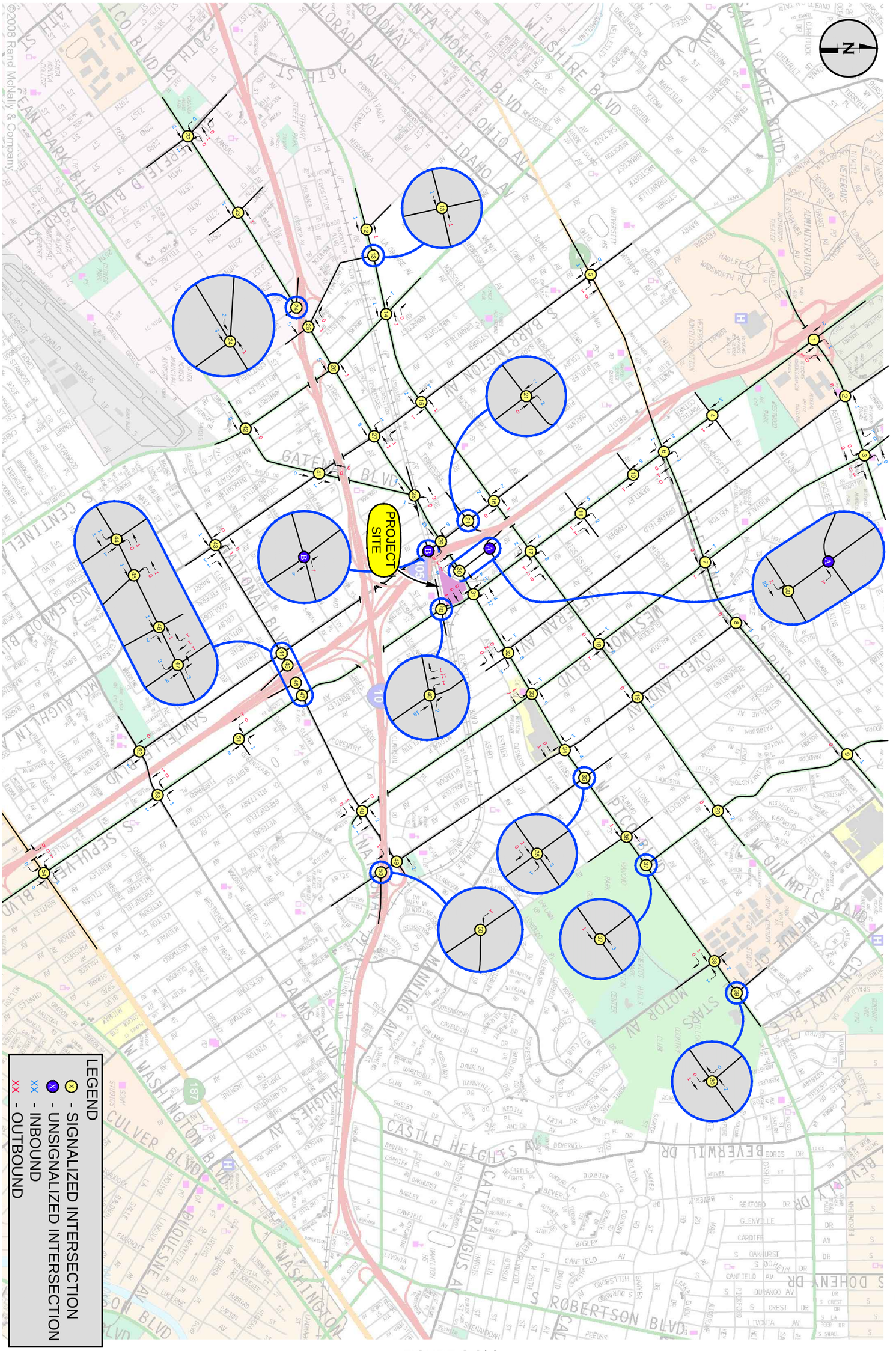
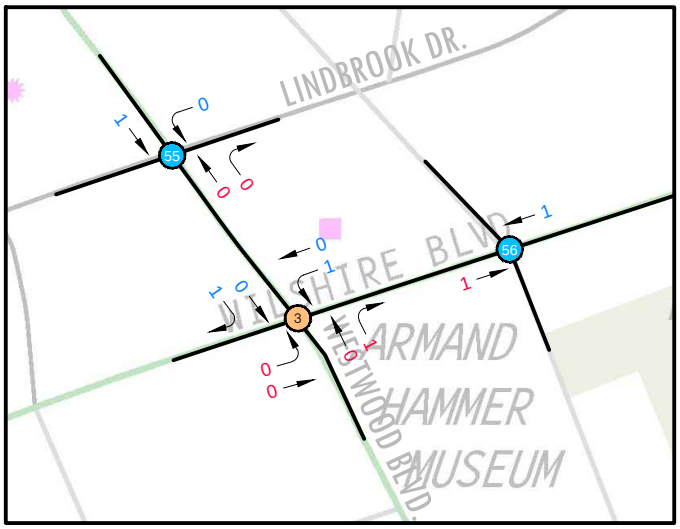
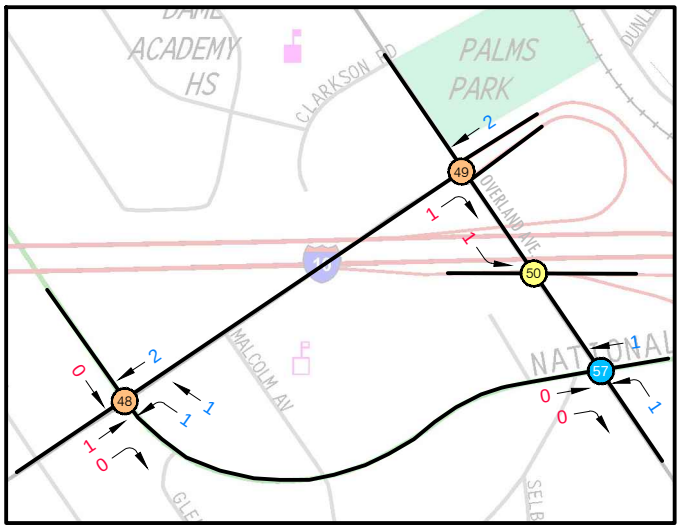


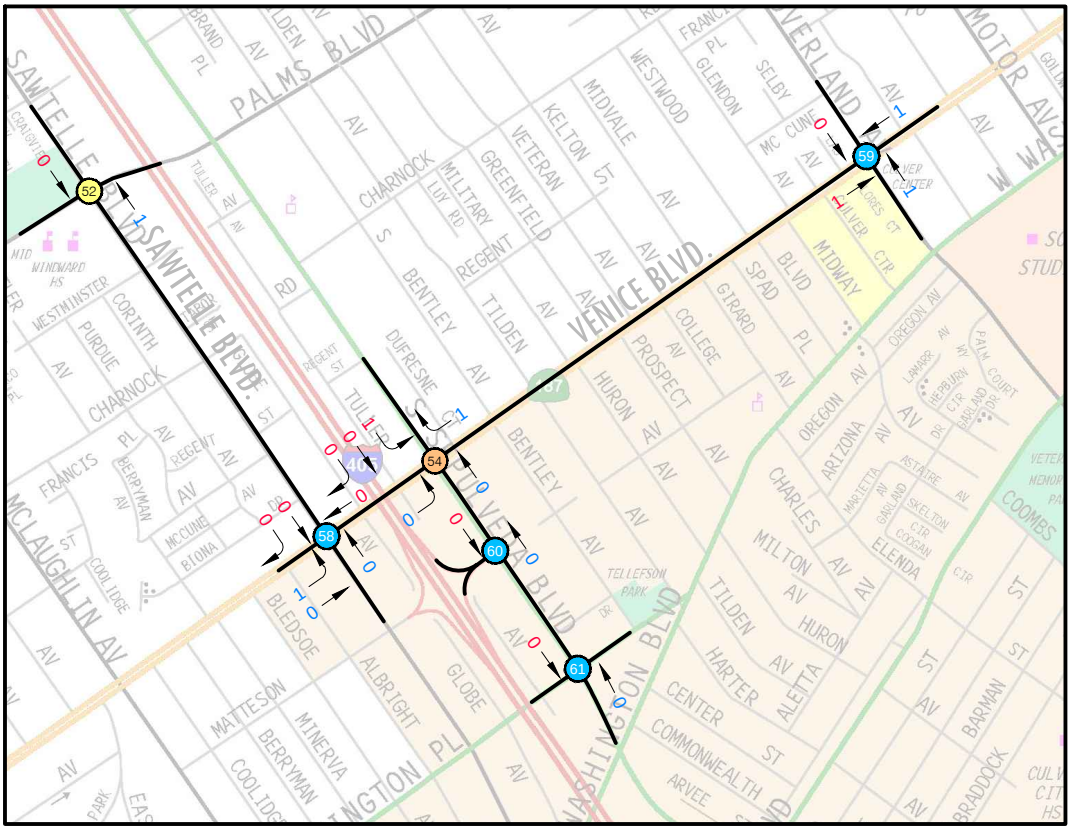
FIGURE C-3(a)

PROJECT TRAFFIC VOLUMES
(MARKET/LOCAL SERVING RETAIL COMPONENT ONLY)
AM PEAK HOUR

HIRSCH GREEN
Hirsch/Green Transportation Consulting, Inc.







LEGEND

- X - ORIGINAL STUDY INTERSECTION
- X - PREVIOUSLY IDENTIFIED SIGNIFICANT IMPACT
- X - ADDITIONAL STUDY INTERSECTION PER EXPANDED STUDY AREA

XX - INBOUND
XX - OUTBOUND

N

FIGURE C-3(b)

12/4/2012

HIRSCH GREEN
Hirsch/Green Transportation Consulting, Inc.

PROJECT TRAFFIC VOLUMES
ADDED STUDY INTERSECTIONS
(MARKET/LOCAL SERVING RETAIL COMPONENT ONLY)
AM PEAK HOUR

PM Peak Hour

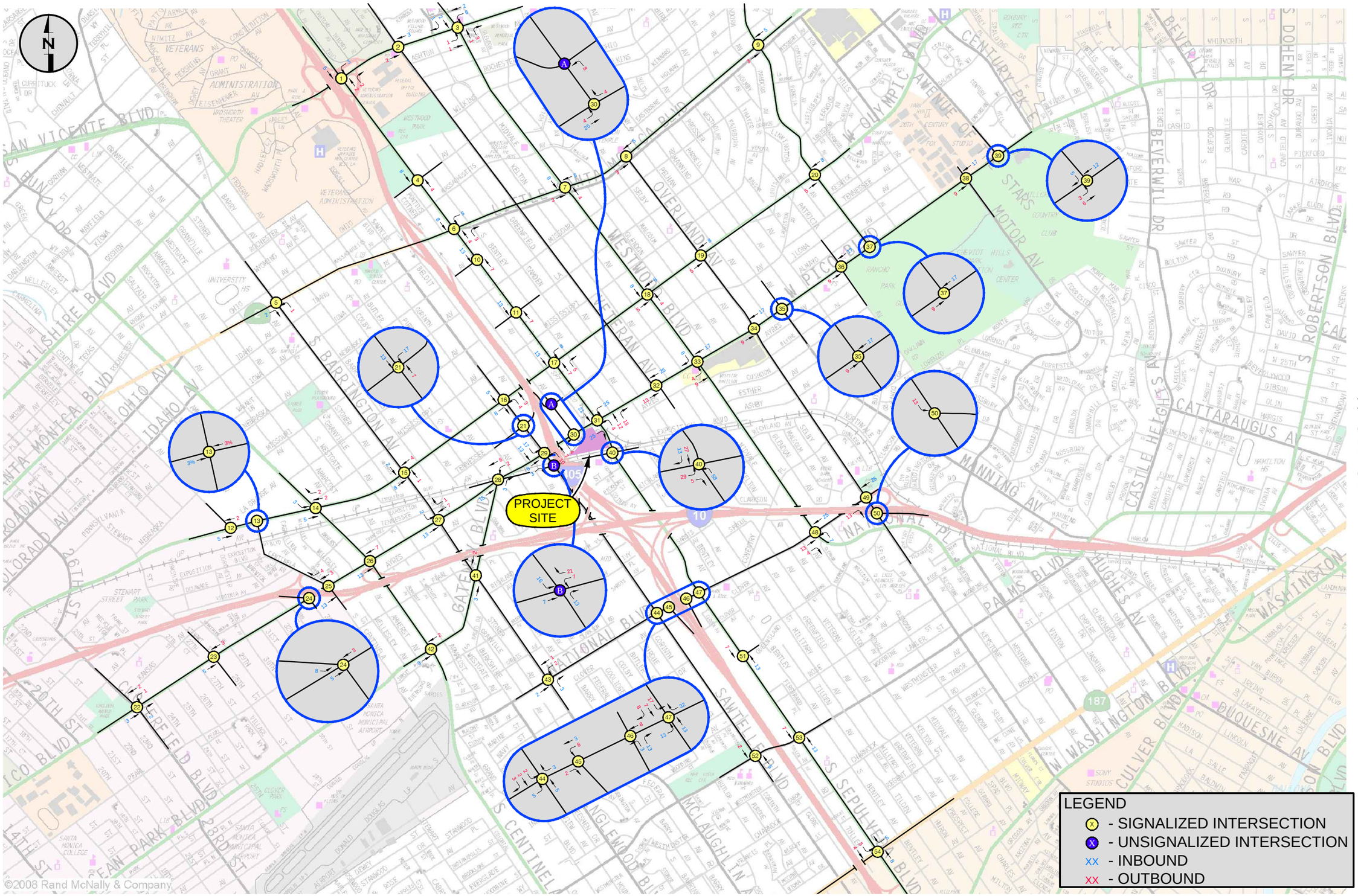
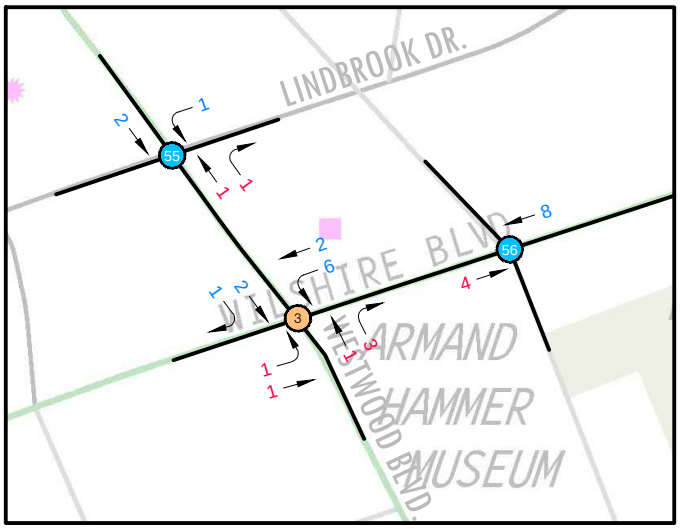
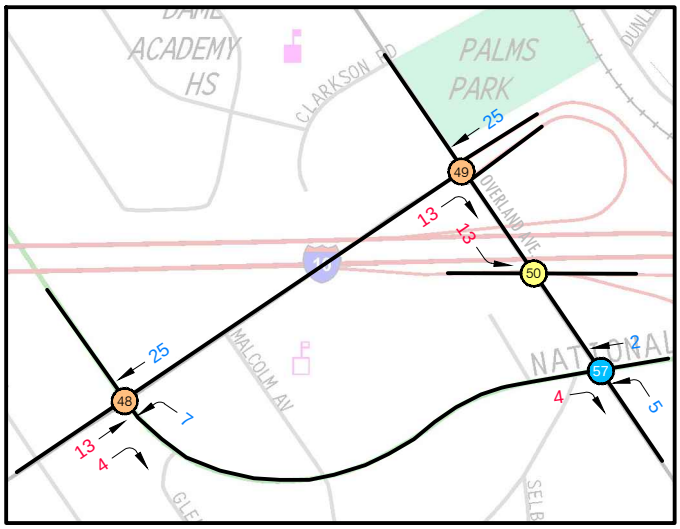


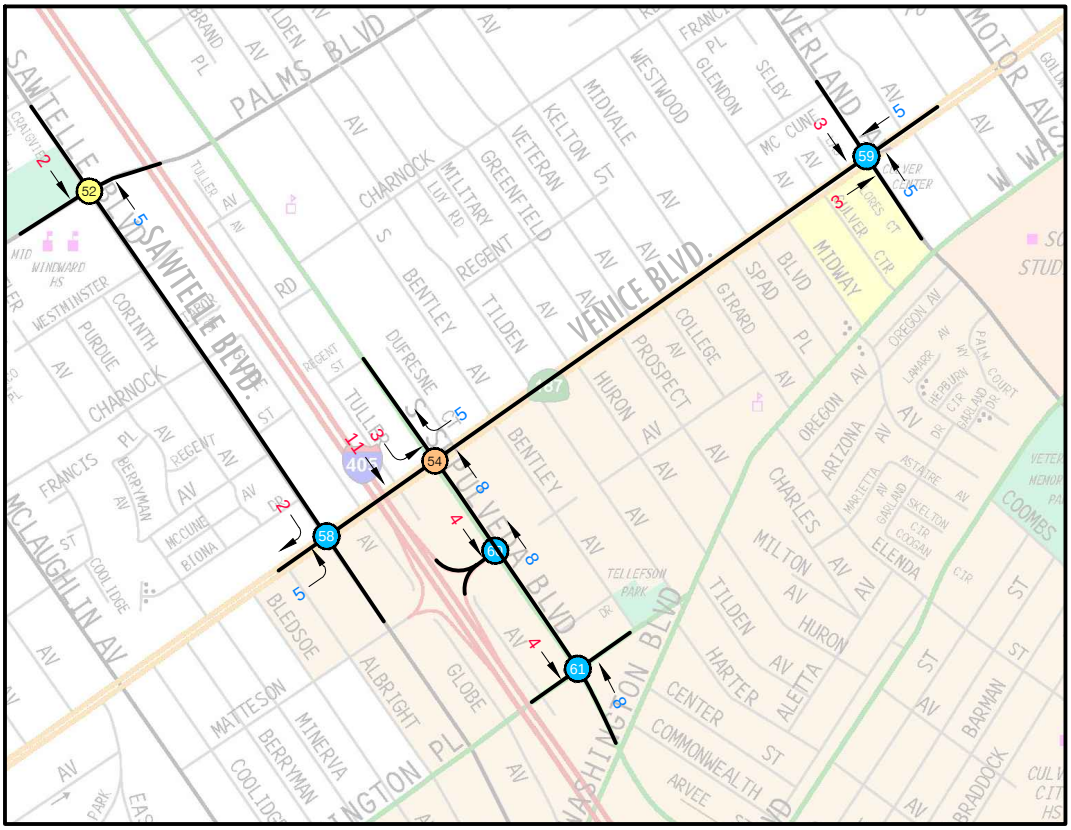
FIGURE C-4(a)

PROJECT TRAFFIC VOLUMES
(RESIDENTIAL COMPONENT ONLY)
PM PEAK HOUR

IRSCH REEN
Hirsch/Green Transportation Consulting, Inc.







LEGEND

- (X) - ORIGINAL STUDY INTERSECTION
- (X) - PREVIOUSLY IDENTIFIED SIGNIFICANT IMPACT
- (X) - ADDITIONAL STUDY INTERSECTION PER EXPANDED STUDY AREA

XX - INBOUND
XX - OUTBOUND

N

FIGURE C-4(b)

HIRSCH GREEN
Hirsch/Green Transportation Consulting, Inc.

PROJECT TRAFFIC VOLUMES
ADDED STUDY INTERSECTIONS
(RESIDENTIAL COMPONENT ONLY)
PM PEAK HOUR

12/4/2012

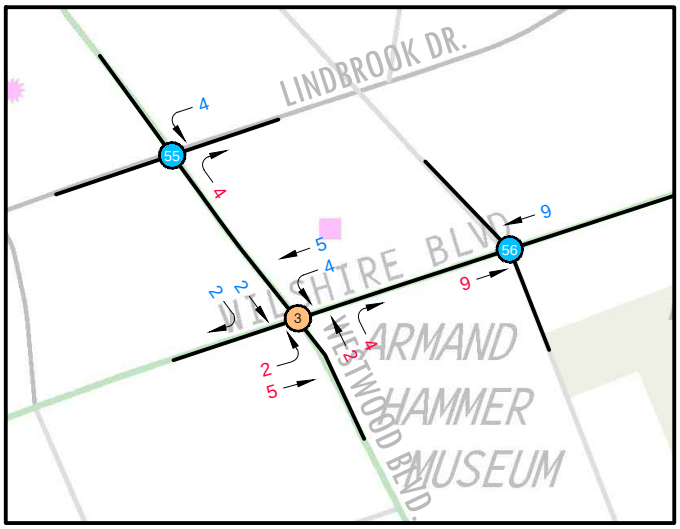
FIGURE C-5(a)

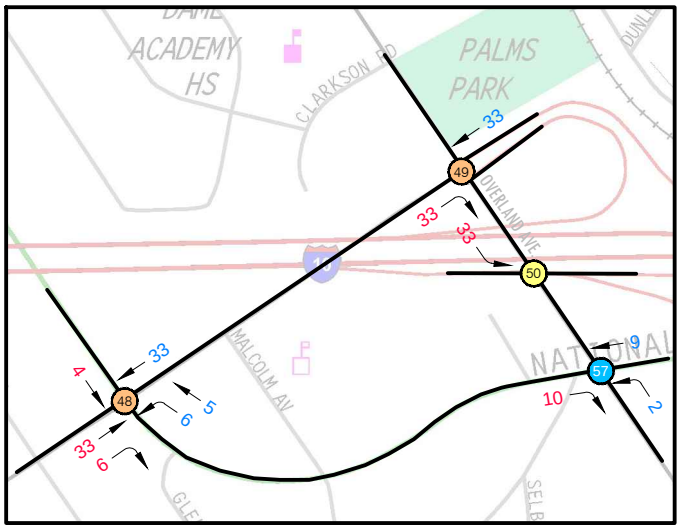
PROJECT TRAFFIC VOLUMES
(TARGET/REGIONAL RETAIL COMPONENT ONLY)
PM PEAK HOUR

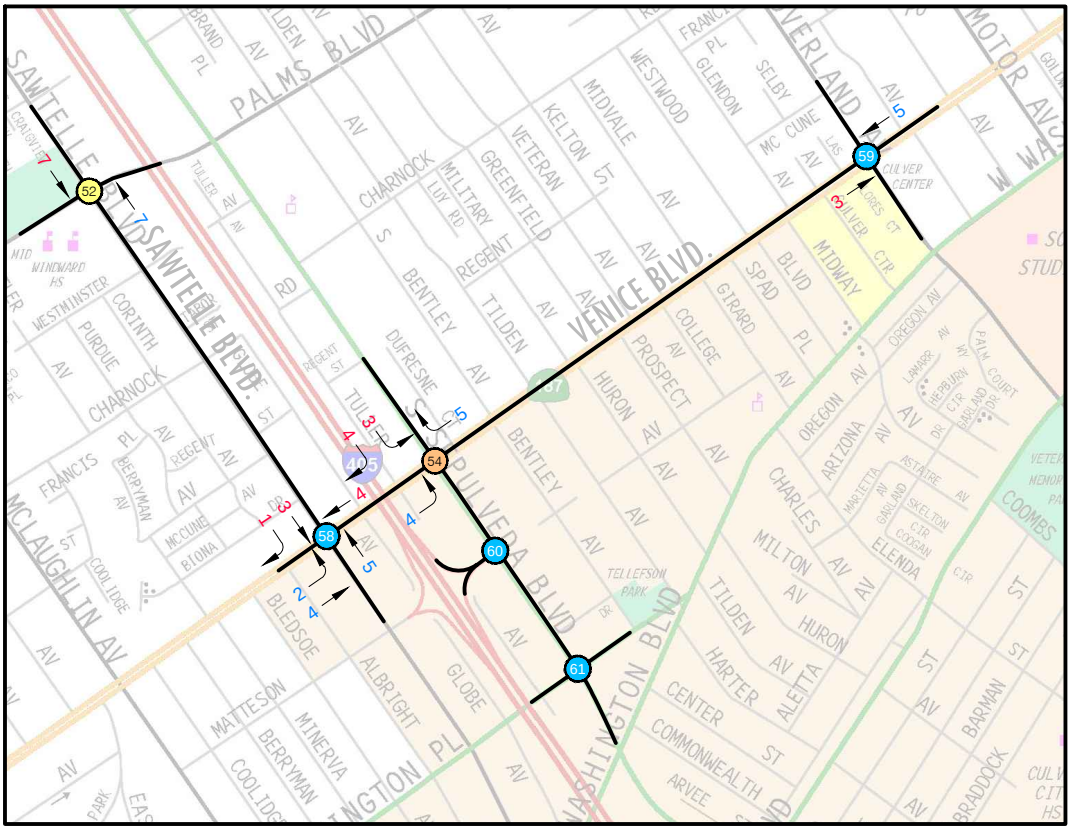
PROJECT SITE

LEGEND
- X - SIGNALIZED INTERSECTION
- X - UNSIGNALIZED INTERSECTION
- XX - INBOUND
- XX - OUTBOUND

Hirsch/Green Transportation Consulting, Inc.







LEGEND

- (X) - ORIGINAL STUDY INTERSECTION
- (X) - PREVIOUSLY IDENTIFIED SIGNIFICANT IMPACT
- (X) - ADDITIONAL STUDY INTERSECTION PER EXPANDED STUDY AREA

XX - INBOUND
XX - OUTBOUND

N

FIGURE C-5(b)

12/4/2012

IRSCH GREEN
Hirsch/Green Transportation Consulting, Inc.

PROJECT TRAFFIC VOLUMES
ADDED STUDY INTERSECTIONS
(TARGET/REGIONAL RETAIL COMPONENT ONLY)
PM PEAK HOUR

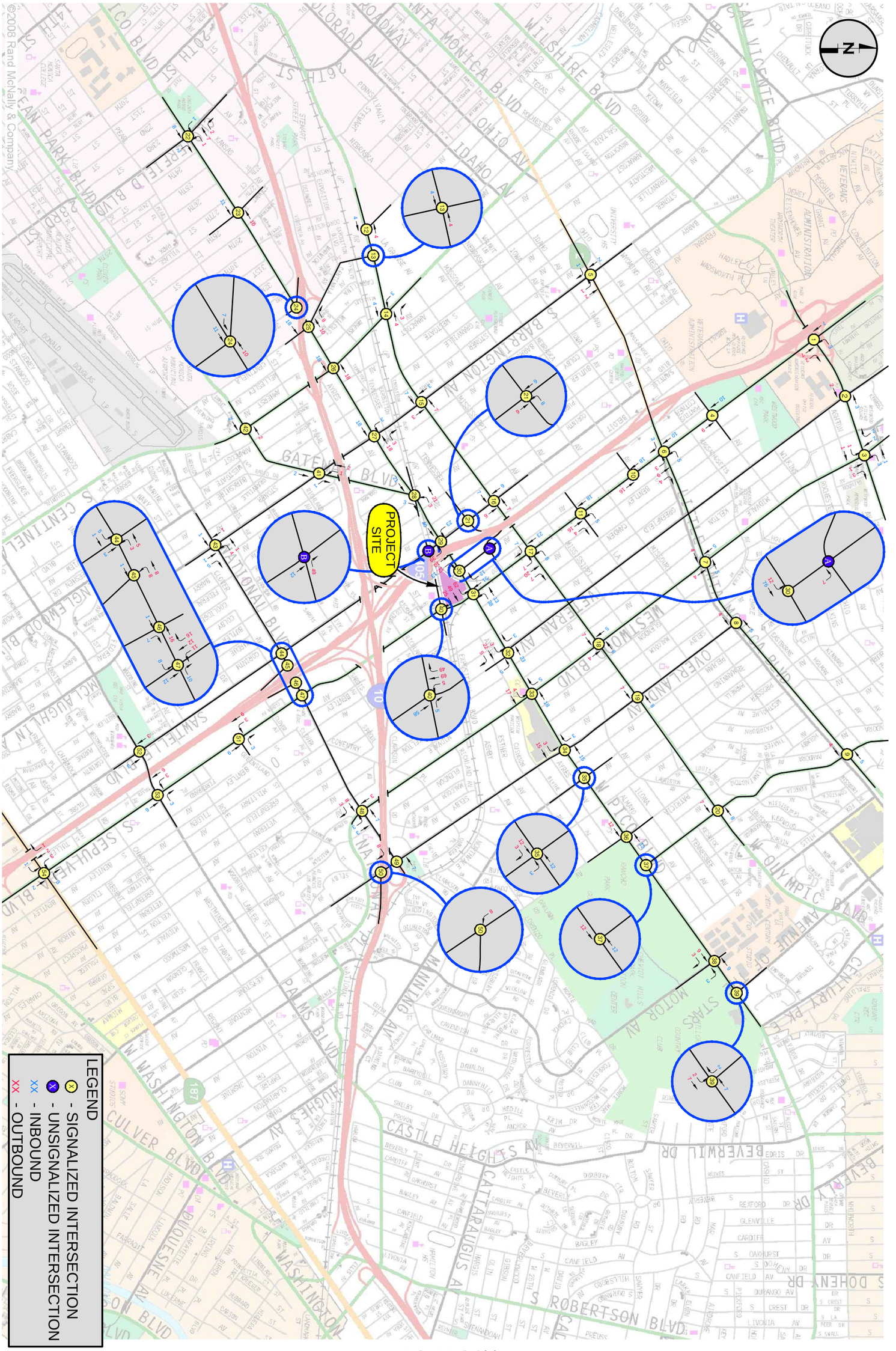
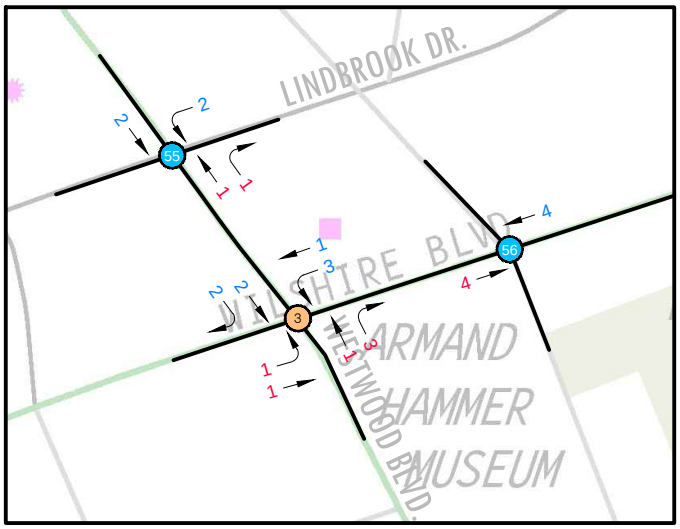
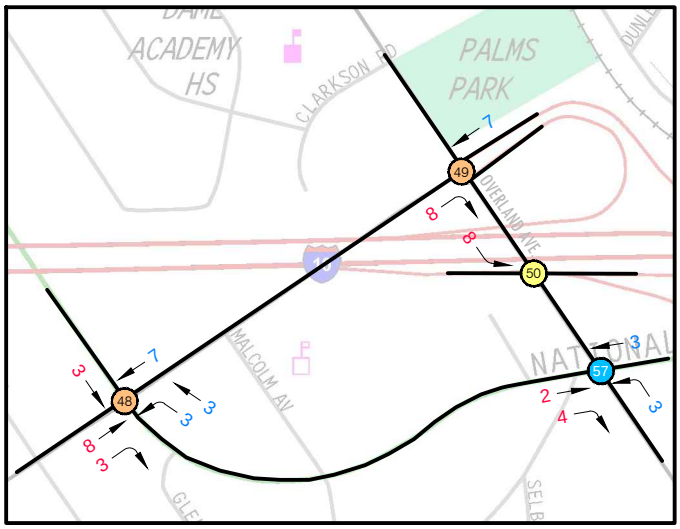


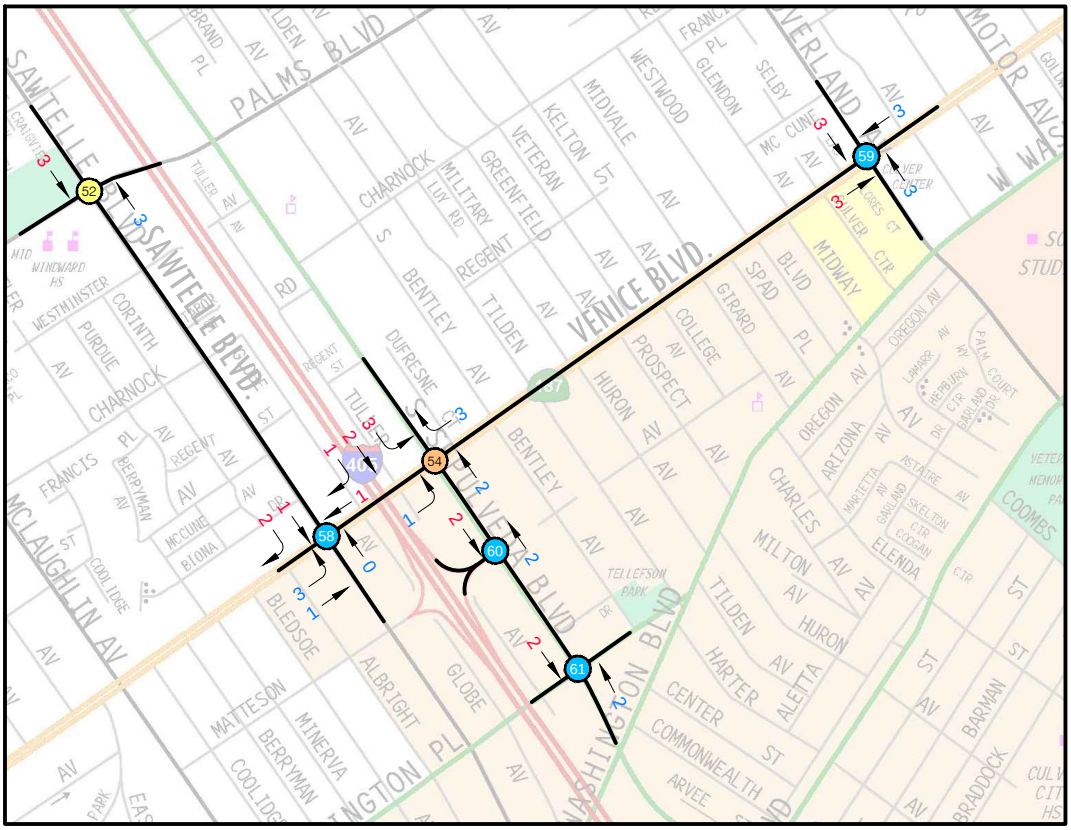
FIGURE C-6(a)

PROJECT TRAFFIC VOLUMES
(MARKET/LOCAL SERVING RETAIL COMPONENT ONLY)
PM PEAK HOUR

HIRSCH GREEN
Hirsch/Green Transportation Consulting, Inc.







LEGEND

- (X) - ORIGINAL STUDY INTERSECTION
- (X) - PREVIOUSLY IDENTIFIED SIGNIFICANT IMPACT
- (X) - ADDITIONAL STUDY INTERSECTION PER EXPANDED STUDY AREA

XX - INBOUND
XX - OUTBOUND

N

FIGURE C-6(b)

PROJECT TRAFFIC VOLUMES
ADDED STUDY INTERSECTIONS
(MARKET/LOCAL SERVING RETAIL COMPONENT ONLY)
PM PEAK HOUR

IRSCH GREEN
Hirsch/Green Transportation Consulting, Inc.

APPENDIX D

PROJECT RESIDENTIAL TOD AND COMMERCIAL TDM TRIP REDUCTION

AM AND PM PEAK HOUR TRAFFIC VOLUMES

AM Peak Hour

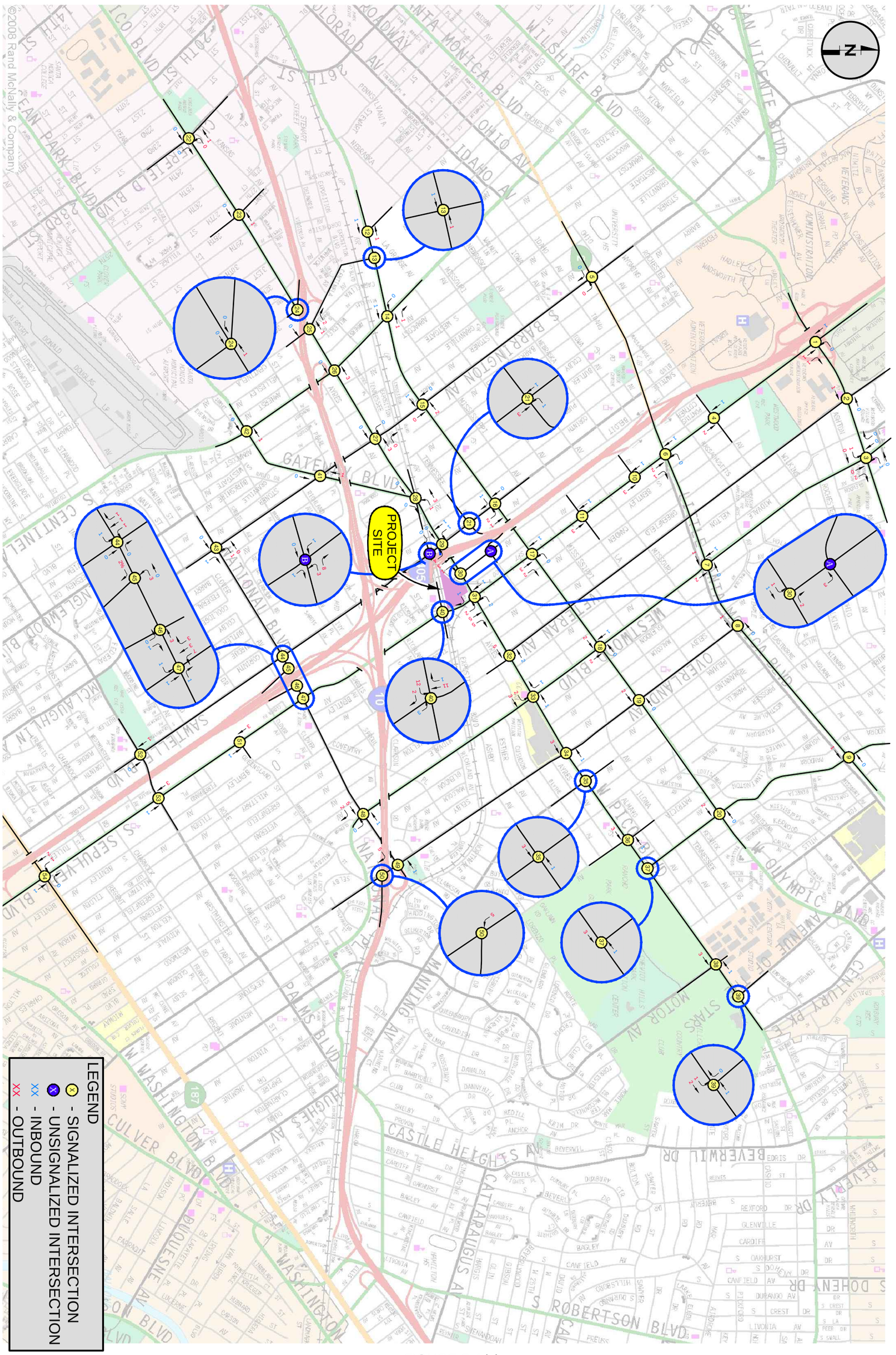
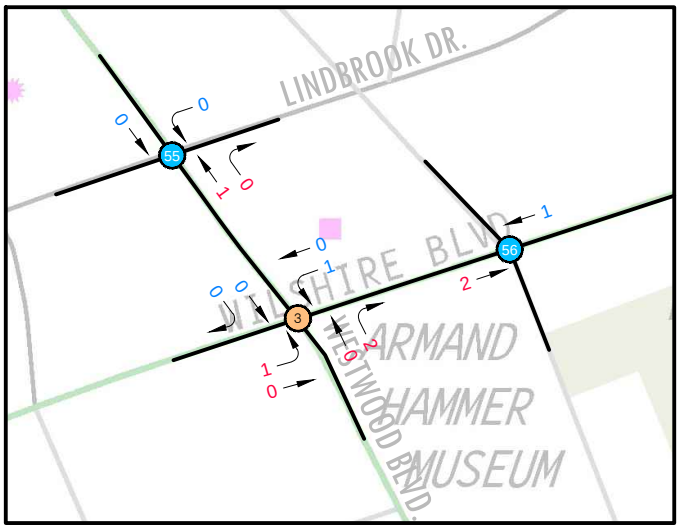
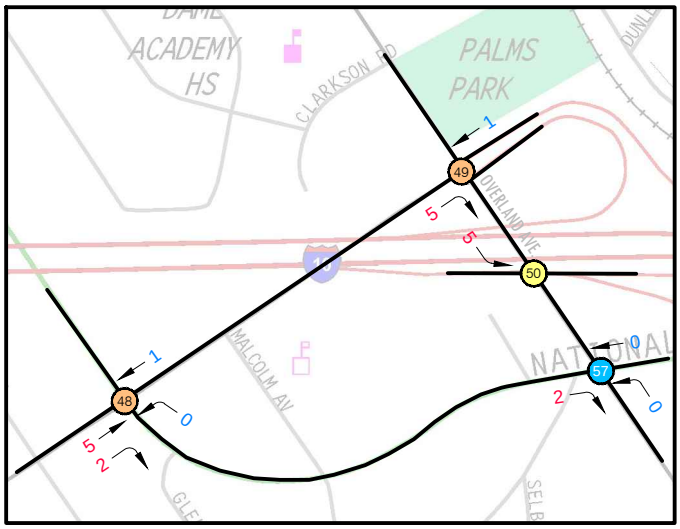


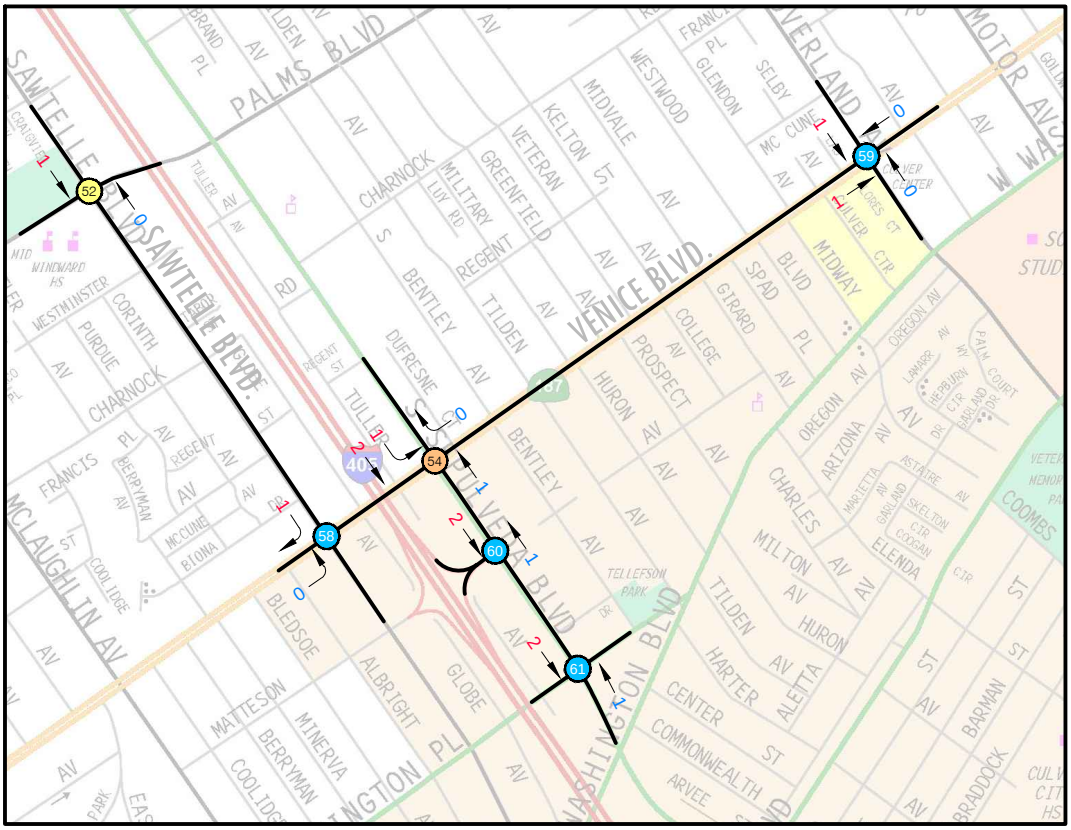
FIGURE D-1(a)

PROJECT TRIP REDUCTIONS (TDM)
(RESIDENTIAL COMPONENT ONLY)
AM PEAK HOUR

HIRSCH GREEN
Hirsch/Green Transportation Consulting, Inc.







LEGEND

- (X) - ORIGINAL STUDY INTERSECTION
- (X) - PREVIOUSLY IDENTIFIED SIGNIFICANT IMPACT
- (X) - ADDITIONAL STUDY INTERSECTION PER EXPANDED STUDY AREA

XX - INBOUND
XX - OUTBOUND

N

D-1(b)

12/4/2012

HIRSCH GREEN
Hirsch/Green Transportation Consulting, Inc.

PROJECT TRIP REDUCTIONS (TDM)
ADDED STUDY INTERSECTIONS
(RESIDENTIAL COMPONENT ONLY)
AM PEAK HOUR

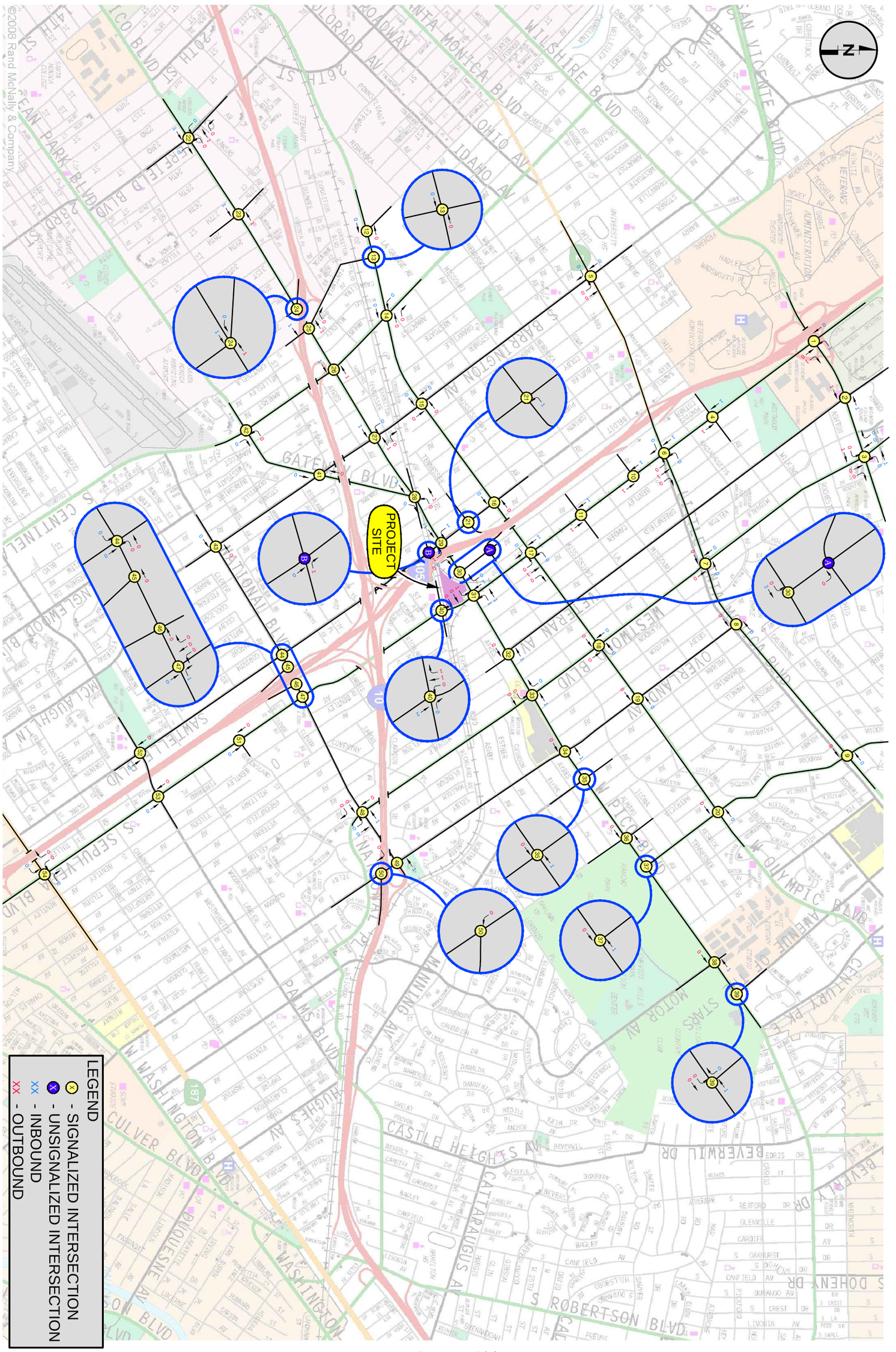
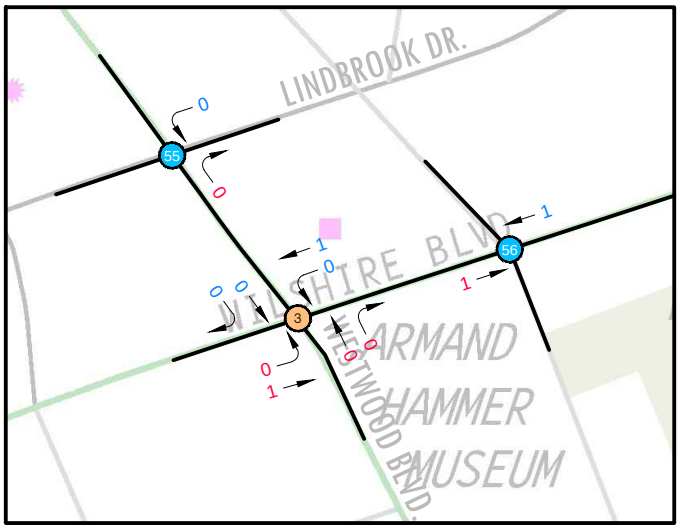
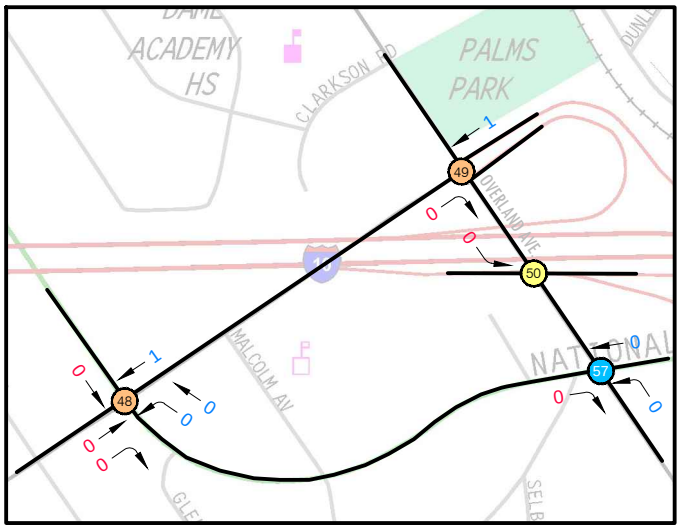


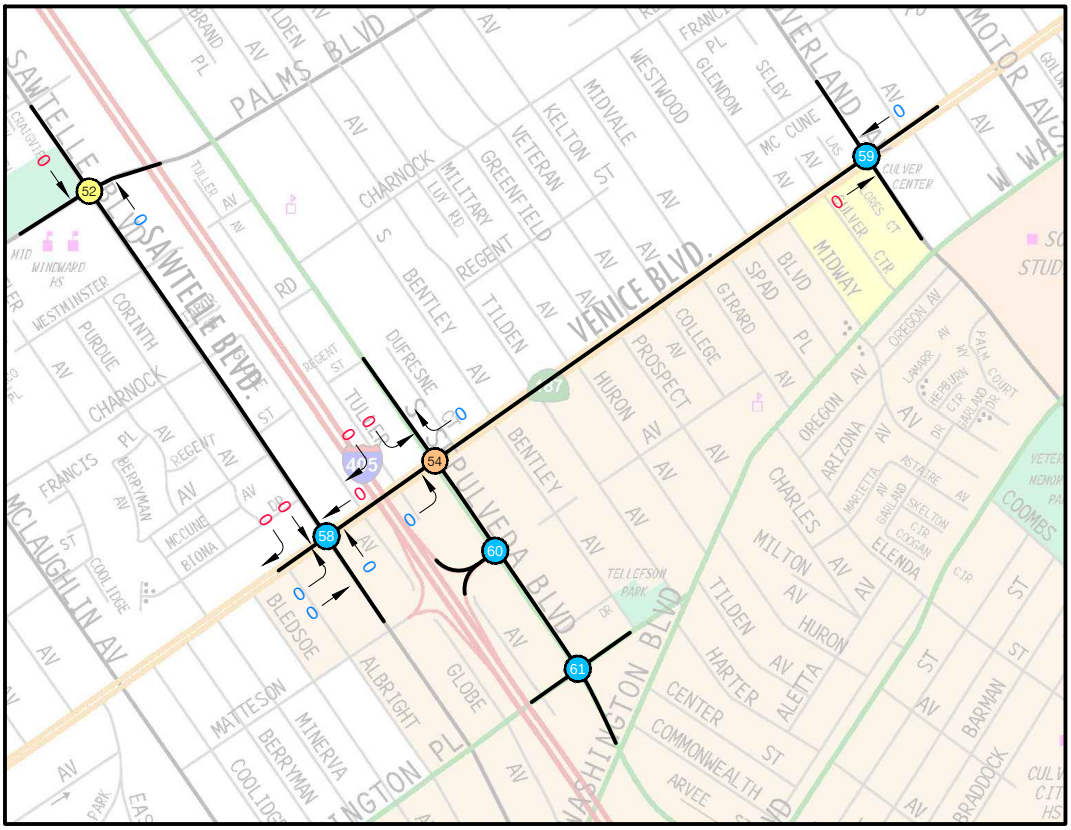
FIGURE D-2(a)

PROJECT TRIP REDUCTIONS (TDM)
(TARGET/REGIONAL RETAIL COMPONENT ONLY)
AM PEAK HOUR

HIRSCH GREEN
Hirsch/Green Transportation Consulting, Inc.







LEGEND

- (X) - ORIGINAL STUDY INTERSECTION
- (X) - PREVIOUSLY IDENTIFIED SIGNIFICANT IMPACT
- (X) - ADDITIONAL STUDY INTERSECTION PER EXPANDED STUDY AREA

XX - INBOUND
XX - OUTBOUND

N

FIGURE D-2(b)

HIRSCH GREEN
Hirsch/Green Transportation Consulting, Inc.

PROJECT TRIP REDUCTIONS (TDM)
ADDED STUDY INTERSECTIONS
(TARGET/REGIONAL RETAIL COMPONENT ONLY)
AM PEAK HOUR

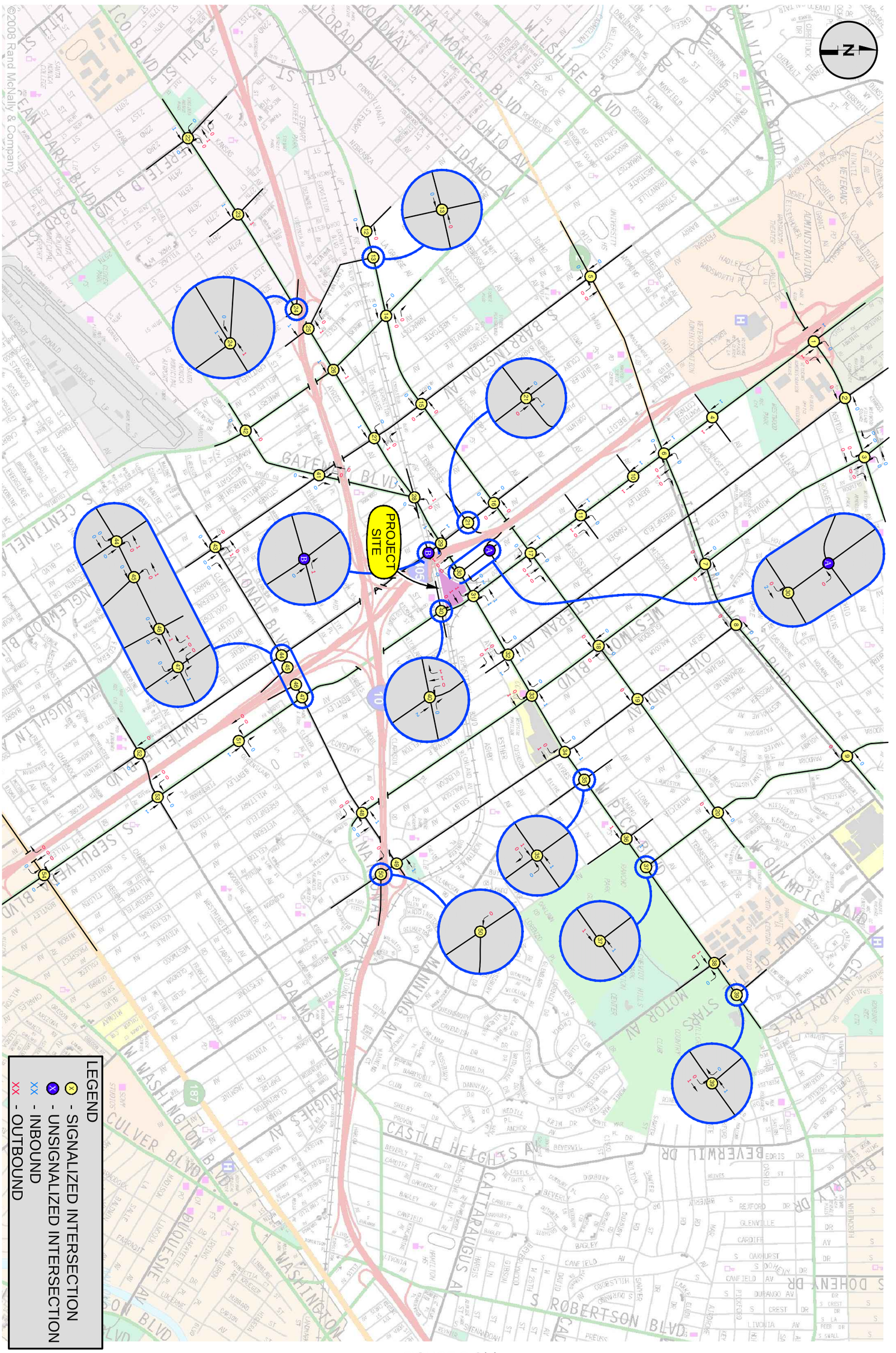


FIGURE D-3(a)

PROJECT TRIP REDUCTIONS (TDM)
(MARKET/LOCAL SERVING RETAIL COMPONENT ONLY)
AM PEAK HOUR

HIRSCH GREEN
Hirsch/Green Transportation Consulting, Inc.

LEGEND

- (X) - ORIGINAL STUDY INTERSECTION
- (X) - PREVIOUSLY IDENTIFIED SIGNIFICANT IMPACT
- (X) - ADDITIONAL STUDY INTERSECTION PER EXPANDED STUDY AREA

XX - INBOUND
XX - OUTBOUND

N

FIGURE D-3(b)

12/4/2012

IRSCH REEN
Hirsch/Green Transportation Consulting, Inc.

PROJECT TRIP REDUCTIONS (TDM)
ADDED STUDY INTERSECTIONS
(MARKET/LOCAL SERVING RETAIL COMPONENT ONLY)
AM PEAK HOUR

PM Peak Hour

FIGURE D-4(a)

PROJECT TRIP REDUCTIONS (TDM)
(RESIDENTIAL COMPONENT ONLY)
PM PEAK HOUR

PROJECT SITE

LEGEND
- X - SIGNALIZED INTERSECTION
- X - UNSIGNALIZED INTERSECTION
- XX - INBOUND
- XX - OUTBOUND

Hirsch/Green Transportation Consulting, Inc.

LEGEND

- (X) - ORIGINAL STUDY INTERSECTION
- (X) - PREVIOUSLY IDENTIFIED SIGNIFICANT IMPACT
- (X) - ADDITIONAL STUDY INTERSECTION PER EXPANDED STUDY AREA

XX - INBOUND
XX - OUTBOUND

N

FIGURE D-4(b)

12/4/2012

IRSCH GREEN
Hirsch/Green Transportation Consulting, Inc.

PROJECT TRIP REDUCTIONS (TDM)
ADDED STUDY INTERSECTIONS
(RESIDENTIAL COMPONENT ONLY)
PM PEAK HOUR

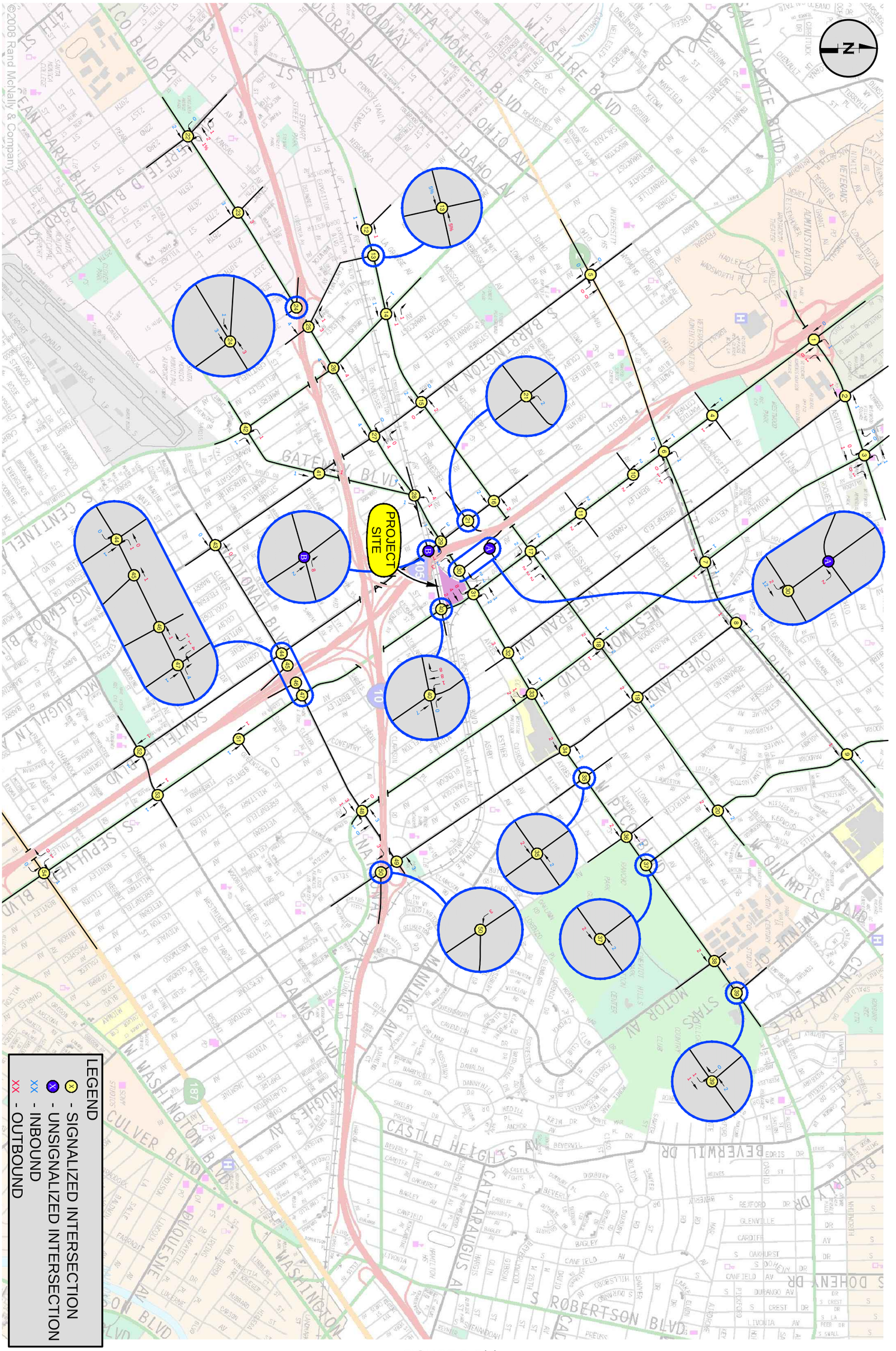
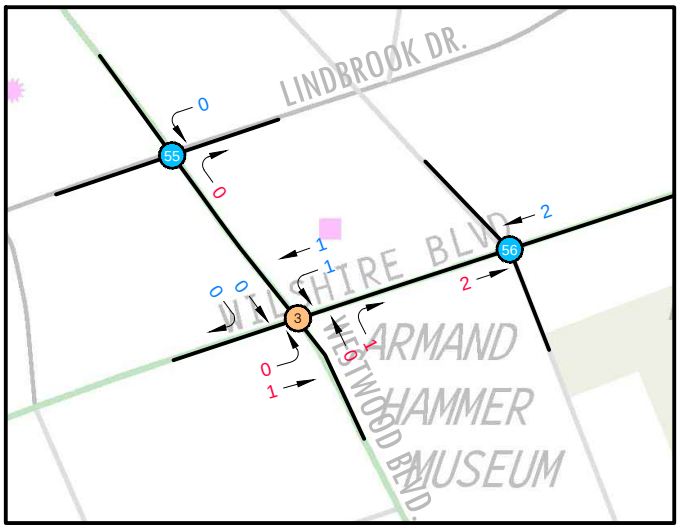
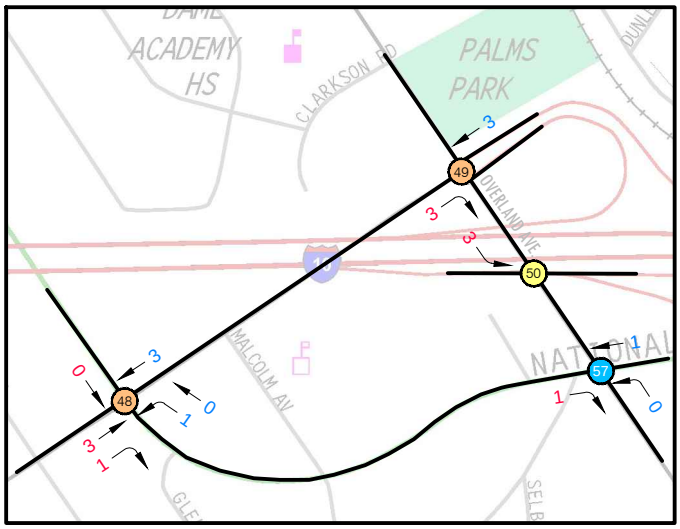


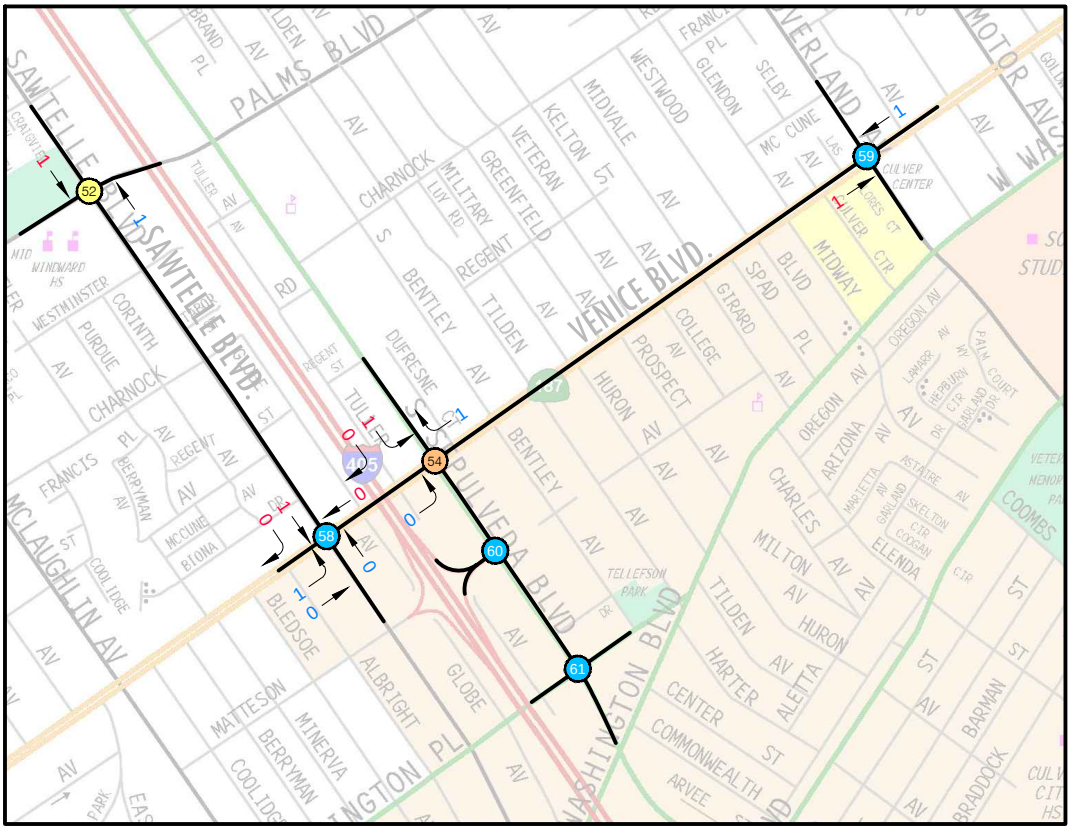
FIGURE D-5(a)

PROJECT TRIP REDUCTIONS (TDM)
(TARGET/REGIONAL RETAIL COMPONENT ONLY)
PM PEAK HOUR

HIRSCH GREEN
Hirsch/Green Transportation Consulting, Inc.







LEGEND

- (X) - ORIGINAL STUDY INTERSECTION
- (X) - PREVIOUSLY IDENTIFIED SIGNIFICANT IMPACT
- (X) - ADDITIONAL STUDY INTERSECTION PER EXPANDED STUDY AREA

XX - INBOUND
XX - OUTBOUND

N

FIGURE D-5(b)

12/4/2012

IRSCH GREEN
Hirsch/Green Transportation Consulting, Inc.

PROJECT TRIP REDUCTIONS (TDM)
ADDED STUDY INTERSECTIONS
(TARGET/REGIONAL RETAIL COMPONENT ONLY)
PM PEAK HOUR

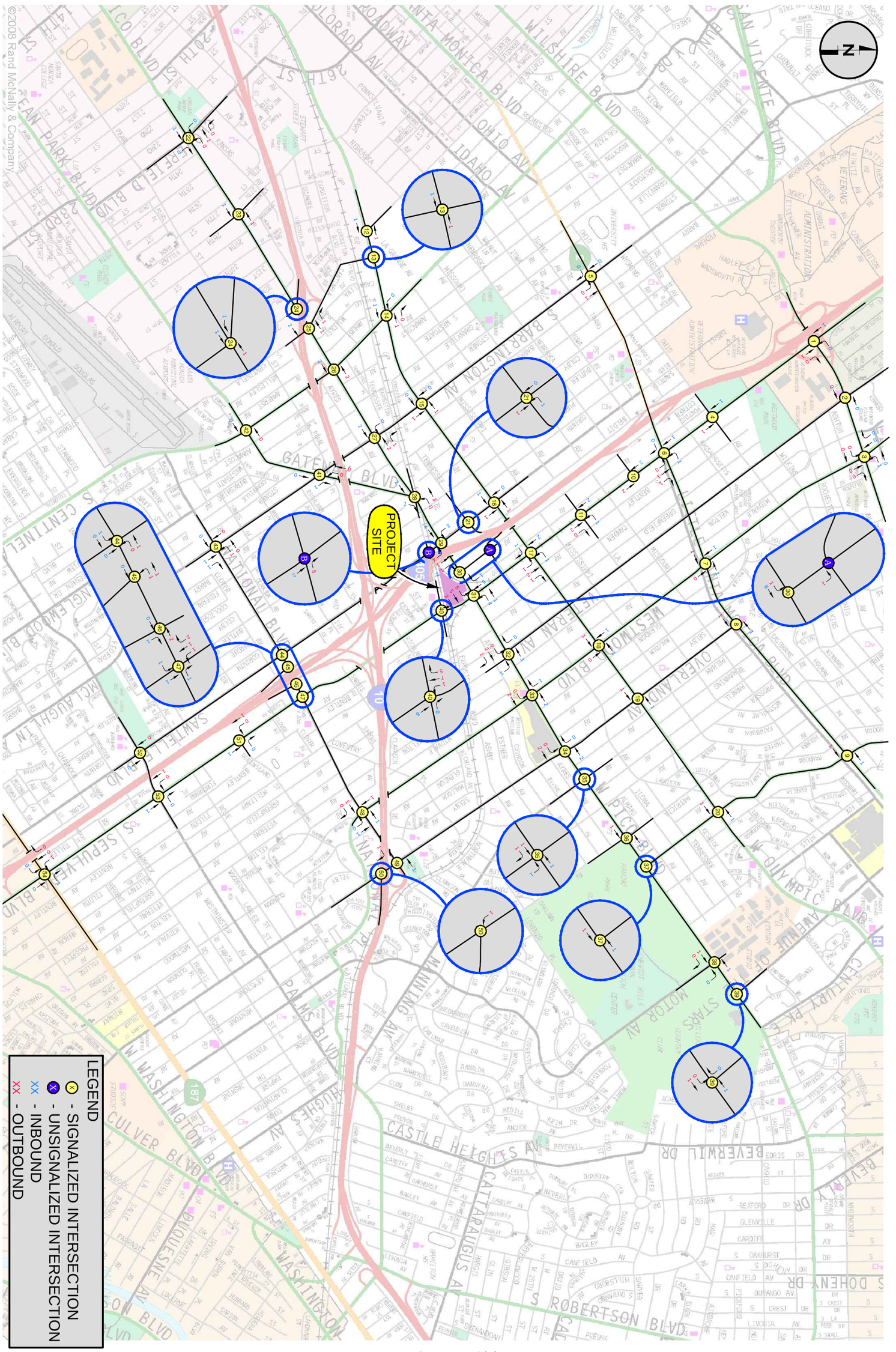


FIGURE D-6(a)

PROJECT TRIP REDUCTIONS (TDM)
(MARKET/LOCAL SERVING RETAIL COMPONENT ONLY)
PM PEAK HOUR

HIRSCH GREEN
Hirsch/Green Transportation Consulting, Inc.

LEGEND

- (X) - ORIGINAL STUDY INTERSECTION
- (X) - PREVIOUSLY IDENTIFIED SIGNIFICANT IMPACT
- (X) - ADDITIONAL STUDY INTERSECTION PER EXPANDED STUDY AREA

XX - INBOUND
XX - OUTBOUND

N

FIGURE D-6(b)

12/4/2012

IRSCH GREEN
Hirsch/Green Transportation Consulting, Inc.

