County of Los Angeles

THE CANYON RESIDENCES PROJECT

Draft EIR

Volume IV

Appendices 5.5 – 6.0

Project No. R2008-00549
Case Nos. RENVT20080042,
RCUPT200800069, RPAT200800004
SCH No. 2008061035

Prepared for:

County of Los Angeles
Department of Regional Planning
320 West Temple Street
Los Angeles, CA 90012

Prepared by:

IMPACT SCIENCES, INC.
234 East Colorado Boulevard, Suite 205
Pasadena, California 91101

September 2010

THE CANYON RESIDENCES PROJECT

Draft Environmental Impact Report

Volume IV

Appendices 5.5 – 6.0

Prepared for:

County of Los Angeles
Department of Regional Planning

Prepared by:

Impact Sciences, Inc.
234 East Colorado Boulevard, Suite 205
Pasadena, California 91101

September 2010

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Greenhouse Gas Emissions Calculations

The Canyon Residences Project
Evaluation of Global Climate Change Impacts

Table GHG-1
Summary of Annual GHG Emissions

	Construction Emissions		Operational Direct Emissions		Operational Indirect Emissions				Total**
Land Use	**Total Construction** (MT CO_2e)	**Annualized* Construction** (MT CO_2e)	**Motor Vehicles** (MT CO_2e/yr)	**Area Sources** (MT CO_2e/yr)	**Electricity** (MT CO_2e/yr)	**Solid Waste** (MT CO_2e/yr)	**Water** (MT CO_2e/yr)	**Wastewater** (MT CO_2e/yr)	(MT CO_2e/yr)
Mixed Use	4,439.33	147.98	7,853.77	2,065.02	1,264.56	24.13	188.10	56.36	11,599.90
Existing Land Use	-	-	696.17	66.09	201.69	8.20	13.87	2.56	988.58
Net Total	4,439.33	147.98	7,157.59	1,998.93	1,062.86	15.93	174.23	53.80	10,611.32

* Annualized over the "project lifetime" (30 years). Included in the total emissions.
** Totals may not add up exactly due to rounding.

The Canyons Residences Project
Evaluation of Global Climate Change Impacts

Table GHG-2
Construction GHG Emission Factors

Equipment Type	CO_2 Emission Factor[1] (kg/gal)	CH_4 Emission Factor[2,3] (kg/gal)	N_2O Emission Factor[2,3] (kg/gal)	CO_2 to CO_2e Ratio (GWP CH_4 = 21) (GWP N_2O = 310)
Off-Road	10.15	0.0014	0.0001	0.994
On-Road	10.15	0.0005	0.0003	0.990
Autos[4]	n/a	n/a	n/a	0.950

Sources:

1. California Climate Action Registry, *General Reporting Protocol: Reporting Entity-Wide Greenhouse Gas Emissions Version 3.0*, (2008) 94.
2. California Climate Action Registry, *General Reporting Protocol: Reporting Entity-Wide Greenhouse as Emissions Version 3.0*, (2008) 95-96.
3. California Energy Commission, *Diesel Use in California, Remarks by Commissioner James D. Boyd, (*2002). It was assumed that heavy duty on-road trucks have a fuel economy of 6 miles per gallon based on this data source.
4. US Environmental Protection Agency, Office of Transportation and Air Quality, *Emission Facts - Greenhouse Gas Emissions from a Typical Passenger Vehicle (EPA420-F-05-004)*, (2005) 4. Passenger vehicle CO_2 emissions are assumed to be 95% of GHG emissions on a CO_2 equivalent basis.

Table GHG-3
Construction GHG Emissions

Construction Year	Equipment Type	Annual CO_2 Emissions[1] (Tons CO_2/yr)	Annual CO_2 Emissions (MT CO_2/yr)	CO_2 to CO_2e Ratio	Annual CO_2e Emissions (MT CO_2e/yr)
2009	Off-Road	58.09	52.70	0.99	53.01
2009	On-Road	6.09	5.52	0.99	5.58
2009	Worker/Autos	5.37	4.87	0.95	5.13
Total 2009		**69.55**	**63.09**		**63.72**
2010	Off-Road	493.70	447.88	0.99	450.54
2010	On-Road	424.80	385.37	0.99	389.29
2010	Worker/Autos	593.18	538.12	0.95	566.45
Total 2010		**1,511.68**	**1,371.37**		**1,406.27**
2011	Off-Road	348.69	316.33	0.99	318.21
2011	On-Road	475.41	431.28	0.99	435.66
2011	Worker/Autos	912.40	827.72	0.95	871.28
Total 2011		**1,736.50**	**1,575.33**		**1,625.15**
2012	Off-Road	266.52	241.78	0.99	243.22
2012	On-Road	398.85	361.83	0.99	365.51
2012	Worker/Autos	770.17	698.69	0.95	735.46
Total 2012		**1,435.54**	**1,302.30**		**1,344.19**

Sources:

1. Estimated CO_2 emission from URBEMIS2007.

Where:

CH_4	Methane
CO_2	Carbon dioxide
CO_2e	Carbon dioxide equivalent
gal	Gallons
GWP	Global warming potential
kg	Kilograms
MT	Metric ton
N_2O	Nitrous oxide
yr	Year

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Urbemis 2007 Version 9.2.4

Combined Annual Emissions Reports (Tons/Year)

File Name: Z:\Alan Sako\291.06 The Canyon Residences\Emissions\Urbemis Canyon Residences - Construction.urb924
Project Name: The Canyon Residences - Construction
Project Location: South Coast AQMD
On-Road Vehicle Emissions Based on: Version : Emfac2007 V2.3 Nov 1 2006
Off-Road Vehicle Emissions Based on: OFFROAD2007

Summary Report:

CONSTRUCTION EMISSION ESTIMATES

	CO2
2009 TOTALS (tons/year unmitigated)	69.55
2009 TOTALS (tons/year mitigated)	69.55
Percent Reduction	0.00
2010 TOTALS (tons/year unmitigated)	1,511.67
2010 TOTALS (tons/year mitigated)	1,511.67
Percent Reduction	0.00
2011 TOTALS (tons/year unmitigated)	1,736.50
2011 TOTALS (tons/year mitigated)	1,736.50
Percent Reduction	0.00
2012 TOTALS (tons/year unmitigated)	1,435.54
2012 TOTALS (tons/year mitigated)	1,435.54
Percent Reduction	0.00

Construction Unmitigated Detail Report:

CONSTRUCTION EMISSION ESTIMATES Annual Tons Per Year, Unmitigated

	CO2
2009	69.55
Demolition 12/01/2009-02/20/2010	69.55
Fugitive Dust	0.00
Demo Off Road Diesel	58.09
Demo On Road Diesel	6.09
Demo Worker Trips	5.37

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Combined Annual Emissions Reports (Tons/Year)

2010	1,511.67
Demolition 12/01/2009-02/20/2010	108.85
Fugitive Dust	0.00
Demo Off Road Diesel	90.92
Demo On Road Diesel	9.54
Demo Worker Trips	8.40
Mass Grading 02/21/2010-05/15/2010	349.49
Mass Grading Dust	0.00
Mass Grading Off Road Diesel	222.72
Mass Grading On Road Diesel	114.65
Mass Grading Worker Trips	12.13
Building 05/16/2010-10/31/2012	1,053.32
Building Off Road Diesel	180.06
Building Vendor Trips	300.61
Building Worker Trips	572.65
2011	1,736.50
Building 05/16/2010-10/31/2012	1,659.59
Building Off Road Diesel	283.73
Building Vendor Trips	473.70
Building Worker Trips	902.16
Asphalt 02/01/2011-03/31/2011	71.35
Paving Off-Gas	0.00
Paving Off Road Diesel	64.96
Paving On Road Diesel	1.71
Paving Worker Trips	4.68
Coating 07/01/2011-09/30/2012	5.56
Architectural Coating	0.00
Coating Worker Trips	5.56

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Combined Annual Emissions Reports (Tons/Year)

2012	1,435.54
Building 05/16/2010-10/31/2012	1,391.38
Building Off Road Diesel	237.90
Building Vendor Trips	397.18
Building Worker Trips	756.30
Coating 07/01/2011-09/30/2012	8.27
Architectural Coating	0.00
Coating Worker Trips	8.27
Asphalt 07/01/2012-08/31/2012	35.89
Paving Off-Gas	0.00
Paving Off Road Diesel	28.62
Paving On Road Diesel	1.67
Paving Worker Trips	5.60

Phase Assumptions

Phase: Demolition 12/1/2009 - 2/20/2010 - Demolition

Building Volume Total (cubic feet): 540015.8

Building Volume Daily (cubic feet): 8998.91

On Road Truck Travel (VMT): 124.98

Off-Road Equipment:

3 Concrete/Industrial Saws (10 hp) operating at a 0.73 load factor for 8 hours per day

1 Crushing/Processing Equip (142 hp) operating at a 0.78 load factor for 8 hours per day

2 Excavators (168 hp) operating at a 0.57 load factor for 8 hours per day

2 Graders (174 hp) operating at a 0.61 load factor for 8 hours per day

2 Rubber Tired Dozers (357 hp) operating at a 0.59 load factor for 1 hours per day

2 Rubber Tired Loaders (164 hp) operating at a 0.54 load factor for 8 hours per day

1 Signal Boards (15 hp) operating at a 0.78 load factor for 8 hours per day

2 Skid Steer Loaders (44 hp) operating at a 0.55 load factor for 8 hours per day

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Combined Annual Emissions Reports (Tons/Year)

Phase: Mass Grading 2/21/2010 - 5/15/2010 - Mass Site Grading/Excavation
Total Acres Disturbed: 15.3
Maximum Daily Acreage Disturbed: 3.82
Fugitive Dust Level of Detail: High
  Onsite Haulage: 167.5 ton-miles/day; Offsite haulage: 0 ton-mils/day
On Road Truck Travel (VMT): 901.64
Off-Road Equipment:
2 Excavators (168 hp) operating at a 0.57 load factor for 8 hours per day
2 Graders (174 hp) operating at a 0.61 load factor for 6 hours per day
2 Rubber Tired Dozers (357 hp) operating at a 0.59 load factor for 6 hours per day
2 Rubber Tired Loaders (164 hp) operating at a 0.54 load factor for 8 hours per day
1 Scrapers (313 hp) operating at a 0.72 load factor for 8 hours per day
1 Signal Boards (15 hp) operating at a 0.78 load factor for 8 hours per day
2 Skid Steer Loaders (44 hp) operating at a 0.55 load factor for 8 hours per day
1 Water Trucks (189 hp) operating at a 0.5 load factor for 8 hours per day

Phase: Paving 2/1/2011 - 3/31/2011 - Paving
Acres to be Paved: 2.25
Off-Road Equipment:
1 Pavers (100 hp) operating at a 0.62 load factor for 7 hours per day
2 Paving Equipment (104 hp) operating at a 0.53 load factor for 6 hours per day
2 Rollers (95 hp) operating at a 0.56 load factor for 7 hours per day
1 Scrapers (313 hp) operating at a 0.72 load factor for 8 hours per day
1 Signal Boards (15 hp) operating at a 0.78 load factor for 8 hours per day

Phase: Paving 7/1/2012 - 8/31/2012 - Paving
Acres to be Paved: 2.25
Off-Road Equipment:
4 Cement and Mortar Mixers (10 hp) operating at a 0.56 load factor for 6 hours per day
1 Pavers (100 hp) operating at a 0.62 load factor for 7 hours per day
1 Paving Equipment (104 hp) operating at a 0.53 load factor for 8 hours per day
1 Rollers (95 hp) operating at a 0.56 load factor for 7 hours per day
1 Tractors/Loaders/Backhoes (108 hp) operating at a 0.55 load factor for 7 hours per day

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Combined Annual Emissions Reports (Tons/Year)

Phase: Building Construction 5/16/2010 - 10/31/2012 - Building Construction
Off-Road Equipment:
2 Cranes (399 hp) operating at a 0.43 load factor for 6 hours per day
1 Signal Boards (15 hp) operating at a 0.78 load factor for 8 hours per day
2 Skid Steer Loaders (44 hp) operating at a 0.55 load factor for 8 hours per day
2 Trenchers (63 hp) operating at a 0.75 load factor for 8 hours per day

Phase: Architectural Coating 7/1/2011 - 9/30/2012 - Architectural Coating
Rule: Residential Interior Coatings begins 1/1/2005 ends 6/30/2008 specifies a VOC of 100
Rule: Residential Interior Coatings begins 7/1/2008 ends 12/31/2040 specifies a VOC of 50
Rule: Residential Exterior Coatings begins 1/1/2005 ends 6/30/2008 specifies a VOC of 250
Rule: Residential Exterior Coatings begins 7/1/2008 ends 12/31/2040 specifies a VOC of 100
Rule: Nonresidential Interior Coatings begins 1/1/2005 ends 12/31/2040 specifies a VOC of 250
Rule: Nonresidential Exterior Coatings begins 1/1/2005 ends 12/31/2040 specifies a VOC of 250

Construction Mitigated Detail Report:
CONSTRUCTION EMISSION ESTIMATES Annual Tons Per Year, Mitigated

	CO2
2009	69.55
Demolition 12/01/2009-02/20/2010	69.55
Fugitive Dust	0.00
Demo Off Road Diesel	58.09
Demo On Road Diesel	6.09
Demo Worker Trips	5.37

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Combined Annual Emissions Reports (Tons/Year)

2010	1,511.67
Demolition 12/01/2009-02/20/2010	108.85
Fugitive Dust	0.00
Demo Off Road Diesel	90.92
Demo On Road Diesel	9.54
Demo Worker Trips	8.40
Mass Grading 02/21/2010-05/15/2010	349.49
Mass Grading Dust	0.00
Mass Grading Off Road Diesel	222.72
Mass Grading On Road Diesel	114.65
Mass Grading Worker Trips	12.13
Building 05/16/2010-10/31/2012	1,053.32
Building Off Road Diesel	180.06
Building Vendor Trips	300.61
Building Worker Trips	572.65
2011	1,736.50
Building 05/16/2010-10/31/2012	1,659.59
Building Off Road Diesel	283.73
Building Vendor Trips	473.70
Building Worker Trips	902.16
Asphalt 02/01/2011-03/31/2011	71.35
Paving Off-Gas	0.00
Paving Off Road Diesel	64.96
Paving On Road Diesel	1.71
Paving Worker Trips	4.68
Coating 07/01/2011-09/30/2012	5.56
Architectural Coating	0.00
Coating Worker Trips	5.56

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Combined Annual Emissions Reports (Tons/Year)

2012	1,435.54
Building 05/16/2010-10/31/2012	1,391.38
Building Off Road Diesel	237.90
Building Vendor Trips	397.18
Building Worker Trips	756.30
Coating 07/01/2011-09/30/2012	8.27
Architectural Coating	0.00
Coating Worker Trips	8.27
Asphalt 07/01/2012-08/31/2012	35.89
Paving Off-Gas	0.00
Paving Off Road Diesel	28.62
Paving On Road Diesel	1.67
Paving Worker Trips	5.60

Construction Related Mitigation Measures

The following mitigation measures apply to Phase: Mass Grading 2/21/2010 - 5/15/2010 - Mass Site Grading/Excavation

For Soil Stablizing Measures, the Water exposed surfaces 3x daily watering mitigation reduces emissions by:

PM10: 61% PM25: 61%

For Soil Stablizing Measures, the Equipment loading/unloading mitigation reduces emissions by:

PM10: 69% PM25: 69%

For Unpaved Roads Measures, the Manage haul road dust 3x daily watering mitigation reduces emissions by:

PM10: 61% PM25: 61%

The Canyons Residences Project
Evaluation of Global Climate Change Impacts

Table GHG-4
Operational Motor Vehicle GHG Emissions

Land Use	Equipment Type	Annual CO_2 Emissions[1] (Tons CO_2/yr)	CO_2 to CO_2e Ratio[2]	Annual CO_2e Emissions (MT CO_2E/yr)
Multi-Family Residential	Motor Vehicles	8,224.43	0.950	7,853.77
Existing Land Use	Motor Vehicles	729.03	0.950	696.17
Net Total		**7,495.40**		**7,157.59**

Sources:

1. Estimated CO_2 emission from URBEMIS2007.
2. US Environmental Protection Agency, Office of Transportation and Air Quality, *Emission Facts - Greenhouse Gas Emissions from a Typical Passenger Vehicle* EPA420-F-05-004, (2005) 4. Passenger vehicle CO_2 emissions are assumed to be 95% of GHG emissions on a CO_2 equivalent basis.

Where:

CO_2	Carbon dioxide
CO_2e	Carbon dioxide equivalent
MT	Metric ton
yr	Year

The Canyons Residences Project
Evaluation of Global Climate Change Impacts

Table GHG-5
Area Source GHG Emissions

Land Use	CO_2 Emission Factor[1] GWP = 1 (kg/MMBtu)	CH_4 Emission Factor[2] GWP = 21 (kg/MMBtu)	N_2O Emission Factor[2] GWP = 310 (kg/MMBtu)	Annual CO_2 Emissions[3] (Tons CO_2/yr)	Annual CO_2e Emissions (MT CO_2e/yr)
Multi-Family Residential					
Natural Gas	56.06	0.0059	0.0001	2,269.51	2,064.55
Landscape Maintenance	56.06	0.0059	0.0001	0.51	0.46
Total				2,270.02	2,065.02
Less 15% Natural Gas Consumption				2,235.97	1,755.33
Existing Land Uses					
Natural Gas	56.06	0.0059	0.0001	72.15	65.63
Landscape Maintenance	56.06	0.0059	0.0001	0.50	0.45
Total				72.65	66.09
Net Total				**2,197.37**	**1,998.93**
Less 15% Energy Consumption				**2,163.32**	**1,689.25**

Sources:
1. URBEMIS2007 uses a CO_2 emission factor of 120,000 pounds per million cubic feet. This was converted to kg/MMBtu.
2. California Climate Action Registry, *General Reporting Protocol: Reporting Entity-Wide Greenhouse Gas Emissions Version 3.0*, (2008) 97-99.
3. Estimated CO_2 emissions from URBEMIS2007. URBEMIS2007 assumes 4,011.5 cubic feet/unit/month of natural gas for multi-family units.
4. All emission factors for wood burning are provided in the California Climate Action Registry, *General Reporting Protocol: Reporting Entity-Wide Greenhouse Gas Emissions Version 3.0*, (2008).

Where:

CH_4	Methane	MMBtu	Million British thermal units
CO_2	Carbon dioxide	MT	Metric ton
CO_2e	Carbon dioxide equivalent	N_2O	Nitrous oxide
GWP	Global warming potential	yr	Year
kg	Kilogram		

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Combined Annual Emissions Reports (Tons/Year)

File Name: Z:\Alan Sako\291.06 The Canyon Residences\Emissions\Urbemis Canyon Residences - Existing.urb924
Project Name: The Canyon Residences - Existing Site
Project Location: South Coast AQMD
On-Road Vehicle Emissions Based on: Version : Emfac2007 V2.3 Nov 1 2006
Off-Road Vehicle Emissions Based on: OFFROAD2007

Summary Report:

AREA SOURCE EMISSION ESTIMATES

	CO2
TOTALS (tons/year, unmitigated)	72.65

OPERATIONAL (VEHICLE) EMISSION ESTIMATES

	CO2
TOTALS (tons/year, unmitigated)	729.03

SUM OF AREA SOURCE AND OPERATIONAL EMISSION ESTIMATES

	CO2
TOTALS (tons/year, unmitigated)	801.68

Area Source Unmitigated Detail Report:

AREA SOURCE EMISSION ESTIMATES Annual Tons Per Year, Unmitigated

Source	CO2
Natural Gas	72.15
Hearth	0.00
Landscape	0.50
Consumer Products	
Architectural Coatings	
TOTALS (tons/year, unmitigated)	72.65

Area Source Changes to Defaults

Operational Unmitigated Detail Report:

OPERATIONAL EMISSION ESTIMATES Annual Tons Per Year, Unmitigated

Source	CO2
Elementary school	729.03
TOTALS (tons/year, unmitigated)	729.03

Operational Settings:

Includes correction for passby trips
Does not include double counting adjustment for internal trips
Analysis Year: 2008 Season: Annual
Emfac: Version : Emfac2007 V2.3 Nov 1 2006

Summary of Land Uses

Land Use Type	Acreage	Trip Rate	Unit Type	No. Units	Total Trips	Total VMT
Elementary school		1.29	students	480.00	619.20	3,959.36
					619.20	3,959.36

Vehicle Fleet Mix

Vehicle Type	Percent Type	Non-Catalyst	Catalyst	Diesel
Light Auto	51.6	1.7	97.9	0.4
Light Truck < 3750 lbs	7.4	4.1	91.8	4.1
Light Truck 3751-5750 lbs	22.9	0.9	99.1	0.0
Med Truck 5751-8500 lbs	10.6	0.9	99.1	0.0
Lite-Heavy Truck 8501-10,000 lbs	1.6	0.0	81.2	18.8
Lite-Heavy Truck 10,001-14,000 lbs	0.5	0.0	60.0	40.0
Med-Heavy Truck 14,001-33,000 lbs	0.9	0.0	22.2	77.8
Heavy-Heavy Truck 33,001-60,000 lbs	0.5	0.0	0.0	100.0
Other Bus	0.1	0.0	0.0	100.0
Urban Bus	0.1	0.0	0.0	100.0
Motorcycle	2.8	78.6	21.4	0.0
School Bus	0.1	0.0	0.0	100.0
Motor Home	0.9	11.1	77.8	11.1

Travel Conditions

	Residential			Commercial		
	Home-Work	Home-Shop	Home-Other	Commute	Non-Work	Customer
Urban Trip Length (miles)	12.7	7.0	9.5	13.3	7.4	8.9
Rural Trip Length (miles)	17.6	12.1	14.9	15.4	9.6	12.6
Trip speeds (mph)	30.0	30.0	30.0	30.0	30.0	30.0
% of Trips - Residential	32.9	18.0	49.1			
% of Trips - Commercial (by land use)						
Elementary school				20.0	10.0	70.0

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Urbemis 2007 Version 9.2.4

Combined Annual Emissions Reports (Tons/Year)

File Name: Z:\Alan Sako\291.06 The Canyon Residences\Emissions\Urbemis Canyon Residences - Operation.urb924
Project Name: The Canyon Residences - Operation
Project Location: South Coast AQMD
On-Road Vehicle Emissions Based on: Version : Emfac2007 V2.3 Nov 1 2006
Off-Road Vehicle Emissions Based on: OFFROAD2007

Summary Report:

AREA SOURCE EMISSION ESTIMATES

	CO2
TOTALS (tons/year, unmitigated)	2,270.02

OPERATIONAL (VEHICLE) EMISSION ESTIMATES

	CO2
TOTALS (tons/year, unmitigated)	8,465.55
TOTALS (tons/year, mitigated)	8,224.43
Percent Reduction	2.85

SUM OF AREA SOURCE AND OPERATIONAL EMISSION ESTIMATES

	CO2
TOTALS (tons/year, unmitigated)	10,735.57

Both Area and Operational Mitigation must be turned on to get a combined mitigated total.