PROJECT TRIP REDUCTIONS (TDM)
ADDED STUDY INTERSECTIONS
(MARKET/LOCAL SERVING RETAIL COMPONENT ONLY)
PM PEAK HOUR

APPENDIX E

CRITICAL MOVEMENT ANALYSIS

INTERSECTION OPERATIONS CALCULATION WORKSHEETS

54 “ORIGINAL” STUDY INTERSECTIONS

(From “Revised December 2009” Traffic Study)

Existing (2009) With Modified Project

AM Peak Hour

Hirsch/Green Transportation Consulting, Inc.
Critical Movement Analysis (CMA) Worksheet

Project Name	Pico/Sepulveda Mixed-Use Project		
Intersection Number	1	**Date**	December 7, 2012
Intersection Name	North/South: Sepulveda Boulevard East/West: Wilshire Boulevard		
Intersection Control	Signalized		
Analysis Period	AM Peak Hour		
Analysis Scenario	Existing (2009) With Project		

Approach Direction	Lane Type	No. of Lanes	Approach Volumes	Right-Turn on Red	Assigned Lane Volumes	Critical Moves
Northbound	Left	1	289		289	289
	Left/Through	0				
	Through	1	473		401	
	Through/Right	1			401	
	Right	0	329	0		
	Total Lanes	3				
Southbound	Left	1	332		332	
	Left/Through	0				
	Through	1	601		455	455
	Through/Right	1			455	
	Right	0	309	0		
	Total Lanes	3				
			Sum of North/South Critical Volumes			**744**
Eastbound	Left	1	27		27	27
	Left/Through	0				
	Through	3	2,060		546	
	Through/Right	1			546	
	Right	0	123	0		
	Total Lanes	5				
Westbound	Left	2	116		64	
	Left/Through	0				
	Through	4	3,793		770	770
	Through/Right	1			770	
	Right	0	57	0		
	Total Lanes	7				
			Sum of East/West Critical Volumes			**797**
			Total Intersection Critical Volumes			**1,541**
Number of Clearance Intervals	**4**		**Intersection Capacity**			**1,375**
			Base CMA			**1.121**
Signal Coordination	**ATSAC + ATCS**		**Signal Coordination Adjustment**			**-0.100**
			Final CMA			**1.021**
			Level of Service (LOS)			**F**

Hirsch/Green Transportation Consulting, Inc.
Critical Movement Analysis (CMA) Worksheet

Project Name	Pico/Sepulveda Mixed-Use Project		
Intersection Number	2	**Date**	December 7, 2012
Intersection Name	North/South: Veteran Avenue East/West: Wilshire Boulevard		
Intersection Control	Signalized		
Analysis Period	AM Peak Hour		
Analysis Scenario	Existing (2009) With Project		

Approach Direction	Lane Type	No. of Lanes	Approach Volumes	Right-Turn on Red	Assigned Lane Volumes	Critical Moves
Northbound	Left	1	204		204	
	Left/Through	0				
	Through	2	443		222	222
	Through/Right	0				
	Right	1	81	27	54	
	Total Lanes	4				
Southbound	Left	1	106		106	106
	Left/Through	0				
	Through	2	241		120	
	Through/Right	0				
	Right	2	394	146	124	
	Total Lanes	5				
			Sum of North/South Critical Volumes			**328**
Eastbound	Left	2	531		292	292
	Left/Through	0				
	Through	3	3,178		849	
	Through/Right	1			849	
	Right	0	219	0		
	Total Lanes	6				
Westbound	Left	2	49		27	
	Left/Through	0				
	Through	3	2,355		604	604
	Through/Right	1			604	
	Right	0	62	0		
	Total Lanes	6				
			Sum of East/West Critical Volumes			**896**
			Total Intersection Critical Volumes			**1,224**
Number of Clearance Intervals	**4**		**Intersection Capacity**			**1,375**
			Base CMA			**0.890**
Signal Coordination	**ATSAC + ATCS**		**Signal Coordination Adjustment**			**-0.100**
			Final CMA			**0.790**
			Level of Service (LOS)			**C**

NB Rt. Turn Overlap with WB Left

Hirsch/Green Transportation Consulting, Inc.
Critical Movement Analysis (CMA) Worksheet

Project Name	Pico/Sepulveda Mixed-Use Project		
Intersection Number	3	**Date**	December 7, 2012
Intersection Name	North/South: Westwood Boulevard East/West: Wilshire Boulevard		
Intersection Control	Signalized		
Analysis Period	AM Peak Hour		
Analysis Scenario	Existing (2009) With Project		

Approach Direction	Lane Type	No. of Lanes	Approach Volumes	Right-Turn on Red	Assigned Lane Volumes	Critical Moves
Northbound	Left	1	132		132	
	Left/Through	0				
	Through	2	630		258	258
	Through/Right	1			258	
	Right	0	144	0		
	Total Lanes	4				
Southbound	Left	1	74		74	74
	Left/Through	0				
	Through	2	293		98	
	Through/Right	1			98	
	Right	1	172	105	67	
	Total Lanes	5				
			Sum of North/South Critical Volumes			**332**
Eastbound	Left	2	382		210	210
	Left/Through	0				
	Through	3	2,194		588	
	Through/Right	1			588	
	Right	0	158	0		
	Total Lanes	6				
Westbound	Left	2	169		93	
	Left/Through	0				
	Through	3	1,963		515	515
	Through/Right	1			515	
	Right	0	98	0		
	Total Lanes	6				
			Sum of East/West Critical Volumes			**725**
			Total Intersection Critical Volumes			**1,057**
Number of Clearance Intervals	**4**		**Intersection Capacity**			**1,375**
			Base CMA			**0.769**
Signal Coordination	**ATSAC + ATCS**		**Signal Coordination Adjustment**			**-0.100**
			Final CMA			**0.669**
			Level of Service (LOS)			**B**

Hirsch/Green Transportation Consulting, Inc.
Critical Movement Analysis (CMA) Worksheet

Project Name	Pico/Sepulveda Mixed-Use Project		
Intersection Number	4	**Date**	December 7, 2012
Intersection Name	North/South: Sepulveda Boulevard East/West: Ohio Avenue		
Intersection Control	Signalized		
Analysis Period	AM Peak Hour		
Analysis Scenario	Existing (2009) With Project		

Approach Direction	Lane Type	No. of Lanes	Approach Volumes	Right-Turn on Red	Assigned Lane Volumes	Critical Moves
Northbound	Left	1	123		123	123
	Left/Through	0				
	Through	1	659		395	
	Through/Right	1			395	
	Right	0	131	0		
	Total Lanes	3				
Southbound	Left	1	52		52	
	Left/Through	0				
	Through	1	695		378	378
	Through/Right	1			378	
	Right	0	61	0		
	Total Lanes	3				
			Sum of North/South Critical Volumes			**501**
Eastbound	Left	1	194		194	
	Left/Through	0				
	Through	0	803			
	Through/Right	1			886	886
	Right	0	83	0		
	Total Lanes	2				
Westbound	Left	1	86		86	86
	Left/Through	0				
	Through	0	571			
	Through/Right	1			621	
	Right	0	50	0		
	Total Lanes	2				
			Sum of East/West Critical Volumes			**972**
			Total Intersection Critical Volumes			**1,473**
Number of Clearance Intervals	**2**		**Intersection Capacity**			**1,500**
			Base CMA			**0.982**
Signal Coordination	**ATSAC + ATCS**		**Signal Coordination Adjustment**			**-0.100**
			Final CMA			**0.882**
			Level of Service (LOS)			**D**

Hirsch/Green Transportation Consulting, Inc.
Critical Movement Analysis (CMA) Worksheet

Project Name	Pico/Sepulveda Mixed-Use Project		
Intersection Number	5	**Date**	December 7, 2012
Intersection Name	North/South: Barrington Avenue East/West: Santa Monica Boulevard		
Intersection Control	Signalized		
Analysis Period	AM Peak Hour		
Analysis Scenario	Existing (2009) With Project		

Approach Direction	Lane Type	No. of Lanes	Approach Volumes	Right-Turn on Red	Assigned Lane Volumes	Critical Moves
Northbound	Left	1	115		115	115
	Left/Through	0				
	Through	1	527		527	
	Through/Right	0				
	Right	1	85	56	29	
	Total Lanes	3				
Southbound	Left	1	116		116	
	Left/Through	0				
	Through	0	596			
	Through/Right	1			643	643
	Right	0	47	0		
	Total Lanes	2				
			Sum of North/South Critical Volumes			**758**
Eastbound	Left	1	37		37	37
	Left/Through	0				
	Through	2	1,076		384	
	Through/Right	1			384	
	Right	0	77	0		
	Total Lanes	4				
Westbound	Left	1	67		67	
	Left/Through	0				
	Through	2	1,283		460	460
	Through/Right	1			460	
	Right	0	96	0		
	Total Lanes	4				
			Sum of East/West Critical Volumes			**497**
			Total Intersection Critical Volumes			**1,255**
Number of Clearance Intervals	**2**		**Intersection Capacity**			**1,500**
			Base CMA			**0.837**
Signal Coordination	**ATSAC**		**Signal Coordination Adjustment**			**-0.070**
			Final CMA			**0.767**
			Level of Service (LOS)			**C**

Hirsch/Green Transportation Consulting, Inc.
Critical Movement Analysis (CMA) Worksheet

Project Name	Pico/Sepulveda Mixed-Use Project		
Intersection Number	6	**Date**	December 7, 2012
Intersection Name	North/South: Sepulveda Boulevard East/West: Santa Monica Boulevard		
Intersection Control	Signalized		
Analysis Period	AM Peak Hour		
Analysis Scenario	Existing (2009) With Project		

Approach Direction	Lane Type	No. of Lanes	Approach Volumes	Right-Turn on Red	Assigned Lane Volumes	Critical Moves
Northbound	Left	1	162		162	
	Left/Through	0				
	Through	2	812		406	406
	Through/Right	0				
	Right	1	167	152	15	
	Total Lanes	4				
Southbound	Left	1	129		129	129
	Left/Through	0				
	Through	2	581		290	
	Through/Right	0				
	Right	1	114	114	0	
	Total Lanes	4				
			Sum of North/South Critical Volumes			**535**
Eastbound	Left	1	115		115	
	Left/Through	0				
	Through	3	1,761		587	587
	Through/Right	0				
	Right	1	317	162	155	
	Total Lanes	5				
Westbound	Left	1	152		152	152
	Left/Through	0				
	Through	3	1,429		476	
	Through/Right	0				
	Right	1	72	64	8	
	Total Lanes	5				
			Sum of East/West Critical Volumes			**739**
			Total Intersection Critical Volumes			**1,274**
Number of Clearance Intervals	**4**		**Intersection Capacity**			**1,375**
			Base CMA			**0.927**
Signal Coordination	**ATSAC + ATCS**		**Signal Coordination Adjustment**			**-0.100**
			Final CMA			**0.827**
			Level of Service (LOS)			**D**

NB/SB Rt. Turn Overlap With WB/EB Lefts

EB Rt. Turn Overlap with NB Left

Hirsch/Green Transportation Consulting, Inc.
Critical Movement Analysis (CMA) Worksheet

Project Name	Pico/Sepulveda Mixed-Use Project		
Intersection Number	7	**Date**	December 7, 2012
Intersection Name	North/South: Westwood Boulevard East/West: Santa Monica Boulevard		
Intersection Control	Signalized		
Analysis Period	AM Peak Hour		
Analysis Scenario	Existing (2009) With Project		

Approach Direction	Lane Type	No. of Lanes	Approach Volumes	Right-Turn on Red	Assigned Lane Volumes	Critical Moves
Northbound	Left	1	94		94	
	Left/Through	0				
	Through	1	1,055		568	568
	Through/Right	1			568	
	Right	0	81	0		
	Total Lanes	3				
Southbound	Left	1	188		188	188
	Left/Through	0				
	Through	2	587		294	
	Through/Right	0				
	Right	1	74	74	0	
	Total Lanes	4				
			Sum of North/South Critical Volumes			**756**
Eastbound	Left	2	150		82	
	Left/Through	0				
	Through	3	2,144		715	715
	Through/Right	0				
	Right	1	110	110	0	
	Total Lanes	6				
Westbound	Left	2	179		98	98
	Left/Through	0				
	Through	3	1,409		470	
	Through/Right	0				
	Right	1	188	94	94	
	Total Lanes	6				
			Sum of East/West Critical Volumes			**813**
			Total Intersection Critical Volumes			**1,569**
Number of Clearance Intervals	**4**		**Intersection Capacity**			**1,375**
			Base CMA			**1.141**
Signal Coordination	**ATSAC + ATCS**		**Signal Coordination Adjustment**			**-0.100**
			Final CMA			**1.041**
			Level of Service (LOS)			**F**

Hirsch/Green Transportation Consulting, Inc.
Critical Movement Analysis (CMA) Worksheet

Project Name	Pico/Sepulveda Mixed-Use Project		
Intersection Number	8	**Date**	December 7, 2012
Intersection Name	North/South: Overland Avenue East/West: Santa Monica Boulevard		
Intersection Control	Signalized		
Analysis Period	AM Peak Hour		
Analysis Scenario	Existing (2009) With Project		

Approach Direction	Lane Type	No. of Lanes	Approach Volumes	Right-Turn on Red	Assigned Lane Volumes	Critical Moves
Northbound	Left	1	143		143	
	Left/Through	0				
	Through	0	0			
	Through/Right	0				
	Right	1	152	0	152	152
	Total Lanes	2				
Southbound	Left	0	0			
	Left/Through	0				
	Through	0	0			
	Through/Right	0				
	Right	0	0	0		
	Total Lanes	0				
			Sum of North/South Critical Volumes			**152**
Eastbound	Left	0	0			
	Left/Through	0				
	Through	2	1,887		645	645
	Through/Right	1			645	
	Right	0	47	0		
	Total Lanes	3				
Westbound	Left	1	181		181	181
	Left/Through	0				
	Through	3	1,496		499	
	Through/Right	0				
	Right	0	0	0		
	Total Lanes	4				
			Sum of East/West Critical Volumes			**826**
			Total Intersection Critical Volumes			**978**
Number of Clearance Intervals	**4**		**Intersection Capacity**			**1,375**
			Base CMA			**0.711**
Signal Coordination	**ATSAC + ATCS**		**Signal Coordination Adjustment**			**-0.100**
			Final CMA			**0.611**
			Level of Service (LOS)			**B**

Hirsch/Green Transportation Consulting, Inc.
Critical Movement Analysis (CMA) Worksheet

Project Name	Pico/Sepulveda Mixed-Use Project		
Intersection Number	9	**Date**	December 7, 2012
Intersection Name	North/South: Beverly Glen Boulevard East/West: Santa Monica Boulevard		
Intersection Control	Signalized		
Analysis Period	AM Peak Hour		
Analysis Scenario	Existing (2009) With Project		

Approach Direction	Lane Type	No. of Lanes	Approach Volumes	Right-Turn on Red	Assigned Lane Volumes	Critical Moves
Northbound	Left	2	104		57	
	Left/Through	0				
	Through	2	549		274	274
	Through/Right	0				
	Right	1	243	34	209	
	Total Lanes	5				
Southbound	Left	2	516		284	284
	Left/Through	0				
	Through	2	803		402	
	Through/Right	0				
	Right	1	114	114	0	
	Total Lanes	5				
			Sum of North/South Critical Volumes			**558**
Eastbound	Left	2	139		76	
	Left/Through	0				
	Through	3	2,165		722	722
	Through/Right	0				
	Right	1	152	78	74	
	Total Lanes	6				
Westbound	Left	2	124		68	68
	Left/Through	0				
	Through	3	1,278		426	
	Through/Right	0				
	Right	1	140	140	0	
	Total Lanes	6				
			Sum of East/West Critical Volumes			**790**
			Total Intersection Critical Volumes			**1,348**
Number of Clearance Intervals	**4**		**Intersection Capacity**			**1,375**
			Base CMA			**0.980**
Signal Coordination	**ATSAC + ATCS**		**Signal Coordination Adjustment**			**-0.100**
			Final CMA			**0.880**
			Level of Service (LOS)			**D**

Hirsch/Green Transportation Consulting, Inc.
Critical Movement Analysis (CMA) Worksheet

Project Name	Pico/Sepulveda Mixed-Use Project		
Intersection Number	10	**Date**	December 7, 2012
Intersection Name	North/South: Sepulveda Boulevard East/West: Nebraska Avenue		
Intersection Control	Signalized		
Analysis Period	AM Peak Hour		
Analysis Scenario	Existing (2009) With Project		

Approach Direction	Lane Type	No. of Lanes	Approach Volumes	Right-Turn on Red	Assigned Lane Volumes	Critical Moves
Northbound	Left	1	40		40	40
	Left/Through	0				
	Through	1	1,118		559	
	Through/Right	1			559	
	Right	0	0	0		
	Total Lanes	3				
Southbound	Left	1	0		0	
	Left/Through	0				
	Through	1	980		544	544
	Through/Right	1			544	
	Right	0	107	0		
	Total Lanes	3				
			Sum of North/South Critical Volumes			**584**
Eastbound	Left	0	56			
	Left/Through	1			56	56
	Through	0	0			
	Through/Right	0				
	Right	1	42	20	22	
	Total Lanes	2				
Westbound	Left	0	0			
	Left/Through	0				
	Through	0	0			
	Through/Right	0				
	Right	0	0	0		
	Total Lanes	0				
			Sum of East/West Critical Volumes			**56**
			Total Intersection Critical Volumes			**640**
Number of Clearance Intervals	**3**		**Intersection Capacity**			**1,425**
			Base CMA			**0.449**
Signal Coordination	**ATSAC + ATCS**		**Signal Coordination Adjustment**			**-0.100**
			Final CMA			**0.349**
			Level of Service (LOS)			**A**

Hirsch/Green Transportation Consulting, Inc.
Critical Movement Analysis (CMA) Worksheet

Project Name	Pico/Sepulveda Mixed-Use Project		
Intersection Number	11	**Date**	December 7, 2012
Intersection Name	North/South: Sepulveda Boulevard East/West: La Grange Avenue		
Intersection Control	Signalized		
Analysis Period	AM Peak Hour		
Analysis Scenario	Existing (2009) With Project		

Approach Direction	Lane Type	No. of Lanes	Approach Volumes	Right-Turn on Red	Assigned Lane Volumes	Critical Moves
Northbound	Left	1	58		58	
	Left/Through	0				
	Through	1	1,029		526	526
	Through/Right	1			526	
	Right	0	22	0		
	Total Lanes	3				
Southbound	Left	1	41		41	41
	Left/Through	0				
	Through	1	901		476	
	Through/Right	1			476	
	Right	0	51	0		
	Total Lanes	3				
			Sum of North/South Critical Volumes			**567**
Eastbound	Left	0	62			62
	Left/Through	0				
	Left/Through/Right	1	39		114	
	Through/Right	0				
	Right	0	13	0		
	Total Lanes	1				
Westbound	Left	0	48			
	Left/Through	0				
	Left/Through/Right	1	58		144	144
	Through/Right	0				
	Right	0	38	0		
	Total Lanes	1				
			Sum of East/West Critical Volumes			**206**
			Total Intersection Critical Volumes			**773**
Number of Clearance Intervals	**2**		**Intersection Capacity**			**1,500**
			Base CMA			**0.515**
Signal Coordination	**ATSAC + ATCS**		**Signal Coordination Adjustment**			**-0.100**
			Final CMA			**0.415**
			Level of Service (LOS)			**A**

Hirsch/Green Transportation Consulting, Inc.
Critical Movement Analysis (CMA) Worksheet

Project Name	Pico/Sepulveda Mixed-Use Project		
Intersection Number	12	**Date**	December 7, 2012
Intersection Name	North/South: Centinela Avenue (west intersection)		
	East/West: Olympic Boulevard		
Intersection Control	Signalized		
Analysis Period	AM Peak Hour		
Analysis Scenario	Existing (2009) With Project		

Approach Direction	Lane Type	No. of Lanes	Approach Volumes	Right-Turn on Red	Assigned Lane Volumes	Critical Moves
	Left	0	0			
	Left/Through	0				
Northbound	Through	0	0			
	Through/Right	0				
	Right	0	0	0		
	Total Lanes	0				
	Left	2	603		332	332
	Left/Through	0				
Southbound	Through	0	0			
	Through/Right	0				
	Right	1	63	12	51	
	Total Lanes	3				
			Sum of North/South Critical Volumes			**332**
	Left	1	23		23	23
	Left/Through	0				
Eastbound	Through	2	696		348	
	Through/Right	0				
	Right	0	0	0		
	Total Lanes	3				
	Left	1	0		0	
	Left/Through	0				
Westbound	Through	2	1,515		758	758
	Through/Right	0				
	Right	1	848	166	682	
	Total Lanes	4				
			Sum of East/West Critical Volumes			**781**
			Total Intersection Critical Volumes			**1,113**
Number of Clearance Intervals	**2**		**Intersection Capacity**			**1,500**
			Base CMA			**0.742**
Signal Coordination	**ATSAC**		**Signal Coordination Adjustment**			**-0.070**
			Final CMA			**0.672**
			Level of Service (LOS)			**B**

Hirsch/Green Transportation Consulting, Inc.
Critical Movement Analysis (CMA) Worksheet

Project Name	Pico/Sepulveda Mixed-Use Project		
Intersection Number	13	**Date**	December 7, 2012
Intersection Name	North/South: Centinela Avenue (east intersection)		
	East/West: Olympic Boulevard		
Intersection Control	Signalized		
Analysis Period	AM Peak Hour		
Analysis Scenario	Existing (2009) With Project		

Approach Direction	Lane Type	No. of Lanes	Approach Volumes	Right-Turn on Red	Assigned Lane Volumes	Critical Moves
	Left	1	640		394	
	Left/Through	0				
Northbound	Left/Through/Right	1	0		394	394
	Through/Right	0				
	Right	0	149	0		
	Total Lanes	2				
	Left	0	0			
	Left/Through	0				
Southbound	Through	0	0			
	Through/Right	0				
	Right	0	0	0		
	Total Lanes	0				
			Sum of North/South Critical Volumes			**394**
	Left	1	0		0	
	Left/Through	0				
Eastbound	Through	3	829		276	276
	Through/Right	0				
	Right	1	367	197	170	
	Total Lanes	5				
	Left	1	195		195	195
	Left/Through	0				
Westbound	Through	2	1,380		460	
	Through/Right	1			460	
	Right	0	0	0		
	Total Lanes	4				
			Sum of East/West Critical Volumes			**471**
			Total Intersection Critical Volumes			**865**
Number of Clearance Intervals	**2**		**Intersection Capacity**			**1,500**
			Base CMA			**0.577**
Signal Coordination	**ATSAC**		**Signal Coordination Adjustment**			**-0.070**
			Final CMA			**0.507**
			Level of Service (LOS)			**A**

Hirsch/Green Transportation Consulting, Inc.
Critical Movement Analysis (CMA) Worksheet

Project Name	Pico/Sepulveda Mixed-Use Project		
Intersection Number	14	**Date**	December 7, 2012
Intersection Name	North/South: Bundy Drive East/West: Olympic Boulevard		
Intersection Control	Signalized		
Analysis Period	AM Peak Hour		
Analysis Scenario	Existing (2009) With Project		

Approach Direction	Lane Type	No. of Lanes	Approach Volumes	Right-Turn on Red	Assigned Lane Volumes	Critical Moves
Northbound	Left	1	236		236	
	Left/Through	0				
	Through	2	1,227		614	614
	Through/Right	0				
	Right	1	229	139	90	
	Total Lanes	4				
Southbound	Left	1	245		245	245
	Left/Through	0				
	Through	2	1,069		534	
	Through/Right	0				
	Right	1	131	68	63	
	Total Lanes	4				
			Sum of North/South Critical Volumes			**859**
Eastbound	Left	1	137		137	137
	Left/Through	0				
	Through	3	919		306	
	Through/Right	0				
	Right	1	108	108	0	
	Total Lanes	5				
Westbound	Left	2	235		129	
	Left/Through	0				
	Through	3	1,342		447	447
	Through/Right	0				
	Right	1	266	122	144	
	Total Lanes	6				
			Sum of East/West Critical Volumes			**584**
			Total Intersection Critical Volumes			**1,443**
Number of Clearance Intervals	**4**		**Intersection Capacity**			**1,375**
			Base CMA			**1.049**
Signal Coordination	**ATSAC**		**Signal Coordination Adjustment**			**-0.070**
			Final CMA			**0.979**
			Level of Service (LOS)			**E**

Hirsch/Green Transportation Consulting, Inc.
Critical Movement Analysis (CMA) Worksheet

Project Name	Pico/Sepulveda Mixed-Use Project		
Intersection Number	15	**Date**	December 7, 2012
Intersection Name	North/South: Barrington Avenue East/West: Olympic Boulevard		
Intersection Control	Signalized		
Analysis Period	AM Peak Hour		
Analysis Scenario	Existing (2009) With Project		

Approach Direction	Lane Type	No. of Lanes	Approach Volumes	Right-Turn on Red	Assigned Lane Volumes	Critical Moves
Northbound	Left	1	294		294	294
	Left/Through	0				
	Through	1	839		520	
	Through/Right	1			520	
	Right	0	202	0		
	Total Lanes	3				
Southbound	Left	1	224		224	
	Left/Through	0				
	Through	2	984		492	492
	Through/Right	0				
	Right	1	42	20	22	
	Total Lanes	4				
			Sum of North/South Critical Volumes			**786**
Eastbound	Left	1	39		39	39
	Left/Through	0				
	Through	2	1,213		428	
	Through/Right	1			428	
	Right	0	70	0		
	Total Lanes	4				
Westbound	Left	1	95		95	
	Left/Through	0				
	Through	3	1,546		515	515
	Through/Right	0				
	Right	1	189	133	56	
	Total Lanes	5				
			Sum of East/West Critical Volumes			**554**
			Total Intersection Critical Volumes			**1,340**
Number of Clearance Intervals	**3**		**Intersection Capacity**			**1,425**
			Base CMA			**0.940**
Signal Coordination	**ATSAC**		**Signal Coordination Adjustment**			**-0.070**
			Final CMA			**0.870**
			Level of Service (LOS)			**D**

Hirsch/Green Transportation Consulting, Inc.
Critical Movement Analysis (CMA) Worksheet

Project Name	Pico/Sepulveda Mixed-Use Project		
Intersection Number	16	**Date**	December 7, 2012
Intersection Name	North/South: Sawtelle Boulevard East/West: Olympic Boulevard		
Intersection Control	Signalized		
Analysis Period	AM Peak Hour		
Analysis Scenario	Existing (2009) With Project		

Approach Direction	Lane Type	No. of Lanes	Approach Volumes	Right-Turn on Red	Assigned Lane Volumes	Critical Moves
Northbound	Left	1	269		269	
	Left/Through	0				
	Through	1	427		427	427
	Through/Right	0				
	Right	1	481	139	342	
	Total Lanes	3				
Southbound	Left	1	251		251	251
	Left/Through	0				
	Through	1	300		180	
	Through/Right	1			180	
	Right	0	61	0		
	Total Lanes	3				
			Sum of North/South Critical Volumes			**678**
Eastbound	Left	1	46		46	46
	Left/Through	0				
	Through	2	1,395		476	
	Through/Right	1			476	
	Right	0	33	0		
	Total Lanes	4				
Westbound	Left	1	139		139	
	Left/Through	0				
	Through	3	2,153		572	572
	Through/Right	1			572	
	Right	0	135	0		
	Total Lanes	5				
			Sum of East/West Critical Volumes			**618**
			Total Intersection Critical Volumes			**1,296**
Number of Clearance Intervals	**4**		**Intersection Capacity**			**1,375**
			Base CMA			**0.943**
Signal Coordination	**ATSAC + ATCS**		**Signal Coordination Adjustment**			**-0.100**
			Final CMA			**0.843**
			Level of Service (LOS)			**D**

NB Rt. Turn Overlap with WB Left

Hirsch/Green Transportation Consulting, Inc.
Critical Movement Analysis (CMA) Worksheet

Project Name	Pico/Sepulveda Mixed-Use Project		
Intersection Number	17	**Date**	December 7, 2012
Intersection Name	North/South: Sepulveda Boulevard East/West: Olympic Boulevard		
Intersection Control	Signalized		
Analysis Period	AM Peak Hour		
Analysis Scenario	Existing (2009) With Project		

Approach Direction	Lane Type	No. of Lanes	Approach Volumes	Right-Turn on Red	Assigned Lane Volumes	Critical Moves
Northbound	Left	1	198		198	198
	Left/Through	0				
	Through	2	945		472	
	Through/Right	0				
	Right	1	214	137	77	
	Total Lanes	4				
Southbound	Left	1	111		111	
	Left/Through	0				
	Through	1	697		402	402
	Through/Right	1			402	
	Right	0	107	0		
	Total Lanes	3				
			Sum of North/South Critical Volumes			**600**
Eastbound	Left	1	67		67	
	Left/Through	0				
	Through	2	1,988		679	679
	Through/Right	1			679	
	Right	0	49	0		
	Total Lanes	4				
Westbound	Left	1	137		137	137
	Left/Through	0				
	Through	3	2,085		546	
	Through/Right	1			546	
	Right	0	100	0		
	Total Lanes	5				
			Sum of East/West Critical Volumes			**816**
			Total Intersection Critical Volumes			**1,416**
Number of Clearance Intervals	**3**		**Intersection Capacity**			**1,425**
			Base CMA			**0.994**
Signal Coordination	**ATSAC + ATCS**		**Signal Coordination Adjustment**			**-0.100**
			Final CMA			**0.894**
			Level of Service (LOS)			**D**

NB Rt. Turn Overlap with WB Left

Hirsch/Green Transportation Consulting, Inc.
Critical Movement Analysis (CMA) Worksheet

Project Name	Pico/Sepulveda Mixed-Use Project		
Intersection Number	18	**Date**	December 7, 2012
Intersection Name	North/South: Westwood Boulevard East/West: Olympic Boulevard		
Intersection Control	Signalized		
Analysis Period	AM Peak Hour		
Analysis Scenario	Existing (2009) With Project		

Approach Direction	Lane Type	No. of Lanes	Approach Volumes	Right-Turn on Red	Assigned Lane Volumes	Critical Moves
Northbound	Left	1	123		123	
	Left/Through	0				
	Through	1	874		520	520
	Through/Right	1			520	
	Right	0	167	0		
	Total Lanes	3				
Southbound	Left	1	148		148	148
	Left/Through	0				
	Through	1	513		306	
	Through/Right	1			306	
	Right	0	98	0		
	Total Lanes	3				
			Sum of North/South Critical Volumes			**668**
Eastbound	Left	1	51		51	
	Left/Through	0				
	Through	2	2,237		774	774
	Through/Right	1			774	
	Right	0	86	0		
	Total Lanes	4				
Westbound	Left	1	84		84	84
	Left/Through	0				
	Through	2	2,027		733	
	Through/Right	1			733	
	Right	0	171	0		
	Total Lanes	4				
			Sum of East/West Critical Volumes			**858**
			Total Intersection Critical Volumes			**1,526**
Number of Clearance Intervals	**4**		**Intersection Capacity**			**1,375**
			Base CMA			**1.110**
Signal Coordination	**ATSAC + ATCS**		**Signal Coordination Adjustment**			**-0.100**
			Final CMA			**1.010**
			Level of Service (LOS)			**F**

Hirsch/Green Transportation Consulting, Inc.
Critical Movement Analysis (CMA) Worksheet

Project Name	Pico/Sepulveda Mixed-Use Project		
Intersection Number	19	**Date**	December 7, 2012
Intersection Name	North/South: Overland Avenue East/West: Olympic Boulevard		
Intersection Control	Signalized		
Analysis Period	AM Peak Hour		
Analysis Scenario	Existing (2009) With Project		

Approach Direction	Lane Type	No. of Lanes	Approach Volumes	Right-Turn on Red	Assigned Lane Volumes	Critical Moves
Northbound	Left	1	86		86	
	Left/Through	0				
	Through	0	251			
	Through/Right	1			450	450
	Right	0	199	0		
	Total Lanes	2				
Southbound	Left	1	57		57	57
	Left/Through	0				
	Through	0	343			
	Through/Right	1			383	
	Right	0	40	0		
	Total Lanes	2				
			Sum of North/South Critical Volumes			**507**
Eastbound	Left	1	24		24	
	Left/Through	0				
	Through	2	2,223		762	762
	Through/Right	1			762	
	Right	0	63	0		
	Total Lanes	4				
Westbound	Left	1	140		140	140
	Left/Through	0				
	Through	3	2,043		681	
	Through/Right	0				
	Right	1	24	24	0	
	Total Lanes	5				
			Sum of East/West Critical Volumes			**902**
			Total Intersection Critical Volumes			**1,409**
Number of Clearance Intervals	**3**		**Intersection Capacity**			**1,425**
			Base CMA			**0.989**
Signal Coordination	**ATSAC + ATCS**		**Signal Coordination Adjustment**			**-0.100**
			Final CMA			**0.889**
			Level of Service (LOS)			**D**

Hirsch/Green Transportation Consulting, Inc.
Critical Movement Analysis (CMA) Worksheet

Project Name	Pico/Sepulveda Mixed-Use Project		
Intersection Number	20	**Date**	December 7, 2012
Intersection Name	North/South: Beverly Glen Boulevard East/West: Olympic Boulevard		
Intersection Control	Signalized		
Analysis Period	AM Peak Hour		
Analysis Scenario	Existing (2009) With Project		

Approach Direction	Lane Type	No. of Lanes	Approach Volumes	Right-Turn on Red	Assigned Lane Volumes	Critical Moves
	Left	1	140		140	
	Left/Through	0				
Northbound	Through	2	521		260	260
	Through/Right	0				
	Right	1	228	22	206	
	Total Lanes	4				
	Left	1	285		285	285
	Left/Through	0				
Southbound	Through	2	493		246	
	Through/Right	0				
	Right	1	190	130	60	
	Total Lanes	4				
			Sum of North/South Critical Volumes			**545**
	Left	1	156		156	
	Left/Through	0				
Eastbound	Through	2	2,501		860	860
	Through/Right	1			860	
	Right	0	79	0		
	Total Lanes	4				
	Left	1	45		45	45
	Left/Through	0				
Westbound	Through	3	1,934		645	
	Through/Right	0				
	Right	1	108	108	0	
	Total Lanes	5				
			Sum of East/West Critical Volumes			**905**
			Total Intersection Critical Volumes			**1,450**
Number of Clearance Intervals	**4**		**Intersection Capacity**			**1,375**
			Base CMA			**1.055**
Signal Coordination	**ATSAC + ATCS**		**Signal Coordination Adjustment**			**-0.100**
			Final CMA			**0.955**
			Level of Service (LOS)			**E**

Hirsch/Green Transportation Consulting, Inc.
Critical Movement Analysis (CMA) Worksheet

Project Name	Pico/Sepulveda Mixed-Use Project		
Intersection Number	21	**Date**	December 7, 2012
Intersection Name	North/South: Sawtelle Boulevard East/West: Tennessee Avenue/I-405 SB Off-Ramp		
Intersection Control	Signalized		
Analysis Period	AM Peak Hour		
Analysis Scenario	Existing (2009) With Project		

Approach Direction	Lane Type	No. of Lanes	Approach Volumes	Right-Turn on Red	Assigned Lane Volumes	Critical Moves
Northbound	Left	1	141		141	141
	Left/Through	0				
	Through	2	766		383	
	Through/Right	0				
	Right	0	0	0		
	Total Lanes	3				
Southbound	Left	0	0			
	Left/Through	0				
	Through	1	466		252	252
	Through/Right	1			252	
	Right	0	37	0		
	Total Lanes	2				
			Sum of North/South Critical Volumes			**393**
Eastbound	Left	1	35		35	35
	Left/Through	0				
	Through	0	0			
	Through/Right	0				
	Right	1	67	67	0	
	Total Lanes	2				
Westbound	Left	1	362		362	362
	Left/Through	0				
	Through	0	164			
	Through/Right	1			292	
	Right	1	424	5	292	
	Total Lanes	3				
			Sum of East/West Critical Volumes			**397**
			Total Intersection Critical Volumes			**790**
Number of Clearance Intervals	**3**		**Intersection Capacity**			**1,425**
			Base CMA			**0.554**
Signal Coordination	**ATSAC + ATCS**		**Signal Coordination Adjustment**			**-0.100**
			Final CMA			**0.454**
			Level of Service (LOS)			**A**

East/West Opposed Phasing

Hirsch/Green Transportation Consulting, Inc.
Critical Movement Analysis (CMA) Worksheet

Project Name	Pico/Sepulveda Mixed-Use Project		
Intersection Number	22	**Date**	December 7, 2012
Intersection Name	North/South: Cloverfield Boulevard East/West: Pico Boulevard		
Intersection Control	Signalized		
Analysis Period	AM Peak Hour		
Analysis Scenario	Existing (2009) With Project		

Approach Direction	Lane Type	No. of Lanes	Approach Volumes	Right-Turn on Red	Assigned Lane Volumes	Critical Moves
Northbound	Left	1	25		25	
	Left/Through	0				
	Through	1	312		312	312
	Through/Right	0				
	Right	1	35	35	0	
	Total Lanes	3				
Southbound	Left	1	96		96	96
	Left/Through	0				
	Through	1	214		214	
	Through/Right	0				
	Right	1	374	119	255	
	Total Lanes	3				
			Sum of North/South Critical Volumes			**408**
Eastbound	Left	2	432		238	238
	Left/Through	0				
	Through	1	798		408	
	Through/Right	1			408	
	Right	0	19	0		
	Total Lanes	4				
Westbound	Left	1	46		46	
	Left/Through	0				
	Through	1	681		388	388
	Through/Right	1			388	
	Right	0	95	0		
	Total Lanes	3				
			Sum of East/West Critical Volumes			**626**
			Total Intersection Critical Volumes			**1,034**
Number of Clearance Intervals	**3**		**Intersection Capacity**			**1,425**
			Base CMA			**0.726**
Signal Coordination	**None**		**Signal Coordination Adjustment**			**0.000**
			Final CMA			**0.726**
			Level of Service (LOS)			**C**

HCS+™ DETAILED REPORT

General Information		***Site Information***	
Analyst	*RRH*	Intersection	*22*
Agency or Co.	*Hirsch/Green*	Area Type	*All other areas*
Date Performed	*12/7/2012*	Jurisdiction	*City of Santa Monica*
Time Period	*AM Peak Hour*	Analysis Year	*Existing (2009) With Project*
		Project ID	*Pico/Sepulveda Mixed-Use Project*

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Number of Lanes, N_1	*2*	*2*	*0*	*1*	*2*	*0*	*1*	*1*	*1*	*1*	*1*	*1*
Lane Group	*L*	*TR*		*L*	*TR*		*L*	*T*	*R*	*L*	*T*	*R*
Volume, V (vph)	*432*	*798*	*19*	*46*	*681*	*95*	*25*	*312*	*35*	*96*	*214*	*374*
% Heavy Vehicles, %HV	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*
Peak-Hour Factor, PHF	*1.00*	*1.00*	*1.00*	*1.00*	*1.00*	*1.00*	*1.00*	*1.00*	*1.00*	*1.00*	*1.00*	*1.00*
Pretimed (P) or Actuated (A)	*P*	*P*	*P*	*P*	*P*	*P*	*P*	*P*	*P*	*P*	*P*	*P*
Start-up Lost Time, l_1	*2.0*	*2.0*		*2.0*	*2.0*		*2.0*	*2.0*	*2.0*	*2.0*	*2.0*	*2.0*
Extension of Effective Green, e	*2.0*	*2.0*		*2.0*	*2.0*		*2.0*	*2.0*	*2.0*	*2.0*	*2.0*	*2.0*
Arrival Type, AT	*3*	*3*		*3*	*3*		*3*	*3*	*3*	*3*	*3*	*3*
Unit Extension, UE	*3.0*	*3.0*		*3.0*	*3.0*		*3.0*	*3.0*	*3.0*	*3.0*	*3.0*	*3.0*
Filtering/Metering, I	*1.000*	*1.000*		*1.000*	*1.000*		*1.000*	*1.000*	*1.000*	*1.000*	*1.000*	*1.000*
Initial Unmet Demand, Q_b	*0.0*	*0.0*		*0.0*	*0.0*		*0.0*	*0.0*	*0.0*	*0.0*	*0.0*	*0.0*
Ped / Bike / RTOR Volumes	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*33*	*0*	*0*	*119*
Lane Width	*12.0*	*12.0*		*12.0*	*12.0*		*12.0*	*12.0*	*12.0*	*12.0*	*12.0*	*12.0*
Parking / Grade / Parking	*N*	*0*	*N*	*N*	*0*	*N*	*N*	*0*	*N*	*N*	*0*	*N*
Parking Maneuvers, N_m												
Buses Stopping, N_B	*0*	*0*		*0*	*0*		*0*	*0*	*0*	*0*	*0*	*0*
Min. Time for Pedestrians, G_p	*3.2*			*3.2*			*3.2*			*3.2*		

Phasing	WB Only	Thru & RT	EB Only	04	SB Only	NS Perm	07	08
Timing	G = *10.0*	G = *25.0*	G = *15.0*	G = *0.0*	G = *10.0*	G = *20.0*	G = *0.0*	G = *0.0*
	Y = *0*	Y = *0*	Y = *5*	Y = *0*	Y = *0*	Y = *5*	Y = *0*	Y = *0*
Duration of Analysis, T = *1.00*						Cycle Length, C = *90.0*		

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Adjusted Flow Rate, v	*432*	*817*		*46*	*776*		*25*	*312*	*2*	*96*	*214*	*255*
Lane Group Capacity, c	*584*	*1602*		*201*	*1381*		*264*	*422*	*359*	*325*	*633*	*897*
v/c Ratio, X	*0.74*	*0.51*		*0.23*	*0.56*		*0.09*	*0.74*	*0.01*	*0.30*	*0.34*	*0.28*
Total Green Ratio, g/C	*0.17*	*0.44*		*0.11*	*0.39*		*0.22*	*0.22*	*0.22*	*0.39*	*0.33*	*0.56*
Uniform Delay, d_1	*35.6*	*18.0*		*36.5*	*21.5*		*27.8*	*32.6*	*27.3*	*19.1*	*22.5*	*10.6*
Progression Factor, PF	*1.000*	*1.000*		*1.000*	*1.000*		*1.000*	*1.000*	*1.000*	*1.000*	*1.000*	*1.000*
Delay Calibration, k	*0.50*	*0.50*		*0.50*	*0.50*		*0.50*	*0.50*	*0.50*	*0.50*	*0.50*	*0.50*
Incremental Delay, d_2	*8.6*	*1.2*		*2.7*	*1.7*		*0.7*	*11.8*	*0.0*	*2.3*	*1.5*	*0.8*
Initial Queue Delay, d_3	*0.0*	*0.0*		*0.0*	*0.0*		*0.0*	*0.0*	*0.0*	*0.0*	*0.0*	*0.0*
Control Delay	*44.2*	*19.1*		*39.1*	*23.2*		*28.5*	*44.4*	*27.3*	*21.4*	*24.0*	*11.4*
Lane Group LOS	*D*	*B*		*D*	*C*		*C*	*D*	*C*	*C*	*C*	*B*
Approach Delay	*27.8*			*24.1*			*43.1*			*17.8*		
Approach LOS	*C*			*C*			*D*			*B*		
Intersection Delay	*26.6*			X_C = *0.67*			Intersection LOS			*C*		

Hirsch/Green Transportation Consulting, Inc.
Critical Movement Analysis (CMA) Worksheet

Project Name	Pico/Sepulveda Mixed-Use Project		
Intersection Number	23	**Date**	December 7, 2012
Intersection Name	North/South: Stewart Street/28th Street East/West: Pico Boulevard		
Intersection Control	Signalized		
Analysis Period	AM Peak Hour		
Analysis Scenario	Existing (2009) With Project		

Approach Direction	Lane Type	No. of Lanes	Approach Volumes	Right-Turn on Red	Assigned Lane Volumes	Critical Moves
Northbound	Left	1	35		35	
	Left/Through	0				
	Through	1	249		249	249
	Through/Right	0				
	Right	1	45	45	0	
	Total Lanes	3				
Southbound	Left	1	117		117	117
	Left/Through	0				
	Through	0	138			
	Through/Right	1			236	
	Right	0	98	0		
	Total Lanes	2				
			Sum of North/South Critical Volumes			**366**
Eastbound	Left	1	126		126	126
	Left/Through	0				
	Through	1	810		433	
	Through/Right	1			433	
	Right	0	56	0		
	Total Lanes	3				
Westbound	Left	1	63		63	
	Left/Through	0				
	Through	1	905		564	564
	Through/Right	1			564	
	Right	0	224	0		
	Total Lanes	3				
			Sum of East/West Critical Volumes			**690**
			Total Intersection Critical Volumes			**1,056**
Number of Clearance Intervals	**2**		**Intersection Capacity**			**1,500**
			Base CMA			**0.704**
Signal Coordination	**None**		**Signal Coordination Adjustment**			**0.000**
			Final CMA			**0.704**
			Level of Service (LOS)			**C**

HCS+™ DETAILED REPORT

General Information		***Site Information***	
Analyst	*RRH*	Intersection	*23*
Agency or Co.	*Hirsch/Green*	Area Type	*All other areas*
Date Performed	*12/7/2012*	Jurisdiction	*City of Santa Monica*
Time Period	*AM Peak Hour*	Analysis Year	*Existing (2009) With Project*
		Project ID	*Pico/Sepulveda Mixed-Use Project*

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Number of Lanes, N_1	*1*	*2*	*0*	*1*	*2*	*0*	*1*	*1*	*1*	*1*	*1*	*0*
Lane Group	*L*	*TR*		*L*	*TR*		*L*	*T*	*R*	*L*	*TR*	
Volume, V (vph)	*126*	*810*	*56*	*63*	*905*	*224*	*35*	*249*	*45*	*117*	*138*	*98*
% Heavy Vehicles, %HV	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*
Peak-Hour Factor, PHF	*1.00*	*1.00*	*1.00*	*1.00*	*1.00*	*1.00*	*1.00*	*1.00*	*1.00*	*1.00*	*1.00*	*1.00*
Pretimed (P) or Actuated (A)	*P*	*P*	*P*	*P*	*P*	*P*	*P*	*P*	*P*	*P*	*P*	*P*
Start-up Lost Time, l_1	*2.0*	*2.0*		*2.0*	*2.0*		*2.0*	*2.0*	*2.0*	*2.0*	*2.0*	
Extension of Effective Green, e	*2.0*	*2.0*		*2.0*	*2.0*		*2.0*	*2.0*	*2.0*	*2.0*	*2.0*	
Arrival Type, AT	*3*	*3*		*3*	*3*		*3*	*3*	*3*	*3*	*3*	
Unit Extension, UE	*3.0*	*3.0*		*3.0*	*3.0*		*3.0*	*3.0*	*3.0*	*3.0*	*3.0*	
Filtering/Metering, I	*1.000*	*1.000*		*1.000*	*1.000*		*1.000*	*1.000*	*1.000*	*1.000*	*1.000*	
Initial Unmet Demand, Q_b	*0.0*	*0.0*		*0.0*	*0.0*		*0.0*	*0.0*	*0.0*	*0.0*	*0.0*	
Ped / Bike / RTOR Volumes	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*45*	*0*	*0*	*0*
Lane Width	*12.0*	*12.0*		*12.0*	*12.0*		*12.0*	*12.0*	*12.0*	*12.0*	*12.0*	
Parking / Grade / Parking	*N*	*0*	*N*	*N*	*0*	*N*	*N*	*0*	*N*	*N*	*0*	*N*
Parking Maneuvers, N_m												
Buses Stopping, N_B	*0*	*0*		*0*	*0*		*0*	*0*	*0*	*0*	*0*	
Min. Time for Pedestrians, G_p	*3.2*			*3.2*			*3.2*			*3.2*		

Phasing	EW Perm	02	03	04	NS Perm	06	07	08
Timing	G = *50.0*	G = *0.0*	G = *0.0*	G = *0.0*	G = *30.0*	G = *0.0*	G = *0.0*	G = *0.0*
	Y = *5*	Y = *0*	Y = *0*	Y = *0*	Y = *5*	Y = *0*	Y = *0*	Y = *0*
Duration of Analysis, T = *1.00*					Cycle Length, C = *90.0*			

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Adjusted Flow Rate, v	*126*	*866*		*63*	*1129*		*35*	*249*	*0*	*117*	*236*	
Lane Group Capacity, c	*188*	*1991*		*287*	*1950*		*335*	*633*	*538*	*324*	*594*	
v/c Ratio, X	*0.67*	*0.43*		*0.22*	*0.58*		*0.10*	*0.39*	*0.00*	*0.36*	*0.40*	
Total Green Ratio, g/C	*0.56*	*0.56*		*0.56*	*0.56*		*0.33*	*0.33*	*0.33*	*0.33*	*0.33*	
Uniform Delay, d_1	*14.2*	*11.7*		*10.1*	*13.1*		*20.7*	*23.0*	*20.0*	*22.7*	*23.1*	
Progression Factor, PF	*1.000*	*1.000*		*1.000*	*1.000*		*1.000*	*1.000*	*1.000*	*1.000*	*1.000*	
Delay Calibration, k	*0.50*	*0.50*		*0.50*	*0.50*		*0.50*	*0.50*	*0.50*	*0.50*	*0.50*	
Incremental Delay, d_2	*18.9*	*0.7*		*1.8*	*1.3*		*0.6*	*1.8*	*0.0*	*3.1*	*2.0*	
Initial Queue Delay, d_3	*0.0*	*0.0*		*0.0*	*0.0*		*0.0*	*0.0*	*0.0*	*0.0*	*0.0*	
Control Delay	*33.0*	*12.4*		*11.9*	*14.4*		*21.3*	*24.9*	*20.0*	*25.9*	*25.0*	
Lane Group LOS	*C*	*B*		*B*	*B*		*C*	*C*	*B*	*C*	*C*	
Approach Delay	*15.0*			*14.2*			*24.4*			*25.3*		
Approach LOS	*B*			*B*			*C*			*C*		
Intersection Delay	*16.9*			X_C = *0.57*			Intersection LOS			*B*		

Hirsch/Green Transportation Consulting, Inc.
Critical Movement Analysis (CMA) Worksheet

Project Name	Pico/Sepulveda Mixed-Use Project		
Intersection Number	24	**Date**	December 7, 2012
Intersection Name	North/South: I-10 EB Off-Ramp/34th Street East/West: Pico Boulevard		
Intersection Control	Signalized		
Analysis Period	AM Peak Hour		
Analysis Scenario	Existing (2009) With Project		

Approach Direction	Lane Type	No. of Lanes	Approach Volumes	Right-Turn on Red	Assigned Lane Volumes	Critical Moves
Northbound	Left	0	15			
	Left/Through	0				
	Left/Through/Right	1	0		58	58
	Through/Right	0				
	Right	0	43	0		
	Total Lanes	1				
Southbound	Left	1	603		322	322
	Left/Through	1			322	
	Through	0	40			
	Through/Right	0				
	Right	1	49	49	0	
	Total Lanes	3				
			Sum of North/South Critical Volumes			**380**
Eastbound	Left	0	0			
	Left/Through	0				
	Through	1	1,277		652	652
	Through/Right	1			652	
	Right	0	28	0		
	Total Lanes	2				
Westbound	Left	0	56			56
	Left/Through	1			330	
	Through	1	885		610	
	Through/Right	0				
	Right	0	0	0		
	Total Lanes	2				
			Sum of East/West Critical Volumes			**708**
			Total Intersection Critical Volumes			**1,088**
Number of Clearance Intervals	**3**		**Intersection Capacity**			**1,425**
			Base CMA			**0.764**
Signal Coordination	**None**		**Signal Coordination Adjustment**			**0.000**
			Final CMA			**0.764**
			Level of Service (LOS)			**C**

North/South Opposed Phasing

HCS+™ DETAILED REPORT

General Information		***Site Information***	
Analyst	*RRH*	Intersection	*24*
Agency or Co.	*Hirsch/Green*	Area Type	*All other areas*
Date Performed	*12/7/2012*	Jurisdiction	*City of Santa Monica*
Time Period	*AM Peak Hour*	Analysis Year	*Existing (2009) With Project*
		Project ID	*Pico/Sepulveda Mixed-Use Project*

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Number of Lanes, N_1		*2*	*0*	*0*	*2*		*0*	*1*	*0*	*1*	*1*	*1*
Lane Group		*TR*			*LT*			*LTR*		*L*	*LT*	*R*
Volume, V (vph)		*1277*	*28*	*56*	*885*		*15*	*0*	*43*	*603*	*40*	*49*
% Heavy Vehicles, %HV		*0*	*0*	*0*	*0*		*0*	*0*	*0*	*0*	*0*	*0*
Peak-Hour Factor, PHF		*1.00*	*1.00*	*1.00*	*1.00*		*1.00*	*1.00*	*1.00*	*1.00*	*1.00*	*1.00*
Pretimed (P) or Actuated (A)		*P*	*P*	*P*	*P*		*P*	*P*	*P*	*P*	*P*	*P*
Start-up Lost Time, l_1		*2.0*			*2.0*			*2.0*		*2.0*	*2.0*	*2.0*
Extension of Effective Green, e		*2.0*			*2.0*			*2.0*		*2.0*	*2.0*	*2.0*
Arrival Type, AT		*3*			*3*			*3*		*3*	*3*	*3*
Unit Extension, UE		*3.0*			*3.0*			*3.0*		*3.0*	*3.0*	*3.0*
Filtering/Metering, I		*1.000*			*1.000*			*1.000*		*1.000*	*1.000*	*1.000*
Initial Unmet Demand, Q_b		*0.0*			*0.0*			*0.0*		*0.0*	*0.0*	*0.0*
Ped / Bike / RTOR Volumes	*0*	*0*	*0*	*0*	*0*		*0*	*0*	*0*	*0*	*0*	*49*
Lane Width		*12.0*			*12.0*			*12.0*		*12.0*	*12.0*	*12.0*
Parking / Grade / Parking	*N*	*0*	*N*	*N*	*0*	*N*	*N*	*0*	*N*	*N*	*0*	*N*
Parking Maneuvers, N_m												
Buses Stopping, N_B		*0*			*0*			*0*		*0*	*0*	*0*
Min. Time for Pedestrians, G_p	*3.2*			*3.2*			*3.2*			*3.2*		

Phasing	EW Perm	02	03	04	NB Only	SB Only	07	08
Timing	G = *55.0*	G = *0.0*	G = *0.0*	G = *0.0*	G = *5.0*	G = *15.0*	G = *0.0*	G = *0.0*
	Y = *5*	Y = *0*	Y = *0*	Y = *0*	Y = *5*	Y = *5*	Y = *0*	Y = *0*

Duration of Analysis, T = *1.00* | Cycle Length, C = *90.0*

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Adjusted Flow Rate, v		*1305*			*941*			*58*		*603*	*40*	*0*
Lane Group Capacity, c		*2204*			*1687*			*94*		*301*	*317*	*269*
v/c Ratio, X		*0.59*			*0.56*			*0.62*		*2.00*	*0.13*	*0.00*
Total Green Ratio, g/C		*0.61*			*0.61*			*0.06*		*0.17*	*0.17*	*0.17*
Uniform Delay, d_1		*10.7*			*10.3*			*41.6*		*37.5*	*31.9*	*31.3*
Progression Factor, PF		*1.000*			*1.000*			*1.000*		*1.000*	*1.000*	*1.000*
Delay Calibration, k		*0.50*			*0.50*			*0.50*		*0.50*	*0.50*	*0.50*
Incremental Delay, d_2		*1.2*			*1.3*			*29.6*		*1818*	*0.8*	*0.0*
Initial Queue Delay, d_3		*0.0*			*0.0*			*0.0*		*0.0*	*0.0*	*0.0*
Control Delay		*11.8*			*11.7*			*71.1*		*1855*	*32.7*	*31.3*
Lane Group LOS		*B*			*B*			*E*		*F*	*C*	*C*
Approach Delay	*11.8*			*11.7*			*71.1*			*1742*		
Approach LOS	*B*			*B*			*E*			*F*		
Intersection Delay	*390.4*			X_C = *0.88*			Intersection LOS			*F*		

Hirsch/Green Transportation Consulting, Inc.
Critical Movement Analysis (CMA) Worksheet

Project Name	Pico/Sepulveda Mixed-Use Project		
Intersection Number	25	**Date**	December 7, 2012
Intersection Name	North/South: Centinela Avenue East/West: Pico Boulevard		
Intersection Control	Signalized		
Analysis Period	AM Peak Hour		
Analysis Scenario	Existing (2009) With Project		

Approach Direction	Lane Type	No. of Lanes	Approach Volumes	Right-Turn on Red	Assigned Lane Volumes	Critical Moves
Northbound	Left	1	61		61	
	Left/Through	0				
	Through	1	557		557	557
	Through/Right	0				
	Right	1	49	28	21	
	Total Lanes	3				
Southbound	Left	1	41		41	41
	Left/Through	0				
	Through	2	455		228	
	Through/Right	0				
	Right	1	215	136	79	
	Total Lanes	4				
			Sum of North/South Critical Volumes			**598**
Eastbound	Left	1	138		138	
	Left/Through	0				
	Through	1	1,003		702	702
	Through/Right	1			702	
	Right	0	402	0		
	Total Lanes	3				
Westbound	Left	1	57		57	57
	Left/Through	0				
	Through	1	668		486	
	Through/Right	1			486	
	Right	0	305	0		
	Total Lanes	3				
			Sum of East/West Critical Volumes			**759**
			Total Intersection Critical Volumes			**1,357**
Number of Clearance Intervals	**2**		**Intersection Capacity**			**1,500**
			Base CMA			**0.905**
Signal Coordination	**ATSAC**		**Signal Coordination Adjustment**			**-0.070**
			Final CMA			**0.835**
			Level of Service (LOS)			**D**

Hirsch/Green Transportation Consulting, Inc.
Critical Movement Analysis (CMA) Worksheet

Project Name	Pico/Sepulveda Mixed-Use Project		
Intersection Number	26	**Date**	December 7, 2012
Intersection Name	North/South: Bundy Drive East/West: Pico Boulevard		
Intersection Control	Signalized		
Analysis Period	AM Peak Hour		
Analysis Scenario	Existing (2009) With Project		

Approach Direction	Lane Type	No. of Lanes	Approach Volumes	Right-Turn on Red	Assigned Lane Volumes	Critical Moves
	Left	1	238		238	
	Left/Through	0				
Northbound	Through	2	1,586		793	793
	Through/Right	0				
	Right	1	235	56	179	
	Total Lanes	4				
	Left	1	73		73	73
	Left/Through	0				
Southbound	Through	2	1,138		569	
	Through/Right	0				
	Right	1	73	73	0	
	Total Lanes	4				
			Sum of North/South Critical Volumes			**866**
	Left	1	107		107	
	Left/Through	0				
Eastbound	Through	1	1,279		662	662
	Through/Right	1			662	
	Right	0	45	0		
	Total Lanes	3				
	Left	1	111		111	111
	Left/Through	0				
Westbound	Through	1	1,023		558	
	Through/Right	1			558	
	Right	0	93	0		
	Total Lanes	3				
			Sum of East/West Critical Volumes			**773**
			Total Intersection Critical Volumes			**1,639**
Number of Clearance Intervals	**4**		**Intersection Capacity**			**1,375**
			Base CMA			**1.192**
Signal Coordination	**ATSAC**		**Signal Coordination Adjustment**			**-0.070**
			Final CMA			**1.122**
			Level of Service (LOS)			**F**

Hirsch/Green Transportation Consulting, Inc.
Critical Movement Analysis (CMA) Worksheet

Project Name	Pico/Sepulveda Mixed-Use Project		
Intersection Number	27	**Date**	December 7, 2012
Intersection Name	North/South: Barrington Avenue East/West: Pico Boulevard		
Intersection Control	Signalized		
Analysis Period	AM Peak Hour		
Analysis Scenario	Existing (2009) With Project		

Approach Direction	Lane Type	No. of Lanes	Approach Volumes	Right-Turn on Red	Assigned Lane Volumes	Critical Moves
Northbound	Left	1	124		124	
	Left/Through	0				
	Through	1	1,126		586	586
	Through/Right	1			586	
	Right	0	47	0		
	Total Lanes	3				
Southbound	Left	1	137		137	137
	Left/Through	0				
	Through	1	539		306	
	Through/Right	1			306	
	Right	0	74	0		
	Total Lanes	3				
			Sum of North/South Critical Volumes			**723**
Eastbound	Left	1	140		140	
	Left/Through	0				
	Through	1	1,325		714	714
	Through/Right	1			714	
	Right	0	104	0		
	Total Lanes	3				
Westbound	Left	1	52		52	52
	Left/Through	0				
	Through	1	1,054		565	
	Through/Right	1			565	
	Right	0	76	0		
	Total Lanes	3				
			Sum of East/West Critical Volumes			**766**
			Total Intersection Critical Volumes			**1,489**
Number of Clearance Intervals	**2**		**Intersection Capacity**			**1,500**
			Base CMA			**0.993**
Signal Coordination	**ATSAC**		**Signal Coordination Adjustment**			**-0.070**
			Final CMA			**0.923**
			Level of Service (LOS)			**E**

Hirsch/Green Transportation Consulting, Inc.
Critical Movement Analysis (CMA) Worksheet

Project Name	Pico/Sepulveda Mixed-Use Project		
Intersection Number	28	**Date**	December 7, 2012
Intersection Name	North/South: Gateway Boulevard East/West: Pico Boulevard		
Intersection Control	Signalized		
Analysis Period	AM Peak Hour		
Analysis Scenario	Existing (2009) With Project		

Approach Direction	Lane Type	No. of Lanes	Approach Volumes	Right-Turn on Red	Assigned Lane Volumes	Critical Moves
Northbound	Left	0	0			
	Left/Through	0				
	Through	0	0			
	Through/Right	0				
	Right	2	1,336	88	624	624
	Total Lanes	2				
Southbound	Left	0	0			
	Left/Through	0				
	Through	0	0			
	Through/Right	0				
	Right	0	0	0		
	Total Lanes	0				
			Sum of North/South Critical Volumes			**624**
Eastbound	Left	0	0			
	Left/Through	0				
	Through	1	1,196		608	608
	Through/Right	1			608	
	Right	0	20	0		
	Total Lanes	2				
Westbound	Left	2	322		177	177
	Left/Through	0				
	Through	2	1,062		531	
	Through/Right	0				
	Right	0	0	0		
	Total Lanes	4				
			Sum of East/West Critical Volumes			**785**
			Total Intersection Critical Volumes			**1,409**
Number of Clearance Intervals	**3**		**Intersection Capacity**			**1,425**
			Base CMA			**0.989**
Signal Coordination	**ATSAC**		**Signal Coordination Adjustment**			**-0.070**
			Final CMA			**0.919**
			Level of Service (LOS)			**E**

Hirsch/Green Transportation Consulting, Inc.
Critical Movement Analysis (CMA) Worksheet

Project Name	Pico/Sepulveda Mixed-Use Project		
Intersection Number	29	**Date**	December 7, 2012
Intersection Name	North/South: Sawtelle Boulevard East/West: Pico Boulevard		
Intersection Control	Signalized		
Analysis Period	AM Peak Hour		
Analysis Scenario	Existing (2009) With Project		

Approach Direction	Lane Type	No. of Lanes	Approach Volumes	Right-Turn on Red	Assigned Lane Volumes	Critical Moves
Northbound	Left	1	218		218	
	Left/Through	0				
	Through	1	529		420	420
	Through/Right	1			420	
	Right	0	311	0		
	Total Lanes	3				
Southbound	Left	1	303		303	303
	Left/Through	0				
	Through	2	501		250	
	Through/Right	0				
	Right	1	89	89	0	
	Total Lanes	4				
			Sum of North/South Critical Volumes			**723**
Eastbound	Left	1	154		154	
	Left/Through	0				
	Through	2	1,915		677	677
	Through/Right	1			677	
	Right	0	115	0		
	Total Lanes	4				
Westbound	Left	1	181		181	181
	Left/Through	0				
	Through	2	1,017		401	
	Through/Right	1			401	
	Right	0	187	0		
	Total Lanes	4				
			Sum of East/West Critical Volumes			**858**
			Total Intersection Critical Volumes			**1,581**
Number of Clearance Intervals	**4**		**Intersection Capacity**			**1,375**
			Base CMA			**1.150**
Signal Coordination	**ATSAC + ATCS**		**Signal Coordination Adjustment**			**-0.100**
			Final CMA			**1.050**
			Level of Service (LOS)			**F**

Hirsch/Green Transportation Consulting, Inc.
Critical Movement Analysis (CMA) Worksheet

Project Name	Pico/Sepulveda Mixed-Use Project		
Intersection Number	30	**Date**	December 7, 2012
Intersection Name	North/South: Cotner Avenue East/West: Pico Boulevard		
Intersection Control	Signalized		
Analysis Period	AM Peak Hour		
Analysis Scenario	Existing (2009) With Project		

Approach Direction	Lane Type	No. of Lanes	Approach Volumes	Right-Turn on Red	Assigned Lane Volumes	Critical Moves
	Left	0	0			
	Left/Through	0				
Northbound	Through	0	0			
	Through/Right	0				
	Right	0	0	0		
	Total Lanes	0				
	Left	1	34		34	34
	Left/Through	0				
Southbound	Through	0	0			
	Through/Right	0				
	Right	1	51	51	0	
	Total Lanes	2				
			Sum of North/South Critical Volumes			**34**
	Left	1	484		484	484
	Left/Through	0				
Eastbound	Through	3	2,045		682	
	Through/Right	0				
	Right	0	0	0		
	Total Lanes	4				
	Left	0	0			
	Left/Through	0				
Westbound	Through	2	1,334		569	569
	Through/Right	1			569	
	Right	0	372	0		
	Total Lanes	3				
			Sum of East/West Critical Volumes			**1,053**
			Total Intersection Critical Volumes			**1,087**
Number of Clearance Intervals	**3**		**Intersection Capacity**			**1,425**
			Base CMA			**0.763**
Signal Coordination	**ATSAC + ATCS**		**Signal Coordination Adjustment**			**-0.100**
			Final CMA			**0.663**
			Level of Service (LOS)			**B**

Hirsch/Green Transportation Consulting, Inc.
Critical Movement Analysis (CMA) Worksheet

Project Name	Pico/Sepulveda Mixed-Use Project		
Intersection Number	31	**Date**	December 7, 2012
Intersection Name	North/South: Sepulveda Boulevard East/West: Pico Boulevard		
Intersection Control	Signalized		
Analysis Period	AM Peak Hour		
Analysis Scenario	Existing (2009) With Project		

Approach Direction	Lane Type	No. of Lanes	Approach Volumes	Right-Turn on Red	Assigned Lane Volumes	Critical Moves
Northbound	Left	1	363		363	
	Left/Through	0				
	Through	1	1,331		770	770
	Through/Right	1			770	
	Right	0	208	0		
	Total Lanes	3				
Southbound	Left	1	89		89	89
	Left/Through	0				
	Through	1	613		356	
	Through/Right	1			356	
	Right	0	100	0		
	Total Lanes	3				
			Sum of North/South Critical Volumes			**859**
Eastbound	Left	1	100		100	
	Left/Through	0				
	Through	3	1,634		545	545
	Through/Right	0				
	Right	1	129	129	0	
	Total Lanes	5				
Westbound	Left	1	159		159	159
	Left/Through	0				
	Through	2	1,313		477	
	Through/Right	1			477	
	Right	0	117	0		
	Total Lanes	4				
			Sum of East/West Critical Volumes			**704**
			Total Intersection Critical Volumes			**1,563**
Number of Clearance Intervals	**4**		**Intersection Capacity**			**1,375**
			Base CMA			**1.137**
Signal Coordination	**ATSAC + ATCS**		**Signal Coordination Adjustment**			**-0.100**
			Final CMA			**1.037**
			Level of Service (LOS)			**F**

EB Rt. Turn Overlap with NB Left

Hirsch/Green Transportation Consulting, Inc.
Critical Movement Analysis (CMA) Worksheet

Project Name	Pico/Sepulveda Mixed-Use Project		
Intersection Number	32	**Date**	December 7, 2012
Intersection Name	North/South: Veteran Avenue East/West: Pico Boulevard		
Intersection Control	Signalized		
Analysis Period	AM Peak Hour		
Analysis Scenario	Existing (2009) With Project		

Approach Direction	Lane Type	No. of Lanes	Approach Volumes	Right-Turn on Red	Assigned Lane Volumes	Critical Moves
Northbound	Left	0	22			
	Left/Through	0				
	Left/Through/Right	1	22		72	72
	Through/Right	0				
	Right	0	28	0		
	Total Lanes	1				
Southbound	Left	0	38			38
	Left/Through	1			53	
	Through	0	15			
	Through/Right	0				
	Right	1	44	44	0	
	Total Lanes	2				
			Sum of North/South Critical Volumes			**110**
Eastbound	Left	1	100		100	100
	Left/Through	0				
	Through	2	1,536		522	
	Through/Right	1			522	
	Right	0	29	0		
	Total Lanes	4				
Westbound	Left	1	16		16	
	Left/Through	0				
	Through	2	1,462		502	502
	Through/Right	1			502	
	Right	0	44	0		
	Total Lanes	4				
			Sum of East/West Critical Volumes			**602**
			Total Intersection Critical Volumes			**712**
Number of Clearance Intervals	**2**		**Intersection Capacity**			**1,500**
			Base CMA			**0.475**
Signal Coordination	**ATSAC + ATCS**		**Signal Coordination Adjustment**			**-0.100**
			Final CMA			**0.375**
			Level of Service (LOS)			**A**

Hirsch/Green Transportation Consulting, Inc.
Critical Movement Analysis (CMA) Worksheet

Project Name	Pico/Sepulveda Mixed-Use Project		
Intersection Number	33	**Date**	December 7, 2012
Intersection Name	North/South: Westwood Boulevard East/West: Pico Boulevard		
Intersection Control	Signalized		
Analysis Period	AM Peak Hour		
Analysis Scenario	Existing (2009) With Project		

Approach Direction	Lane Type	No. of Lanes	Approach Volumes	Right-Turn on Red	Assigned Lane Volumes	Critical Moves
Northbound	Left	1	146		146	
	Left/Through	0				
	Through	2	793		396	396
	Through/Right	0				
	Right	1	99	63	36	
	Total Lanes	4				
Southbound	Left	1	153		153	153
	Left/Through	0				
	Through	1	417		258	
	Through/Right	1			258	
	Right	0	99	0		
	Total Lanes	3				
			Sum of North/South Critical Volumes			**549**
Eastbound	Left	1	161		161	161
	Left/Through	0				
	Through	3	1,359		453	
	Through/Right	0				
	Right	1	65	65	0	
	Total Lanes	5				
Westbound	Left	1	63		63	
	Left/Through	0				
	Through	3	1,316		439	439
	Through/Right	0				
	Right	1	202	153	49	
	Total Lanes	5				
			Sum of East/West Critical Volumes			**600**
			Total Intersection Critical Volumes			**1,149**
Number of Clearance Intervals	**4**		**Intersection Capacity**			**1,375**
			Base CMA			**0.836**
Signal Coordination	**ATSAC + ATCS**		**Signal Coordination Adjustment**			**-0.100**
			Final CMA			**0.736**
			Level of Service (LOS)			**C**

NB Rt. Turn Overlap with WB Left

EB/WB Rt. Turn Overlap With NB/SB Lefts

Hirsch/Green Transportation Consulting, Inc.
Critical Movement Analysis (CMA) Worksheet

Project Name	Pico/Sepulveda Mixed-Use Project		
Intersection Number	34	**Date**	December 7, 2012
Intersection Name	North/South: Overland Avenue East/West: Pico Boulevard		
Intersection Control	Signalized		
Analysis Period	AM Peak Hour		
Analysis Scenario	Existing (2009) With Project		

Approach Direction	Lane Type	No. of Lanes	Approach Volumes	Right-Turn on Red	Assigned Lane Volumes	Critical Moves
Northbound	Left	2	279		153	
	Left/Through	0				
	Through	1	501		501	501
	Through/Right	0				
	Right	2	734	121	306	
	Total Lanes	5				
Southbound	Left	1	30		30	30
	Left/Through	0				
	Through	1	505		264	
	Through/Right	1			264	
	Right	0	22	0		
	Total Lanes	3				
			Sum of North/South Critical Volumes			**531**
Eastbound	Left	1	57		57	
	Left/Through	0				
	Through	2	1,490		543	543
	Through/Right	1			543	
	Right	0	140	0		
	Total Lanes	4				
Westbound	Left	2	440		242	242
	Left/Through	0				
	Through	2	1,235		618	
	Through/Right	0				
	Right	1	37	15	22	
	Total Lanes	5				
			Sum of East/West Critical Volumes			**785**
			Total Intersection Critical Volumes			**1,316**
Number of Clearance Intervals	**4**		**Intersection Capacity**			**1,375**
			Base CMA			**0.957**
Signal Coordination	**ATSAC + ATCS**		**Signal Coordination Adjustment**			**-0.100**
			Final CMA			**0.857**
			Level of Service (LOS)			**D**

Hirsch/Green Transportation Consulting, Inc.
Critical Movement Analysis (CMA) Worksheet

Project Name	Pico/Sepulveda Mixed-Use Project		
Intersection Number	35	**Date**	December 7, 2012
Intersection Name	North/South: Manning Avenue East/West: Pico Boulevard		
Intersection Control	Signalized		
Analysis Period	AM Peak Hour		
Analysis Scenario	Existing (2009) With Project		

Approach Direction	Lane Type	No. of Lanes	Approach Volumes	Right-Turn on Red	Assigned Lane Volumes	Critical Moves
Northbound	Left	0	74			
	Left/Through	0				
	Left/Through/Right	1	49		165	165
	Through/Right	0				
	Right	0	42	0		
	Total Lanes	1				
Southbound	Left	0	11			11
	Left/Through	0				
	Left/Through/Right	1	33		83	
	Through/Right	0				
	Right	0	39	0		
	Total Lanes	1				
			Sum of North/South Critical Volumes			**176**
Eastbound	Left	1	20		20	
	Left/Through	0				
	Through	2	2,423		820	820
	Through/Right	1			820	
	Right	0	38	0		
	Total Lanes	4				
Westbound	Left	1	49		49	49
	Left/Through	0				
	Through	2	1,398		699	
	Through/Right	0				
	Right	1	27	6	21	
	Total Lanes	4				
			Sum of East/West Critical Volumes			**869**
			Total Intersection Critical Volumes			**1,045**
Number of Clearance Intervals	**3**		**Intersection Capacity**			**1,425**
			Base CMA			**0.733**
Signal Coordination	**ATSAC + ATCS**		**Signal Coordination Adjustment**			**-0.100**
			Final CMA			**0.633**
			Level of Service (LOS)			**B**

Hirsch/Green Transportation Consulting, Inc.
Critical Movement Analysis (CMA) Worksheet

Project Name	Pico/Sepulveda Mixed-Use Project		
Intersection Number	36	**Date**	December 7, 2012
Intersection Name	North/South: Patricia Avenue East/West: Pico Boulevard		
Intersection Control	Signalized		
Analysis Period	AM Peak Hour		
Analysis Scenario	Existing (2009) With Project		

Approach Direction	Lane Type	No. of Lanes	Approach Volumes	Right-Turn on Red	Assigned Lane Volumes	Critical Moves
Northbound	Left	0	58			
	Left/Through	0				
	Left/Through/Right	1	53		308	308
	Through/Right	0				
	Right	0	197	0		
	Total Lanes	1				
Southbound	Left	0	7			7
	Left/Through	0				
	Left/Through/Right	1	46		80	
	Through/Right	0				
	Right	0	27	0		
	Total Lanes	1				
			Sum of North/South Critical Volumes			**315**
Eastbound	Left	1	28		28	
	Left/Through	0				
	Through	2	2,402		826	826
	Through/Right	1			826	
	Right	0	77	0		
	Total Lanes	4				
Westbound	Left	1	55		55	55
	Left/Through	0				
	Through	2	1,421		710	
	Through/Right	0				
	Right	1	12	4	8	
	Total Lanes	4				
			Sum of East/West Critical Volumes			**881**
			Total Intersection Critical Volumes			**1,196**
Number of Clearance Intervals	**3**		**Intersection Capacity**			**1,425**
			Base CMA			**0.839**
Signal Coordination	**ATSAC + ATCS**		**Signal Coordination Adjustment**			**-0.100**
			Final CMA			**0.739**
			Level of Service (LOS)			**C**

Hirsch/Green Transportation Consulting, Inc.
Critical Movement Analysis (CMA) Worksheet

Project Name	Pico/Sepulveda Mixed-Use Project		
Intersection Number	37	**Date**	December 7, 2012
Intersection Name	North/South: Beverly Glen Boulevard East/West: Pico Boulevard		
Intersection Control	Signalized		
Analysis Period	AM Peak Hour		
Analysis Scenario	Existing (2009) With Project		

Approach Direction	Lane Type	No. of Lanes	Approach Volumes	Right-Turn on Red	Assigned Lane Volumes	Critical Moves
Northbound	Left	0	0			
	Left/Through	0				
	Through	0	0			
	Through/Right	0				
	Right	0	0	0		
	Total Lanes	0				
Southbound	Left	2	234		129	129
	Left/Through	0				
	Through	0	0			
	Through/Right	0				
	Right	1	300	194	106	
	Total Lanes	3				
			Sum of North/South Critical Volumes			**129**
Eastbound	Left	1	388		388	388
	Left/Through	0				
	Through	3	1,838		613	
	Through/Right	0				
	Right	0	0	0		
	Total Lanes	4				
Westbound	Left	0	0			
	Left/Through	0				
	Through	2	1,272		533	533
	Through/Right	1			533	
	Right	0	327	0		
	Total Lanes	3				
			Sum of East/West Critical Volumes			**921**
			Total Intersection Critical Volumes			**1,050**
Number of Clearance Intervals	**3**		**Intersection Capacity**			**1,425**
			Base CMA			**0.737**
Signal Coordination	**ATSAC + ATCS**		**Signal Coordination Adjustment**			**-0.100**
			Final CMA			**0.637**
			Level of Service (LOS)			**B**

Hirsch/Green Transportation Consulting, Inc.
Critical Movement Analysis (CMA) Worksheet

Project Name	Pico/Sepulveda Mixed-Use Project		
Intersection Number	38	**Date**	December 7, 2012
Intersection Name	North/South: Motor Avenue/Fox Studios Driveway East/West: Pico Boulevard		
Intersection Control	Signalized		
Analysis Period	AM Peak Hour		
Analysis Scenario	Existing (2009) With Project		

Approach Direction	Lane Type	No. of Lanes	Approach Volumes	Right-Turn on Red	Assigned Lane Volumes	Critical Moves
Northbound	Left	1	273		273	
	Left/Through	0				
	Through	0	12			
	Through/Right	1			312	
	Right	1	819	206	312	312
	Total Lanes	3				
Southbound	Left	1	14		14	
	Left/Through	0				
	Through	0	0			
	Through/Right	1			30	30
	Right	0	30	0		
	Total Lanes	2				
			Sum of North/South Critical Volumes			**342**
Eastbound	Left	1	254		254	254
	Left/Through	0				
	Through	2	1,770		641	
	Through/Right	1			641	
	Right	0	154	0		
	Total Lanes	4				
Westbound	Left	1	206		206	
	Left/Through	0				
	Through	2	1,606		596	596
	Through/Right	1			596	
	Right	0	182	0		
	Total Lanes	4				
			Sum of East/West Critical Volumes			**850**
			Total Intersection Critical Volumes			**1,192**
Number of Clearance Intervals	**4**		**Intersection Capacity**			**1,375**
			Base CMA			**0.867**
Signal Coordination	**ATSAC + ATCS**		**Signal Coordination Adjustment**			**-0.100**
			Final CMA			**0.767**
			Level of Service (LOS)			**C**

North/South Opposed Phasing
NB Rt. Turn Overlap with WB Left

Hirsch/Green Transportation Consulting, Inc.
Critical Movement Analysis (CMA) Worksheet

Project Name	Pico/Sepulveda Mixed-Use Project		
Intersection Number	39	**Date**	December 7, 2012
Intersection Name	North/South: Avenue of the Stars East/West: Pico Boulevard		
Intersection Control	Signalized		
Analysis Period	AM Peak Hour		
Analysis Scenario	Existing (2009) With Project		

Approach Direction	Lane Type	No. of Lanes	Approach Volumes	Right-Turn on Red	Assigned Lane Volumes	Critical Moves
	Left	0	0			
	Left/Through	0				
Northbound	Through	0	0			
	Through/Right	0				
	Right	0	0	0		
	Total Lanes	0				
	Left	2	41		23	23
	Left/Through	0				
Southbound	Through	0	0			
	Through/Right	0				
	Right	2	295	295	0	
	Total Lanes	4				
			Sum of North/South Critical Volumes			**23**
	Left	3	1,122		411	411
	Left/Through	0				
Eastbound	Through	3	1,374		458	
	Through/Right	0				
	Right	0	0	0		
	Total Lanes	6				
	Left	0	0			
	Left/Through	0				
Westbound	Through	2	1,376		561	561
	Through/Right	1			561	
	Right	0	306	0		
	Total Lanes	3				
			Sum of East/West Critical Volumes			**972**
			Total Intersection Critical Volumes			**995**
Number of Clearance Intervals	**3**		**Intersection Capacity**			**1,425**
			Base CMA			**0.698**
Signal Coordination	**ATSAC + ATCS**		**Signal Coordination Adjustment**			**-0.100**
			Final CMA			**0.598**
			Level of Service (LOS)			**A**

Hirsch/Green Transportation Consulting, Inc.
Critical Movement Analysis (CMA) Worksheet

Project Name	Pico/Sepulveda Mixed-Use Project		
Intersection Number	40	**Date**	December 7, 2012
Intersection Name	North/South: Sepulveda Boulevard East/West: Exposition Boulevard		
Intersection Control	Signalized		
Analysis Period	AM Peak Hour		
Analysis Scenario	Existing (2009) With Project		

Approach Direction	Lane Type	No. of Lanes	Approach Volumes	Right-Turn on Red	Assigned Lane Volumes	Critical Moves
Northbound	Left	1	150		150	
	Left/Through	0				
	Through	1	1,659		840	840
	Through/Right	1			840	
	Right	0	20	0		
	Total Lanes	3				
Southbound	Left	1	36		36	36
	Left/Through	0				
	Through	1	810		434	
	Through/Right	1			434	
	Right	0	57	0		
	Total Lanes	3				
			Sum of North/South Critical Volumes			**876**
Eastbound	Left	0	163			163
	Left/Through	0				
	Left/Through/Right	1	130		390	
	Through/Right	0				
	Right	0	97	0		
	Total Lanes	1				
Westbound	Left	0	21			
	Left/Through	0				
	Left/Through/Right	1	103		265	265
	Through/Right	0				
	Right	0	141	0		
	Total Lanes	1				
			Sum of East/West Critical Volumes			**428**
			Total Intersection Critical Volumes			**1,304**
Number of Clearance Intervals	**2**		**Intersection Capacity**			**1,500**
			Base CMA			**0.869**
Signal Coordination	**ATSAC + ATCS**		**Signal Coordination Adjustment**			**-0.100**
			Final CMA			**0.769**
			Level of Service (LOS)			**C**

Hirsch/Green Transportation Consulting, Inc.
Critical Movement Analysis (CMA) Worksheet

Project Name	Pico/Sepulveda Mixed-Use Project		
Intersection Number	41	**Date**	December 7, 2012
Intersection Name	North/South: Barrington Avenue East/West: Gateway Boulevard		
Intersection Control	Signalized		
Analysis Period	AM Peak Hour		
Analysis Scenario	Existing (2009) With Project		

Approach Direction	Lane Type	No. of Lanes	Approach Volumes	Right-Turn on Red	Assigned Lane Volumes	Critical Moves
Northbound	Left	1	152		152	
	Left/Through	0				
	Through	1	1,020		664	664
	Through/Right	1			664	
	Right	0	308	0		
	Total Lanes	3				
Southbound	Left	1	55		55	55
	Left/Through	0				
	Through	1	501		301	
	Through/Right	1			301	
	Right	0	101	0		
	Total Lanes	3				
			Sum of North/South Critical Volumes			**719**
Eastbound	Left	1	202		202	
	Left/Through	0				
	Through	2	814		407	407
	Through/Right	0				
	Right	1	47	47	0	
	Total Lanes	4				
Westbound	Left	1	76		76	76
	Left/Through	0				
	Through	1	374		198	
	Through/Right	1			198	
	Right	0	22	0		
	Total Lanes	3				
			Sum of East/West Critical Volumes			**483**
			Total Intersection Critical Volumes			**1,202**
Number of Clearance Intervals	**2**		**Intersection Capacity**			**1,500**
			Base CMA			**0.801**
Signal Coordination	**ATSAC**		**Signal Coordination Adjustment**			**-0.070**
			Final CMA			**0.731**
			Level of Service (LOS)			**C**

Hirsch/Green Transportation Consulting, Inc.
Critical Movement Analysis (CMA) Worksheet

Project Name	Pico/Sepulveda Mixed-Use Project		
Intersection Number	42	**Date**	December 7, 2012
Intersection Name	North/South: Bundy Drive East/West: Ocean Park Boulevard		
Intersection Control	Signalized		
Analysis Period	AM Peak Hour		
Analysis Scenario	Existing (2009) With Project		

Approach Direction	Lane Type	No. of Lanes	Approach Volumes	Right-Turn on Red	Assigned Lane Volumes	Critical Moves
Northbound	Left	1	577		577	577
	Left/Through	0				
	Through	1	998		578	
	Through/Right	1			578	
	Right	0	158	0		
	Total Lanes	3				
Southbound	Left	1	32		32	
	Left/Through	0				
	Through	2	687		344	344
	Through/Right	0				
	Right	1	343	34	309	
	Total Lanes	4				
			Sum of North/South Critical Volumes			**921**
Eastbound	Left	1	67		67	67
	Left/Through	0				
	Through	2	304		152	
	Through/Right	0				
	Right	1	262	262	0	
	Total Lanes	4				
Westbound	Left	1	62		62	
	Left/Through	0				
	Through	1	539		282	282
	Through/Right	1			282	
	Right	0	25	0		
	Total Lanes	3				
			Sum of East/West Critical Volumes			**349**
			Total Intersection Critical Volumes			**1,270**
Number of Clearance Intervals	**3**		**Intersection Capacity**			**1,425**
			Base CMA			**0.891**
Signal Coordination	**ATSAC**		**Signal Coordination Adjustment**			**-0.070**
			Final CMA			**0.821**
			Level of Service (LOS)			**D**

EB Rt. Turn Overlap with NB Left

Hirsch/Green Transportation Consulting, Inc.
Critical Movement Analysis (CMA) Worksheet

Project Name	Pico/Sepulveda Mixed-Use Project		
Intersection Number	43	**Date**	December 7, 2012
Intersection Name	North/South: Barrington Avenue East/West: National Boulevard		
Intersection Control	Signalized		
Analysis Period	AM Peak Hour		
Analysis Scenario	Existing (2009) With Project		

Approach Direction	Lane Type	No. of Lanes	Approach Volumes	Right-Turn on Red	Assigned Lane Volumes	Critical Moves
Northbound	Left	1	97		97	
	Left/Through	0				
	Through	1	1,013		552	552
	Through/Right	1			552	
	Right	0	92	0		
	Total Lanes	3				
Southbound	Left	1	76		76	76
	Left/Through	0				
	Through	1	369		225	
	Through/Right	1			225	
	Right	0	81	0		
	Total Lanes	3				
			Sum of North/South Critical Volumes			**628**
Eastbound	Left	1	253		253	253
	Left/Through	0				
	Through	1	342		190	
	Through/Right	1			190	
	Right	0	38	0		
	Total Lanes	3				
Westbound	Left	1	57		57	
	Left/Through	0				
	Through	1	312		243	243
	Through/Right	1			243	
	Right	0	174	0		
	Total Lanes	3				
			Sum of East/West Critical Volumes			**496**
			Total Intersection Critical Volumes			**1,124**
Number of Clearance Intervals	**3**		**Intersection Capacity**			**1,425**
			Base CMA			**0.789**
Signal Coordination	**ATSAC**		**Signal Coordination Adjustment**			**-0.070**
			Final CMA			**0.719**
			Level of Service (LOS)			**C**

Hirsch/Green Transportation Consulting, Inc.
Critical Movement Analysis (CMA) Worksheet

Project Name	Pico/Sepulveda Mixed-Use Project		
Intersection Number	44	**Date**	December 7, 2012
Intersection Name	North/South: Sawtelle Boulevard East/West: National Boulevard		
Intersection Control	Signalized		
Analysis Period	AM Peak Hour		
Analysis Scenario	Existing (2009) With Project		

Approach Direction	Lane Type	No. of Lanes	Approach Volumes	Right-Turn on Red	Assigned Lane Volumes	Critical Moves
Northbound	Left	1	50		50	
	Left/Through	0				
	Through	0	510			
	Through/Right	1			562	562
	Right	0	52	0		
	Total Lanes	2				
Southbound	Left	1	340		340	340
	Left/Through	0				
	Through	1	375		212	
	Through/Right	1			212	
	Right	0	48	0		
	Total Lanes	3				
			Sum of North/South Critical Volumes			**902**
Eastbound	Left	1	176		176	176
	Left/Through	0				
	Through	1	634		634	
	Through/Right	0				
	Right	1	54	54	0	
	Total Lanes	3				
Westbound	Left	1	57		57	
	Left/Through	0				
	Through	0	510			
	Through/Right	1			777	777
	Right	0	267	0		
	Total Lanes	2				
			Sum of East/West Critical Volumes			**953**
			Total Intersection Critical Volumes			**1,855**
Number of Clearance Intervals	**3**		**Intersection Capacity**			**1,425**
			Base CMA			**1.302**
Signal Coordination	**ATSAC + ATCS**		**Signal Coordination Adjustment**			**-0.100**
Note: Intersection Currently Under Construction			**Final CMA**			**1.202**
			Level of Service (LOS)			**F**

Hirsch/Green Transportation Consulting, Inc.
Critical Movement Analysis (CMA) Worksheet

Project Name	Pico/Sepulveda Mixed-Use Project		
Intersection Number	45	**Date**	December 7, 2012
Intersection Name	North/South: I-405 SB On-Ramp East/West: National Boulevard		
Intersection Control	Signalized		
Analysis Period	AM Peak Hour		
Analysis Scenario	Existing (2009) With Project		

Approach Direction	Lane Type	No. of Lanes	Approach Volumes	Right-Turn on Red	Assigned Lane Volumes	Critical Moves
	Left	0	0			
	Left/Through	0				
Northbound	Through	0	0			
	Through/Right	0				
	Right	0	0	0		
	Total Lanes	0				
	Left	0	0			
	Left/Through	0				
Southbound	Through	0	0			
	Through/Right	0				
	Right	0	0	0		
	Total Lanes	0				
			Sum of North/South Critical Volumes			**0**
	Left	0	0			
	Left/Through	0				
Eastbound	Through	1	724		724	724
	Through/Right	0				
	Right	1	336	0	336	
	Total Lanes	2				
	Left	1	237		237	237
	Left/Through	0				
Westbound	Through	1	857		857	
	Through/Right	0				
	Right	0	0	0		
	Total Lanes	2				
			Sum of East/West Critical Volumes			**961**
			Total Intersection Critical Volumes			**961**
Number of Clearance Intervals	**2**		**Intersection Capacity**			**1,500**
			Base CMA			**0.641**
Signal Coordination	**ATSAC + ATCS**		**Signal Coordination Adjustment**			**-0.100**
Note: Intersection Currently Under Construction			**Final CMA**			**0.541**
			Level of Service (LOS)			**A**

Hirsch/Green Transportation Consulting, Inc.
Critical Movement Analysis (CMA) Worksheet

Project Name	Pico/Sepulveda Mixed-Use Project		
Intersection Number	46	**Date**	December 7, 2012
Intersection Name	North/South: I-405 NB Off-Ramp East/West: National Boulevard		
Intersection Control	Signalized		
Analysis Period	AM Peak Hour		
Analysis Scenario	Existing (2009) With Project		

Approach Direction	Lane Type	No. of Lanes	Approach Volumes	Right-Turn on Red	Assigned Lane Volumes	Critical Moves
Northbound	Left	0	173			
	Left/Through	0				
	Left/Through/Right	1	3		479	479
	Through/Right	0				
	Right	0	303	0		
	Total Lanes	1				
Southbound	Left	0	0			
	Left/Through	0				
	Left/Through/Right	1	0		16	
	Through/Right	0				
	Right	0	16	0		
	Total Lanes	1				
			Sum of North/South Critical Volumes			**479**
Eastbound	Left	0	0			
	Left/Through	0				
	Through	1	743		743	
	Through/Right	0				
	Right	0	0	0		
	Total Lanes	1				
Westbound	Left	0	0			
	Left/Through	0				
	Through	0	925			
	Through/Right	1			925	925
	Right	0	0	0		
	Total Lanes	1				
			Sum of East/West Critical Volumes			**925**
			Total Intersection Critical Volumes			**1,404**
Number of Clearance Intervals	**2**		**Intersection Capacity**			**1,500**
			Base CMA			**0.936**
Signal Coordination	**ATSAC + ATCS**		**Signal Coordination Adjustment**			**-0.100**
Note: Intersection Currently Under Construction			**Final CMA**			**0.836**
			Level of Service (LOS)			**D**

Hirsch/Green Transportation Consulting, Inc.
Critical Movement Analysis (CMA) Worksheet

Project Name	Pico/Sepulveda Mixed-Use Project		
Intersection Number	47	**Date**	December 7, 2012
Intersection Name	North/South: Sepulveda Boulevard East/West: National Boulevard		
Intersection Control	Signalized		
Analysis Period	AM Peak Hour		
Analysis Scenario	Existing (2009) With Project		

Approach Direction	Lane Type	No. of Lanes	Approach Volumes	Right-Turn on Red	Assigned Lane Volumes	Critical Moves
	Left	1	255		255	
	Left/Through	0				
Northbound	Through	1	1,428		824	824
	Through/Right	1			824	
	Right	0	221	0		
	Total Lanes	3				
	Left	1	136		136	136
	Left/Through	0				
Southbound	Through	1	617		428	
	Through/Right	1			428	
	Right	0	239	0		
	Total Lanes	3				
			Sum of North/South Critical Volumes			**960**
	Left	1	188		188	188
	Left/Through	0				
Eastbound	Through	1	794		426	
	Through/Right	1			426	
	Right	0	57	0		
	Total Lanes	3				
	Left	1	90		90	
	Left/Through	0				
Westbound	Through	0	448			
	Through/Right	1			548	548
	Right	0	100	0		
	Total Lanes	2				
			Sum of East/West Critical Volumes			**736**
			Total Intersection Critical Volumes			**1,696**
Number of Clearance Intervals	**4**		**Intersection Capacity**			**1,375**
			Base CMA			**1.233**
Signal Coordination	**ATSAC + ATCS**		**Signal Coordination Adjustment**			**-0.100**
Note: Intersection Currently Under Construction			**Final CMA**			**1.133**
			Level of Service (LOS)			**F**

Hirsch/Green Transportation Consulting, Inc.
Critical Movement Analysis (CMA) Worksheet

Project Name	Pico/Sepulveda Mixed-Use Project		
Intersection Number	48	**Date**	December 7, 2012
Intersection Name	North/South: Westwood Boulevard East/West: National Boulevard		
Intersection Control	Signalized		
Analysis Period	AM Peak Hour		
Analysis Scenario	Existing (2009) With Project		

Approach Direction	Lane Type	No. of Lanes	Approach Volumes	Right-Turn on Red	Assigned Lane Volumes	Critical Moves
Northbound	Left	1	231		231	231
	Left/Through	0				
	Through	1	639		335	
	Through/Right	1			335	
	Right	0	31	0		
	Total Lanes	3				
Southbound	Left	1	141		141	
	Left/Through	0				
	Through	1	286		286	286
	Through/Right	0				
	Right	1	75	75	0	
	Total Lanes	3				
			Sum of North/South Critical Volumes			**517**
Eastbound	Left	1	327		327	327
	Left/Through	0				
	Through	1	751		420	
	Through/Right	1			420	
	Right	0	89	0		
	Total Lanes	3				
Westbound	Left	1	7		7	
	Left/Through	0				
	Through	1	303		196	196
	Through/Right	1			196	
	Right	0	88	0		
	Total Lanes	3				
			Sum of East/West Critical Volumes			**523**
			Total Intersection Critical Volumes			**1,040**
Number of Clearance Intervals	**2**		**Intersection Capacity**			**1,500**
			Base CMA			**0.693**
Signal Coordination	**ATSAC + ATCS**		**Signal Coordination Adjustment**			**-0.100**
			Final CMA			**0.593**
			Level of Service (LOS)			**A**

Hirsch/Green Transportation Consulting, Inc.
Critical Movement Analysis (CMA) Worksheet

Project Name Pico/Sepulveda Mixed-Use Project
Intersection Number 49 **Date** December 7, 2012
Intersection Name North/South: Overland Avenue
East/West: I-10 WB On/Off-Ramps/National Boulevard
Intersection Control Signalized
Analysis Period AM Peak Hour
Analysis Scenario Existing (2009) With Project

Approach Direction	Lane Type	No. of Lanes	Approach Volumes	Right-Turn on Red	Assigned Lane Volumes	Critical Moves
Northbound	Left	1	27		27	
	Left/Through	0				
	Through	1	1,185		592	592
	Through/Right	1			592	
	Right	1	757	236	521	
	Total Lanes	4				
Southbound	Left	2	428		235	235
	Left/Through	0				
	Through	1	824		454	
	Through/Right	1			454	
	Right	0	84	0		
	Total Lanes	4				
			Sum of North/South Critical Volumes			**827**
Eastbound	Left	1	353		259	
	Left/Through	1			259	
	Through	0	165			
	Through/Right	0				
	Right	1	475	14	461	461
	Total Lanes	3				
Westbound	Left	0	64			
	Left/Through	1			157	
	Through	1	250		157	
	Through/Right	0				
	Right	1	354	118	236	236
	Total Lanes	3				
			Sum of East/West Critical Volumes			**697**
			Total Intersection Critical Volumes			**1,524**
Number of Clearance Intervals	**4**		**Intersection Capacity**			**1,375**
			Base CMA			**1.108**
Signal Coordination	**ATSAC + ATCS**		**Signal Coordination Adjustment**			**-0.100**
			Final CMA			**1.008**
			Level of Service (LOS)			**F**

NB Rt. Turn Overlap with WB Left

East/West Opposed Phasing

Hirsch/Green Transportation Consulting, Inc.
Critical Movement Analysis (CMA) Worksheet

Project Name	Pico/Sepulveda Mixed-Use Project		
Intersection Number	50	**Date**	December 7, 2012
Intersection Name	North/South: Overland Avenue East/West: I-10 EB On-Ramp		
Intersection Control	Signalized		
Analysis Period	AM Peak Hour		
Analysis Scenario	Existing (2009) With Project		

Approach Direction	Lane Type	No. of Lanes	Approach Volumes	Right-Turn on Red	Assigned Lane Volumes	Critical Moves
Northbound	Left	0	0			
	Left/Through	0				
	Through	2	1,935		740	740
	Through/Right	1			740	
	Right	0	286	0		
	Total Lanes	3				
Southbound	Left	2	816		449	449
	Left/Through	0				
	Through	2	554		277	
	Through/Right	0				
	Right	0	0	0		
	Total Lanes	4				
			Sum of North/South Critical Volumes			**1,189**
Eastbound	Left	0	0			
	Left/Through	0				
	Through	0	0			
	Through/Right	0				
	Right	0	0	0		
	Total Lanes	0				
Westbound	Left	0	0			
	Left/Through	0				
	Through	0	0			
	Through/Right	0				
	Right	0	0	0		
	Total Lanes	0				
			Sum of East/West Critical Volumes			**0**
			Total Intersection Critical Volumes			**1,189**
Number of Clearance Intervals	**2**		**Intersection Capacity**			**1,500**
			Base CMA			**0.793**
Signal Coordination	**ATSAC + ATCS**		**Signal Coordination Adjustment**			**-0.100**
			Final CMA			**0.693**
			Level of Service (LOS)			**B**

Hirsch/Green Transportation Consulting, Inc.
Critical Movement Analysis (CMA) Worksheet

Project Name	Pico/Sepulveda Mixed-Use Project		
Intersection Number	51	**Date**	December 7, 2012
Intersection Name	North/South: Sepulveda Boulevard East/West: Queensland Avenue		
Intersection Control	Signalized		
Analysis Period	AM Peak Hour		
Analysis Scenario	Existing (2009) With Project		

Approach Direction	Lane Type	No. of Lanes	Approach Volumes	Right-Turn on Red	Assigned Lane Volumes	Critical Moves
	Left	1	27		27	
	Left/Through	0				
Northbound	Through	1	1,748		897	897
	Through/Right	1			897	
	Right	0	46	0		
	Total Lanes	3				
	Left	1	23		23	23
	Left/Through	0				
Southbound	Through	1	650		348	
	Through/Right	1			348	
	Right	0	47	0		
	Total Lanes	3				
			Sum of North/South Critical Volumes			**920**
	Left	0	62			62
	Left/Through	0				
Eastbound	Left/Through/Right	1	35		132	
	Through/Right	0				
	Right	0	35	0		
	Total Lanes	1				
	Left	0	81			
	Left/Through	0				
Westbound	Left/Through/Right	1	16		161	161
	Through/Right	0				
	Right	0	64	0		
	Total Lanes	1				
			Sum of East/West Critical Volumes			**223**
			Total Intersection Critical Volumes			**1,143**
Number of Clearance Intervals	**2**		**Intersection Capacity**			**1,500**
			Base CMA			**0.762**
Signal Coordination	**ATSAC**		**Signal Coordination Adjustment**			**-0.070**
			Final CMA			**0.692**
			Level of Service (LOS)			**B**

Hirsch/Green Transportation Consulting, Inc.
Critical Movement Analysis (CMA) Worksheet

Project Name	Pico/Sepulveda Mixed-Use Project		
Intersection Number	52	**Date**	December 7, 2012
Intersection Name	North/South: Sawtelle Boulevard East/West: Palms Boulevard		
Intersection Control	Signalized		
Analysis Period	AM Peak Hour		
Analysis Scenario	Existing (2009) With Project		

Approach Direction	Lane Type	No. of Lanes	Approach Volumes	Right-Turn on Red	Assigned Lane Volumes	Critical Moves
	Left	1	76		76	
	Left/Through	0				
Northbound	Through	1	550		382	382
	Through/Right	1			382	
	Right	0	213	0		
	Total Lanes	3				
	Left	1	332		332	332
	Left/Through	0				
Southbound	Through	1	963		524	
	Through/Right	1			524	
	Right	0	85	0		
	Total Lanes	3				
			Sum of North/South Critical Volumes			**714**
	Left	1	50		50	50
	Left/Through	0				
Eastbound	Through	1	608		322	
	Through/Right	1			322	
	Right	0	35	0		
	Total Lanes	3				
	Left	1	151		151	
	Left/Through	0				
Westbound	Through	1	741		457	457
	Through/Right	1			457	
	Right	0	173	0		
	Total Lanes	3				
			Sum of East/West Critical Volumes			**507**
			Total Intersection Critical Volumes			**1,221**
Number of Clearance Intervals	**2**		**Intersection Capacity**			**1,500**
			Base CMA			**0.814**
Signal Coordination	**ATSAC**		**Signal Coordination Adjustment**			**-0.070**
			Final CMA			**0.744**
			Level of Service (LOS)			**C**

Hirsch/Green Transportation Consulting, Inc.
Critical Movement Analysis (CMA) Worksheet

Project Name	Pico/Sepulveda Mixed-Use Project		
Intersection Number	53	**Date**	December 7, 2012
Intersection Name	North/South: Sepulveda Boulevard East/West: Palms Boulevard		
Intersection Control	Signalized		
Analysis Period	AM Peak Hour		
Analysis Scenario	Existing (2009) With Project		

Approach Direction	Lane Type	No. of Lanes	Approach Volumes	Right-Turn on Red	Assigned Lane Volumes	Critical Moves
Northbound	Left	1	214		214	
	Left/Through	0				
	Through	1	1,344		750	750
	Through/Right	1			750	
	Right	0	157	0		
	Total Lanes	3				
Southbound	Left	1	69		69	69
	Left/Through	0				
	Through	1	551		358	
	Through/Right	1			358	
	Right	0	166	0		
	Total Lanes	3				
			Sum of North/South Critical Volumes			**819**
Eastbound	Left	1	111		111	111
	Left/Through	0				
	Through	1	718		381	
	Through/Right	1			381	
	Right	0	44	0		
	Total Lanes	3				
Westbound	Left	1	106		106	
	Left/Through	0				
	Through	1	747		747	747
	Through/Right	0				
	Right	1	301	34	267	
	Total Lanes	3				
			Sum of East/West Critical Volumes			**858**
			Total Intersection Critical Volumes			**1,677**
Number of Clearance Intervals	**2**		**Intersection Capacity**			**1,500**
			Base CMA			**1.118**
Signal Coordination	**ATSAC**		**Signal Coordination Adjustment**			**-0.070**
			Final CMA			**1.048**
			Level of Service (LOS)			**F**

Hirsch/Green Transportation Consulting, Inc.
Critical Movement Analysis (CMA) Worksheet

Project Name	Pico/Sepulveda Mixed-Use Project		
Intersection Number	54	**Date**	December 7, 2012
Intersection Name	North/South: Sepulveda Boulevard East/West: Venice Boulevard		
Intersection Control	Signalized		
Analysis Period	AM Peak Hour		
Analysis Scenario	Existing (2009) With Project		

Approach Direction	Lane Type	No. of Lanes	Approach Volumes	Right-Turn on Red	Assigned Lane Volumes	Critical Moves
Northbound	Left	1	90		90	
	Left/Through	0				
	Through	2	1,064		532	532
	Through/Right	0				
	Right	1	160	160	0	
	Total Lanes	4				
Southbound	Left	1	84		84	84
	Left/Through	0				
	Through	2	413		206	
	Through/Right	0				
	Right	1	185	126	59	
	Total Lanes	4				
			Sum of North/South Critical Volumes			**616**
Eastbound	Left	1	253		253	253
	Left/Through	0				
	Through	3	1,282		427	
	Through/Right	0				
	Right	1	409	205	204	
	Total Lanes	5				
Westbound	Left	1	185		185	
	Left/Through	0				
	Through	3	1,507		502	502
	Through/Right	0				
	Right	1	152	42	110	
	Total Lanes	5				
			Sum of East/West Critical Volumes			**755**
			Total Intersection Critical Volumes			**1,371**
Number of Clearance Intervals	**4**		**Intersection Capacity**			**1,375**
			Base CMA			**0.997**
Signal Coordination	**ATSAC**		**Signal Coordination Adjustment**			**-0.070**
			Final CMA			**0.927**
			Level of Service (LOS)			**E**

Existing (2009) With Modified Project

PM Peak Hour

Hirsch/Green Transportation Consulting, Inc.
Critical Movement Analysis (CMA) Worksheet

Project Name	Pico/Sepulveda Mixed-Use Project		
Intersection Number	1	**Date**	December 7, 2012
Intersection Name	North/South: Sepulveda Boulevard East/West: Wilshire Boulevard		
Intersection Control	Signalized		
Analysis Period	PM Peak Hour		
Analysis Scenario	Existing (2009) With Project		

Approach Direction	Lane Type	No. of Lanes	Approach Volumes	Right-Turn on Red	Assigned Lane Volumes	Critical Moves
	Left	1	224		224	
	Left/Through	0				
Northbound	Through	1	1,062		644	644
	Through/Right	1			644	
	Right	0	226	0		
	Total Lanes	3				
	Left	1	139		139	139
	Left/Through	0				
Southbound	Through	1	709		437	
	Through/Right	1			437	
	Right	0	165	0		
	Total Lanes	3				
			Sum of North/South Critical Volumes			**783**
	Left	1	27		27	27
	Left/Through	0				
Eastbound	Through	3	1,205		333	
	Through/Right	1			333	
	Right	0	126	0		
	Total Lanes	5				
	Left	2	312		172	
	Left/Through	0				
Westbound	Through	4	2,830		597	597
	Through/Right	1			597	
	Right	0	153	0		
	Total Lanes	7				
			Sum of East/West Critical Volumes			**624**
			Total Intersection Critical Volumes			**1,407**
Number of Clearance Intervals	**4**		**Intersection Capacity**			**1,375**
			Base CMA			**1.023**
Signal Coordination	**ATSAC + ATCS**		**Signal Coordination Adjustment**			**-0.100**
			Final CMA			**0.923**
			Level of Service (LOS)			**E**

Hirsch/Green Transportation Consulting, Inc.
Critical Movement Analysis (CMA) Worksheet

Project Name	Pico/Sepulveda Mixed-Use Project		
Intersection Number	2	**Date**	December 7, 2012
Intersection Name	North/South: Veteran Avenue East/West: Wilshire Boulevard		
Intersection Control	Signalized		
Analysis Period	PM Peak Hour		
Analysis Scenario	Existing (2009) With Project		

Approach Direction	Lane Type	No. of Lanes	Approach Volumes	Right-Turn on Red	Assigned Lane Volumes	Critical Moves
Northbound	Left	1	189		189	189
	Left/Through	0				
	Through	2	436		218	
	Through/Right	0				
	Right	1	124	50	74	
	Total Lanes	4				
Southbound	Left	1	140		140	
	Left/Through	0				
	Through	2	583		292	
	Through/Right	0				
	Right	2	789	86	352	352
	Total Lanes	5				
			Sum of North/South Critical Volumes			**541**
Eastbound	Left	2	311		171	171
	Left/Through	0				
	Through	3	2,135		564	
	Through/Right	1			564	
	Right	0	122	0		
	Total Lanes	6				
Westbound	Left	2	91		50	
	Left/Through	0				
	Through	3	2,510		637	637
	Through/Right	1			637	
	Right	0	39	0		
	Total Lanes	6				
			Sum of East/West Critical Volumes			**808**
			Total Intersection Critical Volumes			**1,349**
Number of Clearance Intervals	**4**		**Intersection Capacity**			**1,375**
			Base CMA			**0.981**
Signal Coordination	**ATSAC + ATCS**		**Signal Coordination Adjustment**			**-0.100**
			Final CMA			**0.881**
			Level of Service (LOS)			**D**

NB Rt. Turn Overlap with WB Left

Hirsch/Green Transportation Consulting, Inc.
Critical Movement Analysis (CMA) Worksheet

Project Name	Pico/Sepulveda Mixed-Use Project		
Intersection Number	3	**Date**	December 7, 2012
Intersection Name	North/South: Westwood Boulevard East/West: Wilshire Boulevard		
Intersection Control	Signalized		
Analysis Period	PM Peak Hour		
Analysis Scenario	Existing (2009) With Project		

Approach Direction	Lane Type	No. of Lanes	Approach Volumes	Right-Turn on Red	Assigned Lane Volumes	Critical Moves
	Left	1	158		158	158
	Left/Through	0				
Northbound	Through	2	448		209	
	Through/Right	1			209	
	Right	0	178	0		
	Total Lanes	4				
	Left	1	124		124	
	Left/Through	0				
Southbound	Through	2	540		190	190
	Through/Right	1			190	
	Right	1	318	96	190	
	Total Lanes	5				
			Sum of North/South Critical Volumes			**348**
	Left	2	229		126	
	Left/Through	0				
Eastbound	Through	3	1,742		488	488
	Through/Right	1			488	
	Right	0	211	0		
	Total Lanes	6				
	Left	2	240		132	132
	Left/Through	0				
Westbound	Through	3	1,622		428	
	Through/Right	1			428	
	Right	0	89	0		
	Total Lanes	6				
			Sum of East/West Critical Volumes			**620**
			Total Intersection Critical Volumes			**968**
Number of Clearance Intervals	**4**		**Intersection Capacity**			**1,030 ****
** Assumed 25% reduction in capacity due to downstream congestion			**Base CMA**			**0.940**
Signal Coordination	**ATSAC + ATCS**		**Signal Coordination Adjustment**			**-0.100**
			Final CMA			**0.840**
			Level of Service (LOS)			**D**

Hirsch/Green Transportation Consulting, Inc.
Critical Movement Analysis (CMA) Worksheet

Project Name	Pico/Sepulveda Mixed-Use Project		
Intersection Number	4	**Date**	December 7, 2012
Intersection Name	North/South: Sepulveda Boulevard East/West: Ohio Avenue		
Intersection Control	Signalized		
Analysis Period	PM Peak Hour		
Analysis Scenario	Existing (2009) With Project		

Approach Direction	Lane Type	No. of Lanes	Approach Volumes	Right-Turn on Red	Assigned Lane Volumes	Critical Moves
Northbound	Left	1	211		211	211
	Left/Through	0				
	Through	1	751		438	
	Through/Right	1			438	
	Right	0	125	0		
	Total Lanes	3				
Southbound	Left	1	80		80	
	Left/Through	0				
	Through	1	1,060		628	628
	Through/Right	1			628	
	Right	0	197	0		
	Total Lanes	3				
			Sum of North/South Critical Volumes			**839**
Eastbound	Left	1	164		164	164
	Left/Through	0				
	Through	0	523			
	Through/Right	1			585	
	Right	0	62	0		
	Total Lanes	2				
Westbound	Left	1	62		62	
	Left/Through	0				
	Through	0	637			
	Through/Right	1			664	664
	Right	0	27	0		
	Total Lanes	2				
			Sum of East/West Critical Volumes			**828**
			Total Intersection Critical Volumes			**1,667**
Number of Clearance Intervals	**2**		**Intersection Capacity**			**1,500**
			Base CMA			**1.111**
Signal Coordination	**ATSAC + ATCS**		**Signal Coordination Adjustment**			**-0.100**
			Final CMA			**1.011**
			Level of Service (LOS)			**F**

Hirsch/Green Transportation Consulting, Inc.
Critical Movement Analysis (CMA) Worksheet

Project Name	Pico/Sepulveda Mixed-Use Project		
Intersection Number	5	**Date**	December 7, 2012
Intersection Name	North/South: Barrington Avenue East/West: Santa Monica Boulevard		
Intersection Control	Signalized		
Analysis Period	PM Peak Hour		
Analysis Scenario	Existing (2009) With Project		

Approach Direction	Lane Type	No. of Lanes	Approach Volumes	Right-Turn on Red	Assigned Lane Volumes	Critical Moves
Northbound	Left	1	125		125	125
	Left/Through	0				
	Through	1	467		467	
	Through/Right	0				
	Right	1	95	50	45	
	Total Lanes	3				
Southbound	Left	1	107		107	
	Left/Through	0				
	Through	0	560			
	Through/Right	1			597	597
	Right	0	37	0		
	Total Lanes	2				
			Sum of North/South Critical Volumes			**722**
Eastbound	Left	1	71		71	
	Left/Through	0				
	Through	2	1,180		445	445
	Through/Right	1			445	
	Right	0	154	0		
	Total Lanes	4				
Westbound	Left	1	99		99	99
	Left/Through	0				
	Through	2	1,054		373	
	Through/Right	1			373	
	Right	0	66	0		
	Total Lanes	4				
			Sum of East/West Critical Volumes			**544**
			Total Intersection Critical Volumes			**1,266**
Number of Clearance Intervals	**2**		**Intersection Capacity**			**1,500**
			Base CMA			**0.844**
Signal Coordination	**ATSAC**		**Signal Coordination Adjustment**			**-0.070**
			Final CMA			**0.774**
			Level of Service (LOS)			**C**

Hirsch/Green Transportation Consulting, Inc.
Critical Movement Analysis (CMA) Worksheet

Project Name	Pico/Sepulveda Mixed-Use Project		
Intersection Number	6	**Date**	December 7, 2012
Intersection Name	North/South: Sepulveda Boulevard East/West: Santa Monica Boulevard		
Intersection Control	Signalized		
Analysis Period	PM Peak Hour		
Analysis Scenario	Existing (2009) With Project		

Approach Direction	Lane Type	No. of Lanes	Approach Volumes	Right-Turn on Red	Assigned Lane Volumes	Critical Moves
Northbound	Left	1	190		190	190
	Left/Through	0				
	Through	2	791		396	
	Through/Right	0				
	Right	1	255	195	60	
	Total Lanes	4				
Southbound	Left	1	176		176	
	Left/Through	0				
	Through	2	952		476	476
	Through/Right	0				
	Right	1	123	123	0	
	Total Lanes	4				
			Sum of North/South Critical Volumes			**666**
Eastbound	Left	1	146		146	
	Left/Through	0				
	Through	3	1,527		509	509
	Through/Right	0				
	Right	1	247	190	57	
	Total Lanes	5				
Westbound	Left	1	195		195	195
	Left/Through	0				
	Through	3	1,322		441	
	Through/Right	0				
	Right	1	136	135	1	
	Total Lanes	5				
			Sum of East/West Critical Volumes			**704**
			Total Intersection Critical Volumes			**1,370**
Number of Clearance Intervals	**4**		**Intersection Capacity**			**1,375**
			Base CMA			**0.996**
Signal Coordination	**ATSAC + ATCS**		**Signal Coordination Adjustment**			**-0.100**
			Final CMA			**0.896**
			Level of Service (LOS)			**D**

NB/SB Rt. Turn Overlap With WB/EB Lefts

EB Rt. Turn Overlap with NB Left

Hirsch/Green Transportation Consulting, Inc.
Critical Movement Analysis (CMA) Worksheet

Project Name	Pico/Sepulveda Mixed-Use Project		
Intersection Number	7	**Date**	December 7, 2012
Intersection Name	North/South: Westwood Boulevard East/West: Santa Monica Boulevard		
Intersection Control	Signalized		
Analysis Period	PM Peak Hour		
Analysis Scenario	Existing (2009) With Project		

Approach Direction	Lane Type	No. of Lanes	Approach Volumes	Right-Turn on Red	Assigned Lane Volumes	Critical Moves
Northbound	Left	1	114		114	114
	Left/Through	0				
	Through	1	872		488	
	Through/Right	1			488	
	Right	0	104	0		
	Total Lanes	3				
Southbound	Left	1	193		193	
	Left/Through	0				
	Through	2	1,175		588	588
	Through/Right	0				
	Right	1	141	100	41	
	Total Lanes	4				
			Sum of North/South Critical Volumes			**702**
Eastbound	Left	2	194		107	
	Left/Through	0				
	Through	3	1,778		593	593
	Through/Right	0				
	Right	1	110	57	53	
	Total Lanes	6				
Westbound	Left	2	220		121	121
	Left/Through	0				
	Through	3	1,546		515	
	Through/Right	0				
	Right	1	213	107	106	
	Total Lanes	6				
			Sum of East/West Critical Volumes			**714**
			Total Intersection Critical Volumes			**1,416**
Number of Clearance Intervals	**4**		**Intersection Capacity**			**1,375**
			Base CMA			**1.030**
Signal Coordination	**ATSAC + ATCS**		**Signal Coordination Adjustment**			**-0.100**
			Final CMA			**0.930**
			Level of Service (LOS)			**E**

Hirsch/Green Transportation Consulting, Inc.
Critical Movement Analysis (CMA) Worksheet

Project Name	Pico/Sepulveda Mixed-Use Project		
Intersection Number	8	**Date**	December 7, 2012
Intersection Name	North/South: Overland Avenue East/West: Santa Monica Boulevard		
Intersection Control	Signalized		
Analysis Period	PM Peak Hour		
Analysis Scenario	Existing (2009) With Project		

Approach Direction	Lane Type	No. of Lanes	Approach Volumes	Right-Turn on Red	Assigned Lane Volumes	Critical Moves
Northbound	Left	1	141		141	
	Left/Through	0				
	Through	0	0			
	Through/Right	0				
	Right	1	148	0	148	148
	Total Lanes	2				
Southbound	Left	0	0			
	Left/Through	0				
	Through	0	0			
	Through/Right	0				
	Right	0	0	0		
	Total Lanes	0				
			Sum of North/South Critical Volumes			**148**
Eastbound	Left	0	0			
	Left/Through	0				
	Through	2	1,389		488	488
	Through/Right	1			488	
	Right	0	76	0		
	Total Lanes	3				
Westbound	Left	1	312		312	312
	Left/Through	0				
	Through	3	1,638		546	
	Through/Right	0				
	Right	0	0	0		
	Total Lanes	4				
			Sum of East/West Critical Volumes			**800**
			Total Intersection Critical Volumes			**948**
Number of Clearance Intervals	**4**		**Intersection Capacity**			**1,375**
			Base CMA			**0.689**
Signal Coordination	**ATSAC + ATCS**		**Signal Coordination Adjustment**			**-0.100**
			Final CMA			**0.589**
			Level of Service (LOS)			**A**

Hirsch/Green Transportation Consulting, Inc.
Critical Movement Analysis (CMA) Worksheet

Project Name	Pico/Sepulveda Mixed-Use Project		
Intersection Number	9	**Date**	December 7, 2012
Intersection Name	North/South: Beverly Glen Boulevard East/West: Santa Monica Boulevard		
Intersection Control	Signalized		
Analysis Period	PM Peak Hour		
Analysis Scenario	Existing (2009) With Project		

Approach Direction	Lane Type	No. of Lanes	Approach Volumes	Right-Turn on Red	Assigned Lane Volumes	Critical Moves
Northbound	Left	2	97		53	53
	Left/Through	0				
	Through	2	602		301	
	Through/Right	0				
	Right	1	102	102	0	
	Total Lanes	5				
Southbound	Left	2	341		187	
	Left/Through	0				
	Through	2	968		484	484
	Through/Right	0				
	Right	1	104	50	54	
	Total Lanes	5				
			Sum of North/South Critical Volumes			**537**
Eastbound	Left	2	183		101	101
	Left/Through	0				
	Through	3	1,557		519	
	Through/Right	0				
	Right	1	163	26	137	
	Total Lanes	6				
Westbound	Left	2	247		136	
	Left/Through	0				
	Through	3	2,077		692	692
	Through/Right	0				
	Right	1	515	118	397	
	Total Lanes	6				
			Sum of East/West Critical Volumes			**793**
			Total Intersection Critical Volumes			**1,330**
Number of Clearance Intervals	**4**		**Intersection Capacity**			**1,375**
			Base CMA			**0.967**
Signal Coordination	**ATSAC + ATCS**		**Signal Coordination Adjustment**			**-0.100**
			Final CMA			**0.867**
			Level of Service (LOS)			**D**

Hirsch/Green Transportation Consulting, Inc.
Critical Movement Analysis (CMA) Worksheet

Project Name	Pico/Sepulveda Mixed-Use Project		
Intersection Number	10	**Date**	December 7, 2012
Intersection Name	North/South: Sepulveda Boulevard East/West: Nebraska Avenue		
Intersection Control	Signalized		
Analysis Period	PM Peak Hour		
Analysis Scenario	Existing (2009) With Project		

Approach Direction	Lane Type	No. of Lanes	Approach Volumes	Right-Turn on Red	Assigned Lane Volumes	Critical Moves
Northbound	Left	1	53		53	53
	Left/Through	0				
	Through	1	1,210		605	
	Through/Right	1			605	
	Right	0	0	0		
	Total Lanes	3				
Southbound	Left	1	0		0	
	Left/Through	0				
	Through	1	1,315		724	724
	Through/Right	1			724	
	Right	0	133	0		
	Total Lanes	3				
			Sum of North/South Critical Volumes			**777**
Eastbound	Left	0	68			
	Left/Through	1			68	68
	Through	0	0			
	Through/Right	0				
	Right	1	79	26	53	
	Total Lanes	2				
Westbound	Left	0	0			
	Left/Through	0				
	Through	0	0			
	Through/Right	0				
	Right	0	0	0		
	Total Lanes	0				
			Sum of East/West Critical Volumes			**68**
			Total Intersection Critical Volumes			**845**
Number of Clearance Intervals	**3**		**Intersection Capacity**			**1,425**
			Base CMA			**0.593**
Signal Coordination	**ATSAC + ATCS**		**Signal Coordination Adjustment**			**-0.100**
			Final CMA			**0.493**
			Level of Service (LOS)			**A**

Hirsch/Green Transportation Consulting, Inc.
Critical Movement Analysis (CMA) Worksheet

Project Name	Pico/Sepulveda Mixed-Use Project		
Intersection Number	11	**Date**	December 7, 2012
Intersection Name	North/South: Sepulveda Boulevard East/West: La Grange Avenue		
Intersection Control	Signalized		
Analysis Period	PM Peak Hour		
Analysis Scenario	Existing (2009) With Project		

Approach Direction	Lane Type	No. of Lanes	Approach Volumes	Right-Turn on Red	Assigned Lane Volumes	Critical Moves
Northbound	Left	1	59		59	59
	Left/Through	0				
	Through	1	1,125		585	
	Through/Right	1			585	
	Right	0	45	0		
	Total Lanes	3				
Southbound	Left	1	84		84	
	Left/Through	0				
	Through	1	1,289		676	676
	Through/Right	1			676	
	Right	0	63	0		
	Total Lanes	3				
			Sum of North/South Critical Volumes			**735**
Eastbound	Left	0	62			62
	Left/Through	0				
	Left/Through/Right	1	45		126	
	Through/Right	0				
	Right	0	19	0		
	Total Lanes	1				
Westbound	Left	0	49			
	Left/Through	0				
	Left/Through/Right	1	125		215	215
	Through/Right	0				
	Right	0	41	0		
	Total Lanes	1				
			Sum of East/West Critical Volumes			**277**
			Total Intersection Critical Volumes			**1,012**
Number of Clearance Intervals	**2**		**Intersection Capacity**			**1,500**
			Base CMA			**0.675**
Signal Coordination	**ATSAC + ATCS**		**Signal Coordination Adjustment**			**-0.100**
			Final CMA			**0.575**
			Level of Service (LOS)			**A**

Hirsch/Green Transportation Consulting, Inc.
Critical Movement Analysis (CMA) Worksheet

Project Name	Pico/Sepulveda Mixed-Use Project		
Intersection Number	12	**Date**	December 7, 2012
Intersection Name	North/South: Centinela Avenue (west intersection)		
	East/West: Olympic Boulevard		
Intersection Control	Signalized		
Analysis Period	PM Peak Hour		
Analysis Scenario	Existing (2009) With Project		

Approach Direction	Lane Type	No. of Lanes	Approach Volumes	Right-Turn on Red	Assigned Lane Volumes	Critical Moves
	Left	0	0			
	Left/Through	0				
Northbound	Through	0	0			
	Through/Right	0				
	Right	0	0	0		
	Total Lanes	0				
	Left	2	567		312	312
	Left/Through	0				
Southbound	Through	0	0			
	Through/Right	0				
	Right	1	88	88	0	
	Total Lanes	3				
			Sum of North/South Critical Volumes			**312**
	Left	1	43		43	
	Left/Through	0				
Eastbound	Through	2	1,829		914	914
	Through/Right	0				
	Right	0	0	0		
	Total Lanes	3				
	Left	1	0		0	
	Left/Through	0				
Westbound	Through	2	1,110		555	
	Through/Right	0				
	Right	1	843	156	687	
	Total Lanes	4				
			Sum of East/West Critical Volumes			**914**
			Total Intersection Critical Volumes			**1,226**
Number of Clearance Intervals	**2**		**Intersection Capacity**			**1,500**
			Base CMA			**0.817**
Signal Coordination	**ATSAC**		**Signal Coordination Adjustment**			**-0.070**
			Final CMA			**0.747**
			Level of Service (LOS)			**C**

Hirsch/Green Transportation Consulting, Inc.
Critical Movement Analysis (CMA) Worksheet

Project Name	Pico/Sepulveda Mixed-Use Project		
Intersection Number	13	**Date**	December 7, 2012
Intersection Name	North/South: Centinela Avenue (east intersection)		
	East/West: Olympic Boulevard		
Intersection Control	Signalized		
Analysis Period	PM Peak Hour		
Analysis Scenario	Existing (2009) With Project		

Approach Direction	Lane Type	No. of Lanes	Approach Volumes	Right-Turn on Red	Assigned Lane Volumes	Critical Moves
	Left	1	480		322	
	Left/Through	0				
Northbound	Left/Through/Right	1	0		322	322
	Through/Right	0				
	Right	0	163	0		
	Total Lanes	2				
	Left	0	0			
	Left/Through	0				
Southbound	Through	0	0			
	Through/Right	0				
	Right	0	0	0		
	Total Lanes	0				
			Sum of North/South Critical Volumes			**322**
	Left	1	0		0	
	Left/Through	0				
Eastbound	Through	3	1,545		515	
	Through/Right	0				
	Right	1	727	161	566	566
	Total Lanes	5				
	Left	1	139		139	139
	Left/Through	0				
Westbound	Through	2	1,450		483	
	Through/Right	1			483	
	Right	0	0	0		
	Total Lanes	4				
			Sum of East/West Critical Volumes			**705**
			Total Intersection Critical Volumes			**1,027**
Number of Clearance Intervals	**2**		**Intersection Capacity**			**1,500**
			Base CMA			**0.685**
Signal Coordination	**ATSAC**		**Signal Coordination Adjustment**			**-0.070**
			Final CMA			**0.615**
			Level of Service (LOS)			**B**

Hirsch/Green Transportation Consulting, Inc.
Critical Movement Analysis (CMA) Worksheet

Project Name	Pico/Sepulveda Mixed-Use Project		
Intersection Number	14	**Date**	December 7, 2012
Intersection Name	North/South: Bundy Drive East/West: Olympic Boulevard		
Intersection Control	Signalized		
Analysis Period	PM Peak Hour		
Analysis Scenario	Existing (2009) With Project		

Approach Direction	Lane Type	No. of Lanes	Approach Volumes	Right-Turn on Red	Assigned Lane Volumes	Critical Moves
Northbound	Left	1	145		145	
	Left/Through	0				
	Through	2	1,166		583	583
	Through/Right	0				
	Right	1	219	101	118	
	Total Lanes	4				
Southbound	Left	1	168		168	168
	Left/Through	0				
	Through	2	993		496	
	Through/Right	0				
	Right	1	116	88	28	
	Total Lanes	4				
			Sum of North/South Critical Volumes			**751**
Eastbound	Left	1	176		176	176
	Left/Through	0				
	Through	3	1,194		398	
	Through/Right	0				
	Right	1	243	128	115	
	Total Lanes	5				
Westbound	Left	2	271		149	
	Left/Through	0				
	Through	3	1,272		424	424
	Through/Right	0				
	Right	1	235	84	151	
	Total Lanes	6				
			Sum of East/West Critical Volumes			**600**
			Total Intersection Critical Volumes			**1,351**
Number of Clearance Intervals	**4**		**Intersection Capacity**			**1,375**
			Base CMA			**0.983**
Signal Coordination	**ATSAC**		**Signal Coordination Adjustment**			**-0.070**
			Final CMA			**0.913**
			Level of Service (LOS)			**E**

Hirsch/Green Transportation Consulting, Inc.
Critical Movement Analysis (CMA) Worksheet

Project Name	Pico/Sepulveda Mixed-Use Project		
Intersection Number	15	**Date**	December 7, 2012
Intersection Name	North/South: Barrington Avenue East/West: Olympic Boulevard		
Intersection Control	Signalized		
Analysis Period	PM Peak Hour		
Analysis Scenario	Existing (2009) With Project		

Approach Direction	Lane Type	No. of Lanes	Approach Volumes	Right-Turn on Red	Assigned Lane Volumes	Critical Moves
Northbound	Left	1	168		168	168
	Left/Through	0				
	Through	1	602		370	
	Through/Right	1			370	
	Right	0	138	0		
	Total Lanes	3				
Southbound	Left	1	191		191	
	Left/Through	0				
	Through	2	1,275		638	638
	Through/Right	0				
	Right	1	53	46	7	
	Total Lanes	4				
			Sum of North/South Critical Volumes			**806**
Eastbound	Left	1	93		93	93
	Left/Through	0				
	Through	2	1,311		522	
	Through/Right	1			522	
	Right	0	255	0		
	Total Lanes	4				
Westbound	Left	1	134		134	
	Left/Through	0				
	Through	3	1,726		575	575
	Through/Right	0				
	Right	1	113	113	0	
	Total Lanes	5				
			Sum of East/West Critical Volumes			**668**
			Total Intersection Critical Volumes			**1,474**
Number of Clearance Intervals	**3**		**Intersection Capacity**			**1,425**
			Base CMA			**1.034**
Signal Coordination	**ATSAC**		**Signal Coordination Adjustment**			**-0.070**
			Final CMA			**0.964**
			Level of Service (LOS)			**E**

Hirsch/Green Transportation Consulting, Inc.
Critical Movement Analysis (CMA) Worksheet

Project Name Pico/Sepulveda Mixed-Use Project
Intersection Number 16 **Date** December 7, 2012
Intersection Name North/South: Sawtelle Boulevard
East/West: Olympic Boulevard
Intersection Control Signalized
Analysis Period PM Peak Hour
Analysis Scenario Existing (2009) With Project

Approach Direction	Lane Type	No. of Lanes	Approach Volumes	Right-Turn on Red	Assigned Lane Volumes	Critical Moves
Northbound	Left	1	153		153	
	Left/Through	0				
	Through	1	500		500	500
	Through/Right	0				
	Right	1	462	336	126	
	Total Lanes	3				
Southbound	Left	1	388		388	388
	Left/Through	0				
	Through	1	671		360	
	Through/Right	1			360	
	Right	0	48	0		
	Total Lanes	3				
			Sum of North/South Critical Volumes			**888**
Eastbound	Left	1	7		7	
	Left/Through	0				
	Through	2	1,105		395	395
	Through/Right	1			395	
	Right	0	80	0		
	Total Lanes	4				
Westbound	Left	1	336		336	336
	Left/Through	0				
	Through	3	1,714		458	
	Through/Right	1			458	
	Right	0	117	0		
	Total Lanes	5				
			Sum of East/West Critical Volumes			**731**
			Total Intersection Critical Volumes			**1,619**
Number of Clearance Intervals	**4**		**Intersection Capacity**			**1,375**
			Base CMA			**1.177**
Signal Coordination	**ATSAC + ATCS**		**Signal Coordination Adjustment**			**-0.100**
			Final CMA			**1.077**
			Level of Service (LOS)			**F**

NB Rt. Turn Overlap with WB Left

Hirsch/Green Transportation Consulting, Inc.
Critical Movement Analysis (CMA) Worksheet

Project Name	Pico/Sepulveda Mixed-Use Project		
Intersection Number	17	**Date**	December 7, 2012
Intersection Name	North/South: Sepulveda Boulevard East/West: Olympic Boulevard		
Intersection Control	Signalized		
Analysis Period	PM Peak Hour		
Analysis Scenario	Existing (2009) With Project		

Approach Direction	Lane Type	No. of Lanes	Approach Volumes	Right-Turn on Red	Assigned Lane Volumes	Critical Moves
Northbound	Left	1	91		91	91
	Left/Through	0				
	Through	2	943		472	
	Through/Right	0				
	Right	1	157	157	0	
	Total Lanes	4				
Southbound	Left	1	67		67	
	Left/Through	0				
	Through	1	1,152		624	624
	Through/Right	1			624	
	Right	0	97	0		
	Total Lanes	3				
			Sum of North/South Critical Volumes			**715**
Eastbound	Left	1	77		77	
	Left/Through	0				
	Through	2	1,721		616	616
	Through/Right	1			616	
	Right	0	127	0		
	Total Lanes	4				
Westbound	Left	1	223		223	223
	Left/Through	0				
	Through	3	2,024		542	
	Through/Right	1			542	
	Right	0	146	0		
	Total Lanes	5				
			Sum of East/West Critical Volumes			**839**
			Total Intersection Critical Volumes			**1,554**
Number of Clearance Intervals	**3**		**Intersection Capacity**			**1,425**
			Base CMA			**1.091**
Signal Coordination	**ATSAC + ATCS**		**Signal Coordination Adjustment**			**-0.100**
			Final CMA			**0.991**
			Level of Service (LOS)			**E**

NB Rt. Turn Overlap with WB Left

Hirsch/Green Transportation Consulting, Inc.
Critical Movement Analysis (CMA) Worksheet

Project Name	Pico/Sepulveda Mixed-Use Project		
Intersection Number	18	**Date**	December 7, 2012
Intersection Name	North/South: Westwood Boulevard East/West: Olympic Boulevard		
Intersection Control	Signalized		
Analysis Period	PM Peak Hour		
Analysis Scenario	Existing (2009) With Project		

Approach Direction	Lane Type	No. of Lanes	Approach Volumes	Right-Turn on Red	Assigned Lane Volumes	Critical Moves
Northbound	Left	1	74		74	74
	Left/Through	0				
	Through	1	778		436	
	Through/Right	1			436	
	Right	0	95	0		
	Total Lanes	3				
Southbound	Left	1	229		229	
	Left/Through	0				
	Through	1	1,085		604	604
	Through/Right	1			604	
	Right	0	124	0		
	Total Lanes	3				
			Sum of North/South Critical Volumes			**678**
Eastbound	Left	1	50		50	
	Left/Through	0				
	Through	2	1,730		603	603
	Through/Right	1			603	
	Right	0	78	0		
	Total Lanes	4				
Westbound	Left	1	122		122	122
	Left/Through	0				
	Through	3	2,117		576	
	Through/Right	1			576	
	Right	0	189	0		
	Total Lanes	5				
			Sum of East/West Critical Volumes			**725**
			Total Intersection Critical Volumes			**1,403**
Number of Clearance Intervals	**4**		**Intersection Capacity**			**1,375**
			Base CMA			**1.020**
Signal Coordination	**ATSAC + ATCS**		**Signal Coordination Adjustment**			**-0.100**
			Final CMA			**0.920**
			Level of Service (LOS)			**E**

Hirsch/Green Transportation Consulting, Inc.
Critical Movement Analysis (CMA) Worksheet

Project Name	Pico/Sepulveda Mixed-Use Project		
Intersection Number	19	**Date**	December 7, 2012
Intersection Name	North/South: Overland Avenue East/West: Olympic Boulevard		
Intersection Control	Signalized		
Analysis Period	PM Peak Hour		
Analysis Scenario	Existing (2009) With Project		

Approach Direction	Lane Type	No. of Lanes	Approach Volumes	Right-Turn on Red	Assigned Lane Volumes	Critical Moves
	Left	1	70		70	
	Left/Through	0				
Northbound	Through	0	420			
	Through/Right	1			529	529
	Right	0	109	0		
	Total Lanes	2				
	Left	1	42		42	42
	Left/Through	0				
Southbound	Through	0	334			
	Through/Right	1			355	
	Right	0	21	0		
	Total Lanes	2				
			Sum of North/South Critical Volumes			**571**
	Left	1	39		39	
	Left/Through	0				
Eastbound	Through	2	1,648		570	570
	Through/Right	1			570	
	Right	0	62	0		
	Total Lanes	4				
	Left	1	223		223	223
	Left/Through	0				
Westbound	Through	3	2,429		612	
	Through/Right	1			612	
	Right	0	19	0		
	Total Lanes	5				
			Sum of East/West Critical Volumes			**793**
			Total Intersection Critical Volumes			**1,364**
Number of Clearance Intervals	**3**		**Intersection Capacity**			**1,425**
			Base CMA			**0.957**
Signal Coordination	**ATSAC + ATCS**		**Signal Coordination Adjustment**			**-0.100**
			Final CMA			**0.857**
			Level of Service (LOS)			**D**

Hirsch/Green Transportation Consulting, Inc.
Critical Movement Analysis (CMA) Worksheet

Project Name	Pico/Sepulveda Mixed-Use Project		
Intersection Number	20	**Date**	December 7, 2012
Intersection Name	North/South: Beverly Glen Boulevard East/West: Olympic Boulevard		
Intersection Control	Signalized		
Analysis Period	PM Peak Hour		
Analysis Scenario	Existing (2009) With Project		

Approach Direction	Lane Type	No. of Lanes	Approach Volumes	Right-Turn on Red	Assigned Lane Volumes	Critical Moves
	Left	1	99		99	99
	Left/Through	0				
Northbound	Through	2	421		210	
	Through/Right	0				
	Right	1	80	80	0	
	Total Lanes	4				
	Left	1	253		253	
	Left/Through	0				
Southbound	Through	2	740		370	370
	Through/Right	0				
	Right	1	170	83	87	
	Total Lanes	4				
			Sum of North/South Critical Volumes			**469**
	Left	1	166		166	166
	Left/Through	0				
Eastbound	Through	2	1,748		613	
	Through/Right	1			613	
	Right	0	91	0		
	Total Lanes	4				
	Left	1	125		125	
	Left/Through	0				
Westbound	Through	3	3,091		798	798
	Through/Right	1			798	
	Right	0	99	0		
	Total Lanes	5				
			Sum of East/West Critical Volumes			**964**
			Total Intersection Critical Volumes			**1,433**
Number of Clearance Intervals	**4**		**Intersection Capacity**			**1,375**
			Base CMA			**1.042**
Signal Coordination	**ATSAC + ATCS**		**Signal Coordination Adjustment**			**-0.100**
			Final CMA			**0.942**
			Level of Service (LOS)			**E**

Hirsch/Green Transportation Consulting, Inc.
Critical Movement Analysis (CMA) Worksheet

Project Name	Pico/Sepulveda Mixed-Use Project		
Intersection Number	21	**Date**	December 7, 2012
Intersection Name	North/South: Sawtelle Boulevard East/West: Tennessee Avenue/I-405 SB Off-Ramp		
Intersection Control	Signalized		
Analysis Period	PM Peak Hour		
Analysis Scenario	Existing (2009) With Project		

Approach Direction	Lane Type	No. of Lanes	Approach Volumes	Right-Turn on Red	Assigned Lane Volumes	Critical Moves
Northbound	Left	1	86		86	86
	Left/Through	0				
	Through	2	781		390	
	Through/Right	0				
	Right	0	0	0		
	Total Lanes	3				
Southbound	Left	0	0			
	Left/Through	0				
	Through	1	1,084		562	562
	Through/Right	1			562	
	Right	0	41	0		
	Total Lanes	2				
			Sum of North/South Critical Volumes			**648**
Eastbound	Left	1	259		259	
	Left/Through	0				
	Through	0	0			
	Through/Right	0				
	Right	1	365	43	322	322
	Total Lanes	2				
Westbound	Left	1	378		378	378
	Left/Through	0				
	Through	0	27			
	Through/Right	1			27	
	Right	1	109	109	0	
	Total Lanes	3				
			Sum of East/West Critical Volumes			**700**
			Total Intersection Critical Volumes			**1,348**
Number of Clearance Intervals	**3**		**Intersection Capacity**			**1,425**
			Base CMA			**0.946**
Signal Coordination	**ATSAC + ATCS**		**Signal Coordination Adjustment**			**-0.100**
			Final CMA			**0.846**
			Level of Service (LOS)			**D**

East/West Opposed Phasing

Hirsch/Green Transportation Consulting, Inc.
Critical Movement Analysis (CMA) Worksheet

Project Name	Pico/Sepulveda Mixed-Use Project		
Intersection Number	22	**Date**	December 7, 2012
Intersection Name	North/South: Cloverfield Boulevard East/West: Pico Boulevard		
Intersection Control	Signalized		
Analysis Period	PM Peak Hour		
Analysis Scenario	Existing (2009) With Project		

Approach Direction	Lane Type	No. of Lanes	Approach Volumes	Right-Turn on Red	Assigned Lane Volumes	Critical Moves
Northbound	Left	1	43		43	43
	Left/Through	0				
	Through	1	186		186	
	Through/Right	0				
	Right	1	32	22	10	
	Total Lanes	3				
Southbound	Left	1	306		306	
	Left/Through	0				
	Through	1	423		423	
	Through/Right	0				
	Right	1	578	126	452	452
	Total Lanes	3				
			Sum of North/South Critical Volumes			**495**
Eastbound	Left	2	307		169	
	Left/Through	0				
	Through	1	1,182		606	606
	Through/Right	1			606	
	Right	0	30	0		
	Total Lanes	4				
Westbound	Left	1	44		44	44
	Left/Through	0				
	Through	1	689		399	
	Through/Right	1			399	
	Right	0	109	0		
	Total Lanes	3				
			Sum of East/West Critical Volumes			**650**
			Total Intersection Critical Volumes			**1,145**
Number of Clearance Intervals	**3**		**Intersection Capacity**			**1,425**
			Base CMA			**0.804**
Signal Coordination	**None**		**Signal Coordination Adjustment**			**0.000**
			Final CMA			**0.804**
			Level of Service (LOS)			**D**

HCS+™ DETAILED REPORT

General Information		***Site Information***	
Analyst	*RRH*	Intersection	*22*
Agency or Co.	*Hirsch/Green*	Area Type	*All other areas*
Date Performed	*12/7/2012*	Jurisdiction	*City of Santa Monica*
Time Period	*PM Peak Hour*	Analysis Year	*Existing (2009) With Project*
		Project ID	*Pico/Sepulveda Mixed-Use Project*

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Number of Lanes, N_1	*2*	*2*	*0*	*1*	*2*	*0*	*1*	*1*	*1*	*1*	*1*	*1*
Lane Group	*L*	*TR*		*L*	*TR*		*L*	*T*	*R*	*L*	*T*	*R*
Volume, V (vph)	*307*	*1182*	*30*	*44*	*689*	*109*	*43*	*186*	*32*	*306*	*423*	*578*
% Heavy Vehicles, %HV	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*
Peak-Hour Factor, PHF	*1.00*	*1.00*	*1.00*	*1.00*	*1.00*	*1.00*	*1.00*	*1.00*	*1.00*	*1.00*	*1.00*	*1.00*
Pretimed (P) or Actuated (A)	*P*	*P*	*P*	*P*	*P*	*P*	*P*	*P*	*P*	*P*	*P*	*P*
Start-up Lost Time, l_1	*2.0*	*2.0*		*2.0*	*2.0*		*2.0*	*2.0*	*2.0*	*2.0*	*2.0*	*2.0*
Extension of Effective Green, e	*2.0*	*2.0*		*2.0*	*2.0*		*2.0*	*2.0*	*2.0*	*2.0*	*2.0*	*2.0*
Arrival Type, AT	*3*	*3*		*3*	*3*		*3*	*3*	*3*	*3*	*3*	*3*
Unit Extension, UE	*3.0*	*3.0*		*3.0*	*3.0*		*3.0*	*3.0*	*3.0*	*3.0*	*3.0*	*3.0*
Filtering/Metering, I	*1.000*	*1.000*		*1.000*	*1.000*		*1.000*	*1.000*	*1.000*	*1.000*	*1.000*	*1.000*
Initial Unmet Demand, Q_b	*0.0*	*0.0*		*0.0*	*0.0*		*0.0*	*0.0*	*0.0*	*0.0*	*0.0*	*0.0*
Ped / Bike / RTOR Volumes	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*20*	*0*	*0*	*124*
Lane Width	*12.0*	*12.0*		*12.0*	*12.0*		*12.0*	*12.0*	*12.0*	*12.0*	*12.0*	*12.0*
Parking / Grade / Parking	*N*	*0*	*N*	*N*	*0*	*N*	*N*	*0*	*N*	*N*	*0*	*N*
Parking Maneuvers, N_m												
Buses Stopping, N_B	*0*	*0*		*0*	*0*		*0*	*0*	*0*	*0*	*0*	*0*
Min. Time for Pedestrians, G_p	*3.2*			*3.2*			*3.2*			*3.2*		

Phasing	WB Only	Thru & RT	EB Only	04	SB Only	NS Perm	07	08
Timing	G = *10.0*	G = *25.0*	G = *15.0*	G = *0.0*	G = *10.0*	G = *20.0*	G = *0.0*	G = *0.0*
	Y = *0*	Y = *0*	Y = *5*	Y = *0*	Y = *0*	Y = *5*	Y = *0*	Y = *0*
Duration of Analysis, T = *1.00*						Cycle Length, C = *90.0*		

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Adjusted Flow Rate, v	*307*	*1212*		*44*	*798*		*43*	*186*	*12*	*306*	*423*	*454*
Lane Group Capacity, c	*584*	*1602*		*201*	*1378*		*180*	*422*	*359*	*430*	*633*	*897*
v/c Ratio, X	*0.53*	*0.76*		*0.22*	*0.58*		*0.24*	*0.44*	*0.03*	*0.71*	*0.67*	*0.51*
Total Green Ratio, g/C	*0.17*	*0.44*		*0.11*	*0.39*		*0.22*	*0.22*	*0.22*	*0.39*	*0.33*	*0.56*
Uniform Delay, d_1	*34.3*	*20.9*		*36.4*	*21.7*		*28.7*	*30.2*	*27.4*	*24.0*	*25.7*	*12.4*
Progression Factor, PF	*1.000*	*1.000*		*1.000*	*1.000*		*1.000*	*1.000*	*1.000*	*1.000*	*1.000*	*1.000*
Delay Calibration, k	*0.50*	*0.50*		*0.50*	*0.50*		*0.50*	*0.50*	*0.50*	*0.50*	*0.50*	*0.50*
Incremental Delay, d_2	*3.4*	*3.5*		*2.5*	*1.8*		*3.1*	*3.4*	*0.2*	*10.1*	*5.7*	*2.1*
Initial Queue Delay, d_3	*0.0*	*0.0*		*0.0*	*0.0*		*0.0*	*0.0*	*0.0*	*0.0*	*0.0*	*0.0*
Control Delay	*37.7*	*24.4*		*38.9*	*23.5*		*31.9*	*33.5*	*27.6*	*34.2*	*31.4*	*14.4*
Lane Group LOS	*D*	*C*		*D*	*C*		*C*	*C*	*C*	*C*	*C*	*B*
Approach Delay	*27.1*			*24.3*			*32.9*			*25.6*		
Approach LOS	*C*			*C*			*C*			*C*		
Intersection Delay	*26.4*			X_C = *0.67*			Intersection LOS			*C*		

Hirsch/Green Transportation Consulting, Inc.
Critical Movement Analysis (CMA) Worksheet

Project Name	Pico/Sepulveda Mixed-Use Project		
Intersection Number	23	**Date**	December 7, 2012
Intersection Name	North/South: Stewart Street/28th Street East/West: Pico Boulevard		
Intersection Control	Signalized		
Analysis Period	PM Peak Hour		
Analysis Scenario	Existing (2009) With Project		

Approach Direction	Lane Type	No. of Lanes	Approach Volumes	Right-Turn on Red	Assigned Lane Volumes	Critical Moves
Northbound	Left	1	52		52	52
	Left/Through	0				
	Through	1	148		148	
	Through/Right	0				
	Right	1	35	28	7	
	Total Lanes	3				
Southbound	Left	1	207		207	
	Left/Through	0				
	Through	0	243			
	Through/Right	1			344	344
	Right	0	101	0		
	Total Lanes	2				
			Sum of North/South Critical Volumes			**396**
Eastbound	Left	1	101		101	
	Left/Through	0				
	Through	1	1,216		623	623
	Through/Right	1			623	
	Right	0	30	0		
	Total Lanes	3				
Westbound	Left	1	57		57	57
	Left/Through	0				
	Through	1	774		440	
	Through/Right	1			440	
	Right	0	107	0		
	Total Lanes	3				
			Sum of East/West Critical Volumes			**680**
			Total Intersection Critical Volumes			**1,076**
Number of Clearance Intervals	**2**		**Intersection Capacity**			**1,500**
			Base CMA			**0.717**
Signal Coordination	**None**		**Signal Coordination Adjustment**			**0.000**
			Final CMA			**0.717**
			Level of Service (LOS)			**C**

HCS+™ DETAILED REPORT

General Information		***Site Information***	
Analyst	*RRH*	Intersection	*23*
Agency or Co.	*Hirsch/Green*	Area Type	*All other areas*
Date Performed	*12/7/2012*	Jurisdiction	*City of Santa Monica*
Time Period	*PM Peak Hour*	Analysis Year	*Existing (2009) With Project*
		Project ID	*Pico/Sepulveda Mixed-Use Project*

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Number of Lanes, N_1	*1*	*2*	*0*	*1*	*2*	*0*	*1*	*1*	*1*	*1*	*1*	*0*
Lane Group	*L*	*TR*		*L*	*TR*		*L*	*T*	*R*	*L*	*TR*	
Volume, V (vph)	*101*	*1216*	*30*	*57*	*774*	*107*	*52*	*148*	*35*	*207*	*243*	*101*
% Heavy Vehicles, %HV	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*
Peak-Hour Factor, PHF	*1.00*	*1.00*	*1.00*	*1.00*	*1.00*	*1.00*	*1.00*	*1.00*	*1.00*	*1.00*	*1.00*	*1.00*
Pretimed (P) or Actuated (A)	*P*	*P*	*P*	*P*	*P*	*P*	*P*	*P*	*P*	*P*	*P*	*P*
Start-up Lost Time, l_1	*2.0*	*2.0*		*2.0*	*2.0*		*2.0*	*2.0*	*2.0*	*2.0*	*2.0*	
Extension of Effective Green, e	*2.0*	*2.0*		*2.0*	*2.0*		*2.0*	*2.0*	*2.0*	*2.0*	*2.0*	
Arrival Type, AT	*3*	*3*		*3*	*3*		*3*	*3*	*3*	*3*	*3*	
Unit Extension, UE	*3.0*	*3.0*		*3.0*	*3.0*		*3.0*	*3.0*	*3.0*	*3.0*	*3.0*	
Filtering/Metering, I	*1.000*	*1.000*		*1.000*	*1.000*		*1.000*	*1.000*	*1.000*	*1.000*	*1.000*	
Initial Unmet Demand, Q_b	*0.0*	*0.0*		*0.0*	*0.0*		*0.0*	*0.0*	*0.0*	*0.0*	*0.0*	
Ped / Bike / RTOR Volumes	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*28*	*0*	*0*	*0*
Lane Width	*12.0*	*12.0*		*12.0*	*12.0*		*12.0*	*12.0*	*12.0*	*12.0*	*12.0*	
Parking / Grade / Parking	*N*	*0*	*N*	*N*	*0*	*N*	*N*	*0*	*N*	*N*	*0*	*N*
Parking Maneuvers, N_m												
Buses Stopping, N_B	*0*	*0*		*0*	*0*		*0*	*0*	*0*	*0*	*0*	
Min. Time for Pedestrians, G_p	*3.2*			*3.2*			*3.2*			*3.2*		

Phasing	EW Perm	02	03	04	NS Perm	06	07	08
Timing	G = *50.0*	G = *0.0*	G = *0.0*	G = *0.0*	G = *30.0*	G = *0.0*	G = *0.0*	G = *0.0*
	Y = *5*	Y = *0*	Y = *0*	Y = *0*	Y = *5*	Y = *0*	Y = *0*	Y = *0*
Duration of Analysis, T = *1.00*					Cycle Length, C = *90.0*			

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Adjusted Flow Rate, v	*101*	*1246*		*57*	*881*		*52*	*148*	*7*	*207*	*344*	
Lane Group Capacity, c	*281*	*2003*		*153*	*1973*		*244*	*633*	*538*	*415*	*605*	
v/c Ratio, X	*0.36*	*0.62*		*0.37*	*0.45*		*0.21*	*0.23*	*0.01*	*0.50*	*0.57*	
Total Green Ratio, g/C	*0.56*	*0.56*		*0.56*	*0.56*		*0.33*	*0.33*	*0.33*	*0.33*	*0.33*	
Uniform Delay, d_1	*11.1*	*13.6*		*11.2*	*11.8*		*21.5*	*21.7*	*20.1*	*24.0*	*24.7*	
Progression Factor, PF	*1.000*	*1.000*		*1.000*	*1.000*		*1.000*	*1.000*	*1.000*	*1.000*	*1.000*	
Delay Calibration, k	*0.50*	*0.50*		*0.50*	*0.50*		*0.50*	*0.50*	*0.50*	*0.50*	*0.50*	
Incremental Delay, d_2	*3.6*	*1.5*		*6.9*	*0.7*		*2.0*	*0.9*	*0.0*	*4.3*	*3.9*	
Initial Queue Delay, d_3	*0.0*	*0.0*		*0.0*	*0.0*		*0.0*	*0.0*	*0.0*	*0.0*	*0.0*	
Control Delay	*14.7*	*15.1*		*18.2*	*12.6*		*23.5*	*22.6*	*20.1*	*28.3*	*28.6*	
Lane Group LOS	*B*	*B*		*B*	*B*		*C*	*C*	*C*	*C*	*C*	
Approach Delay	*15.0*			*12.9*			*22.7*			*28.5*		
Approach LOS	*B*			*B*			*C*			*C*		
Intersection Delay	*17.3*			X_C = *0.60*			Intersection LOS			*B*		

Hirsch/Green Transportation Consulting, Inc.
Critical Movement Analysis (CMA) Worksheet

Project Name	Pico/Sepulveda Mixed-Use Project		
Intersection Number	24	**Date**	December 7, 2012
Intersection Name	North/South: I-10 EB Off-Ramp/34th Street East/West: Pico Boulevard		
Intersection Control	Signalized		
Analysis Period	PM Peak Hour		
Analysis Scenario	Existing (2009) With Project		

Approach Direction	Lane Type	No. of Lanes	Approach Volumes	Right-Turn on Red	Assigned Lane Volumes	Critical Moves
Northbound	Left	0	9			
	Left/Through	0				
	Left/Through/Right	1	0		59	59
	Through/Right	0				
	Right	0	50	0		
	Total Lanes	1				
Southbound	Left	1	205		120	120
	Left/Through	1			120	
	Through	0	34			
	Through/Right	0				
	Right	1	34	34	0	
	Total Lanes	3				
			Sum of North/South Critical Volumes			**179**
Eastbound	Left	0	0			
	Left/Through	0				
	Through	1	1,756		892	892
	Through/Right	1			892	
	Right	0	28	0		
	Total Lanes	2				
Westbound	Left	0	29			29
	Left/Through	1			374	
	Through	1	865		520	
	Through/Right	0				
	Right	0	0	0		
	Total Lanes	2				
			Sum of East/West Critical Volumes			**920**
			Total Intersection Critical Volumes			**1,099**
Number of Clearance Intervals	**3**		**Intersection Capacity**			**1,425**
			Base CMA			**0.771**
Signal Coordination	**None**		**Signal Coordination Adjustment**			**0.000**
			Final CMA			**0.771**
			Level of Service (LOS)			**C**

North/South Opposed Phasing

HCS+™ DETAILED REPORT

General Information		***Site Information***	
Analyst	*RRH*	Intersection	*24*
Agency or Co.	*Hirsch/Green*	Area Type	*All other areas*
Date Performed	*12/7/2012*	Jurisdiction	*City of Santa Monica*
Time Period	*PM Peak Hour*	Analysis Year	*Existing (2009) With Project*
		Project ID	*Pico/Sepulveda Mixed-Use Project*

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Number of Lanes, N_1		*2*	*0*	*0*	*2*		*0*	*1*	*0*	*1*	*1*	*1*
Lane Group		*TR*			*LT*			*LTR*		*L*	*LT*	*R*
Volume, V (vph)		*1756*	*28*	*29*	*865*		*9*	*0*	*50*	*205*	*34*	*34*
% Heavy Vehicles, %HV		*0*	*0*	*0*	*0*		*0*	*0*	*0*	*0*	*0*	*0*
Peak-Hour Factor, PHF		*1.00*	*1.00*	*1.00*	*1.00*		*1.00*	*1.00*	*1.00*	*1.00*	*1.00*	*1.00*
Pretimed (P) or Actuated (A)		*P*	*P*	*P*	*P*		*P*	*P*	*P*	*P*	*P*	*P*
Start-up Lost Time, l_1		*2.0*			*2.0*			*2.0*		*2.0*	*2.0*	*2.0*
Extension of Effective Green, e		*2.0*			*2.0*			*2.0*		*2.0*	*2.0*	*2.0*
Arrival Type, AT		*3*			*3*			*3*		*3*	*3*	*3*
Unit Extension, UE		*3.0*			*3.0*			*3.0*		*3.0*	*3.0*	*3.0*
Filtering/Metering, I		*1.000*			*1.000*			*1.000*		*1.000*	*1.000*	*1.000*
Initial Unmet Demand, Q_b		*0.0*			*0.0*			*0.0*		*0.0*	*0.0*	*0.0*
Ped / Bike / RTOR Volumes	*0*	*0*	*0*	*0*	*0*		*0*	*0*	*0*	*0*	*0*	*34*
Lane Width		*12.0*			*12.0*			*12.0*		*12.0*	*12.0*	*12.0*
Parking / Grade / Parking	*N*	*0*	*N*	*N*	*0*	*N*	*N*	*0*	*N*	*N*	*0*	*N*
Parking Maneuvers, N_m												
Buses Stopping, N_B		*0*			*0*			*0*		*0*	*0*	*0*
Min. Time for Pedestrians, G_p	*3.2*			*3.2*			*3.2*			*3.2*		

Phasing	EW Perm	02	03	04	NB Only	SB Only	07	08
Timing	G = *55.0*	G = *0.0*	G = *0.0*	G = *0.0*	G = *5.0*	G = *15.0*	G = *0.0*	G = *0.0*
	Y = *5*	Y = *0*	Y = *0*	Y = *0*	Y = *5*	Y = *5*	Y = *0*	Y = *0*

Duration of Analysis, T = *1.00* | Cycle Length, C = *90.0*

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Adjusted Flow Rate, v		*1784*			*894*			*59*		*205*	*34*	*0*
Lane Group Capacity, c		*2205*			*1714*			*93*		*301*	*317*	*269*
v/c Ratio, X		*0.81*			*0.52*			*0.63*		*0.68*	*0.11*	*0.00*
Total Green Ratio, g/C		*0.61*			*0.61*			*0.06*		*0.17*	*0.17*	*0.17*
Uniform Delay, d_1		*13.5*			*10.0*			*41.6*		*35.3*	*31.8*	*31.3*
Progression Factor, PF		*1.000*			*1.000*			*1.000*		*1.000*	*1.000*	*1.000*
Delay Calibration, k		*0.50*			*0.50*			*0.50*		*0.50*	*0.50*	*0.50*
Incremental Delay, d_2		*3.4*			*1.1*			*32.0*		*12.5*	*0.7*	*0.0*
Initial Queue Delay, d_3		*0.0*			*0.0*			*0.0*		*0.0*	*0.0*	*0.0*
Control Delay		*16.9*			*11.1*			*73.6*		*47.7*	*32.5*	*31.3*
Lane Group LOS		*B*			*B*			*E*		*D*	*C*	*C*
Approach Delay	*16.9*			*11.1*			*73.6*			*45.6*		
Approach LOS	*B*			*B*			*E*			*D*		
Intersection Delay	*18.6*			X_C = *0.77*			Intersection LOS			*B*		

Hirsch/Green Transportation Consulting, Inc.
Critical Movement Analysis (CMA) Worksheet

Project Name	Pico/Sepulveda Mixed-Use Project		
Intersection Number	25	**Date**	December 7, 2012
Intersection Name	North/South: Centinela Avenue East/West: Pico Boulevard		
Intersection Control	Signalized		
Analysis Period	PM Peak Hour		
Analysis Scenario	Existing (2009) With Project		

Approach Direction	Lane Type	No. of Lanes	Approach Volumes	Right-Turn on Red	Assigned Lane Volumes	Critical Moves
Northbound	Left	1	34		34	
	Left/Through	0				
	Through	1	421		421	421
	Through/Right	0				
	Right	1	115	44	71	
	Total Lanes	3				
Southbound	Left	1	76		76	76
	Left/Through	0				
	Through	2	863		432	
	Through/Right	0				
	Right	1	108	108	0	
	Total Lanes	4				
			Sum of North/South Critical Volumes			**497**
Eastbound	Left	1	93		93	
	Left/Through	0				
	Through	1	1,446		1,010	1,010
	Through/Right	1			1,010	
	Right	0	573	0		
	Total Lanes	3				
Westbound	Left	1	88		88	88
	Left/Through	0				
	Through	1	665		505	
	Through/Right	1			505	
	Right	0	345	0		
	Total Lanes	3				
			Sum of East/West Critical Volumes			**1,098**
			Total Intersection Critical Volumes			**1,595**
Number of Clearance Intervals	**2**		**Intersection Capacity**			**1,500**
			Base CMA			**1.063**
Signal Coordination	**ATSAC**		**Signal Coordination Adjustment**			**-0.070**
			Final CMA			**0.993**
			Level of Service (LOS)			**E**

Hirsch/Green Transportation Consulting, Inc.
Critical Movement Analysis (CMA) Worksheet

Project Name	Pico/Sepulveda Mixed-Use Project		
Intersection Number	26	**Date**	December 7, 2012
Intersection Name	North/South: Bundy Drive East/West: Pico Boulevard		
Intersection Control	Signalized		
Analysis Period	PM Peak Hour		
Analysis Scenario	Existing (2009) With Project		

Approach Direction	Lane Type	No. of Lanes	Approach Volumes	Right-Turn on Red	Assigned Lane Volumes	Critical Moves
Northbound	Left	1	181		181	181
	Left/Through	0				
	Through	2	1,333		666	
	Through/Right	0				
	Right	1	215	26	189	
	Total Lanes	4				
Southbound	Left	1	54		54	
	Left/Through	0				
	Through	2	1,462		731	731
	Through/Right	0				
	Right	1	52	52	0	
	Total Lanes	4				
			Sum of North/South Critical Volumes			**912**
Eastbound	Left	1	138		138	
	Left/Through	0				
	Through	1	1,118		638	638
	Through/Right	1			638	
	Right	0	159	0		
	Total Lanes	3				
Westbound	Left	1	53		53	53
	Left/Through	0				
	Through	1	905		493	
	Through/Right	1			493	
	Right	0	81	0		
	Total Lanes	3				
			Sum of East/West Critical Volumes			**691**
			Total Intersection Critical Volumes			**1,603**
Number of Clearance Intervals	**4**		**Intersection Capacity**			**1,375**
			Base CMA			**1.166**
Signal Coordination	**ATSAC**		**Signal Coordination Adjustment**			**-0.070**
			Final CMA			**1.096**
			Level of Service (LOS)			**F**

Hirsch/Green Transportation Consulting, Inc.
Critical Movement Analysis (CMA) Worksheet

Project Name	Pico/Sepulveda Mixed-Use Project		
Intersection Number	27	**Date**	December 7, 2012
Intersection Name	North/South: Barrington Avenue East/West: Pico Boulevard		
Intersection Control	Signalized		
Analysis Period	PM Peak Hour		
Analysis Scenario	Existing (2009) With Project		

Approach Direction	Lane Type	No. of Lanes	Approach Volumes	Right-Turn on Red	Assigned Lane Volumes	Critical Moves
Northbound	Left	1	104		104	104
	Left/Through	0				
	Through	1	731		396	
	Through/Right	1			396	
	Right	0	60	0		
	Total Lanes	3				
Southbound	Left	1	165		165	
	Left/Through	0				
	Through	1	1,376		741	741
	Through/Right	1			741	
	Right	0	106	0		
	Total Lanes	3				
			Sum of North/South Critical Volumes			**845**
Eastbound	Left	1	144		144	
	Left/Through	0				
	Through	1	1,029		586	586
	Through/Right	1			586	
	Right	0	143	0		
	Total Lanes	3				
Westbound	Left	1	166		166	166
	Left/Through	0				
	Through	1	853		476	
	Through/Right	1			476	
	Right	0	98	0		
	Total Lanes	3				
			Sum of East/West Critical Volumes			**752**
			Total Intersection Critical Volumes			**1,597**
Number of Clearance Intervals	**2**		**Intersection Capacity**			**1,500**
			Base CMA			**1.065**
Signal Coordination	**ATSAC**		**Signal Coordination Adjustment**			**-0.070**
			Final CMA			**0.995**
			Level of Service (LOS)			**E**

Hirsch/Green Transportation Consulting, Inc.
Critical Movement Analysis (CMA) Worksheet

Project Name	Pico/Sepulveda Mixed-Use Project		
Intersection Number	28	**Date**	December 7, 2012
Intersection Name	North/South: Gateway Boulevard East/West: Pico Boulevard		
Intersection Control	Signalized		
Analysis Period	PM Peak Hour		
Analysis Scenario	Existing (2009) With Project		

Approach Direction	Lane Type	No. of Lanes	Approach Volumes	Right-Turn on Red	Assigned Lane Volumes	Critical Moves
Northbound	Left	0	0			
	Left/Through	0				
	Through	0	0			
	Through/Right	0				
	Right	2	949	291	329	329
	Total Lanes	2				
Southbound	Left	0	0			
	Left/Through	0				
	Through	0	0			
	Through/Right	0				
	Right	0	0	0		
	Total Lanes	0				
			Sum of North/South Critical Volumes			**329**
Eastbound	Left	0	0			
	Left/Through	0				
	Through	1	1,195		613	613
	Through/Right	1			613	
	Right	0	31	0		
	Total Lanes	2				
Westbound	Left	2	1,058		582	582
	Left/Through	0				
	Through	2	1,087		544	
	Through/Right	0				
	Right	0	0	0		
	Total Lanes	4				
			Sum of East/West Critical Volumes			**1,195**
			Total Intersection Critical Volumes			**1,524**
Number of Clearance Intervals	**3**		**Intersection Capacity**			**1,425**
			Base CMA			**1.069**
Signal Coordination	**ATSAC**		**Signal Coordination Adjustment**			**-0.070**
			Final CMA			**0.999**
			Level of Service (LOS)			**E**

Hirsch/Green Transportation Consulting, Inc.
Critical Movement Analysis (CMA) Worksheet

Project Name	Pico/Sepulveda Mixed-Use Project		
Intersection Number	29	**Date**	December 7, 2012
Intersection Name	North/South: Sawtelle Boulevard East/West: Pico Boulevard		
Intersection Control	Signalized		
Analysis Period	PM Peak Hour		
Analysis Scenario	Existing (2009) With Project		

Approach Direction	Lane Type	No. of Lanes	Approach Volumes	Right-Turn on Red	Assigned Lane Volumes	Critical Moves
Northbound	Left	1	322		322	322
	Left/Through	0				
	Through	1	604		460	
	Through/Right	1			460	
	Right	0	315	0		
	Total Lanes	3				
Southbound	Left	1	404		404	
	Left/Through	0				
	Through	2	1,255		628	628
	Through/Right	0				
	Right	1	222	63	159	
	Total Lanes	4				
			Sum of North/South Critical Volumes			**950**
Eastbound	Left	1	70		70	
	Left/Through	0				
	Through	2	1,229		497	497
	Through/Right	1			497	
	Right	0	263	0		
	Total Lanes	4				
Westbound	Left	1	220		220	220
	Left/Through	0				
	Through	2	1,566		591	
	Through/Right	1			591	
	Right	0	208	0		
	Total Lanes	4				
			Sum of East/West Critical Volumes			**717**
			Total Intersection Critical Volumes			**1,667**
Number of Clearance Intervals	**4**		**Intersection Capacity**			**1,375**
			Base CMA			**1.212**
Signal Coordination	**ATSAC + ATCS**		**Signal Coordination Adjustment**			**-0.100**
			Final CMA			**1.112**
			Level of Service (LOS)			**F**

Hirsch/Green Transportation Consulting, Inc.
Critical Movement Analysis (CMA) Worksheet

Project Name	Pico/Sepulveda Mixed-Use Project		
Intersection Number	30	**Date**	December 7, 2012
Intersection Name	North/South: Cotner Avenue East/West: Pico Boulevard		
Intersection Control	Signalized		
Analysis Period	PM Peak Hour		
Analysis Scenario	Existing (2009) With Project		

Approach Direction	Lane Type	No. of Lanes	Approach Volumes	Right-Turn on Red	Assigned Lane Volumes	Critical Moves
	Left	0	0			
	Left/Through	0				
Northbound	Through	0	0			
	Through/Right	0				
	Right	0	0	0		
	Total Lanes	0				
	Left	1	98		98	98
	Left/Through	0				
Southbound	Through	0	0			
	Through/Right	0				
	Right	1	287	287	0	
	Total Lanes	2				
			Sum of North/South Critical Volumes			**98**
	Left	1	438		438	438
	Left/Through	0				
Eastbound	Through	3	1,501		500	
	Through/Right	0				
	Right	0	0	0		
	Total Lanes	4				
	Left	0	0			
	Left/Through	0				
Westbound	Through	2	1,707		683	683
	Through/Right	1			683	
	Right	0	342	0		
	Total Lanes	3				
			Sum of East/West Critical Volumes			**1,121**
			Total Intersection Critical Volumes			**1,219**
Number of Clearance Intervals	**3**		**Intersection Capacity**			**1,425**
			Base CMA			**0.855**
Signal Coordination	**ATSAC + ATCS**		**Signal Coordination Adjustment**			**-0.100**
			Final CMA			**0.755**
			Level of Service (LOS)			**C**

Hirsch/Green Transportation Consulting, Inc.
Critical Movement Analysis (CMA) Worksheet

Project Name	Pico/Sepulveda Mixed-Use Project		
Intersection Number	31	**Date**	December 7, 2012
Intersection Name	North/South: Sepulveda Boulevard East/West: Pico Boulevard		
Intersection Control	Signalized		
Analysis Period	PM Peak Hour		
Analysis Scenario	Existing (2009) With Project		

Approach Direction	Lane Type	No. of Lanes	Approach Volumes	Right-Turn on Red	Assigned Lane Volumes	Critical Moves
Northbound	Left	1	216		216	216
	Left/Through	0				
	Through	1	1,050		618	
	Through/Right	1			618	
	Right	0	185	0		
	Total Lanes	3				
Southbound	Left	1	122		122	
	Left/Through	0				
	Through	1	1,412		776	776
	Through/Right	1			776	
	Right	0	139	0		
	Total Lanes	3				
			Sum of North/South Critical Volumes			**992**
Eastbound	Left	1	342		342	342
	Left/Through	0				
	Through	3	1,474		491	
	Through/Right	0				
	Right	1	159	159	0	
	Total Lanes	5				
Westbound	Left	1	298		298	
	Left/Through	0				
	Through	2	1,578		551	551
	Through/Right	1			551	
	Right	0	74	0		
	Total Lanes	4				
			Sum of East/West Critical Volumes			**893**
			Total Intersection Critical Volumes			**1,885**
Number of Clearance Intervals	**4**		**Intersection Capacity**			**1,375**
			Base CMA			**1.371**
Signal Coordination	**ATSAC + ATCS**		**Signal Coordination Adjustment**			**-0.100**
			Final CMA			**1.271**
			Level of Service (LOS)			**F**

EB Rt. Turn Overlap with NB Left

Hirsch/Green Transportation Consulting, Inc.
Critical Movement Analysis (CMA) Worksheet

Project Name	Pico/Sepulveda Mixed-Use Project		
Intersection Number	32	**Date**	December 7, 2012
Intersection Name	North/South: Veteran Avenue East/West: Pico Boulevard		
Intersection Control	Signalized		
Analysis Period	PM Peak Hour		
Analysis Scenario	Existing (2009) With Project		

Approach Direction	Lane Type	No. of Lanes	Approach Volumes	Right-Turn on Red	Assigned Lane Volumes	Critical Moves
Northbound	Left	0	23			23
	Left/Through	0				
	Left/Through/Right	1	28		86	
	Through/Right	0				
	Right	0	35	0		
	Total Lanes	1				
Southbound	Left	0	59			
	Left/Through	1			129	129
	Through	0	70			
	Through/Right	0				
	Right	1	90	49	41	
	Total Lanes	2				
			Sum of North/South Critical Volumes			**152**
Eastbound	Left	1	98		98	98
	Left/Through	0				
	Through	2	1,302		444	
	Through/Right	1			444	
	Right	0	30	0		
	Total Lanes	4				
Westbound	Left	1	26		26	
	Left/Through	0				
	Through	2	1,638		558	558
	Through/Right	1			558	
	Right	0	37	0		
	Total Lanes	4				
			Sum of East/West Critical Volumes			**656**
			Total Intersection Critical Volumes			**808**
Number of Clearance Intervals	**2**		**Intersection Capacity**			**1,500**
			Base CMA			**0.539**
Signal Coordination	**ATSAC + ATCS**		**Signal Coordination Adjustment**			**-0.100**
			Final CMA			**0.439**
			Level of Service (LOS)			**A**

Hirsch/Green Transportation Consulting, Inc.
Critical Movement Analysis (CMA) Worksheet

Project Name	Pico/Sepulveda Mixed-Use Project		
Intersection Number	33	**Date**	December 7, 2012
Intersection Name	North/South: Westwood Boulevard East/West: Pico Boulevard		
Intersection Control	Signalized		
Analysis Period	PM Peak Hour		
Analysis Scenario	Existing (2009) With Project		

Approach Direction	Lane Type	No. of Lanes	Approach Volumes	Right-Turn on Red	Assigned Lane Volumes	Critical Moves
Northbound	Left	1	134		134	134
	Left/Through	0				
	Through	2	569		284	
	Through/Right	0				
	Right	1	101	101	0	
	Total Lanes	4				
Southbound	Left	1	202		202	
	Left/Through	0				
	Through	1	924		539	539
	Through/Right	1			539	
	Right	0	154	0		
	Total Lanes	3				
			Sum of North/South Critical Volumes			**673**
Eastbound	Left	1	152		152	152
	Left/Through	0				
	Through	3	1,080		360	
	Through/Right	0				
	Right	1	208	134	74	
	Total Lanes	5				
Westbound	Left	1	198		198	
	Left/Through	0				
	Through	3	1,432		477	477
	Through/Right	0				
	Right	1	251	202	49	
	Total Lanes	5				
			Sum of East/West Critical Volumes			**629**
			Total Intersection Critical Volumes			**1,302**
Number of Clearance Intervals	**4**		**Intersection Capacity**			**1,375**
			Base CMA			**0.947**
Signal Coordination	**ATSAC + ATCS**		**Signal Coordination Adjustment**			**-0.100**
			Final CMA			**0.847**
			Level of Service (LOS)			**D**

NB Rt. Turn Overlap with WB Left

EB/WB Rt. Turn Overlap With NB/SB Lefts

Hirsch/Green Transportation Consulting, Inc.
Critical Movement Analysis (CMA) Worksheet

Project Name	Pico/Sepulveda Mixed-Use Project		
Intersection Number	34	**Date**	December 7, 2012
Intersection Name	North/South: Overland Avenue East/West: Pico Boulevard		
Intersection Control	Signalized		
Analysis Period	PM Peak Hour		
Analysis Scenario	Existing (2009) With Project		

Approach Direction	Lane Type	No. of Lanes	Approach Volumes	Right-Turn on Red	Assigned Lane Volumes	Critical Moves
Northbound	Left	2	320		176	
	Left/Through	0				
	Through	1	572		572	572
	Through/Right	0				
	Right	2	557	164	196	
	Total Lanes	5				
Southbound	Left	1	54		54	54
	Left/Through	0				
	Through	1	861		448	
	Through/Right	1			448	
	Right	0	34	0		
	Total Lanes	3				
			Sum of North/South Critical Volumes			**626**
Eastbound	Left	1	90		90	
	Left/Through	0				
	Through	2	908		437	437
	Through/Right	1			437	
	Right	0	403	0		
	Total Lanes	4				
Westbound	Left	2	598		329	329
	Left/Through	0				
	Through	2	1,530		519	
	Through/Right	1			519	
	Right	0	26	0		
	Total Lanes	5				
			Sum of East/West Critical Volumes			**766**
			Total Intersection Critical Volumes			**1,392**
Number of Clearance Intervals	**4**		**Intersection Capacity**			**1,375**
			Base CMA			**1.012**
Signal Coordination	**ATSAC + ATCS**		**Signal Coordination Adjustment**			**-0.100**
			Final CMA			**0.912**
			Level of Service (LOS)			**E**

Hirsch/Green Transportation Consulting, Inc.
Critical Movement Analysis (CMA) Worksheet

Project Name	Pico/Sepulveda Mixed-Use Project		
Intersection Number	35	**Date**	December 7, 2012
Intersection Name	North/South: Manning Avenue East/West: Pico Boulevard		
Intersection Control	Signalized		
Analysis Period	PM Peak Hour		
Analysis Scenario	Existing (2009) With Project		