Area Source Unmitigated Detail Report:

AREA SOURCE EMISSION ESTIMATES Annual Tons Per Year, Unmitigated

Source	CO2
Natural Gas	2,269.51
Hearth	0.00
Landscape	0.51
Consumer Products	
Architectural Coatings	
TOTALS (tons/year, unmitigated)	2,270.02

Area Source Changes to Defaults

Percent residential using natural gas changed from 78% to 100%
Percentage of residences with wood stoves changed from 10% to 0%
Percentage of residences with wood fireplaces changed from 5% to 0%
Percentage of residences with natural gas fireplaces changed from 85% to 0%
The number of persons per household for consumer product use changed from 3 persons to 2.76 persons

Operational Unmitigated Detail Report:
OPERATIONAL EMISSION ESTIMATES Annual Tons Per Year, Unmitigated

Source	CO2
Apartments mid rise	8,465.55
TOTALS (tons/year, unmitigated)	8,465.55

Operational Mitigated Detail Report:
OPERATIONAL EMISSION ESTIMATES Annual Tons Per Year, Mitigated

Source	CO2
Apartments mid rise	8,224.43
TOTALS (tons/year, mitigated)	8,224.43

Operational Settings:

Includes correction for passby trips
Does not include double counting adjustment for internal trips
Analysis Year: 2012 Season: Annual
Emfac: Version : Emfac2007 V2.3 Nov 1 2006

Summary of Land Uses

Land Use Type	Acreage	Trip Rate	Unit Type	No. Units	Total Trips	Total VMT
Apartments mid rise	15.70	6.72	dwelling units	775.00	5,208.00	46,064.77
					5,208.00	46,064.77

Vehicle Fleet Mix

Vehicle Type	Percent Type	Non-Catalyst	Catalyst	Diesel
Light Auto	51.5	0.6	99.2	0.2
Light Truck < 3750 lbs	7.3	1.4	95.9	2.7
Light Truck 3751-5750 lbs	23.0	0.4	99.6	0.0
Med Truck 5751-8500 lbs	10.7	0.9	99.1	0.0
Lite-Heavy Truck 8501-10,000 lbs	1.6	0.0	81.2	18.8
Lite-Heavy Truck 10,001-14,000 lbs	0.5	0.0	60.0	40.0
Med-Heavy Truck 14,001-33,000 lbs	0.9	0.0	22.2	77.8
Heavy-Heavy Truck 33,001-60,000 lbs	0.5	0.0	0.0	100.0
Other Bus	0.1	0.0	0.0	100.0
Urban Bus	0.1	0.0	0.0	100.0
Motorcycle	2.8	60.7	39.3	0.0
School Bus	0.1	0.0	0.0	100.0
Motor Home	0.9	0.0	88.9	11.1

Travel Conditions

	Residential			Commercial		
	Home-Work	Home-Shop	Home-Other	Commute	Non-Work	Customer
Urban Trip Length (miles)	12.7	7.0	9.5	13.3	7.4	8.9
Rural Trip Length (miles)	17.6	12.1	14.9	15.4	9.6	12.6
Trip speeds (mph)	30.0	30.0	30.0	30.0	30.0	30.0
% of Trips - Residential	32.9	18.0	49.1			

% of Trips - Commercial (by land use)

7/23/2009 08:00:49 PM

Urbemis 2007 Version 9.2.4

Combined Annual Emissions Reports (Tons/Year)

File Name: Z:\Alan Sako\291.06 The Canyon Residences\Emissions\Urbemis Canyon Residences - Mitigated Operation.urb924
Project Name: The Canyon Residences - Operation
Project Location: South Coast AQMD
On-Road Vehicle Emissions Based on: Version : Emfac2007 V2.3 Nov 1 2006
Off-Road Vehicle Emissions Based on: OFFROAD2007

Summary Report:

AREA SOURCE EMISSION ESTIMATES

	CO2
TOTALS (tons/year, unmitigated)	2,270.02
TOTALS (tons/year, mitigated)	1,929.59
Percent Reduction	15.00

OPERATIONAL (VEHICLE) EMISSION ESTIMATES

	CO2
TOTALS (tons/year, unmitigated)	8,465.55
TOTALS (tons/year, mitigated)	8,224.43
Percent Reduction	2.85

SUM OF AREA SOURCE AND OPERATIONAL EMISSION ESTIMATES

	CO2
TOTALS (tons/year, unmitigated)	10,735.57
TOTALS (tons/year, mitigated)	10,154.02
Percent Reduction	5.42

Area Source Unmitigated Detail Report:

AREA SOURCE EMISSION ESTIMATES Annual Tons Per Year, Unmitigated

Source	CO2
Natural Gas	2,269.51
Hearth	0.00
Landscape	0.51
Consumer Products	
Architectural Coatings	
TOTALS (tons/year, unmitigated)	2,270.02

Area Source Mitigated Detail Report:

AREA SOURCE EMISSION ESTIMATES Annual Tons Per Year, Mitigated

Source	CO2
Natural Gas	1,929.08
Hearth	0.00
Landscape	0.51
Consumer Products	
Architectural Coatings	
TOTALS (tons/year, mitigated)	1,929.59

Area Source Changes to Defaults

Percent residential using natural gas changed from 78% to 100%

Percentage of residences with wood stoves changed from 10% to 0%

Percentage of residences with wood fireplaces changed from 5% to 0%

Percentage of residences with natural gas fireplaces changed from 85% to 0%

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OPERATIONAL EMISSION ESTIMATES Annual Tons Per Year, Mitigated

Source	CO2
Apartments mid rise	8,224.43
TOTALS (tons/year, mitigated)	8,224.43

Operational Settings:

Includes correction for passby trips

Does not include double counting adjustment for internal trips

Analysis Year: 2012 Season: Annual

Emfac: Version : Emfac2007 V2.3 Nov 1 2006

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Med Truck 5751-8500 lbs	10.7	0.9	99.1	0.0
Lite-Heavy Truck 8501-10,000 lbs	1.6	0.0	81.2	18.8
Lite-Heavy Truck 10,001-14,000 lbs	0.5	0.0	60.0	40.0
Med-Heavy Truck 14,001-33,000 lbs	0.9	0.0	22.2	77.8
Heavy-Heavy Truck 33,001-60,000 lbs	0.5	0.0	0.0	100.0
Other Bus	0.1	0.0	0.0	100.0
Urban Bus	0.1	0.0	0.0	100.0
Motorcycle	2.8	60.7	39.3	0.0
School Bus	0.1	0.0	0.0	100.0
Motor Home	0.9	0.0	88.9	11.1

Travel Conditions

	Residential			Commercial		
	Home-Work	Home-Shop	Home-Other	Commute	Non-Work	Customer
Urban Trip Length (miles)	12.7	7.0	9.5	13.3	7.4	8.9
Rural Trip Length (miles)	17.6	12.1	14.9	15.4	9.6	12.6
Trip speeds (mph)	30.0	30.0	30.0	30.0	30.0	30.0
% of Trips - Residential	32.9	18.0	49.1			

% of Trips - Commercial (by land use)

The Canyons Residences Project
Evaluation of Global Climate Change Impacts

Table GHG-6
Electrical Demand GHG Emissions (General and Student/General)

Land Use	Units	Electrical Demand Factor[1] (kW-hr/unit/yr)	Annual Demand Factor (10^6 kW-hr/yr)	CO_2e Emission Factor[2] (MT $CO_2e/10^6$ kW-hr)	Annual CO_2e Emissions (MT CO_2e/yr)
Multi-Family Residential	775 DU	5,626.50	4.3605	290	1,264.56
Less 15% Energy Consumption					1,074.87
Existing Land Uses	63,226 sf	11	0.6955	290	201.69
Net Total					**1,062.86**
Less 15% Energy Consumption					**873.18**

Sources:

1. South Coast Air Quality Management District, *CEQA Air Quality Handbook* , (1993) Table A9-11-A.
2. California Climate Action Registry, "Reporting Online Tool, Public Annual Entity Emissions," *Southern California Edison, PUP Report* , (2006), http://www.climateregistry.org/CARROT/public/Reports.aspx.

Where:

CO_2e	Carbon dioxide equivalent
DU	Dwelling unit
GWP	Global warming potential
kW-hr	Kilowatt-hour
lbs	Pounds
MT	Metric ton
sf	Square feet
yr	Year

The Canyons Residences Project
Evaluation of Global Climate Change Impacts

Table GHG-7
Solid Waste GHG Emissions

Land Use	Solid Waste Generation[1] (Tons/yr)	CO_2e Emission Factor[2] (MT CO_2e/MT waste)	Annual CO_2e Emissions (MT CO_2e/yr)
Multi-Family Residential	241.78	0.11	24.13
Existing Land Uses	82.19	0.11	8.20
Net Total	159.59		15.93

Sources:
1. Section 5.13, Solid Waste. Values for the project are inclusive of 50 percent diversion.

2. US Environmental Protection Agency, Office of Solid Waste and Emergency Response, *Greenhouse Gas Emission Factors for Management of Selected Materials in Municipal Solid Waste (EPA-530-R-98-013)* , (1998). The factor is based on mixed municipal solid waste as disposed in landfills without landfill gas recovery.

Where:

CO_2e	Carbon dioxide equivalent
MT	Metric ton
yr	Year

The Canyons Residences Project
Evaluation of Global Climate Change Impacts

Table GHG-8
Potable Water Supply, Conveyance, Treatment, and Distribution GHG Emissions

Land Use	Action	Net Potable Water Needs Estimate[1] (MG/yr)	Electrical Demand Factor[2,3,4] (kW-hr/MG)	Annual Electrical Demand (10^6 kW-hr/year)	CO_2e Emission Factor[5] (MT $CO_2e/10^6$ kW-hr)	Annual CO_2e Emissions (MT CO_2e/yr)
Multi-Family Residential	Supply & Conveyance	58.08	9,727	0.565	290	163.84
Multi-Family Residential	Treatment	58.08	111	0.006	290	1.87
Multi-Family Residential	Distribution	58.08	1,272	0.074	290	21.43
Multi-Family Residential	Recycled Water	3.78	875	0.003	290	0.96
Existing Land Use	Supply & Conveyance	4.30	9,727	0.042	290	12.14
Existing Land Use	Treatment	4.30	111	0.000	290	0.14
Existing Land Use	Distribution	4.30	1,272	0.005	290	1.59
Net Total						**174.23**

Sources:

1. Section 5.11, Water. Values converted to million gallons per year.
2. California Energy Commission, *California's Water-Energy Relationship, Final Staff Report (CEC-700-2005-011-SF)*, (2005) 26.
3. California Energy Commission, *Refining Estimates of Water-Related Energy Use in California, PIER Final Project Report (CEC-500-2006-118)*, (2006) 22. Prepared by Navigant Consulting, Inc.
4. R. C. Wilkinson, et. al, California Department of Water Resources, Water Sources "Powering" Southern California, n.d. Recycled water was estimated to use 285 kW-hr per acre-foot.
5. California Climate Action Registry, "Reporting Online Tool, Public Annual Entity Emissions," *Southern California Edison, PUP Report*, (2006), http://www.climateregistry.org/CARROT/public/Reports.aspx.

Where:

CO_2e	Carbon dioxide equivalent
GWP	Global warming potential
kW-hr	Kilowatt-hour
lbs	Pounds
MG	Million gallons
MT	Metric ton
N_2O	Nitrous oxide
yr	Year

The Canyons Residences Project
Evaluation of Global Climate Change Impacts

Table GHG-9
Wasterwater Treatment Electrical Demand GHG Emissions

Land Use	Net Wastewater Generation Rate[1] (MG/yr)	Electrical Demand Factor[2] (kW-hr/MG)	Annual Demand Factor (10^6 kW-hr/yr)	CO_2e Emision Factor[3] (MT $CO_2e/10^6$ kW-hr)	Annual CO_2e Emissions (MT CO_2e/yr)
Multi-Family Residential	44.13	1,911	0.08	290	24.46
Existing Land Use	4.62	1,911	0.01	290	2.56

Sources:
1. Section 5.8, Sewage Disposal. Value converted to million gallons per year.
2. California Energy Commission, *Refining Estimates of Water-Related Energy Use in California, PIER Final Project Report (CEC-500-2006-118).* Prepared by Navigant Consulting, Inc., (2006) 22.
3. California Climate Action Registry, "Reporting Online Tool, Public Annual Entity Emissions,"*Southern California Edison, PUP Report*, (2006), http://www.climateregistry.org/CARROT/public/Reports.aspx.

Table GHG-10
Wastewater Treatment Process GHG Emissions[1]

Project	Maximum Population	Pounds BOD5 per Capita per Day[2] (lbs BOD5/capita/day)	Pounds CH_4 per Pound BOD5[3] (lbs CH_4/BOD5)	Fraction Anaerobically Digested[4]	Annual CO_2e Emissions (MT CO_2e/yr)
Multi-Family Residential	2,139	0.13	0.22	0.15	31.90
Existing Land Use[5]	-	0.13	0.22	0.15	-

Sources:
1. US Environmental Protection Agency, *Compilation of Air Pollutant Emission Factors, AP-42, Fifth Edition, Volume I, Chapter 4.3.5*, (1998). Data is not available to determine CO_2 and N_2O emissions from this process. The dominant GHG is CH_4.
2. The US EPA recommends a default value of 0.13 lb BOD5/capita/day.
3. The US EPA recommends a default value of 0.22 lb CH_4/BOD5.
4. The US EPA recommends a default value of 15% for the fraction anaerobically digested for domestic wastewater.
5. Data not available.

Where:

BOD5	Biological oxygen demand using a standard 5 day test
CH_4	Methane
CO_2	Carbon dioxide
CO_2e	Carbon dioxide equivalent
GWP	Global warming potential
kW-hr	Kilowatt-hour
lbs	Pounds
MG	Million gallons
MT	Metric ton
N_2O	Nitrous oxide
yr	Year

The Canyons Residences Project
Evaluation of Global Climate Change Impacts

Table GHG-11
Comparison of GHG Inventory from Housing Stock between Project and State of California Average

Land Use	Units	Energy Use Per Dwelling Unit[1]		Energy Use Total[2,3,4]		GHG Emissions[5]		
		Electricity (kW-hr/unit/yr)	Natural Gas (10^6 Btu/unit/yr)	Electricity (kW-hr/yr)	Natural Gas (10^6 Btu/yr)	Electricity (MT CO_2E/yr)	Natural Gas (MT CO_2E/yr)	Total (MT CO_2E/yr)
Apartments	775 DU	5,626.50	49.58	4,360,538	38,426	1,264.56	2,064.55	3,329.11
California Average				5,397,599	30,434	2,154.51	1,710.96	3,865.47
Improvement over California Average				19%	-26%	41%	-21%	**14%**

Sources:

1. Energy use per dwelling unit is cited under the electricity and area source tables for the proposed project.
2. Total energy use for the proposed project is based on the per dwelling unit factor multiplied by the number of dwelling units.
3. Total electricity use for the "California Average" is calculated by dividing the total California residential electricity use in 2006 (89,835,749 MW-hrs according to US Department of Energy, Energy Information Administration, "Electric Power Annual 2006 - State Data Tables," http://www.eia.doe.gov/cneaf/electricity/epa/epa_sprdshts.html) by the estimated 2006 California population (36,249,872 people according to US Census Bureau, "National and State Population Estimates," http://www.census.gov/popest/states/NST-ann-est.html) to give a per capita electricity use of 2,478 kW-hr/capita. This was multiplied by the proposed project population of 2,178 people to determing a "California Average" for the proposed project.
4. Total natural gas use for the "California Average" is calculated by dividing the total California residential natural gas use use in 2006 (491,777 million cubic feet or 506,530,310 million Btu according to US Department of Energy, Energy Information Administration, "Natural Gas Consumption by End Use," http://tonto.eia.doe.gov/dnav/ng/ng_cons_sum_dcu_SCA_a.htm) by the estimated 2006 California population (36,249,872 people according to US Census Bureau, "National and State Population Estimates," http://www.census.gov/popest/states/NST-ann-est.html) to give a per capita natural gas use of 13.97 million Btu/capita. This was multiplied by the proposed project population of 2,178 people to determing a "California Average" for the proposed project.
5. "California Average" electricity CO_2E emission factor is based on State of California-specific CO_2, CH_4, and N_2O factors from the California Climate Action Registry, *General Reporting Protocol: Reporting Entity-Wide Greenhouse Gas Emissions Version 3.0*, (2008) 92-93. Refer to the table below for detailed calculations. Natural gas CO_2, CH_4, and N_2O emission factors are the same as cited under the natural gas tables for the proposed project.

Where:

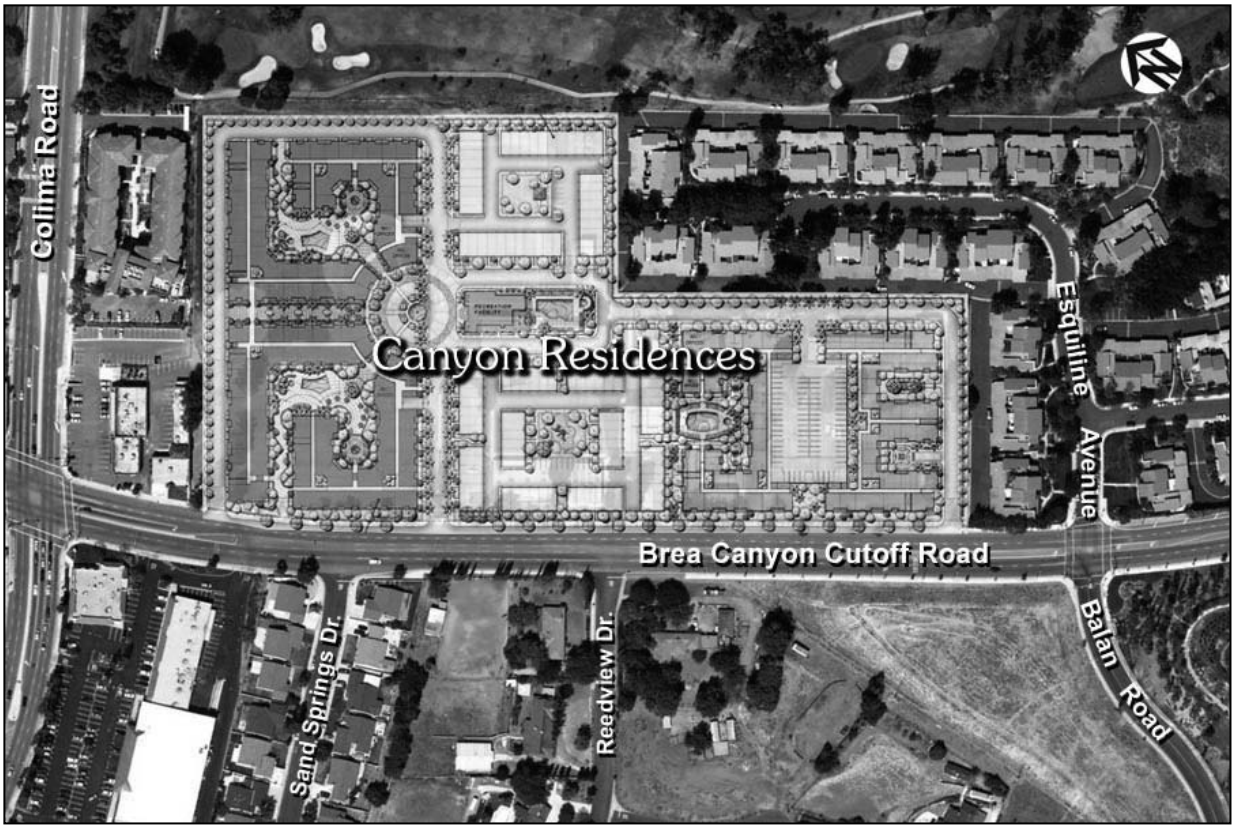
Btu	British thermal units
CH_4	Methane
CO_2	Carbon dioxide
CO_2E	Carbon dioxide equivalent
kW-hr	Kilowatt-hour
lbs	Pounds
MT	Metric ton
MW-hr	Megawatt-hour
N_2O	Nitrous oxide
yr	Year

State of California Electricity GHG Emission Factors (Refer to Source #5.)				
	CO_2	CH_4	N_2O	CO_2E
lbs/MW-hr	878.71	0.00670	0.00370	
lbs/kW-hr	0.88	0.00001	0.00000	
lbs/10^6 kW-hr	878,710.00	6.70000	3.70000	
MT/10^6 kW-hr	398.58	0.00304	0.00168	399.16

APPENDIX 5.7

Traffic Impact Analysis

CANYON RESIDENCES
TRAFFIC IMPACT ANALYSIS
ROWLAND HEIGHTS (LOS ANGELES COUNTY), CALIFORNIA
NOVEMBER 2, 2009



Prepared For

TCR
TRAMMELL CROW RESIDENTIAL

Prepared By

KHR ASSOCIATES
CONSULTING ENGINEERS/SURVEYORS/PLANNERS
4100 Newport Place Drive - Suite 200 Newport Beach, California 92660
(949) 756-6440 Fax (949) 756-6444

ATTESTATION

This report has been prepared by, and under the direction of, the undersigned, a duly Registered Traffic Engineer and Registered Civil Engineer in the State of California, and a Professional Traffic Operations Engineer. Except as noted, the undersigned attests to the technical information contained herein, and has judged to be acceptable the qualifications of any technical specialists providing engineering data for this report, upon which findings, conclusions, and recommendations are based.