Approach Direction	Lane Type	No. of Lanes	Approach Volumes	Right-Turn on Red	Assigned Lane Volumes	Critical Moves
Northbound	Left	0	71			71
	Left/Through	0				
	Left/Through/Right	1	50		169	
	Through/Right	0				
	Right	0	48	0		
	Total Lanes	1				
Southbound	Left	0	19			
	Left/Through	0				
	Left/Through/Right	1	206		263	263
	Through/Right	0				
	Right	0	38	0		
	Total Lanes	1				
			Sum of North/South Critical Volumes			**334**
Eastbound	Left	1	40		40	
	Left/Through	0				
	Through	2	1,366		683	683
	Through/Right	0				
	Right	1	77	36	41	
	Total Lanes	4				
Westbound	Left	1	72		72	72
	Left/Through	0				
	Through	2	2,077		705	
	Through/Right	1			705	
	Right	0	37	0		
	Total Lanes	4				
			Sum of East/West Critical Volumes			**755**
			Total Intersection Critical Volumes			**1,089**
Number of Clearance Intervals	**3**		**Intersection Capacity**			**1,425**
			Base CMA			**0.764**
Signal Coordination	**ATSAC + ATCS**		**Signal Coordination Adjustment**			**-0.100**
			Final CMA			**0.664**
			Level of Service (LOS)			**B**

Hirsch/Green Transportation Consulting, Inc.
Critical Movement Analysis (CMA) Worksheet

Project Name	Pico/Sepulveda Mixed-Use Project		
Intersection Number	36	**Date**	December 7, 2012
Intersection Name	North/South: Patricia Avenue East/West: Pico Boulevard		
Intersection Control	Signalized		
Analysis Period	PM Peak Hour		
Analysis Scenario	Existing (2009) With Project		

Approach Direction	Lane Type	No. of Lanes	Approach Volumes	Right-Turn on Red	Assigned Lane Volumes	Critical Moves
Northbound	Left	0	37			37
	Left/Through	0				
	Left/Through/Right	1	44		176	
	Through/Right	0				
	Right	0	95	0		
	Total Lanes	1				
Southbound	Left	0	17			
	Left/Through	0				
	Left/Through/Right	1	300		340	340
	Through/Right	0				
	Right	0	23	0		
	Total Lanes	1				
			Sum of North/South Critical Volumes			**377**
Eastbound	Left	1	18		18	
	Left/Through	0				
	Through	1	1,394		722	722
	Through/Right	1			722	
	Right	0	49	0		
	Total Lanes	3				
Westbound	Left	1	133		133	133
	Left/Through	0				
	Through	2	2,095		704	
	Through/Right	1			704	
	Right	0	16	0		
	Total Lanes	4				
			Sum of East/West Critical Volumes			**855**
			Total Intersection Critical Volumes			**1,232**
Number of Clearance Intervals	**3**		**Intersection Capacity**			**1,425**
			Base CMA			**0.865**
Signal Coordination	**ATSAC + ATCS**		**Signal Coordination Adjustment**			**-0.100**
			Final CMA			**0.765**
			Level of Service (LOS)			**C**

Hirsch/Green Transportation Consulting, Inc.
Critical Movement Analysis (CMA) Worksheet

Project Name	Pico/Sepulveda Mixed-Use Project		
Intersection Number	37	**Date**	December 7, 2012
Intersection Name	North/South: Beverly Glen Boulevard East/West: Pico Boulevard		
Intersection Control	Signalized		
Analysis Period	PM Peak Hour		
Analysis Scenario	Existing (2009) With Project		

Approach Direction	Lane Type	No. of Lanes	Approach Volumes	Right-Turn on Red	Assigned Lane Volumes	Critical Moves
	Left	0	0			
	Left/Through	0				
Northbound	Through	0	0			
	Through/Right	0				
	Right	0	0	0		
	Total Lanes	0				
	Left	2	423		233	
	Left/Through	0				
Southbound	Through	0	0			
	Through/Right	0				
	Right	1	388	116	272	272
	Total Lanes	3				
			Sum of North/South Critical Volumes			**272**
	Left	1	232		232	232
	Left/Through	0				
Eastbound	Through	3	1,216		405	
	Through/Right	0				
	Right	0	0	0		
	Total Lanes	4				
	Left	0	0			
	Left/Through	0				
Westbound	Through	2	1,752		645	645
	Through/Right	1			645	
	Right	0	184	0		
	Total Lanes	3				
			Sum of East/West Critical Volumes			**877**
			Total Intersection Critical Volumes			**1,149**
Number of Clearance Intervals	**3**		**Intersection Capacity**			**1,425**
			Base CMA			**0.806**
Signal Coordination	**ATSAC + ATCS**		**Signal Coordination Adjustment**			**-0.100**
			Final CMA			**0.706**
			Level of Service (LOS)			**C**

Hirsch/Green Transportation Consulting, Inc.
Critical Movement Analysis (CMA) Worksheet

Project Name	Pico/Sepulveda Mixed-Use Project		
Intersection Number	38	**Date**	December 7, 2012
Intersection Name	North/South: Motor Avenue/Fox Studios Driveway East/West: Pico Boulevard		
Intersection Control	Signalized		
Analysis Period	PM Peak Hour		
Analysis Scenario	Existing (2009) With Project		

Approach Direction	Lane Type	No. of Lanes	Approach Volumes	Right-Turn on Red	Assigned Lane Volumes	Critical Moves
Northbound	Left	1	241		241	241
	Left/Through	0				
	Through	0	5			
	Through/Right	1			13	
	Right	1	472	451	13	
	Total Lanes	3				
Southbound	Left	1	100		100	
	Left/Through	0				
	Through	0	5			
	Through/Right	1			190	190
	Right	0	185	0		
	Total Lanes	2				
			Sum of North/South Critical Volumes			**431**
Eastbound	Left	1	40		40	
	Left/Through	0				
	Through	2	1,370		560	560
	Through/Right	1			560	
	Right	0	310	0		
	Total Lanes	4				
Westbound	Left	1	451		451	451
	Left/Through	0				
	Through	2	1,796		615	
	Through/Right	1			615	
	Right	0	50	0		
	Total Lanes	4				
			Sum of East/West Critical Volumes			**1,010**
			Total Intersection Critical Volumes			**1,441**
Number of Clearance Intervals	**4**		**Intersection Capacity**			**1,375**
			Base CMA			**1.048**
Signal Coordination	**ATSAC + ATCS**		**Signal Coordination Adjustment**			**-0.100**
			Final CMA			**0.948**
			Level of Service (LOS)			**E**

North/South Opposed Phasing
NB Rt. Turn Overlap with WB Left

Hirsch/Green Transportation Consulting, Inc.
Critical Movement Analysis (CMA) Worksheet

Project Name	Pico/Sepulveda Mixed-Use Project		
Intersection Number	39	**Date**	December 7, 2012
Intersection Name	North/South: Avenue of the Stars East/West: Pico Boulevard		
Intersection Control	Signalized		
Analysis Period	PM Peak Hour		
Analysis Scenario	Existing (2009) With Project		

Approach Direction	Lane Type	No. of Lanes	Approach Volumes	Right-Turn on Red	Assigned Lane Volumes	Critical Moves
	Left	0	0			
	Left/Through	0				
Northbound	Through	0	0			
	Through/Right	0				
	Right	0	0	0		
	Total Lanes	0				
	Left	2	415		228	
	Left/Through	0				
Southbound	Through	0	0			
	Through/Right	0				
	Right	2	812	228	292	292
	Total Lanes	4				
			Sum of North/South Critical Volumes			**292**
	Left	3	310		114	114
	Left/Through	0				
Eastbound	Through	3	1,399		466	
	Through/Right	0				
	Right	0	0	0		
	Total Lanes	6				
	Left	0	0			
	Left/Through	0				
Westbound	Through	2	1,514		550	550
	Through/Right	1			550	
	Right	0	136	0		
	Total Lanes	3				
			Sum of East/West Critical Volumes			**664**
			Total Intersection Critical Volumes			**956**
Number of Clearance Intervals	**3**		**Intersection Capacity**			**1,425**
			Base CMA			**0.671**
Signal Coordination	**ATSAC + ATCS**		**Signal Coordination Adjustment**			**-0.100**
			Final CMA			**0.571**
			Level of Service (LOS)			**A**

Hirsch/Green Transportation Consulting, Inc.
Critical Movement Analysis (CMA) Worksheet

Project Name	Pico/Sepulveda Mixed-Use Project		
Intersection Number	40	**Date**	December 7, 2012
Intersection Name	North/South: Sepulveda Boulevard East/West: Exposition Boulevard		
Intersection Control	Signalized		
Analysis Period	PM Peak Hour		
Analysis Scenario	Existing (2009) With Project		

Approach Direction	Lane Type	No. of Lanes	Approach Volumes	Right-Turn on Red	Assigned Lane Volumes	Critical Moves
Northbound	Left	1	154		154	154
	Left/Through	0				
	Through	1	1,527		778	
	Through/Right	1			778	
	Right	0	29	0		
	Total Lanes	3				
Southbound	Left	1	141		141	
	Left/Through	0				
	Through	1	1,564		882	882
	Through/Right	1			882	
	Right	0	200	0		
	Total Lanes	3				
			Sum of North/South Critical Volumes			**1,036**
Eastbound	Left	0	69			
	Left/Through	0				
	Left/Through/Right	1	245		518	518
	Through/Right	0				
	Right	0	204	0		
	Total Lanes	1				
Westbound	Left	0	38			38
	Left/Through	0				
	Left/Through/Right	1	65		162	
	Through/Right	0				
	Right	0	59	0		
	Total Lanes	1				
			Sum of East/West Critical Volumes			**556**
			Total Intersection Critical Volumes			**1,592**
Number of Clearance Intervals	**2**		**Intersection Capacity**			**1,500**
			Base CMA			**1.061**
Signal Coordination	**ATSAC + ATCS**		**Signal Coordination Adjustment**			**-0.100**
			Final CMA			**0.961**
			Level of Service (LOS)			**E**

Hirsch/Green Transportation Consulting, Inc.
Critical Movement Analysis (CMA) Worksheet

Project Name	Pico/Sepulveda Mixed-Use Project		
Intersection Number	41	**Date**	December 7, 2012
Intersection Name	North/South: Barrington Avenue East/West: Gateway Boulevard		
Intersection Control	Signalized		
Analysis Period	PM Peak Hour		
Analysis Scenario	Existing (2009) With Project		

Approach Direction	Lane Type	No. of Lanes	Approach Volumes	Right-Turn on Red	Assigned Lane Volumes	Critical Moves
	Left	1	118		118	118
	Left/Through	0				
Northbound	Through	1	721		400	
	Through/Right	1			400	
	Right	0	79	0		
	Total Lanes	3				
	Left	1	89		89	
	Left/Through	0				
Southbound	Through	1	1,430		784	784
	Through/Right	1			784	
	Right	0	138	0		
	Total Lanes	3				
			Sum of North/South Critical Volumes			**902**
	Left	1	100		100	100
	Left/Through	0				
Eastbound	Through	2	744		372	
	Through/Right	0				
	Right	1	109	59	50	
	Total Lanes	4				
	Left	1	140		140	
	Left/Through	0				
Westbound	Through	1	872		452	452
	Through/Right	1			452	
	Right	0	33	0		
	Total Lanes	3				
			Sum of East/West Critical Volumes			**552**
			Total Intersection Critical Volumes			**1,454**
Number of Clearance Intervals	**2**		**Intersection Capacity**			**1,500**
			Base CMA			**0.969**
Signal Coordination	**ATSAC**		**Signal Coordination Adjustment**			**-0.070**
			Final CMA			**0.899**
			Level of Service (LOS)			**D**

Hirsch/Green Transportation Consulting, Inc.
Critical Movement Analysis (CMA) Worksheet

Project Name	Pico/Sepulveda Mixed-Use Project		
Intersection Number	42	**Date**	December 7, 2012
Intersection Name	North/South: Bundy Drive East/West: Ocean Park Boulevard		
Intersection Control	Signalized		
Analysis Period	PM Peak Hour		
Analysis Scenario	Existing (2009) With Project		

Approach Direction	Lane Type	No. of Lanes	Approach Volumes	Right-Turn on Red	Assigned Lane Volumes	Critical Moves
Northbound	Left	1	380		380	380
	Left/Through	0				
	Through	1	1,000		610	
	Through/Right	1			610	
	Right	0	220	0		
	Total Lanes	3				
Southbound	Left	1	24		24	
	Left/Through	0				
	Through	2	1,629		814	814
	Through/Right	0				
	Right	1	173	147	26	
	Total Lanes	4				
			Sum of North/South Critical Volumes			**1,194**
Eastbound	Left	1	138		138	
	Left/Through	0				
	Through	2	670		335	
	Through/Right	0				
	Right	1	846	380	466	466
	Total Lanes	4				
Westbound	Left	1	56		56	56
	Left/Through	0				
	Through	1	429		228	
	Through/Right	1			228	
	Right	0	26	0		
	Total Lanes	3				
			Sum of East/West Critical Volumes			**522**
			Total Intersection Critical Volumes			**1,716**
Number of Clearance Intervals	**3**		**Intersection Capacity**			**1,425**
			Base CMA			**1.204**
Signal Coordination	**ATSAC**		**Signal Coordination Adjustment**			**-0.070**
			Final CMA			**1.134**
			Level of Service (LOS)			**F**

EB Rt. Turn Overlap with NB Left

Hirsch/Green Transportation Consulting, Inc.
Critical Movement Analysis (CMA) Worksheet

Project Name	Pico/Sepulveda Mixed-Use Project		
Intersection Number	43	**Date**	December 7, 2012
Intersection Name	North/South: Barrington Avenue East/West: National Boulevard		
Intersection Control	Signalized		
Analysis Period	PM Peak Hour		
Analysis Scenario	Existing (2009) With Project		

Approach Direction	Lane Type	No. of Lanes	Approach Volumes	Right-Turn on Red	Assigned Lane Volumes	Critical Moves
Northbound	Left	1	58		58	58
	Left/Through	0				
	Through	1	451		282	
	Through/Right	1			282	
	Right	0	113	0		
	Total Lanes	3				
Southbound	Left	1	301		301	
	Left/Through	0				
	Through	1	1,368		772	772
	Through/Right	1			772	
	Right	0	176	0		
	Total Lanes	3				
			Sum of North/South Critical Volumes			**830**
Eastbound	Left	1	147		147	
	Left/Through	0				
	Through	1	497		300	300
	Through/Right	1			300	
	Right	0	103	0		
	Total Lanes	3				
Westbound	Left	1	115		115	115
	Left/Through	0				
	Through	1	330		220	
	Through/Right	1			220	
	Right	0	109	0		
	Total Lanes	3				
			Sum of East/West Critical Volumes			**415**
			Total Intersection Critical Volumes			**1,245**
Number of Clearance Intervals	**3**		**Intersection Capacity**			**1,425**
			Base CMA			**0.874**
Signal Coordination	**ATSAC**		**Signal Coordination Adjustment**			**-0.070**
			Final CMA			**0.804**
			Level of Service (LOS)			**D**

Hirsch/Green Transportation Consulting, Inc.
Critical Movement Analysis (CMA) Worksheet

Project Name	Pico/Sepulveda Mixed-Use Project		
Intersection Number	44	**Date**	December 7, 2012
Intersection Name	North/South: Sawtelle Boulevard East/West: National Boulevard		
Intersection Control	Signalized		
Analysis Period	PM Peak Hour		
Analysis Scenario	Existing (2009) With Project		

Approach Direction	Lane Type	No. of Lanes	Approach Volumes	Right-Turn on Red	Assigned Lane Volumes	Critical Moves
Northbound	Left	1	53		53	53
	Left/Through	0				
	Through	0	330			
	Through/Right	1			397	
	Right	0	67	0		
	Total Lanes	2				
Southbound	Left	1	261		261	
	Left/Through	0				
	Through	1	1,469		780	780
	Through/Right	1			780	
	Right	0	92	0		
	Total Lanes	3				
			Sum of North/South Critical Volumes			**833**
Eastbound	Left	1	162		162	
	Left/Through	0				
	Through	1	881		881	881
	Through/Right	0				
	Right	1	151	26	125	
	Total Lanes	3				
Westbound	Left	1	102		102	102
	Left/Through	0				
	Through	0	543			
	Through/Right	1			728	
	Right	0	185	0		
	Total Lanes	2				
			Sum of East/West Critical Volumes			**983**
			Total Intersection Critical Volumes			**1,816**
Number of Clearance Intervals	**3**		**Intersection Capacity**			**1,425**
			Base CMA			**1.274**
Signal Coordination	**ATSAC + ATCS**		**Signal Coordination Adjustment**			**-0.100**
Note: Intersection Currently Under Construction			**Final CMA**			**1.174**
			Level of Service (LOS)			**F**

Hirsch/Green Transportation Consulting, Inc.
Critical Movement Analysis (CMA) Worksheet

Project Name	Pico/Sepulveda Mixed-Use Project		
Intersection Number	45	**Date**	December 7, 2012
Intersection Name	North/South: I-405 SB On-Ramp East/West: National Boulevard		
Intersection Control	Signalized		
Analysis Period	PM Peak Hour		
Analysis Scenario	Existing (2009) With Project		

Approach Direction	Lane Type	No. of Lanes	Approach Volumes	Right-Turn on Red	Assigned Lane Volumes	Critical Moves
	Left	0	0			
	Left/Through	0				
Northbound	Through	0	0			
	Through/Right	0				
	Right	0	0	0		
	Total Lanes	0				
	Left	0	0			
	Left/Through	0				
Southbound	Through	0	0			
	Through/Right	0				
	Right	0	0	0		
	Total Lanes	0				
			Sum of North/South Critical Volumes			**0**
	Left	0	0			
	Left/Through	0				
Eastbound	Through	1	833		833	833
	Through/Right	0				
	Right	1	394	0	394	
	Total Lanes	2				
	Left	1	374		374	374
	Left/Through	0				
Westbound	Through	1	815		815	
	Through/Right	0				
	Right	0	0	0		
	Total Lanes	2				
			Sum of East/West Critical Volumes			**1,207**
			Total Intersection Critical Volumes			**1,207**
Number of Clearance Intervals	**2**		**Intersection Capacity**			**1,500**
			Base CMA			**0.805**
Signal Coordination	**ATSAC + ATCS**		**Signal Coordination Adjustment**			**-0.100**
Note: Intersection Currently Under Construction			**Final CMA**			**0.705**
			Level of Service (LOS)			**C**

Hirsch/Green Transportation Consulting, Inc.
Critical Movement Analysis (CMA) Worksheet

Project Name	Pico/Sepulveda Mixed-Use Project		
Intersection Number	46	**Date**	December 7, 2012
Intersection Name	North/South: I-405 NB Off-Ramp East/West: National Boulevard		
Intersection Control	Signalized		
Analysis Period	PM Peak Hour		
Analysis Scenario	Existing (2009) With Project		

Approach Direction	Lane Type	No. of Lanes	Approach Volumes	Right-Turn on Red	Assigned Lane Volumes	Critical Moves
Northbound	Left	0	222			
	Left/Through	0				
	Left/Through/Right	1	3		477	477
	Through/Right	0				
	Right	0	252	0		
	Total Lanes	1				
Southbound	Left	0	1			1
	Left/Through	0				
	Left/Through/Right	1	0		50	
	Through/Right	0				
	Right	0	49	0		
	Total Lanes	1				
			Sum of North/South Critical Volumes			**478**
Eastbound	Left	0	0			
	Left/Through	0				
	Through	1	828		828	
	Through/Right	0				
	Right	0	0	0		
	Total Lanes	1				
Westbound	Left	0	0			
	Left/Through	0				
	Through	0	903			
	Through/Right	1			913	913
	Right	0	10	0		
	Total Lanes	1				
			Sum of East/West Critical Volumes			**913**
			Total Intersection Critical Volumes			**1,391**
Number of Clearance Intervals	**2**		**Intersection Capacity**			**1,500**
			Base CMA			**0.927**
Signal Coordination	**ATSAC + ATCS**		**Signal Coordination Adjustment**			**-0.100**
Note: Intersection Currently Under Construction			**Final CMA**			**0.827**
			Level of Service (LOS)			**D**

Hirsch/Green Transportation Consulting, Inc.
Critical Movement Analysis (CMA) Worksheet

Project Name	Pico/Sepulveda Mixed-Use Project		
Intersection Number	47	**Date**	December 7, 2012
Intersection Name	North/South: Sepulveda Boulevard East/West: National Boulevard		
Intersection Control	Signalized		
Analysis Period	PM Peak Hour		
Analysis Scenario	Existing (2009) With Project		

Approach Direction	Lane Type	No. of Lanes	Approach Volumes	Right-Turn on Red	Assigned Lane Volumes	Critical Moves
Northbound	Left	1	229		229	229
	Left/Through	0				
	Through	1	1,259		698	
	Through/Right	1			698	
	Right	0	136	0		
	Total Lanes	3				
Southbound	Left	1	226		226	
	Left/Through	0				
	Through	1	1,302		779	779
	Through/Right	1			779	
	Right	0	256	0		
	Total Lanes	3				
			Sum of North/South Critical Volumes			**1,008**
Eastbound	Left	1	217		217	217
	Left/Through	0				
	Through	1	722		416	
	Through/Right	1			416	
	Right	0	110	0		
	Total Lanes	3				
Westbound	Left	1	152		152	
	Left/Through	0				
	Through	0	459			
	Through/Right	1			600	600
	Right	0	141	0		
	Total Lanes	2				
			Sum of East/West Critical Volumes			**817**
			Total Intersection Critical Volumes			**1,825**
Number of Clearance Intervals	**4**		**Intersection Capacity**			**1,375**
			Base CMA			**1.327**
Signal Coordination	**ATSAC + ATCS**		**Signal Coordination Adjustment**			**-0.100**
Note: Intersection Currently Under Construction			**Final CMA**			**1.227**
			Level of Service (LOS)			**F**

Hirsch/Green Transportation Consulting, Inc.
Critical Movement Analysis (CMA) Worksheet

Project Name	Pico/Sepulveda Mixed-Use Project		
Intersection Number	48	**Date**	December 7, 2012
Intersection Name	North/South: Westwood Boulevard East/West: National Boulevard		
Intersection Control	Signalized		
Analysis Period	PM Peak Hour		
Analysis Scenario	Existing (2009) With Project		

Approach Direction	Lane Type	No. of Lanes	Approach Volumes	Right-Turn on Red	Assigned Lane Volumes	Critical Moves
Northbound	Left	1	142		142	142
	Left/Through	0				
	Through	1	229		128	
	Through/Right	1			128	
	Right	0	26	0		
	Total Lanes	3				
Southbound	Left	1	158		158	
	Left/Through	0				
	Through	1	778		778	778
	Through/Right	0				
	Right	1	261	125	136	
	Total Lanes	3				
			Sum of North/South Critical Volumes			**920**
Eastbound	Left	1	237		237	
	Left/Through	0				
	Through	1	584		452	452
	Through/Right	1			452	
	Right	0	321	0		
	Total Lanes	3				
Westbound	Left	1	79		79	79
	Left/Through	0				
	Through	1	441		281	
	Through/Right	1			281	
	Right	0	121	0		
	Total Lanes	3				
			Sum of East/West Critical Volumes			**531**
			Total Intersection Critical Volumes			**1,451**
Number of Clearance Intervals	**2**		**Intersection Capacity**			**1,500**
			Base CMA			**0.967**
Signal Coordination	**ATSAC + ATCS**		**Signal Coordination Adjustment**			**-0.100**
			Final CMA			**0.867**
			Level of Service (LOS)			**D**

Hirsch/Green Transportation Consulting, Inc.
Critical Movement Analysis (CMA) Worksheet

Project Name Pico/Sepulveda Mixed-Use Project
Intersection Number 49 **Date** December 7, 2012
Intersection Name North/South: Overland Avenue
East/West: I-10 WB On/Off-Ramps/National Boulevard
Intersection Control Signalized
Analysis Period PM Peak Hour
Analysis Scenario Existing (2009) With Project

Approach Direction	Lane Type	No. of Lanes	Approach Volumes	Right-Turn on Red	Assigned Lane Volumes	Critical Moves
	Left	1	63		63	63
	Left/Through	0				
Northbound	Through	1	872		436	
	Through/Right	1			436	
	Right	1	611	344	267	
	Total Lanes	4				
	Left	2	688		378	
	Left/Through	0				
Southbound	Through	1	1,648		880	880
	Through/Right	1			880	
	Right	0	111	0		
	Total Lanes	4				
			Sum of North/South Critical Volumes			**943**
	Left	1	232		176	
	Left/Through	1			176	
Eastbound	Through	0	119			
	Through/Right	0				
	Right	1	432	32	400	400
	Total Lanes	3				
	Left	0	215			
	Left/Through	1			344	
Westbound	Through	1	472		344	344
	Through/Right	0				
	Right	1	587	254	333	
	Total Lanes	3				
			Sum of East/West Critical Volumes			**744**
			Total Intersection Critical Volumes			**1,687**
Number of Clearance Intervals	**4**		**Intersection Capacity**			**1,375**
			Base CMA			**1.227**
Signal Coordination	**ATSAC + ATCS**		**Signal Coordination Adjustment**			**-0.100**
			Final CMA			**1.127**
			Level of Service (LOS)			**F**

NB Rt. Turn Overlap with WB Left

East/West Opposed Phasing

Hirsch/Green Transportation Consulting, Inc.
Critical Movement Analysis (CMA) Worksheet

Project Name	Pico/Sepulveda Mixed-Use Project		
Intersection Number	50	**Date**	December 7, 2012
Intersection Name	North/South: Overland Avenue East/West: I-10 EB On-Ramp		
Intersection Control	Signalized		
Analysis Period	PM Peak Hour		
Analysis Scenario	Existing (2009) With Project		

Approach Direction	Lane Type	No. of Lanes	Approach Volumes	Right-Turn on Red	Assigned Lane Volumes	Critical Moves
Northbound	Left	0	0			
	Left/Through	0				
	Through	2	1,571		674	674
	Through/Right	1			674	
	Right	0	451	0		
	Total Lanes	3				
Southbound	Left	2	1,098		604	604
	Left/Through	0				
	Through	2	1,181		590	
	Through/Right	0				
	Right	0	0	0		
	Total Lanes	4				
			Sum of North/South Critical Volumes			**1,278**
Eastbound	Left	0	0			
	Left/Through	0				
	Through	0	0			
	Through/Right	0				
	Right	0	0	0		
	Total Lanes	0				
Westbound	Left	0	0			
	Left/Through	0				
	Through	0	0			
	Through/Right	0				
	Right	0	0	0		
	Total Lanes	0				
			Sum of East/West Critical Volumes			**0**
			Total Intersection Critical Volumes			**1,278**
Number of Clearance Intervals	**2**		**Intersection Capacity**			**1,500**
			Base CMA			**0.852**
Signal Coordination	**ATSAC + ATCS**		**Signal Coordination Adjustment**			**-0.100**
			Final CMA			**0.752**
			Level of Service (LOS)			**C**

Hirsch/Green Transportation Consulting, Inc.
Critical Movement Analysis (CMA) Worksheet

Project Name	Pico/Sepulveda Mixed-Use Project		
Intersection Number	51	**Date**	December 7, 2012
Intersection Name	North/South: Sepulveda Boulevard East/West: Queensland Avenue		
Intersection Control	Signalized		
Analysis Period	PM Peak Hour		
Analysis Scenario	Existing (2009) With Project		

Approach Direction	Lane Type	No. of Lanes	Approach Volumes	Right-Turn on Red	Assigned Lane Volumes	Critical Moves
Northbound	Left	1	33		33	
	Left/Through	0				
	Through	1	1,589		818	818
	Through/Right	1			818	
	Right	0	47	0		
	Total Lanes	3				
Southbound	Left	1	29		29	29
	Left/Through	0				
	Through	1	1,468		756	
	Through/Right	1			756	
	Right	0	44	0		
	Total Lanes	3				
			Sum of North/South Critical Volumes			**847**
Eastbound	Left	0	38			
	Left/Through	0				
	Left/Through/Right	1	16		97	97
	Through/Right	0				
	Right	0	43	0		
	Total Lanes	1				
Westbound	Left	0	135			135
	Left/Through	0				
	Left/Through/Right	1	30		186	
	Through/Right	0				
	Right	0	21	0		
	Total Lanes	1				
			Sum of East/West Critical Volumes			**232**
			Total Intersection Critical Volumes			**1,079**
Number of Clearance Intervals	**2**		**Intersection Capacity**			**1,500**
			Base CMA			**0.719**
Signal Coordination	**ATSAC**		**Signal Coordination Adjustment**			**-0.070**
			Final CMA			**0.649**
			Level of Service (LOS)			**B**

Hirsch/Green Transportation Consulting, Inc.
Critical Movement Analysis (CMA) Worksheet

Project Name	Pico/Sepulveda Mixed-Use Project		
Intersection Number	52	**Date**	December 7, 2012
Intersection Name	North/South: Sawtelle Boulevard East/West: Palms Boulevard		
Intersection Control	Signalized		
Analysis Period	PM Peak Hour		
Analysis Scenario	Existing (2009) With Project		

Approach Direction	Lane Type	No. of Lanes	Approach Volumes	Right-Turn on Red	Assigned Lane Volumes	Critical Moves
	Left	1	61		61	
	Left/Through	0				
Northbound	Through	1	496		294	294
	Through/Right	1			294	
	Right	0	93	0		
	Total Lanes	3				
	Left	1	182		182	182
	Left/Through	0				
Southbound	Through	1	256		142	
	Through/Right	1			142	
	Right	0	28	0		
	Total Lanes	3				
			Sum of North/South Critical Volumes			**476**
	Left	1	43		43	
	Left/Through	0				
Eastbound	Through	1	676		372	372
	Through/Right	1			372	
	Right	0	68	0		
	Total Lanes	3				
	Left	1	173		173	173
	Left/Through	0				
Westbound	Through	1	690		458	
	Through/Right	1			458	
	Right	0	225	0		
	Total Lanes	3				
			Sum of East/West Critical Volumes			**545**
			Total Intersection Critical Volumes			**1,021**
Number of Clearance Intervals	**2**		**Intersection Capacity**			**1,500**
			Base CMA			**0.681**
Signal Coordination	**ATSAC**		**Signal Coordination Adjustment**			**-0.070**
			Final CMA			**0.611**
			Level of Service (LOS)			**B**

Hirsch/Green Transportation Consulting, Inc.
Critical Movement Analysis (CMA) Worksheet

Project Name	Pico/Sepulveda Mixed-Use Project		
Intersection Number	53	**Date**	December 7, 2012
Intersection Name	North/South: Sepulveda Boulevard East/West: Palms Boulevard		
Intersection Control	Signalized		
Analysis Period	PM Peak Hour		
Analysis Scenario	Existing (2009) With Project		

Approach Direction	Lane Type	No. of Lanes	Approach Volumes	Right-Turn on Red	Assigned Lane Volumes	Critical Moves
Northbound	Left	1	107		107	
	Left/Through	0				
	Through	1	1,418		808	808
	Through/Right	1			808	
	Right	0	198	0		
	Total Lanes	3				
Southbound	Left	1	104		104	104
	Left/Through	0				
	Through	1	1,363		787	
	Through/Right	1			787	
	Right	0	211	0		
	Total Lanes	3				
			Sum of North/South Critical Volumes			**912**
Eastbound	Left	1	109		109	109
	Left/Through	0				
	Through	1	927		491	
	Through/Right	1			491	
	Right	0	55	0		
	Total Lanes	3				
Westbound	Left	1	105		105	
	Left/Through	0				
	Through	1	719		719	719
	Through/Right	0				
	Right	1	168	52	116	
	Total Lanes	3				
			Sum of East/West Critical Volumes			**828**
			Total Intersection Critical Volumes			**1,740**
Number of Clearance Intervals	**2**		**Intersection Capacity**			**1,500**
			Base CMA			**1.160**
Signal Coordination	**ATSAC**		**Signal Coordination Adjustment**			**-0.070**
			Final CMA			**1.090**
			Level of Service (LOS)			**F**

Hirsch/Green Transportation Consulting, Inc.
Critical Movement Analysis (CMA) Worksheet

Project Name	Pico/Sepulveda Mixed-Use Project		
Intersection Number	54	**Date**	December 7, 2012
Intersection Name	North/South: Sepulveda Boulevard East/West: Venice Boulevard		
Intersection Control	Signalized		
Analysis Period	PM Peak Hour		
Analysis Scenario	Existing (2009) With Project		

Approach Direction	Lane Type	No. of Lanes	Approach Volumes	Right-Turn on Red	Assigned Lane Volumes	Critical Moves
	Left	1	112		112	
	Left/Through	0				
Northbound	Through	2	1,287		644	644
	Through/Right	0				
	Right	1	270	93	177	
	Total Lanes	4				
	Left	1	108		108	108
	Left/Through	0				
Southbound	Through	2	938		469	
	Through/Right	0				
	Right	1	204	116	88	
	Total Lanes	4				
			Sum of North/South Critical Volumes			**752**
	Left	1	222		222	
	Left/Through	0				
Eastbound	Through	3	1,455		485	485
	Through/Right	0				
	Right	1	263	142	121	
	Total Lanes	5				
	Left	1	186		186	186
	Left/Through	0				
Westbound	Through	3	1,317		439	
	Through/Right	0				
	Right	1	159	54	105	
	Total Lanes	5				
			Sum of East/West Critical Volumes			**671**
			Total Intersection Critical Volumes			**1,423**
Number of Clearance Intervals	**4**		**Intersection Capacity**			**1,375**
			Base CMA			**1.035**
Signal Coordination	**ATSAC**		**Signal Coordination Adjustment**			**-0.070**
			Final CMA			**0.965**
			Level of Service (LOS)			**E**

Existing (2009) With Modified Project Plus Physical Mitigation

AM Peak Hour

Hirsch/Green Transportation Consulting, Inc.
Critical Movement Analysis (CMA) Worksheet

Project Name	Pico/Sepulveda Mixed-Use Project		
Intersection Number	18	**Date**	December 7, 2012
Intersection Name	North/South: Westwood Boulevard East/West: Olympic Boulevard		
Intersection Control	Signalized		
Analysis Period	AM Peak Hour		
Analysis Scenario	Existing (2009) With Project Plus Physical Mitigation		

Approach Direction	Lane Type	No. of Lanes	Approach Volumes	Right-Turn on Red	Assigned Lane Volumes	Critical Moves
Northbound	Left	1	123		123	
	Left/Through	0				
	Through	1	874		520	520
	Through/Right	1			520	
	Right	0	167	0		
	Total Lanes	3				
Southbound	Left	1	148		148	148
	Left/Through	0				
	Through	2	513		256	
	Through/Right	0				
	Right	1	98	51	47	
	Total Lanes	4				
			Sum of North/South Critical Volumes			**668**
Eastbound	Left	1	51		51	
	Left/Through	0				
	Through	2	2,237		774	774
	Through/Right	1			774	
	Right	0	86	0		
	Total Lanes	4				
Westbound	Left	1	84		84	84
	Left/Through	0				
	Through	2	2,027		733	
	Through/Right	1			733	
	Right	0	171	0		
	Total Lanes	4				
			Sum of East/West Critical Volumes			**858**
			Total Intersection Critical Volumes			**1,526**
Number of Clearance Intervals	**4**		**Intersection Capacity**			**1,375**
			Base CMA			**1.110**
Signal Coordination	**ATSAC + ATCS**		**Signal Coordination Adjustment**			**-0.100**
			Final CMA			**1.010**
			Level of Service (LOS)			**F**

SB Rt. Turn Overlap with EB Left

Hirsch/Green Transportation Consulting, Inc.
Critical Movement Analysis (CMA) Worksheet

Project Name	Pico/Sepulveda Mixed-Use Project		
Intersection Number	21	**Date**	December 7, 2012
Intersection Name	North/South: Sawtelle Boulevard East/West: Tennessee Avenue/I-405 SB Off-Ramp		
Intersection Control	Signalized		
Analysis Period	AM Peak Hour		
Analysis Scenario	Existing (2009) With Project Plus Physical Mitigation		

Approach Direction	Lane Type	No. of Lanes	Approach Volumes	Right-Turn on Red	Assigned Lane Volumes	Critical Moves
Northbound	Left	1	141		141	141
	Left/Through	0				
	Through	2	766		383	
	Through/Right	0				
	Right	0	0	0		
	Total Lanes	3				
Southbound	Left	0	0			
	Left/Through	0				
	Through	1	466		252	252
	Through/Right	1			252	
	Right	0	37	0		
	Total Lanes	2				
			Sum of North/South Critical Volumes			**393**
Eastbound	Left	1	35		35	35
	Left/Through	0				
	Through	0	0			
	Through/Right	0				
	Right	1	67	67	0	
	Total Lanes	2				
Westbound	Left	1	362		315	
	Left/Through	0				
	Left/Through/Right	1	164		315	315
	Through/Right	0				
	Right	1	424	5	315	
	Total Lanes	3				
			Sum of East/West Critical Volumes			**350**
			Total Intersection Critical Volumes			**743**
Number of Clearance Intervals	**3**		**Intersection Capacity**			**1,425**
			Base CMA			**0.521**
Signal Coordination	**ATSAC + ATCS**		**Signal Coordination Adjustment**			**-0.100**
			Final CMA			**0.421**
			Level of Service (LOS)			**A**

East/West Opposed Phasing

Hirsch/Green Transportation Consulting, Inc.
Critical Movement Analysis (CMA) Worksheet

Project Name	Pico/Sepulveda Mixed-Use Project		
Intersection Number	54	**Date**	December 7, 2012
Intersection Name	North/South: Sepulveda Boulevard East/West: Venice Boulevard		
Intersection Control	Signalized		
Analysis Period	AM Peak Hour		
Analysis Scenario	Existing (2009) With Project Plus Physical Mitigation		

Approach Direction	Lane Type	No. of Lanes	Approach Volumes	Right-Turn on Red	Assigned Lane Volumes	Critical Moves
	Left	1	90		90	
	Left/Through	0				
Northbound	Through	2	1,064		408	408
	Through/Right	1			408	
	Right	0	160	0		
	Total Lanes	4				
	Left	1	84		84	84
	Left/Through	0				
Southbound	Through	2	413		206	
	Through/Right	0				
	Right	1	185	126	59	
	Total Lanes	4				
			Sum of North/South Critical Volumes			**492**
	Left	1	253		253	253
	Left/Through	0				
Eastbound	Through	3	1,282		427	
	Through/Right	0				
	Right	1	409	143	266	
	Total Lanes	5				
	Left	1	185		185	
	Left/Through	0				
Westbound	Through	3	1,507		502	502
	Through/Right	0				
	Right	1	152	42	110	
	Total Lanes	5				
			Sum of East/West Critical Volumes			**755**
			Total Intersection Critical Volumes			**1,247**
Number of Clearance Intervals	**4**		**Intersection Capacity**			**1,375**
			Base CMA			**0.907**
Signal Coordination	**ATSAC**		**Signal Coordination Adjustment**			**-0.070**
			Final CMA			**0.837**
			Level of Service (LOS)			**D**

Existing (2009) With Modified Project Plus Physical Mitigation

PM Peak Hour

Hirsch/Green Transportation Consulting, Inc.
Critical Movement Analysis (CMA) Worksheet

Project Name	Pico/Sepulveda Mixed-Use Project		
Intersection Number	18	**Date**	December 7, 2012
Intersection Name	North/South: Westwood Boulevard East/West: Olympic Boulevard		
Intersection Control	Signalized		
Analysis Period	PM Peak Hour		
Analysis Scenario	Existing (2009) With Project Plus Physical Mitigation		

Approach Direction	Lane Type	No. of Lanes	Approach Volumes	Right-Turn on Red	Assigned Lane Volumes	Critical Moves
Northbound	Left	1	74		74	
	Left/Through	0				
	Through	1	778		436	436
	Through/Right	1			436	
	Right	0	95	0		
	Total Lanes	3				
Southbound	Left	1	229		229	229
	Left/Through	0				
	Through	2	1,085		542	
	Through/Right	0				
	Right	1	124	50	74	
	Total Lanes	4				
			Sum of North/South Critical Volumes			**665**
Eastbound	Left	1	50		50	
	Left/Through	0				
	Through	2	1,730		603	603
	Through/Right	1			603	
	Right	0	78	0		
	Total Lanes	4				
Westbound	Left	1	122		122	122
	Left/Through	0				
	Through	3	2,117		576	
	Through/Right	1			576	
	Right	0	189	0		
	Total Lanes	5				
			Sum of East/West Critical Volumes			**725**
			Total Intersection Critical Volumes			**1,390**
Number of Clearance Intervals	**4**		**Intersection Capacity**			**1,375**
			Base CMA			**1.011**
Signal Coordination	**ATSAC + ATCS**		**Signal Coordination Adjustment**			**-0.100**
			Final CMA			**0.911**
			Level of Service (LOS)			**E**

SB Rt. Turn Overlap with EB Left

Hirsch/Green Transportation Consulting, Inc.
Critical Movement Analysis (CMA) Worksheet

Project Name	Pico/Sepulveda Mixed-Use Project		
Intersection Number	21	**Date**	December 7, 2012
Intersection Name	North/South: Sawtelle Boulevard East/West: Tennessee Avenue/I-405 SB Off-Ramp		
Intersection Control	Signalized		
Analysis Period	PM Peak Hour		
Analysis Scenario	Existing (2009) With Project Plus Physical Mitigation		

Approach Direction	Lane Type	No. of Lanes	Approach Volumes	Right-Turn on Red	Assigned Lane Volumes	Critical Moves
Northbound	Left	1	86		86	86
	Left/Through	0				
	Through	2	781		390	
	Through/Right	0				
	Right	0	0	0		
	Total Lanes	3				
Southbound	Left	0	0			
	Left/Through	0				
	Through	1	1,084		562	562
	Through/Right	1			562	
	Right	0	41	0		
	Total Lanes	2				
			Sum of North/South Critical Volumes			**648**
Eastbound	Left	1	259		259	
	Left/Through	0				
	Through	0	0			
	Through/Right	0				
	Right	1	365	43	322	322
	Total Lanes	2				
Westbound	Left	1	378		203	
	Left/Through	0				
	Left/Through/Right	1	27		203	203
	Through/Right	0				
	Right	1	109	109	0	
	Total Lanes	3				
			Sum of East/West Critical Volumes			**524**
			Total Intersection Critical Volumes			**1,172**
Number of Clearance Intervals	**3**		**Intersection Capacity**			**1,425**
			Base CMA			**0.822**
Signal Coordination	**ATSAC + ATCS**		**Signal Coordination Adjustment**			**-0.100**
			Final CMA			**0.722**
			Level of Service (LOS)			**C**

East/West Opposed Phasing

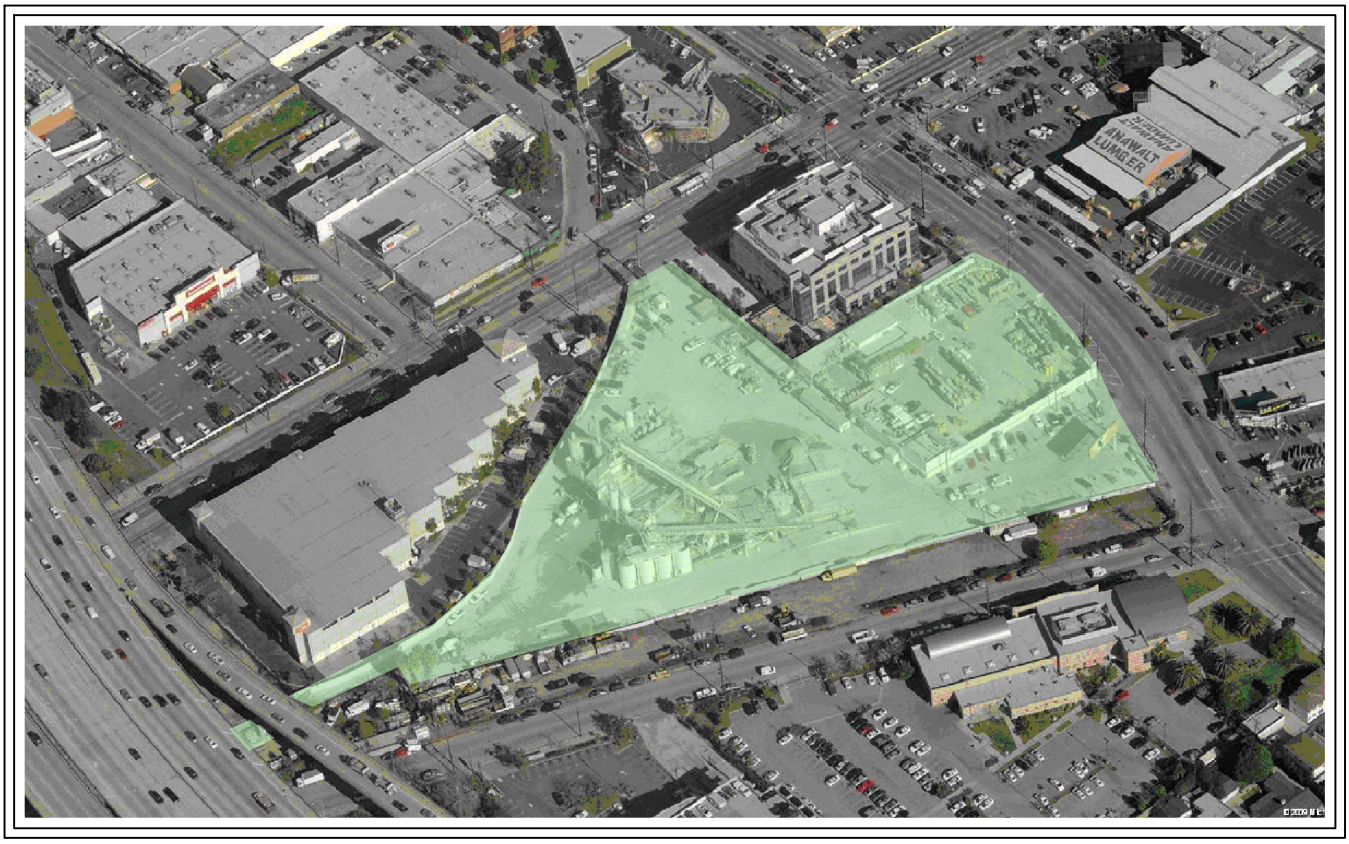
Hirsch/Green Transportation Consulting, Inc.
Critical Movement Analysis (CMA) Worksheet

Project Name	Pico/Sepulveda Mixed-Use Project		
Intersection Number	54	**Date**	December 7, 2012
Intersection Name	North/South: Sepulveda Boulevard East/West: Venice Boulevard		
Intersection Control	Signalized		
Analysis Period	PM Peak Hour		
Analysis Scenario	Existing (2009) With Project Plus Physical Mitigation		

Approach Direction	Lane Type	No. of Lanes	Approach Volumes	Right-Turn on Red	Assigned Lane Volumes	Critical Moves
	Left	1	112		112	
	Left/Through	0				
Northbound	Through	2	1,287		519	519
	Through/Right	1			519	
	Right	0	270	0		
	Total Lanes	4				
	Left	1	108		108	108
	Left/Through	0				
Southbound	Through	2	938		469	
	Through/Right	0				
	Right	1	204	116	88	
	Total Lanes	4				
			Sum of North/South Critical Volumes			**627**
	Left	1	222		222	
	Left/Through	0				
Eastbound	Through	3	1,455		485	485
	Through/Right	0				
	Right	1	263	79	184	
	Total Lanes	5				
	Left	1	186		186	186
	Left/Through	0				
Westbound	Through	3	1,317		439	
	Through/Right	0				
	Right	1	159	54	105	
	Total Lanes	5				
			Sum of East/West Critical Volumes			**671**
			Total Intersection Critical Volumes			**1,298**
Number of Clearance Intervals	**4**		**Intersection Capacity**			**1,375**
			Base CMA			**0.944**
Signal Coordination	**ATSAC**		**Signal Coordination Adjustment**			**-0.070**
			Final CMA			**0.874**
			Level of Service (LOS)			**D**

TRAFFIC IMPACT ANALYSIS REPORT - APPENDIX VOLUME II

Modified Mixed-Use Development
(638 Apartments, 110,000 Square Foot Retail
and 50,000 Square Foot Supermarket)
at Sepulveda Boulevard and Pico Boulevard
in Los Angeles, California



Prepared for:

Casden West LA
9090 Wilshire Boulevard
Third Floor
Beverly Hills, California 90211

Prepared by:

HIRSCH GREEN
Hirsch/Green Transportation Consulting, Inc.
13333 Ventura Boulevard, #204
Sherman Oaks, California 91423

REGISTERED PROFESSIONAL ENGINEER
RONALD R. HIRSCH
NO. 2318
6-30-2013
TRAFFIC
STATE OF CALIFORNIA

DECEMBER 2012

APPENDICES

TABLE OF CONTENTS

VOLUME I

A – Project General Geographic Trip Distribution Percentages (By Component)

B – Project Intersection Trip Assignment Percentages (By Component)

C – Project Intersection AM and PM Peak Hour Traffic Volumes (By Component)

D – Project Residential TOD and Commercial TDM Trip Reduction
AM and PM Peak Hour Traffic Volumes

E – Critical Movement Analysis Intersection Operations Calculation Worksheets

54 "Original" Study Intersections (from "Revised December 2009" traffic study)

- *Existing (2009) With Modified Project*
- *Existing (2009) With Modified Project Plus Physical Mitigation*

VOLUME II

E – Critical Movement Analysis Intersection Operations Calculation Worksheets (continued)

54 "Original" Study Intersections (from "Revised December 2009" traffic study)

- *Future (2012) With Modified Project*
- *Future (2012) With Modified Project Plus TOD/TDM Trip Reductions Only*
- *Future (2012) With Modified Project Plus Physical Mitigation*

7 Supplemental Study Intersections (from DEIR Analyses)

Future (2012) With Modified Project

AM Peak Hour

Hirsch/Green Transportation Consulting, Inc.
Critical Movement Analysis (CMA) Worksheet

Project Name	Pico/Sepulveda Mixed-Use Project		
Intersection Number	1	**Date**	December 7, 2012
Intersection Name	North/South: Sepulveda Boulevard East/West: Wilshire Boulevard		
Intersection Control	Signalized		
Analysis Period	AM Peak Hour		
Analysis Scenario	Future (2012) With Project		

Approach Direction	Lane Type	No. of Lanes	Approach Volumes	Right-Turn on Red	Assigned Lane Volumes	Critical Moves
Northbound	Left	1	298		298	298
	Left/Through	0				
	Through	2	542		271	
	Through/Right	0				
	Right	1	345	66	279	
	Total Lanes	4				
Southbound	Left	1	349		349	
	Left/Through	0				
	Through	2	683		342	342
	Through/Right	0				
	Right	1	318	14	304	
	Total Lanes	4				
			Sum of North/South Critical Volumes			**640**
Eastbound	Left	1	28		28	28
	Left/Through	0				
	Through	3	2,138		566	
	Through/Right	1			566	
	Right	0	127	0		
	Total Lanes	5				
Westbound	Left	2	120		66	
	Left/Through	0				
	Through	4	3,948		801	801
	Through/Right	1			801	
	Right	0	59	0		
	Total Lanes	7				
			Sum of East/West Critical Volumes			**829**
			Total Intersection Critical Volumes			**1,469**
Number of Clearance Intervals	**4**		**Intersection Capacity**			**1,375**
			Base CMA			**1.068**
Signal Coordination	**ATSAC + ATCS**		**Signal Coordination Adjustment**			**-0.100**
			Final CMA			**0.968**
			Level of Service (LOS)			**E**

NB Rt. Turn Overlap with WB Left

Hirsch/Green Transportation Consulting, Inc.
Critical Movement Analysis (CMA) Worksheet

Project Name	Pico/Sepulveda Mixed-Use Project		
Intersection Number	2	**Date**	December 7, 2012
Intersection Name	North/South: Veteran Avenue East/West: Wilshire Boulevard		
Intersection Control	Signalized		
Analysis Period	AM Peak Hour		
Analysis Scenario	Future (2012) With Project		

Approach Direction	Lane Type	No. of Lanes	Approach Volumes	Right-Turn on Red	Assigned Lane Volumes	Critical Moves
Northbound	Left	1	210		210	
	Left/Through	0				
	Through	2	502		251	251
	Through/Right	0				
	Right	1	83	28	55	
	Total Lanes	4				
Southbound	Left	1	115		115	115
	Left/Through	0				
	Through	2	300		150	
	Through/Right	0				
	Right	2	407	152	128	
	Total Lanes	5				
			Sum of North/South Critical Volumes			**366**
Eastbound	Left	2	553		304	304
	Left/Through	0				
	Through	3	3,333		890	
	Through/Right	1			890	
	Right	0	226	0		
	Total Lanes	6				
Westbound	Left	2	50		28	
	Left/Through	0				
	Through	3	2,493		641	641
	Through/Right	1			641	
	Right	0	71	0		
	Total Lanes	6				
			Sum of East/West Critical Volumes			**945**
			Total Intersection Critical Volumes			**1,311**
Number of Clearance Intervals	**4**		**Intersection Capacity**			**1,375**
			Base CMA			**0.953**
Signal Coordination	**ATSAC + ATCS**		**Signal Coordination Adjustment**			**-0.100**
			Final CMA			**0.853**
			Level of Service (LOS)			**D**

NB Rt. Turn Overlap with WB Left

Hirsch/Green Transportation Consulting, Inc.
Critical Movement Analysis (CMA) Worksheet

Project Name	Pico/Sepulveda Mixed-Use Project		
Intersection Number	3	**Date**	December 7, 2012
Intersection Name	North/South: Westwood Boulevard East/West: Wilshire Boulevard		
Intersection Control	Signalized		
Analysis Period	AM Peak Hour		
Analysis Scenario	Future (2012) With Project		

Approach Direction	Lane Type	No. of Lanes	Approach Volumes	Right-Turn on Red	Assigned Lane Volumes	Critical Moves
Northbound	Left	1	170		170	
	Left/Through	0				
	Through	2	649		266	266
	Through/Right	1			266	
	Right	0	148	0		
	Total Lanes	4				
Southbound	Left	1	76		76	76
	Left/Through	0				
	Through	2	303		101	
	Through/Right	1			101	
	Right	1	177	108	69	
	Total Lanes	5				
			Sum of North/South Critical Volumes			**342**
Eastbound	Left	2	394		217	217
	Left/Through	0				
	Through	3	2,295		622	
	Through/Right	1			622	
	Right	0	193	0		
	Total Lanes	6				
Westbound	Left	2	174		96	
	Left/Through	0				
	Through	3	2,062		541	541
	Through/Right	1			541	
	Right	0	101	0		
	Total Lanes	6				
			Sum of East/West Critical Volumes			**758**
			Total Intersection Critical Volumes			**1,100**
Number of Clearance Intervals	**4**		**Intersection Capacity**			**1,375**
			Base CMA			**0.800**
Signal Coordination	**ATSAC + ATCS**		**Signal Coordination Adjustment**			**-0.100**
			Final CMA			**0.700**
			Level of Service (LOS)			**B**

Hirsch/Green Transportation Consulting, Inc.
Critical Movement Analysis (CMA) Worksheet

Project Name	Pico/Sepulveda Mixed-Use Project		
Intersection Number	4	**Date**	December 7, 2012
Intersection Name	North/South: Sepulveda Boulevard East/West: Ohio Avenue		
Intersection Control	Signalized		
Analysis Period	AM Peak Hour		
Analysis Scenario	Future (2012) With Project		

Approach Direction	Lane Type	No. of Lanes	Approach Volumes	Right-Turn on Red	Assigned Lane Volumes	Critical Moves
Northbound	Left	1	127		127	127
	Left/Through	0				
	Through	1	740		438	
	Through/Right	1			438	
	Right	0	135	0		
	Total Lanes	3				
Southbound	Left	1	54		54	
	Left/Through	0				
	Through	1	781		422	422
	Through/Right	1			422	
	Right	0	63	0		
	Total Lanes	3				
			Sum of North/South Critical Volumes			**549**
Eastbound	Left	1	200		200	
	Left/Through	0				
	Through	0	827			
	Through/Right	1			913	913
	Right	0	86	0		
	Total Lanes	2				
Westbound	Left	1	89		89	89
	Left/Through	0				
	Through	0	588			
	Through/Right	1			641	
	Right	0	53	0		
	Total Lanes	2				
			Sum of East/West Critical Volumes			**1,002**
			Total Intersection Critical Volumes			**1,551**
Number of Clearance Intervals	**2**		**Intersection Capacity**			**1,500**
			Base CMA			**1.034**
Signal Coordination	**ATSAC + ATCS**		**Signal Coordination Adjustment**			**-0.100**
			Final CMA			**0.934**
			Level of Service (LOS)			**E**

Hirsch/Green Transportation Consulting, Inc.
Critical Movement Analysis (CMA) Worksheet

Project Name	Pico/Sepulveda Mixed-Use Project		
Intersection Number	5	**Date**	December 7, 2012
Intersection Name	North/South: Barrington Avenue East/West: Santa Monica Boulevard		
Intersection Control	Signalized		
Analysis Period	AM Peak Hour		
Analysis Scenario	Future (2012) With Project		

Approach Direction	Lane Type	No. of Lanes	Approach Volumes	Right-Turn on Red	Assigned Lane Volumes	Critical Moves
Northbound	Left	1	118		118	118
	Left/Through	0				
	Through	1	547		547	
	Through/Right	0				
	Right	1	98	67	31	
	Total Lanes	3				
Southbound	Left	1	120		120	
	Left/Through	0				
	Through	0	624			
	Through/Right	1			672	672
	Right	0	48	0		
	Total Lanes	2				
			Sum of North/South Critical Volumes			**790**
Eastbound	Left	1	38		38	
	Left/Through	0				
	Through	2	1,188		422	422
	Through/Right	1			422	
	Right	0	79	0		
	Total Lanes	4				
Westbound	Left	1	134		134	134
	Left/Through	0				
	Through	2	1,407		502	
	Through/Right	1			502	
	Right	0	99	0		
	Total Lanes	4				
			Sum of East/West Critical Volumes			**556**
			Total Intersection Critical Volumes			**1,346**
Number of Clearance Intervals	**2**		**Intersection Capacity**			**1,500**
			Base CMA			**0.897**
Signal Coordination	**ATSAC**		**Signal Coordination Adjustment**			**-0.070**
			Final CMA			**0.827**
			Level of Service (LOS)			**D**

Hirsch/Green Transportation Consulting, Inc.
Critical Movement Analysis (CMA) Worksheet

Project Name	Pico/Sepulveda Mixed-Use Project		
Intersection Number	6	**Date**	December 7, 2012
Intersection Name	North/South: Sepulveda Boulevard East/West: Santa Monica Boulevard		
Intersection Control	Signalized		
Analysis Period	AM Peak Hour		
Analysis Scenario	Future (2012) With Project		

Approach Direction	Lane Type	No. of Lanes	Approach Volumes	Right-Turn on Red	Assigned Lane Volumes	Critical Moves
Northbound	Left	1	169		169	
	Left/Through	0				
	Through	2	879		440	440
	Through/Right	0				
	Right	1	188	182	6	
	Total Lanes	4				
Southbound	Left	1	133		133	133
	Left/Through	0				
	Through	2	663		332	
	Through/Right	0				
	Right	1	128	128	0	
	Total Lanes	4				
			Sum of North/South Critical Volumes			**573**
Eastbound	Left	1	140		140	
	Left/Through	0				
	Through	3	1,932		644	644
	Through/Right	0				
	Right	1	345	169	176	
	Total Lanes	5				
Westbound	Left	1	182		182	182
	Left/Through	0				
	Through	3	1,534		511	
	Through/Right	0				
	Right	1	71	66	5	
	Total Lanes	5				
			Sum of East/West Critical Volumes			**826**
			Total Intersection Critical Volumes			**1,399**
Number of Clearance Intervals	**4**		**Intersection Capacity**			**1,375**
			Base CMA			**1.017**
Signal Coordination	**ATSAC + ATCS**		**Signal Coordination Adjustment**			**-0.100**
			Final CMA			**0.917**
			Level of Service (LOS)			**E**

NB/SB Rt. Turn Overlap With WB/EB Lefts

EB Rt. Turn Overlap with NB Left

Hirsch/Green Transportation Consulting, Inc.
Critical Movement Analysis (CMA) Worksheet

Project Name	Pico/Sepulveda Mixed-Use Project		
Intersection Number	7	**Date**	December 7, 2012
Intersection Name	North/South: Westwood Boulevard East/West: Santa Monica Boulevard		
Intersection Control	Signalized		
Analysis Period	AM Peak Hour		
Analysis Scenario	Future (2012) With Project		

Approach Direction	Lane Type	No. of Lanes	Approach Volumes	Right-Turn on Red	Assigned Lane Volumes	Critical Moves
Northbound	Left	1	98		98	
	Left/Through	0				
	Through	1	1,119		610	610
	Through/Right	1			610	
	Right	0	102	0		
	Total Lanes	3				
Southbound	Left	1	194		194	194
	Left/Through	0				
	Through	2	649		324	
	Through/Right	0				
	Right	1	83	83	0	
	Total Lanes	4				
			Sum of North/South Critical Volumes			**804**
Eastbound	Left	2	162		89	
	Left/Through	0				
	Through	3	2,305		768	768
	Through/Right	0				
	Right	1	116	116	0	
	Total Lanes	6				
Westbound	Left	2	194		107	107
	Left/Through	0				
	Through	3	1,542		514	
	Through/Right	0				
	Right	1	194	97	97	
	Total Lanes	6				
			Sum of East/West Critical Volumes			**875**
			Total Intersection Critical Volumes			**1,679**
Number of Clearance Intervals	**4**		**Intersection Capacity**			**1,375**
			Base CMA			**1.221**
Signal Coordination	**ATSAC + ATCS**		**Signal Coordination Adjustment**			**-0.100**
			Final CMA			**1.121**
			Level of Service (LOS)			**F**

Hirsch/Green Transportation Consulting, Inc.
Critical Movement Analysis (CMA) Worksheet

Project Name	Pico/Sepulveda Mixed-Use Project		
Intersection Number	8	**Date**	December 7, 2012
Intersection Name	North/South: Overland Avenue East/West: Santa Monica Boulevard		
Intersection Control	Signalized		
Analysis Period	AM Peak Hour		
Analysis Scenario	Future (2012) With Project		

Approach Direction	Lane Type	No. of Lanes	Approach Volumes	Right-Turn on Red	Assigned Lane Volumes	Critical Moves
Northbound	Left	1	157		157	157
	Left/Through	0				
	Through	0	0			
	Through/Right	0				
	Right	1	148	0	148	
	Total Lanes	2				
Southbound	Left	0	0			
	Left/Through	0				
	Through	0	0			
	Through/Right	0				
	Right	0	0	0		
	Total Lanes	0				
			Sum of North/South Critical Volumes			**157**
Eastbound	Left	0	0			
	Left/Through	0				
	Through	2	2,039		696	696
	Through/Right	1			696	
	Right	0	48	0		
	Total Lanes	3				
Westbound	Left	1	158		158	158
	Left/Through	0				
	Through	3	1,631		544	
	Through/Right	0				
	Right	0	0	0		
	Total Lanes	4				
			Sum of East/West Critical Volumes			**854**
			Total Intersection Critical Volumes			**1,011**
Number of Clearance Intervals	**4**		**Intersection Capacity**			**1,375**
			Base CMA			**0.735**
Signal Coordination	**ATSAC + ATCS**		**Signal Coordination Adjustment**			**-0.100**
			Final CMA			**0.635**
			Level of Service (LOS)			**B**

Hirsch/Green Transportation Consulting, Inc.
Critical Movement Analysis (CMA) Worksheet

Project Name	Pico/Sepulveda Mixed-Use Project		
Intersection Number	9	**Date**	December 7, 2012
Intersection Name	North/South: Beverly Glen Boulevard East/West: Santa Monica Boulevard		
Intersection Control	Signalized		
Analysis Period	AM Peak Hour		
Analysis Scenario	Future (2012) With Project		

Approach Direction	Lane Type	No. of Lanes	Approach Volumes	Right-Turn on Red	Assigned Lane Volumes	Critical Moves
Northbound	Left	2	104		57	
	Left/Through	0				
	Through	2	582		291	291
	Through/Right	0				
	Right	1	256	37	219	
	Total Lanes	5				
Southbound	Left	2	547		301	301
	Left/Through	0				
	Through	2	845		422	
	Through/Right	0				
	Right	1	117	117	0	
	Total Lanes	5				
			Sum of North/South Critical Volumes			**592**
Eastbound	Left	2	143		79	
	Left/Through	0				
	Through	3	2,330		777	777
	Through/Right	0				
	Right	1	148	85	63	
	Total Lanes	6				
Westbound	Left	2	135		74	74
	Left/Through	0				
	Through	3	1,433		478	
	Through/Right	0				
	Right	1	157	150	7	
	Total Lanes	6				
			Sum of East/West Critical Volumes			**851**
			Total Intersection Critical Volumes			**1,443**
Number of Clearance Intervals	**4**		**Intersection Capacity**			**1,375**
			Base CMA			**1.049**
Signal Coordination	**ATSAC + ATCS**		**Signal Coordination Adjustment**			**-0.100**
			Final CMA			**0.949**
			Level of Service (LOS)			**E**

Hirsch/Green Transportation Consulting, Inc.
Critical Movement Analysis (CMA) Worksheet

Project Name	Pico/Sepulveda Mixed-Use Project		
Intersection Number	10	**Date**	December 7, 2012
Intersection Name	North/South: Sepulveda Boulevard East/West: Nebraska Avenue		
Intersection Control	Signalized		
Analysis Period	AM Peak Hour		
Analysis Scenario	Future (2012) With Project		

Approach Direction	Lane Type	No. of Lanes	Approach Volumes	Right-Turn on Red	Assigned Lane Volumes	Critical Moves
Northbound	Left	1	41		41	41
	Left/Through	0				
	Through	1	1,213		606	
	Through/Right	1			606	
	Right	0	0	0		
	Total Lanes	3				
Southbound	Left	1	0		0	
	Left/Through	0				
	Through	1	1,110		610	610
	Through/Right	1			610	
	Right	0	110	0		
	Total Lanes	3				
			Sum of North/South Critical Volumes			**651**
Eastbound	Left	0	58			
	Left/Through	1			58	58
	Through	0	0			
	Through/Right	0				
	Right	1	43	20	23	
	Total Lanes	2				
Westbound	Left	0	0			
	Left/Through	0				
	Through	0	0			
	Through/Right	0				
	Right	0	0	0		
	Total Lanes	0				
			Sum of East/West Critical Volumes			**58**
			Total Intersection Critical Volumes			**709**
Number of Clearance Intervals	**3**		**Intersection Capacity**			**1,425**
			Base CMA			**0.498**
Signal Coordination	**ATSAC + ATCS**		**Signal Coordination Adjustment**			**-0.100**
			Final CMA			**0.398**
			Level of Service (LOS)			**A**

Hirsch/Green Transportation Consulting, Inc.
Critical Movement Analysis (CMA) Worksheet

Project Name	Pico/Sepulveda Mixed-Use Project		
Intersection Number	11	**Date**	December 7, 2012
Intersection Name	North/South: Sepulveda Boulevard East/West: La Grange Avenue		
Intersection Control	Signalized		
Analysis Period	AM Peak Hour		
Analysis Scenario	Future (2012) With Project		

Approach Direction	Lane Type	No. of Lanes	Approach Volumes	Right-Turn on Red	Assigned Lane Volumes	Critical Moves
Northbound	Left	1	60		60	
	Left/Through	0				
	Through	1	1,122		573	573
	Through/Right	1			573	
	Right	0	24	0		
	Total Lanes	3				
Southbound	Left	1	42		42	42
	Left/Through	0				
	Through	1	1,032		542	
	Through/Right	1			542	
	Right	0	53	0		
	Total Lanes	3				
			Sum of North/South Critical Volumes			**615**
Eastbound	Left	0	64			64
	Left/Through	0				
	Left/Through/Right	1	40		117	
	Through/Right	0				
	Right	0	13	0		
	Total Lanes	1				
Westbound	Left	0	55			
	Left/Through	0				
	Left/Through/Right	1	60		154	154
	Through/Right	0				
	Right	0	39	0		
	Total Lanes	1				
			Sum of East/West Critical Volumes			**218**
			Total Intersection Critical Volumes			**833**
Number of Clearance Intervals	**2**		**Intersection Capacity**			**1,500**
			Base CMA			**0.555**
Signal Coordination	**ATSAC + ATCS**		**Signal Coordination Adjustment**			**-0.100**
			Final CMA			**0.455**
			Level of Service (LOS)			**A**

Hirsch/Green Transportation Consulting, Inc.
Critical Movement Analysis (CMA) Worksheet

Project Name	Pico/Sepulveda Mixed-Use Project		
Intersection Number	12	**Date**	December 7, 2012
Intersection Name	North/South: Centinela Avenue (west intersection)		
	East/West: Olympic Boulevard		
Intersection Control	Signalized		
Analysis Period	AM Peak Hour		
Analysis Scenario	Future (2012) With Project		

Approach Direction	Lane Type	No. of Lanes	Approach Volumes	Right-Turn on Red	Assigned Lane Volumes	Critical Moves
	Left	0	0			
	Left/Through	0				
Northbound	Through	0	0			
	Through/Right	0				
	Right	0	0	0		
	Total Lanes	0				
	Left	2	643		354	354
	Left/Through	0				
Southbound	Through	0	0			
	Through/Right	0				
	Right	1	65	10	55	
	Total Lanes	3				
			Sum of North/South Critical Volumes			**354**
	Left	1	19		19	19
	Left/Through	0				
Eastbound	Through	2	889		444	
	Through/Right	0				
	Right	0	0	0		
	Total Lanes	3				
	Left	1	0		0	
	Left/Through	0				
Westbound	Through	2	1,780		890	890
	Through/Right	0				
	Right	1	881	177	704	
	Total Lanes	4				
			Sum of East/West Critical Volumes			**909**
			Total Intersection Critical Volumes			**1,263**
Number of Clearance Intervals	**2**		**Intersection Capacity**			**1,500**
			Base CMA			**0.842**
Signal Coordination	**ATSAC**		**Signal Coordination Adjustment**			**-0.070**
			Final CMA			**0.772**
			Level of Service (LOS)			**C**

Hirsch/Green Transportation Consulting, Inc.
Critical Movement Analysis (CMA) Worksheet

Project Name	Pico/Sepulveda Mixed-Use Project		
Intersection Number	13	**Date**	December 7, 2012
Intersection Name	North/South: Centinela Avenue (east intersection)		
	East/West: Olympic Boulevard		
Intersection Control	Signalized		
Analysis Period	AM Peak Hour		
Analysis Scenario	Future (2012) With Project		

Approach Direction	Lane Type	No. of Lanes	Approach Volumes	Right-Turn on Red	Assigned Lane Volumes	Critical Moves
Northbound	Left	1	661		537	
	Left/Through	0				
	Left/Through/Right	1	252		537	537
	Through/Right	0				
	Right	0	161	0		
	Total Lanes	2				
Southbound	Left	1	78		78	
	Left/Through	0				
	Through	0	82			
	Through/Right	1			102	102
	Right	0	20	0		
	Total Lanes	2				
			Sum of North/South Critical Volumes			**639**
Eastbound	Left	1	61		61	61
	Left/Through	0				
	Through	3	987		329	
	Through/Right	0				
	Right	1	378	268	110	
	Total Lanes	5				
Westbound	Left	1	241		241	
	Left/Through	0				
	Through	2	1,626		632	632
	Through/Right	1			632	
	Right	0	269	0		
	Total Lanes	4				
			Sum of East/West Critical Volumes			**693**
			Total Intersection Critical Volumes			**1,332**
Number of Clearance Intervals	**3**		**Intersection Capacity**			**1,425**
			Base CMA			**0.935**
Signal Coordination	**ATSAC**		**Signal Coordination Adjustment**			**-0.070**
			Final CMA			**0.865**
			Level of Service (LOS)			**D**

Hirsch/Green Transportation Consulting, Inc.
Critical Movement Analysis (CMA) Worksheet

Project Name	Pico/Sepulveda Mixed-Use Project		
Intersection Number	14	**Date**	December 7, 2012
Intersection Name	North/South: Bundy Drive East/West: Olympic Boulevard		
Intersection Control	Signalized		
Analysis Period	AM Peak Hour		
Analysis Scenario	Future (2012) With Project		

Approach Direction	Lane Type	No. of Lanes	Approach Volumes	Right-Turn on Red	Assigned Lane Volumes	Critical Moves
Northbound	Left	1	344		344	
	Left/Through	0				
	Through	2	1,375		688	688
	Through/Right	0				
	Right	1	339	194	145	
	Total Lanes	4				
Southbound	Left	1	322		322	322
	Left/Through	0				
	Through	2	1,289		644	
	Through/Right	0				
	Right	1	297	98	199	
	Total Lanes	4				
			Sum of North/South Critical Volumes			**1,010**
Eastbound	Left	1	196		196	196
	Left/Through	0				
	Through	3	1,059		353	
	Through/Right	0				
	Right	1	164	164	0	
	Total Lanes	5				
Westbound	Left	2	273		150	
	Left/Through	0				
	Through	3	1,632		544	544
	Through/Right	0				
	Right	1	315	161	154	
	Total Lanes	6				
			Sum of East/West Critical Volumes			**740**
			Total Intersection Critical Volumes			**1,750**
Number of Clearance Intervals	**4**		**Intersection Capacity**			**1,375**
			Base CMA			**1.273**
Signal Coordination	**ATSAC**		**Signal Coordination Adjustment**			**-0.070**
			Final CMA			**1.203**
			Level of Service (LOS)			**F**

Hirsch/Green Transportation Consulting, Inc.
Critical Movement Analysis (CMA) Worksheet

Project Name	Pico/Sepulveda Mixed-Use Project		
Intersection Number	15	**Date**	December 7, 2012
Intersection Name	North/South: Barrington Avenue East/West: Olympic Boulevard		
Intersection Control	Signalized		
Analysis Period	AM Peak Hour		
Analysis Scenario	Future (2012) With Project		

Approach Direction	Lane Type	No. of Lanes	Approach Volumes	Right-Turn on Red	Assigned Lane Volumes	Critical Moves
Northbound	Left	1	313		313	313
	Left/Through	0				
	Through	1	866		537	
	Through/Right	1			537	
	Right	0	208	0		
	Total Lanes	3				
Southbound	Left	1	231		231	
	Left/Through	0				
	Through	2	1,043		522	522
	Through/Right	0				
	Right	1	89	26	63	
	Total Lanes	4				
			Sum of North/South Critical Volumes			**835**
Eastbound	Left	1	52		52	52
	Left/Through	0				
	Through	3	1,402		370	
	Through/Right	1			370	
	Right	0	76	0		
	Total Lanes	5				
Westbound	Left	1	98		98	
	Left/Through	0				
	Through	3	1,888		629	629
	Through/Right	0				
	Right	1	195	149	46	
	Total Lanes	5				
			Sum of East/West Critical Volumes			**681**
			Total Intersection Critical Volumes			**1,516**
Number of Clearance Intervals	**3**		**Intersection Capacity**			**1,425**
			Base CMA			**1.064**
Signal Coordination	**ATSAC**		**Signal Coordination Adjustment**			**-0.070**
			Final CMA			**0.994**
			Level of Service (LOS)			**E**

Hirsch/Green Transportation Consulting, Inc.
Critical Movement Analysis (CMA) Worksheet

Project Name Pico/Sepulveda Mixed-Use Project
Intersection Number 16 **Date** December 7, 2012
Intersection Name North/South: Sawtelle Boulevard
East/West: Olympic Boulevard
Intersection Control Signalized
Analysis Period AM Peak Hour
Analysis Scenario Future (2012) With Project

Approach Direction	Lane Type	No. of Lanes	Approach Volumes	Right-Turn on Red	Assigned Lane Volumes	Critical Moves
Northbound	Left	1	317		317	
	Left/Through	0				
	Through	1	467		467	467
	Through/Right	0				
	Right	1	504	145	359	
	Total Lanes	3				
Southbound	Left	1	271		271	271
	Left/Through	0				
	Through	1	359		214	
	Through/Right	1			214	
	Right	0	68	0		
	Total Lanes	3				
			Sum of North/South Critical Volumes			**738**
Eastbound	Left	1	51		51	51
	Left/Through	0				
	Through	2	1,579		541	
	Through/Right	1			541	
	Right	0	45	0		
	Total Lanes	4				
Westbound	Left	1	145		145	
	Left/Through	0				
	Through	3	2,464		651	651
	Through/Right	1			651	
	Right	0	141	0		
	Total Lanes	5				
			Sum of East/West Critical Volumes			**702**
			Total Intersection Critical Volumes			**1,440**
Number of Clearance Intervals	**4**		**Intersection Capacity**			**1,375**
			Base CMA			**1.047**
Signal Coordination	**ATSAC + ATCS**		**Signal Coordination Adjustment**			**-0.100**
			Final CMA			**0.947**
			Level of Service (LOS)			**E**

NB Rt. Turn Overlap with WB Left

Hirsch/Green Transportation Consulting, Inc.
Critical Movement Analysis (CMA) Worksheet

Project Name	Pico/Sepulveda Mixed-Use Project		
Intersection Number	17	**Date**	December 7, 2012
Intersection Name	North/South: Sepulveda Boulevard East/West: Olympic Boulevard		
Intersection Control	Signalized		
Analysis Period	AM Peak Hour		
Analysis Scenario	Future (2012) With Project		

Approach Direction	Lane Type	No. of Lanes	Approach Volumes	Right-Turn on Red	Assigned Lane Volumes	Critical Moves
Northbound	Left	1	258		258	258
	Left/Through	0				
	Through	2	1,030		515	
	Through/Right	0				
	Right	1	245	173	72	
	Total Lanes	4				
Southbound	Left	1	123		123	
	Left/Through	0				
	Through	1	792		464	464
	Through/Right	1			464	
	Right	0	135	0		
	Total Lanes	3				
			Sum of North/South Critical Volumes			**722**
Eastbound	Left	1	77		77	
	Left/Through	0				
	Through	2	2,166		748	748
	Through/Right	1			748	
	Right	0	77	0		
	Total Lanes	4				
Westbound	Left	1	173		173	173
	Left/Through	0				
	Through	3	2,323		608	
	Through/Right	1			608	
	Right	0	110	0		
	Total Lanes	5				
			Sum of East/West Critical Volumes			**921**
			Total Intersection Critical Volumes			**1,643**
Number of Clearance Intervals	**3**		**Intersection Capacity**			**1,425**
			Base CMA			**1.153**
Signal Coordination	**ATSAC + ATCS**		**Signal Coordination Adjustment**			**-0.100**
			Final CMA			**1.053**
			Level of Service (LOS)			**F**

NB Rt. Turn Overlap with WB Left

Hirsch/Green Transportation Consulting, Inc.
Critical Movement Analysis (CMA) Worksheet

Project Name	Pico/Sepulveda Mixed-Use Project		
Intersection Number	18	**Date**	December 7, 2012
Intersection Name	North/South: Westwood Boulevard East/West: Olympic Boulevard		
Intersection Control	Signalized		
Analysis Period	AM Peak Hour		
Analysis Scenario	Future (2012) With Project		

Approach Direction	Lane Type	No. of Lanes	Approach Volumes	Right-Turn on Red	Assigned Lane Volumes	Critical Moves
Northbound	Left	1	141		141	
	Left/Through	0				
	Through	1	934		554	554
	Through/Right	1			554	
	Right	0	175	0		
	Total Lanes	3				
Southbound	Left	1	153		153	153
	Left/Through	0				
	Through	1	569		354	
	Through/Right	1			354	
	Right	0	139	0		
	Total Lanes	3				
			Sum of North/South Critical Volumes			**707**
Eastbound	Left	1	73		73	
	Left/Through	0				
	Through	2	2,413		838	838
	Through/Right	1			838	
	Right	0	101	0		
	Total Lanes	4				
Westbound	Left	1	99		99	99
	Left/Through	0				
	Through	3	2,233		602	
	Through/Right	1			602	
	Right	0	177	0		
	Total Lanes	5				
			Sum of East/West Critical Volumes			**937**
			Total Intersection Critical Volumes			**1,644**
Number of Clearance Intervals	**4**		**Intersection Capacity**			**1,375**
			Base CMA			**1.196**
Signal Coordination	**ATSAC + ATCS**		**Signal Coordination Adjustment**			**-0.100**
			Final CMA			**1.096**
			Level of Service (LOS)			**F**

Hirsch/Green Transportation Consulting, Inc.
Critical Movement Analysis (CMA) Worksheet

Project Name	Pico/Sepulveda Mixed-Use Project		
Intersection Number	19	**Date**	December 7, 2012
Intersection Name	North/South: Overland Avenue East/West: Olympic Boulevard		
Intersection Control	Signalized		
Analysis Period	AM Peak Hour		
Analysis Scenario	Future (2012) With Project		

Approach Direction	Lane Type	No. of Lanes	Approach Volumes	Right-Turn on Red	Assigned Lane Volumes	Critical Moves
Northbound	Left	1	91		91	
	Left/Through	0				
	Through	0	254			
	Through/Right	1			477	477
	Right	0	223	0		
	Total Lanes	2				
Southbound	Left	1	80		80	80
	Left/Through	0				
	Through	0	336			
	Through/Right	1			371	
	Right	0	35	0		
	Total Lanes	2				
			Sum of North/South Critical Volumes			**557**
Eastbound	Left	1	23		23	
	Left/Through	0				
	Through	2	2,413		826	826
	Through/Right	1			826	
	Right	0	65	0		
	Total Lanes	4				
Westbound	Left	1	172		172	172
	Left/Through	0				
	Through	3	2,271		575	
	Through/Right	1			575	
	Right	0	30	0		
	Total Lanes	5				
			Sum of East/West Critical Volumes			**998**
			Total Intersection Critical Volumes			**1,555**
Number of Clearance Intervals	**3**		**Intersection Capacity**			**1,425**
			Base CMA			**1.091**
Signal Coordination	**ATSAC + ATCS**		**Signal Coordination Adjustment**			**-0.100**
			Final CMA			**0.991**
			Level of Service (LOS)			**E**

Hirsch/Green Transportation Consulting, Inc.
Critical Movement Analysis (CMA) Worksheet

Project Name	Pico/Sepulveda Mixed-Use Project		
Intersection Number	20	**Date**	December 7, 2012
Intersection Name	North/South: Beverly Glen Boulevard East/West: Olympic Boulevard		
Intersection Control	Signalized		
Analysis Period	AM Peak Hour		
Analysis Scenario	Future (2012) With Project		

Approach Direction	Lane Type	No. of Lanes	Approach Volumes	Right-Turn on Red	Assigned Lane Volumes	Critical Moves
Northbound	Left	1	144		144	
	Left/Through	0				
	Through	2	545		272	272
	Through/Right	0				
	Right	1	246	31	215	
	Total Lanes	4				
Southbound	Left	1	301		301	301
	Left/Through	0				
	Through	2	517		258	
	Through/Right	0				
	Right	1	196	136	60	
	Total Lanes	4				
			Sum of North/South Critical Volumes			**573**
Eastbound	Left	1	161		161	
	Left/Through	0				
	Through	2	2,738		940	940
	Through/Right	1			940	
	Right	0	81	0		
	Total Lanes	4				
Westbound	Left	1	62		62	62
	Left/Through	0				
	Through	3	2,191		730	
	Through/Right	0				
	Right	1	122	122	0	
	Total Lanes	5				
			Sum of East/West Critical Volumes			**1,002**
			Total Intersection Critical Volumes			**1,575**
Number of Clearance Intervals	**4**		**Intersection Capacity**			**1,375**
			Base CMA			**1.145**
Signal Coordination	**ATSAC + ATCS**		**Signal Coordination Adjustment**			**-0.100**
			Final CMA			**1.045**
			Level of Service (LOS)			**F**

Hirsch/Green Transportation Consulting, Inc.
Critical Movement Analysis (CMA) Worksheet

Project Name	Pico/Sepulveda Mixed-Use Project		
Intersection Number	21	**Date**	December 7, 2012
Intersection Name	North/South: Sawtelle Boulevard East/West: Tennessee Avenue/I-405 SB Off-Ramp		
Intersection Control	Signalized		
Analysis Period	AM Peak Hour		
Analysis Scenario	Future (2012) With Project		

Approach Direction	Lane Type	No. of Lanes	Approach Volumes	Right-Turn on Red	Assigned Lane Volumes	Critical Moves
Northbound	Left	1	142		142	142
	Left/Through	0				
	Through	2	846		423	
	Through/Right	0				
	Right	0	0	0		
	Total Lanes	3				
Southbound	Left	0	0			
	Left/Through	0				
	Through	1	543		290	290
	Through/Right	1			290	
	Right	0	38	0		
	Total Lanes	2				
			Sum of North/South Critical Volumes			**432**
Eastbound	Left	1	36		36	36
	Left/Through	0				
	Through	0	0			
	Through/Right	0				
	Right	1	69	69	0	
	Total Lanes	2				
Westbound	Left	1	408		408	408
	Left/Through	0				
	Through	0	169			
	Through/Right	1			316	
	Right	1	468	4	316	
	Total Lanes	3				
			Sum of East/West Critical Volumes			**444**
			Total Intersection Critical Volumes			**876**
Number of Clearance Intervals	**3**		**Intersection Capacity**			**1,425**
			Base CMA			**0.615**
Signal Coordination	**ATSAC + ATCS**		**Signal Coordination Adjustment**			**-0.100**
			Final CMA			**0.515**
			Level of Service (LOS)			**A**

East/West Opposed Phasing

Hirsch/Green Transportation Consulting, Inc.
Critical Movement Analysis (CMA) Worksheet

Project Name	Pico/Sepulveda Mixed-Use Project		
Intersection Number	22	**Date**	December 7, 2012
Intersection Name	North/South: Cloverfield Boulevard East/West: Pico Boulevard		
Intersection Control	Signalized		
Analysis Period	AM Peak Hour		
Analysis Scenario	Future (2012) With Project		

Approach Direction	Lane Type	No. of Lanes	Approach Volumes	Right-Turn on Red	Assigned Lane Volumes	Critical Moves
Northbound	Left	1	32		32	
	Left/Through	0				
	Through	1	326		326	326
	Through/Right	0				
	Right	1	39	39	0	
	Total Lanes	3				
Southbound	Left	1	99		99	99
	Left/Through	0				
	Through	1	221		221	
	Through/Right	0				
	Right	1	385	122	263	
	Total Lanes	3				
			Sum of North/South Critical Volumes			**425**
Eastbound	Left	2	445		245	245
	Left/Through	0				
	Through	1	891		456	
	Through/Right	1			456	
	Right	0	22	0		
	Total Lanes	4				
Westbound	Left	1	49		49	
	Left/Through	0				
	Through	1	762		430	430
	Through/Right	1			430	
	Right	0	98	0		
	Total Lanes	3				
			Sum of East/West Critical Volumes			**675**
			Total Intersection Critical Volumes			**1,100**
Number of Clearance Intervals	**3**		**Intersection Capacity**			**1,425**
			Base CMA			**0.772**
Signal Coordination	**None**		**Signal Coordination Adjustment**			**0.000**
			Final CMA			**0.772**
			Level of Service (LOS)			**C**

HCS+™ DETAILED REPORT

General Information		***Site Information***	
Analyst	*RRH*	Intersection	*22*
Agency or Co.	*Hirsch/Green*	Area Type	*All other areas*
Date Performed	*12/7/2012*	Jurisdiction	*City of Santa Monica*
Time Period	*AM Peak Hour*	Analysis Year	*Future (2012) With Project*
		Project ID	*Pico/Sepulveda Mixed-Use Project*

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Number of Lanes, N_1	*2*	*2*	*0*	*1*	*2*	*0*	*1*	*1*	*1*	*1*	*1*	*1*
Lane Group	*L*	*TR*		*L*	*TR*		*L*	*T*	*R*	*L*	*T*	*R*
Volume, V (vph)	*445*	*891*	*22*	*49*	*762*	*98*	*32*	*326*	*39*	*99*	*221*	*385*
% Heavy Vehicles, %HV	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*
Peak-Hour Factor, PHF	*1.00*	*1.00*	*1.00*	*1.00*	*1.00*	*1.00*	*1.00*	*1.00*	*1.00*	*1.00*	*1.00*	*1.00*
Pretimed (P) or Actuated (A)	*P*	*P*	*P*	*P*	*P*	*P*	*P*	*P*	*P*	*P*	*P*	*P*
Start-up Lost Time, l_1	*2.0*	*2.0*		*2.0*	*2.0*		*2.0*	*2.0*	*2.0*	*2.0*	*2.0*	*2.0*
Extension of Effective Green, e	*2.0*	*2.0*		*2.0*	*2.0*		*2.0*	*2.0*	*2.0*	*2.0*	*2.0*	*2.0*
Arrival Type, AT	*3*	*3*		*3*	*3*		*3*	*3*	*3*	*3*	*3*	*3*
Unit Extension, UE	*3.0*	*3.0*		*3.0*	*3.0*		*3.0*	*3.0*	*3.0*	*3.0*	*3.0*	*3.0*
Filtering/Metering, I	*1.000*	*1.000*		*1.000*	*1.000*		*1.000*	*1.000*	*1.000*	*1.000*	*1.000*	*1.000*
Initial Unmet Demand, Q_b	*0.0*	*0.0*		*0.0*	*0.0*		*0.0*	*0.0*	*0.0*	*0.0*	*0.0*	*0.0*
Ped / Bike / RTOR Volumes	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*122*
Lane Width	*12.0*	*12.0*		*12.0*	*12.0*		*12.0*	*12.0*	*12.0*	*12.0*	*12.0*	*12.0*
Parking / Grade / Parking	*N*	*0*	*N*	*N*	*0*	*N*	*N*	*0*	*N*	*N*	*0*	*N*
Parking Maneuvers, N_m												
Buses Stopping, N_B	*0*	*0*		*0*	*0*		*0*	*0*	*0*	*0*	*0*	*0*
Min. Time for Pedestrians, G_p	*3.2*			*3.2*			*3.2*			*3.2*		

Phasing	WB Only	Thru & RT	EB Only	04	SB Only	NS Perm	07	08
Timing	G = *10.0*	G = *25.0*	G = *15.0*	G = *0.0*	G = *10.0*	G = *20.0*	G = *0.0*	G = *0.0*
	Y = *0*	Y = *0*	Y = *5*	Y = *0*	Y = *0*	Y = *5*	Y = *0*	Y = *0*
Duration of Analysis, T = *1.00*						Cycle Length, C = *90.0*		

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Adjusted Flow Rate, v	*445*	*913*		*49*	*860*		*32*	*326*	*39*	*99*	*221*	*263*
Lane Group Capacity, c	*584*	*1602*		*201*	*1383*		*262*	*422*	*359*	*314*	*633*	*897*
v/c Ratio, X	*0.76*	*0.57*		*0.24*	*0.62*		*0.12*	*0.77*	*0.11*	*0.32*	*0.35*	*0.29*
Total Green Ratio, g/C	*0.17*	*0.44*		*0.11*	*0.39*		*0.22*	*0.22*	*0.22*	*0.39*	*0.33*	*0.56*
Uniform Delay, d_1	*35.8*	*18.6*		*36.5*	*22.2*		*28.0*	*32.9*	*27.9*	*19.2*	*22.6*	*10.6*
Progression Factor, PF	*1.000*	*1.000*		*1.000*	*1.000*		*1.000*	*1.000*	*1.000*	*1.000*	*1.000*	*1.000*
Delay Calibration, k	*0.50*	*0.50*		*0.50*	*0.50*		*0.50*	*0.50*	*0.50*	*0.50*	*0.50*	*0.50*
Incremental Delay, d_2	*9.7*	*1.5*		*2.9*	*2.1*		*1.0*	*14.0*	*0.6*	*2.6*	*1.5*	*0.8*
Initial Queue Delay, d_3	*0.0*	*0.0*		*0.0*	*0.0*		*0.0*	*0.0*	*0.0*	*0.0*	*0.0*	*0.0*
Control Delay	*45.4*	*20.1*		*39.4*	*24.3*		*28.9*	*46.9*	*28.5*	*21.9*	*24.2*	*11.5*
Lane Group LOS	*D*	*C*		*D*	*C*		*C*	*D*	*C*	*C*	*C*	*B*
Approach Delay	*28.4*			*25.1*			*43.6*			*18.0*		
Approach LOS	*C*			*C*			*D*			*B*		
Intersection Delay	*27.5*			X_C = *0.71*			Intersection LOS			*C*		

Hirsch/Green Transportation Consulting, Inc.
Critical Movement Analysis (CMA) Worksheet

Project Name	Pico/Sepulveda Mixed-Use Project		
Intersection Number	23	**Date**	December 7, 2012
Intersection Name	North/South: Stewart Street/28th Street East/West: Pico Boulevard		
Intersection Control	Signalized		
Analysis Period	AM Peak Hour		
Analysis Scenario	Future (2012) With Project		

Approach Direction	Lane Type	No. of Lanes	Approach Volumes	Right-Turn on Red	Assigned Lane Volumes	Critical Moves
Northbound	Left	1	36		36	
	Left/Through	0				
	Through	1	257		257	257
	Through/Right	0				
	Right	1	46	46	0	
	Total Lanes	3				
Southbound	Left	1	121		121	121
	Left/Through	0				
	Through	0	142			
	Through/Right	1			243	
	Right	0	101	0		
	Total Lanes	2				
			Sum of North/South Critical Volumes			**378**
Eastbound	Left	1	130		130	130
	Left/Through	0				
	Through	1	906		482	
	Through/Right	1			482	
	Right	0	58	0		
	Total Lanes	3				
Westbound	Left	1	65		65	
	Left/Through	0				
	Through	1	995		613	613
	Through/Right	1			613	
	Right	0	231	0		
	Total Lanes	3				
			Sum of East/West Critical Volumes			**743**
			Total Intersection Critical Volumes			**1,121**
Number of Clearance Intervals	**2**		**Intersection Capacity**			**1,500**
			Base CMA			**0.747**
Signal Coordination	**None**		**Signal Coordination Adjustment**			**0.000**
			Final CMA			**0.747**
			Level of Service (LOS)			**C**

HCS+™ DETAILED REPORT

General Information		***Site Information***	
Analyst	*RRH*	Intersection	*23*
Agency or Co.	*Hirsch/Green*	Area Type	*All other areas*
Date Performed	*12/7/2012*	Jurisdiction	*City of Santa Monica*
Time Period	*AM Peak Hour*	Analysis Year	*Future (2012) With Project*
		Project ID	*Pico/Sepulveda Mixed-Use Project*

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Number of Lanes, N_1	*1*	*2*	*0*	*1*	*2*	*0*	*1*	*1*	*1*	*1*	*1*	*0*
Lane Group	*L*	*TR*		*L*	*TR*		*L*	*T*	*R*	*L*	*TR*	
Volume, V (vph)	*130*	*906*	*58*	*65*	*995*	*231*	*36*	*257*	*46*	*121*	*142*	*101*
% Heavy Vehicles, %HV	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*
Peak-Hour Factor, PHF	*1.00*	*1.00*	*1.00*	*1.00*	*1.00*	*1.00*	*1.00*	*1.00*	*1.00*	*1.00*	*1.00*	*1.00*
Pretimed (P) or Actuated (A)	*P*	*P*	*P*	*P*	*P*	*P*	*P*	*P*	*P*	*P*	*P*	*P*
Start-up Lost Time, l_1	*2.0*	*2.0*		*2.0*	*2.0*		*2.0*	*2.0*	*2.0*	*2.0*	*2.0*	
Extension of Effective Green, e	*2.0*	*2.0*		*2.0*	*2.0*		*2.0*	*2.0*	*2.0*	*2.0*	*2.0*	
Arrival Type, AT	*3*	*3*		*3*	*3*		*3*	*3*	*3*	*3*	*3*	
Unit Extension, UE	*3.0*	*3.0*		*3.0*	*3.0*		*3.0*	*3.0*	*3.0*	*3.0*	*3.0*	
Filtering/Metering, I	*1.000*	*1.000*		*1.000*	*1.000*		*1.000*	*1.000*	*1.000*	*1.000*	*1.000*	
Initial Unmet Demand, Q_b	*0.0*	*0.0*		*0.0*	*0.0*		*0.0*	*0.0*	*0.0*	*0.0*	*0.0*	
Ped / Bike / RTOR Volumes	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*46*	*0*	*0*	*0*
Lane Width	*12.0*	*12.0*		*12.0*	*12.0*		*12.0*	*12.0*	*12.0*	*12.0*	*12.0*	
Parking / Grade / Parking	*N*	*0*	*N*	*N*	*0*	*N*	*N*	*0*	*N*	*N*	*0*	*N*
Parking Maneuvers, N_m												
Buses Stopping, N_B	*0*	*0*		*0*	*0*		*0*	*0*	*0*	*0*	*0*	
Min. Time for Pedestrians, G_p	*3.2*			*3.2*			*3.2*			*3.2*		

Phasing	EW Perm	02	03	04	NS Perm	06	07	08
Timing	G = *50.0*	G = *0.0*	G = *0.0*	G = *0.0*	G = *30.0*	G = *0.0*	G = *0.0*	G = *0.0*
	Y = *5*	Y = *0*	Y = *0*	Y = *0*	Y = *5*	Y = *0*	Y = *0*	Y = *0*
Duration of Analysis, T = *1.00*					Cycle Length, C = *90.0*			

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Adjusted Flow Rate, v	*130*	*964*		*65*	*1226*		*36*	*257*	*0*	*121*	*243*	
Lane Group Capacity, c	*158*	*1992*		*247*	*1953*		*329*	*633*	*538*	*317*	*594*	
v/c Ratio, X	*0.82*	*0.48*		*0.26*	*0.63*		*0.11*	*0.41*	*0.00*	*0.38*	*0.41*	
Total Green Ratio, g/C	*0.56*	*0.56*		*0.56*	*0.56*		*0.33*	*0.33*	*0.33*	*0.33*	*0.33*	
Uniform Delay, d_1	*16.4*	*12.2*		*10.4*	*13.6*		*20.8*	*23.1*	*20.0*	*22.9*	*23.2*	
Progression Factor, PF	*1.000*	*1.000*		*1.000*	*1.000*		*1.000*	*1.000*	*1.000*	*1.000*	*1.000*	
Delay Calibration, k	*0.50*	*0.50*		*0.50*	*0.50*		*0.50*	*0.50*	*0.50*	*0.50*	*0.50*	
Incremental Delay, d_2	*46.2*	*0.8*		*2.6*	*1.6*		*0.7*	*1.9*	*0.0*	*3.5*	*2.1*	
Initial Queue Delay, d_3	*0.0*	*0.0*		*0.0*	*0.0*		*0.0*	*0.0*	*0.0*	*0.0*	*0.0*	
Control Delay	*62.6*	*13.0*		*13.0*	*15.2*		*21.4*	*25.1*	*20.0*	*26.4*	*25.3*	
Lane Group LOS	*E*	*B*		*B*	*B*		*C*	*C*	*B*	*C*	*C*	
Approach Delay	*18.9*			*15.1*			*24.6*			*25.6*		
Approach LOS	*B*			*B*			*C*			*C*		
Intersection Delay	*18.6*			X_C = *0.67*			Intersection LOS			*B*		

Hirsch/Green Transportation Consulting, Inc.
Critical Movement Analysis (CMA) Worksheet

Project Name	Pico/Sepulveda Mixed-Use Project		
Intersection Number	24	**Date**	December 7, 2012
Intersection Name	North/South: I-10 EB Off-Ramp/34th Street East/West: Pico Boulevard		
Intersection Control	Signalized		
Analysis Period	AM Peak Hour		
Analysis Scenario	Future (2012) With Project		

Approach Direction	Lane Type	No. of Lanes	Approach Volumes	Right-Turn on Red	Assigned Lane Volumes	Critical Moves
Northbound	Left	0	15			
	Left/Through	0				
	Left/Through/Right	1	0		59	59
	Through/Right	0				
	Right	0	44	0		
	Total Lanes	1				
Southbound	Left	1	689		365	365
	Left/Through	1			365	
	Through	0	41			
	Through/Right	0				
	Right	1	50	50	0	
	Total Lanes	3				
			Sum of North/South Critical Volumes			**424**
Eastbound	Left	0	0			
	Left/Through	0				
	Through	1	1,387		708	708
	Through/Right	1			708	
	Right	0	29	0		
	Total Lanes	2				
Westbound	Left	0	58			58
	Left/Through	1			372	
	Through	1	975		662	
	Through/Right	0				
	Right	0	0	0		
	Total Lanes	2				
			Sum of East/West Critical Volumes			**766**
			Total Intersection Critical Volumes			**1,190**
Number of Clearance Intervals	**3**		**Intersection Capacity**			**1,425**
			Base CMA			**0.835**
Signal Coordination	**None**		**Signal Coordination Adjustment**			**0.000**
			Final CMA			**0.835**
			Level of Service (LOS)			**D**

North/South Opposed Phasing

HCS+™ DETAILED REPORT

General Information		***Site Information***	
Analyst	*RRH*	Intersection	*24*
Agency or Co.	*Hirsch/Green*	Area Type	*All other areas*
Date Performed	*12/7/2012*	Jurisdiction	*City of Santa Monica*
Time Period	*AM Peak Hour*	Analysis Year	*Future (2012) With Project*
		Project ID	*Pico/Sepulveda Mixed-Use Project*

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Number of Lanes, N_1		*2*	*0*	*0*	*2*		*0*	*1*	*0*	*1*	*1*	*1*
Lane Group		*TR*			*LT*			*LTR*		*L*	*LT*	*R*
Volume, V (vph)		*1387*	*29*	*58*	*975*		*15*	*0*	*44*	*689*	*41*	*50*
% Heavy Vehicles, %HV		*0*	*0*	*0*	*0*		*0*	*0*	*0*	*0*	*0*	*0*
Peak-Hour Factor, PHF		*1.00*	*1.00*	*1.00*	*1.00*		*1.00*	*1.00*	*1.00*	*1.00*	*1.00*	*1.00*
Pretimed (P) or Actuated (A)		*P*	*P*	*P*	*P*		*P*	*P*	*P*	*P*	*P*	*P*
Start-up Lost Time, l_1		*2.0*			*2.0*			*2.0*		*2.0*	*2.0*	*2.0*
Extension of Effective Green, e		*2.0*			*2.0*			*2.0*		*2.0*	*2.0*	*2.0*
Arrival Type, AT		*3*			*3*			*3*		*3*	*3*	*3*
Unit Extension, UE		*3.0*			*3.0*			*3.0*		*3.0*	*3.0*	*3.0*
Filtering/Metering, I		*1.000*			*1.000*			*1.000*		*1.000*	*1.000*	*1.000*
Initial Unmet Demand, Q_b		*0.0*			*0.0*			*0.0*		*0.0*	*0.0*	*0.0*
Ped / Bike / RTOR Volumes	*0*	*0*	*0*	*0*	*0*		*0*	*0*	*0*	*0*	*0*	*50*
Lane Width		*12.0*			*12.0*			*12.0*		*12.0*	*12.0*	*12.0*
Parking / Grade / Parking	*N*	*0*	*N*	*N*	*0*	*N*	*N*	*0*	*N*	*N*	*0*	*N*
Parking Maneuvers, N_m												
Buses Stopping, N_B		*0*			*0*			*0*		*0*	*0*	*0*
Min. Time for Pedestrians, G_p	*3.2*			*3.2*			*3.2*			*3.2*		

Phasing	EW Perm	02	03	04	NB Only	SB Only	07	08
Timing	G = *55.0*	G = *0.0*	G = *0.0*	G = *0.0*	G = *5.0*	G = *15.0*	G = *0.0*	G = *0.0*
	Y = *5*	Y = *0*	Y = *0*	Y = *0*	Y = *5*	Y = *5*	Y = *0*	Y = *0*

Duration of Analysis, T = *1.00* | Cycle Length, C = *90.0*

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Adjusted Flow Rate, v		*1416*			*1033*			*59*		*689*	*41*	*0*
Lane Group Capacity, c		*2204*			*1619*			*94*		*301*	*317*	*269*
v/c Ratio, X		*0.64*			*0.64*			*0.63*		*2.29*	*0.13*	*0.00*
Total Green Ratio, g/C		*0.61*			*0.61*			*0.06*		*0.17*	*0.17*	*0.17*
Uniform Delay, d_1		*11.2*			*11.2*			*41.6*		*37.5*	*31.9*	*31.3*
Progression Factor, PF		*1.000*			*1.000*			*1.000*		*1.000*	*1.000*	*1.000*
Delay Calibration, k		*0.50*			*0.50*			*0.50*		*0.50*	*0.50*	*0.50*
Incremental Delay, d_2		*1.5*			*2.0*			*30.9*		*2331*	*0.8*	*0.0*
Initial Queue Delay, d_3		*0.0*			*0.0*			*0.0*		*0.0*	*0.0*	*0.0*
Control Delay		*12.7*			*13.1*			*72.4*		*2368*	*32.8*	*31.3*
Lane Group LOS		*B*			*B*			*E*		*F*	*C*	*C*
Approach Delay	*12.7*			*13.1*			*72.4*			*2237*		
Approach LOS	*B*			*B*			*E*			*F*		
Intersection Delay	*515.4*			X_C = *0.97*			Intersection LOS			*F*		

Hirsch/Green Transportation Consulting, Inc.
Critical Movement Analysis (CMA) Worksheet

Project Name	Pico/Sepulveda Mixed-Use Project		
Intersection Number	25	**Date**	December 7, 2012
Intersection Name	North/South: Centinela Avenue East/West: Pico Boulevard		
Intersection Control	Signalized		
Analysis Period	AM Peak Hour		
Analysis Scenario	Future (2012) With Project		

Approach Direction	Lane Type	No. of Lanes	Approach Volumes	Right-Turn on Red	Assigned Lane Volumes	Critical Moves
Northbound	Left	1	63		63	
	Left/Through	0				
	Through	1	605		605	605
	Through/Right	0				
	Right	1	50	32	18	
	Total Lanes	3				
Southbound	Left	1	56		56	56
	Left/Through	0				
	Through	2	556		278	
	Through/Right	0				
	Right	1	241	127	114	
	Total Lanes	4				
			Sum of North/South Critical Volumes			**661**
Eastbound	Left	1	206		206	
	Left/Through	0				
	Through	1	1,123		768	768
	Through/Right	1			768	
	Right	0	414	0		
	Total Lanes	3				
Westbound	Left	1	63		63	63
	Left/Through	0				
	Through	1	730		577	
	Through/Right	1			577	
	Right	0	424	0		
	Total Lanes	3				
			Sum of East/West Critical Volumes			**831**
			Total Intersection Critical Volumes			**1,492**
Number of Clearance Intervals	**2**		**Intersection Capacity**			**1,500**
			Base CMA			**0.995**
Signal Coordination	**ATSAC**		**Signal Coordination Adjustment**			**-0.070**
			Final CMA			**0.925**
			Level of Service (LOS)			**E**

Hirsch/Green Transportation Consulting, Inc.
Critical Movement Analysis (CMA) Worksheet

Project Name	Pico/Sepulveda Mixed-Use Project		
Intersection Number	26	**Date**	December 7, 2012
Intersection Name	North/South: Bundy Drive East/West: Pico Boulevard		
Intersection Control	Signalized		
Analysis Period	AM Peak Hour		
Analysis Scenario	Future (2012) With Project		

Approach Direction	Lane Type	No. of Lanes	Approach Volumes	Right-Turn on Red	Assigned Lane Volumes	Critical Moves
	Left	1	328		328	
	Left/Through	0				
Northbound	Through	2	1,861		930	930
	Through/Right	0				
	Right	1	272	146	126	
	Total Lanes	4				
	Left	1	111		111	111
	Left/Through	0				
Southbound	Through	2	1,353		676	
	Through/Right	0				
	Right	1	91	78	13	
	Total Lanes	4				
			Sum of North/South Critical Volumes			**1,041**
	Left	1	156		156	156
	Left/Through	0				
Eastbound	Through	2	1,380		476	
	Through/Right	1			476	
	Right	0	48	0		
	Total Lanes	4				
	Left	1	126		126	
	Left/Through	0				
Westbound	Through	1	1,114		612	612
	Through/Right	1			612	
	Right	0	111	0		
	Total Lanes	3				
			Sum of East/West Critical Volumes			**768**
			Total Intersection Critical Volumes			**1,809**
Number of Clearance Intervals	**4**		**Intersection Capacity**			**1,375**
			Base CMA			**1.316**
Signal Coordination	**ATSAC**		**Signal Coordination Adjustment**			**-0.070**
			Final CMA			**1.246**
			Level of Service (LOS)			**F**

Hirsch/Green Transportation Consulting, Inc.
Critical Movement Analysis (CMA) Worksheet

Project Name	Pico/Sepulveda Mixed-Use Project		
Intersection Number	27	**Date**	December 7, 2012
Intersection Name	North/South: Barrington Avenue East/West: Pico Boulevard		
Intersection Control	Signalized		
Analysis Period	AM Peak Hour		
Analysis Scenario	Future (2012) With Project		

Approach Direction	Lane Type	No. of Lanes	Approach Volumes	Right-Turn on Red	Assigned Lane Volumes	Critical Moves
	Left	1	128		128	
	Left/Through	0				
Northbound	Through	1	1,185		622	622
	Through/Right	1			622	
	Right	0	58	0		
	Total Lanes	3				
	Left	1	141		141	141
	Left/Through	0				
Southbound	Through	2	559		215	
	Through/Right	1			215	
	Right	0	85	0		
	Total Lanes	4				
			Sum of North/South Critical Volumes			**763**
	Left	1	146		146	146
	Left/Through	0				
Eastbound	Through	2	1,459		523	
	Through/Right	1			523	
	Right	0	110	0		
	Total Lanes	4				
	Left	1	62		62	
	Left/Through	0				
Westbound	Through	1	1,164		621	621
	Through/Right	1			621	
	Right	0	78	0		
	Total Lanes	3				
			Sum of East/West Critical Volumes			**767**
			Total Intersection Critical Volumes			**1,530**
Number of Clearance Intervals	**2**		**Intersection Capacity**			**1,500**
			Base CMA			**1.020**
Signal Coordination	**ATSAC**		**Signal Coordination Adjustment**			**-0.070**
			Final CMA			**0.950**
			Level of Service (LOS)			**E**

Hirsch/Green Transportation Consulting, Inc.
Critical Movement Analysis (CMA) Worksheet

Project Name	Pico/Sepulveda Mixed-Use Project		
Intersection Number	28	**Date**	December 7, 2012
Intersection Name	North/South: Gateway Boulevard East/West: Pico Boulevard		
Intersection Control	Signalized		
Analysis Period	AM Peak Hour		
Analysis Scenario	Future (2012) With Project		

Approach Direction	Lane Type	No. of Lanes	Approach Volumes	Right-Turn on Red	Assigned Lane Volumes	Critical Moves
Northbound	Left	0	0			
	Left/Through	0				
	Through	0	0			
	Through/Right	0				
	Right	2	1,380	92	644	644
	Total Lanes	2				
Southbound	Left	0	0			
	Left/Through	0				
	Through	0	0			
	Through/Right	0				
	Right	0	0	0		
	Total Lanes	0				
			Sum of North/South Critical Volumes			**644**
Eastbound	Left	0	0			
	Left/Through	0				
	Through	2	1,319		447	447
	Through/Right	1			447	
	Right	0	21	0		
	Total Lanes	3				
Westbound	Left	2	337		185	185
	Left/Through	0				
	Through	2	1,179		590	
	Through/Right	0				
	Right	0	0	0		
	Total Lanes	4				
			Sum of East/West Critical Volumes			**632**
			Total Intersection Critical Volumes			**1,276**
Number of Clearance Intervals	**3**		**Intersection Capacity**			**1,425**
			Base CMA			**0.895**
Signal Coordination	**ATSAC**		**Signal Coordination Adjustment**			**-0.070**
			Final CMA			**0.825**
			Level of Service (LOS)			**D**

Hirsch/Green Transportation Consulting, Inc.
Critical Movement Analysis (CMA) Worksheet

Project Name	Pico/Sepulveda Mixed-Use Project		
Intersection Number	29	**Date**	December 7, 2012
Intersection Name	North/South: Sawtelle Boulevard East/West: Pico Boulevard		
Intersection Control	Signalized		
Analysis Period	AM Peak Hour		
Analysis Scenario	Future (2012) With Project		

Approach Direction	Lane Type	No. of Lanes	Approach Volumes	Right-Turn on Red	Assigned Lane Volumes	Critical Moves
	Left	1	224		224	
	Left/Through	0				
Northbound	Through	1	597		464	464
	Through/Right	1			464	
	Right	0	330	0		
	Total Lanes	3				
	Left	1	332		332	332
	Left/Through	0				
Southbound	Through	2	582		291	
	Through/Right	0				
	Right	1	104	104	0	
	Total Lanes	4				
			Sum of North/South Critical Volumes			**796**
	Left	1	160		160	
	Left/Through	0				
Eastbound	Through	2	2,062		727	727
	Through/Right	1			727	
	Right	0	118	0		
	Total Lanes	4				
	Left	1	186		186	186
	Left/Through	0				
Westbound	Through	2	1,113		435	
	Through/Right	1			435	
	Right	0	193	0		
	Total Lanes	4				
			Sum of East/West Critical Volumes			**913**
			Total Intersection Critical Volumes			**1,709**
Number of Clearance Intervals	**4**		**Intersection Capacity**			**1,375**
			Base CMA			**1.243**
Signal Coordination	**ATSAC + ATCS**		**Signal Coordination Adjustment**			**-0.100**
			Final CMA			**1.143**
			Level of Service (LOS)			**F**

Hirsch/Green Transportation Consulting, Inc.
Critical Movement Analysis (CMA) Worksheet

Project Name	Pico/Sepulveda Mixed-Use Project		
Intersection Number	30	**Date**	December 7, 2012
Intersection Name	North/South: Cotner Avenue East/West: Pico Boulevard		
Intersection Control	Signalized		
Analysis Period	AM Peak Hour		
Analysis Scenario	Future (2012) With Project		

Approach Direction	Lane Type	No. of Lanes	Approach Volumes	Right-Turn on Red	Assigned Lane Volumes	Critical Moves
Northbound	Left	0	0			
	Left/Through	0				
	Through	0	0			
	Through/Right	0				
	Right	0	0	0		
	Total Lanes	0				
Southbound	Left	1	35		35	35
	Left/Through	0				
	Through	0	0			
	Through/Right	0				
	Right	1	53	53	0	
	Total Lanes	2				
			Sum of North/South Critical Volumes			**35**
Eastbound	Left	1	513		513	513
	Left/Through	0				
	Through	3	2,210		737	
	Through/Right	0				
	Right	0	0	0		
	Total Lanes	4				
Westbound	Left	0	0			
	Left/Through	0				
	Through	2	1,453		619	619
	Through/Right	1			619	
	Right	0	405	0		
	Total Lanes	3				
			Sum of East/West Critical Volumes			**1,132**
			Total Intersection Critical Volumes			**1,167**
Number of Clearance Intervals	**3**		**Intersection Capacity**			**1,425**
			Base CMA			**0.819**
Signal Coordination	**ATSAC + ATCS**		**Signal Coordination Adjustment**			**-0.100**
			Final CMA			**0.719**
			Level of Service (LOS)			**C**

Hirsch/Green Transportation Consulting, Inc.
Critical Movement Analysis (CMA) Worksheet

Project Name	Pico/Sepulveda Mixed-Use Project		
Intersection Number	31	**Date**	December 7, 2012
Intersection Name	North/South: Sepulveda Boulevard East/West: Pico Boulevard		
Intersection Control	Signalized		
Analysis Period	AM Peak Hour		
Analysis Scenario	Future (2012) With Project		

Approach Direction	Lane Type	No. of Lanes	Approach Volumes	Right-Turn on Red	Assigned Lane Volumes	Critical Moves
Northbound	Left	1	389		389	
	Left/Through	0				
	Through	1	1,494		860	860
	Through/Right	1			860	
	Right	0	226	0		
	Total Lanes	3				
Southbound	Left	1	92		92	92
	Left/Through	0				
	Through	1	759		433	
	Through/Right	1			433	
	Right	0	107	0		
	Total Lanes	3				
			Sum of North/South Critical Volumes			**952**
Eastbound	Left	1	113		113	
	Left/Through	0				
	Through	3	1,748		583	583
	Through/Right	0				
	Right	1	132	132	0	
	Total Lanes	5				
Westbound	Left	1	169		169	169
	Left/Through	0				
	Through	2	1,446		523	
	Through/Right	1			523	
	Right	0	124	0		
	Total Lanes	4				
			Sum of East/West Critical Volumes			**752**
			Total Intersection Critical Volumes			**1,704**
Number of Clearance Intervals	**4**		**Intersection Capacity**			**1,100** **
** Assumed 20% reduction in capacity due to Expo Line at-grade crossing			**Base CMA**			**1.549**
Signal Coordination	**ATSAC + ATCS**		**Signal Coordination Adjustment**			**-0.100**
			Final CMA			**1.449**
			Level of Service (LOS)			**F**

EB Rt. Turn Overlap with NB Left

Hirsch/Green Transportation Consulting, Inc.
Critical Movement Analysis (CMA) Worksheet

Project Name	Pico/Sepulveda Mixed-Use Project		
Intersection Number	32	**Date**	December 7, 2012
Intersection Name	North/South: Veteran Avenue East/West: Pico Boulevard		
Intersection Control	Signalized		
Analysis Period	AM Peak Hour		
Analysis Scenario	Future (2012) With Project		

Approach Direction	Lane Type	No. of Lanes	Approach Volumes	Right-Turn on Red	Assigned Lane Volumes	Critical Moves
Northbound	Left	0	23			
	Left/Through	0				
	Left/Through/Right	1	23		75	75
	Through/Right	0				
	Right	0	29	0		
	Total Lanes	1				
Southbound	Left	0	39			39
	Left/Through	1			54	
	Through	0	15			
	Through/Right	0				
	Right	1	60	54	6	
	Total Lanes	2				
			Sum of North/South Critical Volumes			**114**
Eastbound	Left	1	109		109	109
	Left/Through	0				
	Through	2	1,646		559	
	Through/Right	1			559	
	Right	0	30	0		
	Total Lanes	4				
Westbound	Left	1	16		16	
	Left/Through	0				
	Through	2	1,591		545	545
	Through/Right	1			545	
	Right	0	45	0		
	Total Lanes	4				
			Sum of East/West Critical Volumes			**654**
			Total Intersection Critical Volumes			**768**
Number of Clearance Intervals	**2**		**Intersection Capacity**			**1,500**
			Base CMA			**0.512**
Signal Coordination	**ATSAC + ATCS**		**Signal Coordination Adjustment**			**-0.100**
			Final CMA			**0.412**
			Level of Service (LOS)			**A**

Hirsch/Green Transportation Consulting, Inc.
Critical Movement Analysis (CMA) Worksheet

Project Name	Pico/Sepulveda Mixed-Use Project		
Intersection Number	33	**Date**	December 7, 2012
Intersection Name	North/South: Westwood Boulevard East/West: Pico Boulevard		
Intersection Control	Signalized		
Analysis Period	AM Peak Hour		
Analysis Scenario	Future (2012) With Project		

Approach Direction	Lane Type	No. of Lanes	Approach Volumes	Right-Turn on Red	Assigned Lane Volumes	Critical Moves
Northbound	Left	1	156		156	
	Left/Through	0				
	Through	2	832		416	416
	Through/Right	0				
	Right	1	107	65	42	
	Total Lanes	4				
Southbound	Left	1	159		159	159
	Left/Through	0				
	Through	1	474		300	
	Through/Right	1			300	
	Right	0	126	0		
	Total Lanes	3				
			Sum of North/South Critical Volumes			**575**
Eastbound	Left	1	187		187	187
	Left/Through	0				
	Through	3	1,436		479	
	Through/Right	0				
	Right	1	73	73	0	
	Total Lanes	5				
Westbound	Left	1	65		65	
	Left/Through	0				
	Through	3	1,410		470	470
	Through/Right	0				
	Right	1	209	159	50	
	Total Lanes	5				
			Sum of East/West Critical Volumes			**657**
			Total Intersection Critical Volumes			**1,232**
Number of Clearance Intervals	**4**		**Intersection Capacity**			**1,375**
			Base CMA			**0.896**
Signal Coordination	**ATSAC + ATCS**		**Signal Coordination Adjustment**			**-0.100**
			Final CMA			**0.796**
			Level of Service (LOS)			**C**

NB Rt. Turn Overlap with WB Left

EB/WB Rt. Turn Overlap With NB/SB Lefts

Hirsch/Green Transportation Consulting, Inc.
Critical Movement Analysis (CMA) Worksheet

Project Name	Pico/Sepulveda Mixed-Use Project		
Intersection Number	34	**Date**	December 7, 2012
Intersection Name	North/South: Overland Avenue East/West: Pico Boulevard		
Intersection Control	Signalized		
Analysis Period	AM Peak Hour		
Analysis Scenario	Future (2012) With Project		

Approach Direction	Lane Type	No. of Lanes	Approach Volumes	Right-Turn on Red	Assigned Lane Volumes	Critical Moves
Northbound	Left	2	287		158	
	Left/Through	0				
	Through	1	538		538	538
	Through/Right	0				
	Right	2	757	127	315	
	Total Lanes	5				
Southbound	Left	1	35		35	35
	Left/Through	0				
	Through	1	551		280	
	Through/Right	1			280	
	Right	0	10	0		
	Total Lanes	3				
			Sum of North/South Critical Volumes			**573**
Eastbound	Left	1	54		54	
	Left/Through	0				
	Through	2	1,582		575	575
	Through/Right	1			575	
	Right	0	144	0		
	Total Lanes	4				
Westbound	Left	2	462		254	254
	Left/Through	0				
	Through	2	1,341		460	
	Through/Right	1			460	
	Right	0	38	0		
	Total Lanes	5				
			Sum of East/West Critical Volumes			**829**
			Total Intersection Critical Volumes			**1,402**
Number of Clearance Intervals	**4**		**Intersection Capacity**			**1,375**
			Base CMA			**1.020**
Signal Coordination	**ATSAC + ATCS**		**Signal Coordination Adjustment**			**-0.100**
			Final CMA			**0.920**
			Level of Service (LOS)			**E**

Hirsch/Green Transportation Consulting, Inc.
Critical Movement Analysis (CMA) Worksheet

Project Name	Pico/Sepulveda Mixed-Use Project		
Intersection Number	35	**Date**	December 7, 2012
Intersection Name	North/South: Manning Avenue East/West: Pico Boulevard		
Intersection Control	Signalized		
Analysis Period	AM Peak Hour		
Analysis Scenario	Future (2012) With Project		

Approach Direction	Lane Type	No. of Lanes	Approach Volumes	Right-Turn on Red	Assigned Lane Volumes	Critical Moves
Northbound	Left	0	76			
	Left/Through	0				
	Left/Through/Right	1	50		169	169
	Through/Right	0				
	Right	0	43	0		
	Total Lanes	1				
Southbound	Left	0	11			11
	Left/Through	0				
	Left/Through/Right	1	34		85	
	Through/Right	0				
	Right	0	40	0		
	Total Lanes	1				
			Sum of North/South Critical Volumes			**180**
Eastbound	Left	1	21		21	
	Left/Through	0				
	Through	2	2,548		862	862
	Through/Right	1			862	
	Right	0	39	0		
	Total Lanes	4				
Westbound	Left	1	50		50	50
	Left/Through	0				
	Through	2	1,508		512	
	Through/Right	1			512	
	Right	0	28	0		
	Total Lanes	4				
			Sum of East/West Critical Volumes			**912**
			Total Intersection Critical Volumes			**1,092**
Number of Clearance Intervals	**3**		**Intersection Capacity**			**1,425**
			Base CMA			**0.766**
Signal Coordination	**ATSAC + ATCS**		**Signal Coordination Adjustment**			**-0.100**
			Final CMA			**0.666**
			Level of Service (LOS)			**B**

Hirsch/Green Transportation Consulting, Inc.
Critical Movement Analysis (CMA) Worksheet

Project Name	Pico/Sepulveda Mixed-Use Project		
Intersection Number	36	**Date**	December 7, 2012
Intersection Name	North/South: Patricia Avenue East/West: Pico Boulevard		
Intersection Control	Signalized		
Analysis Period	AM Peak Hour		
Analysis Scenario	Future (2012) With Project		

Approach Direction	Lane Type	No. of Lanes	Approach Volumes	Right-Turn on Red	Assigned Lane Volumes	Critical Moves
Northbound	Left	0	60			
	Left/Through	0				
	Left/Through/Right	1	55		318	318
	Through/Right	0				
	Right	0	203	0		
	Total Lanes	1				
Southbound	Left	0	7			7
	Left/Through	0				
	Left/Through/Right	1	47		87	
	Through/Right	0				
	Right	0	33	0		
	Total Lanes	1				
			Sum of North/South Critical Volumes			**325**
Eastbound	Left	1	33		33	
	Left/Through	0				
	Through	2	2,521		867	867
	Through/Right	1			867	
	Right	0	79	0		
	Total Lanes	4				
Westbound	Left	1	57		57	57
	Left/Through	0				
	Through	2	1,524		512	
	Through/Right	1			512	
	Right	0	12	0		
	Total Lanes	4				
			Sum of East/West Critical Volumes			**924**
			Total Intersection Critical Volumes			**1,249**
Number of Clearance Intervals	**3**		**Intersection Capacity**			**1,425**
			Base CMA			**0.876**
Signal Coordination	**ATSAC + ATCS**		**Signal Coordination Adjustment**			**-0.100**
			Final CMA			**0.776**
			Level of Service (LOS)			**C**

Hirsch/Green Transportation Consulting, Inc.
Critical Movement Analysis (CMA) Worksheet

Project Name	Pico/Sepulveda Mixed-Use Project		
Intersection Number	37	**Date**	December 7, 2012
Intersection Name	North/South: Beverly Glen Boulevard East/West: Pico Boulevard		
Intersection Control	Signalized		
Analysis Period	AM Peak Hour		
Analysis Scenario	Future (2012) With Project		

Approach Direction	Lane Type	No. of Lanes	Approach Volumes	Right-Turn on Red	Assigned Lane Volumes	Critical Moves
	Left	0	0			
	Left/Through	0				
Northbound	Through	0	0			
	Through/Right	0				
	Right	0	0	0		
	Total Lanes	0				
	Left	2	243		134	134
	Left/Through	0				
Southbound	Through	0	0			
	Through/Right	0				
	Right	1	336	210	126	
	Total Lanes	3				
			Sum of North/South Critical Volumes			**134**
	Left	1	419		419	419
	Left/Through	0				
Eastbound	Through	3	1,921		640	
	Through/Right	0				
	Right	0	0	0		
	Total Lanes	4				
	Left	0	0			
	Left/Through	0				
Westbound	Through	2	1,343		561	561
	Through/Right	1			561	
	Right	0	339	0		
	Total Lanes	3				
			Sum of East/West Critical Volumes			**980**
			Total Intersection Critical Volumes			**1,114**
Number of Clearance Intervals	**3**		**Intersection Capacity**			**1,425**
			Base CMA			**0.782**
Signal Coordination	**ATSAC + ATCS**		**Signal Coordination Adjustment**			**-0.100**
			Final CMA			**0.682**
			Level of Service (LOS)			**B**

Hirsch/Green Transportation Consulting, Inc.
Critical Movement Analysis (CMA) Worksheet

Project Name	Pico/Sepulveda Mixed-Use Project		
Intersection Number	38	**Date**	December 7, 2012
Intersection Name	North/South: Motor Avenue/Fox Studios Driveway East/West: Pico Boulevard		
Intersection Control	Signalized		
Analysis Period	AM Peak Hour		
Analysis Scenario	Future (2012) With Project		

Approach Direction	Lane Type	No. of Lanes	Approach Volumes	Right-Turn on Red	Assigned Lane Volumes	Critical Moves
Northbound	Left	1	281		281	
	Left/Through	0				
	Through	0	12			
	Through/Right	1			322	
	Right	1	844	212	322	322
	Total Lanes	3				
Southbound	Left	1	14		14	
	Left/Through	0				
	Through	0	0			
	Through/Right	1			31	31
	Right	0	31	0		
	Total Lanes	2				
			Sum of North/South Critical Volumes			**353**
Eastbound	Left	1	262		262	262
	Left/Through	0				
	Through	2	1,853		671	
	Through/Right	1			671	
	Right	0	159	0		
	Total Lanes	4				
Westbound	Left	1	212		212	
	Left/Through	0				
	Through	2	1,689		626	626
	Through/Right	1			626	
	Right	0	188	0		
	Total Lanes	4				
			Sum of East/West Critical Volumes			**888**
			Total Intersection Critical Volumes			**1,241**
Number of Clearance Intervals	**4**		**Intersection Capacity**			**1,375**
			Base CMA			**0.903**
Signal Coordination	**ATSAC + ATCS**		**Signal Coordination Adjustment**			**-0.100**
			Final CMA			**0.803**
			Level of Service (LOS)			**D**

North/South Opposed Phasing
NB Rt. Turn Overlap with WB Left

Hirsch/Green Transportation Consulting, Inc.
Critical Movement Analysis (CMA) Worksheet

Project Name	Pico/Sepulveda Mixed-Use Project		
Intersection Number	39	**Date**	December 7, 2012
Intersection Name	North/South: Avenue of the Stars East/West: Pico Boulevard		
Intersection Control	Signalized		
Analysis Period	AM Peak Hour		
Analysis Scenario	Future (2012) With Project		

Approach Direction	Lane Type	No. of Lanes	Approach Volumes	Right-Turn on Red	Assigned Lane Volumes	Critical Moves
Northbound	Left	0	0			
	Left/Through	0				
	Through	0	0			
	Through/Right	0				
	Right	0	0	0		
	Total Lanes	0				
Southbound	Left	2	44		24	24
	Left/Through	0				
	Through	0	0			
	Through/Right	0				
	Right	2	304	304	0	
	Total Lanes	4				
			Sum of North/South Critical Volumes			**24**
Eastbound	Left	3	1,156		424	424
	Left/Through	0				
	Through	3	1,445		482	
	Through/Right	0				
	Right	0	0	0		
	Total Lanes	6				
Westbound	Left	0	0			
	Left/Through	0				
	Through	2	1,452		589	589
	Through/Right	1			589	
	Right	0	316	0		
	Total Lanes	3				
			Sum of East/West Critical Volumes			**1,013**
			Total Intersection Critical Volumes			**1,037**
Number of Clearance Intervals	**3**		**Intersection Capacity**			**1,425**
			Base CMA			**0.728**
Signal Coordination	**ATSAC + ATCS**		**Signal Coordination Adjustment**			**-0.100**
			Final CMA			**0.628**
			Level of Service (LOS)			**B**

Hirsch/Green Transportation Consulting, Inc.
Critical Movement Analysis (CMA) Worksheet

Project Name	Pico/Sepulveda Mixed-Use Project		
Intersection Number	40	**Date**	December 7, 2012
Intersection Name	North/South: Sepulveda Boulevard East/West: Exposition Boulevard		
Intersection Control	Signalized		
Analysis Period	AM Peak Hour		
Analysis Scenario	Future (2012) With Project		

Approach Direction	Lane Type	No. of Lanes	Approach Volumes	Right-Turn on Red	Assigned Lane Volumes	Critical Moves
Northbound	Left	1	160		160	
	Left/Through	0				
	Through	1	1,878		950	950
	Through/Right	1			950	
	Right	0	21	0		
	Total Lanes	3				
Southbound	Left	1	37		37	37
	Left/Through	0				
	Through	2	914		334	
	Through/Right	1			334	
	Right	0	88	0		
	Total Lanes	4				
			Sum of North/South Critical Volumes			**987**
Eastbound	Left	1	171		171	171
	Left/Through	0				
	Through	0	136			
	Through/Right	1			237	
	Right	0	101	0		
	Total Lanes	2				
Westbound	Left	1	22		22	
	Left/Through	0				
	Through	0	118			
	Through/Right	1			263	263
	Right	0	145	0		
	Total Lanes	2				
			Sum of East/West Critical Volumes			**434**
			Total Intersection Critical Volumes			**1,421**
Number of Clearance Intervals	**2**		**Intersection Capacity**			**1,050** **
** Assumed 30% reduction in capacity due to Expo Line at-grade crossing			**Base CMA**			**1.353**
Signal Coordination	**ATSAC + ATCS**		**Signal Coordination Adjustment**			**-0.100**
			Final CMA			**1.253**
			Level of Service (LOS)			**F**

Hirsch/Green Transportation Consulting, Inc.
Critical Movement Analysis (CMA) Worksheet

Project Name	Pico/Sepulveda Mixed-Use Project		
Intersection Number	41	**Date**	December 7, 2012
Intersection Name	North/South: Barrington Avenue East/West: Gateway Boulevard		
Intersection Control	Signalized		
Analysis Period	AM Peak Hour		
Analysis Scenario	Future (2012) With Project		

Approach Direction	Lane Type	No. of Lanes	Approach Volumes	Right-Turn on Red	Assigned Lane Volumes	Critical Moves
Northbound	Left	1	157		157	
	Left/Through	0				
	Through	1	1,084		700	700
	Through/Right	1			700	
	Right	0	317	0		
	Total Lanes	3				
Southbound	Left	1	57		57	57
	Left/Through	0				
	Through	1	529		318	
	Through/Right	1			318	
	Right	0	106	0		
	Total Lanes	3				
			Sum of North/South Critical Volumes			**757**
Eastbound	Left	1	210		210	
	Left/Through	0				
	Through	2	844		422	422
	Through/Right	0				
	Right	1	48	48	0	
	Total Lanes	4				
Westbound	Left	1	78		78	78
	Left/Through	0				
	Through	1	390		206	
	Through/Right	1			206	
	Right	0	23	0		
	Total Lanes	3				
			Sum of East/West Critical Volumes			**500**
			Total Intersection Critical Volumes			**1,257**
Number of Clearance Intervals	**2**		**Intersection Capacity**			**1,500**
			Base CMA			**0.838**
Signal Coordination	**ATSAC**		**Signal Coordination Adjustment**			**-0.070**
			Final CMA			**0.768**
			Level of Service (LOS)			**C**

Hirsch/Green Transportation Consulting, Inc.
Critical Movement Analysis (CMA) Worksheet

Project Name	Pico/Sepulveda Mixed-Use Project		
Intersection Number	42	**Date**	December 7, 2012
Intersection Name	North/South: Bundy Drive East/West: Ocean Park Boulevard		
Intersection Control	Signalized		
Analysis Period	AM Peak Hour		
Analysis Scenario	Future (2012) With Project		

Approach Direction	Lane Type	No. of Lanes	Approach Volumes	Right-Turn on Red	Assigned Lane Volumes	Critical Moves
Northbound	Left	1	616		616	616
	Left/Through	0				
	Through	1	1,131		650	
	Through/Right	1			650	
	Right	0	169	0		
	Total Lanes	3				
Southbound	Left	1	33		33	
	Left/Through	0				
	Through	2	778		389	389
	Through/Right	0				
	Right	1	354	35	319	
	Total Lanes	4				
			Sum of North/South Critical Volumes			**1,005**
Eastbound	Left	1	70		70	70
	Left/Through	0				
	Through	2	313		156	
	Through/Right	0				
	Right	1	276	276	0	
	Total Lanes	4				
Westbound	Left	1	71		71	
	Left/Through	0				
	Through	1	555		290	290
	Through/Right	1			290	
	Right	0	26	0		
	Total Lanes	3				
			Sum of East/West Critical Volumes			**360**
			Total Intersection Critical Volumes			**1,365**
Number of Clearance Intervals	**3**		**Intersection Capacity**			**1,425**
			Base CMA			**0.958**
Signal Coordination	**ATSAC**		**Signal Coordination Adjustment**			**-0.070**
			Final CMA			**0.888**
			Level of Service (LOS)			**D**

EB Rt. Turn Overlap with NB Left

Hirsch/Green Transportation Consulting, Inc.
Critical Movement Analysis (CMA) Worksheet

Project Name	Pico/Sepulveda Mixed-Use Project		
Intersection Number	43	**Date**	December 7, 2012
Intersection Name	North/South: Barrington Avenue East/West: National Boulevard		
Intersection Control	Signalized		
Analysis Period	AM Peak Hour		
Analysis Scenario	Future (2012) With Project		

Approach Direction	Lane Type	No. of Lanes	Approach Volumes	Right-Turn on Red	Assigned Lane Volumes	Critical Moves
Northbound	Left	1	100		100	
	Left/Through	0				
	Through	1	1,066		580	580
	Through/Right	1			580	
	Right	0	95	0		
	Total Lanes	3				
Southbound	Left	1	78		78	78
	Left/Through	0				
	Through	1	387		236	
	Through/Right	1			236	
	Right	0	84	0		
	Total Lanes	3				
			Sum of North/South Critical Volumes			**658**
Eastbound	Left	1	265		265	265
	Left/Through	0				
	Through	1	387		213	
	Through/Right	1			213	
	Right	0	39	0		
	Total Lanes	3				
Westbound	Left	1	59		59	
	Left/Through	0				
	Through	1	389		284	284
	Through/Right	1			284	
	Right	0	179	0		
	Total Lanes	3				
			Sum of East/West Critical Volumes			**549**
			Total Intersection Critical Volumes			**1,207**
Number of Clearance Intervals	**3**		**Intersection Capacity**			**1,425**
			Base CMA			**0.847**
Signal Coordination	**ATSAC**		**Signal Coordination Adjustment**			**-0.070**
			Final CMA			**0.777**
			Level of Service (LOS)			**C**

Hirsch/Green Transportation Consulting, Inc.
Critical Movement Analysis (CMA) Worksheet

Project Name	Pico/Sepulveda Mixed-Use Project		
Intersection Number	44	**Date**	December 7, 2012
Intersection Name	North/South: Sawtelle Boulevard East/West: National Boulevard		
Intersection Control	Signalized		
Analysis Period	AM Peak Hour		
Analysis Scenario	Future (2012) With Project		

Approach Direction	Lane Type	No. of Lanes	Approach Volumes	Right-Turn on Red	Assigned Lane Volumes	Critical Moves
Northbound	Left	1	120		120	
	Left/Through	0				
	Through	1	1,020		573	573
	Through/Right	1			573	
	Right	0	126	0		
	Total Lanes	3				
Southbound	Left	2	382		210	210
	Left/Through	0				
	Through	1	623		350	
	Through/Right	1			350	
	Right	0	78	0		
	Total Lanes	4				
			Sum of North/South Critical Volumes			**783**
Eastbound	Left	1	162		162	162
	Left/Through	0				
	Through	1	996		526	
	Through/Right	1			526	
	Right	0	56	0		
	Total Lanes	3				
Westbound	Left	1	86		86	
	Left/Through	0				
	Through	1	963		650	650
	Through/Right	1			650	
	Right	0	338	0		
	Total Lanes	3				
			Sum of East/West Critical Volumes			**812**
			Total Intersection Critical Volumes			**1,595**
Number of Clearance Intervals	**3**		**Intersection Capacity**			**1,425**
			Base CMA			**1.119**
Signal Coordination	**ATSAC + ATCS**		**Signal Coordination Adjustment**			**-0.100**
			Final CMA			**1.019**
			Level of Service (LOS)			**F**

Hirsch/Green Transportation Consulting, Inc.
Critical Movement Analysis (CMA) Worksheet

Project Name	Pico/Sepulveda Mixed-Use Project		
Intersection Number	45	**Date**	December 7, 2012
Intersection Name	North/South: I-405 SB On-Ramp East/West: National Boulevard		
Intersection Control	Signalized		
Analysis Period	AM Peak Hour		
Analysis Scenario	Future (2012) With Project		

Approach Direction	Lane Type	No. of Lanes	Approach Volumes	Right-Turn on Red	Assigned Lane Volumes	Critical Moves
Northbound	Left	0	0			
	Left/Through	0				
	Through	0	0			
	Through/Right	0				
	Right	0	0	0		
	Total Lanes	0				
Southbound	Left	0	0			
	Left/Through	0				
	Through	0	0			
	Through/Right	0				
	Right	0	0	0		
	Total Lanes	0				
			Sum of North/South Critical Volumes			**0**
Eastbound	Left	0	0			
	Left/Through	0				
	Through	1	1,063		532	532
	Through/Right	1			532	
	Right	1	445	0	445	
	Total Lanes	3				
Westbound	Left	2	408		224	224
	Left/Through	0				
	Through	2	1,389		694	
	Through/Right	0				
	Right	0	0	0		
	Total Lanes	4				
			Sum of East/West Critical Volumes			**756**
			Total Intersection Critical Volumes			**756**
Number of Clearance Intervals	**2**		**Intersection Capacity**			**1,500**
			Base CMA			**0.504**
Signal Coordination	**ATSAC + ATCS**		**Signal Coordination Adjustment**			**-0.100**
			Final CMA			**0.404**
			Level of Service (LOS)			**A**

Hirsch/Green Transportation Consulting, Inc.
Critical Movement Analysis (CMA) Worksheet

Project Name	Pico/Sepulveda Mixed-Use Project		
Intersection Number	46	**Date**	December 7, 2012
Intersection Name	North/South: I-405 NB Off-Ramp East/West: National Boulevard		
Intersection Control	Signalized		
Analysis Period	AM Peak Hour		
Analysis Scenario	Future (2012) With Project		

Approach Direction	Lane Type	No. of Lanes	Approach Volumes	Right-Turn on Red	Assigned Lane Volumes	Critical Moves
Northbound	Left	0	602			602
	Left/Through	0				
	Left/Through/Right	1	3		605	
	Through/Right	0				
	Right	1	601	0	601	
	Total Lanes	2				
Southbound	Left	0	3			
	Left/Through	0				
	Left/Through/Right	1	0		20	20
	Through/Right	0				
	Right	0	17	0		
	Total Lanes	1				
			Sum of North/South Critical Volumes			**622**
Eastbound	Left	0	0			
	Left/Through	0				
	Through	2	1,066		533	
	Through/Right	0				
	Right	0	0	0		
	Total Lanes	2				
Westbound	Left	0	0			
	Left/Through	0				
	Through	1	1,199		618	618
	Through/Right	1			618	
	Right	0	38	0		
	Total Lanes	2				
			Sum of East/West Critical Volumes			**618**
			Total Intersection Critical Volumes			**1,240**
Number of Clearance Intervals	**2**		**Intersection Capacity**			**1,500**
			Base CMA			**0.827**
Signal Coordination	**ATSAC + ATCS**		**Signal Coordination Adjustment**			**-0.100**
			Final CMA			**0.727**
			Level of Service (LOS)			**C**

Hirsch/Green Transportation Consulting, Inc.
Critical Movement Analysis (CMA) Worksheet

Project Name	Pico/Sepulveda Mixed-Use Project		
Intersection Number	47	**Date**	December 7, 2012
Intersection Name	North/South: Sepulveda Boulevard East/West: National Boulevard		
Intersection Control	Signalized		
Analysis Period	AM Peak Hour		
Analysis Scenario	Future (2012) With Project		

Approach Direction	Lane Type	No. of Lanes	Approach Volumes	Right-Turn on Red	Assigned Lane Volumes	Critical Moves
	Left	1	339		339	
	Left/Through	0				
Northbound	Through	1	1,651		958	958
	Through/Right	1			958	
	Right	0	264	0		
	Total Lanes	3				
	Left	1	142		142	142
	Left/Through	0				
Southbound	Through	1	725		494	
	Through/Right	1			494	
	Right	0	262	0		
	Total Lanes	3				
			Sum of North/South Critical Volumes			**1,100**
	Left	2	297		163	
	Left/Through	0				
Eastbound	Through	1	1,281		688	688
	Through/Right	1			688	
	Right	0	95	0		
	Total Lanes	4				
	Left	1	121		121	121
	Left/Through	0				
Westbound	Through	1	637		370	
	Through/Right	1			370	
	Right	0	104	0		
	Total Lanes	3				
			Sum of East/West Critical Volumes			**809**
			Total Intersection Critical Volumes			**1,909**
Number of Clearance Intervals	**4**		**Intersection Capacity**			**1,375**
			Base CMA			**1.388**
Signal Coordination	**ATSAC + ATCS**		**Signal Coordination Adjustment**			**-0.100**
			Final CMA			**1.288**
			Level of Service (LOS)			**F**

Hirsch/Green Transportation Consulting, Inc.
Critical Movement Analysis (CMA) Worksheet

Project Name	Pico/Sepulveda Mixed-Use Project		
Intersection Number	48	**Date**	December 7, 2012
Intersection Name	North/South: Westwood Boulevard East/West: National Boulevard		
Intersection Control	Signalized		
Analysis Period	AM Peak Hour		
Analysis Scenario	Future (2012) With Project		

Approach Direction	Lane Type	No. of Lanes	Approach Volumes	Right-Turn on Red	Assigned Lane Volumes	Critical Moves
Northbound	Left	1	245		245	245
	Left/Through	0				
	Through	1	660		346	
	Through/Right	1			346	
	Right	0	32	0		
	Total Lanes	3				
Southbound	Left	1	145		145	
	Left/Through	0				
	Through	1	306		306	306
	Through/Right	0				
	Right	1	104	104	0	
	Total Lanes	3				
			Sum of North/South Critical Volumes			**551**
Eastbound	Left	1	362		362	362
	Left/Through	0				
	Through	1	811		451	
	Through/Right	1			451	
	Right	0	91	0		
	Total Lanes	3				
Westbound	Left	1	7		7	
	Left/Through	0				
	Through	1	322		211	211
	Through/Right	1			211	
	Right	0	100	0		
	Total Lanes	3				
			Sum of East/West Critical Volumes			**573**
			Total Intersection Critical Volumes			**1,124**
Number of Clearance Intervals	**2**		**Intersection Capacity**			**1,500**
			Base CMA			**0.749**
Signal Coordination	**ATSAC + ATCS**		**Signal Coordination Adjustment**			**-0.100**
			Final CMA			**0.649**
			Level of Service (LOS)			**B**

Hirsch/Green Transportation Consulting, Inc.
Critical Movement Analysis (CMA) Worksheet

Project Name Pico/Sepulveda Mixed-Use Project
Intersection Number 49 **Date** December 7, 2012
Intersection Name North/South: Overland Avenue
East/West: I-10 WB On/Off-Ramps/National Boulevard
Intersection Control Signalized
Analysis Period AM Peak Hour
Analysis Scenario Future (2012) With Project

Approach Direction	Lane Type	No. of Lanes	Approach Volumes	Right-Turn on Red	Assigned Lane Volumes	Critical Moves
Northbound	Left	1	28		28	
	Left/Through	0				
	Through	3	1,238		413	
	Through/Right	0				
	Right	1	782	247	535	535
	Total Lanes	5				
Southbound	Left	2	453		249	249
	Left/Through	0				
	Through	1	855		476	
	Through/Right	1			476	
	Right	0	96	0		
	Total Lanes	4				
			Sum of North/South Critical Volumes			**784**
Eastbound	Left	1	373		278	
	Left/Through	1			278	
	Through	0	183			
	Through/Right	0				
	Right	1	509	14	495	495
	Total Lanes	3				
Westbound	Left	0	68			
	Left/Through	1			168	
	Through	1	269		168	
	Through/Right	0				
	Right	1	371	124	247	247
	Total Lanes	3				
			Sum of East/West Critical Volumes			**742**
			Total Intersection Critical Volumes			**1,526**
Number of Clearance Intervals	**4**		**Intersection Capacity**			**1,375**
			Base CMA			**1.110**
Signal Coordination	**ATSAC + ATCS**		**Signal Coordination Adjustment**			**-0.100**
			Final CMA			**1.010**
			Level of Service (LOS)			**F**

NB Rt. Turn Overlap with WB Left

East/West Opposed Phasing

Hirsch/Green Transportation Consulting, Inc.
Critical Movement Analysis (CMA) Worksheet

Project Name	Pico/Sepulveda Mixed-Use Project		
Intersection Number	50	**Date**	December 7, 2012
Intersection Name	North/South: Overland Avenue East/West: I-10 EB On-Ramp		
Intersection Control	Signalized		
Analysis Period	AM Peak Hour		
Analysis Scenario	Future (2012) With Project		

Approach Direction	Lane Type	No. of Lanes	Approach Volumes	Right-Turn on Red	Assigned Lane Volumes	Critical Moves
Northbound	Left	0	0			
	Left/Through	0				
	Through	3	2,013		581	581
	Through/Right	1			581	
	Right	0	310	0		
	Total Lanes	4				
Southbound	Left	2	866		476	476
	Left/Through	0				
	Through	2	574		287	
	Through/Right	0				
	Right	0	0	0		
	Total Lanes	4				
			Sum of North/South Critical Volumes			**1,057**
Eastbound	Left	0	0			
	Left/Through	0				
	Through	0	0			
	Through/Right	0				
	Right	0	0	0		
	Total Lanes	0				
Westbound	Left	0	0			
	Left/Through	0				
	Through	0	0			
	Through/Right	0				
	Right	0	0	0		
	Total Lanes	0				
			Sum of East/West Critical Volumes			**0**
			Total Intersection Critical Volumes			**1,057**
Number of Clearance Intervals	**2**		**Intersection Capacity**			**1,500**
			Base CMA			**0.705**
Signal Coordination	**ATSAC + ATCS**		**Signal Coordination Adjustment**			**-0.100**
			Final CMA			**0.605**
			Level of Service (LOS)			**B**

Hirsch/Green Transportation Consulting, Inc.
Critical Movement Analysis (CMA) Worksheet

Project Name	Pico/Sepulveda Mixed-Use Project		
Intersection Number	51	**Date**	December 7, 2012
Intersection Name	North/South: Sepulveda Boulevard East/West: Queensland Avenue		
Intersection Control	Signalized		
Analysis Period	AM Peak Hour		
Analysis Scenario	Future (2012) With Project		

Approach Direction	Lane Type	No. of Lanes	Approach Volumes	Right-Turn on Red	Assigned Lane Volumes	Critical Moves
Northbound	Left	1	28		28	
	Left/Through	0				
	Through	1	1,995		1,021	1,021
	Through/Right	1			1,021	
	Right	0	47	0		
	Total Lanes	3				
Southbound	Left	1	24		24	24
	Left/Through	0				
	Through	1	777		412	
	Through/Right	1			412	
	Right	0	48	0		
	Total Lanes	3				
			Sum of North/South Critical Volumes			**1,045**
Eastbound	Left	0	64			64
	Left/Through	0				
	Left/Through/Right	1	36		136	
	Through/Right	0				
	Right	0	36	0		
	Total Lanes	1				
Westbound	Left	0	83			
	Left/Through	0				
	Left/Through/Right	1	16		172	172
	Through/Right	0				
	Right	0	73	0		
	Total Lanes	1				
			Sum of East/West Critical Volumes			**236**
			Total Intersection Critical Volumes			**1,281**
Number of Clearance Intervals	**2**		**Intersection Capacity**			**1,500**
			Base CMA			**0.854**
Signal Coordination	**ATSAC**		**Signal Coordination Adjustment**			**-0.070**
			Final CMA			**0.784**
			Level of Service (LOS)			**C**

Hirsch/Green Transportation Consulting, Inc.
Critical Movement Analysis (CMA) Worksheet

Project Name	Pico/Sepulveda Mixed-Use Project		
Intersection Number	52	**Date**	December 7, 2012
Intersection Name	North/South: Sawtelle Boulevard East/West: Palms Boulevard		
Intersection Control	Signalized		
Analysis Period	AM Peak Hour		
Analysis Scenario	Future (2012) With Project		

Approach Direction	Lane Type	No. of Lanes	Approach Volumes	Right-Turn on Red	Assigned Lane Volumes	Critical Moves
	Left	1	78		78	
	Left/Through	0				
Northbound	Through	1	607		413	413
	Through/Right	1			413	
	Right	0	219	0		
	Total Lanes	3				
	Left	1	350		350	350
	Left/Through	0				
Southbound	Through	1	1,004		546	
	Through/Right	1			546	
	Right	0	88	0		
	Total Lanes	3				
			Sum of North/South Critical Volumes			**763**
	Left	1	52		52	52
	Left/Through	0				
Eastbound	Through	1	664		350	
	Through/Right	1			350	
	Right	0	36	0		
	Total Lanes	3				
	Left	1	156		156	
	Left/Through	0				
Westbound	Through	1	789		484	484
	Through/Right	1			484	
	Right	0	180	0		
	Total Lanes	3				
			Sum of East/West Critical Volumes			**536**
			Total Intersection Critical Volumes			**1,299**
Number of Clearance Intervals	**2**		**Intersection Capacity**			**1,500**
			Base CMA			**0.866**
Signal Coordination	**ATSAC**		**Signal Coordination Adjustment**			**-0.070**
			Final CMA			**0.796**
			Level of Service (LOS)			**C**

Hirsch/Green Transportation Consulting, Inc.
Critical Movement Analysis (CMA) Worksheet

Project Name	Pico/Sepulveda Mixed-Use Project		
Intersection Number	53	**Date**	December 7, 2012
Intersection Name	North/South: Sepulveda Boulevard East/West: Palms Boulevard		
Intersection Control	Signalized		
Analysis Period	AM Peak Hour		
Analysis Scenario	Future (2012) With Project		

Approach Direction	Lane Type	No. of Lanes	Approach Volumes	Right-Turn on Red	Assigned Lane Volumes	Critical Moves
	Left	1	244		244	
	Left/Through	0				
Northbound	Through	1	1,511		836	836
	Through/Right	1			836	
	Right	0	162	0		
	Total Lanes	3				
	Left	1	74		74	74
	Left/Through	0				
Southbound	Through	1	669		421	
	Through/Right	1			421	
	Right	0	173	0		
	Total Lanes	3				
			Sum of North/South Critical Volumes			**910**
	Left	1	127		127	127
	Left/Through	0				
Eastbound	Through	1	741		409	
	Through/Right	1			409	
	Right	0	77	0		
	Total Lanes	3				
	Left	1	111		111	
	Left/Through	0				
Westbound	Through	1	772		772	772
	Through/Right	0				
	Right	1	325	37	288	
	Total Lanes	3				
			Sum of East/West Critical Volumes			**899**
			Total Intersection Critical Volumes			**1,809**
Number of Clearance Intervals	**2**		**Intersection Capacity**			**1,500**
			Base CMA			**1.206**
Signal Coordination	**ATSAC**		**Signal Coordination Adjustment**			**-0.070**
			Final CMA			**1.136**
			Level of Service (LOS)			**F**

Hirsch/Green Transportation Consulting, Inc.
Critical Movement Analysis (CMA) Worksheet

Project Name	Pico/Sepulveda Mixed-Use Project		
Intersection Number	54	**Date**	December 7, 2012
Intersection Name	North/South: Sepulveda Boulevard East/West: Venice Boulevard		
Intersection Control	Signalized		
Analysis Period	AM Peak Hour		
Analysis Scenario	Future (2012) With Project		

Approach Direction	Lane Type	No. of Lanes	Approach Volumes	Right-Turn on Red	Assigned Lane Volumes	Critical Moves
Northbound	Left	1	93		93	
	Left/Through	0				
	Through	2	1,232		616	616
	Through/Right	0				
	Right	1	165	165	0	
	Total Lanes	4				
Southbound	Left	1	87		87	87
	Left/Through	0				
	Through	2	556		278	
	Through/Right	0				
	Right	1	195	134	61	
	Total Lanes	4				
			Sum of North/South Critical Volumes			**703**
Eastbound	Left	1	267		267	267
	Left/Through	0				
	Through	3	1,321		440	
	Through/Right	0				
	Right	1	421	212	209	
	Total Lanes	5				
Westbound	Left	1	191		191	
	Left/Through	0				
	Through	3	1,553		518	518
	Through/Right	0				
	Right	1	161	44	117	
	Total Lanes	5				
			Sum of East/West Critical Volumes			**785**
			Total Intersection Critical Volumes			**1,488**
Number of Clearance Intervals	**4**		**Intersection Capacity**			**1,375**
			Base CMA			**1.082**
Signal Coordination	**ATSAC**		**Signal Coordination Adjustment**			**-0.070**
			Final CMA			**1.012**
			Level of Service (LOS)			**F**

Future (2012) With Modified Project

PM Peak Hour

Hirsch/Green Transportation Consulting, Inc.
Critical Movement Analysis (CMA) Worksheet

Project Name	Pico/Sepulveda Mixed-Use Project		
Intersection Number	1	**Date**	December 7, 2012
Intersection Name	North/South: Sepulveda Boulevard East/West: Wilshire Boulevard		
Intersection Control	Signalized		
Analysis Period	PM Peak Hour		
Analysis Scenario	Future (2012) With Project		

Approach Direction	Lane Type	No. of Lanes	Approach Volumes	Right-Turn on Red	Assigned Lane Volumes	Critical Moves
Northbound	Left	1	231		231	
	Left/Through	0				
	Through	2	1,189		594	594
	Through/Right	0				
	Right	1	240	182	58	
	Total Lanes	4				
Southbound	Left	1	149		149	149
	Left/Through	0				
	Through	2	803		402	
	Through/Right	0				
	Right	1	170	14	156	
	Total Lanes	4				
			Sum of North/South Critical Volumes			**743**
Eastbound	Left	1	28		28	28
	Left/Through	0				
	Through	3	1,269		350	
	Through/Right	1			350	
	Right	0	130	0		
	Total Lanes	5				
Westbound	Left	2	330		182	
	Left/Through	0				
	Through	4	2,954		622	622
	Through/Right	1			622	
	Right	0	158	0		
	Total Lanes	7				
			Sum of East/West Critical Volumes			**650**
			Total Intersection Critical Volumes			**1,393**
Number of Clearance Intervals	**4**		**Intersection Capacity**			**1,375**
			Base CMA			**1.013**
Signal Coordination	**ATSAC + ATCS**		**Signal Coordination Adjustment**			**-0.100**
			Final CMA			**0.913**
			Level of Service (LOS)			**E**

NB Rt. Turn Overlap with WB Left

Hirsch/Green Transportation Consulting, Inc.
Critical Movement Analysis (CMA) Worksheet

Project Name	Pico/Sepulveda Mixed-Use Project		
Intersection Number	2	**Date**	December 7, 2012
Intersection Name	North/South: Veteran Avenue East/West: Wilshire Boulevard		
Intersection Control	Signalized		
Analysis Period	PM Peak Hour		
Analysis Scenario	Future (2012) With Project		

Approach Direction	Lane Type	No. of Lanes	Approach Volumes	Right-Turn on Red	Assigned Lane Volumes	Critical Moves
Northbound	Left	1	195		195	195
	Left/Through	0				
	Through	2	533		266	
	Through/Right	0				
	Right	1	128	52	76	
	Total Lanes	4				
Southbound	Left	1	150		150	
	Left/Through	0				
	Through	2	661		330	
	Through/Right	0				
	Right	2	823	90	366	366
	Total Lanes	5				
			Sum of North/South Critical Volumes			**561**
Eastbound	Left	2	327		180	180
	Left/Through	0				
	Through	3	2,264		598	
	Through/Right	1			598	
	Right	0	126	0		
	Total Lanes	6				
Westbound	Left	2	94		52	
	Left/Through	0				
	Through	3	2,641		672	672
	Through/Right	1			672	
	Right	0	45	0		
	Total Lanes	6				
			Sum of East/West Critical Volumes			**852**
			Total Intersection Critical Volumes			**1,413**
Number of Clearance Intervals	**4**		**Intersection Capacity**			**1,375**
			Base CMA			**1.028**
Signal Coordination	**ATSAC + ATCS**		**Signal Coordination Adjustment**			**-0.100**
			Final CMA			**0.928**
			Level of Service (LOS)			**E**

NB Rt. Turn Overlap with WB Left

Hirsch/Green Transportation Consulting, Inc.
Critical Movement Analysis (CMA) Worksheet

Project Name	Pico/Sepulveda Mixed-Use Project		
Intersection Number	3	**Date**	December 7, 2012
Intersection Name	North/South: Westwood Boulevard East/West: Wilshire Boulevard		
Intersection Control	Signalized		
Analysis Period	PM Peak Hour		
Analysis Scenario	Future (2012) With Project		

Approach Direction	Lane Type	No. of Lanes	Approach Volumes	Right-Turn on Red	Assigned Lane Volumes	Critical Moves
Northbound	Left	1	188		188	188
	Left/Through	0				
	Through	2	461		215	
	Through/Right	1			215	
	Right	0	183	0		
	Total Lanes	4				
Southbound	Left	1	128		128	
	Left/Through	0				
	Through	2	556		195	195
	Through/Right	1			195	
	Right	1	327	104	195	
	Total Lanes	5				
			Sum of North/South Critical Volumes			**383**
Eastbound	Left	2	236		130	
	Left/Through	0				
	Through	3	1,837		521	521
	Through/Right	1			521	
	Right	0	246	0		
	Total Lanes	6				
Westbound	Left	2	247		136	136
	Left/Through	0				
	Through	3	1,706		450	
	Through/Right	1			450	
	Right	0	92	0		
	Total Lanes	6				
			Sum of East/West Critical Volumes			**657**
			Total Intersection Critical Volumes			**1,040**
Number of Clearance Intervals	**4**		**Intersection Capacity**			**1,030 ****
** Assumed 25% reduction in capacity due to downstream congestion			**Base CMA**			**1.010**
Signal Coordination	**ATSAC + ATCS**		**Signal Coordination Adjustment**			**-0.100**
			Final CMA			**0.910**
			Level of Service (LOS)			**E**

Hirsch/Green Transportation Consulting, Inc.
Critical Movement Analysis (CMA) Worksheet

Project Name	Pico/Sepulveda Mixed-Use Project		
Intersection Number	4	**Date**	December 7, 2012
Intersection Name	North/South: Sepulveda Boulevard East/West: Ohio Avenue		
Intersection Control	Signalized		
Analysis Period	PM Peak Hour		
Analysis Scenario	Future (2012) With Project		

Approach Direction	Lane Type	No. of Lanes	Approach Volumes	Right-Turn on Red	Assigned Lane Volumes	Critical Moves
Northbound	Left	1	217		217	217
	Left/Through	0				
	Through	1	874		502	
	Through/Right	1			502	
	Right	0	131	0		
	Total Lanes	3				
Southbound	Left	1	82		82	
	Left/Through	0				
	Through	1	1,174		688	688
	Through/Right	1			688	
	Right	0	203	0		
	Total Lanes	3				
			Sum of North/South Critical Volumes			**905**
Eastbound	Left	1	169		169	169
	Left/Through	0				
	Through	0	539			
	Through/Right	1			603	
	Right	0	64	0		
	Total Lanes	2				
Westbound	Left	1	64		64	
	Left/Through	0				
	Through	0	656			
	Through/Right	1			685	685
	Right	0	29	0		
	Total Lanes	2				
			Sum of East/West Critical Volumes			**854**
			Total Intersection Critical Volumes			**1,759**
Number of Clearance Intervals	**2**		**Intersection Capacity**			**1,500**
			Base CMA			**1.173**
Signal Coordination	**ATSAC + ATCS**		**Signal Coordination Adjustment**			**-0.100**
			Final CMA			**1.073**
			Level of Service (LOS)			**F**

Hirsch/Green Transportation Consulting, Inc.
Critical Movement Analysis (CMA) Worksheet

Project Name	Pico/Sepulveda Mixed-Use Project		
Intersection Number	5	**Date**	December 7, 2012
Intersection Name	North/South: Barrington Avenue East/West: Santa Monica Boulevard		
Intersection Control	Signalized		
Analysis Period	PM Peak Hour		
Analysis Scenario	Future (2012) With Project		

Approach Direction	Lane Type	No. of Lanes	Approach Volumes	Right-Turn on Red	Assigned Lane Volumes	Critical Moves
Northbound	Left	1	129		129	129
	Left/Through	0				
	Through	1	503		503	
	Through/Right	0				
	Right	1	167	70	97	
	Total Lanes	3				
Southbound	Left	1	110		110	
	Left/Through	0				
	Through	0	591			
	Through/Right	1			629	629
	Right	0	38	0		
	Total Lanes	2				
			Sum of North/South Critical Volumes			**758**
Eastbound	Left	1	73		73	
	Left/Through	0				
	Through	2	1,346		502	502
	Through/Right	1			502	
	Right	0	159	0		
	Total Lanes	4				
Westbound	Left	1	141		141	141
	Left/Through	0				
	Through	2	1,201		423	
	Through/Right	1			423	
	Right	0	68	0		
	Total Lanes	4				
			Sum of East/West Critical Volumes			**643**
			Total Intersection Critical Volumes			**1,401**
Number of Clearance Intervals	**2**		**Intersection Capacity**			**1,500**
			Base CMA			**0.934**
Signal Coordination	**ATSAC**		**Signal Coordination Adjustment**			**-0.070**
			Final CMA			**0.864**
			Level of Service (LOS)			**D**

Hirsch/Green Transportation Consulting, Inc.
Critical Movement Analysis (CMA) Worksheet

Project Name Pico/Sepulveda Mixed-Use Project
Intersection Number 6 **Date** December 7, 2012
Intersection Name North/South: Sepulveda Boulevard
East/West: Santa Monica Boulevard
Intersection Control Signalized
Analysis Period PM Peak Hour
Analysis Scenario Future (2012) With Project

Approach Direction	Lane Type	No. of Lanes	Approach Volumes	Right-Turn on Red	Assigned Lane Volumes	Critical Moves
Northbound	Left	1	216		216	216
	Left/Through	0				
	Through	2	893		446	
	Through/Right	0				
	Right	1	299	225	74	
	Total Lanes	4				
Southbound	Left	1	186		186	
	Left/Through	0				
	Through	2	1,034		517	517
	Through/Right	0				
	Right	1	152	152	0	
	Total Lanes	4				
			Sum of North/South Critical Volumes			**733**
Eastbound	Left	1	172		172	
	Left/Through	0				
	Through	3	1,787		596	596
	Through/Right	0				
	Right	1	269	216	53	
	Total Lanes	5				
Westbound	Left	1	225		225	225
	Left/Through	0				
	Through	3	1,566		522	
	Through/Right	0				
	Right	1	147	144	3	
	Total Lanes	5				
			Sum of East/West Critical Volumes			**821**
			Total Intersection Critical Volumes			**1,554**
Number of Clearance Intervals	**4**		**Intersection Capacity**			**1,375**
			Base CMA			**1.130**
Signal Coordination	**ATSAC + ATCS**		**Signal Coordination Adjustment**			**-0.100**
			Final CMA			**1.030**
			Level of Service (LOS)			**F**

NB/SB Rt. Turn Overlap With WB/EB Lefts

EB Rt. Turn Overlap with NB Left

Hirsch/Green Transportation Consulting, Inc.
Critical Movement Analysis (CMA) Worksheet

Project Name	Pico/Sepulveda Mixed-Use Project		
Intersection Number	7	**Date**	December 7, 2012
Intersection Name	North/South: Westwood Boulevard East/West: Santa Monica Boulevard		
Intersection Control	Signalized		
Analysis Period	PM Peak Hour		
Analysis Scenario	Future (2012) With Project		

Approach Direction	Lane Type	No. of Lanes	Approach Volumes	Right-Turn on Red	Assigned Lane Volumes	Critical Moves
Northbound	Left	1	128		128	128
	Left/Through	0				
	Through	1	933		534	
	Through/Right	1			534	
	Right	0	135	0		
	Total Lanes	3				
Southbound	Left	1	199		199	
	Left/Through	0				
	Through	2	1,238		619	619
	Through/Right	0				
	Right	1	150	110	40	
	Total Lanes	4				
			Sum of North/South Critical Volumes			**747**
Eastbound	Left	2	206		113	
	Left/Through	0				
	Through	3	2,017		672	672
	Through/Right	0				
	Right	1	122	64	58	
	Total Lanes	6				
Westbound	Left	2	245		135	135
	Left/Through	0				
	Through	3	1,763		588	
	Through/Right	0				
	Right	1	219	106	113	
	Total Lanes	6				
			Sum of East/West Critical Volumes			**807**
			Total Intersection Critical Volumes			**1,554**
Number of Clearance Intervals	**4**		**Intersection Capacity**			**1,375**
			Base CMA			**1.130**
Signal Coordination	**ATSAC + ATCS**		**Signal Coordination Adjustment**			**-0.100**
			Final CMA			**1.030**
			Level of Service (LOS)			**F**

Hirsch/Green Transportation Consulting, Inc.
Critical Movement Analysis (CMA) Worksheet

Project Name	Pico/Sepulveda Mixed-Use Project		
Intersection Number	8	**Date**	December 7, 2012
Intersection Name	North/South: Overland Avenue East/West: Santa Monica Boulevard		
Intersection Control	Signalized		
Analysis Period	PM Peak Hour		
Analysis Scenario	Future (2012) With Project		

Approach Direction	Lane Type	No. of Lanes	Approach Volumes	Right-Turn on Red	Assigned Lane Volumes	Critical Moves
Northbound	Left	1	175		175	175
	Left/Through	0				
	Through	0	0			
	Through/Right	0				
	Right	1	139	0	139	
	Total Lanes	2				
Southbound	Left	0	0			
	Left/Through	0				
	Through	0	0			
	Through/Right	0				
	Right	0	0	0		
	Total Lanes	0				
			Sum of North/South Critical Volumes			**175**
Eastbound	Left	0	0			
	Left/Through	0				
	Through	2	1,612		563	563
	Through/Right	1			563	
	Right	0	78	0		
	Total Lanes	3				
Westbound	Left	1	331		331	331
	Left/Through	0				
	Through	3	1,849		616	
	Through/Right	0				
	Right	0	0	0		
	Total Lanes	4				
			Sum of East/West Critical Volumes			**894**
			Total Intersection Critical Volumes			**1,069**
Number of Clearance Intervals	**4**		**Intersection Capacity**			**1,375**
			Base CMA			**0.777**
Signal Coordination	**ATSAC + ATCS**		**Signal Coordination Adjustment**			**-0.100**
			Final CMA			**0.677**
			Level of Service (LOS)			**B**

Hirsch/Green Transportation Consulting, Inc.
Critical Movement Analysis (CMA) Worksheet

Project Name	Pico/Sepulveda Mixed-Use Project		
Intersection Number	9	**Date**	December 7, 2012
Intersection Name	North/South: Beverly Glen Boulevard East/West: Santa Monica Boulevard		
Intersection Control	Signalized		
Analysis Period	PM Peak Hour		
Analysis Scenario	Future (2012) With Project		