James H. Kawamura, P.E.
Registered Traffic Engineer No. TR1100
Registered Civil Engineer No. C30560

Date: November 2, 2009

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CANYON RESIDENCES
TRAFFIC IMPACT ANALYSIS
NOVEMBER 2, 2009

I. EXECUTIVE SUMMARY

This report documents a Traffic Impact Analysis completed for the *Canyon Residences*, a proposed 775-unit multi-family residential project, located at 1920 Brea Canyon Cutoff Road, in the community of Rowland Heights, in an unincorporated portion of the County of Los Angeles, California ("*Project*"). The analysis was requested by the County of Los Angeles; commissioned by Trammell Crow Residential, Costa Mesa, California; and independently performed by **KHR Associates**, Newport Beach, California. According to the *Project* developer, Canyons Apartments LLC, Costa Mesa, California, the target year for completion of the *Project* is late in the year 2012. The findings, conclusions, and recommendations presented in this report were independently derived by **KHR Associates**, and are not necessarily shared by Trammell Crow Residential, Canyons Apartments LLC, the County of Los Angeles, any *Project* proponent or opponent, or any other interested parties.

Background

Based on an initial review of the proposed *Project*, the County of Los Angeles determined that the *Project* will generate over 500 motor vehicle trips per average weekday. As a result, the County's Department of Public Works, Traffic and Lighting Division, Traffic Studies Unit (hereinafter referred to as the "Traffic Studies Unit") requested that a Traffic Impact Analysis (TIA) be performed to specify if, and when, traffic mitigation improvements, as described in the Analysis and Impact Section of the County of Los Angeles' "Traffic Impact Analysis Report Guidelines" (January 1, 1997), need to be implemented. Traffic improvements identified in this TIA are: 1) necessary to maintain satisfactory levels of service as defined by the County's Traffic Studies Unit, the County's Congested Management Program (CMP), and/or the State of California Department of Transportation (Caltrans); 2) based on thresholds of significance; and/or 3) proposed *Project* access locations that are required to provide adequate safety (e.g., due to limited visibility on curving roadways). The content and format of the TIA and report basically follow the County's and Caltrans' guidelines.

Identified herein are the study parameters, analyses, and findings, conclusions, and recommendations regarding potential traffic impacts associated with the proposed *Project* and mitigation measures necessary to mitigated impacts, if any, to levels of less than significant, per County and Caltrans guidelines for such determination.

Study Parameters

As a result of discussions between **KHR Associates** and the Traffic Studies Unit, a Memorandum of Understanding (MOU) for the TIA was prepared in January 2008, with twelve (12) intersections and six arterial roadway segments selected for study. Traffic at the 12 County-specified study intersections was counted during the weekday A.M. and P.M. peak hours of commute. Daily (24-hour) traffic was counted at the 6 roadway locations. The Intersection Capacity Utilization (ICU) methodology was used to analyze intersection levels of service. Roadway segments were evaluated based on the level of service volumes described in the Highway Capacity Manual (HCM). As required by Caltrans' methodology for

traffic studies, the six Caltrans maintained intersections were also analyzed under the HCM methodology (using *HCS* software). The HCM method was also used for the unsignalized Reedview Drive/*Project* driveway intersection. Although not required by the County, seven (7) additional intersections (beyond the County-specified study intersections) were counted and analyzed at the request of Trammell Crow Residential, resulting in a total of nineteen (19) study intersections. These additional intersections were analyzed in order to address potential traffic impacts in the adjacent Cities of Diamond Bar, Industry, and Walnut.

The jurisdictional limits of the study area extend from the City of Industry to the north, the Los Angeles/Orange County boundary to the south, the City of Diamond Bar to the east, and the community of Hacienda Heights to the west. The Pomona Freeway, Brea Canyon Road, Fullerton Road south of Pathfinder Road, Colima Road west of Stoner Road and Schabarum Regional Park form the approximate boundaries of the study area. The intersection of Colima Road and Brea Canyon Cutoff Road is the closest in proximity to the *Project* site.

Summary of Findings

Based on the analyses presented herein, the following findings are made:

1) The proposed *Project* is estimated to generate 5,208 daily trip ends during an average weekday 24-hour period of time.
2) During the morning (A.M.) peak period of weekday commute, the proposed *Project* is estimated to generate a gross amount of 395 A.M. peak hour trip ends (79 inbound, 316 outbound), with a net amount of 99 more peak hour trip ends than the 296 A.M. peak hour trip ends generated by current uses on the *Project* site.
3) During the late afternoon (P.M.) peak period of weekday commute, the proposed *Project* is estimated to generate a gross amount of 481 peak hour trip ends (313 inbound, 168 outbound) or 361 peak hour trip ends more than the 120 P.M. peak hour trip ends generated by current uses on the *Project* site.
4) Under all five analyzed traffic scenarios (i.e., existing traffic; existing plus ambient traffic; existing plus ambient plus *Project* traffic; existing plus ambient plus related projects traffic; and existing plus ambient plus related projects plus *Project* traffic, all six roadway segments studied operate at acceptable levels of service of “D” or better, in both directions, during the A.M. and P.M. weekday peak hours.
5) Under existing traffic conditions, the levels of service at each of the study intersections during both the A.M. and P.M. peak hours of weekday commute fall within acceptable limits (i.e., “D” or better), except for Brea Canyon Cutoff Road and Colima Road (LOS “E” during A.M. peak hour); Colima Road and Fullerton Road (LOS “E” during A.M. peak hour), Colima Road and Nogales Street (LOS “F” and “E” during A.M. and P.M. peak hours, respectively), and Golden Springs Drive and Brea Canyon Road (LOS “E” during P.M. peak hour).
6) By the *Project* target build-out year 2012, the levels of service at each of the study intersections during the A.M. and P.M. peak hours of weekday commute are projected to stay within acceptable limits, with only ambient increases in traffic (i.e., no related project traffic or *Project*-generated traffic), except at the intersections of Brea Canyon Cutoff Road and Colima Road (LOS “E” during A.M. peak hour); Colima Road and Fullerton Road (LOS “E” during the A.M. peak hour); Colima Road and

Nogales Street (LOS "F" during both the A.M. and P.M. peak hours); and Golden Springs Drive and Brea Canyon Road (LOS "E" during the P.M. peak hour).

7) For both the existing and existing plus ambient traffic scenarios, the freeway interchanges and the *Project* driveway/Reedview Drive and Brea Canyon Cutoff Road intersection operate at LOS "C" or better during the A.M. and P.M. peak hours.

8) In the *Project* target build-out year 2012, with the addition of *Project*-generated traffic, the levels of service at each of the study intersections during both the weekday A.M. and P.M. peak hours of traffic continue to operate at acceptable levels of service except for the intersections of Brea Canyon Cutoff Road and Colima Road (LOS "E" during both the A.M. and P.M. peak hours); Colima Road and Fullerton Road (LOS "E" during both the A.M. and P.M. peak hours); Colima Road and Nogales Street (LOS "F" during the both A.M. and P.M. peak hours); and Golden Springs Drive and Brea Canyon Road (LOS "E" during the P.M. peak hour).

9) Per County of Los Angeles' methods of determination, without mitigation measures, when added to existing plus ambient traffic, the proposed *Project* would result in significant traffic impacts at three intersections: Brea Canyon Cutoff Road and Colima Road; Colima Road and Nogales Street; and Fairway Drive and Valley Boulevard.

10) Traffic impacts potentially created by the proposed *Project* can be mitigated to levels of less than significant through implementation of mitigation improvements within existing rights of way, as identified in this report.

11) Per County's methods of determination, without mitigation measures, when traffic from related projects is added to existing plus ambient plus proposed *Project* traffic, significant traffic impacts are projected to occur at four intersections: Brea Canyon Cutoff Road and Colima Road; Brea Canyon Cutoff Road and Pathfinder Road; Colima Road and Fullerton Road; and Colima Road and Nogales Street.

12) Traffic impacts created by the addition of related projects can be mitigated to levels of less than significant by implementing mitigation improvements within existing rights of way, as identified in this report.

Conclusions & Recommendations

Based on the findings of the TIA, the proposed *Project* is not expected to generate a significant traffic impact that cannot be mitigated. Therefore, it is recommended that the proposed *Project* move forward with the following commitments:

1) Relocate the main driveway entrance to the *Project* site on Brea Canyon Cutoff Road to be directly opposite Reedview Drive, and install a traffic signal to allow safe and convenient left turn movements into and out of the *Project* site.

2) Restrict all other driveway access to the *Project* site to right turn in and out only.

3) Encourage the use of alternative modes of transportation by providing convenient pedestrian pathways; secure bicycle storage facilities; and information regarding transit and ridesharing opportunities to employees and residents of the *Project*.

4) As identified in this report, fully implement improvements that are required to mitigate significant traffic impacts caused by the *Project,* and participate in the "fair-share" cost of improvements required to mitigate impacts with the addition of related projects.

II. STUDY TERMINOLOGY

The following are definitions of some of the terminology used throughout this report.

A.M. and P.M. Peak Hours

The *A.M and P.M. peak hours* refer to the morning and late afternoon times of the day during which the greatest number of motor vehicles are carried on a given roadway segment or intersection. Typically, the significant peak hours of traffic on an average weekday occur once during the morning commute (i.e., between 7:00 and 9:00 A.M.) and once during the late afternoon commute (i.e., between 4:00 and 6:00 P.M.). It should be noted that these hours do not necessarily correspond to the peak hour of trip generation, which, for commercial uses, can occur mid-day and on weekends. For the subject analysis, peak hour traffic counts were collected in the month of February 2008 for each study intersection by **KHR Associates** personnel using the DAITA traffic count program.[1] The results of these traffic counts were tabulated and can be found in the Appendix section of this report.

Average Daily Traffic

The *average daily traffic* (ADT) volume is an estimate of the number of motor vehicles carried on a given roadway segment over a 24-hour period of time. The estimate of ADT is often based on one or more days of actual traffic counts taken by a mechanical device designed specifically for counting traffic on streets. ADT volumes are typically expressed as the total number of vehicles for both directions of travel, but may be separated by direction when such information is useful, as was done for this traffic analysis. ADT volumes do not typically change in dramatic fashion from month to month or year to year, unless the area in question is undergoing rapid growth and development or seasonal variations are significant. For the subject analysis, directional roadway segment traffic counts were continuously collected in the month of February 2008 over 3 consecutive days beginning on a Thursday and ending on a Saturday. These counts were independently collected for **KHR Associates** by Traffic Data Services, Santa Ana, California. The results of these traffic counts were tabulated and can be found in the Appendix section of this report.

Capacity

The *capacity* of a roadway segment or intersection is the maximum rate of vehicular traffic flow under prevailing traffic, physical design, and operational conditions. Factors affecting capacity include the type and frequency of traffic controls; the operational characteristics of traffic signals (if present); lane widths; horizontal and vertical grades; horizontal and vertical clearances from obstructions; the amount of truck and/or bus traffic; the availability of on-street parking and the rate of parking turnover; restrictions on mid-property access; and the volume of turn movements at adjacent intersections and driveways. Capacity is most commonly defined for hourly periods of time, and most analyses rely on peak 15-minute count increments to establish capacity values. It is useful to define capacity as the maximum volume of traffic that an intersection may be expected to carry, under the least desirable conditions (e.g., with heavy congestion during the peak hours).

For planning purposes, roadway segments are also assigned “capacities” based on the number of travel lanes; width of the roadway; access restrictions; medians; parkway and

[1] Data Acquisition for Intersection and Traffic Applications, Version 1.0, University of Florida, 2005

intersection design; and adjacent land uses. 24-hour roadway segment capacities are not indicative of the maximum number of vehicles that can be *physically* carried - rather, such capacities suggest the maximum number of vehicles that *should be allowed* under ideal conditions given the characteristics of the roadway and community preferences. These capacities vary from jurisdiction to jurisdiction. Table I lists typical ADT capacities used by the County of Los Angeles and, for comparison purposes, the City of Diamond Bar, for various roadway classifications.

TABLE I - ROADWAY CLASSIFICATIONS & CAPACITIES

	Average Daily Traffic Capacity	
Type of Roadway	**County of L.A.***	**Diamond Bar****
6–Lane Divided Arterial	54,000	56,300
4–Lane Divided Arterial	36,000	37,500
4-Lane Undivided Arterial or Collector	24,000	25,000
2-Lane Collector	14,000	12,500

* From LA County Traffic and Lighting Division of Public Works Department
**From City of Diamond Bar TIA Guidelines.

Hourly capacities for roadways are typically stated in vehicles per hour per lane (VPHPL). On multi-lane arterials and freeways, unimpeded capacity is 2,000 VPHPL. On two-lane roadways, with directional traffic split 50%/50%, the total capacity for both directions is 2,800 vehicles per hour.

Level of Service

The *level of service* (LOS) of a roadway segment or an intersection is a qualitatively defined measure of prevailing traffic, design, and operational conditions. The LOS, denoted alphabetically from "A" to "F," best to worst, is an evaluation of the degree of congestion, roadway design constraints, delay, accident potential, and driver discomfort experienced during a given period of time - typically during the peak hour or on a daily basis. While LOS “A” is the most desirable operational state for a roadway segment or intersection, LOS “C” is usually considered a benchmark for arterial streets segments, and LOS “D” is usually an accepted condition for urban intersections.

The LOS may be quantitatively calculated by a number of methods that generally compare traffic volumes with the physical and operational capacity of a roadway section or intersection to carry traffic demands placed upon it. For roadway segments and intersections, the volume-to-capacity (V/C) ratio is indicative of LOS. Traffic volumes are measured by conducting actual counts over prescribed periods of time. Capacity figures are established by the governing jurisdiction, and often based on localized conditions.

Intersection LOS can be determined using computer software to account for various influencing factors such as lane configurations, traffic signal timing (for signalized intersections), and vehicle delays. Within the Highway Capacity Manual, levels of service definitions are provided. Various methods of computing intersection LOS are used, including the County-prescribed Intersection Capacity Utilization (ICU) for signalized intersections and Highway Capacity Manual (HCM) for unsignalized intersections. Caltrans uses the HCM method for analyzing all State-controlled intersections (such as at freeway interchanges).

Table II provides LOS definitions for signalized intersections at corresponding volume-to-capacity (V/C) ratios, while Table III provides criteria for signalized and unsignalized intersections, based on HCM and Caltrans methodologies for determining LOS.

TABLE II - SIGNALIZED INTERSECTION LEVEL OF SERVICE & VOLUME-TO-CAPACITY RATIOS

Level of Service	V/C Ratio	Definitions
A	0.0 - 0.60	There are no signal cycles that are fully loaded, and few are close to loaded. No approach phase is fully utilized by traffic and no vehicle waits longer than one red indication. Typically, the approach appears quite open, turning movements are easily made, and nearly all drivers find freedom of operation.
B	0.61 - 0.70	Stable operation is maintained. An occasional approach phase is fully utilized and a substantial number are approaching full use. Many drivers begin to feel somewhat restricted within groups of vehicles.
C	0.71 - 0.80	Stable operation continues. Full signal cycle loading is still intermittent, but more frequent. Occasionally, drivers may have to wait through more than one red signal indication, and backups may develop behind turning vehicles.
D	0.81 - 0.90	Encompasses a zone of increasing restriction approaching instability. Delays to approaching vehicles may be substantial during short peaks within the peak period, but enough cycles with lower demand occur to periodic clearance of developing queues, thus preventing excessive backups.
E	0.91 - 1.00	Represents the most vehicles that any particular intersection approach can accommodate. At capacity (V/C = 1.00), there may be long queues of vehicles waiting upstream of the intersection and delays may be great.
F	>1.00	Represents jammed conditions. Backups from locations downstream or on the cross street may restrict or prevent movement of vehicles out of the approach under consideration; hence, volumes carried are not predictable. V/C values are highly variable, because full utilization of the approach may be prevented by outside conditions.

SOURCE: Highway Capacity Manual, 2000

TABLE III - UNSIGNALIZED & SIGNALIZED INTERSECTION LEVEL OF SERVICE CRITERIA

	Intersection Delay (in Seconds)	
Level of Service	Unsignalized Intersection*	Signalized Intersection*
A	≤ 10.0	≤ 10.0
B	> 10.0 and ≤ 15.0	> 10.0 and ≤ 20.0
C	> 15.0 and ≤ 25.0	> 20.0 and ≤ 35.0
D	> 25.0 and ≤ 35.0	> 35.0 and ≤ 55.0
E	> 35.0 and ≤ 50.0	> 55.0 and ≤ 80.0
F	> 50.0	> 80.0

* Highway Capacity Manual, HCM 2000 & Caltrans Guide for the Preparation of Traffic Impact Studies, December 2002

These LOS are used to approximate true operating conditions, and are calculated for intersections during morning and late afternoon peak hours. Caltrans endeavors to maintain a target LOS at the transition between LOS “C” and LOS “D” on State highway facilities.

Significant Transportation Impact

Although the methodologies for calculating LOS are well-established and fairly consistent, determining whether or not a "significant transportation impact" or intersection traffic impact occurs is not as easy to quantify. Local jurisdictions have varying interpretations of what constitutes a significant impact. Some agencies base significant impacts on the number of seconds added to average intersection delay per vehicle or the number of additional vehicles added to a critical intersection turn movement. In the case of the County of Los Angeles, significant transportation impacts for intersections are determined on the basis of increase in the volume-to-capacity ratio under the Los Angeles County methodology (see Table IV).

TABLE IV - SIGNIFICANT IMPACT THRESHOLDS FOR INTERSECTIONS

Level of Service	V/C Ratio	Project-Related Increase in V/C
C	0.71 – 0.80	0.04 or more
D	0.81 – 0.90	0.02 or more
E & F	0.91 or more	0.01 or more

Source: "Traffic Impact Analysis Report Guidelines," County of Los Angeles, January 1, 1997

Trip Ends

Traffic generated by different types of development and land use is typically expressed in terms of *trip ends*. A trip end (or trip) is the directional movement of a single motor vehicle either to or from a development site. When a vehicle enters a development site, one trip end is generated. When a vehicle exits a development site, one trip end is generated. Therefore, each vehicle entering and exiting a development site generates two trip ends. For analysis purposes, the number of trip ends generated over a given time period is the total of all vehicles entering plus all vehicles exiting the site during that time period. Trip ends generated to a development site are designated inbound trips and trip ends generated from a development site are designated outbound trips.

Trip Generation

Trip generation refers to the number of trip ends generated by a given development or land use over a specified period of time - usually per day or during peak hours of traffic demand. Attempts to quantify the trip making propensities of given land uses and types of development have led to the formulation of trip generation rates. In simplified travel demand forecasting, trip ends are often estimated by applying these empirically-determined trip generation rates. Rates for a variety of land uses, including residential developments, may be found in technical reference documents such as the Institute of Transportation Engineers' (ITE) *Trip Generation* manual.[2] The data found in these documents typically include average weekday and peak hour rates that correspond with the peak periods of commuter traffic. For multi-family residential development, the independent variable is typically the number of dwelling units, and trip generation is stated in terms of trip ends per dwelling unit. For institutional uses, such as schools, one independent variable is the number of students enrolled at the school, and trip generation is stated in terms of trip ends per student.