Approach Direction	Lane Type	No. of Lanes	Approach Volumes	Right-Turn on Red	Assigned Lane Volumes	Critical Moves
Northbound	Left	2	95		52	52
	Left/Through	0				
	Through	2	635		318	
	Through/Right	0				
	Right	1	108	108	0	
	Total Lanes	5				
Southbound	Left	2	362		199	
	Left/Through	0				
	Through	2	1,010		505	505
	Through/Right	0				
	Right	1	107	52	55	
	Total Lanes	5				
			Sum of North/South Critical Volumes			**557**
Eastbound	Left	2	189		104	104
	Left/Through	0				
	Through	3	1,804		601	
	Through/Right	0				
	Right	1	170	26	144	
	Total Lanes	6				
Westbound	Left	2	257		141	
	Left/Through	0				
	Through	3	2,291		764	764
	Through/Right	0				
	Right	1	544	120	424	
	Total Lanes	6				
			Sum of East/West Critical Volumes			**868**
			Total Intersection Critical Volumes			**1,425**
Number of Clearance Intervals	**4**		**Intersection Capacity**			**1,375**
			Base CMA			**1.036**
Signal Coordination	**ATSAC + ATCS**		**Signal Coordination Adjustment**			**-0.100**
			Final CMA			**0.936**
			Level of Service (LOS)			**E**

Hirsch/Green Transportation Consulting, Inc.
Critical Movement Analysis (CMA) Worksheet

Project Name	Pico/Sepulveda Mixed-Use Project		
Intersection Number	10	**Date**	December 7, 2012
Intersection Name	North/South: Sepulveda Boulevard East/West: Nebraska Avenue		
Intersection Control	Signalized		
Analysis Period	PM Peak Hour		
Analysis Scenario	Future (2012) With Project		

Approach Direction	Lane Type	No. of Lanes	Approach Volumes	Right-Turn on Red	Assigned Lane Volumes	Critical Moves
Northbound	Left	1	55		55	55
	Left/Through	0				
	Through	1	1,382		691	
	Through/Right	1			691	
	Right	0	0	0		
	Total Lanes	3				
Southbound	Left	1	0		0	
	Left/Through	0				
	Through	1	1,447		792	792
	Through/Right	1			792	
	Right	0	137	0		
	Total Lanes	3				
			Sum of North/South Critical Volumes			**847**
Eastbound	Left	0	70			
	Left/Through	1			70	70
	Through	0	0			
	Through/Right	0				
	Right	1	81	28	53	
	Total Lanes	2				
Westbound	Left	0	0			
	Left/Through	0				
	Through	0	0			
	Through/Right	0				
	Right	0	0	0		
	Total Lanes	0				
			Sum of East/West Critical Volumes			**70**
			Total Intersection Critical Volumes			**917**
Number of Clearance Intervals	**3**		**Intersection Capacity**			**1,425**
			Base CMA			**0.644**
Signal Coordination	**ATSAC + ATCS**		**Signal Coordination Adjustment**			**-0.100**
			Final CMA			**0.544**
			Level of Service (LOS)			**A**

Hirsch/Green Transportation Consulting, Inc.
Critical Movement Analysis (CMA) Worksheet

Project Name	Pico/Sepulveda Mixed-Use Project		
Intersection Number	11	**Date**	December 7, 2012
Intersection Name	North/South: Sepulveda Boulevard East/West: La Grange Avenue		
Intersection Control	Signalized		
Analysis Period	PM Peak Hour		
Analysis Scenario	Future (2012) With Project		

Approach Direction	Lane Type	No. of Lanes	Approach Volumes	Right-Turn on Red	Assigned Lane Volumes	Critical Moves
	Left	1	61		61	61
	Left/Through	0				
Northbound	Through	1	1,297		676	
	Through/Right	1			676	
	Right	0	55	0		
	Total Lanes	3				
	Left	1	87		87	
	Left/Through	0				
Southbound	Through	1	1,423		744	744
	Through/Right	1			744	
	Right	0	65	0		
	Total Lanes	3				
			Sum of North/South Critical Volumes			**805**
	Left	0	64			64
	Left/Through	0				
Eastbound	Left/Through/Right	1	46		130	
	Through/Right	0				
	Right	0	20	0		
	Total Lanes	1				
	Left	0	51			
	Left/Through	0				
Westbound	Left/Through/Right	1	129		222	222
	Through/Right	0				
	Right	0	42	0		
	Total Lanes	1				
			Sum of East/West Critical Volumes			**286**
			Total Intersection Critical Volumes			**1,091**
Number of Clearance Intervals	**2**		**Intersection Capacity**			**1,500**
			Base CMA			**0.727**
Signal Coordination	**ATSAC + ATCS**		**Signal Coordination Adjustment**			**-0.100**
			Final CMA			**0.627**
			Level of Service (LOS)			**B**

Hirsch/Green Transportation Consulting, Inc.
Critical Movement Analysis (CMA) Worksheet

Project Name	Pico/Sepulveda Mixed-Use Project		
Intersection Number	12	**Date**	December 7, 2012
Intersection Name	North/South: Centinela Avenue (west intersection)		
	East/West: Olympic Boulevard		
Intersection Control	Signalized		
Analysis Period	PM Peak Hour		
Analysis Scenario	Future (2012) With Project		

Approach Direction	Lane Type	No. of Lanes	Approach Volumes	Right-Turn on Red	Assigned Lane Volumes	Critical Moves
	Left	0	0			
	Left/Through	0				
Northbound	Through	0	0			
	Through/Right	0				
	Right	0	0	0		
	Total Lanes	0				
	Left	2	596		328	328
	Left/Through	0				
Southbound	Through	0	0			
	Through/Right	0				
	Right	1	86	86	0	
	Total Lanes	3				
			Sum of North/South Critical Volumes			**328**
	Left	1	44		44	
	Left/Through	0				
Eastbound	Through	2	2,144		1,072	1,072
	Through/Right	0				
	Right	0	0	0		
	Total Lanes	3				
	Left	1	0		0	
	Left/Through	0				
Westbound	Through	2	1,426		713	
	Through/Right	0				
	Right	1	903	164	739	
	Total Lanes	4				
			Sum of East/West Critical Volumes			**1,072**
			Total Intersection Critical Volumes			**1,400**
Number of Clearance Intervals	**2**		**Intersection Capacity**			**1,500**
			Base CMA			**0.933**
Signal Coordination	**ATSAC**		**Signal Coordination Adjustment**			**-0.070**
			Final CMA			**0.863**
			Level of Service (LOS)			**D**

Hirsch/Green Transportation Consulting, Inc.
Critical Movement Analysis (CMA) Worksheet

Project Name	Pico/Sepulveda Mixed-Use Project		
Intersection Number	13	**Date**	December 7, 2012
Intersection Name	North/South: Centinela Avenue (east intersection)		
	East/West: Olympic Boulevard		
Intersection Control	Signalized		
Analysis Period	PM Peak Hour		
Analysis Scenario	Future (2012) With Project		

Approach Direction	Lane Type	No. of Lanes	Approach Volumes	Right-Turn on Red	Assigned Lane Volumes	Critical Moves
	Left	1	495		330	
	Left/Through	0				
Northbound	Left/Through/Right	1	191		612	612
	Through/Right	0				
	Right	0	257	0		
	Total Lanes	2				
	Left	1	451		451	451
	Left/Through	0				
Southbound	Through	0	434			
	Through/Right	1			540	
	Right	0	106	0		
	Total Lanes	2				
			Sum of North/South Critical Volumes			**1,063**
	Left	1	49		49	
	Left/Through	0				
Eastbound	Through	3	1,813		604	604
	Through/Right	0				
	Right	1	749	262	487	
	Total Lanes	5				
	Left	1	228		228	228
	Left/Through	0				
Westbound	Through	2	1,704		625	
	Through/Right	1			625	
	Right	0	172	0		
	Total Lanes	4				
			Sum of East/West Critical Volumes			**832**
			Total Intersection Critical Volumes			**1,895**
Number of Clearance Intervals	**3**		**Intersection Capacity**			**1,425**
			Base CMA			**1.330**
Signal Coordination	**ATSAC**		**Signal Coordination Adjustment**			**-0.070**
			Final CMA			**1.260**
			Level of Service (LOS)			**F**

Hirsch/Green Transportation Consulting, Inc.
Critical Movement Analysis (CMA) Worksheet

Project Name	Pico/Sepulveda Mixed-Use Project		
Intersection Number	14	**Date**	December 7, 2012
Intersection Name	North/South: Bundy Drive East/West: Olympic Boulevard		
Intersection Control	Signalized		
Analysis Period	PM Peak Hour		
Analysis Scenario	Future (2012) With Project		

Approach Direction	Lane Type	No. of Lanes	Approach Volumes	Right-Turn on Red	Assigned Lane Volumes	Critical Moves
Northbound	Left	1	232		232	
	Left/Through	0				
	Through	2	1,549		774	774
	Through/Right	0				
	Right	1	374	244	130	
	Total Lanes	4				
Southbound	Left	1	286		286	286
	Left/Through	0				
	Through	2	1,287		644	
	Through/Right	0				
	Right	1	307	247	60	
	Total Lanes	4				
			Sum of North/South Critical Volumes			**1,060**
Eastbound	Left	1	494		494	494
	Left/Through	0				
	Through	3	1,514		505	
	Through/Right	0				
	Right	1	415	208	207	
	Total Lanes	5				
Westbound	Left	2	538		296	
	Left/Through	0				
	Through	3	1,498		499	499
	Through/Right	0				
	Right	1	395	143	252	
	Total Lanes	6				
			Sum of East/West Critical Volumes			**993**
			Total Intersection Critical Volumes			**2,053**
Number of Clearance Intervals	**4**		**Intersection Capacity**			**1,375**
			Base CMA			**1.493**
Signal Coordination	**ATSAC**		**Signal Coordination Adjustment**			**-0.070**
			Final CMA			**1.423**
			Level of Service (LOS)			**F**

Hirsch/Green Transportation Consulting, Inc.
Critical Movement Analysis (CMA) Worksheet

Project Name	Pico/Sepulveda Mixed-Use Project		
Intersection Number	15	**Date**	December 7, 2012
Intersection Name	North/South: Barrington Avenue East/West: Olympic Boulevard		
Intersection Control	Signalized		
Analysis Period	PM Peak Hour		
Analysis Scenario	Future (2012) With Project		

Approach Direction	Lane Type	No. of Lanes	Approach Volumes	Right-Turn on Red	Assigned Lane Volumes	Critical Moves
Northbound	Left	1	187		187	187
	Left/Through	0				
	Through	1	641		392	
	Through/Right	1			392	
	Right	0	142	0		
	Total Lanes	3				
Southbound	Left	1	197		197	
	Left/Through	0				
	Through	2	1,322		661	661
	Through/Right	0				
	Right	1	102	94	8	
	Total Lanes	4				
			Sum of North/South Critical Volumes			**848**
Eastbound	Left	1	189		189	189
	Left/Through	0				
	Through	3	1,801		522	
	Through/Right	1			522	
	Right	0	285	0		
	Total Lanes	5				
Westbound	Left	1	138		138	
	Left/Through	0				
	Through	3	2,056		685	685
	Through/Right	0				
	Right	1	116	116	0	
	Total Lanes	5				
			Sum of East/West Critical Volumes			**874**
			Total Intersection Critical Volumes			**1,722**
Number of Clearance Intervals	**3**		**Intersection Capacity**			**1,425**
			Base CMA			**1.208**
Signal Coordination	**ATSAC**		**Signal Coordination Adjustment**			**-0.070**
			Final CMA			**1.138**
			Level of Service (LOS)			**F**

Hirsch/Green Transportation Consulting, Inc.
Critical Movement Analysis (CMA) Worksheet

Project Name Pico/Sepulveda Mixed-Use Project
Intersection Number 16 **Date** December 7, 2012
Intersection Name North/South: Sawtelle Boulevard
East/West: Olympic Boulevard
Intersection Control Signalized
Analysis Period PM Peak Hour
Analysis Scenario Future (2012) With Project

Approach Direction	Lane Type	No. of Lanes	Approach Volumes	Right-Turn on Red	Assigned Lane Volumes	Critical Moves
Northbound	Left	1	221		221	
	Left/Through	0				
	Through	1	559		559	559
	Through/Right	0				
	Right	1	480	353	127	
	Total Lanes	3				
Southbound	Left	1	406		406	406
	Left/Through	0				
	Through	1	714		386	
	Through/Right	1			386	
	Right	0	59	0		
	Total Lanes	3				
			Sum of North/South Critical Volumes			**965**
Eastbound	Left	1	22		22	
	Left/Through	0				
	Through	2	1,546		552	552
	Through/Right	1			552	
	Right	0	110	0		
	Total Lanes	4				
Westbound	Left	1	353		353	353
	Left/Through	0				
	Through	3	1,986		530	
	Through/Right	1			530	
	Right	0	133	0		
	Total Lanes	5				
			Sum of East/West Critical Volumes			**905**
			Total Intersection Critical Volumes			**1,870**
Number of Clearance Intervals	**4**		**Intersection Capacity**			**1,375**
			Base CMA			**1.360**
Signal Coordination	**ATSAC + ATCS**		**Signal Coordination Adjustment**			**-0.100**
			Final CMA			**1.260**
			Level of Service (LOS)			**F**

NB Rt. Turn Overlap with WB Left

Hirsch/Green Transportation Consulting, Inc.
Critical Movement Analysis (CMA) Worksheet

Project Name	Pico/Sepulveda Mixed-Use Project		
Intersection Number	17	**Date**	December 7, 2012
Intersection Name	North/South: Sepulveda Boulevard East/West: Olympic Boulevard		
Intersection Control	Signalized		
Analysis Period	PM Peak Hour		
Analysis Scenario	Future (2012) With Project		

Approach Direction	Lane Type	No. of Lanes	Approach Volumes	Right-Turn on Red	Assigned Lane Volumes	Critical Moves
Northbound	Left	1	146		146	146
	Left/Through	0				
	Through	2	1,075		538	
	Through/Right	0				
	Right	1	210	210	0	
	Total Lanes	4				
Southbound	Left	1	81		81	
	Left/Through	0				
	Through	1	1,273		696	696
	Through/Right	1			696	
	Right	0	119	0		
	Total Lanes	3				
			Sum of North/South Critical Volumes			**842**
Eastbound	Left	1	119		119	
	Left/Through	0				
	Through	2	2,019		747	747
	Through/Right	1			747	
	Right	0	222	0		
	Total Lanes	4				
Westbound	Left	1	258		258	258
	Left/Through	0				
	Through	3	2,251		601	
	Through/Right	1			601	
	Right	0	153	0		
	Total Lanes	5				
			Sum of East/West Critical Volumes			**1,005**
			Total Intersection Critical Volumes			**1,847**
Number of Clearance Intervals	**3**		**Intersection Capacity**			**1,425**
			Base CMA			**1.296**
Signal Coordination	**ATSAC + ATCS**		**Signal Coordination Adjustment**			**-0.100**
			Final CMA			**1.196**
			Level of Service (LOS)			**F**

NB Rt. Turn Overlap with WB Left

Hirsch/Green Transportation Consulting, Inc.
Critical Movement Analysis (CMA) Worksheet

Project Name	Pico/Sepulveda Mixed-Use Project		
Intersection Number	18	**Date**	December 7, 2012
Intersection Name	North/South: Westwood Boulevard East/West: Olympic Boulevard		
Intersection Control	Signalized		
Analysis Period	PM Peak Hour		
Analysis Scenario	Future (2012) With Project		

Approach Direction	Lane Type	No. of Lanes	Approach Volumes	Right-Turn on Red	Assigned Lane Volumes	Critical Moves
Northbound	Left	1	82		82	82
	Left/Through	0				
	Through	1	842		478	
	Through/Right	1			478	
	Right	0	115	0		
	Total Lanes	3				
Southbound	Left	1	243		243	
	Left/Through	0				
	Through	1	1,148		648	648
	Through/Right	1			648	
	Right	0	147	0		
	Total Lanes	3				
			Sum of North/South Critical Volumes			**730**
Eastbound	Left	1	81		81	
	Left/Through	0				
	Through	2	1,898		662	662
	Through/Right	1			662	
	Right	0	87	0		
	Total Lanes	4				
Westbound	Left	1	134		134	134
	Left/Through	0				
	Through	3	2,324		632	
	Through/Right	1			632	
	Right	0	204	0		
	Total Lanes	5				
			Sum of East/West Critical Volumes			**796**
			Total Intersection Critical Volumes			**1,526**
Number of Clearance Intervals	**4**		**Intersection Capacity**			**1,375**
			Base CMA			**1.110**
Signal Coordination	**ATSAC + ATCS**		**Signal Coordination Adjustment**			**-0.100**
			Final CMA			**1.010**
			Level of Service (LOS)			**F**

Hirsch/Green Transportation Consulting, Inc.
Critical Movement Analysis (CMA) Worksheet

Project Name	Pico/Sepulveda Mixed-Use Project		
Intersection Number	19	**Date**	December 7, 2012
Intersection Name	North/South: Overland Avenue East/West: Olympic Boulevard		
Intersection Control	Signalized		
Analysis Period	PM Peak Hour		
Analysis Scenario	Future (2012) With Project		

Approach Direction	Lane Type	No. of Lanes	Approach Volumes	Right-Turn on Red	Assigned Lane Volumes	Critical Moves
Northbound	Left	1	73		73	
	Left/Through	0				
	Through	0	430			
	Through/Right	1			558	558
	Right	0	128	0		
	Total Lanes	2				
Southbound	Left	1	61		61	61
	Left/Through	0				
	Through	0	360			
	Through/Right	1			383	
	Right	0	23	0		
	Total Lanes	2				
			Sum of North/South Critical Volumes			**619**
Eastbound	Left	1	37		37	
	Left/Through	0				
	Through	2	1,928		665	665
	Through/Right	1			665	
	Right	0	68	0		
	Total Lanes	4				
Westbound	Left	1	242		242	242
	Left/Through	0				
	Through	3	2,661		676	
	Through/Right	1			676	
	Right	0	43	0		
	Total Lanes	5				
			Sum of East/West Critical Volumes			**907**
			Total Intersection Critical Volumes			**1,526**
Number of Clearance Intervals	**3**		**Intersection Capacity**			**1,425**
			Base CMA			**1.071**
Signal Coordination	**ATSAC + ATCS**		**Signal Coordination Adjustment**			**-0.100**
			Final CMA			**0.971**
			Level of Service (LOS)			**E**

Hirsch/Green Transportation Consulting, Inc.
Critical Movement Analysis (CMA) Worksheet

Project Name	Pico/Sepulveda Mixed-Use Project		
Intersection Number	20	**Date**	December 7, 2012
Intersection Name	North/South: Beverly Glen Boulevard East/West: Olympic Boulevard		
Intersection Control	Signalized		
Analysis Period	PM Peak Hour		
Analysis Scenario	Future (2012) With Project		

Approach Direction	Lane Type	No. of Lanes	Approach Volumes	Right-Turn on Red	Assigned Lane Volumes	Critical Moves
Northbound	Left	1	102		102	
	Left/Through	0				
	Through	2	439		220	220
	Through/Right	0				
	Right	1	88	88	0	
	Total Lanes	4				
Southbound	Left	1	272		272	272
	Left/Through	0				
	Through	2	769		384	
	Through/Right	0				
	Right	1	175	86	89	
	Total Lanes	4				
			Sum of North/South Critical Volumes			**492**
Eastbound	Left	1	171		171	171
	Left/Through	0				
	Through	2	2,057		717	
	Through/Right	1			717	
	Right	0	94	0		
	Total Lanes	4				
Westbound	Left	1	134		134	
	Left/Through	0				
	Through	3	3,378		872	872
	Through/Right	1			872	
	Right	0	110	0		
	Total Lanes	5				
			Sum of East/West Critical Volumes			**1,043**
			Total Intersection Critical Volumes			**1,535**
Number of Clearance Intervals	**4**		**Intersection Capacity**			**1,375**
			Base CMA			**1.116**
Signal Coordination	**ATSAC + ATCS**		**Signal Coordination Adjustment**			**-0.100**
			Final CMA			**1.016**
			Level of Service (LOS)			**F**

Hirsch/Green Transportation Consulting, Inc.
Critical Movement Analysis (CMA) Worksheet

Project Name	Pico/Sepulveda Mixed-Use Project		
Intersection Number	21	**Date**	December 7, 2012
Intersection Name	North/South: Sawtelle Boulevard East/West: Tennessee Avenue/I-405 SB Off-Ramp		
Intersection Control	Signalized		
Analysis Period	PM Peak Hour		
Analysis Scenario	Future (2012) With Project		

Approach Direction	Lane Type	No. of Lanes	Approach Volumes	Right-Turn on Red	Assigned Lane Volumes	Critical Moves
Northbound	Left	1	89		89	89
	Left/Through	0				
	Through	2	883		442	
	Through/Right	0				
	Right	0	0	0		
	Total Lanes	3				
Southbound	Left	0	0			
	Left/Through	0				
	Through	1	1,174		608	608
	Through/Right	1			608	
	Right	0	42	0		
	Total Lanes	2				
			Sum of North/South Critical Volumes			**697**
Eastbound	Left	1	267		267	
	Left/Through	0				
	Through	0	0			
	Through/Right	0				
	Right	1	376	44	332	332
	Total Lanes	2				
Westbound	Left	1	424		424	424
	Left/Through	0				
	Through	0	28			
	Through/Right	1			28	
	Right	1	149	128	21	
	Total Lanes	3				
			Sum of East/West Critical Volumes			**756**
			Total Intersection Critical Volumes			**1,453**
Number of Clearance Intervals	**3**		**Intersection Capacity**			**1,425**
			Base CMA			**1.020**
Signal Coordination	**ATSAC + ATCS**		**Signal Coordination Adjustment**			**-0.100**
			Final CMA			**0.920**
			Level of Service (LOS)			**E**

East/West Opposed Phasing

Hirsch/Green Transportation Consulting, Inc.
Critical Movement Analysis (CMA) Worksheet

Project Name	Pico/Sepulveda Mixed-Use Project		
Intersection Number	22	**Date**	December 7, 2012
Intersection Name	North/South: Cloverfield Boulevard East/West: Pico Boulevard		
Intersection Control	Signalized		
Analysis Period	PM Peak Hour		
Analysis Scenario	Future (2012) With Project		

Approach Direction	Lane Type	No. of Lanes	Approach Volumes	Right-Turn on Red	Assigned Lane Volumes	Critical Moves
Northbound	Left	1	47		47	47
	Left/Through	0				
	Through	1	194		194	
	Through/Right	0				
	Right	1	40	28	12	
	Total Lanes	3				
Southbound	Left	1	315		315	
	Left/Through	0				
	Through	1	440		440	
	Through/Right	0				
	Right	1	596	123	473	473
	Total Lanes	3				
			Sum of North/South Critical Volumes			**520**
Eastbound	Left	2	316		174	
	Left/Through	0				
	Through	1	1,321		679	679
	Through/Right	1			679	
	Right	0	37	0		
	Total Lanes	4				
Westbound	Left	1	55		55	55
	Left/Through	0				
	Through	1	863		488	
	Through/Right	1			488	
	Right	0	112	0		
	Total Lanes	3				
			Sum of East/West Critical Volumes			**734**
			Total Intersection Critical Volumes			**1,254**
Number of Clearance Intervals	**3**		**Intersection Capacity**			**1,425**
			Base CMA			**0.880**
Signal Coordination	**None**		**Signal Coordination Adjustment**			**0.000**
			Final CMA			**0.880**
			Level of Service (LOS)			**D**

HCS+™ DETAILED REPORT

General Information		***Site Information***	
Analyst	*RRH*	Intersection	*22*
Agency or Co.	*Hirsch/Green*	Area Type	*All other areas*
Date Performed	*12/7/2012*	Jurisdiction	*City of Santa Monica*
Time Period	*PM Peak Hour*	Analysis Year	*Future (2012) With Project*
		Project ID	*Pico/Sepulveda Mixed-Use Project*

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Number of Lanes, N_1	*2*	*2*	*0*	*1*	*2*	*0*	*1*	*1*	*1*	*1*	*1*	*1*
Lane Group	*L*	*TR*		*L*	*TR*		*L*	*T*	*R*	*L*	*T*	*R*
Volume, V (vph)	*316*	*1321*	*37*	*55*	*863*	*112*	*47*	*194*	*40*	*315*	*440*	*596*
% Heavy Vehicles, %HV	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*
Peak-Hour Factor, PHF	*1.00*	*1.00*	*1.00*	*1.00*	*1.00*	*1.00*	*1.00*	*1.00*	*1.00*	*1.00*	*1.00*	*1.00*
Pretimed (P) or Actuated (A)	*P*	*P*	*P*	*P*	*P*	*P*	*P*	*P*	*P*	*P*	*P*	*P*
Start-up Lost Time, l_1	*2.0*	*2.0*		*2.0*	*2.0*		*2.0*	*2.0*	*2.0*	*2.0*	*2.0*	*2.0*
Extension of Effective Green, e	*2.0*	*2.0*		*2.0*	*2.0*		*2.0*	*2.0*	*2.0*	*2.0*	*2.0*	*2.0*
Arrival Type, AT	*3*	*3*		*3*	*3*		*3*	*3*	*3*	*3*	*3*	*3*
Unit Extension, UE	*3.0*	*3.0*		*3.0*	*3.0*		*3.0*	*3.0*	*3.0*	*3.0*	*3.0*	*3.0*
Filtering/Metering, I	*1.000*	*1.000*		*1.000*	*1.000*		*1.000*	*1.000*	*1.000*	*1.000*	*1.000*	*1.000*
Initial Unmet Demand, Q_b	*0.0*	*0.0*		*0.0*	*0.0*		*0.0*	*0.0*	*0.0*	*0.0*	*0.0*	*0.0*
Ped / Bike / RTOR Volumes	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*28*	*0*	*0*	*124*
Lane Width	*12.0*	*12.0*		*12.0*	*12.0*		*12.0*	*12.0*	*12.0*	*12.0*	*12.0*	*12.0*
Parking / Grade / Parking	*N*	*0*	*N*	*N*	*0*	*N*	*N*	*0*	*N*	*N*	*0*	*N*
Parking Maneuvers, N_m												
Buses Stopping, N_B	*0*	*0*		*0*	*0*		*0*	*0*	*0*	*0*	*0*	*0*
Min. Time for Pedestrians, G_p	*3.2*			*3.2*			*3.2*			*3.2*		

Phasing	WB Only	Thru & RT	EB Only	04	SB Only	NS Perm	07	08
Timing	G = *10.0*	G = *25.0*	G = *15.0*	G = *0.0*	G = *10.0*	G = *20.0*	G = *0.0*	G = *0.0*
	Y = *0*	Y = *0*	Y = *5*	Y = *0*	Y = *0*	Y = *5*	Y = *0*	Y = *0*
Duration of Analysis, T = *1.00*						Cycle Length, C = *90.0*		

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Adjusted Flow Rate, v	*316*	*1358*		*55*	*975*		*47*	*194*	*12*	*315*	*440*	*472*
Lane Group Capacity, c	*584*	*1601*		*201*	*1383*		*167*	*422*	*359*	*423*	*633*	*897*
v/c Ratio, X	*0.54*	*0.85*		*0.27*	*0.70*		*0.28*	*0.46*	*0.03*	*0.74*	*0.70*	*0.53*
Total Green Ratio, g/C	*0.17*	*0.44*		*0.11*	*0.39*		*0.22*	*0.22*	*0.22*	*0.39*	*0.33*	*0.56*
Uniform Delay, d_1	*34.3*	*22.3*		*36.7*	*23.2*		*29.0*	*30.3*	*27.4*	*24.7*	*26.0*	*12.6*
Progression Factor, PF	*1.000*	*1.000*		*1.000*	*1.000*		*1.000*	*1.000*	*1.000*	*1.000*	*1.000*	*1.000*
Delay Calibration, k	*0.50*	*0.50*		*0.50*	*0.50*		*0.50*	*0.50*	*0.50*	*0.50*	*0.50*	*0.50*
Incremental Delay, d_2	*3.6*	*6.1*		*3.4*	*3.1*		*4.2*	*3.6*	*0.2*	*12.1*	*6.4*	*2.2*
Initial Queue Delay, d_3	*0.0*	*0.0*		*0.0*	*0.0*		*0.0*	*0.0*	*0.0*	*0.0*	*0.0*	*0.0*
Control Delay	*38.0*	*28.4*		*40.0*	*26.2*		*33.2*	*33.9*	*27.6*	*36.8*	*32.4*	*14.8*
Lane Group LOS	*D*	*C*		*D*	*C*		*C*	*C*	*C*	*D*	*C*	*B*
Approach Delay	*30.2*			*27.0*			*33.5*			*26.8*		
Approach LOS	*C*			*C*			*C*			*C*		
Intersection Delay	*28.6*			X_C = *0.74*			Intersection LOS			*C*		

Hirsch/Green Transportation Consulting, Inc.
Critical Movement Analysis (CMA) Worksheet

Project Name	Pico/Sepulveda Mixed-Use Project		
Intersection Number	23	**Date**	December 7, 2012
Intersection Name	North/South: Stewart Street/28th Street East/West: Pico Boulevard		
Intersection Control	Signalized		
Analysis Period	PM Peak Hour		
Analysis Scenario	Future (2012) With Project		

Approach Direction	Lane Type	No. of Lanes	Approach Volumes	Right-Turn on Red	Assigned Lane Volumes	Critical Moves
Northbound	Left	1	54		54	54
	Left/Through	0				
	Through	1	152		152	
	Through/Right	0				
	Right	1	36	30	6	
	Total Lanes	3				
Southbound	Left	1	213		213	
	Left/Through	0				
	Through	0	250			
	Through/Right	1			354	354
	Right	0	104	0		
	Total Lanes	2				
			Sum of North/South Critical Volumes			**408**
Eastbound	Left	1	104		104	
	Left/Through	0				
	Through	1	1,363		697	697
	Through/Right	1			697	
	Right	0	31	0		
	Total Lanes	3				
Westbound	Left	1	59		59	59
	Left/Through	0				
	Through	1	950		530	
	Through/Right	1			530	
	Right	0	110	0		
	Total Lanes	3				
			Sum of East/West Critical Volumes			**756**
			Total Intersection Critical Volumes			**1,164**
Number of Clearance Intervals	**2**		**Intersection Capacity**			**1,500**
			Base CMA			**0.776**
Signal Coordination	**None**		**Signal Coordination Adjustment**			**0.000**
			Final CMA			**0.776**
			Level of Service (LOS)			**C**

HCS+™ DETAILED REPORT

General Information		***Site Information***	
Analyst	*RRH*	Intersection	*23*
Agency or Co.	*Hirsch/Green*	Area Type	*All other areas*
Date Performed	*12/7/2012*	Jurisdiction	*City of Santa Monica*
Time Period	*PM Peak Hour*	Analysis Year	*Future (2012) With Project*
		Project ID	*Pico/Sepulveda Mixed-Use Project*

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Number of Lanes, N_1	*1*	*2*	*0*	*1*	*2*	*0*	*1*	*1*	*1*	*1*	*1*	*0*
Lane Group	*L*	*TR*		*L*	*TR*		*L*	*T*	*R*	*L*	*TR*	
Volume, V (vph)	*104*	*1363*	*31*	*59*	*950*	*110*	*54*	*152*	*36*	*213*	*250*	*104*
% Heavy Vehicles, %HV	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*
Peak-Hour Factor, PHF	*1.00*	*1.00*	*1.00*	*1.00*	*1.00*	*1.00*	*1.00*	*1.00*	*1.00*	*1.00*	*1.00*	*1.00*
Pretimed (P) or Actuated (A)	*P*	*P*	*P*	*P*	*P*	*P*	*P*	*P*	*P*	*P*	*P*	*P*
Start-up Lost Time, l_1	*2.0*	*2.0*		*2.0*	*2.0*		*2.0*	*2.0*	*2.0*	*2.0*	*2.0*	
Extension of Effective Green, e	*2.0*	*2.0*		*2.0*	*2.0*		*2.0*	*2.0*	*2.0*	*2.0*	*2.0*	
Arrival Type, AT	*3*	*3*		*3*	*3*		*3*	*3*	*3*	*3*	*3*	
Unit Extension, UE	*3.0*	*3.0*		*3.0*	*3.0*		*3.0*	*3.0*	*3.0*	*3.0*	*3.0*	
Filtering/Metering, I	*1.000*	*1.000*		*1.000*	*1.000*		*1.000*	*1.000*	*1.000*	*1.000*	*1.000*	
Initial Unmet Demand, Q_b	*0.0*	*0.0*		*0.0*	*0.0*		*0.0*	*0.0*	*0.0*	*0.0*	*0.0*	
Ped / Bike / RTOR Volumes	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*30*	*0*	*0*	*0*
Lane Width	*12.0*	*12.0*		*12.0*	*12.0*		*12.0*	*12.0*	*12.0*	*12.0*	*12.0*	
Parking / Grade / Parking	*N*	*0*	*N*	*N*	*0*	*N*	*N*	*0*	*N*	*N*	*0*	*N*
Parking Maneuvers, N_m												
Buses Stopping, N_B	*0*	*0*		*0*	*0*		*0*	*0*	*0*	*0*	*0*	
Min. Time for Pedestrians, G_p	*3.2*			*3.2*			*3.2*			*3.2*		

Phasing	EW Perm	02	03	04	NS Perm	06	07	08
Timing	G = *50.0*	G = *0.0*	G = *0.0*	G = *0.0*	G = *30.0*	G = *0.0*	G = *0.0*	G = *0.0*
	Y = *5*	Y = *0*	Y = *0*	Y = *0*	Y = *5*	Y = *0*	Y = *0*	Y = *0*
Duration of Analysis, T = *1.00*					Cycle Length, C = *90.0*			

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Adjusted Flow Rate, v	*104*	*1394*		*59*	*1060*		*54*	*152*	*6*	*213*	*354*	
Lane Group Capacity, c	*212*	*2003*		*113*	*1978*		*235*	*633*	*538*	*411*	*605*	
v/c Ratio, X	*0.49*	*0.70*		*0.52*	*0.54*		*0.23*	*0.24*	*0.01*	*0.52*	*0.59*	
Total Green Ratio, g/C	*0.56*	*0.56*		*0.56*	*0.56*		*0.33*	*0.33*	*0.33*	*0.33*	*0.33*	
Uniform Delay, d_1	*12.2*	*14.5*		*12.5*	*12.7*		*21.7*	*21.7*	*20.1*	*24.2*	*24.8*	
Progression Factor, PF	*1.000*	*1.000*		*1.000*	*1.000*		*1.000*	*1.000*	*1.000*	*1.000*	*1.000*	
Delay Calibration, k	*0.50*	*0.50*		*0.50*	*0.50*		*0.50*	*0.50*	*0.50*	*0.50*	*0.50*	
Incremental Delay, d_2	*8.1*	*2.0*		*17.1*	*1.0*		*2.3*	*0.9*	*0.0*	*4.7*	*4.2*	
Initial Queue Delay, d_3	*0.0*	*0.0*		*0.0*	*0.0*		*0.0*	*0.0*	*0.0*	*0.0*	*0.0*	
Control Delay	*20.3*	*16.5*		*29.6*	*13.7*		*23.9*	*22.6*	*20.1*	*28.9*	*29.0*	
Lane Group LOS	*C*	*B*		*C*	*B*		*C*	*C*	*C*	*C*	*C*	
Approach Delay	*16.8*			*14.5*			*22.9*			*29.0*		
Approach LOS	*B*			*B*			*C*			*C*		
Intersection Delay	*18.5*			X_C = *0.65*			Intersection LOS			*B*		

Hirsch/Green Transportation Consulting, Inc.
Critical Movement Analysis (CMA) Worksheet

Project Name	Pico/Sepulveda Mixed-Use Project		
Intersection Number	24	**Date**	December 7, 2012
Intersection Name	North/South: I-10 EB Off-Ramp/34th Street East/West: Pico Boulevard		
Intersection Control	Signalized		
Analysis Period	PM Peak Hour		
Analysis Scenario	Future (2012) With Project		

Approach Direction	Lane Type	No. of Lanes	Approach Volumes	Right-Turn on Red	Assigned Lane Volumes	Critical Moves
Northbound	Left	0	9			
	Left/Through	0				
	Left/Through/Right	1	0		61	61
	Through/Right	0				
	Right	0	52	0		
	Total Lanes	1				
Southbound	Left	1	288		162	162
	Left/Through	1			162	
	Through	0	35			
	Through/Right	0				
	Right	1	35	35	0	
	Total Lanes	3				
			Sum of North/South Critical Volumes			**223**
Eastbound	Left	0	0			
	Left/Through	0				
	Through	1	1,920		974	974
	Through/Right	1			974	
	Right	0	29	0		
	Total Lanes	2				
Westbound	Left	0	30			30
	Left/Through	1			468	
	Through	1	1,056		618	
	Through/Right	0				
	Right	0	0	0		
	Total Lanes	2				
			Sum of East/West Critical Volumes			**1,004**
			Total Intersection Critical Volumes			**1,227**
Number of Clearance Intervals	**3**		**Intersection Capacity**			**1,425**
			Base CMA			**0.861**
Signal Coordination	**None**		**Signal Coordination Adjustment**			**0.000**
			Final CMA			**0.861**
			Level of Service (LOS)			**D**

North/South Opposed Phasing

HCS+™ DETAILED REPORT

General Information		***Site Information***	
Analyst	*RRH*	Intersection	*24*
Agency or Co.	*Hirsch/Green*	Area Type	*All other areas*
Date Performed	*12/7/2012*	Jurisdiction	*City of Santa Monica*
Time Period	*PM Peak Hour*	Analysis Year	*Future (2012) With Project*
		Project ID	*Pico/Sepulveda Mixed-Use Project*

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Number of Lanes, N_1		*2*	*0*	*0*	*2*		*0*	*1*	*0*	*1*	*1*	*1*
Lane Group		*TR*			*LT*			*LTR*		*L*	*LT*	*R*
Volume, V (vph)		*1920*	*29*	*30*	*1056*		*9*	*0*	*52*	*288*	*35*	*35*
% Heavy Vehicles, %HV		*0*	*0*	*0*	*0*		*0*	*0*	*0*	*0*	*0*	*0*
Peak-Hour Factor, PHF		*1.00*	*1.00*	*1.00*	*1.00*		*1.00*	*1.00*	*1.00*	*1.00*	*1.00*	*1.00*
Pretimed (P) or Actuated (A)		*P*	*P*	*P*	*P*		*P*	*P*	*P*	*P*	*P*	*P*
Start-up Lost Time, l_1		*2.0*			*2.0*			*2.0*		*2.0*	*2.0*	*2.0*
Extension of Effective Green, e		*2.0*			*2.0*			*2.0*		*2.0*	*2.0*	*2.0*
Arrival Type, AT		*3*			*3*			*3*		*3*	*3*	*3*
Unit Extension, UE		*3.0*			*3.0*			*3.0*		*3.0*	*3.0*	*3.0*
Filtering/Metering, I		*1.000*			*1.000*			*1.000*		*1.000*	*1.000*	*1.000*
Initial Unmet Demand, Q_b		*0.0*			*0.0*			*0.0*		*0.0*	*0.0*	*0.0*
Ped / Bike / RTOR Volumes	*0*	*0*	*0*	*0*	*0*		*0*	*0*	*0*	*0*	*0*	*35*
Lane Width		*12.0*			*12.0*			*12.0*		*12.0*	*12.0*	*12.0*
Parking / Grade / Parking	*N*	*0*	*N*	*N*	*0*	*N*	*N*	*0*	*N*	*N*	*0*	*N*
Parking Maneuvers, N_m												
Buses Stopping, N_B		*0*			*0*			*0*		*0*	*0*	*0*
Min. Time for Pedestrians, G_p	*3.2*			*3.2*			*3.2*			*3.2*		

Phasing	EW Perm	02	03	04	NB Only	SB Only	07	08
Timing	G = *55.0*	G = *0.0*	G = *0.0*	G = *0.0*	G = *5.0*	G = *15.0*	G = *0.0*	G = *0.0*
	Y = *5*	Y = *0*	Y = *0*	Y = *0*	Y = *5*	Y = *5*	Y = *0*	Y = *0*

Duration of Analysis, T = *1.00* | Cycle Length, C = *90.0*

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Adjusted Flow Rate, v		*1949*			*1086*			*61*		*288*	*35*	*0*
Lane Group Capacity, c		*2206*			*1604*			*93*		*301*	*317*	*269*
v/c Ratio, X		*0.88*			*0.68*			*0.66*		*0.96*	*0.11*	*0.00*
Total Green Ratio, g/C		*0.61*			*0.61*			*0.06*		*0.17*	*0.17*	*0.17*
Uniform Delay, d_1		*14.8*			*11.6*			*41.7*		*37.2*	*31.8*	*31.3*
Progression Factor, PF		*1.000*			*1.000*			*1.000*		*1.000*	*1.000*	*1.000*
Delay Calibration, k		*0.50*			*0.50*			*0.50*		*0.50*	*0.50*	*0.50*
Incremental Delay, d_2		*6.0*			*2.3*			*34.9*		*69.8*	*0.7*	*0.0*
Initial Queue Delay, d_3		*0.0*			*0.0*			*0.0*		*0.0*	*0.0*	*0.0*
Control Delay		*20.8*			*14.0*			*76.6*		*107.0*	*32.5*	*31.3*
Lane Group LOS		*C*			*B*			*E*		*F*	*C*	*C*
Approach Delay	*20.8*			*14.0*			*76.6*			*98.9*		
Approach LOS	*C*			*B*			*E*			*F*		
Intersection Delay	*27.0*			X_C = *0.88*			Intersection LOS			*C*		

Hirsch/Green Transportation Consulting, Inc.
Critical Movement Analysis (CMA) Worksheet

Project Name	Pico/Sepulveda Mixed-Use Project		
Intersection Number	25	**Date**	December 7, 2012
Intersection Name	North/South: Centinela Avenue East/West: Pico Boulevard		
Intersection Control	Signalized		
Analysis Period	PM Peak Hour		
Analysis Scenario	Future (2012) With Project		

Approach Direction	Lane Type	No. of Lanes	Approach Volumes	Right-Turn on Red	Assigned Lane Volumes	Critical Moves
	Left	1	35		35	35
	Left/Through	0				
Northbound	Through	1	464		464	
	Through/Right	0				
	Right	1	119	46	73	
	Total Lanes	3				
	Left	1	118		118	
	Left/Through	0				
Southbound	Through	2	1,233		616	616
	Through/Right	0				
	Right	1	192	192	0	
	Total Lanes	4				
			Sum of North/South Critical Volumes			**651**
	Left	1	173		173	
	Left/Through	0				
Eastbound	Through	1	1,591		1,092	1,092
	Through/Right	1			1,092	
	Right	0	594	0		
	Total Lanes	3				
	Left	1	91		91	91
	Left/Through	0				
Westbound	Through	1	761		605	
	Through/Right	1			605	
	Right	0	449	0		
	Total Lanes	3				
			Sum of East/West Critical Volumes			**1,183**
			Total Intersection Critical Volumes			**1,834**
Number of Clearance Intervals	**2**		**Intersection Capacity**			**1,500**
			Base CMA			**1.223**
Signal Coordination	**ATSAC**		**Signal Coordination Adjustment**			**-0.070**
			Final CMA			**1.153**
			Level of Service (LOS)			**F**

Hirsch/Green Transportation Consulting, Inc.
Critical Movement Analysis (CMA) Worksheet

Project Name	Pico/Sepulveda Mixed-Use Project		
Intersection Number	26	**Date**	December 7, 2012
Intersection Name	North/South: Bundy Drive East/West: Pico Boulevard		
Intersection Control	Signalized		
Analysis Period	PM Peak Hour		
Analysis Scenario	Future (2012) With Project		

Approach Direction	Lane Type	No. of Lanes	Approach Volumes	Right-Turn on Red	Assigned Lane Volumes	Critical Moves
Northbound	Left	1	223		223	223
	Left/Through	0				
	Through	2	1,770		885	
	Through/Right	0				
	Right	1	228	49	179	
	Total Lanes	4				
Southbound	Left	1	93		93	
	Left/Through	0				
	Through	2	1,832		916	916
	Through/Right	0				
	Right	1	112	97	15	
	Total Lanes	4				
			Sum of North/South Critical Volumes			**1,139**
Eastbound	Left	1	194		194	194
	Left/Through	0				
	Through	2	1,242		472	
	Through/Right	1			472	
	Right	0	173	0		
	Total Lanes	4				
Westbound	Left	1	59		59	
	Left/Through	0				
	Through	2	1,004		376	376
	Through/Right	1			376	
	Right	0	123	0		
	Total Lanes	4				
			Sum of East/West Critical Volumes			**570**
			Total Intersection Critical Volumes			**1,709**
Number of Clearance Intervals	**4**		**Intersection Capacity**			**1,375**
			Base CMA			**1.243**
Signal Coordination	**ATSAC**		**Signal Coordination Adjustment**			**-0.070**
			Final CMA			**1.173**
			Level of Service (LOS)			**F**

Hirsch/Green Transportation Consulting, Inc.
Critical Movement Analysis (CMA) Worksheet

Project Name	Pico/Sepulveda Mixed-Use Project		
Intersection Number	27	**Date**	December 7, 2012
Intersection Name	North/South: Barrington Avenue East/West: Pico Boulevard		
Intersection Control	Signalized		
Analysis Period	PM Peak Hour		
Analysis Scenario	Future (2012) With Project		

Approach Direction	Lane Type	No. of Lanes	Approach Volumes	Right-Turn on Red	Assigned Lane Volumes	Critical Moves
Northbound	Left	1	107		107	107
	Left/Through	0				
	Through	1	769		417	
	Through/Right	1			417	
	Right	0	65	0		
	Total Lanes	3				
Southbound	Left	1	170		170	
	Left/Through	0				
	Through	2	1,440		519	519
	Through/Right	1			519	
	Right	0	116	0		
	Total Lanes	4				
			Sum of North/South Critical Volumes			**626**
Eastbound	Left	1	169		169	
	Left/Through	0				
	Through	2	1,154		438	438
	Through/Right	1			438	
	Right	0	161	0		
	Total Lanes	4				
Westbound	Left	1	174		174	174
	Left/Through	0				
	Through	2	987		363	
	Through/Right	1			363	
	Right	0	101	0		
	Total Lanes	4				
			Sum of East/West Critical Volumes			**612**
			Total Intersection Critical Volumes			**1,238**
Number of Clearance Intervals	**2**		**Intersection Capacity**			**1,500**
			Base CMA			**0.825**
Signal Coordination	**ATSAC**		**Signal Coordination Adjustment**			**-0.070**
			Final CMA			**0.755**
			Level of Service (LOS)			**C**

Hirsch/Green Transportation Consulting, Inc.
Critical Movement Analysis (CMA) Worksheet

Project Name	Pico/Sepulveda Mixed-Use Project		
Intersection Number	28	**Date**	December 7, 2012
Intersection Name	North/South: Gateway Boulevard East/West: Pico Boulevard		
Intersection Control	Signalized		
Analysis Period	PM Peak Hour		
Analysis Scenario	Future (2012) With Project		

Approach Direction	Lane Type	No. of Lanes	Approach Volumes	Right-Turn on Red	Assigned Lane Volumes	Critical Moves
Northbound	Left	0	0			
	Left/Through	0				
	Through	0	0			
	Through/Right	0				
	Right	2	983	302	340	340
	Total Lanes	2				
Southbound	Left	0	0			
	Left/Through	0				
	Through	0	0			
	Through/Right	0				
	Right	0	0	0		
	Total Lanes	0				
			Sum of North/South Critical Volumes			**340**
Eastbound	Left	0	0			
	Left/Through	0				
	Through	2	1,324		452	452
	Through/Right	1			452	
	Right	0	32	0		
	Total Lanes	3				
Westbound	Left	2	1,096		603	603
	Left/Through	0				
	Through	2	1,227		614	
	Through/Right	0				
	Right	0	0	0		
	Total Lanes	4				
			Sum of East/West Critical Volumes			**1,055**
			Total Intersection Critical Volumes			**1,395**
Number of Clearance Intervals	**3**		**Intersection Capacity**			**1,425**
			Base CMA			**0.979**
Signal Coordination	**ATSAC**		**Signal Coordination Adjustment**			**-0.070**
			Final CMA			**0.909**
			Level of Service (LOS)			**E**

Hirsch/Green Transportation Consulting, Inc.
Critical Movement Analysis (CMA) Worksheet

Project Name	Pico/Sepulveda Mixed-Use Project		
Intersection Number	29	**Date**	December 7, 2012
Intersection Name	North/South: Sawtelle Boulevard East/West: Pico Boulevard		
Intersection Control	Signalized		
Analysis Period	PM Peak Hour		
Analysis Scenario	Future (2012) With Project		

Approach Direction	Lane Type	No. of Lanes	Approach Volumes	Right-Turn on Red	Assigned Lane Volumes	Critical Moves
Northbound	Left	1	328		328	328
	Left/Through	0				
	Through	1	695		510	
	Through/Right	1			510	
	Right	0	326	0		
	Total Lanes	3				
Southbound	Left	1	427		427	
	Left/Through	0				
	Through	2	1,367		684	684
	Through/Right	0				
	Right	1	233	62	171	
	Total Lanes	4				
			Sum of North/South Critical Volumes			**1,012**
Eastbound	Left	1	83		83	
	Left/Through	0				
	Through	2	1,359		543	543
	Through/Right	1			543	
	Right	0	271	0		
	Total Lanes	4				
Westbound	Left	1	228		228	228
	Left/Through	0				
	Through	2	1,724		646	
	Through/Right	1			646	
	Right	0	215	0		
	Total Lanes	4				
			Sum of East/West Critical Volumes			**771**
			Total Intersection Critical Volumes			**1,783**
Number of Clearance Intervals	**4**		**Intersection Capacity**			**1,375**
			Base CMA			**1.297**
Signal Coordination	**ATSAC + ATCS**		**Signal Coordination Adjustment**			**-0.100**
			Final CMA			**1.197**
			Level of Service (LOS)			**F**

Hirsch/Green Transportation Consulting, Inc.
Critical Movement Analysis (CMA) Worksheet

Project Name	Pico/Sepulveda Mixed-Use Project		
Intersection Number	30	**Date**	December 7, 2012
Intersection Name	North/South: Cotner Avenue East/West: Pico Boulevard		
Intersection Control	Signalized		
Analysis Period	PM Peak Hour		
Analysis Scenario	Future (2012) With Project		

Approach Direction	Lane Type	No. of Lanes	Approach Volumes	Right-Turn on Red	Assigned Lane Volumes	Critical Moves
	Left	0	0			
	Left/Through	0				
Northbound	Through	0	0			
	Through/Right	0				
	Right	0	0	0		
	Total Lanes	0				
	Left	1	101		101	101
	Left/Through	0				
Southbound	Through	0	0			
	Through/Right	0				
	Right	1	296	296	0	
	Total Lanes	2				
			Sum of North/South Critical Volumes			**101**
	Left	1	455		455	455
	Left/Through	0				
Eastbound	Through	3	1,648		549	
	Through/Right	0				
	Right	0	0	0		
	Total Lanes	4				
	Left	0	0			
	Left/Through	0				
Westbound	Through	2	1,872		753	753
	Through/Right	1			753	
	Right	0	387	0		
	Total Lanes	3				
			Sum of East/West Critical Volumes			**1,208**
			Total Intersection Critical Volumes			**1,309**
Number of Clearance Intervals	**3**		**Intersection Capacity**			**1,425**
			Base CMA			**0.919**
Signal Coordination	**ATSAC + ATCS**		**Signal Coordination Adjustment**			**-0.100**
			Final CMA			**0.819**
			Level of Service (LOS)			**D**

Hirsch/Green Transportation Consulting, Inc.
Critical Movement Analysis (CMA) Worksheet

Project Name	Pico/Sepulveda Mixed-Use Project		
Intersection Number	31	**Date**	December 7, 2012
Intersection Name	North/South: Sepulveda Boulevard East/West: Pico Boulevard		
Intersection Control	Signalized		
Analysis Period	PM Peak Hour		
Analysis Scenario	Future (2012) With Project		

Approach Direction	Lane Type	No. of Lanes	Approach Volumes	Right-Turn on Red	Assigned Lane Volumes	Critical Moves
Northbound	Left	1	232		232	232
	Left/Through	0				
	Through	1	1,240		724	
	Through/Right	1			724	
	Right	0	209	0		
	Total Lanes	3				
Southbound	Left	1	127		127	
	Left/Through	0				
	Through	1	1,650		898	898
	Through/Right	1			898	
	Right	0	146	0		
	Total Lanes	3				
			Sum of North/South Critical Volumes			**1,130**
Eastbound	Left	1	394		394	394
	Left/Through	0				
	Through	3	1,639		546	
	Through/Right	0				
	Right	1	162	162	0	
	Total Lanes	5				
Westbound	Left	1	326		326	
	Left/Through	0				
	Through	2	1,703		594	594
	Through/Right	1			594	
	Right	0	78	0		
	Total Lanes	4				
			Sum of East/West Critical Volumes			**988**
			Total Intersection Critical Volumes			**2,118**
Number of Clearance Intervals	**4**		**Intersection Capacity**			**1,100** **
** Assumed 20% reduction in capacity due to Expo Line at-grade crossing			**Base CMA**			**1.925**
Signal Coordination	**ATSAC + ATCS**		**Signal Coordination Adjustment**			**-0.100**
			Final CMA			**1.825**
			Level of Service (LOS)			**F**

EB Rt. Turn Overlap with NB Left

Hirsch/Green Transportation Consulting, Inc.
Critical Movement Analysis (CMA) Worksheet

Project Name	Pico/Sepulveda Mixed-Use Project		
Intersection Number	32	**Date**	December 7, 2012
Intersection Name	North/South: Veteran Avenue East/West: Pico Boulevard		
Intersection Control	Signalized		
Analysis Period	PM Peak Hour		
Analysis Scenario	Future (2012) With Project		

Approach Direction	Lane Type	No. of Lanes	Approach Volumes	Right-Turn on Red	Assigned Lane Volumes	Critical Moves
Northbound	Left	0	24			24
	Left/Through	0				
	Left/Through/Right	1	33		93	
	Through/Right	0				
	Right	0	36	0		
	Total Lanes	1				
Southbound	Left	0	61			
	Left/Through	1			133	133
	Through	0	72			
	Through/Right	0				
	Right	1	116	64	52	
	Total Lanes	2				
			Sum of North/South Critical Volumes			**157**
Eastbound	Left	1	128		128	128
	Left/Through	0				
	Through	2	1,442		492	
	Through/Right	1			492	
	Right	0	35	0		
	Total Lanes	4				
Westbound	Left	1	27		27	
	Left/Through	0				
	Through	2	1,752		597	597
	Through/Right	1			597	
	Right	0	38	0		
	Total Lanes	4				
			Sum of East/West Critical Volumes			**725**
			Total Intersection Critical Volumes			**882**
Number of Clearance Intervals	**2**		**Intersection Capacity**			**1,500**
			Base CMA			**0.588**
Signal Coordination	**ATSAC + ATCS**		**Signal Coordination Adjustment**			**-0.100**
			Final CMA			**0.488**
			Level of Service (LOS)			**A**

Hirsch/Green Transportation Consulting, Inc.
Critical Movement Analysis (CMA) Worksheet

Project Name	Pico/Sepulveda Mixed-Use Project		
Intersection Number	33	**Date**	December 7, 2012
Intersection Name	North/South: Westwood Boulevard East/West: Pico Boulevard		
Intersection Control	Signalized		
Analysis Period	PM Peak Hour		
Analysis Scenario	Future (2012) With Project		

Approach Direction	Lane Type	No. of Lanes	Approach Volumes	Right-Turn on Red	Assigned Lane Volumes	Critical Moves
Northbound	Left	1	138		138	138
	Left/Through	0				
	Through	2	638		319	
	Through/Right	0				
	Right	1	126	126	0	
	Total Lanes	4				
Southbound	Left	1	210		210	
	Left/Through	0				
	Through	1	976		576	576
	Through/Right	1			576	
	Right	0	177	0		
	Total Lanes	3				
			Sum of North/South Critical Volumes			**714**
Eastbound	Left	1	179		179	179
	Left/Through	0				
	Through	3	1,199		400	
	Through/Right	0				
	Right	1	218	138	80	
	Total Lanes	5				
Westbound	Left	1	204		204	
	Left/Through	0				
	Through	3	1,532		511	511
	Through/Right	0				
	Right	1	261	210	51	
	Total Lanes	5				
			Sum of East/West Critical Volumes			**690**
			Total Intersection Critical Volumes			**1,404**
Number of Clearance Intervals	**4**		**Intersection Capacity**			**1,375**
			Base CMA			**1.021**
Signal Coordination	**ATSAC + ATCS**		**Signal Coordination Adjustment**			**-0.100**
			Final CMA			**0.921**
			Level of Service (LOS)			**E**

NB Rt. Turn Overlap with WB Left

EB/WB Rt. Turn Overlap With NB/SB Lefts

Hirsch/Green Transportation Consulting, Inc.
Critical Movement Analysis (CMA) Worksheet

Project Name	Pico/Sepulveda Mixed-Use Project		
Intersection Number	34	**Date**	December 7, 2012
Intersection Name	North/South: Overland Avenue East/West: Pico Boulevard		
Intersection Control	Signalized		
Analysis Period	PM Peak Hour		
Analysis Scenario	Future (2012) With Project		

Approach Direction	Lane Type	No. of Lanes	Approach Volumes	Right-Turn on Red	Assigned Lane Volumes	Critical Moves
Northbound	Left	2	333		183	
	Left/Through	0				
	Through	1	616		616	616
	Through/Right	0				
	Right	2	584	170	207	
	Total Lanes	5				
Southbound	Left	1	59		59	59
	Left/Through	0				
	Through	1	914		476	
	Through/Right	1			476	
	Right	0	39	0		
	Total Lanes	3				
			Sum of North/South Critical Volumes			**675**
Eastbound	Left	1	87		87	
	Left/Through	0				
	Through	2	1,034		489	489
	Through/Right	1			489	
	Right	0	433	0		
	Total Lanes	4				
Westbound	Left	2	618		340	340
	Left/Through	0				
	Through	2	1,628		553	
	Through/Right	1			553	
	Right	0	31	0		
	Total Lanes	5				
			Sum of East/West Critical Volumes			**829**
			Total Intersection Critical Volumes			**1,504**
Number of Clearance Intervals	**4**		**Intersection Capacity**			**1,375**
			Base CMA			**1.094**
Signal Coordination	**ATSAC + ATCS**		**Signal Coordination Adjustment**			**-0.100**
			Final CMA			**0.994**
			Level of Service (LOS)			**E**

Hirsch/Green Transportation Consulting, Inc.
Critical Movement Analysis (CMA) Worksheet

Project Name	Pico/Sepulveda Mixed-Use Project		
Intersection Number	35	**Date**	December 7, 2012
Intersection Name	North/South: Manning Avenue East/West: Pico Boulevard		
Intersection Control	Signalized		
Analysis Period	PM Peak Hour		
Analysis Scenario	Future (2012) With Project		

Approach Direction	Lane Type	No. of Lanes	Approach Volumes	Right-Turn on Red	Assigned Lane Volumes	Critical Moves
Northbound	Left	0	73			73
	Left/Through	0				
	Left/Through/Right	1	52		174	
	Through/Right	0				
	Right	0	49	0		
	Total Lanes	1				
Southbound	Left	0	20			
	Left/Through	0				
	Left/Through/Right	1	212		271	271
	Through/Right	0				
	Right	0	39	0		
	Total Lanes	1				
			Sum of North/South Critical Volumes			**344**
Eastbound	Left	1	56		56	56
	Left/Through	0				
	Through	2	1,504		528	
	Through/Right	1			528	
	Right	0	79	0		
	Total Lanes	4				
Westbound	Left	1	74		74	
	Left/Through	0				
	Through	2	2,197		745	745
	Through/Right	1			745	
	Right	0	38	0		
	Total Lanes	4				
			Sum of East/West Critical Volumes			**801**
			Total Intersection Critical Volumes			**1,145**
Number of Clearance Intervals	**3**		**Intersection Capacity**			**1,425**
			Base CMA			**0.804**
Signal Coordination	**ATSAC + ATCS**		**Signal Coordination Adjustment**			**-0.100**
			Final CMA			**0.704**
			Level of Service (LOS)			**C**

Hirsch/Green Transportation Consulting, Inc.
Critical Movement Analysis (CMA) Worksheet

Project Name	Pico/Sepulveda Mixed-Use Project		
Intersection Number	36	**Date**	December 7, 2012
Intersection Name	North/South: Patricia Avenue East/West: Pico Boulevard		
Intersection Control	Signalized		
Analysis Period	PM Peak Hour		
Analysis Scenario	Future (2012) With Project		

Approach Direction	Lane Type	No. of Lanes	Approach Volumes	Right-Turn on Red	Assigned Lane Volumes	Critical Moves
Northbound	Left	0	38			38
	Left/Through	0				
	Left/Through/Right	1	45		181	
	Through/Right	0				
	Right	0	98	0		
	Total Lanes	1				
Southbound	Left	0	18			
	Left/Through	0				
	Left/Through/Right	1	309		352	352
	Through/Right	0				
	Right	0	25	0		
	Total Lanes	1				
			Sum of North/South Critical Volumes			**390**
Eastbound	Left	1	27		27	27
	Left/Through	0				
	Through	2	1,523		524	
	Through/Right	1			524	
	Right	0	50	0		
	Total Lanes	4				
Westbound	Left	1	137		137	
	Left/Through	0				
	Through	2	2,215		744	744
	Through/Right	1			744	
	Right	0	16	0		
	Total Lanes	4				
			Sum of East/West Critical Volumes			**771**
			Total Intersection Critical Volumes			**1,161**
Number of Clearance Intervals	**3**		**Intersection Capacity**			**1,425**
			Base CMA			**0.815**
Signal Coordination	**ATSAC + ATCS**		**Signal Coordination Adjustment**			**-0.100**
			Final CMA			**0.715**
			Level of Service (LOS)			**C**

Hirsch/Green Transportation Consulting, Inc.
Critical Movement Analysis (CMA) Worksheet

Project Name	Pico/Sepulveda Mixed-Use Project		
Intersection Number	37	**Date**	December 7, 2012
Intersection Name	North/South: Beverly Glen Boulevard East/West: Pico Boulevard		
Intersection Control	Signalized		
Analysis Period	PM Peak Hour		
Analysis Scenario	Future (2012) With Project		

Approach Direction	Lane Type	No. of Lanes	Approach Volumes	Right-Turn on Red	Assigned Lane Volumes	Critical Moves
Northbound	Left	0	0			
	Left/Through	0				
	Through	0	0			
	Through/Right	0				
	Right	0	0	0		
	Total Lanes	0				
Southbound	Left	2	438		241	
	Left/Through	0				
	Through	0	0			
	Through/Right	0				
	Right	1	408	128	280	280
	Total Lanes	3				
			Sum of North/South Critical Volumes			**280**
Eastbound	Left	1	256		256	256
	Left/Through	0				
	Through	3	1,323		441	
	Through/Right	0				
	Right	0	0	0		
	Total Lanes	4				
Westbound	Left	0	0			
	Left/Through	0				
	Through	2	1,854		682	682
	Through/Right	1			682	
	Right	0	192	0		
	Total Lanes	3				
			Sum of East/West Critical Volumes			**938**
			Total Intersection Critical Volumes			**1,218**
Number of Clearance Intervals	**3**		**Intersection Capacity**			**1,425**
			Base CMA			**0.855**
Signal Coordination	**ATSAC + ATCS**		**Signal Coordination Adjustment**			**-0.100**
			Final CMA			**0.755**
			Level of Service (LOS)			**C**

Hirsch/Green Transportation Consulting, Inc.
Critical Movement Analysis (CMA) Worksheet

Project Name	Pico/Sepulveda Mixed-Use Project
Intersection Number	38 **Date** December 7, 2012
Intersection Name	North/South: Motor Avenue/Fox Studios Driveway East/West: Pico Boulevard
Intersection Control	Signalized
Analysis Period	PM Peak Hour
Analysis Scenario	Future (2012) With Project

Approach Direction	Lane Type	No. of Lanes	Approach Volumes	Right-Turn on Red	Assigned Lane Volumes	Critical Moves
Northbound	Left	1	248		248	248
	Left/Through	0				
	Through	0	5			
	Through/Right	1			13	
	Right	1	486	465	13	
	Total Lanes	3				
Southbound	Left	1	103		103	
	Left/Through	0				
	Through	0	5			
	Through/Right	1			196	196
	Right	0	191	0		
	Total Lanes	2				
			Sum of North/South Critical Volumes			**444**
Eastbound	Left	1	41		41	
	Left/Through	0				
	Through	2	1,483		601	601
	Through/Right	1			601	
	Right	0	319	0		
	Total Lanes	4				
Westbound	Left	1	465		465	465
	Left/Through	0				
	Through	2	1,901		651	
	Through/Right	1			651	
	Right	0	52	0		
	Total Lanes	4				
			Sum of East/West Critical Volumes			**1,066**
			Total Intersection Critical Volumes			**1,510**
Number of Clearance Intervals	**4**		**Intersection Capacity**			**1,375**
			Base CMA			**1.098**
Signal Coordination	**ATSAC + ATCS**		**Signal Coordination Adjustment**			**-0.100**
			Final CMA			**0.998**
			Level of Service (LOS)			**E**

North/South Opposed Phasing
NB Rt. Turn Overlap with WB Left

Hirsch/Green Transportation Consulting, Inc.
Critical Movement Analysis (CMA) Worksheet

Project Name	Pico/Sepulveda Mixed-Use Project		
Intersection Number	39	**Date**	December 7, 2012
Intersection Name	North/South: Avenue of the Stars East/West: Pico Boulevard		
Intersection Control	Signalized		
Analysis Period	PM Peak Hour		
Analysis Scenario	Future (2012) With Project		

Approach Direction	Lane Type	No. of Lanes	Approach Volumes	Right-Turn on Red	Assigned Lane Volumes	Critical Moves
Northbound	Left	0	0			
	Left/Through	0				
	Through	0	0			
	Through/Right	0				
	Right	0	0	0		
	Total Lanes	0				
Southbound	Left	2	429		236	
	Left/Through	0				
	Through	0	0			
	Through/Right	0				
	Right	2	836	234	301	301
	Total Lanes	4				
			Sum of North/South Critical Volumes			**301**
Eastbound	Left	3	319		117	117
	Left/Through	0				
	Through	3	1,513		504	
	Through/Right	0				
	Right	0	0	0		
	Total Lanes	6				
Westbound	Left	0	0			
	Left/Through	0				
	Through	2	1,611		584	584
	Through/Right	1			584	
	Right	0	141	0		
	Total Lanes	3				
			Sum of East/West Critical Volumes			**701**
			Total Intersection Critical Volumes			**1,002**
Number of Clearance Intervals	**3**		**Intersection Capacity**			**1,425**
			Base CMA			**0.703**
Signal Coordination	**ATSAC + ATCS**		**Signal Coordination Adjustment**			**-0.100**
			Final CMA			**0.603**
			Level of Service (LOS)			**B**

Hirsch/Green Transportation Consulting, Inc.
Critical Movement Analysis (CMA) Worksheet

Project Name	Pico/Sepulveda Mixed-Use Project		
Intersection Number	40	**Date**	December 7, 2012
Intersection Name	North/South: Sepulveda Boulevard East/West: Exposition Boulevard		
Intersection Control	Signalized		
Analysis Period	PM Peak Hour		
Analysis Scenario	Future (2012) With Project		

Approach Direction	Lane Type	No. of Lanes	Approach Volumes	Right-Turn on Red	Assigned Lane Volumes	Critical Moves
Northbound	Left	1	161		161	
	Left/Through	0				
	Through	1	1,737		884	884
	Through/Right	1			884	
	Right	0	30	0		
	Total Lanes	3				
Southbound	Left	1	145		145	145
	Left/Through	0				
	Through	2	1,854		687	
	Through/Right	1			687	
	Right	0	206	0		
	Total Lanes	4				
			Sum of North/South Critical Volumes			**1,029**
Eastbound	Left	1	98		98	
	Left/Through	0				
	Through	0	263			
	Through/Right	1			479	479
	Right	0	216	0		
	Total Lanes	2				
Westbound	Left	1	39		39	39
	Left/Through	0				
	Through	0	68			
	Through/Right	1			128	
	Right	0	60	0		
	Total Lanes	2				
			Sum of East/West Critical Volumes			**518**
			Total Intersection Critical Volumes			**1,547**
Number of Clearance Intervals	**2**		**Intersection Capacity**			**1,050** **
** Assumed 30% reduction in capacity due to Expo Line at-grade crossing			**Base CMA**			**1.473**
Signal Coordination	**ATSAC + ATCS**		**Signal Coordination Adjustment**			**-0.100**
			Final CMA			**1.373**
			Level of Service (LOS)			**F**

Hirsch/Green Transportation Consulting, Inc.
Critical Movement Analysis (CMA) Worksheet

Project Name	Pico/Sepulveda Mixed-Use Project		
Intersection Number	41	**Date**	December 7, 2012
Intersection Name	North/South: Barrington Avenue East/West: Gateway Boulevard		
Intersection Control	Signalized		
Analysis Period	PM Peak Hour		
Analysis Scenario	Future (2012) With Project		

Approach Direction	Lane Type	No. of Lanes	Approach Volumes	Right-Turn on Red	Assigned Lane Volumes	Critical Moves
Northbound	Left	1	122		122	122
	Left/Through	0				
	Through	1	761		421	
	Through/Right	1			421	
	Right	0	81	0		
	Total Lanes	3				
Southbound	Left	1	92		92	
	Left/Through	0				
	Through	1	1,511		827	827
	Through/Right	1			827	
	Right	0	143	0		
	Total Lanes	3				
			Sum of North/South Critical Volumes			**949**
Eastbound	Left	1	104		104	104
	Left/Through	0				
	Through	2	772		386	
	Through/Right	0				
	Right	1	112	61	51	
	Total Lanes	4				
Westbound	Left	1	144		144	
	Left/Through	0				
	Through	1	904		469	469
	Through/Right	1			469	
	Right	0	34	0		
	Total Lanes	3				
			Sum of East/West Critical Volumes			**573**
			Total Intersection Critical Volumes			**1,522**
Number of Clearance Intervals	**2**		**Intersection Capacity**			**1,500**
			Base CMA			**1.015**
Signal Coordination	**ATSAC**		**Signal Coordination Adjustment**			**-0.070**
			Final CMA			**0.945**
			Level of Service (LOS)			**E**

Hirsch/Green Transportation Consulting, Inc.
Critical Movement Analysis (CMA) Worksheet

Project Name	Pico/Sepulveda Mixed-Use Project		
Intersection Number	42	**Date**	December 7, 2012
Intersection Name	North/South: Bundy Drive East/West: Ocean Park Boulevard		
Intersection Control	Signalized		
Analysis Period	PM Peak Hour		
Analysis Scenario	Future (2012) With Project		

Approach Direction	Lane Type	No. of Lanes	Approach Volumes	Right-Turn on Red	Assigned Lane Volumes	Critical Moves
	Left	1	402		402	402
	Left/Through	0				
Northbound	Through	1	1,179		706	
	Through/Right	1			706	
	Right	0	233	0		
	Total Lanes	3				
	Left	1	25		25	
	Left/Through	0				
Southbound	Through	2	1,882		941	941
	Through/Right	0				
	Right	1	178	160	18	
	Total Lanes	4				
			Sum of North/South Critical Volumes			**1,343**
	Left	1	144		144	
	Left/Through	0				
Eastbound	Through	2	690		345	
	Through/Right	0				
	Right	1	891	402	489	489
	Total Lanes	4				
	Left	1	64		64	64
	Left/Through	0				
Westbound	Through	1	442		234	
	Through/Right	1			234	
	Right	0	27	0		
	Total Lanes	3				
			Sum of East/West Critical Volumes			**553**
			Total Intersection Critical Volumes			**1,896**
Number of Clearance Intervals	**3**		**Intersection Capacity**			**1,425**
			Base CMA			**1.331**
Signal Coordination	**ATSAC**		**Signal Coordination Adjustment**			**-0.070**
			Final CMA			**1.261**
			Level of Service (LOS)			**F**

EB Rt. Turn Overlap with NB Left

Hirsch/Green Transportation Consulting, Inc.
Critical Movement Analysis (CMA) Worksheet

Project Name	Pico/Sepulveda Mixed-Use Project		
Intersection Number	43	**Date**	December 7, 2012
Intersection Name	North/South: Barrington Avenue East/West: National Boulevard		
Intersection Control	Signalized		
Analysis Period	PM Peak Hour		
Analysis Scenario	Future (2012) With Project		

Approach Direction	Lane Type	No. of Lanes	Approach Volumes	Right-Turn on Red	Assigned Lane Volumes	Critical Moves
	Left	1	60		60	60
	Left/Through	0				
Northbound	Through	1	482		299	
	Through/Right	1			299	
	Right	0	116	0		
	Total Lanes	3				
	Left	1	310		310	
	Left/Through	0				
Southbound	Through	1	1,415		800	800
	Through/Right	1			800	
	Right	0	184	0		
	Total Lanes	3				
			Sum of North/South Critical Volumes			**860**
	Left	1	151		151	
	Left/Through	0				
Eastbound	Through	1	608		357	357
	Through/Right	1			357	
	Right	0	106	0		
	Total Lanes	3				
	Left	1	118		118	118
	Left/Through	0				
Westbound	Through	1	412		262	
	Through/Right	1			262	
	Right	0	112	0		
	Total Lanes	3				
			Sum of East/West Critical Volumes			**475**
			Total Intersection Critical Volumes			**1,335**
Number of Clearance Intervals	**3**		**Intersection Capacity**			**1,425**
			Base CMA			**0.937**
Signal Coordination	**ATSAC**		**Signal Coordination Adjustment**			**-0.070**
			Final CMA			**0.867**
			Level of Service (LOS)			**D**

Hirsch/Green Transportation Consulting, Inc.
Critical Movement Analysis (CMA) Worksheet

Project Name	Pico/Sepulveda Mixed-Use Project		
Intersection Number	44	**Date**	December 7, 2012
Intersection Name	North/South: Sawtelle Boulevard East/West: National Boulevard		
Intersection Control	Signalized		
Analysis Period	PM Peak Hour		
Analysis Scenario	Future (2012) With Project		

Approach Direction	Lane Type	No. of Lanes	Approach Volumes	Right-Turn on Red	Assigned Lane Volumes	Critical Moves
Northbound	Left	1	100		100	100
	Left/Through	0				
	Through	1	538		320	
	Through/Right	1			320	
	Right	0	103	0		
	Total Lanes	3				
Southbound	Left	2	525		289	
	Left/Through	0				
	Through	1	1,440		758	758
	Through/Right	1			758	
	Right	0	75	0		
	Total Lanes	4				
			Sum of North/South Critical Volumes			**858**
Eastbound	Left	1	146		146	146
	Left/Through	0				
	Through	1	1,095		614	
	Through/Right	1			614	
	Right	0	134	0		
	Total Lanes	3				
Westbound	Left	1	122		122	
	Left/Through	0				
	Through	1	1,281		740	740
	Through/Right	1			740	
	Right	0	199	0		
	Total Lanes	3				
			Sum of East/West Critical Volumes			**886**
			Total Intersection Critical Volumes			**1,744**
Number of Clearance Intervals	**3**		**Intersection Capacity**			**1,425**
			Base CMA			**1.224**
Signal Coordination	**ATSAC + ATCS**		**Signal Coordination Adjustment**			**-0.100**
			Final CMA			**1.124**
			Level of Service (LOS)			**F**

Hirsch/Green Transportation Consulting, Inc.
Critical Movement Analysis (CMA) Worksheet

Project Name	Pico/Sepulveda Mixed-Use Project		
Intersection Number	45	**Date**	December 7, 2012
Intersection Name	North/South: I-405 SB On-Ramp East/West: National Boulevard		
Intersection Control	Signalized		
Analysis Period	PM Peak Hour		
Analysis Scenario	Future (2012) With Project		

Approach Direction	Lane Type	No. of Lanes	Approach Volumes	Right-Turn on Red	Assigned Lane Volumes	Critical Moves
Northbound	Left	0	0			
	Left/Through	0				
	Through	0	0			
	Through/Right	0				
	Right	0	0	0		
	Total Lanes	0				
Southbound	Left	0	0			
	Left/Through	0				
	Through	0	0			
	Through/Right	0				
	Right	0	0	0		
	Total Lanes	0				
			Sum of North/South Critical Volumes			**0**
Eastbound	Left	0	0			
	Left/Through	0				
	Through	1	1,192		596	596
	Through/Right	1			596	
	Right	1	523	0	523	
	Total Lanes	3				
Westbound	Left	2	565		311	311
	Left/Through	0				
	Through	2	1,599		800	
	Through/Right	0				
	Right	0	0	0		
	Total Lanes	4				
			Sum of East/West Critical Volumes			**907**
			Total Intersection Critical Volumes			**907**
Number of Clearance Intervals	**2**		**Intersection Capacity**			**1,500**
			Base CMA			**0.605**
Signal Coordination	**ATSAC + ATCS**		**Signal Coordination Adjustment**			**-0.100**
			Final CMA			**0.505**
			Level of Service (LOS)			**A**

Hirsch/Green Transportation Consulting, Inc.
Critical Movement Analysis (CMA) Worksheet

Project Name	Pico/Sepulveda Mixed-Use Project		
Intersection Number	46	**Date**	December 7, 2012
Intersection Name	North/South: I-405 NB Off-Ramp East/West: National Boulevard		
Intersection Control	Signalized		
Analysis Period	PM Peak Hour		
Analysis Scenario	Future (2012) With Project		

Approach Direction	Lane Type	No. of Lanes	Approach Volumes	Right-Turn on Red	Assigned Lane Volumes	Critical Moves
Northbound	Left	0	452			452
	Left/Through	0				
	Left/Through/Right	1	3		455	
	Through/Right	0				
	Right	1	421	0	421	
	Total Lanes	2				
Southbound	Left	0	38			
	Left/Through	0				
	Left/Through/Right	1	0		103	103
	Through/Right	0				
	Right	0	65	0		
	Total Lanes	1				
			Sum of North/South Critical Volumes			**555**
Eastbound	Left	0	0			
	Left/Through	0				
	Through	2	1,190		595	
	Through/Right	0				
	Right	0	0	0		
	Total Lanes	2				
Westbound	Left	0	0			
	Left/Through	0				
	Through	1	1,692		852	852
	Through/Right	1			852	
	Right	0	12	0		
	Total Lanes	2				
			Sum of East/West Critical Volumes			**852**
			Total Intersection Critical Volumes			**1,407**
Number of Clearance Intervals	**2**		**Intersection Capacity**			**1,500**
			Base CMA			**0.938**
Signal Coordination	**ATSAC + ATCS**		**Signal Coordination Adjustment**			**-0.100**
			Final CMA			**0.838**
			Level of Service (LOS)			**D**

Hirsch/Green Transportation Consulting, Inc.
Critical Movement Analysis (CMA) Worksheet

Project Name	Pico/Sepulveda Mixed-Use Project		
Intersection Number	47	**Date**	December 7, 2012
Intersection Name	North/South: Sepulveda Boulevard East/West: National Boulevard		
Intersection Control	Signalized		
Analysis Period	PM Peak Hour		
Analysis Scenario	Future (2012) With Project		

Approach Direction	Lane Type	No. of Lanes	Approach Volumes	Right-Turn on Red	Assigned Lane Volumes	Critical Moves
Northbound	Left	1	300		300	300
	Left/Through	0				
	Through	1	1,633		910	
	Through/Right	1			910	
	Right	0	188	0		
	Total Lanes	3				
Southbound	Left	1	258		258	
	Left/Through	0				
	Through	1	1,730		1,030	1,030
	Through/Right	1			1,030	
	Right	0	331	0		
	Total Lanes	3				
			Sum of North/South Critical Volumes			**1,330**
Eastbound	Left	2	326		179	
	Left/Through	0				
	Through	1	1,062		662	662
	Through/Right	1			662	
	Right	0	262	0		
	Total Lanes	4				
Westbound	Left	1	206		206	206
	Left/Through	0				
	Through	1	1,062		608	
	Through/Right	1			608	
	Right	0	153	0		
	Total Lanes	3				
			Sum of East/West Critical Volumes			**868**
			Total Intersection Critical Volumes			**2,198**
Number of Clearance Intervals	**4**		**Intersection Capacity**			**1,375**
			Base CMA			**1.599**
Signal Coordination	**ATSAC + ATCS**		**Signal Coordination Adjustment**			**-0.100**
			Final CMA			**1.499**
			Level of Service (LOS)			**F**

Hirsch/Green Transportation Consulting, Inc.
Critical Movement Analysis (CMA) Worksheet

Project Name	Pico/Sepulveda Mixed-Use Project		
Intersection Number	48	**Date**	December 7, 2012
Intersection Name	North/South: Westwood Boulevard East/West: National Boulevard		
Intersection Control	Signalized		
Analysis Period	PM Peak Hour		
Analysis Scenario	Future (2012) With Project		

Approach Direction	Lane Type	No. of Lanes	Approach Volumes	Right-Turn on Red	Assigned Lane Volumes	Critical Moves
	Left	1	154		154	154
	Left/Through	0				
Northbound	Through	1	237		136	
	Through/Right	1			136	
	Right	0	36	0		
	Total Lanes	3				
	Left	1	163		163	
	Left/Through	0				
Southbound	Through	1	809		809	809
	Through/Right	0				
	Right	1	288	133	155	
	Total Lanes	3				
			Sum of North/South Critical Volumes			**963**
	Left	1	266		266	266
	Left/Through	0				
Eastbound	Through	1	627		480	
	Through/Right	1			480	
	Right	0	332	0		
	Total Lanes	3				
	Left	1	81		81	
	Left/Through	0				
Westbound	Through	1	480		307	307
	Through/Right	1			307	
	Right	0	134	0		
	Total Lanes	3				
			Sum of East/West Critical Volumes			**573**
			Total Intersection Critical Volumes			**1,536**
Number of Clearance Intervals	**2**		**Intersection Capacity**			**1,500**
			Base CMA			**1.024**
Signal Coordination	**ATSAC + ATCS**		**Signal Coordination Adjustment**			**-0.100**
			Final CMA			**0.924**
			Level of Service (LOS)			**E**

Hirsch/Green Transportation Consulting, Inc.
Critical Movement Analysis (CMA) Worksheet

Project Name Pico/Sepulveda Mixed-Use Project
Intersection Number 49 **Date** December 7, 2012
Intersection Name North/South: Overland Avenue
East/West: I-10 WB On/Off-Ramps/National Boulevard
Intersection Control Signalized
Analysis Period PM Peak Hour
Analysis Scenario Future (2012) With Project

Approach Direction	Lane Type	No. of Lanes	Approach Volumes	Right-Turn on Red	Assigned Lane Volumes	Critical Moves
Northbound	Left	1	65		65	65
	Left/Through	0				
	Through	3	905		302	
	Through/Right	0				
	Right	1	634	372	262	
	Total Lanes	5				
Southbound	Left	2	715		393	
	Left/Through	0				
	Through	1	1,732		930	930
	Through/Right	1			930	
	Right	0	129	0		
	Total Lanes	4				
			Sum of North/South Critical Volumes			**995**
Eastbound	Left	1	249		192	
	Left/Through	1			192	
	Through	0	135			
	Through/Right	0				
	Right	1	457	32	425	425
	Total Lanes	3				
Westbound	Left	0	234			
	Left/Through	1			372	
	Through	1	511		372	372
	Through/Right	0				
	Right	1	610	346	264	
	Total Lanes	3				
			Sum of East/West Critical Volumes			**797**
			Total Intersection Critical Volumes			**1,792**
Number of Clearance Intervals	**4**		**Intersection Capacity**			**1,375**
			Base CMA			**1.303**
Signal Coordination	**ATSAC + ATCS**		**Signal Coordination Adjustment**			**-0.100**
			Final CMA			**1.203**
			Level of Service (LOS)			**F**

NB Rt. Turn Overlap with WB Left

East/West Opposed Phasing

Hirsch/Green Transportation Consulting, Inc.
Critical Movement Analysis (CMA) Worksheet

Project Name	Pico/Sepulveda Mixed-Use Project		
Intersection Number	50	**Date**	December 7, 2012
Intersection Name	North/South: Overland Avenue East/West: I-10 EB On-Ramp		
Intersection Control	Signalized		
Analysis Period	PM Peak Hour		
Analysis Scenario	Future (2012) With Project		

Approach Direction	Lane Type	No. of Lanes	Approach Volumes	Right-Turn on Red	Assigned Lane Volumes	Critical Moves
Northbound	Left	0	0			
	Left/Through	0				
	Through	3	1,630		528	528
	Through/Right	1			528	
	Right	0	480	0		
	Total Lanes	4				
Southbound	Left	2	1,169		643	643
	Left/Through	0				
	Through	2	1,236		618	
	Through/Right	0				
	Right	0	0	0		
	Total Lanes	4				
			Sum of North/South Critical Volumes			**1,171**
Eastbound	Left	0	0			
	Left/Through	0				
	Through	0	0			
	Through/Right	0				
	Right	0	0	0		
	Total Lanes	0				
Westbound	Left	0	0			
	Left/Through	0				
	Through	0	0			
	Through/Right	0				
	Right	0	0	0		
	Total Lanes	0				
			Sum of East/West Critical Volumes			**0**
			Total Intersection Critical Volumes			**1,171**
Number of Clearance Intervals	**2**		**Intersection Capacity**			**1,500**
			Base CMA			**0.781**
Signal Coordination	**ATSAC + ATCS**		**Signal Coordination Adjustment**			**-0.100**
			Final CMA			**0.681**
			Level of Service (LOS)			**B**