[2] *Trip Generation*, 7th Edition, Volume 3 of 3, Institute of Transportation Engineers

Trip Distribution/Trip Assignment

In addition to trip generation, travel demand forecasting also includes trip distribution and trip assignment. Trip distribution signifies by general direction (i.e., east, west, north, and south), the percentage of all traffic generated to and from a given project site. Trip assignment identifies the particular routes used by traffic generated to and from a given project site. These steps are often combined for small projects and/or areas of analysis. Trip distribution/trip assignment is used to predict the patterns of traffic generated by a given project site, taking into consideration several factors, including: observations of existing traffic patterns; existing land use and proposed land use; surrounding land uses; volumes of traffic on streets and highways; the traffic carrying capacity of these streets and highways; and site access restrictions (e.g., left turn).

Traffic Signal Warrants

Through a system of "warrants," Caltrans has devised a method of determining whether or not a traffic signal should be considered for installation at a given location. The warrants system is based on various factors, including volume of traffic, speed, traffic accident history, proximity to schools, and other criteria. These warrants are fully described in Chapter 9 of the Caltrans *Traffic Manual*, and are referenced by jurisdictions throughout California.[3] A national version of the traffic signal warrants system may be found in the *Manual of Uniform Traffic Control Devices*, published by the Federal Highway Administration.[4] In general, traffic signals should not be installed until warrants are met.

III. INTRODUCTION

The Traffic Impact Analysis for the *Project*, a proposed multi-family residential project, was commissioned by Trammell Crow Residential, Costa Mesa, California, and independently performed by **KHR Associates**, Newport Beach, California. Input regarding the proposed *Project* was provided by the *Project* applicant, Canyons Apartments LLC, Costa Mesa, California; and the *Project* architect, Van Tilburg, Banvard & Soderbergh (VTBS), Santa Monica, California. The content and format of this report follow the County's "Traffic Impact Analysis Report Guidelines."[5] This report summarizes the traffic impact analysis process, as mutually agreed to between the developer, Canyons Apartments LLC, and the County's Traffic and Lighting Division (TLD) of the Department of Public Works in a Memorandum of Understanding (MOU), signed and dated by **KHR Associates** and a representative of the TLD on January 23, 2008 and January 28, 2008, respectively.

This report addresses the traffic-related concerns of the County of Los Angeles, and the Rowland Heights community at-large, with respect to how the proposed *Project* may impact the area when completed in the target build out year 2012, as well as how the proposed *Project* may impact the area when incorporated into cumulative traffic conditions that may exist beyond the year 2012.

[3] *Traffic Manual*, State of California Department of Transportation Engineers, latest edition.
[4] *Manual of Uniform Traffic Control Devices*, Federal Highway Administration, U.S. Department of Transportation, November 2003, revised May 2004.
[5] "Traffic Impact Analysis Report Guidelines," Los Angeles County Department of Public Works, January 1, 1997

Site Location and Existing Uses

The proposed *Project* site is 15.7-gross acres in size and located at 1920 Brea Canyon Cutoff Road, in the community of Rowland Heights, County of Los Angeles, California. The *Project* site is presently developed with the Southlands Christian Church and the Southlands Christian Schools (SCS). SCS includes a preschool, an elementary school, and a secondary school. All existing uses share common surface parking lots and driveway access. The *Project* site is bounded by Brea Canyon Cutoff Road to the west; a small commercial center and a senior housing development to the north; the Royal Vista Golf Club golf course to the east; and a townhome development to the south. The *Project* site features sloping terrain, with an elevation change of 56-feet along Brea Canyon Cutoff Road from the highest point at the southerly end to the lowest point at the northerly end. Figure 1 provides an aerial perspective of the *Project* site and immediate surroundings.

Figure 1 – Aerial Perspective of Project Site

Project Description

The proposed *Project* will consist of replacing the Southlands Christian Church and SCS with 775 multi-family residential units on approximately 15.3 net acres, with 0.4-acre set aside for right of way dedication. The proposed *Project* features three distinct and separate multi-family residential building types - a podium building with subterranean parking garage under the residential units; a free-standing, at-grade parking structure “wrapped” by residential buildings; and townhome-style apartments which feature individual garages that are attached to the residences. Figure 2 illustrates the proposed site plan.

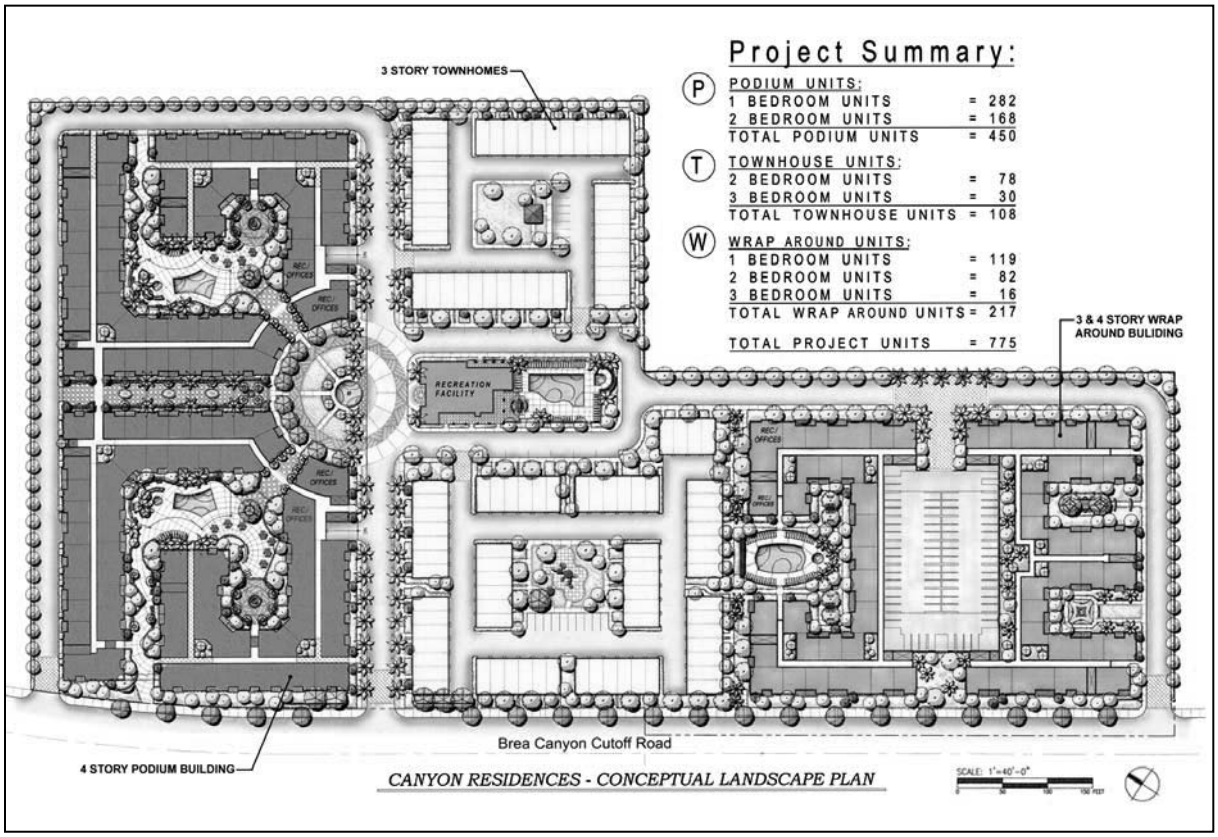

Figure 2 – Canyon Residences Site Plan[6]

The current County of Los Angeles General Plan land use designation for the *Project* site is "Low Density Residential," while the Rowland Heights Community General Plan designation is "U1" (Urban-1). The current zoning designation is "A-1-20,000" (Light Agricultural), which allows single family dwelling units, adult residential facilities, crops, family childcare homes, and various light agricultural uses. The proposed *Project* is also within the Rowland Heights Community Standard District (CSD), which implements the Community Plan and establishes standards for new development.

Study Intersections & Roadway Segments

Per the directive of the Traffic Studies Unit, the general limits of the study area extend from the City of Industry to the north, the Los Angeles/Orange County boundary to the South, the City of Diamond Bar to the east, and the communities of Hacienda Heights and La Habra Heights to the west. The Pomona Freeway, Brea Canyon Road, Fullerton Road south of Pathfinder Road, Colima Road west of Stoner Road and Schabarum Regional Park form the approximate boundaries of the study area. Within this study area, twelve intersections and six arterial roadway segments were identified by the County's Traffic Studies Unit for detailed analysis. **KHR Associates** analyzed seven additional intersections, not required by the County, but as requested by the Project applicant in order to address potential traffic impacts in adjacent jurisdictions, including the Cities of Diamond Bar, Industry, and Walnut.

[6] Conceptual Site Plan by VTBS, Santa Monica, California

The study locations are listed in Table V along with a notation of whether or not the intersections were included in the County's MOU and/or are CMP monitored. Figure 3 provides an aerial perspective on the location of study intersections.

TABLE V - STUDY AREA INTERSECTIONS

No.	Intersection	CMP
1	Brea Canyon Cutoff Road/Fairway Drive at Colima Road	No
2	Fairway Drive at SR-60 Eastbound Off Ramps	No
3	Fairway Drive at SR-60 Westbound On/Off Ramps	No
4	Brea Canyon Cutoff Road at Pathfinder Road	No
5	Brea Canyon Cutoff Road at Reedview Drive/Project Driveway	No
6	Brea Canyon Cutoff Road at SR-57 Northbound On/Off Ramps	No
7	Brea Canyon Cutoff Road at SR-57 Southbound On/Off Ramps	No
8	Pathfinder Road at SR-57 Northbound On/Off Ramps	No
9	Pathfinder Road at SR-57 Southbound On/Off Ramps	No
10	Colima Road at Fullerton Road	No
11	Colima Road at Nogales Street	No
12	Fairway Drive at Valley Boulevard	No
13	Golden Springs Drive at Lemon Avenue*	No
14	Golden Springs Drive at Brea Canyon Road*	No
15	Brea Canyon Road at Diamond Bar Boulevard/Brea Canyon Cutoff Road*	No
16	Pathfinder Road at Brea Canyon Road*	No
17	Pathfinder Road at Fern Hollow Drive/Brea Canyon Road*	No
18	Fairway Drive at Walnut Drive*	No
19	Brea Canyon Cutoff Road at Fallow Field Drive/Diamond Canyon Road*	No
** Denotes Intersection Not Required by County's Memorandum of Understanding*		
ID	**Roadway Segments**	**CMP**
A	Brea Canyon Cutoff s/o Colima Road	No
B	Brea Canyon Cutoff n/o Pathfinder Road	No
C	Brea Canyon Cutoff s/o Pathfinder Road	No
D	Fairway Drive n/o Colima Road	No
E	Fairway Drive n/o Route 60 Interchange	No
F	Colima Road between Nogales Street and Fairway/Brea Canyon Cutoff	No

Figure 3 – Location of Study Intersections

All study intersections were analyzed using the Intersection Capacity Utilization (ICU) methodology. Freeway interchange intersections and the proposed *Project* driveway were also analyzed using the Highway Capacity Manual (HCM) methodology, in accordance with the California Department of Transportation (Caltrans) "*Guide for the Preparation of Traffic Impact Studies*."[7] All arterial roadway segments were analyzed by determining the volume to capacity (V/C) ratio and comparing it to a table of various V/C ratios and corresponding levels of service for both A.M. and P.M. peak hours of traffic during the weekday hours of commute (7:00 A.M. to 9:00 A.M. and 4:00 P.M. to 6:00 P.M., respectively).

Related Projects

Any development projects within the study area of the proposed *Project* that are currently under construction, design, or in planning have the potential of generating varying amounts of traffic on the streets and highways network. The traffic generated by these projects was taken into account when evaluating the *Project*'s construction timing and fair share responsibilities for traffic improvements. In order to determine which projects needed to be included in the cumulative analysis portion of this report, the City of Diamond Bar and the County Department of Regional Planning provided lists of committed and proposed projects (collectively known as the "related projects") within a 1.5 mile radius of the *Project* site.

The most significant project proposed in the Rowland Heights area, but well outside the 1.5 mile radius of the study area, is the proposed *Los Angeles Stadium* project, in the City of Industry (off Grand Avenue and north of the SR-60 Freeway). Phase One of this project is

[7] "*Guide for the Preparation of Traffic Impact Studies,* California Department of Transportation, December 2002

assumed to be built-out by the year 2011, and includes a 75,000-seat stadium, 280,000 square feet of stadium-related offices and other uses, 400,000 square feet of retail space, 100,000 square feet of medical office space, and 50,000 square feet of restaurants. Phase Two, which consists of an additional 433,000 square feet of retail space, 112,000 square feet of restaurants, a 5,000 seat live theater, a 1,200 seat movie theater, and 1,490,000 square feet of general office space, may be partially constructed by the year 2015. The ultimate realization of both Phases hinges on whether or not an existing National Football League team in another City can be bought and brought in to utilize the stadium and its amenities by the start of the 2011 professional football season. An Environmental Impact Report (EIR) has been prepared for this project, and with it, a traffic impact study.[8] The findings of the study for Phase One were incorporated into the analysis of cumulative impacts, only as they affect the proposed *Project* during the A.M. and/or P.M. peak hours.

In addition to the *Los Angeles Stadium* project, the largest proposed project in the Rowland Heights area is the *Aera Energy Planned Development*, a 3,600 unit residential development on a 2,935-acre depleted oil field in the hills south of Rowland Heights between the SR-57 Freeway and Harbor Boulevard. Primary access to this site is via the SR-57/Tonner Canyon interchange. The site is currently part of unincorporated Los Angeles County, but may be annexed to the City of Diamond Bar. The City of Diamond Bar did not identify the *Aera* project on the list of proposed projects, and it is well outside the 1.5-mile radius of the *Project* site. However, the travel demand forecasts for the *Aera* project were taken into consideration, and it was determined that no traffic is projected to interact directly with traffic generated by the proposed *Project*, and streets and intersections within the study area will not be adversely impacted. In addition, a mixed-use development proposed under the City of Diamond Bar's *Site D Specific Plan* was included as a related project.

Table VI summarizes the amounts of traffic estimated to be generated by each related project; Figure 4 identifies their locations; and Figures 5 and 6 show the trip distribution/ assignments at each of the study intersections during the A.M. and P.M. peak hours, respectively. It should be noted that four of the projects from the Los Angeles County Department of Regional Planning were identified as being near the *Project* site, but due to insufficient information provided by the County, trip generation could not be determined. However, it was concluded that the land uses associated with these four small projects will generate insignificant amounts of net new traffic. Related project No. 4 (to occupy an existing building at 14250 Valley Boulevard currently used as a tire shop) is located approximately 7.4 miles from the *Project* site; related project No. 5 (to replace an existing auto broker and pallet storage facility at 13940 Valley Boulevard) is located approximately 7 miles from the *Project* site; related project No. 6 at 1725 Nogales Street is a tenant improvement within an existing commercial center; and related project No. 7 at 19800 Colima Road is to replace a dry cleaning business within an existing building.

TABLE VI - RELATED PROJECTS

				AM Peak Hour			PM Peak Hour		
Land Use/Description	**Size**	**Unit**	**ADT**	**In**	**Out**	**Total**	**In**	**Out**	**Total**
1. Multi-Family Residential – LA County Project No. TR062952 (19280 Colima Road)									
Trip Generation[1]	11	DU	74	1	5	6	5	2	7
2. Condominiums - JCC South Point West – (S. of Larkstone Dr./E. of Morning Sun Ave., Diamond Bar)									
Trip Generation[2]	99	DU	792	6	48	54	47	26	73

[8] *Supplement to Industry Business Center EIR*, The Planning Center, September 2008

TABLE VI - RELATED PROJECTS (Cont.)

Land Use/Description	Size	Unit	ADT	AM Peak Hour In	AM Peak Hour Out	AM Peak Hour Total	PM Peak Hour In	PM Peak Hour Out	PM Peak Hour Total
3. Mixed-Use Commercial Development (1035 ½ Banning Way, Diamond Bar)									
Trip Generation[3]	52,000	SF	2,233	33	21	54	94	101	195
4. Auto Repair – LA County Project No. R2005-02449 (14250 Valley Blvd.)									
Trip Generation	*** Square footage of project not available – Unable to perform Trip Generation (Insignificant)**								
5. Tow Yard/Truck & Equipment Storage/Used Car Sales – LA County Project No. R2007-03157 (13940 Valley Blvd.)									
Trip Generation	*** Square footage of project not available – Unable to perform Trip Generation (Insignificant)**								
6. Recording Studio/Karaoke – LA County Project No. R2005-00896 (1725 Nogales St.)									
Trip Generation	*** Square footage of project not available – Unable to perform Trip Generation (Insignificant)**								
7. Coffee Shop/ Retail – LA County Project No. 2308 (19800 Colima Rd.)									
Trip Generation	*** Square footage of project not available – Unable to perform Trip Generation (Insignificant)**								
8. Aera Master Planned Community – LA County/City of Diamond Bar Project									
Trip Generation[2]	3,600	DU	34,452	675	2,025	2,700	2,291	1,345	3,636
9. Los Angeles Stadium Phase One – City of Industry									
Trip Generation[4]	Per EIR	Per EIR	22,231	N.A.	N.A	669	N.A.	N.A.	1,734
10. Site D Specific Plan – City of Diamond Bar									
Trip Generation[5]	Per EIR	Per EIR	9,276	126.	146	272	332	318	650
Total Trip Generation From Related Projects			**69,058**	**841**	**2,245**	**3,755**	**2,769**	**1,792**	**6,295**

Notes: DU: Dwelling Unit ADT: Average Daily Traffic SF: Square Footage N.A. = Not Available

[1] Trip Generation Rates Per ITE *Trip Generation* Manual, 7th Ed., 2003

[2] Trip Generation Rates Per LA County TIA Report Guidelines, 1997

[3] Trip Generation Rates Per ITE *Trip Generation* Manual, 7th Ed., 2003, Land Use "General Commercial" Shopping Center

[4] Net Trip Generation Without Game Per *Supplement to Industry Business Center EIR*, September 2008

[5] Net Trip Generation Per *Site D Specific Plan EIR*, June 2009

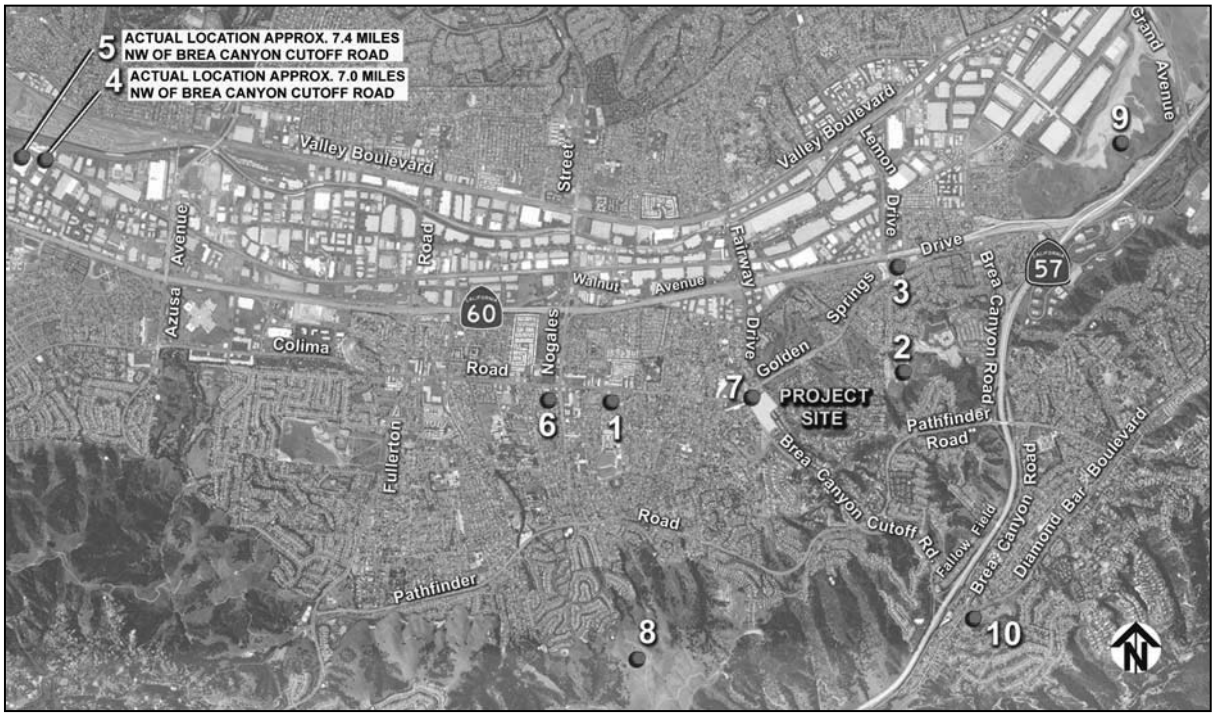

Figure 4 – Location of Related Projects

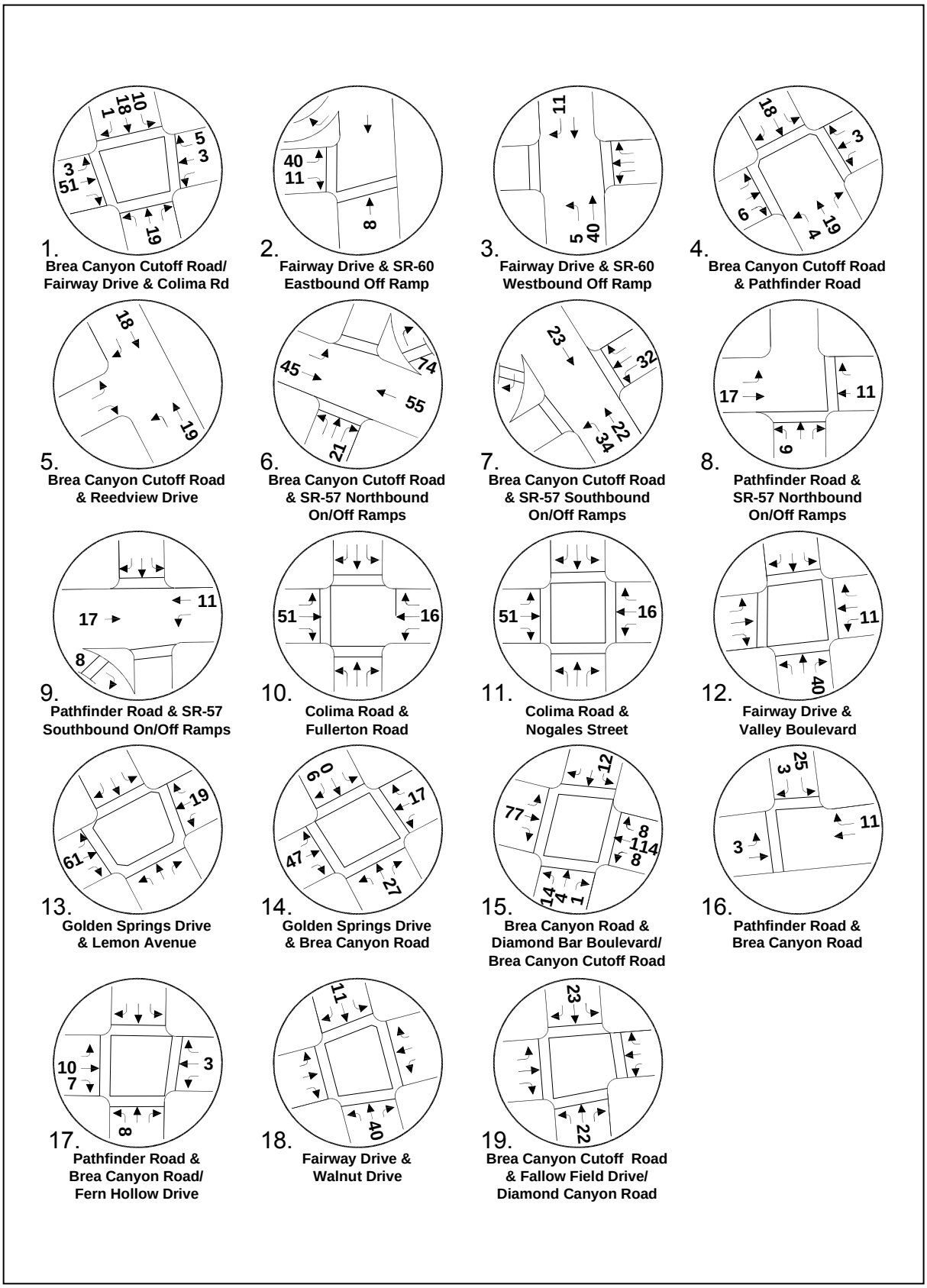

Figure 5 – A.M. Peak Hour Trip Distribution/Assignments of Related Projects

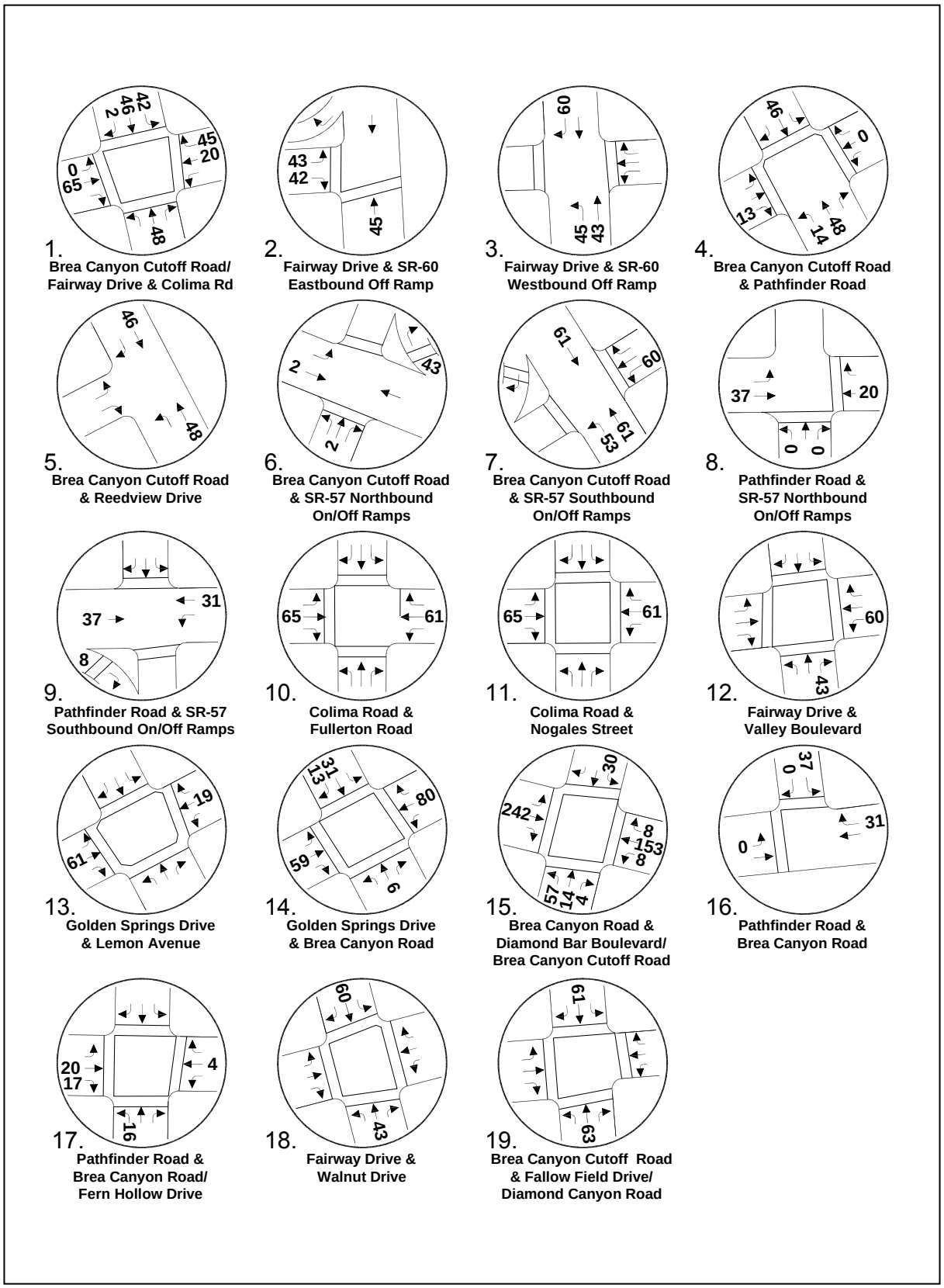

Figure 6 – P.M. Peak Hour Trip Distribution/Assignments of Related Projects

Network of Streets & Highways

Within the boundaries of the study area, a network of streets and highways provides regional and local access to the *Project* site. State Route 60 (SR-60) and State Route 57 (SR-57), also known as the Pomona and Orange Freeways, respectively, provide regional access to the study area, while Colima Road and Fairway Drive/Brea Canyon Cutoff Road are the main local arterials serving the *Project* site. Brief descriptions of these, and other key streets and highways follow:

Pomona (SR-60) Freeway - The Pomona (SR-60) Freeway generally runs in an east-west direction, starting at the San Bernardino (I-10) Freeway in the City of Los Angeles and terminating at the I-10 Freeway in the City of Beaumont (County of Riverside). SR-60 provides regional access to the San Gabriel Valley from both Los Angeles and Riverside Counties. Due to the highly urbanized commercial and industrial corridors along either side, SR-60 is also frequently used for local travel between interchanges – particularly on weekends. In the general vicinity of the *Project* study area, SR-60 has four to five lanes in each direction. High-occupancy vehicle (HOV) lanes are currently being constructed in each direction from the I-605 freeway to the SR-57 freeway.

Orange (SR-57) Freeway - The Orange (SR-57) Freeway generally runs in a north-south direction, starting in San Dimas at the Foothill (SR-210) Freeway, and ending with its southern terminus at the Santa Ana (I-5) and Garden Grove (SR-22) freeways just south of the City of Anaheim. The SR-57 freeway provides regional access from the San Gabriel Valley to northern Orange County and eastern Los Angeles County. The SR-57 freeway features five lanes in each direction, including one high-occupancy vehicle (HOV) lane, in the general vicinity of the *Project* area.

Brea Canyon Cutoff Road/Fairway Drive - Brea Canyon Cutoff Road (known as Fairway Drive north of Colima Road) runs in a northwest-southeast direction and provides direct frontage access to the *Project* site. This roadway is identified on the Los Angeles County Highway Plan as a Limited Secondary Highway, consisting of four lanes divided by a two-way left-turn lane. The reach of Fairway Drive is between Valley Boulevard and Colima Road. North of Valley Boulevard, the roadway narrows, changes name to Camino de Teodoro and terminates into a residential area. The reach of Brea Canyon Cutoff Road begins at its intersection with Colima Road and continues southeast to Brea Canyon Road, in the City of Diamond Bar. The roadway changes names from Brea Canyon Cutoff Road to South Diamond Bar Boulevard at the intersection with Brea Canyon Road, and continues in a northeasterly direction. Brea Canyon Cutoff Road is a well-traveled commuter route providing a surface street connection between the Pomona (State Route 60) Freeway and the Orange (State Route 57) Freeway.

Colima Road - Colima Road generally runs in an east-west direction, and is classified as a Major Highway on the Los Angeles County Highway Plan. This roadway consists of three lanes in each direction (occasionally dropping to two lanes in each direction), and is divided by a raised median island in some reaches and a two-way left-turn lane in other reaches. The reach of Colima Road runs from Imperial Highway, in the City of Whittier to the limits of the City of Diamond Bar, where the roadway changes names from Colima Road to Golden Springs Drive just east of the Brea Canyon Cutoff Road intersection. In addition to serving as a commuter route, Colima Road/Golden Springs Drive is a heavily developed commercial corridor, generating significant weekend traffic.

Pathfinder Road - Pathfinder Road generally winds its way in an east-west direction through the heart of Rowland Heights, starting at the T-intersection with North Harbor Boulevard/Fullerton Road in the City of La Habra Heights and ending to the east at South Diamond Bar Boulevard, in the City of Diamond Bar. Within the County of Los Angeles, Pathfinder Road is classified as a Secondary Highway west of Brea Canyon Road, with two lanes in each direction, undivided except for occasional left-turn pockets at intersecting streets. East of Brea Canyon Road, Pathfinder Road is classified as a Major Highway, with two lanes in each direction, divided by a two-way left-turn lane.

Brea Canyon Road - Brea Canyon Road runs in a north-south direction starting from Valley Boulevard in the City of Walnut to its terminus in the City of Diamond Bar at Pathfinder Road, just west of SR-57. Brea Canyon Road is labeled on the Los Angeles County Highway Plan as a Major Highway within the vicinity of the *Project* site, and consists of four lanes divided by frequent left-turn pockets at intersecting cross streets.

Nogales Street - Nogales Street generally runs in a north-south direction, from East Amar Road to the north to Pathfinder Road to the south. Nogales Street is classified as a Major Highway on the Los Angeles County Highway Plan. This roadway consists mostly of two lanes in each direction (occasionally three lanes in one or both directions), and is divided by a raised median island in some reaches and a two-way left-turn lane in other reaches.

Fullerton Road - Fullerton Road generally runs in a north-south direction, and is classified as a Major Highway on the Los Angeles County Highway Plan. This roadway consists mostly of two lanes in each direction (occasionally three lanes in one or both directions), and is divided by a raised median island in some reaches and a two-way left-turn lane in other reaches. At the Pathfinder Road intersection, Fullerton Road changes names to Harbor Boulevard, and continues into the County of Orange.

Valley Boulevard - Within the study area**,** Valley Boulevard runs in an east-west direction, and generally parallels the SR-60 Freeway. Valley Boulevard is classified as a Major Highway on the Los Angeles County Highway Plan. This roadway consists of two lanes in each direction (occasionally increasing to three lanes in one or both directions), and is divided by either a raised median island or a two-way left-turn lane.

Reedview Drive - Reedview Drive is a local residential street that runs generally southwest from Brea Canyon Cutoff Road along a curvilinear path. Reedview Drive consists of one lane in each direction, with parking permitted on both sides of the street.

Study Intersections

The nineteen study intersections (the first twelve of which were required to be studied by the County) are briefly described below, followed by aerial views of each intersection (see Figures 7 through 25)

1) Brea Canyon Cutoff Road/Fairway Drive & Colima Road – The intersection of Brea Canyon Cutoff Road/Fairway Drive and Colima Road is signalized for eight phases of traffic movement. The northbound and southbound approach legs feature two through lanes and a single left turn pocket with a raised median island. Although both these approach legs are wide enough to accommodate a third through lane or a separate right turn pocket, they are not presently striped for either. The eastbound and westbound approach legs feature three

through lanes and a single left turn pocket with a raised median island. Crosswalks are marked across all legs of the intersection.

2) Fairway Drive & SR-60 Freeway Eastbound Off Ramp – The intersection of Fairway Drive and the eastbound SR-60 Freeway off ramp is under the jurisdiction of Caltrans, and is signalized for two phases of traffic movement. The northbound and southbound approach legs feature two through lanes with a raised median island. The eastbound on ramp from the northbound direction on Fairway Drive is accessed north of the intersection. Therefore, northbound traffic on Fairway Drive turning right onto the eastbound 60 Freeway is treated as a northbound through movement at the intersection. The eastbound on ramp from the southbound direction on Fairway Drive is accessed via a cloverleaf ramp prior to the intersection, and is therefore not counted at the intersection. The eastbound off ramp leg features a left turn lane and a right turn/optional left turn lane. Crosswalks are marked across the eastbound off ramp leg and the south leg of the intersection.

3) Fairway Drive & SR-60 Freeway Westbound On/Off Ramp – The intersection of Fairway Drive and the westbound SR-60 Freeway on/off ramp is signalized for three phases of traffic movement. The northbound approach leg features two through lanes and a left turn pocket with a raised median island. The southbound approach leg features two through lanes and a separate right turn lane. The westbound off ramp leg features a right turn lane and a left turn/optional through lane. Crosswalks are marked across both the westbound off ramp leg and the westbound on ramp leg of the intersection.

4) Brea Canyon Cutoff Road & Pathfinder Road – The intersection of Brea Canyon Cutoff Road and Pathfinder Road is signalized for eight phases of traffic movement. The northbound approach leg features one through lane, a left turn pocket, and a separate right turn lane. The southbound approach leg features one through lane (which is shared for right turns) and a left turn pocket. The eastbound and westbound approach legs both feature two through lanes and a left turn pocket. Crosswalks are marked across the north, east, and west legs of the intersection.

5) Brea Canyon Cutoff Road & Reedview Drive – The T-intersection of Brea Canyon Cutoff Road and Reedview Drive is presently unsignalized, and controlled by a stop sign on the eastbound Reedview Drive approach leg. Other than the stop bar (i.e., limit line), there are no pavement markings or delineation of traffic lanes on the Reedview Drive leg of the intersection, however, there is ample roadway width for simultaneous left and right turns. The northbound and southbound approach legs feature two through lanes and a two-way left turn lane. There are no marked crosswalks at this intersection. On-street parking is permitted on Brea Canyon Cutoff Road in the vicinity of Reedview Drive.

6) Brea Canyon Cutoff Road & SR-57 Freeway Northbound On/Off Ramps – The intersection of Brea Canyon Cutoff Road and the northbound SR-57 Freeway on/off ramps is under the jurisdiction of Caltrans, and is signalized for three phases of traffic movement. The northbound SR-57 Freeway off ramp approach leg features a right turn lane and a left turn/optional through lane. The westbound approach leg features two through lanes and a channelized right turn lane leading directly onto the northbound SR-57 Freeway ramp. The eastbound approach leg features two through lanes and a left turn pocket, with a raised median island. Crosswalks are marked across both the northbound off ramp leg and the northbound on ramp leg of the intersection.

7) Brea Canyon Cutoff Road & SR-57 Freeway Southbound On/Off Ramps – The intersection of Brea Canyon Cutoff Road and the southbound SR-57 Freeway on/off ramps is under the jurisdiction of Caltrans, and is unsignalized. The southbound SR-57 Freeway off ramp approach leg is controlled by a stop sign, and features a right turn lane and a left turn/optional through lane. The westbound Brea Canyon Cutoff Road approach leg features two through lanes and a left turn pocket, with a raised median island. The eastbound approach leg features two through lanes and a channelized right turn lane leading directly onto the southbound SR-57 Freeway ramp prior to the intersection. Therefore, eastbound traffic on Brea Canyon Cutoff Road turning right onto the southbound SR-57 Freeway on ramp is not counted at the intersection. Crosswalks are marked across both the southbound off ramp leg and the southbound on ramp leg of the intersection.

8) Pathfinder Road & SR-57 Freeway Northbound On/Off Ramps – The intersection of Pathfinder Road and the northbound SR-57 Freeway on/off ramps is under the jurisdiction of Caltrans, and is signalized for three phases of traffic movement. The northbound SR-57 Freeway off ramp approach leg features a right turn lane and a left turn/optional through lane. The westbound Pathfinder Road approach leg features two through lanes and a right turn lane leading onto the northbound SR-57 Freeway ramp. The eastbound approach leg features two through lanes and a left turn pocket, with a raised median island. Crosswalks are marked across the north, south, and east legs of the intersection. A Caltrans *Park and Ride* facility, which provides direct carpool access onto the northbound on ramp, sits on the northwest quadrant of the intersection.

9) Pathfinder Road & SR-57 Freeway Southbound On/Off Ramps – The intersection of Pathfinder Road and the southbound SR-57 Freeway on/off ramps is under the jurisdiction of Caltrans, and is signalized for three phases of traffic movement. The southbound SR-57 Freeway off ramp approach leg features a right turn lane and a left turn/optional through lane. The westbound Pathfinder Road approach leg features two through lanes and a left turn pocket, with a raised median island. The eastbound approach leg features two through lanes and a channelized right turn lane leading directly onto the southbound SR-57 Freeway ramp prior to the intersection. Crosswalks are marked across both the southbound off ramp leg and the southbound on ramp leg of the intersection.

10) Colima Road & Fullerton Road – The intersection of Colima Road and Fullerton Road is signalized for eight phases of traffic movement. The northbound approach leg features two through lanes and dual left turn lanes. The southbound approach leg features two through lanes, dual left turn lanes, and a separate right turn lane. The eastbound approach leg features three through lanes and a left turn lane with a raised median island. The westbound approach leg features three through lanes and a left turn pocket with a raised median island. Crosswalks are marked across all legs of the intersection.

11) Colima Road & Nogales Street – The intersection of Colima Road and Nogales Street is signalized for eight phases of traffic movement. The northbound approach leg features two through lanes and a single left turn pocket. The southbound approach leg features two through lanes and dual left turn lanes and a separate right turn lane. The eastbound approach leg features two through lanes and dual left turn lanes with a raised median island. The eastbound left turns are overlapped with the southbound right turn movement. The westbound approach leg features three through lanes and a left turn pocket with a raised median island. Crosswalks are marked across all legs of the intersection.

12) Fairway Drive & Valley Boulevard – The intersection of Fairway Drive and Valley Boulevard is signalized for five phases of traffic movement, with the north-south movements split. The northbound approach leg features a left turn pocket with a raised median island; a left turn/optional through lane; and a separate right turn lane. The southbound approach leg (Camino de Teodoro) features a left turn pocket and a through lane. The eastbound approach leg features two through lanes, a left turn pocket with a raised median island, and a separate right turn lane. The westbound approach leg features two through lanes and dual left turn lanes. Crosswalks are marked across all legs of the intersection except the east leg.