Hirsch/Green Transportation Consulting, Inc.
Critical Movement Analysis (CMA) Worksheet

Project Name	Pico/Sepulveda Mixed-Use Project		
Intersection Number	51	**Date**	December 7, 2012
Intersection Name	North/South: Sepulveda Boulevard East/West: Queensland Avenue		
Intersection Control	Signalized		
Analysis Period	PM Peak Hour		
Analysis Scenario	Future (2012) With Project		

Approach Direction	Lane Type	No. of Lanes	Approach Volumes	Right-Turn on Red	Assigned Lane Volumes	Critical Moves
	Left	1	34		34	
	Left/Through	0				
Northbound	Through	1	1,806		927	927
	Through/Right	1			927	
	Right	0	48	0		
	Total Lanes	3				
	Left	1	36		36	36
	Left/Through	0				
Southbound	Through	1	1,796		920	
	Through/Right	1			920	
	Right	0	45	0		
	Total Lanes	3				
			Sum of North/South Critical Volumes			**963**
	Left	0	39			
	Left/Through	0				
Eastbound	Left/Through/Right	1	16		99	99
	Through/Right	0				
	Right	0	44	0		
	Total Lanes	1				
	Left	0	139			139
	Left/Through	0				
Westbound	Left/Through/Right	1	31		192	
	Through/Right	0				
	Right	0	22	0		
	Total Lanes	1				
			Sum of East/West Critical Volumes			**238**
			Total Intersection Critical Volumes			**1,201**
Number of Clearance Intervals	**2**		**Intersection Capacity**			**1,500**
			Base CMA			**0.801**
Signal Coordination	**ATSAC**		**Signal Coordination Adjustment**			**-0.070**
			Final CMA			**0.731**
			Level of Service (LOS)			**C**

Hirsch/Green Transportation Consulting, Inc.
Critical Movement Analysis (CMA) Worksheet

Project Name	Pico/Sepulveda Mixed-Use Project		
Intersection Number	52	**Date**	December 7, 2012
Intersection Name	North/South: Sawtelle Boulevard East/West: Palms Boulevard		
Intersection Control	Signalized		
Analysis Period	PM Peak Hour		
Analysis Scenario	Future (2012) With Project		

Approach Direction	Lane Type	No. of Lanes	Approach Volumes	Right-Turn on Red	Assigned Lane Volumes	Critical Moves
	Left	1	63		63	
	Left/Through	0				
Northbound	Through	1	550		324	324
	Through/Right	1			324	
	Right	0	98	0		
	Total Lanes	3				
	Left	1	191		191	191
	Left/Through	0				
Southbound	Through	1	286		158	
	Through/Right	1			158	
	Right	0	30	0		
	Total Lanes	3				
			Sum of North/South Critical Volumes			**515**
	Left	1	44		44	
	Left/Through	0				
Eastbound	Through	1	738		404	404
	Through/Right	1			404	
	Right	0	70	0		
	Total Lanes	3				
	Left	1	178		178	178
	Left/Through	0				
Westbound	Through	1	762		500	
	Through/Right	1			500	
	Right	0	239	0		
	Total Lanes	3				
			Sum of East/West Critical Volumes			**582**
			Total Intersection Critical Volumes			**1,097**
Number of Clearance Intervals	**2**		**Intersection Capacity**			**1,500**
			Base CMA			**0.731**
Signal Coordination	**ATSAC**		**Signal Coordination Adjustment**			**-0.070**
			Final CMA			**0.661**
			Level of Service (LOS)			**B**

Hirsch/Green Transportation Consulting, Inc.
Critical Movement Analysis (CMA) Worksheet

Project Name	Pico/Sepulveda Mixed-Use Project		
Intersection Number	53	**Date**	December 7, 2012
Intersection Name	North/South: Sepulveda Boulevard East/West: Palms Boulevard		
Intersection Control	Signalized		
Analysis Period	PM Peak Hour		
Analysis Scenario	Future (2012) With Project		

Approach Direction	Lane Type	No. of Lanes	Approach Volumes	Right-Turn on Red	Assigned Lane Volumes	Critical Moves
Northbound	Left	1	141		141	141
	Left/Through	0				
	Through	1	1,594		908	
	Through/Right	1			908	
	Right	0	223	0		
	Total Lanes	3				
Southbound	Left	1	141		141	
	Left/Through	0				
	Through	1	1,599		914	914
	Through/Right	1			914	
	Right	0	230	0		
	Total Lanes	3				
			Sum of North/South Critical Volumes			**1,055**
Eastbound	Left	1	114		114	114
	Left/Through	0				
	Through	1	970		528	
	Through/Right	1			528	
	Right	0	85	0		
	Total Lanes	3				
Westbound	Left	1	126		126	
	Left/Through	0				
	Through	1	755		755	755
	Through/Right	0				
	Right	1	194	74	120	
	Total Lanes	3				
			Sum of East/West Critical Volumes			**869**
			Total Intersection Critical Volumes			**1,924**
Number of Clearance Intervals	**2**		**Intersection Capacity**			**1,500**
			Base CMA			**1.283**
Signal Coordination	**ATSAC**		**Signal Coordination Adjustment**			**-0.070**
			Final CMA			**1.213**
			Level of Service (LOS)			**F**

Hirsch/Green Transportation Consulting, Inc.
Critical Movement Analysis (CMA) Worksheet

Project Name	Pico/Sepulveda Mixed-Use Project		
Intersection Number	54	**Date**	December 7, 2012
Intersection Name	North/South: Sepulveda Boulevard East/West: Venice Boulevard		
Intersection Control	Signalized		
Analysis Period	PM Peak Hour		
Analysis Scenario	Future (2012) With Project		

Approach Direction	Lane Type	No. of Lanes	Approach Volumes	Right-Turn on Red	Assigned Lane Volumes	Critical Moves
	Left	1	115		115	
	Left/Through	0				
Northbound	Through	2	1,493		746	746
	Through/Right	0				
	Right	1	278	98	180	
	Total Lanes	4				
	Left	1	116		116	116
	Left/Through	0				
Southbound	Through	2	1,086		543	
	Through/Right	0				
	Right	1	222	122	100	
	Total Lanes	4				
			Sum of North/South Critical Volumes			**862**
	Left	1	245		245	245
	Left/Through	0				
Eastbound	Through	3	1,499		500	
	Through/Right	0				
	Right	1	271	160	111	
	Total Lanes	5				
	Left	1	192		192	
	Left/Through	0				
Westbound	Through	3	1,357		452	452
	Through/Right	0				
	Right	1	163	58	105	
	Total Lanes	5				
			Sum of East/West Critical Volumes			**697**
			Total Intersection Critical Volumes			**1,559**
Number of Clearance Intervals	**4**		**Intersection Capacity**			**1,375**
			Base CMA			**1.134**
Signal Coordination	**ATSAC**		**Signal Coordination Adjustment**			**-0.070**
			Final CMA			**1.064**
			Level of Service (LOS)			**F**

Future (2012) With Modified Project Plus TOD/TDM Trip Reductions Only

AM Peak Hour

Hirsch/Green Transportation Consulting, Inc.
Critical Movement Analysis (CMA) Worksheet

Project Name	Pico/Sepulveda Mixed-Use Project		
Intersection Number	3	**Date**	December 7, 2012
Intersection Name	North/South: Westwood Boulevard East/West: Wilshire Boulevard		
Intersection Control	Signalized		
Analysis Period	AM Peak Hour		
Analysis Scenario	Future (2012) With Project Plus TOD/TDM Trip Reductions Only		

Approach Direction	Lane Type	No. of Lanes	Approach Volumes	Right-Turn on Red	Assigned Lane Volumes	Critical Moves
	Left	1	170		170	
	Left/Through	0				
Northbound	Through	2	649		265	265
	Through/Right	1			265	
	Right	0	146	0		
	Total Lanes	4				
	Left	1	76		76	76
	Left/Through	0				
Southbound	Through	2	303		101	
	Through/Right	1			101	
	Right	1	177	108	69	
	Total Lanes	5				
				Sum of North/South Critical Volumes		**341**
	Left	2	393		216	216
	Left/Through	0				
Eastbound	Through	3	2,294		622	
	Through/Right	1			622	
	Right	0	193	0		
	Total Lanes	6				
	Left	2	173		95	
	Left/Through	0				
Westbound	Through	3	2,061		540	540
	Through/Right	1			540	
	Right	0	101	0		
	Total Lanes	6				
				Sum of East/West Critical Volumes		**756**
				Total Intersection Critical Volumes		**1,097**
Number of Clearance Intervals	**4**			**Intersection Capacity**		**1,375**
				Base CMA		**0.798**
Signal Coordination	**ATSAC + ATCS**			**Signal Coordination Adjustment**		**-0.100**
				Final CMA		**0.698**
				Level of Service (LOS)		**B**

Hirsch/Green Transportation Consulting, Inc.
Critical Movement Analysis (CMA) Worksheet

Project Name	Pico/Sepulveda Mixed-Use Project		
Intersection Number	4	**Date**	December 7, 2012
Intersection Name	North/South: Sepulveda Boulevard East/West: Ohio Avenue		
Intersection Control	Signalized		
Analysis Period	AM Peak Hour		
Analysis Scenario	Future (2012) With Project Plus TOD/TDM Trip Reductions Only		

Approach Direction	Lane Type	No. of Lanes	Approach Volumes	Right-Turn on Red	Assigned Lane Volumes	Critical Moves
Northbound	Left	1	127		127	127
	Left/Through	0				
	Through	1	736		436	
	Through/Right	1			436	
	Right	0	135	0		
	Total Lanes	3				
Southbound	Left	1	54		54	
	Left/Through	0				
	Through	1	778		420	420
	Through/Right	1			420	
	Right	0	63	0		
	Total Lanes	3				
			Sum of North/South Critical Volumes			**547**
Eastbound	Left	1	200		200	
	Left/Through	0				
	Through	0	827			
	Through/Right	1			913	913
	Right	0	86	0		
	Total Lanes	2				
Westbound	Left	1	89		89	89
	Left/Through	0				
	Through	0	588			
	Through/Right	1			641	
	Right	0	53	0		
	Total Lanes	2				
			Sum of East/West Critical Volumes			**1,002**
			Total Intersection Critical Volumes			**1,549**
Number of Clearance Intervals	**2**		**Intersection Capacity**			**1,500**
			Base CMA			**1.033**
Signal Coordination	**ATSAC + ATCS**		**Signal Coordination Adjustment**			**-0.100**
			Final CMA			**0.933**
			Level of Service (LOS)			**E**

Hirsch/Green Transportation Consulting, Inc.
Critical Movement Analysis (CMA) Worksheet

Project Name Pico/Sepulveda Mixed-Use Project
Intersection Number 6 **Date** December 7, 2012
Intersection Name North/South: Sepulveda Boulevard
East/West: Santa Monica Boulevard
Intersection Control Signalized
Analysis Period AM Peak Hour
Analysis Scenario Future (2012) With Project Plus TOD/TDM Trip Reductions Only

Approach Direction	Lane Type	No. of Lanes	Approach Volumes	Right-Turn on Red	Assigned Lane Volumes	Critical Moves
Northbound	Left	1	169		169	
	Left/Through	0				
	Through	2	875		438	438
	Through/Right	0				
	Right	1	187	182	5	
	Total Lanes	4				
Southbound	Left	1	133		133	133
	Left/Through	0				
	Through	2	660		330	
	Through/Right	0				
	Right	1	128	128	0	
	Total Lanes	4				
			Sum of North/South Critical Volumes			**571**
Eastbound	Left	1	140		140	
	Left/Through	0				
	Through	3	1,932		644	644
	Through/Right	0				
	Right	1	345	169	176	
	Total Lanes	5				
Westbound	Left	1	182		182	182
	Left/Through	0				
	Through	3	1,534		511	
	Through/Right	0				
	Right	1	71	66	5	
	Total Lanes	5				
			Sum of East/West Critical Volumes			**826**
			Total Intersection Critical Volumes			**1,397**
Number of Clearance Intervals	**4**		**Intersection Capacity**			**1,375**
			Base CMA			**1.016**
Signal Coordination	**ATSAC + ATCS**		**Signal Coordination Adjustment**			**-0.100**
			Final CMA			**0.916**
			Level of Service (LOS)			**E**

NB/SB Rt. Turn Overlap With WB/EB Lefts

EB Rt. Turn Overlap with NB Left

Hirsch/Green Transportation Consulting, Inc.
Critical Movement Analysis (CMA) Worksheet

Project Name	Pico/Sepulveda Mixed-Use Project		
Intersection Number	14	**Date**	December 7, 2012
Intersection Name	North/South: Bundy Drive East/West: Olympic Boulevard		
Intersection Control	Signalized		
Analysis Period	AM Peak Hour		
Analysis Scenario	Future (2012) With Project Plus TOD/TDM Trip Reductions Only		

Approach Direction	Lane Type	No. of Lanes	Approach Volumes	Right-Turn on Red	Assigned Lane Volumes	Critical Moves
Northbound	Left	1	344		344	
	Left/Through	0				
	Through	2	1,375		688	688
	Through/Right	0				
	Right	1	339	194	145	
	Total Lanes	4				
Southbound	Left	1	322		322	322
	Left/Through	0				
	Through	2	1,289		644	
	Through/Right	0				
	Right	1	297	98	199	
	Total Lanes	4				
			Sum of North/South Critical Volumes			**1,010**
Eastbound	Left	1	196		196	196
	Left/Through	0				
	Through	3	1,058		353	
	Through/Right	0				
	Right	1	164	164	0	
	Total Lanes	5				
Westbound	Left	2	273		150	
	Left/Through	0				
	Through	3	1,631		544	544
	Through/Right	0				
	Right	1	314	161	153	
	Total Lanes	6				
			Sum of East/West Critical Volumes			**740**
			Total Intersection Critical Volumes			**1,750**
Number of Clearance Intervals	**4**		**Intersection Capacity**			**1,375**
			Base CMA			**1.273**
Signal Coordination	**ATSAC**		**Signal Coordination Adjustment**			**-0.070**
			Final CMA			**1.203**
			Level of Service (LOS)			**F**

Hirsch/Green Transportation Consulting, Inc.
Critical Movement Analysis (CMA) Worksheet

Project Name	Pico/Sepulveda Mixed-Use Project		
Intersection Number	16	**Date**	December 7, 2012
Intersection Name	North/South: Sawtelle Boulevard East/West: Olympic Boulevard		
Intersection Control	Signalized		
Analysis Period	AM Peak Hour		
Analysis Scenario	Future (2012) With Project Plus TOD/TDM Trip Reductions Only		

Approach Direction	Lane Type	No. of Lanes	Approach Volumes	Right-Turn on Red	Assigned Lane Volumes	Critical Moves
Northbound	Left	1	315		315	
	Left/Through	0				
	Through	1	466		466	466
	Through/Right	0				
	Right	1	504	145	359	
	Total Lanes	3				
Southbound	Left	1	271		271	271
	Left/Through	0				
	Through	1	359		214	
	Through/Right	1			214	
	Right	0	68	0		
	Total Lanes	3				
			Sum of North/South Critical Volumes			**737**
Eastbound	Left	1	51		51	51
	Left/Through	0				
	Through	2	1,579		541	
	Through/Right	1			541	
	Right	0	44	0		
	Total Lanes	4				
Westbound	Left	1	145		145	
	Left/Through	0				
	Through	3	2,464		651	651
	Through/Right	1			651	
	Right	0	141	0		
	Total Lanes	5				
			Sum of East/West Critical Volumes			**702**
			Total Intersection Critical Volumes			**1,439**
Number of Clearance Intervals	**4**		**Intersection Capacity**			**1,375**
			Base CMA			**1.047**
Signal Coordination	**ATSAC + ATCS**		**Signal Coordination Adjustment**			**-0.100**
			Final CMA			**0.947**
			Level of Service (LOS)			**E**

NB Rt. Turn Overlap with WB Left

Hirsch/Green Transportation Consulting, Inc.
Critical Movement Analysis (CMA) Worksheet

Project Name Pico/Sepulveda Mixed-Use Project
Intersection Number 17 **Date** December 7, 2012
Intersection Name North/South: Sepulveda Boulevard
East/West: Olympic Boulevard
Intersection Control Signalized
Analysis Period AM Peak Hour
Analysis Scenario Future (2012) With Project Plus TOD/TDM Trip Reductions Only

Approach Direction	Lane Type	No. of Lanes	Approach Volumes	Right-Turn on Red	Assigned Lane Volumes	Critical Moves
Northbound	Left	1	258		258	258
	Left/Through	0				
	Through	2	1,025		512	
	Through/Right	0				
	Right	1	242	173	69	
	Total Lanes	4				
Southbound	Left	1	123		123	
	Left/Through	0				
	Through	1	789		462	462
	Through/Right	1			462	
	Right	0	135	0		
	Total Lanes	3				
			Sum of North/South Critical Volumes			**720**
Eastbound	Left	1	77		77	
	Left/Through	0				
	Through	2	2,166		748	748
	Through/Right	1			748	
	Right	0	77	0		
	Total Lanes	4				
Westbound	Left	1	173		173	173
	Left/Through	0				
	Through	3	2,323		608	
	Through/Right	1			608	
	Right	0	110	0		
	Total Lanes	5				
			Sum of East/West Critical Volumes			**921**
			Total Intersection Critical Volumes			**1,641**
Number of Clearance Intervals	**3**		**Intersection Capacity**			**1,425**
			Base CMA			**1.152**
Signal Coordination	**ATSAC + ATCS**		**Signal Coordination Adjustment**			**-0.100**
			Final CMA			**1.052**
			Level of Service (LOS)			**F**

NB Rt. Turn Overlap with WB Left

Hirsch/Green Transportation Consulting, Inc.
Critical Movement Analysis (CMA) Worksheet

Project Name	Pico/Sepulveda Mixed-Use Project		
Intersection Number	18	**Date**	December 7, 2012
Intersection Name	North/South: Westwood Boulevard East/West: Olympic Boulevard		
Intersection Control	Signalized		
Analysis Period	AM Peak Hour		
Analysis Scenario	Future (2012) With Project Plus TOD/TDM Trip Reductions Only		

Approach Direction	Lane Type	No. of Lanes	Approach Volumes	Right-Turn on Red	Assigned Lane Volumes	Critical Moves
	Left	1	141		141	
	Left/Through	0				
Northbound	Through	1	932		554	554
	Through/Right	1			554	
	Right	0	175	0		
	Total Lanes	3				
	Left	1	153		153	153
	Left/Through	0				
Southbound	Through	1	568		354	
	Through/Right	1			354	
	Right	0	139	0		
	Total Lanes	3				
			Sum of North/South Critical Volumes			**707**
	Left	1	73		73	
	Left/Through	0				
Eastbound	Through	2	2,411		837	837
	Through/Right	1			837	
	Right	0	101	0		
	Total Lanes	4				
	Left	1	99		99	99
	Left/Through	0				
Westbound	Through	3	2,233		602	
	Through/Right	1			602	
	Right	0	177	0		
	Total Lanes	5				
			Sum of East/West Critical Volumes			**936**
			Total Intersection Critical Volumes			**1,643**
Number of Clearance Intervals	**4**		**Intersection Capacity**			**1,375**
			Base CMA			**1.195**
Signal Coordination	**ATSAC + ATCS**		**Signal Coordination Adjustment**			**-0.100**
			Final CMA			**1.095**
			Level of Service (LOS)			**F**

Hirsch/Green Transportation Consulting, Inc.
Critical Movement Analysis (CMA) Worksheet

Project Name	Pico/Sepulveda Mixed-Use Project		
Intersection Number	21	**Date**	December 7, 2012
Intersection Name	North/South: Sawtelle Boulevard East/West: Tennessee Avenue/I-405 SB Off-Ramp		
Intersection Control	Signalized		
Analysis Period	AM Peak Hour		
Analysis Scenario	Future (2012) With Project Plus TOD/TDM Trip Reductions Only		

Approach Direction	Lane Type	No. of Lanes	Approach Volumes	Right-Turn on Red	Assigned Lane Volumes	Critical Moves
Northbound	Left	1	142		142	142
	Left/Through	0				
	Through	2	843		422	
	Through/Right	0				
	Right	0	0	0		
	Total Lanes	3				
Southbound	Left	0	0			
	Left/Through	0				
	Through	1	542		290	290
	Through/Right	1			290	
	Right	0	38	0		
	Total Lanes	2				
			Sum of North/South Critical Volumes			**432**
Eastbound	Left	1	36		36	36
	Left/Through	0				
	Through	0	0			
	Through/Right	0				
	Right	1	69	69	0	
	Total Lanes	2				
Westbound	Left	1	405		405	405
	Left/Through	0				
	Through	0	169			
	Through/Right	1			316	
	Right	1	468	5	316	
	Total Lanes	3				
			Sum of East/West Critical Volumes			**441**
			Total Intersection Critical Volumes			**873**
Number of Clearance Intervals	**3**		**Intersection Capacity**			**1,425**
			Base CMA			**0.613**
Signal Coordination	**ATSAC + ATCS**		**Signal Coordination Adjustment**			**-0.100**
			Final CMA			**0.513**
			Level of Service (LOS)			**A**

East/West Opposed Phasing

Hirsch/Green Transportation Consulting, Inc.
Critical Movement Analysis (CMA) Worksheet

Project Name	Pico/Sepulveda Mixed-Use Project		
Intersection Number	24	**Date**	December 7, 2012
Intersection Name	North/South: I-10 EB Off-Ramp/34th Street East/West: Pico Boulevard		
Intersection Control	Signalized		
Analysis Period	AM Peak Hour		
Analysis Scenario	Future (2012) With Project Plus TOD/TDM Trip Reductions Only		

Approach Direction	Lane Type	No. of Lanes	Approach Volumes	Right-Turn on Red	Assigned Lane Volumes	Critical Moves
Northbound	Left	0	15			
	Left/Through	0				
	Left/Through/Right	1	0		59	59
	Through/Right	0				
	Right	0	44	0		
	Total Lanes	1				
Southbound	Left	1	689		365	365
	Left/Through	1			365	
	Through	0	41			
	Through/Right	0				
	Right	1	50	50	0	
	Total Lanes	3				
			Sum of North/South Critical Volumes			**424**
Eastbound	Left	0	0			
	Left/Through	0				
	Through	1	1,385		707	707
	Through/Right	1			707	
	Right	0	29	0		
	Total Lanes	2				
Westbound	Left	0	58			58
	Left/Through	1			370	
	Through	1	972		660	
	Through/Right	0				
	Right	0	0	0		
	Total Lanes	2				
			Sum of East/West Critical Volumes			**764**
			Total Intersection Critical Volumes			**1,188**
Number of Clearance Intervals	**3**		**Intersection Capacity**			**1,425**
			Base CMA			**0.834**
Signal Coordination	**None**		**Signal Coordination Adjustment**			**0.000**
			Final CMA			**0.834**
			Level of Service (LOS)			**D**

North/South Opposed Phasing

HCS+™ DETAILED REPORT

General Information		***Site Information***	
Analyst	*RRH*	Intersection	*24*
Agency or Co.	*Hirsch/Green*	Area Type	*All other areas*
Date Performed	*12/7/2012*	Jurisdiction	*City of Santa Monica*
Time Period	*AM Peak Hour*	Analysis Year	*Future (2012) With TOD/TDM*
		Project ID	*Pico/Sepulveda Mixed-Use Project*

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Number of Lanes, N_1		*2*	*0*	*0*	*2*		*0*	*1*	*0*	*1*	*1*	*1*
Lane Group		*TR*			*LT*			*LTR*		*L*	*LT*	*R*
Volume, V (vph)		*1385*	*29*	*58*	*972*		*15*	*0*	*44*	*689*	*41*	*50*
% Heavy Vehicles, %HV		*0*	*0*	*0*	*0*		*0*	*0*	*0*	*0*	*0*	*0*
Peak-Hour Factor, PHF		*1.00*	*1.00*	*1.00*	*1.00*		*1.00*	*1.00*	*1.00*	*1.00*	*1.00*	*1.00*
Pretimed (P) or Actuated (A)		*P*	*P*	*P*	*P*		*P*	*P*	*P*	*P*	*P*	*P*
Start-up Lost Time, l_1		*2.0*			*2.0*			*2.0*		*2.0*	*2.0*	*2.0*
Extension of Effective Green, e		*2.0*			*2.0*			*2.0*		*2.0*	*2.0*	*2.0*
Arrival Type, AT		*3*			*3*			*3*		*3*	*3*	*3*
Unit Extension, UE		*3.0*			*3.0*			*3.0*		*3.0*	*3.0*	*3.0*
Filtering/Metering, I		*1.000*			*1.000*			*1.000*		*1.000*	*1.000*	*1.000*
Initial Unmet Demand, Q_b		*0.0*			*0.0*			*0.0*		*0.0*	*0.0*	*0.0*
Ped / Bike / RTOR Volumes	*0*	*0*	*0*	*0*	*0*		*0*	*0*	*0*	*0*	*0*	*50*
Lane Width		*12.0*			*12.0*			*12.0*		*12.0*	*12.0*	*12.0*
Parking / Grade / Parking	*N*	*0*	*N*	*N*	*0*	*N*	*N*	*0*	*N*	*N*	*0*	*N*
Parking Maneuvers, N_m												
Buses Stopping, N_B		*0*			*0*			*0*		*0*	*0*	*0*
Min. Time for Pedestrians, G_p	*3.2*			*3.2*			*3.2*			*3.2*		

Phasing	EW Perm	02	03	04	NB Only	SB Only	07	08
Timing	G = *55.0*	G = *0.0*	G = *0.0*	G = *0.0*	G = *5.0*	G = *15.0*	G = *0.0*	G = *0.0*
	Y = *5*	Y = *0*	Y = *0*	Y = *0*	Y = *5*	Y = *5*	Y = *0*	Y = *0*
Duration of Analysis, T = *1.00*						Cycle Length, C = *90.0*		

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Adjusted Flow Rate, v		*1414*			*1030*			*59*		*689*	*41*	*0*
Lane Group Capacity, c		*2204*			*1620*			*94*		*301*	*317*	*269*
v/c Ratio, X		*0.64*			*0.64*			*0.63*		*2.29*	*0.13*	*0.00*
Total Green Ratio, g/C		*0.61*			*0.61*			*0.06*		*0.17*	*0.17*	*0.17*
Uniform Delay, d_1		*11.2*			*11.1*			*41.6*		*37.5*	*31.9*	*31.3*
Progression Factor, PF		*1.000*			*1.000*			*1.000*		*1.000*	*1.000*	*1.000*
Delay Calibration, k		*0.50*			*0.50*			*0.50*		*0.50*	*0.50*	*0.50*
Incremental Delay, d_2		*1.5*			*1.9*			*30.9*		*2331*	*0.8*	*0.0*
Initial Queue Delay, d_3		*0.0*			*0.0*			*0.0*		*0.0*	*0.0*	*0.0*
Control Delay		*12.7*			*13.1*			*72.4*		*2368*	*32.8*	*31.3*
Lane Group LOS		*B*			*B*			*E*		*F*	*C*	*C*
Approach Delay	*12.7*			*13.1*			*72.4*			*2237*		
Approach LOS	*B*			*B*			*E*			*F*		
Intersection Delay	*516.2*			X_C = *0.97*			Intersection LOS			*F*		

Hirsch/Green Transportation Consulting, Inc.
Critical Movement Analysis (CMA) Worksheet

Project Name	Pico/Sepulveda Mixed-Use Project		
Intersection Number	25	**Date**	December 7, 2012
Intersection Name	North/South: Centinela Avenue East/West: Pico Boulevard		
Intersection Control	Signalized		
Analysis Period	AM Peak Hour		
Analysis Scenario	Future (2012) With Project Plus TOD/TDM Trip Reductions Only		

Approach Direction	Lane Type	No. of Lanes	Approach Volumes	Right-Turn on Red	Assigned Lane Volumes	Critical Moves
	Left	1	63		63	
	Left/Through	0				
Northbound	Through	1	605		605	605
	Through/Right	0				
	Right	1	50	32	18	
	Total Lanes	3				
	Left	1	56		56	56
	Left/Through	0				
Southbound	Through	2	556		278	
	Through/Right	0				
	Right	1	241	128	113	
	Total Lanes	4				
			Sum of North/South Critical Volumes			**661**
	Left	1	206		206	
	Left/Through	0				
Eastbound	Through	1	1,121		768	768
	Through/Right	1			768	
	Right	0	414	0		
	Total Lanes	3				
	Left	1	63		63	63
	Left/Through	0				
Westbound	Through	1	727		574	
	Through/Right	1			574	
	Right	0	422	0		
	Total Lanes	3				
			Sum of East/West Critical Volumes			**831**
			Total Intersection Critical Volumes			**1,492**
Number of Clearance Intervals	**2**		**Intersection Capacity**			**1,500**
			Base CMA			**0.995**
Signal Coordination	**ATSAC**		**Signal Coordination Adjustment**			**-0.070**
			Final CMA			**0.925**
			Level of Service (LOS)			**E**

Hirsch/Green Transportation Consulting, Inc.
Critical Movement Analysis (CMA) Worksheet

Project Name	Pico/Sepulveda Mixed-Use Project		
Intersection Number	26	**Date**	December 7, 2012
Intersection Name	North/South: Bundy Drive East/West: Pico Boulevard		
Intersection Control	Signalized		
Analysis Period	AM Peak Hour		
Analysis Scenario	Future (2012) With Project Plus TOD/TDM Trip Reductions Only		

Approach Direction	Lane Type	No. of Lanes	Approach Volumes	Right-Turn on Red	Assigned Lane Volumes	Critical Moves
	Left	1	328		328	
	Left/Through	0				
Northbound	Through	2	1,861		930	930
	Through/Right	0				
	Right	1	272	146	126	
	Total Lanes	4				
	Left	1	111		111	111
	Left/Through	0				
Southbound	Through	2	1,353		676	
	Through/Right	0				
	Right	1	91	78	13	
	Total Lanes	4				
			Sum of North/South Critical Volumes			**1,041**
	Left	1	156		156	156
	Left/Through	0				
Eastbound	Through	2	1,378		475	
	Through/Right	1			475	
	Right	0	48	0		
	Total Lanes	4				
	Left	1	126		126	
	Left/Through	0				
Westbound	Through	1	1,109		610	610
	Through/Right	1			610	
	Right	0	111	0		
	Total Lanes	3				
			Sum of East/West Critical Volumes			**766**
			Total Intersection Critical Volumes			**1,807**
Number of Clearance Intervals	**4**		**Intersection Capacity**			**1,375**
			Base CMA			**1.314**
Signal Coordination	**ATSAC**		**Signal Coordination Adjustment**			**-0.070**
			Final CMA			**1.244**
			Level of Service (LOS)			**F**

Hirsch/Green Transportation Consulting, Inc.
Critical Movement Analysis (CMA) Worksheet

Project Name	Pico/Sepulveda Mixed-Use Project		
Intersection Number	27	**Date**	December 7, 2012
Intersection Name	North/South: Barrington Avenue East/West: Pico Boulevard		
Intersection Control	Signalized		
Analysis Period	AM Peak Hour		
Analysis Scenario	Future (2012) With Project Plus TOD/TDM Trip Reductions Only		

Approach Direction	Lane Type	No. of Lanes	Approach Volumes	Right-Turn on Red	Assigned Lane Volumes	Critical Moves
	Left	1	128		128	
	Left/Through	0				
Northbound	Through	1	1,185		622	622
	Through/Right	1			622	
	Right	0	58	0		
	Total Lanes	3				
	Left	1	141		141	141
	Left/Through	0				
Southbound	Through	2	559		215	
	Through/Right	1			215	
	Right	0	85	0		
	Total Lanes	4				
			Sum of North/South Critical Volumes			**763**
	Left	1	146		146	146
	Left/Through	0				
Eastbound	Through	2	1,457		522	
	Through/Right	1			522	
	Right	0	110	0		
	Total Lanes	4				
	Left	1	62		62	
	Left/Through	0				
Westbound	Through	1	1,159		618	618
	Through/Right	1			618	
	Right	0	78	0		
	Total Lanes	3				
			Sum of East/West Critical Volumes			**764**
			Total Intersection Critical Volumes			**1,527**
Number of Clearance Intervals	**2**		**Intersection Capacity**			**1,500**
			Base CMA			**1.018**
Signal Coordination	**ATSAC**		**Signal Coordination Adjustment**			**-0.070**
			Final CMA			**0.948**
			Level of Service (LOS)			**E**

Hirsch/Green Transportation Consulting, Inc.
Critical Movement Analysis (CMA) Worksheet

Project Name	Pico/Sepulveda Mixed-Use Project		
Intersection Number	28	**Date**	December 7, 2012
Intersection Name	North/South: Gateway Boulevard East/West: Pico Boulevard		
Intersection Control	Signalized		
Analysis Period	AM Peak Hour		
Analysis Scenario	Future (2012) With Project Plus TOD/TDM Trip Reductions Only		

Approach Direction	Lane Type	No. of Lanes	Approach Volumes	Right-Turn on Red	Assigned Lane Volumes	Critical Moves
Northbound	Left	0	0			
	Left/Through	0				
	Through	0	0			
	Through/Right	0				
	Right	2	1,380	92	644	644
	Total Lanes	2				
Southbound	Left	0	0			
	Left/Through	0				
	Through	0	0			
	Through/Right	0				
	Right	0	0	0		
	Total Lanes	0				
			Sum of North/South Critical Volumes			**644**
Eastbound	Left	0	0			
	Left/Through	0				
	Through	2	1,317		446	446
	Through/Right	1			446	
	Right	0	21	0		
	Total Lanes	3				
Westbound	Left	2	336		185	185
	Left/Through	0				
	Through	2	1,174		587	
	Through/Right	0				
	Right	0	0	0		
	Total Lanes	4				
			Sum of East/West Critical Volumes			**631**
			Total Intersection Critical Volumes			**1,275**
Number of Clearance Intervals	**3**		**Intersection Capacity**			**1,425**
			Base CMA			**0.895**
Signal Coordination	**ATSAC**		**Signal Coordination Adjustment**			**-0.070**
			Final CMA			**0.825**
			Level of Service (LOS)			**D**

Hirsch/Green Transportation Consulting, Inc.
Critical Movement Analysis (CMA) Worksheet

Project Name	Pico/Sepulveda Mixed-Use Project		
Intersection Number	29	**Date**	December 7, 2012
Intersection Name	North/South: Sawtelle Boulevard East/West: Pico Boulevard		
Intersection Control	Signalized		
Analysis Period	AM Peak Hour		
Analysis Scenario	Future (2012) With Project Plus TOD/TDM Trip Reductions Only		

Approach Direction	Lane Type	No. of Lanes	Approach Volumes	Right-Turn on Red	Assigned Lane Volumes	Critical Moves
	Left	1	217		217	
	Left/Through	0				
Northbound	Through	1	594		462	462
	Through/Right	1			462	
	Right	0	330	0		
	Total Lanes	3				
	Left	1	329		329	329
	Left/Through	0				
Southbound	Through	2	581		290	
	Through/Right	0				
	Right	1	104	104	0	
	Total Lanes	4				
			Sum of North/South Critical Volumes			**791**
	Left	1	160		160	
	Left/Through	0				
Eastbound	Through	2	2,060		726	726
	Through/Right	1			726	
	Right	0	118	0		
	Total Lanes	4				
	Left	1	186		186	186
	Left/Through	0				
Westbound	Through	2	1,113		435	
	Through/Right	1			435	
	Right	0	193	0		
	Total Lanes	4				
			Sum of East/West Critical Volumes			**912**
			Total Intersection Critical Volumes			**1,703**
Number of Clearance Intervals	**4**		**Intersection Capacity**			**1,375**
			Base CMA			**1.239**
Signal Coordination	**ATSAC + ATCS**		**Signal Coordination Adjustment**			**-0.100**
			Final CMA			**1.139**
			Level of Service (LOS)			**F**

Hirsch/Green Transportation Consulting, Inc.
Critical Movement Analysis (CMA) Worksheet

Project Name	Pico/Sepulveda Mixed-Use Project		
Intersection Number	30	**Date**	December 7, 2012
Intersection Name	North/South: Cotner Avenue East/West: Pico Boulevard		
Intersection Control	Signalized		
Analysis Period	AM Peak Hour		
Analysis Scenario	Future (2012) With Project Plus TOD/TDM Trip Reductions Only		

Approach Direction	Lane Type	No. of Lanes	Approach Volumes	Right-Turn on Red	Assigned Lane Volumes	Critical Moves
	Left	0	0			
	Left/Through	0				
Northbound	Through	0	0			
	Through/Right	0				
	Right	0	0	0		
	Total Lanes	0				
	Left	1	35		35	35
	Left/Through	0				
Southbound	Through	0	0			
	Through/Right	0				
	Right	1	53	53	0	
	Total Lanes	2				
			Sum of North/South Critical Volumes			**35**
	Left	1	512		512	512
	Left/Through	0				
Eastbound	Through	3	2,205		735	
	Through/Right	0				
	Right	0	0	0		
	Total Lanes	4				
	Left	0	0			
	Left/Through	0				
Westbound	Through	2	1,453		619	619
	Through/Right	1			619	
	Right	0	403	0		
	Total Lanes	3				
			Sum of East/West Critical Volumes			**1,131**
			Total Intersection Critical Volumes			**1,166**
Number of Clearance Intervals	**3**		**Intersection Capacity**			**1,425**
			Base CMA			**0.818**
Signal Coordination	**ATSAC + ATCS**		**Signal Coordination Adjustment**			**-0.100**
			Final CMA			**0.718**
			Level of Service (LOS)			**C**

Hirsch/Green Transportation Consulting, Inc.
Critical Movement Analysis (CMA) Worksheet

Project Name	Pico/Sepulveda Mixed-Use Project		
Intersection Number	31	**Date**	December 7, 2012
Intersection Name	North/South: Sepulveda Boulevard East/West: Pico Boulevard		
Intersection Control	Signalized		
Analysis Period	AM Peak Hour		
Analysis Scenario	Future (2012) With Project Plus TOD/TDM Trip Reductions Only		

Approach Direction	Lane Type	No. of Lanes	Approach Volumes	Right-Turn on Red	Assigned Lane Volumes	Critical Moves
	Left	1	387		387	
	Left/Through	0				
Northbound	Through	1	1,489		855	855
	Through/Right	1			855	
	Right	0	221	0		
	Total Lanes	3				
	Left	1	92		92	92
	Left/Through	0				
Southbound	Through	1	755		431	
	Through/Right	1			431	
	Right	0	107	0		
	Total Lanes	3				
			Sum of North/South Critical Volumes			**947**
	Left	1	111		111	
	Left/Through	0				
Eastbound	Through	3	1,747		582	582
	Through/Right	0				
	Right	1	131	131	0	
	Total Lanes	5				
	Left	1	165		165	165
	Left/Through	0				
Westbound	Through	2	1,444		523	
	Through/Right	1			523	
	Right	0	124	0		
	Total Lanes	4				
			Sum of East/West Critical Volumes			**747**
			Total Intersection Critical Volumes			**1,694**

EB Rt. Turn Overlap with NB Left

Number of Clearance Intervals	**4**	**Intersection Capacity**	**1,100** **
** Assumed 20% reduction in capacity due to Expo Line at-grade crossing		**Base CMA**	**1.540**
Signal Coordination	**ATSAC + ATCS**	**Signal Coordination Adjustment**	**-0.100**
		Final CMA	**1.440**
		Level of Service (LOS)	**F**

Hirsch/Green Transportation Consulting, Inc.
Critical Movement Analysis (CMA) Worksheet

Project Name	Pico/Sepulveda Mixed-Use Project		
Intersection Number	33	**Date**	December 7, 2012
Intersection Name	North/South: Westwood Boulevard East/West: Pico Boulevard		
Intersection Control	Signalized		
Analysis Period	AM Peak Hour		
Analysis Scenario	Future (2012) With Project Plus TOD/TDM Trip Reductions Only		

Approach Direction	Lane Type	No. of Lanes	Approach Volumes	Right-Turn on Red	Assigned Lane Volumes	Critical Moves
Northbound	Left	1	156		156	
	Left/Through	0				
	Through	2	832		416	416
	Through/Right	0				
	Right	1	107	65	42	
	Total Lanes	4				
Southbound	Left	1	159		159	159
	Left/Through	0				
	Through	1	474		300	
	Through/Right	1			300	
	Right	0	125	0		
	Total Lanes	3				
			Sum of North/South Critical Volumes			**575**
Eastbound	Left	1	185		185	185
	Left/Through	0				
	Through	3	1,432		477	
	Through/Right	0				
	Right	1	73	73	0	
	Total Lanes	5				
Westbound	Left	1	65		65	
	Left/Through	0				
	Through	3	1,407		469	469
	Through/Right	0				
	Right	1	209	159	50	
	Total Lanes	5				
			Sum of East/West Critical Volumes			**654**
			Total Intersection Critical Volumes			**1,229**
Number of Clearance Intervals	**4**		**Intersection Capacity**			**1,375**
			Base CMA			**0.894**
Signal Coordination	**ATSAC + ATCS**		**Signal Coordination Adjustment**			**-0.100**
			Final CMA			**0.794**
			Level of Service (LOS)			**C**

NB Rt. Turn Overlap with WB Left

EB/WB Rt. Turn Overlap With NB/SB Lefts

Hirsch/Green Transportation Consulting, Inc.
Critical Movement Analysis (CMA) Worksheet

Project Name	Pico/Sepulveda Mixed-Use Project		
Intersection Number	34	**Date**	December 7, 2012
Intersection Name	North/South: Overland Avenue East/West: Pico Boulevard		
Intersection Control	Signalized		
Analysis Period	AM Peak Hour		
Analysis Scenario	Future (2012) With Project Plus TOD/TDM Trip Reductions Only		

Approach Direction	Lane Type	No. of Lanes	Approach Volumes	Right-Turn on Red	Assigned Lane Volumes	Critical Moves
	Left	2	287		158	
	Left/Through	0				
Northbound	Through	1	538		538	538
	Through/Right	0				
	Right	2	757	127	315	
	Total Lanes	5				
	Left	1	35		35	35
	Left/Through	0				
Southbound	Through	1	551		280	
	Through/Right	1			280	
	Right	0	10	0		
	Total Lanes	3				
			Sum of North/South Critical Volumes			**573**
	Left	1	54		54	
	Left/Through	0				
Eastbound	Through	2	1,578		574	574
	Through/Right	1			574	
	Right	0	144	0		
	Total Lanes	4				
	Left	2	462		254	254
	Left/Through	0				
Westbound	Through	2	1,338		459	
	Through/Right	1			459	
	Right	0	38	0		
	Total Lanes	5				
			Sum of East/West Critical Volumes			**828**
			Total Intersection Critical Volumes			**1,401**
Number of Clearance Intervals	**4**		**Intersection Capacity**			**1,375**
			Base CMA			**1.019**
Signal Coordination	**ATSAC + ATCS**		**Signal Coordination Adjustment**			**-0.100**
			Final CMA			**0.919**
			Level of Service (LOS)			**E**

Hirsch/Green Transportation Consulting, Inc.
Critical Movement Analysis (CMA) Worksheet

Project Name Pico/Sepulveda Mixed-Use Project
Intersection Number 38 **Date** December 7, 2012
Intersection Name North/South: Motor Avenue/Fox Studios Driveway
East/West: Pico Boulevard
Intersection Control Signalized
Analysis Period AM Peak Hour
Analysis Scenario Future (2012) With Project Plus TOD/TDM Trip Reductions Only

Approach Direction	Lane Type	No. of Lanes	Approach Volumes	Right-Turn on Red	Assigned Lane Volumes	Critical Moves
Northbound	Left	1	281		281	
	Left/Through	0				
	Through	0	12			
	Through/Right	1			322	
	Right	1	844	212	322	322
	Total Lanes	3				
Southbound	Left	1	14		14	
	Left/Through	0				
	Through	0	0			
	Through/Right	1			31	31
	Right	0	31	0		
	Total Lanes	2				
			Sum of North/South Critical Volumes			**353**
Eastbound	Left	1	262		262	262
	Left/Through	0				
	Through	2	1,849		669	
	Through/Right	1			669	
	Right	0	159	0		
	Total Lanes	4				
Westbound	Left	1	212		212	
	Left/Through	0				
	Through	2	1,686		625	625
	Through/Right	1			625	
	Right	0	188	0		
	Total Lanes	4				
			Sum of East/West Critical Volumes			**886**
			Total Intersection Critical Volumes			**1,239**
Number of Clearance Intervals	**4**		**Intersection Capacity**			**1,375**
			Base CMA			**0.901**
Signal Coordination	**ATSAC + ATCS**		**Signal Coordination Adjustment**			**-0.100**
			Final CMA			**0.801**
			Level of Service (LOS)			**D**

North/South Opposed Phasing
NB Rt. Turn Overlap with WB Left

Hirsch/Green Transportation Consulting, Inc.
Critical Movement Analysis (CMA) Worksheet

Project Name	Pico/Sepulveda Mixed-Use Project		
Intersection Number	40	**Date**	December 7, 2012
Intersection Name	North/South: Sepulveda Boulevard East/West: Exposition Boulevard		
Intersection Control	Signalized		
Analysis Period	AM Peak Hour		
Analysis Scenario	Future (2012) With Project Plus TOD/TDM Trip Reductions Only		

Approach Direction	Lane Type	No. of Lanes	Approach Volumes	Right-Turn on Red	Assigned Lane Volumes	Critical Moves
	Left	1	157		157	
	Left/Through	0				
Northbound	Through	1	1,875		948	948
	Through/Right	1			948	
	Right	0	21	0		
	Total Lanes	3				
	Left	1	37		37	37
	Left/Through	0				
Southbound	Through	2	901		329	
	Through/Right	1			329	
	Right	0	85	0		
	Total Lanes	4				
			Sum of North/South Critical Volumes			**985**
	Left	1	159		159	159
	Left/Through	0				
Eastbound	Through	0	136			
	Through/Right	1			235	
	Right	0	99	0		
	Total Lanes	2				
	Left	1	22		22	
	Left/Through	0				
Westbound	Through	0	118			
	Through/Right	1			263	263
	Right	0	145	0		
	Total Lanes	2				
			Sum of East/West Critical Volumes			**422**
			Total Intersection Critical Volumes			**1,407**
Number of Clearance Intervals	**2**		**Intersection Capacity**			**1,050** **
** Assumed 30% reduction in capacity due to Expo Line at-grade crossing			**Base CMA**			**1.340**
Signal Coordination	**ATSAC + ATCS**		**Signal Coordination Adjustment**			**-0.100**
			Final CMA			**1.240**
			Level of Service (LOS)			**F**

Hirsch/Green Transportation Consulting, Inc.
Critical Movement Analysis (CMA) Worksheet

Project Name	Pico/Sepulveda Mixed-Use Project		
Intersection Number	44	**Date**	December 7, 2012
Intersection Name	North/South: Sawtelle Boulevard East/West: National Boulevard		
Intersection Control	Signalized		
Analysis Period	AM Peak Hour		
Analysis Scenario	Future (2012) With Project Plus TOD/TDM Trip Reductions Only		

Approach Direction	Lane Type	No. of Lanes	Approach Volumes	Right-Turn on Red	Assigned Lane Volumes	Critical Moves
	Left	1	120		120	
	Left/Through	0				
Northbound	Through	1	1,020		573	573
	Through/Right	1			573	
	Right	0	126	0		
	Total Lanes	3				
	Left	2	381		210	210
	Left/Through	0				
Southbound	Through	1	622		350	
	Through/Right	1			350	
	Right	0	77	0		
	Total Lanes	4				
			Sum of North/South Critical Volumes			**783**
	Left	1	161		161	161
	Left/Through	0				
Eastbound	Through	1	996		526	
	Through/Right	1			526	
	Right	0	56	0		
	Total Lanes	3				
	Left	1	86		86	
	Left/Through	0				
Westbound	Through	1	962		650	650
	Through/Right	1			650	
	Right	0	338	0		
	Total Lanes	3				
			Sum of East/West Critical Volumes			**811**
			Total Intersection Critical Volumes			**1,594**
Number of Clearance Intervals	**3**		**Intersection Capacity**			**1,425**
			Base CMA			**1.119**
Signal Coordination	**ATSAC + ATCS**		**Signal Coordination Adjustment**			**-0.100**
			Final CMA			**1.019**
			Level of Service (LOS)			**F**

Hirsch/Green Transportation Consulting, Inc.
Critical Movement Analysis (CMA) Worksheet

Project Name	Pico/Sepulveda Mixed-Use Project		
Intersection Number	47	**Date**	December 7, 2012
Intersection Name	North/South: Sepulveda Boulevard East/West: National Boulevard		
Intersection Control	Signalized		
Analysis Period	AM Peak Hour		
Analysis Scenario	Future (2012) With Project Plus TOD/TDM Trip Reductions Only		

Approach Direction	Lane Type	No. of Lanes	Approach Volumes	Right-Turn on Red	Assigned Lane Volumes	Critical Moves
Northbound	Left	1	339		339	
	Left/Through	0				
	Through	1	1,649		956	956
	Through/Right	1			956	
	Right	0	264	0		
	Total Lanes	3				
Southbound	Left	1	135		135	135
	Left/Through	0				
	Through	1	722		490	
	Through/Right	1			490	
	Right	0	258	0		
	Total Lanes	3				
				Sum of North/South Critical Volumes		**1,091**
Eastbound	Left	2	296		163	
	Left/Through	0				
	Through	1	1,281		688	688
	Through/Right	1			688	
	Right	0	95	0		
	Total Lanes	4				
Westbound	Left	1	121		121	121
	Left/Through	0				
	Through	1	637		369	
	Through/Right	1			369	
	Right	0	101	0		
	Total Lanes	3				
				Sum of East/West Critical Volumes		**809**
				Total Intersection Critical Volumes		**1,900**
Number of Clearance Intervals	**4**			**Intersection Capacity**		**1,375**
				Base CMA		**1.382**
Signal Coordination	**ATSAC + ATCS**			**Signal Coordination Adjustment**		**-0.100**
				Final CMA		**1.282**
				Level of Service (LOS)		**F**

Hirsch/Green Transportation Consulting, Inc.
Critical Movement Analysis (CMA) Worksheet

Project Name Pico/Sepulveda Mixed-Use Project
Intersection Number 48 **Date** December 7, 2012
Intersection Name North/South: Westwood Boulevard
East/West: National Boulevard
Intersection Control Signalized
Analysis Period AM Peak Hour
Analysis Scenario Future (2012) With Project Plus TOD/TDM Trip Reductions Only

Approach Direction	Lane Type	No. of Lanes	Approach Volumes	Right-Turn on Red	Assigned Lane Volumes	Critical Moves
	Left	1	245		245	245
	Left/Through	0				
Northbound	Through	1	660		346	
	Through/Right	1			346	
	Right	0	32	0		
	Total Lanes	3				
	Left	1	145		145	
	Left/Through	0				
Southbound	Through	1	306		306	306
	Through/Right	0				
	Right	1	104	104	0	
	Total Lanes	3				
			Sum of North/South Critical Volumes			**551**
	Left	1	362		362	362
	Left/Through	0				
Eastbound	Through	1	806		448	
	Through/Right	1			448	
	Right	0	89	0		
	Total Lanes	3				
	Left	1	7		7	
	Left/Through	0				
Westbound	Through	1	319		210	210
	Through/Right	1			210	
	Right	0	100	0		
	Total Lanes	3				
			Sum of East/West Critical Volumes			**572**
			Total Intersection Critical Volumes			**1,123**
Number of Clearance Intervals	**2**		**Intersection Capacity**			**1,500**
			Base CMA			**0.749**
Signal Coordination	**ATSAC + ATCS**		**Signal Coordination Adjustment**			**-0.100**
			Final CMA			**0.649**
			Level of Service (LOS)			**B**

Hirsch/Green Transportation Consulting, Inc.
Critical Movement Analysis (CMA) Worksheet

Project Name	Pico/Sepulveda Mixed-Use Project
Intersection Number	49 **Date** December 7, 2012
Intersection Name	North/South: Overland Avenue East/West: I-10 WB On/Off-Ramps/National Boulevard
Intersection Control	Signalized
Analysis Period	AM Peak Hour
Analysis Scenario	Future (2012) With Project Plus TOD/TDM Trip Reductions Only

Approach Direction	Lane Type	No. of Lanes	Approach Volumes	Right-Turn on Red	Assigned Lane Volumes	Critical Moves
Northbound	Left	1	28		28	
	Left/Through	0				
	Through	3	1,238		413	
	Through/Right	0				
	Right	1	782	247	535	535
	Total Lanes	5				
Southbound	Left	2	453		249	249
	Left/Through	0				
	Through	1	855		476	
	Through/Right	1			476	
	Right	0	96	0		
	Total Lanes	4				
			Sum of North/South Critical Volumes			**784**
Eastbound	Left	1	373		278	
	Left/Through	1			278	
	Through	0	183			
	Through/Right	0				
	Right	1	504	14	490	490
	Total Lanes	3				
Westbound	Left	0	68			
	Left/Through	1			167	
	Through	1	266		167	
	Through/Right	0				
	Right	1	371	124	247	247
	Total Lanes	3				
			Sum of East/West Critical Volumes			**737**
			Total Intersection Critical Volumes			**1,521**
Number of Clearance Intervals	**4**		**Intersection Capacity**			**1,375**
			Base CMA			**1.106**
Signal Coordination	**ATSAC + ATCS**		**Signal Coordination Adjustment**			**-0.100**
			Final CMA			**1.006**
			Level of Service (LOS)			**F**

NB Rt. Turn Overlap with WB Left

East/West Opposed Phasing

Hirsch/Green Transportation Consulting, Inc.
Critical Movement Analysis (CMA) Worksheet

Project Name	Pico/Sepulveda Mixed-Use Project		
Intersection Number	54	**Date**	December 7, 2012
Intersection Name	North/South: Sepulveda Boulevard East/West: Venice Boulevard		
Intersection Control	Signalized		
Analysis Period	AM Peak Hour		
Analysis Scenario	Future (2012) With Project Plus TOD/TDM Trip Reductions Only		

Approach Direction	Lane Type	No. of Lanes	Approach Volumes	Right-Turn on Red	Assigned Lane Volumes	Critical Moves
Northbound	Left	1	93		93	
	Left/Through	0				
	Through	2	1,231		616	616
	Through/Right	0				
	Right	1	165	165	0	
	Total Lanes	4				
Southbound	Left	1	86		86	86
	Left/Through	0				
	Through	2	554		277	
	Through/Right	0				
	Right	1	195	134	61	
	Total Lanes	4				
			Sum of North/South Critical Volumes			**702**
Eastbound	Left	1	267		267	267
	Left/Through	0				
	Through	3	1,321		440	
	Through/Right	0				
	Right	1	421	212	209	
	Total Lanes	5				
Westbound	Left	1	191		191	
	Left/Through	0				
	Through	3	1,553		518	518
	Through/Right	0				
	Right	1	160	43	117	
	Total Lanes	5				
			Sum of East/West Critical Volumes			**785**
			Total Intersection Critical Volumes			**1,487**
Number of Clearance Intervals	**4**		**Intersection Capacity**			**1,375**
			Base CMA			**1.081**
Signal Coordination	**ATSAC**		**Signal Coordination Adjustment**			**-0.070**
			Final CMA			**1.011**
			Level of Service (LOS)			**F**

Future (2012) With Modified Project Plus TOD/TDM Trip Reductions Only

PM Peak Hour

Hirsch/Green Transportation Consulting, Inc.
Critical Movement Analysis (CMA) Worksheet

Project Name	Pico/Sepulveda Mixed-Use Project		
Intersection Number	3	**Date**	December 7, 2012
Intersection Name	North/South: Westwood Boulevard East/West: Wilshire Boulevard		
Intersection Control	Signalized		
Analysis Period	PM Peak Hour		
Analysis Scenario	Future (2012) With Project Plus TOD/TDM Trip Reductions Only		

Approach Direction	Lane Type	No. of Lanes	Approach Volumes	Right-Turn on Red	Assigned Lane Volumes	Critical Moves
	Left	1	188		188	188
	Left/Through	0				
Northbound	Through	2	461		214	
	Through/Right	1			214	
	Right	0	181	0		
	Total Lanes	4				
	Left	1	128		128	
	Left/Through	0				
Southbound	Through	2	556		195	195
	Through/Right	1			195	
	Right	1	327	102	195	
	Total Lanes	5				
			Sum of North/South Critical Volumes			**383**
	Left	2	236		130	
	Left/Through	0				
Eastbound	Through	3	1,836		520	520
	Through/Right	1			520	
	Right	0	246	0		
	Total Lanes	6				
	Left	2	244		134	134
	Left/Through	0				
Westbound	Through	3	1,705		449	
	Through/Right	1			449	
	Right	0	92	0		
	Total Lanes	6				
			Sum of East/West Critical Volumes			**654**
			Total Intersection Critical Volumes			**1,037**
Number of Clearance Intervals	**4**		**Intersection Capacity**			**1,030 ****
** Assumed 25% reduction in capacity due to downstream congestion			**Base CMA**			**1.007**
Signal Coordination	**ATSAC + ATCS**		**Signal Coordination Adjustment**			**-0.100**
			Final CMA			**0.907**
			Level of Service (LOS)			**E**

Hirsch/Green Transportation Consulting, Inc.
Critical Movement Analysis (CMA) Worksheet

Project Name	Pico/Sepulveda Mixed-Use Project		
Intersection Number	4	**Date**	December 7, 2012
Intersection Name	North/South: Sepulveda Boulevard East/West: Ohio Avenue		
Intersection Control	Signalized		
Analysis Period	PM Peak Hour		
Analysis Scenario	Future (2012) With Project Plus TOD/TDM Trip Reductions Only		

Approach Direction	Lane Type	No. of Lanes	Approach Volumes	Right-Turn on Red	Assigned Lane Volumes	Critical Moves
Northbound	Left	1	217		217	217
	Left/Through	0				
	Through	1	871		501	
	Through/Right	1			501	
	Right	0	131	0		
	Total Lanes	3				
Southbound	Left	1	82		82	
	Left/Through	0				
	Through	1	1,171		687	687
	Through/Right	1			687	
	Right	0	203	0		
	Total Lanes	3				
			Sum of North/South Critical Volumes			**904**
Eastbound	Left	1	169		169	169
	Left/Through	0				
	Through	0	539			
	Through/Right	1			603	
	Right	0	64	0		
	Total Lanes	2				
Westbound	Left	1	64		64	
	Left/Through	0				
	Through	0	656			
	Through/Right	1			685	685
	Right	0	29	0		
	Total Lanes	2				
			Sum of East/West Critical Volumes			**854**
			Total Intersection Critical Volumes			**1,758**
Number of Clearance Intervals	**2**		**Intersection Capacity**			**1,500**
			Base CMA			**1.172**
Signal Coordination	**ATSAC + ATCS**		**Signal Coordination Adjustment**			**-0.100**
			Final CMA			**1.072**
			Level of Service (LOS)			**F**

Hirsch/Green Transportation Consulting, Inc.
Critical Movement Analysis (CMA) Worksheet

Project Name Pico/Sepulveda Mixed-Use Project
Intersection Number 6 **Date** December 7, 2012
Intersection Name North/South: Sepulveda Boulevard
East/West: Santa Monica Boulevard
Intersection Control Signalized
Analysis Period PM Peak Hour
Analysis Scenario Future (2012) With Project Plus TOD/TDM Trip Reductions Only

Approach Direction	Lane Type	No. of Lanes	Approach Volumes	Right-Turn on Red	Assigned Lane Volumes	Critical Moves
Northbound	Left	1	216		216	216
	Left/Through	0				
	Through	2	890		445	
	Through/Right	0				
	Right	1	297	222	75	
	Total Lanes	4				
Southbound	Left	1	186		186	
	Left/Through	0				
	Through	2	1,031		516	516
	Through/Right	0				
	Right	1	152	152	0	
	Total Lanes	4				
			Sum of North/South Critical Volumes			**732**
Eastbound	Left	1	172		172	
	Left/Through	0				
	Through	3	1,787		596	596
	Through/Right	0				
	Right	1	269	216	53	
	Total Lanes	5				
Westbound	Left	1	222		222	222
	Left/Through	0				
	Through	3	1,566		522	
	Through/Right	0				
	Right	1	147	144	3	
	Total Lanes	5				
			Sum of East/West Critical Volumes			**818**
			Total Intersection Critical Volumes			**1,550**
Number of Clearance Intervals	**4**		**Intersection Capacity**			**1,375**
			Base CMA			**1.127**
Signal Coordination	**ATSAC + ATCS**		**Signal Coordination Adjustment**			**-0.100**
			Final CMA			**1.027**
			Level of Service (LOS)			**F**

NB/SB Rt. Turn Overlap With WB/EB Lefts

EB Rt. Turn Overlap with NB Left

Hirsch/Green Transportation Consulting, Inc.
Critical Movement Analysis (CMA) Worksheet

Project Name	Pico/Sepulveda Mixed-Use Project		
Intersection Number	14	**Date**	December 7, 2012
Intersection Name	North/South: Bundy Drive East/West: Olympic Boulevard		
Intersection Control	Signalized		
Analysis Period	PM Peak Hour		
Analysis Scenario	Future (2012) With Project Plus TOD/TDM Trip Reductions Only		

Approach Direction	Lane Type	No. of Lanes	Approach Volumes	Right-Turn on Red	Assigned Lane Volumes	Critical Moves
Northbound	Left	1	232		232	
	Left/Through	0				
	Through	2	1,549		774	774
	Through/Right	0				
	Right	1	374	244	130	
	Total Lanes	4				
Southbound	Left	1	285		285	285
	Left/Through	0				
	Through	2	1,287		644	
	Through/Right	0				
	Right	1	307	247	60	
	Total Lanes	4				
			Sum of North/South Critical Volumes			**1,059**
Eastbound	Left	1	494		494	494
	Left/Through	0				
	Through	3	1,511		504	
	Through/Right	0				
	Right	1	415	208	207	
	Total Lanes	5				
Westbound	Left	2	538		296	
	Left/Through	0				
	Through	3	1,495		498	498
	Through/Right	0				
	Right	1	394	142	252	
	Total Lanes	6				
			Sum of East/West Critical Volumes			**992**
			Total Intersection Critical Volumes			**2,051**
Number of Clearance Intervals	**4**		**Intersection Capacity**			**1,375**
			Base CMA			**1.492**
Signal Coordination	**ATSAC**		**Signal Coordination Adjustment**			**-0.070**
			Final CMA			**1.422**
			Level of Service (LOS)			**F**

Hirsch/Green Transportation Consulting, Inc.
Critical Movement Analysis (CMA) Worksheet

Project Name	Pico/Sepulveda Mixed-Use Project
Intersection Number	16 **Date** December 7, 2012
Intersection Name	North/South: Sawtelle Boulevard East/West: Olympic Boulevard
Intersection Control	Signalized
Analysis Period	PM Peak Hour
Analysis Scenario	Future (2012) With Project Plus TOD/TDM Trip Reductions Only

Approach Direction	Lane Type	No. of Lanes	Approach Volumes	Right-Turn on Red	Assigned Lane Volumes	Critical Moves
Northbound	Left	1	220		220	
	Left/Through	0				
	Through	1	558		558	558
	Through/Right	0				
	Right	1	480	353	127	
	Total Lanes	3				
Southbound	Left	1	406		406	406
	Left/Through	0				
	Through	1	713		386	
	Through/Right	1			386	
	Right	0	59	0		
	Total Lanes	3				
			Sum of North/South Critical Volumes			**964**
Eastbound	Left	1	22		22	
	Left/Through	0				
	Through	2	1,543		551	551
	Through/Right	1			551	
	Right	0	109	0		
	Total Lanes	4				
Westbound	Left	1	353		353	353
	Left/Through	0				
	Through	3	1,983		529	
	Through/Right	1			529	
	Right	0	133	0		
	Total Lanes	5				
			Sum of East/West Critical Volumes			**904**
			Total Intersection Critical Volumes			**1,868**
Number of Clearance Intervals	**4**		**Intersection Capacity**			**1,375**
			Base CMA			**1.359**
Signal Coordination	**ATSAC + ATCS**		**Signal Coordination Adjustment**			**-0.100**
			Final CMA			**1.259**
			Level of Service (LOS)			**F**

NB Rt. Turn Overlap with WB Left

Hirsch/Green Transportation Consulting, Inc.
Critical Movement Analysis (CMA) Worksheet

Project Name	Pico/Sepulveda Mixed-Use Project		
Intersection Number	17	**Date**	December 7, 2012
Intersection Name	North/South: Sepulveda Boulevard East/West: Olympic Boulevard		
Intersection Control	Signalized		
Analysis Period	PM Peak Hour		
Analysis Scenario	Future (2012) With Project Plus TOD/TDM Trip Reductions Only		

Approach Direction	Lane Type	No. of Lanes	Approach Volumes	Right-Turn on Red	Assigned Lane Volumes	Critical Moves
Northbound	Left	1	143		143	143
	Left/Through	0				
	Through	2	1,070		535	
	Through/Right	0				
	Right	1	206	206	0	
	Total Lanes	4				
Southbound	Left	1	81		81	
	Left/Through	0				
	Through	1	1,267		693	693
	Through/Right	1			693	
	Right	0	119	0		
	Total Lanes	3				
			Sum of North/South Critical Volumes			**836**
Eastbound	Left	1	119		119	
	Left/Through	0				
	Through	2	2,019		746	746
	Through/Right	1			746	
	Right	0	219	0		
	Total Lanes	4				
Westbound	Left	1	253		253	253
	Left/Through	0				
	Through	3	2,251		601	
	Through/Right	1			601	
	Right	0	153	0		
	Total Lanes	5				
			Sum of East/West Critical Volumes			**999**
			Total Intersection Critical Volumes			**1,835**
Number of Clearance Intervals	**3**		**Intersection Capacity**			**1,425**
			Base CMA			**1.288**
Signal Coordination	**ATSAC + ATCS**		**Signal Coordination Adjustment**			**-0.100**
			Final CMA			**1.188**
			Level of Service (LOS)			**F**

NB Rt. Turn Overlap with WB Left

Hirsch/Green Transportation Consulting, Inc.
Critical Movement Analysis (CMA) Worksheet

Project Name	Pico/Sepulveda Mixed-Use Project		
Intersection Number	18	**Date**	December 7, 2012
Intersection Name	North/South: Westwood Boulevard East/West: Olympic Boulevard		
Intersection Control	Signalized		
Analysis Period	PM Peak Hour		
Analysis Scenario	Future (2012) With Project Plus TOD/TDM Trip Reductions Only		

Approach Direction	Lane Type	No. of Lanes	Approach Volumes	Right-Turn on Red	Assigned Lane Volumes	Critical Moves
Northbound	Left	1	82		82	82
	Left/Through	0				
	Through	1	840		478	
	Through/Right	1			478	
	Right	0	115	0		
	Total Lanes	3				
Southbound	Left	1	243		243	
	Left/Through	0				
	Through	1	1,145		646	646
	Through/Right	1			646	
	Right	0	147	0		
	Total Lanes	3				
			Sum of North/South Critical Volumes			**728**
Eastbound	Left	1	81		81	
	Left/Through	0				
	Through	2	1,894		660	660
	Through/Right	1			660	
	Right	0	87	0		
	Total Lanes	4				
Westbound	Left	1	134		134	134
	Left/Through	0				
	Through	3	2,319		631	
	Through/Right	1			631	
	Right	0	204	0		
	Total Lanes	5				
			Sum of East/West Critical Volumes			**794**
			Total Intersection Critical Volumes			**1,522**
Number of Clearance Intervals	**4**		**Intersection Capacity**			**1,375**
			Base CMA			**1.107**
Signal Coordination	**ATSAC + ATCS**		**Signal Coordination Adjustment**			**-0.100**
			Final CMA			**1.007**
			Level of Service (LOS)			**F**

Hirsch/Green Transportation Consulting, Inc.
Critical Movement Analysis (CMA) Worksheet

Project Name	Pico/Sepulveda Mixed-Use Project		
Intersection Number	21	**Date**	December 7, 2012
Intersection Name	North/South: Sawtelle Boulevard East/West: Tennessee Avenue/I-405 SB Off-Ramp		
Intersection Control	Signalized		
Analysis Period	PM Peak Hour		
Analysis Scenario	Future (2012) With Project Plus TOD/TDM Trip Reductions Only		

Approach Direction	Lane Type	No. of Lanes	Approach Volumes	Right-Turn on Red	Assigned Lane Volumes	Critical Moves
Northbound	Left	1	89		89	89
	Left/Through	0				
	Through	2	881		440	
	Through/Right	0				
	Right	0	0	0		
	Total Lanes	3				
Southbound	Left	0	0			
	Left/Through	0				
	Through	1	1,172		607	607
	Through/Right	1			607	
	Right	0	42	0		
	Total Lanes	2				
			Sum of North/South Critical Volumes			**696**
Eastbound	Left	1	267		267	
	Left/Through	0				
	Through	0	0			
	Through/Right	0				
	Right	1	376	44	332	332
	Total Lanes	2				
Westbound	Left	1	418		418	418
	Left/Through	0				
	Through	0	28			
	Through/Right	1			28	
	Right	1	149	128	21	
	Total Lanes	3				
			Sum of East/West Critical Volumes			**750**
			Total Intersection Critical Volumes			**1,446**
Number of Clearance Intervals	**3**		**Intersection Capacity**			**1,425**
			Base CMA			**1.015**
Signal Coordination	**ATSAC + ATCS**		**Signal Coordination Adjustment**			**-0.100**
			Final CMA			**0.915**
			Level of Service (LOS)			**E**

East/West Opposed Phasing

Hirsch/Green Transportation Consulting, Inc.
Critical Movement Analysis (CMA) Worksheet

Project Name	Pico/Sepulveda Mixed-Use Project		
Intersection Number	24	**Date**	December 7, 2012
Intersection Name	North/South: I-10 EB Off-Ramp/34th Street East/West: Pico Boulevard		
Intersection Control	Signalized		
Analysis Period	PM Peak Hour		
Analysis Scenario	Future (2012) With Project Plus TOD/TDM Trip Reductions Only		

Approach Direction	Lane Type	No. of Lanes	Approach Volumes	Right-Turn on Red	Assigned Lane Volumes	Critical Moves
Northbound	Left	0	9			
	Left/Through	0				
	Left/Through/Right	1	0		61	61
	Through/Right	0				
	Right	0	52	0		
	Total Lanes	1				
Southbound	Left	1	285		160	160
	Left/Through	1			160	
	Through	0	35			
	Through/Right	0				
	Right	1	35	35	0	
	Total Lanes	3				
			Sum of North/South Critical Volumes			**221**
Eastbound	Left	0	0			
	Left/Through	0				
	Through	1	1,915		972	972
	Through/Right	1			972	
	Right	0	29	0		
	Total Lanes	2				
Westbound	Left	0	30			30
	Left/Through	1			466	
	Through	1	1,052		616	
	Through/Right	0				
	Right	0	0	0		
	Total Lanes	2				
			Sum of East/West Critical Volumes			**1,002**
			Total Intersection Critical Volumes			**1,223**
Number of Clearance Intervals	**3**		**Intersection Capacity**			**1,425**
			Base CMA			**0.858**
Signal Coordination	**None**		**Signal Coordination Adjustment**			**0.000**
			Final CMA			**0.858**
			Level of Service (LOS)			**D**

North/South Opposed Phasing

HCS+™ DETAILED REPORT

General Information		***Site Information***	
Analyst	*RRH*	Intersection	*24*
Agency or Co.	*Hirsch/Green*	Area Type	*All other areas*
Date Performed	*12/7/2012*	Jurisdiction	*City of Santa Monica*
Time Period	*PM Peak Hour*	Analysis Year	*Future (2012) With TOD/TDM*
		Project ID	*Pico/Sepulveda Mixed-Use Project*

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Number of Lanes, N_1		*2*	*0*	*0*	*2*		*0*	*1*	*0*	*1*	*1*	*1*
Lane Group		*TR*			*LT*			*LTR*		*L*	*LT*	*R*
Volume, V (vph)		*1915*	*29*	*30*	*1052*		*9*	*0*	*52*	*285*	*35*	*35*
% Heavy Vehicles, %HV		*0*	*0*	*0*	*0*		*0*	*0*	*0*	*0*	*0*	*0*
Peak-Hour Factor, PHF		*1.00*	*1.00*	*1.00*	*1.00*		*1.00*	*1.00*	*1.00*	*1.00*	*1.00*	*1.00*
Pretimed (P) or Actuated (A)		*P*	*P*	*P*	*P*		*P*	*P*	*P*	*P*	*P*	*P*
Start-up Lost Time, l_1		*2.0*			*2.0*			*2.0*		*2.0*	*2.0*	*2.0*
Extension of Effective Green, e		*2.0*			*2.0*			*2.0*		*2.0*	*2.0*	*2.0*
Arrival Type, AT		*3*			*3*			*3*		*3*	*3*	*3*
Unit Extension, UE		*3.0*			*3.0*			*3.0*		*3.0*	*3.0*	*3.0*
Filtering/Metering, I		*1.000*			*1.000*			*1.000*		*1.000*	*1.000*	*1.000*
Initial Unmet Demand, Q_b		*0.0*			*0.0*			*0.0*		*0.0*	*0.0*	*0.0*
Ped / Bike / RTOR Volumes	*0*	*0*	*0*	*0*	*0*		*0*	*0*	*0*	*0*	*0*	*35*
Lane Width		*12.0*			*12.0*			*12.0*		*12.0*	*12.0*	*12.0*
Parking / Grade / Parking	*N*	*0*	*N*	*N*	*0*	*N*	*N*	*0*	*N*	*N*	*0*	*N*
Parking Maneuvers, N_m												
Buses Stopping, N_B		*0*			*0*			*0*		*0*	*0*	*0*
Min. Time for Pedestrians, G_p	*3.2*			*3.2*			*3.2*			*3.2*		

Phasing	EW Perm	02	03	04	NB Only	SB Only	07	08
Timing	G = *55.0*	G = *0.0*	G = *0.0*	G = *0.0*	G = *5.0*	G = *15.0*	G = *0.0*	G = *0.0*
	Y = *5*	Y = *0*	Y = *0*	Y = *0*	Y = *5*	Y = *5*	Y = *0*	Y = *0*
Duration of Analysis, T = *1.00*						Cycle Length, C = *90.0*		

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Adjusted Flow Rate, v		*1944*			*1082*			*61*		*285*	*35*	*0*
Lane Group Capacity, c		*2206*			*1607*			*93*		*301*	*317*	*269*
v/c Ratio, X		*0.88*			*0.67*			*0.66*		*0.95*	*0.11*	*0.00*
Total Green Ratio, g/C		*0.61*			*0.61*			*0.06*		*0.17*	*0.17*	*0.17*
Uniform Delay, d_1		*14.7*			*11.6*			*41.7*		*37.1*	*31.8*	*31.3*
Progression Factor, PF		*1.000*			*1.000*			*1.000*		*1.000*	*1.000*	*1.000*
Delay Calibration, k		*0.50*			*0.50*			*0.50*		*0.50*	*0.50*	*0.50*
Incremental Delay, d_2		*5.9*			*2.3*			*34.9*		*63.9*	*0.7*	*0.0*
Initial Queue Delay, d_3		*0.0*			*0.0*			*0.0*		*0.0*	*0.0*	*0.0*
Control Delay		*20.6*			*13.9*			*76.6*		*101.0*	*32.5*	*31.3*
Lane Group LOS		*C*			*B*			*E*		*F*	*C*	*C*
Approach Delay	*20.6*			*13.9*			*76.6*			*93.5*		
Approach LOS	*C*			*B*			*E*			*F*		
Intersection Delay	*26.3*			X_C = *0.88*			Intersection LOS			*C*		

Hirsch/Green Transportation Consulting, Inc.
Critical Movement Analysis (CMA) Worksheet

Project Name	Pico/Sepulveda Mixed-Use Project		
Intersection Number	25	**Date**	December 7, 2012
Intersection Name	North/South: Centinela Avenue East/West: Pico Boulevard		
Intersection Control	Signalized		
Analysis Period	PM Peak Hour		
Analysis Scenario	Future (2012) With Project Plus TOD/TDM Trip Reductions Only		

Approach Direction	Lane Type	No. of Lanes	Approach Volumes	Right-Turn on Red	Assigned Lane Volumes	Critical Moves
	Left	1	35		35	35
	Left/Through	0				
Northbound	Through	1	464		464	
	Through/Right	0				
	Right	1	119	46	73	
	Total Lanes	3				
	Left	1	118		118	
	Left/Through	0				
Southbound	Through	2	1,233		616	616
	Through/Right	0				
	Right	1	192	192	0	
	Total Lanes	4				
			Sum of North/South Critical Volumes			**651**
	Left	1	173		173	
	Left/Through	0				
Eastbound	Through	1	1,583		1,088	1,088
	Through/Right	1			1,088	
	Right	0	594	0		
	Total Lanes	3				
	Left	1	91		91	91
	Left/Through	0				
Westbound	Through	1	757		602	
	Through/Right	1			602	
	Right	0	446	0		
	Total Lanes	3				
			Sum of East/West Critical Volumes			**1,179**
			Total Intersection Critical Volumes			**1,830**
Number of Clearance Intervals	**2**		**Intersection Capacity**			**1,500**
			Base CMA			**1.220**
Signal Coordination	**ATSAC**		**Signal Coordination Adjustment**			**-0.070**
			Final CMA			**1.150**
			Level of Service (LOS)			**F**

Hirsch/Green Transportation Consulting, Inc.
Critical Movement Analysis (CMA) Worksheet

Project Name	Pico/Sepulveda Mixed-Use Project		
Intersection Number	26	**Date**	December 7, 2012
Intersection Name	North/South: Bundy Drive East/West: Pico Boulevard		
Intersection Control	Signalized		
Analysis Period	PM Peak Hour		
Analysis Scenario	Future (2012) With Project Plus TOD/TDM Trip Reductions Only		

Approach Direction	Lane Type	No. of Lanes	Approach Volumes	Right-Turn on Red	Assigned Lane Volumes	Critical Moves
Northbound	Left	1	223		223	223
	Left/Through	0				
	Through	2	1,770		885	
	Through/Right	0				
	Right	1	228	49	179	
	Total Lanes	4				
Southbound	Left	1	93		93	
	Left/Through	0				
	Through	2	1,832		916	916
	Through/Right	0				
	Right	1	112	97	15	
	Total Lanes	4				
			Sum of North/South Critical Volumes			**1,139**
Eastbound	Left	1	194		194	194
	Left/Through	0				
	Through	2	1,234		469	
	Through/Right	1			469	
	Right	0	173	0		
	Total Lanes	4				
Westbound	Left	1	59		59	
	Left/Through	0				
	Through	2	997		373	373
	Through/Right	1			373	
	Right	0	123	0		
	Total Lanes	4				
			Sum of East/West Critical Volumes			**567**
			Total Intersection Critical Volumes			**1,706**
Number of Clearance Intervals	**4**		**Intersection Capacity**			**1,375**
			Base CMA			**1.241**
Signal Coordination	**ATSAC**		**Signal Coordination Adjustment**			**-0.070**
			Final CMA			**1.171**
			Level of Service (LOS)			**F**

Hirsch/Green Transportation Consulting, Inc.
Critical Movement Analysis (CMA) Worksheet

Project Name	Pico/Sepulveda Mixed-Use Project		
Intersection Number	27	**Date**	December 7, 2012
Intersection Name	North/South: Barrington Avenue East/West: Pico Boulevard		
Intersection Control	Signalized		
Analysis Period	PM Peak Hour		
Analysis Scenario	Future (2012) With Project Plus TOD/TDM Trip Reductions Only		

Approach Direction	Lane Type	No. of Lanes	Approach Volumes	Right-Turn on Red	Assigned Lane Volumes	Critical Moves
	Left	1	107		107	107
	Left/Through	0				
Northbound	Through	1	769		417	
	Through/Right	1			417	
	Right	0	65	0		
	Total Lanes	3				
	Left	1	170		170	
	Left/Through	0				
Southbound	Through	2	1,440		519	519
	Through/Right	1			519	
	Right	0	116	0		
	Total Lanes	4				
			Sum of North/South Critical Volumes			**626**
	Left	1	169		169	
	Left/Through	0				
Eastbound	Through	2	1,146		436	436
	Through/Right	1			436	
	Right	0	161	0		
	Total Lanes	4				
	Left	1	174		174	174
	Left/Through	0				
Westbound	Through	2	980		360	
	Through/Right	1			360	
	Right	0	101	0		
	Total Lanes	4				
			Sum of East/West Critical Volumes			**610**
			Total Intersection Critical Volumes			**1,236**
Number of Clearance Intervals	**2**		**Intersection Capacity**			**1,500**
			Base CMA			**0.824**
Signal Coordination	**ATSAC**		**Signal Coordination Adjustment**			**-0.070**
			Final CMA			**0.754**
			Level of Service (LOS)			**C**

Hirsch/Green Transportation Consulting, Inc.
Critical Movement Analysis (CMA) Worksheet

Project Name	Pico/Sepulveda Mixed-Use Project		
Intersection Number	28	**Date**	December 7, 2012
Intersection Name	North/South: Gateway Boulevard East/West: Pico Boulevard		
Intersection Control	Signalized		
Analysis Period	PM Peak Hour		
Analysis Scenario	Future (2012) With Project Plus TOD/TDM Trip Reductions Only		

Approach Direction	Lane Type	No. of Lanes	Approach Volumes	Right-Turn on Red	Assigned Lane Volumes	Critical Moves
	Left	0	0			
	Left/Through	0				
Northbound	Through	0	0			
	Through/Right	0				
	Right	2	980	301	340	340
	Total Lanes	2				
	Left	0	0			
	Left/Through	0				
Southbound	Through	0	0			
	Through/Right	0				
	Right	0	0	0		
	Total Lanes	0				
			Sum of North/South Critical Volumes			**340**
	Left	0	0			
	Left/Through	0				
Eastbound	Through	2	1,316		449	449
	Through/Right	1			449	
	Right	0	32	0		
	Total Lanes	3				
	Left	2	1,094		602	602
	Left/Through	0				
Westbound	Through	2	1,220		610	
	Through/Right	0				
	Right	0	0	0		
	Total Lanes	4				
			Sum of East/West Critical Volumes			**1,051**
			Total Intersection Critical Volumes			**1,391**
Number of Clearance Intervals	**3**		**Intersection Capacity**			**1,425**
			Base CMA			**0.976**
Signal Coordination	**ATSAC**		**Signal Coordination Adjustment**			**-0.070**
			Final CMA			**0.906**
			Level of Service (LOS)			**E**

Hirsch/Green Transportation Consulting, Inc.
Critical Movement Analysis (CMA) Worksheet

Project Name	Pico/Sepulveda Mixed-Use Project		
Intersection Number	29	**Date**	December 7, 2012
Intersection Name	North/South: Sawtelle Boulevard East/West: Pico Boulevard		
Intersection Control	Signalized		
Analysis Period	PM Peak Hour		
Analysis Scenario	Future (2012) With Project Plus TOD/TDM Trip Reductions Only		

Approach Direction	Lane Type	No. of Lanes	Approach Volumes	Right-Turn on Red	Assigned Lane Volumes	Critical Moves
Northbound	Left	1	315		315	315
	Left/Through	0				
	Through	1	693		505	
	Through/Right	1			505	
	Right	0	317	0		
	Total Lanes	3				
Southbound	Left	1	419		419	
	Left/Through	0				
	Through	2	1,365		682	682
	Through/Right	0				
	Right	1	233	60	173	
	Total Lanes	4				
			Sum of North/South Critical Volumes			**997**
Eastbound	Left	1	83		83	
	Left/Through	0				
	Through	2	1,347		539	539
	Through/Right	1			539	
	Right	0	270	0		
	Total Lanes	4				
Westbound	Left	1	228		228	228
	Left/Through	0				
	Through	2	1,724		646	
	Through/Right	1			646	
	Right	0	215	0		
	Total Lanes	4				
			Sum of East/West Critical Volumes			**767**
			Total Intersection Critical Volumes			**1,764**
Number of Clearance Intervals	**4**		**Intersection Capacity**			**1,375**
			Base CMA			**1.283**
Signal Coordination	**ATSAC + ATCS**		**Signal Coordination Adjustment**			**-0.100**
			Final CMA			**1.183**
			Level of Service (LOS)			**F**

Hirsch/Green Transportation Consulting, Inc.
Critical Movement Analysis (CMA) Worksheet

Project Name	Pico/Sepulveda Mixed-Use Project		
Intersection Number	30	**Date**	December 7, 2012
Intersection Name	North/South: Cotner Avenue East/West: Pico Boulevard		
Intersection Control	Signalized		
Analysis Period	PM Peak Hour		
Analysis Scenario	Future (2012) With Project Plus TOD/TDM Trip Reductions Only		