13) Golden Springs Drive & Lemon Avenue – The intersection of Golden Springs Drive and Lemon Avenue is signalized for three phases of traffic movement, with the north-south movements operating on a split phase. The northbound approach leg features a left turn lane and a right turn/optional through lane. The southbound approach leg features a separate right turn lane, a through/optional left turn lane, and an exclusive left turn lane. The eastbound approach leg features two through lanes and a left turn pocket with a raised median island, and is wide enough to allow separate right turns without impeding through movements. The westbound approach leg features two through lanes, a separate right turn lane, and a left turn pocket with a raised median island. The westbound right turn movement is overlapped with the southbound turn movements. Crosswalks are marked across all legs of the intersection.

14) Golden Springs Drive & Brea Canyon Road – The intersection of Golden Springs Drive and Brea Canyon Road is signalized for eight phases of traffic movement. The northbound approach leg features a left turn lane and two through lanes. The southbound approach leg features a separate right turn lane, two through lanes, and dual left turn lanes. The eastbound approach leg features two through lanes, a separate right turn lane, and dual left turn lanes with a raised median island. The westbound approach leg features two through lanes, a separate right turn lane, and a left turn pocket with a raised median island. The westbound right turn movement is overlapped with the southbound left turn movement. Crosswalks are marked across all legs of the intersection.

15) Brea Canyon Road & Diamond Bar Boulevard/Brea Canyon Cutoff Road – The intersection of Brea Canyon Road and Diamond Bar Boulevard/Brea Canyon Cutoff Road is in the City of Diamond Bar, and is signalized for eight phases of traffic movement. The northbound approach leg features dual left turn lanes; an optional through/right turn lane; and a separate right turn lane. The southbound approach leg features two through lanes and a left turn pocket. The westbound Diamond Bar Boulevard approach leg features two through lanes and a left turn pocket with a raised median island. The eastbound Brea Canyon Cutoff Road approach leg features two through lanes and a left turn pocket with a raised median island. Crosswalks are marked across all legs of the intersection.

16) Pathfinder Road & Brea Canyon Road – The intersection of Pathfinder Road and Brea Canyon Road is under the jurisdiction of the County of Los Angeles. This T-intersection is signalized for three phases of traffic movement. The southbound approach leg features two left turn lanes and a right turn lane. The southbound approach leg features a single lane wide enough two vehicles to wait side by side. The eastbound approach leg features three through lanes (one lane leading directly onto the southbound SR-57 Freeway on ramp) and a left turn pocket. The westbound approach leg features two through lanes and a right turn lane. Crosswalks are marked across the north and west legs of the intersection.

17) Pathfinder Road & Brea Canyon Road/Fern Hollow Drive – The intersection of Pathfinder Road and Brea Canyon Road/Fern Hollow Drive is east of the Pathfinder Road/SR-57 Freeway interchange, and is under the jurisdiction of the City of Diamond Bar. This intersection is signalized for five phases of traffic movement, with the north-south movements operating on a split phase. The northbound approach leg features a left turn lane; and optional left/through lane; and a right turn lane. The southbound approach leg features a single lane wide enough for two moving vehicles to be side by side. The eastbound approach leg features two through lanes, a separate right turn lane, and a left turn pocket. The westbound approach leg features two through lanes and a left turn pocket. Yellow (school) crosswalks are marked across all legs of the intersection.

18) Fairway Drive & Walnut Drive – The intersection of Fairway Drive and Walnut Drive is signalized for five phases of traffic movement. The northbound approach leg features two through lanes and a left turn pocket. The southbound approach leg features two through lanes and a left turn pocket. The westbound and eastbound legs both feature two through lanes, with left turns made from the lane closest to the centerline. Crosswalks are marked across all legs of the intersection.

19) Brea Canyon Cutoff Road & Fallow Field Drive/Diamond Canyon Road – The intersection of Brea Canyon Cutoff Road and Fallow Field Drive/Diamond Canyon Road is signalized for five phases of traffic movement. The northbound and southbound approach legs feature two through lanes and a left turn pocket. The westbound approach leg features a separate left turn lane and a through lane. The eastbound approach leg features a single lane for all movements, but the roadway is wide enough to accommodate both a left turn or through movement and a right turn simultaneously. Crosswalks are marked across all legs of the intersection.

Figure 7 – Brea Canyon Cutoff Road/Fairway Drive & Colima Road

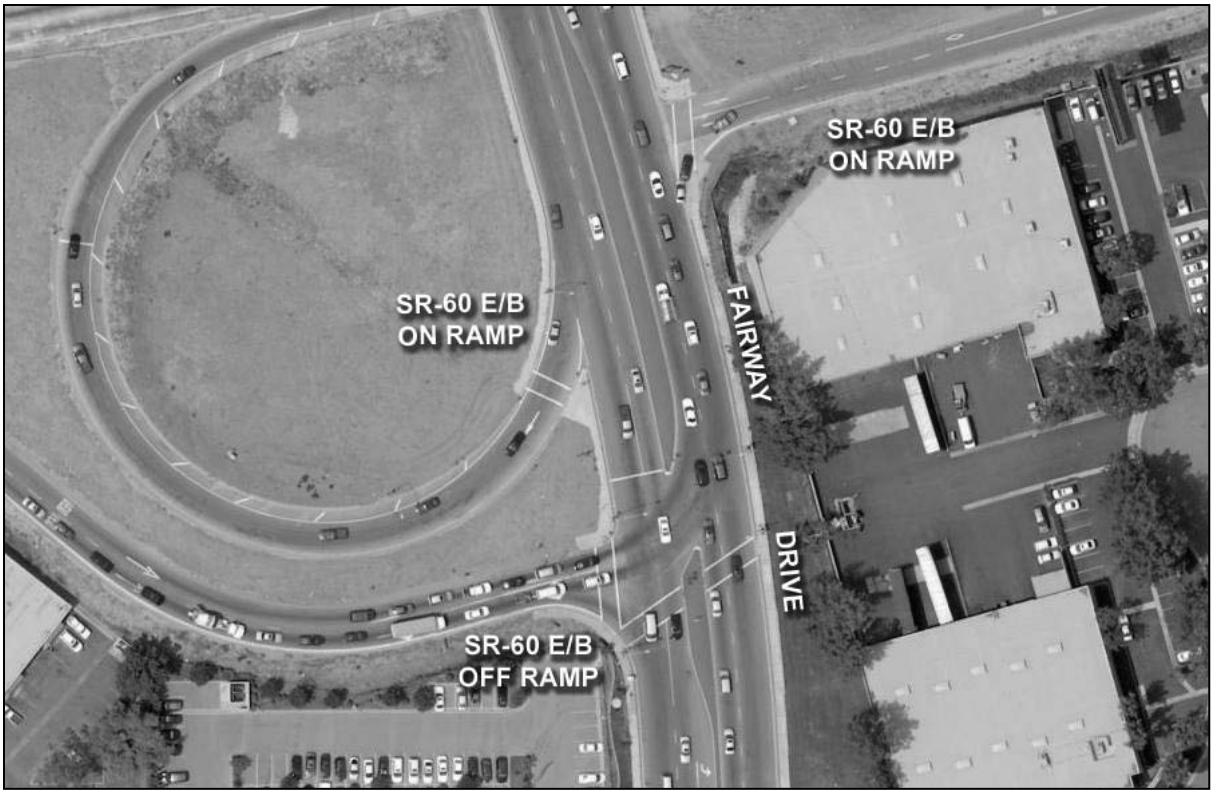

Figure 8 – Fairway Drive & SR-60 Eastbound Off Ramp

Figure 9 – Fairway Drive & SR-60 Westbound Off Ramp

Figure 10 – Brea Canyon Cutoff Road & Pathfinder Road

Figure 11 – Brea Canyon Cutoff Road & Reedview Drive

Figure 12 – Brea Canyon Cutoff Road & SR-57 Northbound On/Off Ramps

Figure 13 – Brea Canyon Cutoff Road & SR-57 Southbound On/Off Ramps

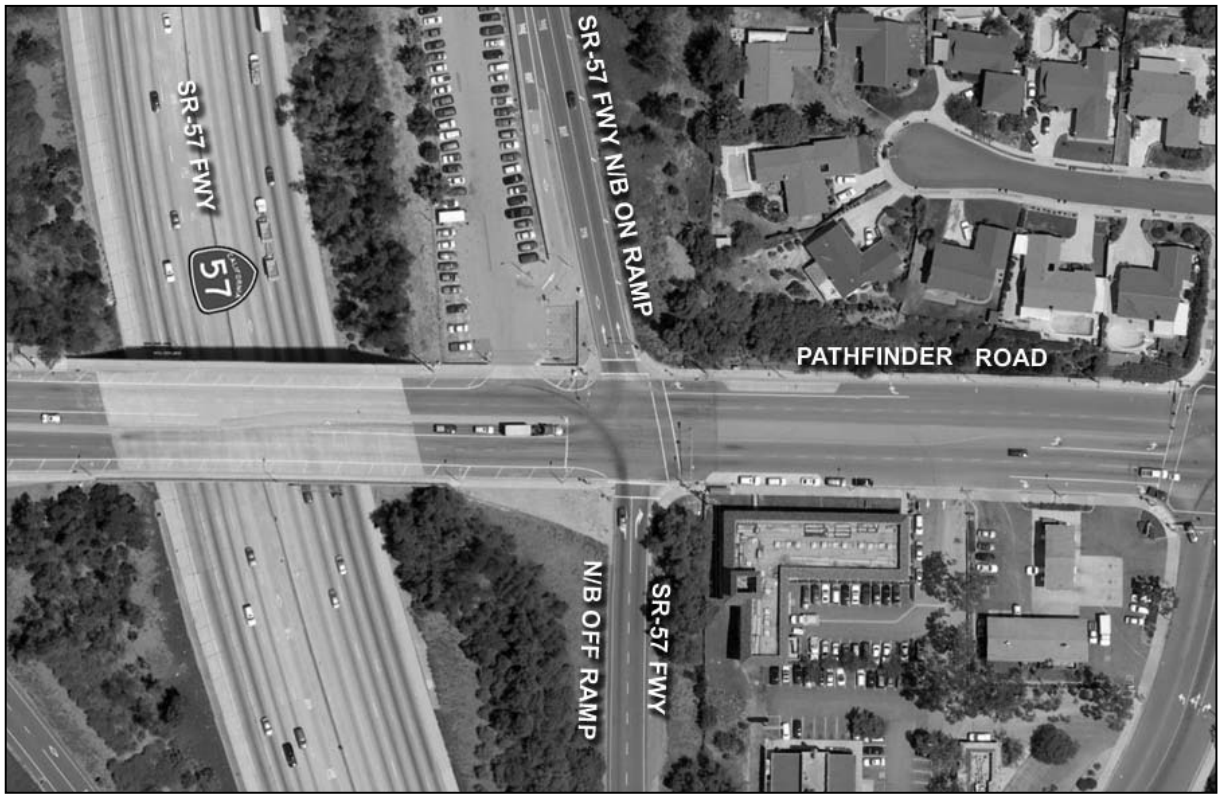

Figure 14 – Pathfinder Road & SR-57 Northbound On/Off Ramps

Figure 15 – Pathfinder Road & SR-57 Southbound On/Off Ramps

Figure 16 – Colima Road & Fullerton Road

Figure 17 – Colima Road & Nogales Street

Figure 18 – Fairway Drive/Camino De Teodoro & Valley Boulevard

Figure 19 – Golden Springs Drive & Lemon Avenue

Figure 20 – Golden Springs Drive & Brea Canyon Road

Figure 21 – Brea Canyon Road & Diamond Bar Boulevard/Brea Canyon Cutoff Road

Figure 22 – Pathfinder Road & Brea Canyon Road

Figure 23 – Pathfinder Road & Brea Canyon Road/Fern Hollow Drive

Figure 24 – Fairway Drive & Walnut Drive

Figure 25 – Brea Canyon Cutoff Road & Fallow Field Drive/Diamond Canyon Road

Graphic representations of traffic lane configurations on the approach legs to each study intersection are depicted in Figure 26.

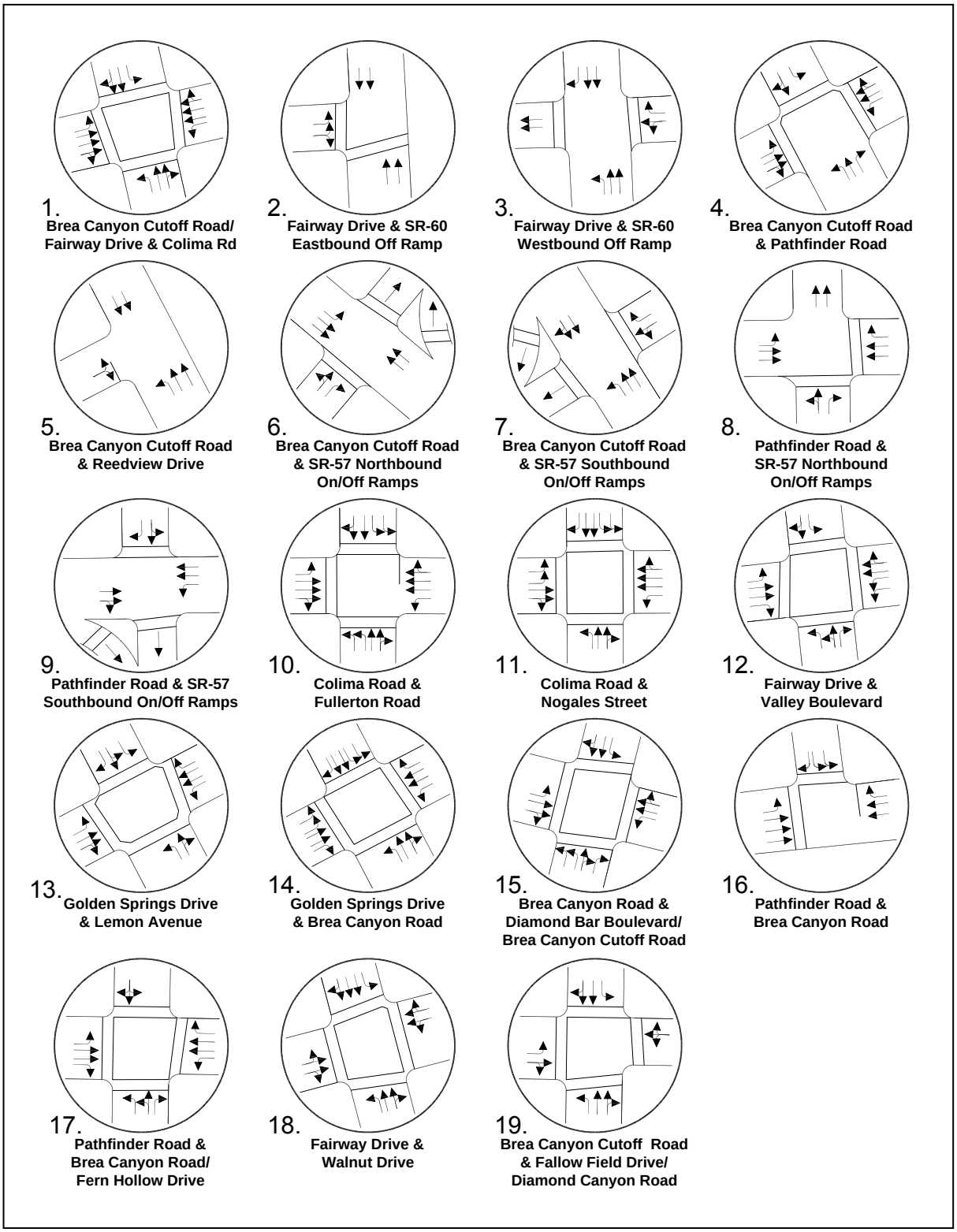

Figure 26 – Intersection Approach Leg Lane Configurations

Existing 24-Hour Roadway Traffic

Existing ADT volumes of were documented by counts taken in February 2008 for the six roadway segments designated in the MOU. Continuous 24-hour counts were commissioned by **KHR Associates** and independently collected by Traffic Data Services, Santa Ana, California, from 12:00 A.M. on Thursday, February 7, 2008, through 11:59 P.M. on Saturday, February 9, 2008. A summary of these 24-hour counts, tabulated in continuous 15-minute increments, can be found in the Appendix B of this report. Additional ADT traffic volumes for other arterial roadways and the SR-60 and SR-57 freeway segments were derived from Caltrans, and other sources.[9] Existing ADT on arterial roadway and freeway segments within the study area are depicted in Figure 27.

Figure 27 – Arterial Roadway & Freeway ADT

Existing Intersection Turn Movements

For the nineteen study intersections, intersection turn movement counts were taken during the two-hour periods that encompass the A.M. and P.M. weekday peak hours of commute. These counts were taken in February by **KHR Associates**. The tabulated count forms may be found in Appendix A of this report. A graphic representation of A.M. and P.M. peak hour turn movements at each intersection are depicted in Figures 28 and 29, respectively.

[9] 2007 ADTs from Traffic Data Branch of Caltrans

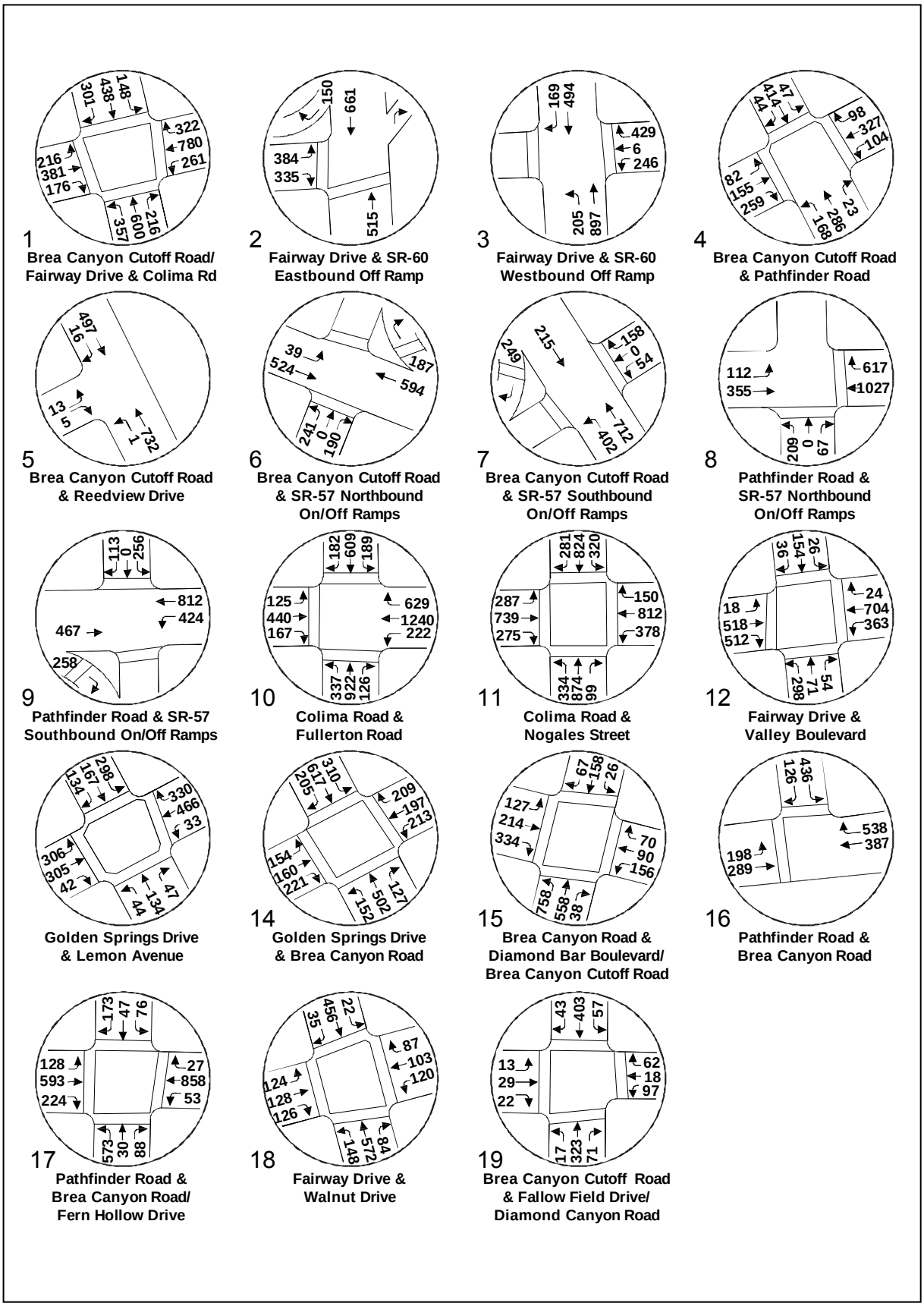

Figure 28 – Existing A.M. Peak Hour Intersection Turn Movements

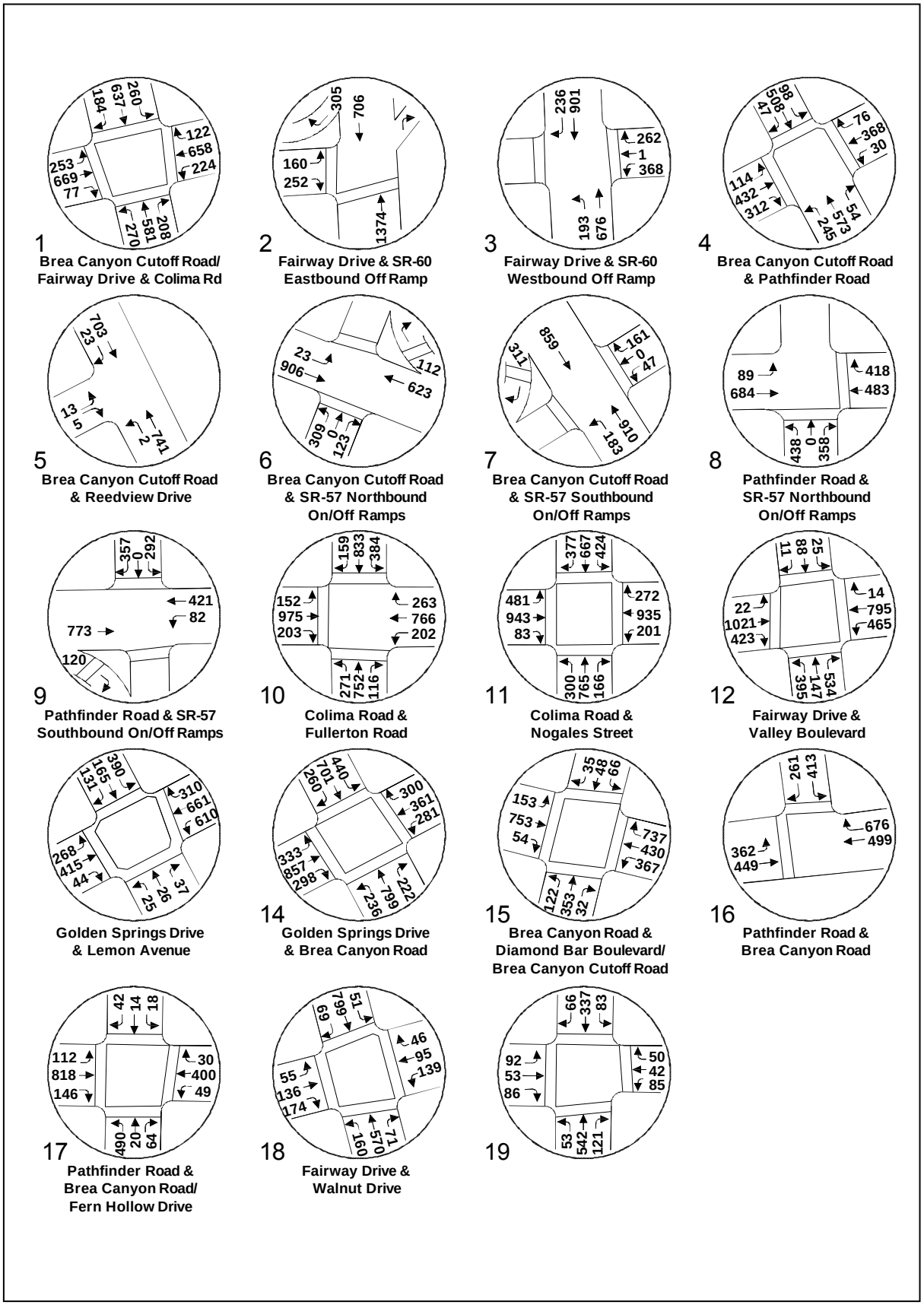

Figure 29 – Existing P.M. Peak Hour Intersection Turn Movements

IV. TRIP GENERATION

Trip generation for the proposed *Project* can be estimated by applying known trip generation rates for the morning and afternoon peak hours of weekday commute on adjacent streets (typically 7:00 to 9:00 A.M. and 4:00 to 6:00 P.M.). The Institute of Transportation Engineers' (ITE) *Trip Generation* manual defines Land Use Code No. 220 - Apartments as rental dwelling units "in rental buildings that have between three and ten levels (floors)." Also, "the peak hour of the generator typically coincides with the peak hour of the adjacent street traffic."[10] Table VII summarizes the average weekday daily traffic generation estimates, and the A.M. and P.M. peak hour trip generation estimates for the *Project*.

TABLE VII - SUMMARY OF TRIP GENERATION FOR *CANYON RESIDENCES*

Land Use Category 220 - Apartments	Dwelling Units (DU)	Trip Generation Rate	Inbound/ Outbound	Inbound Trip Ends	Outbound Trip Ends	Total Trip Ends
Weekday	775	6.72/DU	50%/50%	2,604	2,604	5,208
A.M. Peak Hour	775	0.51/DU	20%/80%	79	316	395
P.M. Peak Hour	775	0.62/DU	65%/35%	313	168	481

Notes: All Trip Ends Rounded to Nearest Whole Unit and Figures May Not Add Up Exactly (i.e., Plus or Minus 1 Unit)
Source: Trip Generate Rate Data Per ITE Trip Generation Manual, 7th Ed.

As indicated in Table VII, the *Project* is estimated to generate a total of 5,208 trip ends on a weekday, based on a trip generation rate of 6.72 trip ends per dwelling unit. During the A.M. peak hour, a total of 395 trip ends are estimated to be generated, based on a trip generation rate of 0.51 trip ends per dwelling unit (including 79 inbound trips and 316 outbound trips). During the P.M. peak hour, a total of 481 trip ends are estimated to be generated based on a trip generation rate of 0.62 trip ends per dwelling unit (including 313 inbound trips and 168 outbound trips).

Trip Generation Comparison

The ITE *Trip Generation* manual provides trip generation rates for schools. Land Use Code No. 534 – Private School (K-8) is defined as "primarily serving students attending kindergarten through the eighth grade, but may also include students beginning with pre-K classes. These schools may also offer extended care and day care." It was also noted that, for the purposes of "crediting" traffic generated by the existing against traffic generated by the proposed *Project*, SCS has indicated they will be relocating to new facilities outside the study area (see letter from SCS in the Appendix Section). However, the County staff prescribed that an alternative method be devised to distinguish between the traffic generation characteristics of the existing and proposed uses. A supplemental analysis of inbound and outbound traffic at SCS during the A.M. and P.M. peak hours was conducted. The results were presented to County staff for review and approval. The relevant correspondences, including supplemental SCS trip generation information, may be found in the Appendix Section of this report.

[10] *Trip Generation*, Volume 2 of 3, 7th Edition, Institute of Transportation Engineers, 2003

Table VIII provides a comparison of trip generation between the existing school use and proposed multi-family residential use, including the net change in average daily trip ends on a weekday, and the net change of trip ends during the A.M. and P.M. weekday peak hours.

TABLE VIII - TRIP GENERATION COMPARISON

WEEKDAY A.M. PEAK HOUR

Land Use	Size	Trip Rate	Inbound/ Outbound	Inbound Trip Ends	Outbound Trip Ends	Total Trip Ends
Canyon Residences	775 DU	0.51/DU	20%/80%	79	316	395
Southlands Christian Schools	480 SDT			79	217	296
Net A.M. Peak Hour Trips Generated on a Weekday				**0**	**99**	**99**

WEEKDAY P.M. PEAK HOUR

Land Use	Size	Trip Rate	Inbound/ Outbound	Inbound Trip Ends	Outbound Trip Ends	Total Trip Ends
Canyon Residences	775 DU	0.62/DU	65%/35%	313	168	481
Southlands Christian Schools	480 SDT			56	64	120
Net P.M. Peak Hour Trips Generated on a Weekday				**257**	**104**	**361**

Notes: 1) DU = Dwelling Units; SDT = Students Enrolled
2) Trip Generation Data Taken From *Trip Generation Manual*, 7th Ed., Institute of Transportation Engineers.
3) Assumed All Dwelling Units Fully Occupied
4) All Trips Rounded to Nearest Unit and Figures May Not Add Up Exactly (i.e., Plus or Minus 1 Unit)
5) Trip generation per KHR Associates' Supplemental Study results.

As calculated in Table VIII, the existing private school uses are estimated to generate 296 trip ends during the weekday A.M. peak hour and 120 trip ends during the weekday P.M. peak hour. By comparison, the proposed *Project* is estimated to generate 395 trip ends during the A.M. peak hour and 481 trip ends during the P.M. peak hour. The net result is that there will be 99 more trips generated by the proposed *Project* during the A.M. peak hour, and 361 more trips generated during the weekday P.M. peak hour than with the existing school uses.

V. TRIP DISTRIBUTION/TRIP ASSIGNMENTS

Trip distribution and trip assignments for the *Project* were formulated with input from the Traffic Studies Unit of the County of Los Angeles. Key consideration was given to existing and future land uses; the configuration of the network of streets and highways within the study area; and existing and future traffic volumes.

Trip Distribution

Trip distribution assumptions are depicted in Figure 30 for inbound and outbound trips generated by the proposed *Project*. Directional distributions are assumed to be the same for inbound and outbound, as they tend to be for residential uses. In determining the general routes to be taken to and from the *Project* site, consideration was given to the location and proximity of regional and local employment centers, transportation facilities, educational institutions, recreational facilities, and shopping centers.

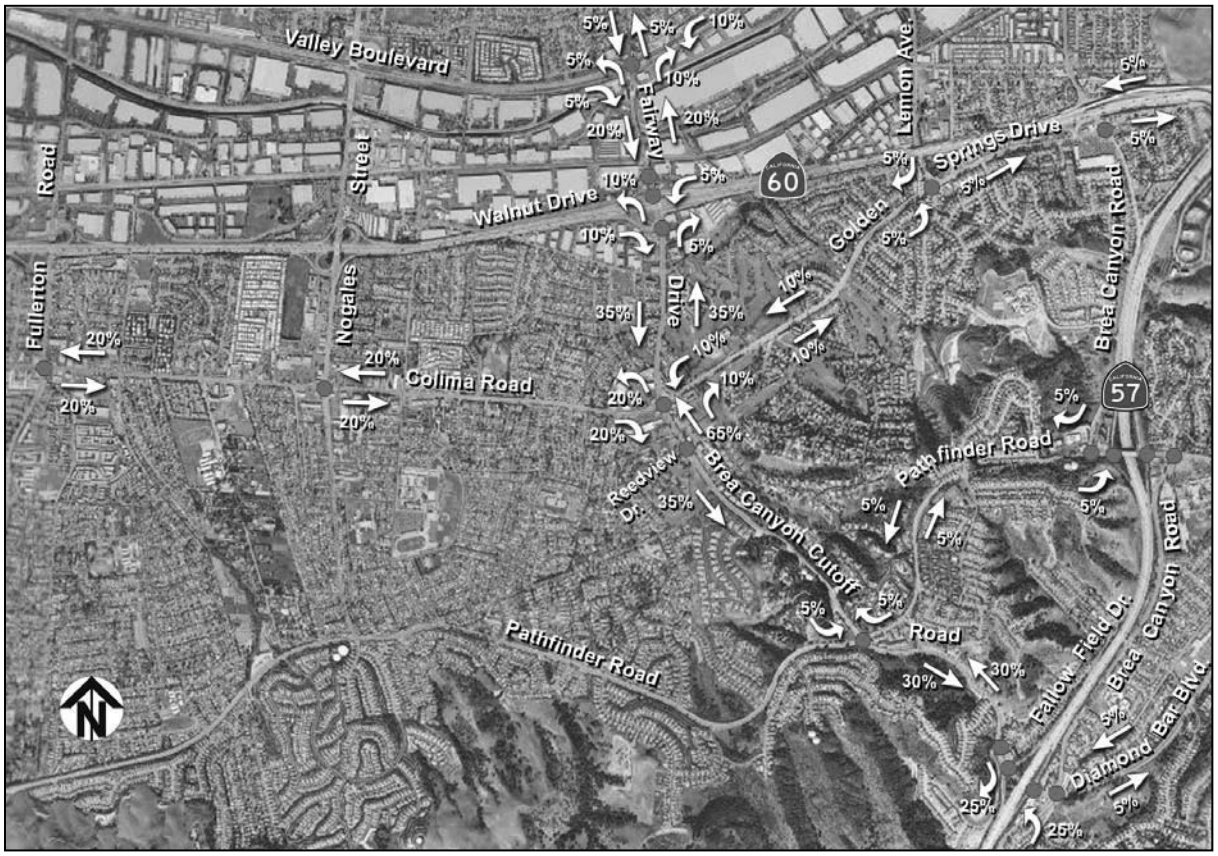

Figure 30 – Project Trip Distribution Assumptions

Notable from Figure 30 is the fact that the *Project* site is entirely accessed via Brea Canyon Cutoff Road, and that all north, south, east, and west bound traffic is initially distributed via Brea Canyon Cutoff Road in either the northbound or southbound direction. Regional traffic distribution is via the SR-57 Freeway for north-south directions, and the SR-60 Freeway for east-west travel. At the local level, westerly trips are distributed via Colima Road, Walnut Drive and Valley Boulevard; easterly trips are distributed via Golden Springs Drive, Valley Boulevard, and Pathfinder Road; northerly are distributed via Fairway Drive, Nogales Street, and Lemon Avenue; and southerly trips are distributed via Brea Canyon Cutoff Road.

Trip Assignments

Based on the trip distribution assumptions illustrated in Figure 30, trip assignments to individual roadways and intersections were made. These trip assignments were based on physical and operational constraints affecting the flow of traffic on roadways and through intersections; direction of travel (i.e., inbound or outbound) and time of day (i.e., A.M. or P.M. peak hour); and traffic control devices that regulate the flow of traffic on the streets and highways network servicing the *Project* site.

Inbound and outbound trips generated by the *Project* during the A.M. and P.M. peak hours of weekday commute were assigned to various roadway segments and study intersections based on trip distribution percentages in each direction from the *Project* site. These inbound and outbound trip assignments during the A.M. peak hour are depicted in Figure 31. The inbound and outbound trip assignments during the P.M. peak hour are depicted in Figure 32.

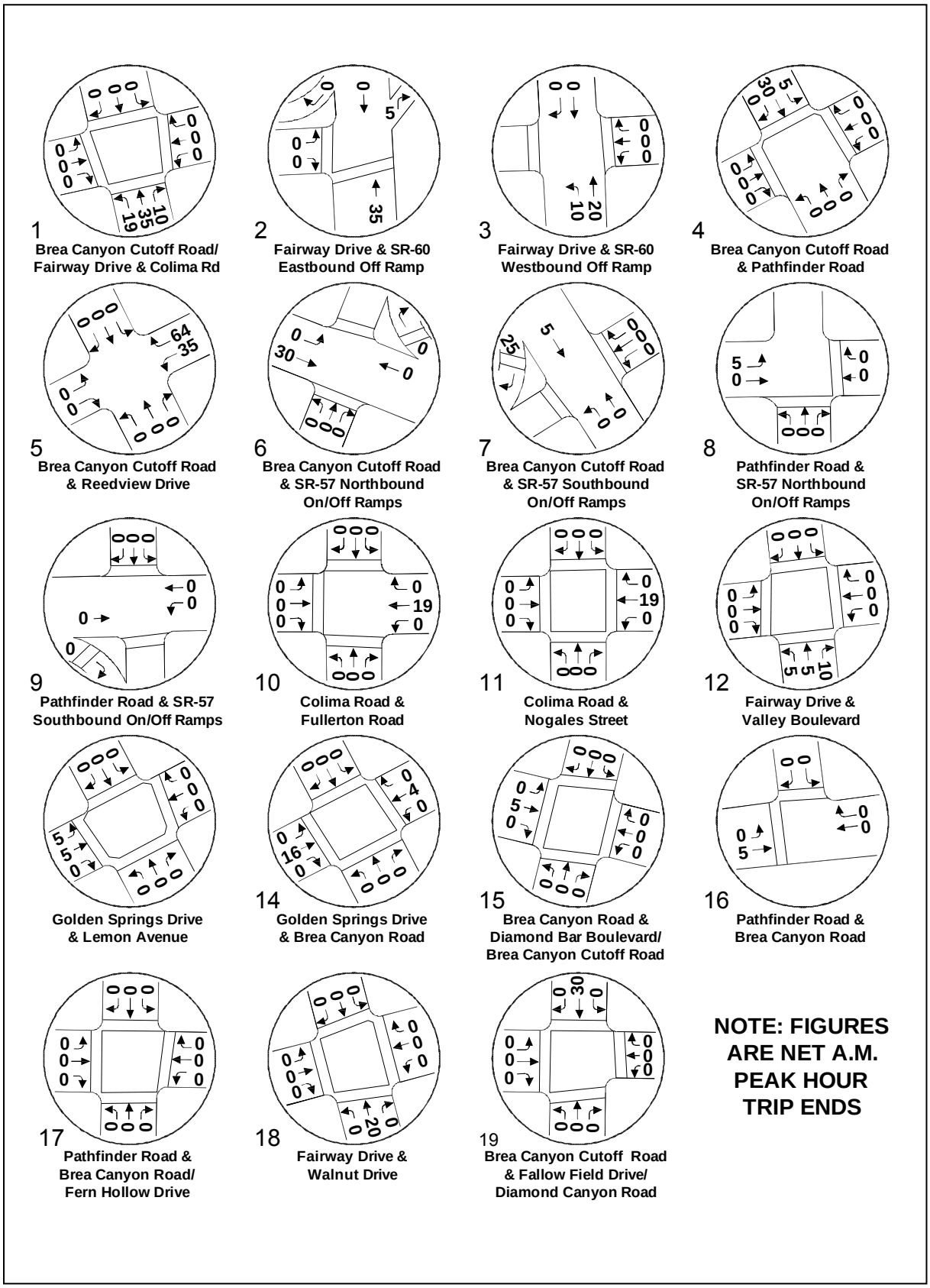

Figure 31 – A.M. Peak Hour Project Trip Assignments

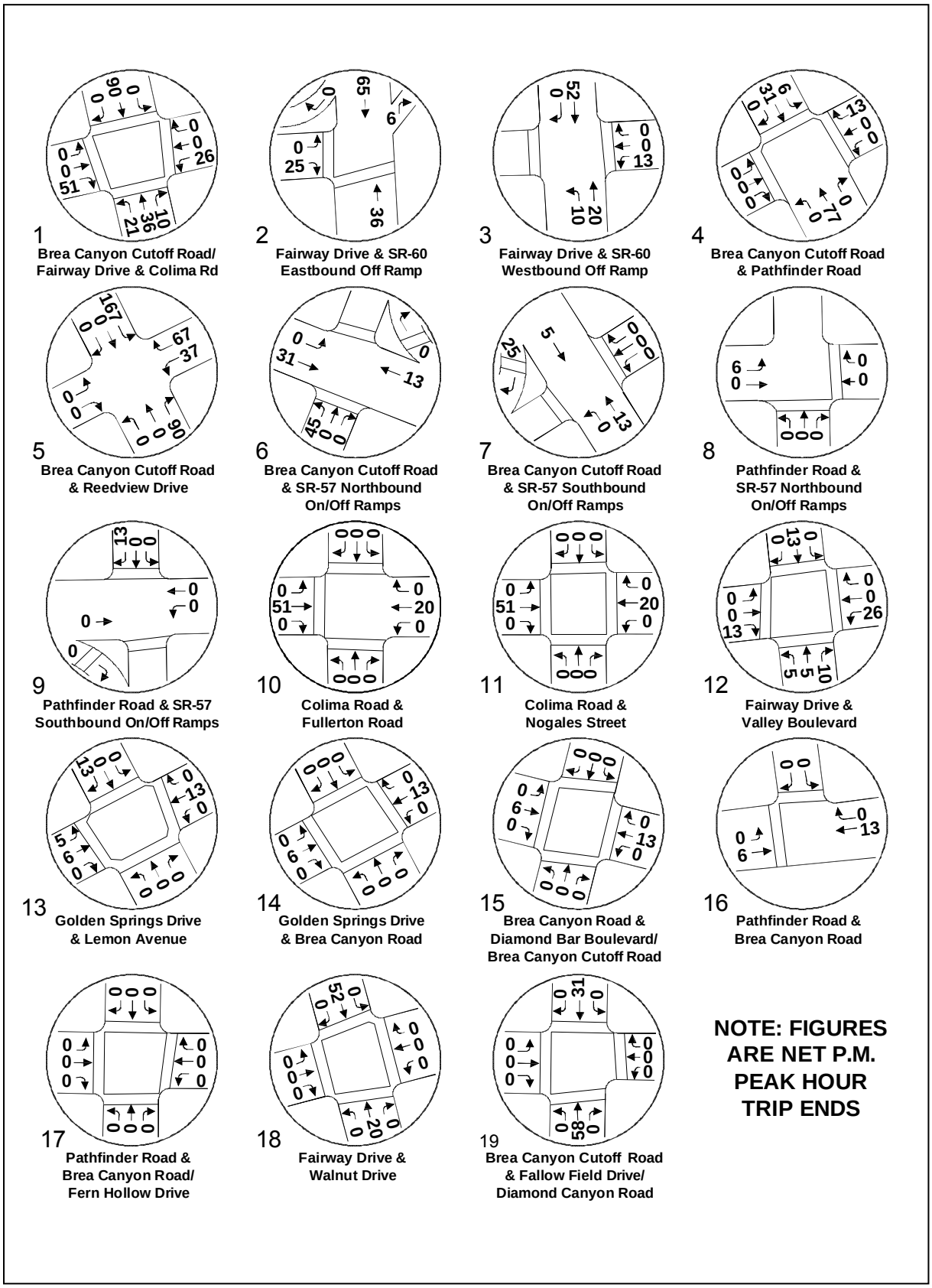

Figure 32 – P.M. Peak Hour Project Trip Assignments

It should be noted that, although the MOU originally specified a distribution of 25% of the Project trips directly to the north, 5% of the northerly trips was assigned first to the east via Golden Springs Drive and then north via the and Lemon Avenue. Northerly trips on Fairway Drive were also diverted at Valley Boulevard, with 5% going west, before proceeding north via Nogales Street; 10% going east, before proceeding north via Lemon Avenue; and 5% going directly north via Camino De Teodoro.