Approach Direction	Lane Type	No. of Lanes	Approach Volumes	Right-Turn on Red	Assigned Lane Volumes	Critical Moves
	Left	0	0			
	Left/Through	0				
Northbound	Through	0	0			
	Through/Right	0				
	Right	0	0	0		
	Total Lanes	0				
	Left	1	101		101	101
	Left/Through	0				
Southbound	Through	0	0			
	Through/Right	0				
	Right	1	296	296	0	
	Total Lanes	2				
			Sum of North/South Critical Volumes			**101**
	Left	1	451		451	451
	Left/Through	0				
Eastbound	Through	3	1,624		541	
	Through/Right	0				
	Right	0	0	0		
	Total Lanes	4				
	Left	0	0			
	Left/Through	0				
Westbound	Through	2	1,872		753	753
	Through/Right	1			753	
	Right	0	386	0		
	Total Lanes	3				
			Sum of East/West Critical Volumes			**1,204**
			Total Intersection Critical Volumes			**1,305**
Number of Clearance Intervals	**3**		**Intersection Capacity**			**1,425**
			Base CMA			**0.916**
Signal Coordination	**ATSAC + ATCS**		**Signal Coordination Adjustment**			**-0.100**
			Final CMA			**0.816**
			Level of Service (LOS)			**D**

Hirsch/Green Transportation Consulting, Inc.
Critical Movement Analysis (CMA) Worksheet

Project Name Pico/Sepulveda Mixed-Use Project
Intersection Number 31 **Date** December 7, 2012
Intersection Name North/South: Sepulveda Boulevard
East/West: Pico Boulevard
Intersection Control Signalized
Analysis Period PM Peak Hour
Analysis Scenario Future (2012) With Project Plus TOD/TDM Trip Reductions Only

Approach Direction	Lane Type	No. of Lanes	Approach Volumes	Right-Turn on Red	Assigned Lane Volumes	Critical Moves
	Left	1	231		231	231
	Left/Through	0				
Northbound	Through	1	1,238		722	
	Through/Right	1			722	
	Right	0	207	0		
	Total Lanes	3				
	Left	1	127		127	
	Left/Through	0				
Southbound	Through	1	1,634		888	888
	Through/Right	1			888	
	Right	0	143	0		
	Total Lanes	3				
				Sum of North/South Critical Volumes		**1,119**
	Left	1	380		380	380
	Left/Through	0				
Eastbound	Through	3	1,630		543	
	Through/Right	0				
	Right	1	153	153	0	
	Total Lanes	5				
	Left	1	316		316	
	Left/Through	0				
Westbound	Through	2	1,701		593	593
	Through/Right	1			593	
	Right	0	78	0		
	Total Lanes	4				
				Sum of East/West Critical Volumes		**973**
				Total Intersection Critical Volumes		**2,092**
Number of Clearance Intervals	**4**			**Intersection Capacity**		**1,100 ****
				Base CMA		**1.902**
Signal Coordination	**ATSAC + ATCS**			**Signal Coordination Adjustment**		**-0.100**
				Final CMA		**1.802**
				Level of Service (LOS)		**F**

** Assumed 20% reduction in capacity due to Expo Line at-grade crossing

EB Rt. Turn Overlap with NB Left

Hirsch/Green Transportation Consulting, Inc.
Critical Movement Analysis (CMA) Worksheet

Project Name	Pico/Sepulveda Mixed-Use Project		
Intersection Number	33	**Date**	December 7, 2012
Intersection Name	North/South: Westwood Boulevard East/West: Pico Boulevard		
Intersection Control	Signalized		
Analysis Period	PM Peak Hour		
Analysis Scenario	Future (2012) With Project Plus TOD/TDM Trip Reductions Only		

Approach Direction	Lane Type	No. of Lanes	Approach Volumes	Right-Turn on Red	Assigned Lane Volumes	Critical Moves
Northbound	Left	1	138		138	138
	Left/Through	0				
	Through	2	638		319	
	Through/Right	0				
	Right	1	126	126	0	
	Total Lanes	4				
Southbound	Left	1	210		210	
	Left/Through	0				
	Through	1	976		575	575
	Through/Right	1			575	
	Right	0	174	0		
	Total Lanes	3				
			Sum of North/South Critical Volumes			**713**
Eastbound	Left	1	177		177	177
	Left/Through	0				
	Through	3	1,194		398	
	Through/Right	0				
	Right	1	218	138	80	
	Total Lanes	5				
Westbound	Left	1	204		204	
	Left/Through	0				
	Through	3	1,525		508	508
	Through/Right	0				
	Right	1	261	210	51	
	Total Lanes	5				
			Sum of East/West Critical Volumes			**685**
			Total Intersection Critical Volumes			**1,398**
Number of Clearance Intervals	**4**		**Intersection Capacity**			**1,375**
			Base CMA			**1.017**
Signal Coordination	**ATSAC + ATCS**		**Signal Coordination Adjustment**			**-0.100**
			Final CMA			**0.917**
			Level of Service (LOS)			**E**

NB Rt. Turn Overlap with WB Left

EB/WB Rt. Turn Overlap With NB/SB Lefts

Hirsch/Green Transportation Consulting, Inc.
Critical Movement Analysis (CMA) Worksheet

Project Name	Pico/Sepulveda Mixed-Use Project		
Intersection Number	34	**Date**	December 7, 2012
Intersection Name	North/South: Overland Avenue East/West: Pico Boulevard		
Intersection Control	Signalized		
Analysis Period	PM Peak Hour		
Analysis Scenario	Future (2012) With Project Plus TOD/TDM Trip Reductions Only		

Approach Direction	Lane Type	No. of Lanes	Approach Volumes	Right-Turn on Red	Assigned Lane Volumes	Critical Moves
Northbound	Left	2	333		183	
	Left/Through	0				
	Through	1	616		616	616
	Through/Right	0				
	Right	2	584	170	207	
	Total Lanes	5				
Southbound	Left	1	59		59	59
	Left/Through	0				
	Through	1	914		476	
	Through/Right	1			476	
	Right	0	39	0		
	Total Lanes	3				
			Sum of North/South Critical Volumes			**675**
Eastbound	Left	1	87		87	
	Left/Through	0				
	Through	2	1,029		487	487
	Through/Right	1			487	
	Right	0	433	0		
	Total Lanes	4				
Westbound	Left	2	618		340	340
	Left/Through	0				
	Through	2	1,621		551	
	Through/Right	1			551	
	Right	0	31	0		
	Total Lanes	5				
			Sum of East/West Critical Volumes			**827**
			Total Intersection Critical Volumes			**1,502**
Number of Clearance Intervals	**4**		**Intersection Capacity**			**1,375**
			Base CMA			**1.092**
Signal Coordination	**ATSAC + ATCS**		**Signal Coordination Adjustment**			**-0.100**
			Final CMA			**0.992**
			Level of Service (LOS)			**E**

Hirsch/Green Transportation Consulting, Inc.
Critical Movement Analysis (CMA) Worksheet

Project Name	Pico/Sepulveda Mixed-Use Project		
Intersection Number	38	**Date**	December 7, 2012
Intersection Name	North/South: Motor Avenue/Fox Studios Driveway East/West: Pico Boulevard		
Intersection Control	Signalized		
Analysis Period	PM Peak Hour		
Analysis Scenario	Future (2012) With Project Plus TOD/TDM Trip Reductions Only		

Approach Direction	Lane Type	No. of Lanes	Approach Volumes	Right-Turn on Red	Assigned Lane Volumes	Critical Moves
Northbound	Left	1	248		248	248
	Left/Through	0				
	Through	0	5			
	Through/Right	1			13	
	Right	1	486	465	13	
	Total Lanes	3				
Southbound	Left	1	103		103	
	Left/Through	0				
	Through	0	5			
	Through/Right	1			196	196
	Right	0	191	0		
	Total Lanes	2				
			Sum of North/South Critical Volumes			**444**
Eastbound	Left	1	41		41	
	Left/Through	0				
	Through	2	1,479		599	599
	Through/Right	1			599	
	Right	0	319	0		
	Total Lanes	4				
Westbound	Left	1	465		465	465
	Left/Through	0				
	Through	2	1,895		649	
	Through/Right	1			649	
	Right	0	52	0		
	Total Lanes	4				
			Sum of East/West Critical Volumes			**1,064**
			Total Intersection Critical Volumes			**1,508**
Number of Clearance Intervals	**4**		**Intersection Capacity**			**1,375**
			Base CMA			**1.097**
Signal Coordination	**ATSAC + ATCS**		**Signal Coordination Adjustment**			**-0.100**
			Final CMA			**0.997**
			Level of Service (LOS)			**E**

North/South Opposed Phasing
NB Rt. Turn Overlap with WB Left

Hirsch/Green Transportation Consulting, Inc.
Critical Movement Analysis (CMA) Worksheet

Project Name	Pico/Sepulveda Mixed-Use Project		
Intersection Number	40	**Date**	December 7, 2012
Intersection Name	North/South: Sepulveda Boulevard East/West: Exposition Boulevard		
Intersection Control	Signalized		
Analysis Period	PM Peak Hour		
Analysis Scenario	Future (2012) With Project Plus TOD/TDM Trip Reductions Only		

Approach Direction	Lane Type	No. of Lanes	Approach Volumes	Right-Turn on Red	Assigned Lane Volumes	Critical Moves
	Left	1	151		151	
	Left/Through	0				
Northbound	Through	1	1,724		877	877
	Through/Right	1			877	
	Right	0	30	0		
	Total Lanes	3				
	Left	1	143		143	143
	Left/Through	0				
Southbound	Through	2	1,835		675	
	Through/Right	1			675	
	Right	0	191	0		
	Total Lanes	4				
				Sum of North/South Critical Volumes		**1,020**
	Left	1	93		93	
	Left/Through	0				
Eastbound	Through	0	263			
	Through/Right	1			478	478
	Right	0	215	0		
	Total Lanes	2				
	Left	1	39		39	39
	Left/Through	0				
Westbound	Through	0	68			
	Through/Right	1			128	
	Right	0	60	0		
	Total Lanes	2				
				Sum of East/West Critical Volumes		**517**
				Total Intersection Critical Volumes		**1,537**
Number of Clearance Intervals	**2**			**Intersection Capacity**		**1,050** **
** Assumed 30% reduction in capacity due to Expo Line at-grade crossing				**Base CMA**		**1.464**
Signal Coordination	**ATSAC + ATCS**			**Signal Coordination Adjustment**		**-0.100**
				Final CMA		**1.364**
				Level of Service (LOS)		**F**

Hirsch/Green Transportation Consulting, Inc.
Critical Movement Analysis (CMA) Worksheet

Project Name	Pico/Sepulveda Mixed-Use Project		
Intersection Number	44	**Date**	December 7, 2012
Intersection Name	North/South: Sawtelle Boulevard East/West: National Boulevard		
Intersection Control	Signalized		
Analysis Period	PM Peak Hour		
Analysis Scenario	Future (2012) With Project Plus TOD/TDM Trip Reductions Only		

Approach Direction	Lane Type	No. of Lanes	Approach Volumes	Right-Turn on Red	Assigned Lane Volumes	Critical Moves
	Left	1	100		100	100
	Left/Through	0				
Northbound	Through	1	536		320	
	Through/Right	1			320	
	Right	0	103	0		
	Total Lanes	3				
	Left	2	525		289	
	Left/Through	0				
Southbound	Through	1	1,439		757	757
	Through/Right	1			757	
	Right	0	75	0		
	Total Lanes	4				
			Sum of North/South Critical Volumes			**857**
	Left	1	144		144	144
	Left/Through	0				
Eastbound	Through	1	1,095		614	
	Through/Right	1			614	
	Right	0	134	0		
	Total Lanes	3				
	Left	1	121		121	
	Left/Through	0				
Westbound	Through	1	1,280		740	740
	Through/Right	1			740	
	Right	0	199	0		
	Total Lanes	3				
			Sum of East/West Critical Volumes			**884**
			Total Intersection Critical Volumes			**1,741**
Number of Clearance Intervals	**3**		**Intersection Capacity**			**1,425**
			Base CMA			**1.222**
Signal Coordination	**ATSAC + ATCS**		**Signal Coordination Adjustment**			**-0.100**
			Final CMA			**1.122**
			Level of Service (LOS)			**F**

Hirsch/Green Transportation Consulting, Inc.
Critical Movement Analysis (CMA) Worksheet

Project Name	Pico/Sepulveda Mixed-Use Project		
Intersection Number	47	**Date**	December 7, 2012
Intersection Name	North/South: Sepulveda Boulevard East/West: National Boulevard		
Intersection Control	Signalized		
Analysis Period	PM Peak Hour		
Analysis Scenario	Future (2012) With Project Plus TOD/TDM Trip Reductions Only		

Approach Direction	Lane Type	No. of Lanes	Approach Volumes	Right-Turn on Red	Assigned Lane Volumes	Critical Moves
Northbound	Left	1	300		300	300
	Left/Through	0				
	Through	1	1,629		908	
	Through/Right	1			908	
	Right	0	188	0		
	Total Lanes	3				
Southbound	Left	1	250		250	
	Left/Through	0				
	Through	1	1,727		1,027	1,027
	Through/Right	1			1,027	
	Right	0	327	0		
	Total Lanes	3				
			Sum of North/South Critical Volumes			**1,327**
Eastbound	Left	2	322		177	
	Left/Through	0				
	Through	1	1,062		662	662
	Through/Right	1			662	
	Right	0	262	0		
	Total Lanes	4				
Westbound	Left	1	206		206	206
	Left/Through	0				
	Through	1	1,062		602	
	Through/Right	1			602	
	Right	0	143	0		
	Total Lanes	3				
			Sum of East/West Critical Volumes			**868**
			Total Intersection Critical Volumes			**2,195**
Number of Clearance Intervals	**4**		**Intersection Capacity**			**1,375**
			Base CMA			**1.596**
Signal Coordination	**ATSAC + ATCS**		**Signal Coordination Adjustment**			**-0.100**
			Final CMA			**1.496**
			Level of Service (LOS)			**F**

Hirsch/Green Transportation Consulting, Inc.
Critical Movement Analysis (CMA) Worksheet

Project Name	Pico/Sepulveda Mixed-Use Project		
Intersection Number	48	**Date**	December 7, 2012
Intersection Name	North/South: Westwood Boulevard East/West: National Boulevard		
Intersection Control	Signalized		
Analysis Period	PM Peak Hour		
Analysis Scenario	Future (2012) With Project Plus TOD/TDM Trip Reductions Only		

Approach Direction	Lane Type	No. of Lanes	Approach Volumes	Right-Turn on Red	Assigned Lane Volumes	Critical Moves
Northbound	Left	1	152		152	152
	Left/Through	0				
	Through	1	236		136	
	Through/Right	1			136	
	Right	0	36	0		
	Total Lanes	3				
Southbound	Left	1	163		163	
	Left/Through	0				
	Through	1	808		808	808
	Through/Right	0				
	Right	1	288	133	155	
	Total Lanes	3				
			Sum of North/South Critical Volumes			**960**
Eastbound	Left	1	266		266	266
	Left/Through	0				
	Through	1	621		476	
	Through/Right	1			476	
	Right	0	330	0		
	Total Lanes	3				
Westbound	Left	1	81		81	
	Left/Through	0				
	Through	1	472		303	303
	Through/Right	1			303	
	Right	0	134	0		
	Total Lanes	3				
			Sum of East/West Critical Volumes			**569**
			Total Intersection Critical Volumes			**1,529**
Number of Clearance Intervals	**2**		**Intersection Capacity**			**1,500**
			Base CMA			**1.019**
Signal Coordination	**ATSAC + ATCS**		**Signal Coordination Adjustment**			**-0.100**
			Final CMA			**0.919**
			Level of Service (LOS)			**E**

Hirsch/Green Transportation Consulting, Inc.
Critical Movement Analysis (CMA) Worksheet

Project Name	Pico/Sepulveda Mixed-Use Project
Intersection Number	49 **Date** December 7, 2012
Intersection Name	North/South: Overland Avenue East/West: I-10 WB On/Off-Ramps/National Boulevard
Intersection Control	Signalized
Analysis Period	PM Peak Hour
Analysis Scenario	Future (2012) With Project Plus TOD/TDM Trip Reductions Only

Approach Direction	Lane Type	No. of Lanes	Approach Volumes	Right-Turn on Red	Assigned Lane Volumes	Critical Moves
Northbound	Left	1	65		65	65
	Left/Through	0				
	Through	3	905		302	
	Through/Right	0				
	Right	1	634	368	266	
	Total Lanes	5				
Southbound	Left	2	715		393	
	Left/Through	0				
	Through	1	1,732		930	930
	Through/Right	1			930	
	Right	0	129	0		
	Total Lanes	4				
			Sum of North/South Critical Volumes			**995**
Eastbound	Left	1	249		192	
	Left/Through	1			192	
	Through	0	135			
	Through/Right	0				
	Right	1	451	32	419	419
	Total Lanes	3				
Westbound	Left	0	234			
	Left/Through	1			368	
	Through	1	503		368	368
	Through/Right	0				
	Right	1	610	346	264	
	Total Lanes	3				
			Sum of East/West Critical Volumes			**787**
			Total Intersection Critical Volumes			**1,782**
Number of Clearance Intervals	**4**		**Intersection Capacity**			**1,375**
			Base CMA			**1.296**
Signal Coordination	**ATSAC + ATCS**		**Signal Coordination Adjustment**			**-0.100**
			Final CMA			**1.196**
			Level of Service (LOS)			**F**

NB Rt. Turn Overlap with WB Left

East/West Opposed Phasing

Hirsch/Green Transportation Consulting, Inc.
Critical Movement Analysis (CMA) Worksheet

Project Name	Pico/Sepulveda Mixed-Use Project		
Intersection Number	54	**Date**	December 7, 2012
Intersection Name	North/South: Sepulveda Boulevard East/West: Venice Boulevard		
Intersection Control	Signalized		
Analysis Period	PM Peak Hour		
Analysis Scenario	Future (2012) With Project Plus TOD/TDM Trip Reductions Only		

Approach Direction	Lane Type	No. of Lanes	Approach Volumes	Right-Turn on Red	Assigned Lane Volumes	Critical Moves
Northbound	Left	1	115		115	
	Left/Through	0				
	Through	2	1,492		746	746
	Through/Right	0				
	Right	1	278	98	180	
	Total Lanes	4				
Southbound	Left	1	115		115	115
	Left/Through	0				
	Through	2	1,085		542	
	Through/Right	0				
	Right	1	221	122	99	
	Total Lanes	4				
			Sum of North/South Critical Volumes			**861**
Eastbound	Left	1	245		245	245
	Left/Through	0				
	Through	3	1,499		500	
	Through/Right	0				
	Right	1	271	160	111	
	Total Lanes	5				
Westbound	Left	1	192		192	
	Left/Through	0				
	Through	3	1,357		452	452
	Through/Right	0				
	Right	1	160	58	102	
	Total Lanes	5				
			Sum of East/West Critical Volumes			**697**
			Total Intersection Critical Volumes			**1,558**
Number of Clearance Intervals	**4**		**Intersection Capacity**			**1,375**
			Base CMA			**1.133**
Signal Coordination	**ATSAC**		**Signal Coordination Adjustment**			**-0.070**
			Final CMA			**1.063**
			Level of Service (LOS)			**F**

Future (2012) With Modified Project Plus Physical Mitigation

AM Peak Hour

Hirsch/Green Transportation Consulting, Inc.
Critical Movement Analysis (CMA) Worksheet

Project Name	Pico/Sepulveda Mixed-Use Project		
Intersection Number	18	**Date**	December 7, 2012
Intersection Name	North/South: Westwood Boulevard East/West: Olympic Boulevard		
Intersection Control	Signalized		
Analysis Period	AM Peak Hour		
Analysis Scenario	Future (2012) With Project Plus TOD/TDM Plus Physical Mitigation		

Approach Direction	Lane Type	No. of Lanes	Approach Volumes	Right-Turn on Red	Assigned Lane Volumes	Critical Moves
Northbound	Left	1	141		141	
	Left/Through	0				
	Through	1	932		554	554
	Through/Right	1			554	
	Right	0	175	0		
	Total Lanes	3				
Southbound	Left	1	153		153	153
	Left/Through	0				
	Through	2	568		284	
	Through/Right	0				
	Right	1	139	73	66	
	Total Lanes	4				
			Sum of North/South Critical Volumes			**707**
Eastbound	Left	1	73		73	
	Left/Through	0				
	Through	2	2,411		837	837
	Through/Right	1			837	
	Right	0	101	0		
	Total Lanes	4				
Westbound	Left	1	99		99	99
	Left/Through	0				
	Through	3	2,233		602	
	Through/Right	1			602	
	Right	0	177	0		
	Total Lanes	5				
			Sum of East/West Critical Volumes			**936**
			Total Intersection Critical Volumes			**1,643**
Number of Clearance Intervals	**4**		**Intersection Capacity**			**1,375**
			Base CMA			**1.195**
Signal Coordination	**ATSAC + ATCS**		**Signal Coordination Adjustment**			**-0.100**
			Final CMA			**1.095**
			Level of Service (LOS)			**F**

SB Rt. Turn Overlap with EB Left

Hirsch/Green Transportation Consulting, Inc.
Critical Movement Analysis (CMA) Worksheet

Project Name Pico/Sepulveda Mixed-Use Project
Intersection Number 21 **Date** December 7, 2012
Intersection Name North/South: Sawtelle Boulevard
East/West: Tennessee Avenue/I-405 SB Off-Ramp
Intersection Control Signalized
Analysis Period AM Peak Hour
Analysis Scenario Future (2012) With Project Plus TOD/TDM Plus Physical Mitigation

Approach Direction	Lane Type	No. of Lanes	Approach Volumes	Right-Turn on Red	Assigned Lane Volumes	Critical Moves
Northbound	Left	1	142		142	142
	Left/Through	0				
	Through	2	843		422	
	Through/Right	0				
	Right	0	0	0		
	Total Lanes	3				
Southbound	Left	0	0			
	Left/Through	0				
	Through	1	542		290	290
	Through/Right	1			290	
	Right	0	38	0		
	Total Lanes	2				
			Sum of North/South Critical Volumes			**432**
Eastbound	Left	1	36		36	36
	Left/Through	0				
	Through	0	0			
	Through/Right	0				
	Right	1	69	69	0	
	Total Lanes	2				
Westbound	Left	1	405		346	
	Left/Through	0				
	Left/Through/Right	1	169		346	346
	Through/Right	0				
	Right	1	468	5	346	
	Total Lanes	3				
			Sum of East/West Critical Volumes			**382**
			Total Intersection Critical Volumes			**814**
Number of Clearance Intervals	**3**		**Intersection Capacity**			**1,425**
			Base CMA			**0.571**
Signal Coordination	**ATSAC + ATCS**		**Signal Coordination Adjustment**			**-0.100**
			Final CMA			**0.471**
			Level of Service (LOS)			**A**

East/West Opposed Phasing

Hirsch/Green Transportation Consulting, Inc.
Critical Movement Analysis (CMA) Worksheet

Project Name	Pico/Sepulveda Mixed-Use Project		
Intersection Number	54	**Date**	December 7, 2012
Intersection Name	North/South: Sepulveda Boulevard East/West: Venice Boulevard		
Intersection Control	Signalized		
Analysis Period	AM Peak Hour		
Analysis Scenario	Future (2012) With Project Plus TOD/TDM Plus Physical Mitigation		

Approach Direction	Lane Type	No. of Lanes	Approach Volumes	Right-Turn on Red	Assigned Lane Volumes	Critical Moves
Northbound	Left	1	93		93	
	Left/Through	0				
	Through	2	1,231		465	465
	Through/Right	1			465	
	Right	0	165	0		
	Total Lanes	4				
Southbound	Left	1	86		86	86
	Left/Through	0				
	Through	2	554		277	
	Through/Right	0				
	Right	1	195	134	61	
	Total Lanes	4				
			Sum of North/South Critical Volumes			**551**
Eastbound	Left	1	267		267	267
	Left/Through	0				
	Through	3	1,321		440	
	Through/Right	0				
	Right	1	421	137	284	
	Total Lanes	5				
Westbound	Left	1	191		191	
	Left/Through	0				
	Through	3	1,553		518	518
	Through/Right	0				
	Right	1	160	43	117	
	Total Lanes	5				
			Sum of East/West Critical Volumes			**785**
			Total Intersection Critical Volumes			**1,336**
Number of Clearance Intervals	**4**		**Intersection Capacity**			**1,375**
			Base CMA			**0.972**
Signal Coordination	**ATSAC**		**Signal Coordination Adjustment**			**-0.070**
			Final CMA			**0.902**
			Level of Service (LOS)			**E**

Future (2012) With Modified Project Plus Physical Mitigation

PM Peak Hour

Hirsch/Green Transportation Consulting, Inc.
Critical Movement Analysis (CMA) Worksheet

Project Name Pico/Sepulveda Mixed-Use Project
Intersection Number 18 **Date** December 7, 2012
Intersection Name North/South: Westwood Boulevard
East/West: Olympic Boulevard
Intersection Control Signalized
Analysis Period PM Peak Hour
Analysis Scenario Future (2012) With Project Plus TOD/TDM Plus Physical Mitigation

Approach Direction	Lane Type	No. of Lanes	Approach Volumes	Right-Turn on Red	Assigned Lane Volumes	Critical Moves
Northbound	Left	1	82		82	
	Left/Through	0				
	Through	1	840		478	478
	Through/Right	1			478	
	Right	0	115	0		
	Total Lanes	3				
Southbound	Left	1	243		243	243
	Left/Through	0				
	Through	2	1,145		572	
	Through/Right	0				
	Right	1	147	81	66	
	Total Lanes	4				
			Sum of North/South Critical Volumes			**721**
Eastbound	Left	1	81		81	
	Left/Through	0				
	Through	2	1,895		661	661
	Through/Right	1			661	
	Right	0	87	0		
	Total Lanes	4				
Westbound	Left	1	134		134	134
	Left/Through	0				
	Through	3	2,318		630	
	Through/Right	1			630	
	Right	0	204	0		
	Total Lanes	5				
			Sum of East/West Critical Volumes			**795**
			Total Intersection Critical Volumes			**1,516**
Number of Clearance Intervals	**4**		**Intersection Capacity**			**1,375**
			Base CMA			**1.103**
Signal Coordination	**ATSAC + ATCS**		**Signal Coordination Adjustment**			**-0.100**
			Final CMA			**1.003**
			Level of Service (LOS)			**F**

SB Rt. Turn Overlap with EB Left

Hirsch/Green Transportation Consulting, Inc.
Critical Movement Analysis (CMA) Worksheet

Project Name	Pico/Sepulveda Mixed-Use Project		
Intersection Number	21	**Date**	December 7, 2012
Intersection Name	North/South: Sawtelle Boulevard East/West: Tennessee Avenue/I-405 SB Off-Ramp		
Intersection Control	Signalized		
Analysis Period	PM Peak Hour		
Analysis Scenario	Future (2012) With Project Plus TOD/TDM Plus Physical Mitigation		

Approach Direction	Lane Type	No. of Lanes	Approach Volumes	Right-Turn on Red	Assigned Lane Volumes	Critical Moves
Northbound	Left	1	89		89	89
	Left/Through	0				
	Through	2	881		440	
	Through/Right	0				
	Right	0	0	0		
	Total Lanes	3				
Southbound	Left	0	0			
	Left/Through	0				
	Through	1	1,172		607	607
	Through/Right	1			607	
	Right	0	42	0		
	Total Lanes	2				
			Sum of North/South Critical Volumes			**696**
Eastbound	Left	1	267		267	
	Left/Through	0				
	Through	0	0			
	Through/Right	0				
	Right	1	376	44	332	332
	Total Lanes	2				
Westbound	Left	1	418		223	
	Left/Through	0				
	Left/Through/Right	1	28		223	223
	Through/Right	0				
	Right	1	149	128	21	
	Total Lanes	3				
			Sum of East/West Critical Volumes			**555**
			Total Intersection Critical Volumes			**1,251**
Number of Clearance Intervals	**3**		**Intersection Capacity**			**1,425**
			Base CMA			**0.878**
Signal Coordination	**ATSAC + ATCS**		**Signal Coordination Adjustment**			**-0.100**
			Final CMA			**0.778**
			Level of Service (LOS)			**C**

East/West Opposed Phasing

Hirsch/Green Transportation Consulting, Inc.
Critical Movement Analysis (CMA) Worksheet

Project Name	Pico/Sepulveda Mixed-Use Project		
Intersection Number	54	**Date**	December 7, 2012
Intersection Name	North/South: Sepulveda Boulevard East/West: Venice Boulevard		
Intersection Control	Signalized		
Analysis Period	PM Peak Hour		
Analysis Scenario	Future (2012) With Project Plus TOD/TDM Plus Physical Mitigation		

Approach Direction	Lane Type	No. of Lanes	Approach Volumes	Right-Turn on Red	Assigned Lane Volumes	Critical Moves
	Left	1	115		115	
	Left/Through	0				
Northbound	Through	2	1,492		590	590
	Through/Right	1			590	
	Right	0	278	0		
	Total Lanes	4				
	Left	1	114		114	114
	Left/Through	0				
Southbound	Through	2	1,085		542	
	Through/Right	0				
	Right	1	222	122	100	
	Total Lanes	4				
			Sum of North/South Critical Volumes			**704**
	Left	1	245		245	245
	Left/Through	0				
Eastbound	Through	3	1,499		500	
	Through/Right	0				
	Right	1	271	81	190	
	Total Lanes	5				
	Left	1	192		192	
	Left/Through	0				
Westbound	Through	3	1,357		452	452
	Through/Right	0				
	Right	1	160	57	103	
	Total Lanes	5				
			Sum of East/West Critical Volumes			**697**
			Total Intersection Critical Volumes			**1,401**
Number of Clearance Intervals	**4**		**Intersection Capacity**			**1,375**
			Base CMA			**1.019**
Signal Coordination	**ATSAC**		**Signal Coordination Adjustment**			**-0.070**
			Final CMA			**0.949**
			Level of Service (LOS)			**E**

7 SUPPLEMENTAL STUDY INTERSECTIONS
(From DEIR Analyses)

AM Peak Hour

Level of Service Worksheet
(Circular 212 Method)

I/S #:	North-South Street:	Westwood Boulevard	Year of Count:	2011	Ambient Growth (%):	1.0	Conducted by:	Hirsch/Green	Date:	12/7/2012
55	East-West Street:	Lindbrook Avenue	Projection Year:	2012	Peak Hour:	AM	Reviewed by:		Project:	Pico/Sepulveda Mixed-Use

	Existing Condition	Existing Plus Project	Future Condition W/O Project	Future Condition W/ Project	Future W/ Project W/ Mitigation
No. of Phases	2	2	2	2	2
Opposed Ø'ing: N/S-1, E/W-2 or Both-3?	0	0	0	0	0
Right Turns: FREE-1, NRTOR-2 or OLA-3?	NB-- 0 SB-- 0 EB-- 0 WB-- 0	NB-- 0 SB-- 0 EB-- 0 WB-- 0	NB-- 0 SB-- 0 EB-- 0 WB-- 0	NB-- 0 SB-- 0 EB-- 0 WB-- 0	NB-- 0 SB-- 0 EB-- 0 WB-- 0
ATSAC-1 or ATSAC+ATCS-2?	1	1	1	1	1
Override Capacity	0	0	0	0	0

MOVEMENT		Existing Condition			Existing Plus Project			Future Condition W/O Project				Future Condition W/ Project				Future W/ Project W/ Mitigation			
		Volume	No. of Lanes	Lane Volume	Project Traffic	Total Volume	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Project Traffic	Total Volume	No. of Lanes	Lane Volume	TDM Change	Total Volume	No. of Lanes	Lane Volume
NORTHBOUND	Left	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Left-Through		0							0				0				0	
	Through	853	2	427	2	855	428	0	862	2	431	2	864	2	432	-1	863	2	432
	Through-Right		0							0				0				0	
	Right	204	1	204	2	206	206	0	206	1	206	2	208	1	208	0	208	1	208
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
SOUTHBOUND	Left	5	0	5	0	5	5	0	5	0	5	0	5	0	5	0	5	0	5
	Left-Through		1							1				1				1	
	Through	436	0	250	2	438	251	0	440	0	252	2	442	0	253	0	442	0	253
	Through-Right		1							1				1				1	
	Right	33	0	250	0	33	251	0	33	0	252	0	33	0	253	0	33	0	253
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
EASTBOUND	Left	27	0	27	0	27	27	0	27	0	27	0	27	0	27	0	27	0	27
	Left-Through		1							1				1				1	
	Through	116	0	91	0	116	91	0	117	0	92	0	117	0	92	0	117	0	92
	Through-Right		1							1				1				1	
	Right	39	0	91	0	39	91	0	39	0	92	0	39	0	92	0	39	0	92
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
WESTBOUND	Left	88	0	88	0	88	88	0	89	0	89	0	89	0	89	0	89	0	89
	Left-Through		1							1				1				1	
	Through	149	0	144	0	149	145	0	150	0	146	0	150	0	146	0	150	0	146
	Through-Right		1							1				1				1	
	Right	51	0	144	1	52	145	0	52	0	146	1	53	0	146	0	53	0	146
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
CRITICAL VOLUMES		North-South:		432	North-South:		433	North-South:			436	North-South:			437		North-South:		437
		East-West:		179	East-West:		179	East-West:			181	East-West:			181		East-West:		181
		SUM:		611	SUM:		612	SUM:			617	SUM:			618		SUM:		618
VOLUME/CAPACITY (V/C) RATIO:				0.407			0.408				0.411				0.412				0.412
V/C LESS ATSAC/ATCS ADJUSTMENT:				0.337			0.338				0.341				0.342				0.342
LEVEL OF SERVICE (LOS):				A			A				A				A				A

REMARKS:

Version: 1i Beta; 8/4/2011

PROJECT IMPACT

Change in *v/c* due to project:	0.001	Δ*v/c* after mitigation:	0.001
Significant impacted?	NO	Fully mitigated?	N/A

Level of Service Worksheet
(Circular 212 Method)

I/S #:	North-South Street:	Glendon Avenue	Year of Count:	2011	Ambient Growth (%):	1.0	Conducted by:	Hirsch/Green	Date:	12/7/2012
56	East-West Street:	Westwood Boulevard	Projection Year:	2012	Peak Hour:	AM	Reviewed by:		Project:	Pico/Sepulveda Mixed-Use

		EXISTING CONDITION			EXISTING PLUS PROJECT			FUTURE CONDITION W/O PROJECT				FUTURE CONDITION W/ PROJECT				FUTURE W/ PROJECT W/ MITIGATION			
	MOVEMENT	Volume	No. of Lanes	Lane Volume	Project Traffic	Total Volume	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Project Traffic	Total Volume	No. of Lanes	Lane Volume	TDM change	Total Volume	No. of Lanes	Lane Volume
	No. of Phases			3			3			3				3					3
	Opposed Ø'ing: N/S-1, E/W-2 or Both-3?			0			0			0				0					0
	Right Turns: FREE-1, NRTOR-2 or OLA-3?	NB-- 0 SB--		3	NB-- 0 SB--		3	NB-- 0 SB--		3		NB-- 0 SB--		3		NB-- 0 SB--			3
		EB-- 0 WB--		0	EB-- 0 WB--		0	EB-- 0 WB--		0		EB-- 0 WB--		0		EB-- 0 WB--			0
	ATSAC-1 or ATSAC+ATCS-2?			2			2			2				2					2
	Override Capacity			0			0			0				0					0
NORTHBOUND	Left	18	0	18	0	18	18	0	18	0	18	0	18	0	18	0	18	0	18
	Left-Through		0							0				0				0	
	Through	201	0	240	0	201	240	0	203	0	242	0	203	0	242	0	203	0	242
	Through-Right		0							0				0				0	
	Right	21	0	0	0	21	0	0	21	0	0	0	21	0	0	0	21	0	0
	Left-Through-Right		1							1				1				1	
	Left-Right		0							0				0				0	
SOUTHBOUND	Left	76	1	76	0	76	76	0	77	1	77	0	77	1	77	0	77	1	77
	Left-Through		0							0				0				0	
	Through	87	1	87	0	87	87	0	88	1	88	0	88	1	88	0	88	1	88
	Through-Right		0							0				0				0	
	Right	24	1	0	0	24	0	0	24	1	0	0	24	1	0	0	24	1	0
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
EASTBOUND	Left	145	2	80	0	145	80	0	146	2	80	0	146	2	80	0	146	2	80
	Left-Through		0							0				0				0	
	Through	1630	3	440	14	1644	443	35	1681	3	453	14	1695	3	456	-3	1692	3	456
	Through-Right		1							1				1				1	
	Right	129	0	129	0	129	129	0	130	0	130	0	130	0	130	0	130	0	130
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
WESTBOUND	Left	56	1	56	0	56	56	0	57	1	57	0	57	1	57	0	57	1	57
	Left-Through		0							0				0				0	
	Through	1526	3	458	6	1532	460	40	1581	3	473	6	1587	3	474	-2	1585	3	474
	Through-Right		1							1				1				1	
	Right	306	0	306	0	306	306	0	309	0	309	0	309	0	309	0	309	0	309
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
	CRITICAL VOLUMES	North-South:		316	North-South:		316	North-South:		319		North-South:		319		North-South:			319
		East-West:		538	East-West:		540	East-West:		553		East-West:		554		East-West:			554
		SUM:		854	SUM:		856	SUM:		872		SUM:		873		SUM:			873
	VOLUME/CAPACITY (V/C) RATIO:			0.599			0.601			0.612				0.613					0.613
	V/C LESS ATSAC/ATCS ADJUSTMENT:			0.499			0.501			0.512				0.513					0.513
	LEVEL OF SERVICE (LOS):			A			A			A				A					A

REMARKS:

Version: 1i Beta; 8/4/2011

PROJECT IMPACT

Change in *v/c* due to project:	0.001	Δ*v/c* after mitigation:	0.001
Significant impacted?	NO	Fully mitigated?	N/A

Level of Service Worksheet
(Circular 212 Method)

I/S #:	North-South Street:	Overland Avenue	Year of Count:	2011	Ambient Growth (%):	1.0	Conducted by:	Hirsch/Green	Date:	12/7/2012
57	East-West Street:	National Place	Projection Year:	2012	Peak Hour:	AM	Reviewed by:		Project:	Pico/Sepulveda Mixed-Use

	EXISTING CONDITION			EXISTING PLUS PROJECT			FUTURE CONDITION W/O PROJECT				FUTURE CONDITION W/ PROJECT				FUTURE W/ PROJECT W/ MITIGATION			
MOVEMENT	Volume	No. of Lanes	Lane Volume	Project Traffic	Total Volume	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Project Traffic	Total Volume	No. of Lanes	Lane Volume	TDM change	Total Volume	No. of Lanes	Lane Volume
NORTHBOUND																		
Left	368	1	368	3	371	371	0	372	1	372	3	375	1	375	0	375	1	375
Left-Through		0							0				0				0	
Through	1939	2	651	0	1939	651	23	1981	2	665	0	1981	2	665	0	1981	2	665
Through-Right		1							1				1				1	
Right	14	0	14	0	14	14	0	14	0	14	0	14	0	14	0	14	0	14
Left-Through-Right		0							0				0				0	
Left-Right		0							0				0				0	
SOUTHBOUND																		
Left	35	1	35	0	35	35	0	35	1	35	0	35	1	35	0	35	1	35
Left-Through		0							0				0				0	
Through	387	1	204	0	387	204	3	394	1	208	0	394	1	208	0	394	1	208
Through-Right		1							1				1				1	
Right	21	0	21	0	21	21	0	21	0	21	0	21	0	21	0	21	0	21
Left-Through-Right		0							0				0				0	
Left-Right		0							0				0				0	
EASTBOUND																		
Left	61	1	61	0	61	61	11	73	1	73	0	73	1	73	0	73	1	73
Left-Through		0							0				0				0	
Through	174	1	174	0	174	174	0	176	1	176	0	176	1	176	0	176	1	176
Through-Right		1							1				1				1	
Right	233	0	49	10	243	58	0	235	0	49	10	245	0	58	-2	243	0	56
Left-Through-Right		0							0				0				0	
Left-Right		0							0				0				0	
WESTBOUND																		
Left	579	1	579	0	579	579	0	585	1	585	0	585	1	585	0	585	1	585
Left-Through		0							0				0				0	
Through	556	1	556	4	560	560	9	571	1	571	4	575	1	575	0	575	1	575
Through-Right		0							0				0				0	
Right	959	2	527	0	959	527	0	969	2	533	0	969	2	533	0	969	2	533
Left-Through-Right		0							0				0				0	
Left-Right		0							0				0				0	
CRITICAL VOLUMES	North-South:		686	North-South:		686	North-South:			700	North-South:			700	North-South:			700
	East-West:		753	East-West:		753	East-West:			761	East-West:			761	East-West:			761
	SUM:		1439	SUM:		1439	SUM:			1461	SUM:			1461	SUM:			1461
VOLUME/CAPACITY (V/C) RATIO:			1.010			1.010				1.025				1.025				1.025
V/C LESS ATSAC/ATCS ADJUSTMENT:			0.910			0.910				0.925				0.925				0.925
LEVEL OF SERVICE (LOS):			E			E				E				E				E

	NB--	SB--	EB--	WB--	NB--	SB--	EB--	WB--	NB--	SB--	EB--	WB--	NB--	SB--	EB--	WB--	NB--	SB--	EB--	WB--
No. of Phases				3				3				3				3				3
Opposed Ø'ing: N/S-1, E/W-2 or Both-3?				0				0				0				0				0
Right Turns: FREE-1, NRTOR-2 or OLA-3?	0	0	0	2	0	0	0	2	0	0	0	2	0	0	0	2	0	0	0	2
ATSAC-1 or ATSAC+ATCS-2?				2				2				2				2				2
Override Capacity				0				0				0				0				0

REMARKS:

Version: 1i Beta; 8/4/2011

PROJECT IMPACT

Change in *v/c* due to project:	0.000	Δ*v/c* after mitigation:	0.000
Significant impacted?	NO	Fully mitigated?	N/A

Level of Service Worksheet
(Circular 212 Method)

I/S #:	North-South Street:	Sawtelle Boulevard	Year of Count:	2011	Ambient Growth (%):	1.0	Conducted by:	Hirsch/Green	Date:	12/7/2012
58	East-West Street:	Venice Boulevard	Projection Year:	2012	Peak Hour:	AM	Reviewed by:		Project:	Pico/Sepulveda Mixed-Use

		EXISTING CONDITION			EXISTING PLUS PROJECT			FUTURE CONDITION W/O PROJECT				FUTURE CONDITION W/ PROJECT				FUTURE W/ PROJECT W/ MITIGATION			
	MOVEMENT	Volume	No. of Lanes	Lane Volume	Project Traffic	Total Volume	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Project Traffic	Total Volume	No. of Lanes	Lane Volume	TDM change	Total Volume	No. of Lanes	Lane Volume
	No. of Phases			4			4			4				4					4
	Opposed Ø'ing: N/S-1, E/W-2 or Both-3?			0			0			0				0					0
	Right Turns: FREE-1, NRTOR-2 or OLA-3?	NB-- 0 SB--		0	NB-- 0 SB--		0	NB-- 0 SB--		0		NB-- 0 SB--		0		NB-- 0 SB--		0	
		EB-- 0 WB--		0	EB-- 0 WB--		0	EB-- 0 WB--		0		EB-- 0 WB--		0		EB-- 0 WB--		0	
	ATSAC-1 or ATSAC+ATCS-2?			2			2			2				2					2
	Override Capacity			0			0			0				0					0
NORTHBOUND	Left	109	1	109	0	109	109	0	110	1	110	0	110	1	110	0	110	1	110
	Left-Through		0							0				0				0	
	Through	475	1	341	1	476	341	40	520	1	364	1	521	1	365	0	521	1	365
	Through-Right		1							1				1				1	
	Right	206	0	206	0	206	206	0	208	0	208	0	208	0	208	0	208	0	208
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
SOUTHBOUND	Left	197	1	197	0	197	197	0	199	1	199	0	199	1	199	0	199	1	199
	Left-Through		0							0				0				0	
	Through	374	1	220	1	375	224	12	390	1	229	1	391	1	233	0	391	1	232
	Through-Right		1							1				1				1	
	Right	66	0	66	7	73	73	0	67	0	67	7	74	0	74	-1	73	0	73
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
EASTBOUND	Left	182	1	182	2	184	184	0	184	1	184	2	186	1	186	0	186	1	186
	Left-Through		0							0				0				0	
	Through	2096	2	731	1	2097	732	6	2123	2	741	1	2124	2	741	0	2124	2	741
	Through-Right		1							1				1				1	
	Right	98	0	98	0	98	98	0	99	0	99	0	99	0	99	0	99	0	99
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
WESTBOUND	Left	360	1	360	0	360	360	0	364	1	364	0	364	1	364	0	364	1	364
	Left-Through		0							0				0				0	
	Through	1352	2	499	0	1352	499	4	1370	2	505	0	1370	2	505	0	1370	2	505
	Through-Right		1							1				1				1	
	Right	145	0	145	0	145	145	0	146	0	146	0	146	0	146	0	146	0	146
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
	CRITICAL VOLUMES	North-South:		538	North-South:		538	North-South:		563		North-South:		564		North-South:		564	
		East-West:		1091	East-West:		1092	East-West:		1105		East-West:		1105		East-West:		1105	
		SUM:		1629	SUM:		1630	SUM:		1668		SUM:		1669		SUM:		1669	
	VOLUME/CAPACITY (V/C) RATIO:			1.185			1.185			1.213				1.214				1.214	
	V/C LESS ATSAC/ATCS ADJUSTMENT:			1.085			1.085			1.113				1.114				1.114	
	LEVEL OF SERVICE (LOS):			F			F			F				F				F	

REMARKS:

Version: 1i Beta; 8/4/2011

PROJECT IMPACT

Change in *v/c* due to project:	0.001	Δ*v/c* after mitigation:	0.001
Significant impacted?	NO	Fully mitigated?	N/A

Level of Service Worksheet
(Circular 212 Method)

I/S #:	North-South Street:	Overland Avenue	Year of Count:	2011	Ambient Growth (%):	1.0	Conducted by:	Hirsch/Green	Date:	12/7/2012
59	East-West Street:	Venice Boulevard	Projection Year:	2012	Peak Hour:	AM	Reviewed by:		Project:	Pico/Sepulveda Mixed-Use

		EXISTING CONDITION			EXISTING PLUS PROJECT			FUTURE CONDITION W/O PROJECT				FUTURE CONDITION W/ PROJECT				FUTURE W/ PROJECT W/ MITIGATION			
	MOVEMENT	Volume	No. of Lanes	Lane Volume	Project Traffic	Total Volume	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Project Traffic	Total Volume	No. of Lanes	Lane Volume	TDM change	Total Volume	No. of Lanes	Lane Volume
	No. of Phases			4			4			4				4					4
	Opposed Ø'ing: N/S-1, E/W-2 or Both-3?			0			0			0				0					0
	Right Turns: FREE-1, NRTOR-2 or OLA-3?	NB-- 0 SB--		0	NB-- 0 SB--		0	NB-- 0 SB--		0		NB-- 0 SB--		0		NB-- 0 SB--		0	
		EB-- 3 WB--		3	EB-- 3 WB--		3	EB-- 3 WB--		3		EB-- 3 WB--		3		EB-- 3 WB--		3	
	ATSAC-1 or ATSAC+ATCS-2?			2			2			2				2					2
	Override Capacity			0			0			0				0					0
NORTHBOUND	Left	119	1	119	0	119	119	0	120	1	120	0	120	1	120	0	120	1	120
	Left-Through		0							0				0				0	
	Through	1557	2	779	1	1558	779	0	1573	2	787	1	1574	2	787	0	1574	2	787
	Through-Right		0							0				0				0	
	Right	136	1	12	0	136	12	0	137	1	12	0	137	1	12	0	137	1	12
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
SOUTHBOUND	Left	225	1	225	0	225	225	0	227	1	227	0	227	1	227	0	227	1	227
	Left-Through		0							0				0				0	
	Through	900	2	450	7	907	454	0	909	2	455	7	916	2	458	-1	915	2	458
	Through-Right		0							0				0				0	
	Right	118	1	44	0	118	44	0	119	1	44	0	119	1	44	0	119	1	44
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
EASTBOUND	Left	271	2	149	0	271	149	0	274	2	151	0	274	2	151	0	274	2	151
	Left-Through		0							0				0				0	
	Through	2068	2	753	8	2076	756	1	2090	2	761	8	2098	2	764	-1	2097	2	763
	Through-Right		1							1				1				1	
	Right	191	0	191	0	191	191	0	193	0	193	0	193	0	193	0	193	0	193
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
WESTBOUND	Left	452	2	249	0	452	249	0	457	2	251	0	457	2	251	0	457	2	251
	Left-Through		0							0				0				0	
	Through	1651	2	671	4	1655	673	5	1673	2	680	4	1677	2	681	-1	1676	2	681
	Through-Right		1							1				1				1	
	Right	363	0	363	0	363	363	0	367	0	367	0	367	0	367	0	367	0	367
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
	CRITICAL VOLUMES	North-South:		1004	North-South:		1004	North-South:		1014		North-South:		1014		North-South:			1014
		East-West:		1002	East-West:		1005	East-West:		1012		East-West:		1015		East-West:			1014
		SUM:		2006	SUM:		2009	SUM:		2026		SUM:		2029		SUM:			2028
	VOLUME/CAPACITY (V/C) RATIO:			1.459			1.461			1.473				1.476					1.475
	V/C LESS ATSAC/ATCS ADJUSTMENT:			1.359			1.361			1.373				1.376					1.375
	LEVEL OF SERVICE (LOS):			F			F			F				F					F

REMARKS:

Version: 1i Beta; 8/4/2011

PROJECT IMPACT

Change in v/c due to project:	0.003	Δv/c after mitigation:	0.002
Significant impacted?	NO	Fully mitigated?	N/A

Level of Service Worksheet
(Circular 212 Method)

I/S #:	North-South Street:	Sepulveda Boulevard	Year of Count:	2011	Ambient Growth (%):	1.0	Conducted by:	Hirsch/Green	Date:	12/7/2012
60	East-West Street:	I-405 Fwy. NB On/Off-Ramps	Projection Year:	2012	Peak Hour:	AM	Reviewed by:		Project:	Pico/Sepulveda Mixed-Use

	EXISTING CONDITION			EXISTING PLUS PROJECT			FUTURE CONDITION W/O PROJECT				FUTURE CONDITION W/ PROJECT				FUTURE W/ PROJECT W/ MITIGATION			
No. of Phases			4			4			4				4				4	
Opposed Ø'ing: N/S-1, E/W-2 or Both-3?			0			0			0				0				0	
Right Turns: FREE-1, NRTOR-2 or OLA-3?	NB-- 0	SB--	2	NB-- 0	SB--	2	NB-- 0	SB--	2		NB-- 0	SB--	2		NB-- 0	SB--	2	
	EB-- 0	WB--	0	EB-- 0	WB--	0	EB-- 0	WB--	0		EB-- 0	WB--	0		EB-- 0	WB--	0	
ATSAC-1 or ATSAC+ATCS-2?			1			1			1				1				1	
Override Capacity			0			0			0				0				0	

	MOVEMENT	Volume	No. of Lanes	Lane Volume	Project Traffic	Total Volume	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Project Traffic	Total Volume	No. of Lanes	Lane Volume	TDM change	Total Volume	No. of Lanes	Lane Volume
NORTHBOUND	Left	463	1	**463**	0	463	**463**	0	468	1	**468**	0	468	1	**468**	0	468	1	**468**
	Left-Through		0							0				0				0	
	Through	1287	2	644	3	1290	645	136	1436	2	718	3	1439	2	720	-1	1438	2	719
	Through-Right		0							0				0				0	
	Right	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
SOUTHBOUND	Left	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Left-Through		0							0				0				0	
	Through	450	2	225	11	461	231	131	586	2	293	11	597	2	298	-2	595	2	297
	Through-Right		0							0				0				0	
	Right	437	1	**437**	0	437	**437**	0	441	1	**441**	0	441	1	**441**	0	441	1	**441**
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
EASTBOUND	Left	428	1	233	0	428	233	0	432	1	235	0	432	1	235	0	432	1	235
	Left-Through		0							0				0				0	
	Through	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Through-Right		0							0				0				0	
	Right	38	0	**233**	0	38	**233**	0	38	0	**235**	0	38	0	**235**	0	38	0	**235**
	Left-Through-Right		0							0				0				0	
	Left-Right		1							1				1				1	
WESTBOUND	Left	0	0	**0**	0	0	**0**	0	0	0	**0**	0	0	0	**0**	0	0	0	**0**
	Left-Through		0							0				0				0	
	Through	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Through-Right		0							0				0				0	
	Right	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
CRITICAL VOLUMES		North-South:		900	North-South:		900	North-South:			909	North-South:			909		North-South:		909
		East-West:		233	East-West:		233	East-West:			235	East-West:			235		East-West:		235
		SUM:		1133	SUM:		1133	SUM:			1144	SUM:			1144		SUM:		1144
VOLUME/CAPACITY (V/C) RATIO:				0.824			0.824				0.832				0.832				0.832
V/C LESS ATSAC/ATCS ADJUSTMENT:				0.754			0.754				0.762				0.762				0.762
LEVEL OF SERVICE (LOS):				C			C				C				C				C

REMARKS:

Version: 1i Beta; 8/4/2011

PROJECT IMPACT

Change in *v/c* due to project:	0.000	Δ*v/c* after mitigation:	0.000
Significant impacted?	NO	Fully mitigated?	N/A

Level of Service Worksheet
(Circular 212 Method)

I/S #:	North-South Street:	Sepulveda Boulevard	Year of Count:	2011	Ambient Growth (%):	1.0	Conducted by:	Hirsch/Green	Date:	12/7/2012
61	East-West Street:	Washington Place	Projection Year:	2012	Peak Hour:	AM	Reviewed by:		Project:	Pico/Sepulveda Mixed-Use

		EXISTING CONDITION			EXISTING PLUS PROJECT			FUTURE CONDITION W/O PROJECT				FUTURE CONDITION W/ PROJECT				FUTURE W/ PROJECT W/ MITIGATION			
	MOVEMENT	Volume	No. of Lanes	Lane Volume	Project Traffic	Total Volume	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Project Traffic	Total Volume	No. of Lanes	Lane Volume	TDM change	Total Volume	No. of Lanes	Lane Volume
	No. of Phases			2			2			2				2					2
	Opposed Ø'ing: N/S-1, E/W-2 or Both-3?			0			0			0				0					0
	Right Turns: FREE-1, NRTOR-2 or OLA-3?	NB-- 0 SB--		0	NB-- 0 SB--		0	NB-- 0 SB--		0		NB-- 0 SB--		0		NB-- 0 SB--		0	
		EB-- 0 WB--		0	EB-- 0 WB--		0	EB-- 0 WB--		0		EB-- 0 WB--		0		EB-- 0 WB--		0	
	ATSAC-1 or ATSAC+ATCS-2?			1			1			1				1					1
	Override Capacity			0			0			0				0					0
NORTHBOUND	Left	97	1	97	0	97	97	0	98	1	98	0	98	1	98	0	98	1	98
	Left-Through		0							0				0				0	
	Through	1186	1	606	3	1189	608	136	1334	1	680	3	1337	1	682	-1	1336	1	681
	Through-Right		1							1				1				1	
	Right	26	0	26	0	26	26	0	26	0	26	0	26	0	26	0	26	0	26
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
SOUTHBOUND	Left	26	1	26	0	26	26	0	26	1	26	0	26	1	26	0	26	1	26
	Left-Through		0							0				0				0	
	Through	336	1	223	11	347	228	131	470	1	290	11	481	1	296	-2	479	1	295
	Through-Right		1							1				1				1	
	Right	109	0	109	0	109	109	0	110	0	110	0	110	0	110	0	110	0	110
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
EASTBOUND	Left	299	1	299	0	299	299	0	302	1	302	0	302	1	302	0	302	1	302
	Left-Through		0							0				0				0	
	Through	551	1	316	0	551	316	0	557	1	319	0	557	1	319	0	557	1	319
	Through-Right		1							1				1				1	
	Right	80	0	80	0	80	80	0	81	0	81	0	81	0	81	0	81	0	81
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
WESTBOUND	Left	22	1	22	0	22	22	0	22	1	22	0	22	1	22	0	22	1	22
	Left-Through		0							0				0				0	
	Through	582	1	387	0	582	387	0	588	1	391	0	588	1	391	0	588	1	391
	Through-Right		1							1				1				1	
	Right	192	0	192	0	192	192	0	194	0	194	0	194	0	194	0	194	0	194
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
	CRITICAL VOLUMES	North-South:		632	North-South:		634	North-South:		706		North-South:		708		North-South:		707	
		East-West:		686	East-West:		686	East-West:		693		East-West:		693		East-West:		693	
		SUM:		1318	SUM:		1320	SUM:		1399		SUM:		1401		SUM:		1400	
	VOLUME/CAPACITY (V/C) RATIO:			0.879			0.880			0.933				0.934					0.933
	V/C LESS ATSAC/ATCS ADJUSTMENT:			0.809			0.810			0.863				0.864					0.863
	LEVEL OF SERVICE (LOS):			D			D			D				D					D

REMARKS:

Version: 1i Beta; 8/4/2011

PROJECT IMPACT

Change in *v/c* due to project:	0.001	Δ*v/c* after mitigation:	0.000
Significant impacted?	NO	Fully mitigated?	N/A

PM Peak Hour

Level of Service Worksheet
(Circular 212 Method)

I/S #:	North-South Street:	Westwood Boulevard	Year of Count:	2011	Ambient Growth (%):	1.0	Conducted by:	Hirsch/Green	Date:	12/7/2012
55	East-West Street:	Lindbrook Avenue	Projection Year:	2012	Peak Hour:	PM	Reviewed by:		Project:	Pico/Sepulveda Mixed-Use

		EXISTING CONDITION			EXISTING PLUS PROJECT			FUTURE CONDITION W/O PROJECT				FUTURE CONDITION W/ PROJECT				FUTURE W/ PROJECT W/ MITIGATION			
	MOVEMENT	Volume	No. of Lanes	Lane Volume	Project Traffic	Total Volume	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Project Traffic	Total Volume	No. of Lanes	Lane Volume	TDM Change	Total Volume	No. of Lanes	Lane Volume
	No. of Phases			2			2			2				2					2
	Opposed Ø'ing: N/S-1, E/W-2 or Both-3?			0			0			0				0					0
	Right Turns: FREE-1, NRTOR-2 or OLA-3?	NB-- 0 SB--		0	NB-- 0 SB--		0	NB-- 0 SB--		0		NB-- 0 SB--		0		NB-- 0 SB--		0	
		EB-- 0 WB--		0	EB-- 0 WB--		0	EB-- 0 WB--		0		EB-- 0 WB--		0		EB-- 0 WB--		0	
	ATSAC-1 or ATSAC+ATCS-2?			1			1			1				1					1
	Override Capacity			0			0			0				0					0
NORTHBOUND	Left	0	0	**0**	0	0	**0**	0	0	0	**0**	0	0	0	**0**	0	0	0	**0**
	Left-Through		0							0				0				0	
	Through	711	2	356	2	713	357	0	718	2	359	2	720	2	360	0	720	2	360
	Through-Right		0							0				0				0	
	Right	180	1	180	6	186	186	0	182	1	182	6	188	1	188	0	188	1	188
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
SOUTHBOUND	Left	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Left-Through		0							0				0				0	
	Through	821	1	**434**	4	825	**436**	0	829	1	**438**	4	833	1	**440**	0	833	1	**440**
	Through-Right		1							1				1				1	
	Right	46	0	46	0	46	46	0	46	0	46	0	46	0	46	0	46	0	46
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
EASTBOUND	Left	18	0	**18**	0	18	**18**	0	18	0	**18**	0	18	0	**18**	0	18	0	**18**
	Left-Through		1							1				1				1	
	Through	131	0	107	0	131	107	0	132	0	107	0	132	0	107	0	132	0	107
	Through-Right		1							1				1				1	
	Right	46	0	107	0	46	107	0	46	0	107	0	46	0	107	0	46	0	107
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
WESTBOUND	Left	93	0	93	7	100	100	0	94	0	94	7	101	0	101	0	101	0	101
	Left-Through		1							1				1				1	
	Through	371	0	**256**	0	371	**260**	0	375	0	**259**	0	375	0	**262**	0	375	0	**262**
	Through-Right		1							1				1				1	
	Right	48	0	256	0	48	260	0	48	0	259	0	48	0	262	0	48	0	262
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
	CRITICAL VOLUMES	North-South:		434	North-South:		436	North-South:			438	North-South:			440	North-South:			440
		East-West:		274	East-West:		278	East-West:			277	East-West:			280	East-West:			280
		SUM:		708	SUM:		714	SUM:			715	SUM:			720	SUM:			720
	VOLUME/CAPACITY (V/C) RATIO:			0.472			0.476				0.477				0.480				0.480
	V/C LESS ATSAC/ATCS ADJUSTMENT:			0.402			0.406				0.407				0.410				0.410
	LEVEL OF SERVICE (LOS):			A			A				A				A				A

REMARKS:

Version: 1i Beta; 8/4/2011

PROJECT IMPACT

Change in *v/c* due to project:	0.003	Δ*v/c* after mitigation:	0.003
Significant impacted?	NO	Fully mitigated?	N/A

Level of Service Worksheet
(Circular 212 Method)

I/S #:	North-South Street:	Glendon Avenue	Year of Count:	2011	Ambient Growth (%):	1.0	Conducted by:	Hirsch/Green	Date:	12/7/2012
56	East-West Street:	Westwood Boulevard	Projection Year:	2012	Peak Hour:	PM	Reviewed by:		Project:	Pico/Sepulveda Mixed-Use

		EXISTING CONDITION			EXISTING PLUS PROJECT			FUTURE CONDITION W/O PROJECT				FUTURE CONDITION W/ PROJECT				FUTURE W/ PROJECT W/ MITIGATION			
	MOVEMENT	Volume	No. of Lanes	Lane Volume	Project Traffic	Total Volume	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Project Traffic	Total Volume	No. of Lanes	Lane Volume	TDM change	Total Volume	No. of Lanes	Lane Volume
	No. of Phases			3			3			3				3					3
	Opposed Ø'ing: N/S-1, E/W-2 or Both-3?			0			0			0				0					0
	Right Turns: FREE-1, NRTOR-2 or OLA-3?	NB-- 0 SB--		3	NB-- 0 SB--		3	NB-- 0 SB--		3		NB-- 0 SB--		3		NB-- 0 SB--			3
		EB-- 0 WB--		0	EB-- 0 WB--		0	EB-- 0 WB--		0		EB-- 0 WB--		0		EB-- 0 WB--			0
	ATSAC-1 or ATSAC+ATCS-2?			2			2			2				2					2
	Override Capacity			0			0			0				0					0
NORTHBOUND	Left	72	0	72	0	72	72	0	73	0	73	0	73	0	73	0	73	0	73
	Left-Through		0							0				0				0	
	Through	184	0	345	0	184	345	0	186	0	349	0	186	0	349	0	186	0	349
	Through-Right		0							0				0				0	
	Right	89	0	0	0	89	0	0	90	0	0	0	90	0	0	0	90	0	0
	Left-Through-Right		1							1				1				1	
	Left-Right		0							0				0				0	
SOUTHBOUND	Left	149	1	149	0	149	149	0	150	1	150	0	150	1	150	0	150	1	150
	Left-Through		0							0				0				0	
	Through	265	1	265	0	265	265	0	268	1	268	0	268	1	268	0	268	1	268
	Through-Right		0							0				0				0	
	Right	277	1	214	0	277	214	0	280	1	217	0	280	1	217	0	280	1	217
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
EASTBOUND	Left	114	2	63	0	114	63	0	115	2	63	0	115	2	63	0	115	2	63
	Left-Through		0							0				0				0	
	Through	1314	3	333	17	1331	338	42	1369	3	347	17	1386	3	351	-3	1383	3	351
	Through-Right		1							1				1				1	
	Right	19	0	19	0	19	19	0	19	0	19	0	19	0	19	0	19	0	19
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
WESTBOUND	Left	73	1	73	0	73	73	0	74	1	74	0	74	1	74	0	74	1	74
	Left-Through		0							0				0				0	
	Through	969	3	297	21	990	302	35	1014	3	309	21	1035	3	314	-4	1031	3	313
	Through-Right		1							1				1				1	
	Right	218	0	218	0	218	218	0	220	0	220	0	220	0	220	0	220	0	220
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
	CRITICAL VOLUMES	North-South:		494	North-South:		494	North-South:		499		North-South:		499		North-South:			499
		East-West:		406	East-West:		411	East-West:		421		East-West:		425		East-West:			425
		SUM:		900	SUM:		905	SUM:		920		SUM:		924		SUM:			924
	VOLUME/CAPACITY (V/C) RATIO:			0.632			0.635			0.646				0.648					0.648
	V/C LESS ATSAC/ATCS ADJUSTMENT:			0.532			0.535			0.546				0.548					0.548
	LEVEL OF SERVICE (LOS):			A			A			A				A					A

REMARKS:

Version: 1i Beta; 8/4/2011

PROJECT IMPACT

Change in *v/c* due to project:	0.002	Δ*v/c* after mitigation:	0.002
Significant impacted?	NO	Fully mitigated?	N/A

Level of Service Worksheet
(Circular 212 Method)

I/S #:	North-South Street:	Overland Avenue	Year of Count:	2011	Ambient Growth (%):	1.0	Conducted by:	Hirsch/Green	Date:	12/7/2012
57	East-West Street:	National Place	Projection Year:	2012	Peak Hour:	PM	Reviewed by:		Project:	Pico/Sepulveda Mixed-Use

		EXISTING CONDITION			EXISTING PLUS PROJECT			FUTURE CONDITION W/O PROJECT				FUTURE CONDITION W/ PROJECT				FUTURE W/ PROJECT W/ MITIGATION			
	MOVEMENT	Volume	No. of Lanes	Lane Volume	Project Traffic	Total Volume	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Project Traffic	Total Volume	No. of Lanes	Lane Volume	TDM change	Total Volume	No. of Lanes	Lane Volume
	No. of Phases			3			3			3				3					3
	Opposed Ø'ing: N/S-1, E/W-2 or Both-3?			0			0			0				0					0
	Right Turns: FREE-1, NRTOR-2 or OLA-3?	NB-- 0 SB--		0	NB-- 0 SB--		0	NB-- 0 SB--		0		NB-- 0 SB--		0		NB-- 0 SB--		0	
		EB-- 0 WB--		2	EB-- 0 WB--		2	EB-- 0 WB--		2		EB-- 0 WB--		2		EB-- 0 WB--		2	
	ATSAC-1 or ATSAC+ATCS-2?			2			2			2				2					2
	Override Capacity			0			0			0				0					0
NORTHBOUND	Left	172	1	**172**	5	177	**177**	0	174	1	**174**	5	179	1	**179**	0	179	1	**179**
	Left-Through		0							0				0				0	
	Through	1524	2	515	0	1524	515	16	1555	2	525	0	1555	2	525	0	1555	2	525
	Through-Right		1							1				1				1	
	Right	20	0	20	0	20	20	0	20	0	20	0	20	0	20	0	20	0	20
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
SOUTHBOUND	Left	97	1	97	0	97	97	0	98	1	98	0	98	1	98	0	98	1	98
	Left-Through		0							0				0				0	
	Through	1038	1	**537**	0	1038	**537**	19	1067	1	**552**	0	1067	1	**552**	0	1067	1	**552**
	Through-Right		1							1				1				1	
	Right	36	0	36	0	36	36	0	36	0	36	0	36	0	36	0	36	0	36
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
EASTBOUND	Left	184	1	184	0	184	184	10	196	1	196	0	196	1	196	0	196	1	196
	Left-Through		0							0				0				0	
	Through	451	1	**451**	2	453	**453**	0	456	1	**456**	2	458	1	**458**	-1	457	1	**457**
	Through-Right		1							1				1				1	
	Right	458	0	372	16	474	386	0	463	0	376	16	479	0	390	-2	477	0	388
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
WESTBOUND	Left	358	1	**358**	0	358	**358**	0	362	1	**362**	0	362	1	**362**	0	362	1	**362**
	Left-Through		0							0				0				0	
	Through	274	1	274	12	286	286	18	295	1	295	12	307	1	307	-3	304	1	304
	Through-Right		0							0				0				0	
	Right	457	2	251	0	457	251	0	462	2	254	0	462	2	254	0	462	2	254
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
	CRITICAL VOLUMES	North-South:		709	North-South:		714	North-South:			726	North-South:			731		North-South:		731
		East-West:		809	East-West:		811	East-West:			818	East-West:			820		East-West:		819
		SUM:		1518	SUM:		1525	SUM:			1544	SUM:			1551		SUM:		1550
	VOLUME/CAPACITY (V/C) RATIO:			1.065			1.070				1.084				1.088				1.088
	V/C LESS ATSAC/ATCS ADJUSTMENT:			0.965			0.970				0.984				0.988				0.988
	LEVEL OF SERVICE (LOS):			E			E				E				E				E

REMARKS:

Version: 1i Beta; 8/4/2011

PROJECT IMPACT

Change in v/c due to project:	0.004	Δv/c after mitigation:	0.004
Significant impacted?	NO	Fully mitigated?	N/A

Level of Service Worksheet
(Circular 212 Method)

I/S #:	North-South Street:	Sawtelle Boulevard	Year of Count:	2011	Ambient Growth (%):	1.0	Conducted by:	Hirsch/Green	Date:	12/7/2012
58	East-West Street:	Venice Boulevard	Projection Year:	2012	Peak Hour:	PM	Reviewed by:		Project:	Pico/Sepulveda Mixed-Use

		EXISTING CONDITION			EXISTING PLUS PROJECT			FUTURE CONDITION W/O PROJECT				FUTURE CONDITION W/ PROJECT				FUTURE W/ PROJECT W/ MITIGATION			
	MOVEMENT	Volume	No. of Lanes	Lane Volume	Project Traffic	Total Volume	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Project Traffic	Total Volume	No. of Lanes	Lane Volume	TDM change	Total Volume	No. of Lanes	Lane Volume
	No. of Phases			4			4			4				4					4
	Opposed Ø'ing: N/S-1, E/W-2 or Both-3?			0			0			0				0					0
	Right Turns: FREE-1, NRTOR-2 or OLA-3?	NB-- 0 SB-- EB-- 0 WB--		0	NB-- 0 SB-- EB-- 0 WB--		0	NB-- 0 SB-- EB-- 0 WB--		0		NB-- 0 SB-- EB-- 0 WB--		0		NB-- 0 SB-- EB-- 0 WB--		0
	ATSAC-1 or ATSAC+ATCS-2?			2			2			2				2					2
	Override Capacity			0			0			0				0					0
NORTHBOUND	Left	186	1	**186**	0	186	**186**	0	188	1	188	0	188	1	**188**	0	188	1	**188**
	Left-Through		0							0				0				0	
	Through	522	1	356	5	527	359	41	568	1	**380**	5	573	1	383	0	573	1	383
	Through-Right		1							1				1				1	
	Right	190	0	190	0	190	190	0	192	0	192	0	192	0	192	0	192	0	192
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
SOUTHBOUND	Left	230	1	230	0	230	230	0	232	1	**232**	0	232	1	232	0	232	1	232
	Left-Through		0							0				0				0	
	Through	702	1	**408**	4	706	**412**	23	732	1	423	4	736	1	**428**	-1	735	1	**427**
	Through-Right		1							1				1				1	
	Right	113	0	113	5	118	118	0	114	0	114	5	119	0	119	-1	118	0	118
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
EASTBOUND	Left	104	1	104	10	114	114	0	105	1	105	10	115	1	115	-2	113	1	113
	Left-Through		0							0				0				0	
	Through	2378	2	**821**	5	2383	**823**	16	2418	2	**835**	5	2423	2	**837**	0	2423	2	**837**
	Through-Right		1							1				1				1	
	Right	86	0	86	0	86	86	0	87	0	87	0	87	0	87	0	87	0	87
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
WESTBOUND	Left	252	1	**252**	0	252	**252**	6	261	1	**261**	0	261	1	**261**	0	261	1	**261**
	Left-Through		0							0				0				0	
	Through	1446	2	524	5	1451	526	6	1466	2	531	5	1471	2	533	0	1471	2	533
	Through-Right		1							1				1				1	
	Right	126	0	126	0	126	126	0	127	0	127	0	127	0	127	0	127	0	127
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
	CRITICAL VOLUMES	*North-South:*		594	*North-South:*		598	*North-South:*			612	*North-South:*			616		*North-South:*		615
		East-West:		1073	*East-West:*		1075	*East-West:*			1096	*East-West:*			1098		*East-West:*		1098
		SUM:		1667	*SUM:*		1673	*SUM:*			1708	*SUM:*			1714		*SUM:*		1713
	VOLUME/CAPACITY (*V/C*) RATIO:			1.212			1.217				1.242				1.247				1.246
	V/C LESS ATSAC/ATCS ADJUSTMENT:			1.112			1.117				1.142				1.147				1.146
	LEVEL OF SERVICE (LOS):			F			F				F				F				F

REMARKS:

Version: 1i Beta; 8/4/2011

PROJECT IMPACT

Change in *v/c* due to project:	0.005	Δ*v/c* after mitigation:	0.004
Significant impacted?	NO	Fully mitigated?	N/A

Level of Service Worksheet
(Circular 212 Method)

I/S #:	North-South Street:	Overland Avenue	Year of Count:	2011	Ambient Growth (%):	1.0	Conducted by:	Hirsch/Green	Date:	12/7/2012
59	East-West Street:	Venice Boulevard	Projection Year:	2012	Peak Hour:	PM	Reviewed by:		Project:	Pico/Sepulveda Mixed-Use

No. of Phases			4			4			4			4			4				4
Opposed Ø'ing: N/S-1, E/W-2 or Both-3?			0			0			0			0			0				0
Right Turns: FREE-1, NRTOR-2 or OLA-3?	NB--	0	SB-- 0	NB--	0	SB-- 0	NB--	0	SB-- 0	NB--	0	SB-- 0	NB--	0	SB-- 0	NB--	0	SB--	0
	EB--	3	WB-- 3	EB--	3	WB-- 3	EB--	3	WB-- 3	EB--	3	WB-- 3	EB--	3	WB-- 3	EB--	3	WB--	3
ATSAC-1 or ATSAC+ATCS-2?			2			2			2			2			2				2
Override Capacity			0			0			0			0			0				0

MOVEMENT		EXISTING CONDITION			EXISTING PLUS PROJECT			FUTURE CONDITION W/O PROJECT				FUTURE CONDITION W/ PROJECT				FUTURE W/ PROJECT W/ MITIGATION			
		Volume	No. of Lanes	Lane Volume	Project Traffic	Total Volume	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Project Traffic	Total Volume	No. of Lanes	Lane Volume	TDM change	Total Volume	No. of Lanes	Lane Volume
NORTHBOUND	Left	143	1	**143**	0	143	**143**	0	144	1	**144**	0	144	1	**144**	0	144	1	**144**
	Left-Through		0							0				0				0	
	Through	1075	2	538	8	1083	542	0	1086	2	543	8	1094	2	547	-1	1093	2	547
	Through-Right		0							0				0				0	
	Right	163	1	59	0	163	59	0	165	1	60	0	165	1	60	0	165	1	60
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
SOUTHBOUND	Left	230	1	230	0	230	230	0	232	1	232	0	232	1	232	0	232	1	232
	Left-Through		0							0				0				0	
	Through	1434	2	**717**	6	1440	**720**	0	1448	2	**724**	6	1454	2	**727**	-1	1453	2	**727**
	Through-Right		0							0				0				0	
	Right	162	1	54	0	162	54	0	164	1	55	0	164	1	55	0	164	1	55
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
EASTBOUND	Left	395	2	217	0	395	217	0	399	2	219	0	399	2	219	0	399	2	219
	Left-Through		0							0				0				0	
	Through	2232	2	**810**	9	2241	**813**	5	2259	2	**820**	9	2268	2	**823**	-2	2266	2	**822**
	Through-Right		1							1				1				1	
	Right	199	0	199	0	199	199	0	201	0	201	0	201	0	201	0	201	0	201
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
WESTBOUND	Left	379	2	**208**	0	379	**208**	0	383	2	**211**	0	383	2	**211**	0	383	2	**211**
	Left-Through		0							0				0				0	
	Through	1544	2	611	13	1557	615	0	1559	2	617	13	1572	2	621	-3	1569	2	620
	Through-Right		1							1				1				1	
	Right	289	0	289	0	289	289	0	292	0	292	0	292	0	292	0	292	0	292
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
CRITICAL VOLUMES		*North-South:*		860	*North-South:*		863	*North-South:*			868	*North-South:*			871	*North-South:*			871
		East-West:		1018	*East-West:*		1021	*East-West:*			1031	*East-West:*			1034	*East-West:*			1033
		SUM:		1878	*SUM:*		1884	*SUM:*			1899	*SUM:*			1905	*SUM:*			1904
VOLUME/CAPACITY (*V/C*) RATIO:				1.366			1.370				1.381				1.385				1.385
V/C LESS ATSAC/ATCS ADJUSTMENT:				1.266			1.270				1.281				1.285				1.285
LEVEL OF SERVICE (LOS):				F			F				F				F				F

REMARKS:

Version: 1i Beta; 8/4/2011

PROJECT IMPACT

Change in *v/c* due to project:	0.004	Δ*v/c* after mitigation:	0.004
Significant impacted?	NO	Fully mitigated?	N/A

Level of Service Worksheet
(Circular 212 Method)

I/S #:	North-South Street:	Sepulveda Boulevard	Year of Count:	2011	Ambient Growth (%):	1.0	Conducted by:	Hirsch/Green	Date:	12/7/2012
60	East-West Street:	I-405 Fwy. NB On/Off-Ramps	Projection Year:	2012	Peak Hour:	PM	Reviewed by:		Project:	Pico/Sepulveda Mixed-Use

		EXISTING CONDITION			EXISTING PLUS PROJECT			FUTURE CONDITION W/O PROJECT				FUTURE CONDITION W/ PROJECT				FUTURE W/ PROJECT W/ MITIGATION			
	MOVEMENT	Volume	No. of Lanes	Lane Volume	Project Traffic	Total Volume	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Project Traffic	Total Volume	No. of Lanes	Lane Volume	TDM change	Total Volume	No. of Lanes	Lane Volume
	No. of Phases			4			4			4				4					4
	Opposed Ø'ing: N/S-1, E/W-2 or Both-3?			0			0			0				0					0
	Right Turns: FREE-1, NRTOR-2 or OLA-3?	NB-- 0 SB--		0	NB-- 0 SB--		0	NB-- 0 SB--		0		NB-- 0 SB--		0		NB-- 0 SB--		0	
		EB-- 0 WB--		0	EB-- 0 WB--		0	EB-- 0 WB--		0		EB-- 0 WB--		0		EB-- 0 WB--		0	
	ATSAC-1 or ATSAC+ATCS-2?			1			1			1				1					1
	Override Capacity			0			0			0				0					0
NORTHBOUND	Left	229	1	**229**	0	229	**229**	0	231	1	**231**	0	231	1	**231**	0	231	1	**231**
	Left-Through		0							0				0				0	
	Through	990	2	495	10	1000	500	161	1161	2	581	10	1171	2	586	-1	1170	2	585
	Through-Right		0							0				0				0	
	Right	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
SOUTHBOUND	Left	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Left-Through		0							0				0				0	
	Through	999	2	**500**	6	1005	**503**	114	1123	2	**562**	6	1129	2	**565**	-1	1128	2	**564**
	Through-Right		0							0				0				0	
	Right	155	1	0	0	155	0	6	163	1	0	0	163	1	0	0	163	1	0
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
EASTBOUND	Left	859	1	483	0	859	483	6	874	1	491	0	874	1	491	0	874	1	491
	Left-Through		0							0				0				0	
	Through	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Through-Right		0							0				0				0	
	Right	107	0	**483**	0	107	**483**	0	108	0	**491**	0	108	0	**491**	0	108	0	**491**
	Left-Through-Right		0							0				0				0	
	Left-Right		1							1				1				1	
WESTBOUND	Left	0	0	**0**	0	0	**0**	0	0	0	**0**	0	0	0	**0**	0	0	0	**0**
	Left-Through		0							0				0				0	
	Through	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Through-Right		0							0				0				0	
	Right	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
	CRITICAL VOLUMES	North-South:		729	North-South:		732	North-South:		793		North-South:		796		North-South:			795
		East-West:		483	East-West:		483	East-West:		491		East-West:		491		East-West:			491
		SUM:		1212	SUM:		1215	SUM:		1284		SUM:		1287		SUM:			1286
	VOLUME/CAPACITY (V/C) RATIO:			0.881			0.884			0.934				0.936					0.935
	V/C LESS ATSAC/ATCS ADJUSTMENT:			0.811			0.814			0.864				0.866					0.865
	LEVEL OF SERVICE (LOS):			D			D			D				D					D

REMARKS:

Version: 1i Beta; 8/4/2011

PROJECT IMPACT

Change in *v/c* due to project:	0.002	Δ*v/c* after mitigation:	0.001
Significant impacted?	NO	Fully mitigated?	N/A

Level of Service Worksheet
(Circular 212 Method)

I/S #:	North-South Street:	Sepulveda Boulevard	Year of Count:	2011	Ambient Growth (%):	1.0	Conducted by:	Hirsch/Green	Date:	12/7/2012
61	East-West Street:	Washington Place	Projection Year:	2012	Peak Hour:	PM	Reviewed by:		Project:	Pico/Sepulveda Mixed-Use

		EXISTING CONDITION			EXISTING PLUS PROJECT			FUTURE CONDITION W/O PROJECT				FUTURE CONDITION W/ PROJECT				FUTURE W/ PROJECT W/ MITIGATION			
	MOVEMENT	Volume	No. of Lanes	Lane Volume	Project Traffic	Total Volume	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Project Traffic	Total Volume	No. of Lanes	Lane Volume	TDM change	Total Volume	No. of Lanes	Lane Volume
	No. of Phases			2			2			2				2					2
	Opposed Ø'ing: N/S-1, E/W-2 or Both-3?			0			0			0				0					0
	Right Turns: FREE-1, NRTOR-2 or OLA-3?	NB-- 0 SB-- EB-- 0 WB--		0	NB-- 0 SB-- EB-- 0 WB--		0	NB-- SB-- EB-- WB--		0		NB-- 0 SB-- EB-- 0 WB--		0		NB-- 0 SB-- EB-- 0 WB--		0
	ATSAC-1 or ATSAC+ATCS-2?			1			1			1				1					1
	Override Capacity			0			0			0				0					0
NORTHBOUND	Left	73	1	**73**	0	73	**73**	0	74	1	**74**	0	74	1	**74**	0	74	1	**74**
	Left-Through		0							0				0				0	
	Through	863	1	455	10	873	460	161	1033	1	540	10	1043	1	545	-1	1042	1	544
	Through-Right		1							1				1				1	
	Right	46	0	46	0	46	46	0	46	0	46	0	46	0	46	0	46	0	46
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
SOUTHBOUND	Left	80	1	80	0	80	80	0	81	1	81	0	81	1	81	0	81	1	81
	Left-Through		0							0				0				0	
	Through	794	1	**516**	6	800	**519**	114	916	1	**578**	6	922	1	**581**	-1	921	1	**581**
	Through-Right		1							1				1				1	
	Right	238	0	238	0	238	238	0	240	0	240	0	240	0	240	0	240	0	240
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
EASTBOUND	Left	217	1	**217**	0	217	**217**	0	219	1	**219**	0	219	1	**219**	0	219	1	**219**
	Left-Through		0							0				0				0	
	Through	545	1	313	0	545	313	0	550	1	316	0	550	1	316	0	550	1	316
	Through-Right		1							1				1				1	
	Right	80	0	80	0	80	80	0	81	0	81	0	81	0	81	0	81	0	81
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
WESTBOUND	Left	30	1	30	0	30	30	0	30	1	30	0	30	1	30	0	30	1	30
	Left-Through		0							0				0				0	
	Through	476	1	**298**	0	476	**298**	0	481	1	**301**	0	481	1	**301**	0	481	1	**301**
	Through-Right		1							1				1				1	
	Right	119	0	119	0	119	119	0	120	0	120	0	120	0	120	0	120	0	120
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
	CRITICAL VOLUMES	North-South:		589	North-South:		592	North-South:			652	North-South:			655		North-South:		655
		East-West:		515	East-West:		515	East-West:			520	East-West:			520		East-West:		520
		SUM:		1104	SUM:		1107	SUM:			1172	SUM:			1175		SUM:		1175
	VOLUME/CAPACITY (V/C) RATIO:			0.736			0.738				0.781				0.783				0.783
	V/C LESS ATSAC/ATCS ADJUSTMENT:			0.666			0.668				0.711				0.713				0.713
	LEVEL OF SERVICE (LOS):			B			B				C				C				C

REMARKS:

Version: 1i Beta; 8/4/2011

PROJECT IMPACT

Change in *v/c* due to project:	0.002	Δ*v/c* after mitigation:	0.002
Significant impacted?	NO	Fully mitigated?	N/A