VI. EXISTING AND PROPOSED LEVELS OF SERVICE

Future traffic conditions resulting from additional development may be predicted by performing a travel demand forecast. Such forecasts vary in magnitude and complexity, but at minimum include defining the streets and highways network of interest; estimating the amount of traffic generated by a given development or geographic area; determining the area wide distribution of this traffic; and assigning it to specific portions of the streets and highways network. In order to determine the magnitude and impact of additional traffic generated onto streets surrounding the *Project* site, a travel demand forecast of future traffic conditions was undertaken for the proposed *Project*.

The travel demand forecasting procedure entailed the following steps:

1) a determination of future trip ends generated by the proposed *Project* using appropriate trip generation rates;
2) a trip distribution of these trip ends based on regional and site-specific factors (such as existing land uses); and
3) the assignment of these trip ends on specific routes based on known traffic conditions (such as the levels of service during peak hours of commute).

To be conservative, a modal split step in travel demand forecasting, which allows the consideration of public transit and non-motorized forms of travel (e.g., bicycles), was not employed. However, options for transit and other alternative modes of transportation within the study area do exist, and a discussion of available transportation options is provided in the "Site Access, Circulation, & Parking" section of this report.

The ICU methodology was employed to analyze all intersection levels of service. Roadway segments were evaluated based on the level of service volumes described in the Highway Capacity Manual. As required by Caltrans' methodology for traffic studies, the six Caltrans maintained intersections were also analyzed using the HCM method (*HCS* software). Also, as prescribed by the County, the HCM method was used to analyze the unsignalized Brea Canyon Cutoff Road/Reedview Drive/*Project* driveway intersection. In addition, a traffic signal warrants analysis was performed for this intersection based on Caltrans' "Estimated Average Daily Traffic" methodology.

Existing & Existing+Ambient Roadway Segment LOS

Table IX summarizes the Existing and Existing Plus Ambient weekday A.M. and P.M. peak hour directional counts, along with the V/C ratio and corresponding level of service. For study purposes, and per the County's MOU (see Appendix I), the ambient growth (increase) in traffic is assumed to be 0.78% per year up to, and including, the target year of project completion (2012). This growth factor is applied to both roadway segments and intersections.

It should be noted that the applicable lane capacity for roadways is 1,600 vehicles per hour per lane, except for Secondary Limited Highways, which have a capacity of 750 vehicles per hour per lane, according to the Traffic Studies Unit.

TABLE IX - EXISTING & EX.+AMBIENT 2012 ROADWAY SEGMENT LOS

	Existing A.M. Peak Hour						Existing P.M. Peak Hour					
	Northbound			Southbound			Northbound			Southbound		
Roadway Segment	**Count[1]**	**V/C[2]**	**LOS**	**Count**	**V/C**	**LOS**	**Count**	**V/C**	**LOS**	**Count**	**V/C**	**LOS**
Brea Canyon Cutoff s/o Colima[3]	811	0.541	A	689	0.459	A	948	0.632	B	1,016	0.677	B
Brea Canyon Cutoff s/o Pathfinder[3]	585	0.390	A	892	0.595	A	958	0.639	B	814	0.543	A
Brea Canyon Cutoff n/o Pathfinder[3]	565	0.376	A	591	0.394	A	800	0.533	A	812	0.541	A
Fairway n/o Colima[4]	906	0.283	A	617	0.193	A	817	0.255	A	1,225	0.383	A
Fairway n/o SR-60 Ramps[4]	1,174	0.367	A	800	0.250	A	1,071	0.335	A	1,399	0.437	A
Colima Rd. - Nogales to Fairway[5,6]	709	0.148	A	762	0.159	A	1,056	0.220	A	1,143	0.238	A

	Existing+Ambient A.M. Peak Hour						Existing+Ambient P.M. Peak Hour					
	Northbound			Southbound			Northbound			Southbound		
Roadway Segment	**Count[1]**	**V/C[2]**	**LOS**	**Count**	**V/C**	**LOS**	**Count**	**V/C**	**LOS**	**Count**	**V/C**	**LOS**
Brea Canyon Cutoff s/o Colima[3]	837	0.558	A	711	0.474	A	978	0.652	B	1,048	0.699	B
Brea Canyon Cutoff s/o Pathfinder[3]	603	0.402	A	920	0.613	B	988	0.659	B	840	0.560	A
Brea Canyon Cutoff n/o Pathfinder[3]	583	0.389	A	610	0.407	A	825	0.550	A	838	0.559	A
Fairway n/o Colima[4]	935	0.292	A	636	0.199	A	843	0.263	A	1,264	0.395	A
Fairway n/o SR-60 Ramps[4]	1,211	0.378	A	825	0.258	A	1,105	0.345	A	1,443	0.451	A
Colima Rd. - Nogales to Fairway[5,6]	731	0.152	A	786	0.164	A	1,089	0.227	A	1,179	0.246	A

***Note*: Capacity Per Lane Per Hour = 1,600 Vehicles, Except for Secondary Limited Highway = 750 Vehicles, Per County of LA Traffic & Lighting Division of Public Works Dept.**

[1] Peak Hour Directional Traffic Count on Roadway Segment
[2] V/C Ratio = Volume/Capacity Ratio
[3] Capacity Per Lane Per Hour = 750; 2 Lanes = 1,500 Per Direction
[4] Capacity Per Lane Per Hour = 1,600; 2 Lanes = 3,200 Per Direction
[5] Capacity Per Lane Per Hour = 1,600; 3 Lanes = 4,800 Per Direction
[6] Colima Rd. - Nogales to Fairway Directional Data is Eastbound/Westbound

The existing roadway LOS is based on a comparison between the peak hour ADT counts taken in February, 2008, and the Los Angeles County Highway Plan designations for various roadway classifications (refer to Table I of this report). As calculated in Table IX, all of the roadway segments studied currently operate at acceptable LOS of “B” or better on a weekday during the A.M. and P.M. peak hours of commute.

When ambient traffic for the target year of 2012 is added to the existing traffic on the roadway segments studied, all levels of service during both the A.M. and P.M. peak hours of commute on a weekday continue to operate at acceptable LOS of “B” or better.

Existing & Existing+Ambient Intersection LOS

Existing plus ambient traffic turn movements during the weekday A.M. and P.M. peak hours are depicted in Figures 33 and 34, respectively. Existing intersection LOS and Existing Plus Ambient (to target year 2012) LOS, as calculated using the ICU method, are summarized in Table X for all 19 intersections studied, while Table XI summarizes the LOS for 7 intersections analyzed using the HCM method, including the unsignalized Brea Canyon Cutoff Road/Reedview Drive/*Project* driveway intersection.

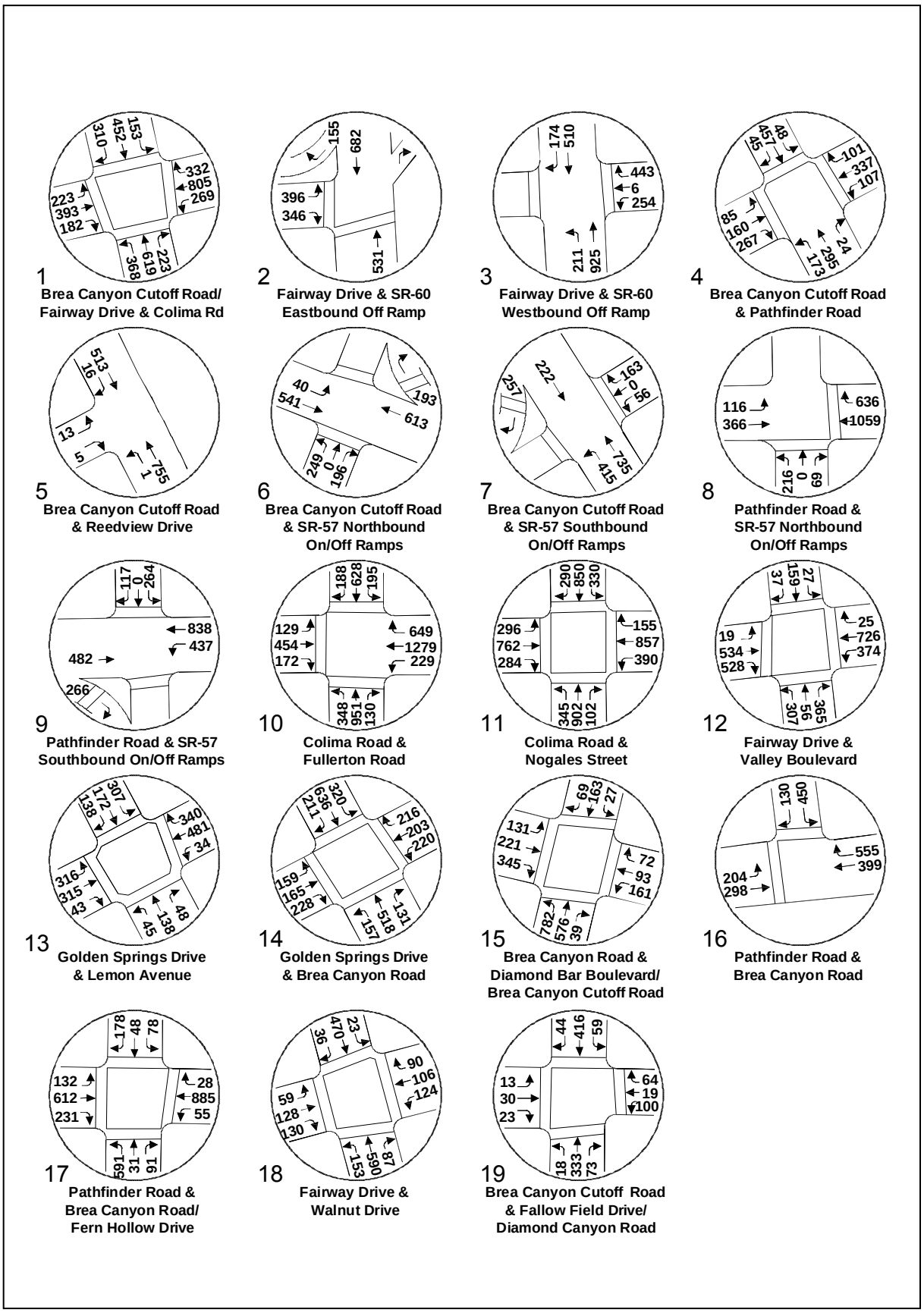

Figure 33 – Existing+Ambient A.M. Peak Hour Intersection Traffic

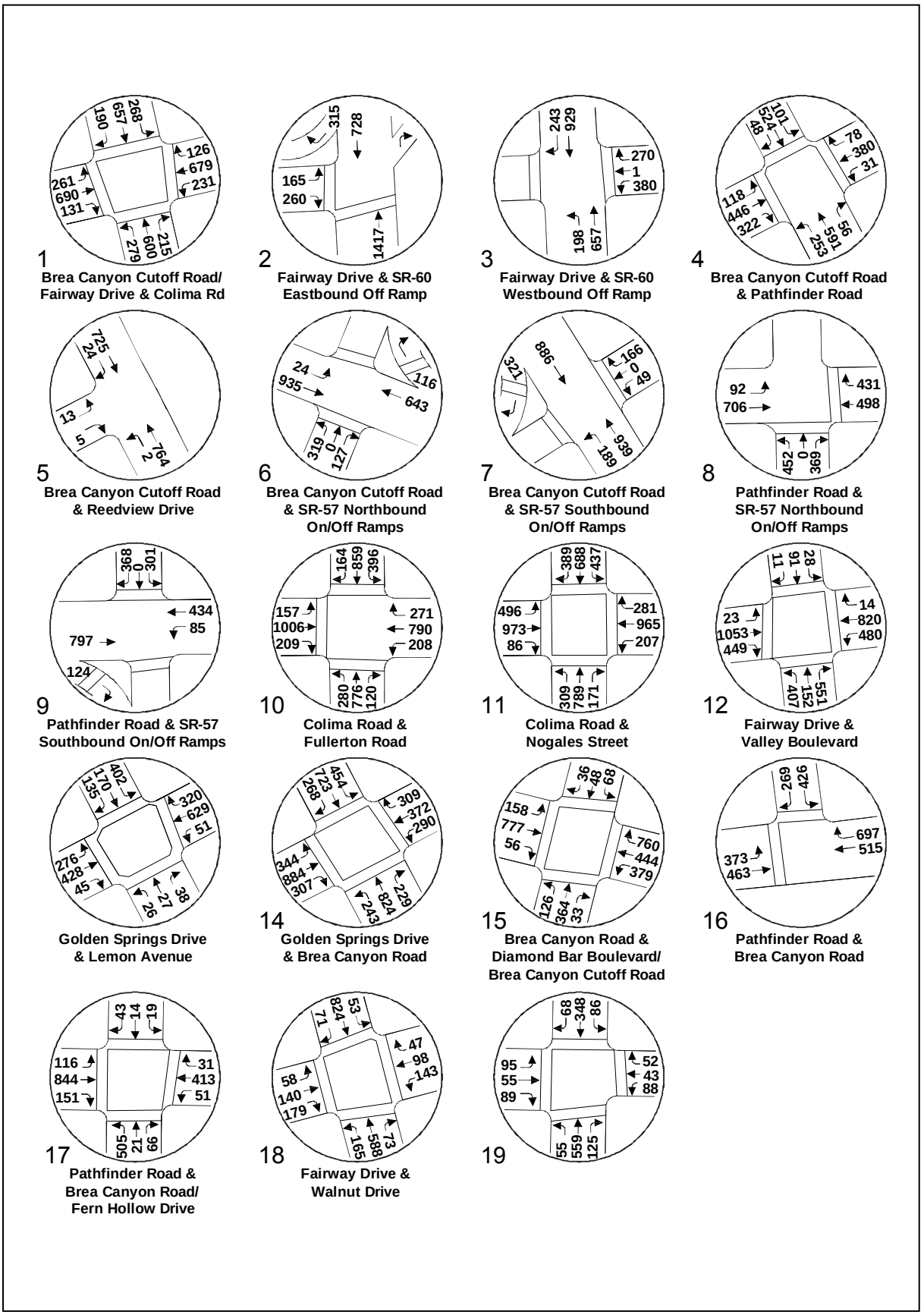

Figure 34 – Existing+Ambient P.M. Peak Hour Intersection Traffic

TABLE X - EXISTING & EX.+AMBIENT ICU-BASED INTERSECTION LOS

	EXISTING				EXISTING + AMBIENT			
	A.M. Peak Hour		P.M. Peak Hour		A.M. Peak Hour		P.M. Peak Hour	
Intersection	**ICU**	**LOS**	**ICU**	**LOS**	**ICU**	**LOS**	**ICU**	**LOS**
1. Brea Canyon Cutoff Rd./Colima Rd.	**0.919**	**E**	0.846	D	**0.944**	**E**	0.870	D
2. Fairway Dr./SR-60 E/B Ramps	0.511	A	0.672	B	0.524	A	0.690	B
3. Fairway Dr./SR-60 W/B Ramps	0.540	A	0.733	C	0.554	A	0.753	C
4. Brea Canyon Cutoff Rd./Pathfinder Rd.	0.686	B	0.851	D	0.703	C	0.875	D
5. Brea Canyon Cutoff/Reedview Dr.	0.337	A	0.340	A	0.344	A	0.347	A
6. Brea Canyon Cutoff Rd./SR-57 N/B Ramps	0.461	A	0.502	A	0.472	A	0.515	A
7. Brea Canyon Cutoff Rd./SR-57 S/B Ramps	0.452	A	0.512	A	0.464	A	0.526	A
8. Pathfinder Rd./SR-57 N/B Ramps	0.622	B	0.580	A	0.638	B	0.596	A
9. Pathfinder Rd./SR-57 S/B Ramps	0.671	B	0.575	A	0.689	B	0.590	A
10. Colima Rd./Fullerton Rd.	**0.961**	**E**	0.876	D	**0.988**	**E**	**0.901**	**D**
11. Colima Rd./Nogales St.	**1.119**	**F**	**0.984**	**E**	**1.152**	**F**	**1.012**	**F**
12. Fairway Dr./Valley Blvd.	0.629	B	0.831	D	0.645	B	0.854	D
13. Golden Springs Dr./Lemon Ave.*	0.711	C	0.690	B	0.730	C	0.708	C
14. Golden Springs Dr./Brea Canyon Rd.*	0.528	A	**0.937**	**E**	0.542	A	**0.964**	**E**
15. Brea Canyon Rd./Diamond Bar Blvd.*	0.606	B	0.653	B	0.622	B	0.671	B
16. Pathfinder Rd./Brea Canyon Rd.*	0.496	A	0.626	B	0.508	A	0.642	B
17. Pathfinder Rd./Fern Hollow Dr.*	0.851	D	0.610	B	0.874	D	0.626	B
18. Fairway Dr./Walnut Dr.*	0.512	A	0.582	A	0.525	A	0.597	A
19. Brea Canyon Cutoff Rd./Fallow Field Dr.*	0.351	A	0.499	A	0.359	A	0.513	A

Denotes Intersection Not Required to be Analyzed by County's Memorandum of Understanding
Boldface *Denotes Unacceptable Level of Service*

TABLE XI - EXISTING & EX.+AMBIENT HCM-BASED INTERSECTION LOS

	EXISTING				EXISTING + AMBIENT			
	A.M. Peak Hour		P.M. Peak Hour		A.M. Peak Hour		P.M. Peak Hour	
Intersection	**Delay[1]**	**LOS**	**Delay[1]**	**LOS**	**Delay[1]**	**LOS**	**Delay[1]**	**LOS**
1. Fairway Dr./SR-60 E/B Ramps	11.4	B	10.5	B	11.6	B	11.1	B
2. Fairway Dr./SR-60 W/B Ramps	18.8	B	21.4	C	19.8	B	23.4	C
3. Brea Canyon Cutoff Rd./Reedview Dr.	12.7	B	14.4	B	12.8	B	14.6	B
4. Brea Canyon Cutoff Rd./SR-57 N/B Ramps	12.1	B	12.6	B	12.3	B	12.9	B
5. Brea Canyon Cutoff Rd./SR-57 S/B Ramps	11.3	B	11.8	B	11.5	B	12.3	B
6. Pathfinder Rd./SR-57 N/B Ramps	17.8	B	22.6	C	19.5	B	23.3	C
7. Pathfinder Rd./SR-57 S/B Ramps	18.1	B	14.9	B	19.3	B	15.3	B

[1] Worst Case Direction Average Intersection Delay Per Vehicle (In Seconds)

As shown in Tables X and XI, all study intersections currently operate at acceptable LOS of "A" to "D" with the exception of Brea Canyon Cutoff Road at Colima Road (currently operating at LOS "E" during the weekday A.M. peak hour); Colima Road at Fullerton Road (currently operating at LOS "E" during the weekday A.M. peak hour); Colima Road at Nogales Street (currently operating at LOS "F" during the weekday A.M. peak hour and LOS "E" during the weekday P.M. peak hour); and Golden Springs Drive at Brea Canyon Road (currently operating at LOS "E" during the weekday P.M. peak hour). The LOS conditions will

remain the same in the year 2012, with the exception that Colima Road at Nogales Street will deteriorate to "F" during the weekday P.M. peak hour. The incremental increases in V/C ratios and changes in LOS between existing and existing plus ambient conditions under the ICU method and the HCM method are provided in Table XII and Table XIII, respectively.

TABLE XII - CHANGES BETWEEN EXISTING & EX.+AMBIENT ICU-BASED V/C RATIO & INTERSECTION LOS

	A.M. PEAK HOUR		P.M. PEAK HOUR	
Intersection	**V/C Change**	**LOS**	**V/C Change**	**LOS**
1. Brea Canyon Cutoff Rd./Colima Rd.	0.025	E	0.024	D
2. Fairway Dr./SR-60 E/B Ramps	0.013	A	0.018	B
3. Fairway Dr./SR-60 W/B Ramps	0.014	A	0.020	C
4. Brea Canyon Cutoff Rd./Pathfinder Rd.	**0.017**	**B to C**	0.024	D
5. Brea Canyon Cutoff/Reedview Dr.	0.007	A	0.007	A
6. Brea Canyon Cutoff Rd./SR-57 N/B Ramps	0.011	A	0.013	A
7. Brea Canyon Cutoff Rd./SR-57 S/B Ramps	0.012	A	0.014	B
8. Pathfinder Rd./SR-57 N/B Ramps	0.016	B	0.016	A
9. Pathfinder Rd./SR-57 S/B Ramps	0.018	B	0.015	A
10. Colima Rd./Fullerton Rd.	0.027	E	0.025	D
11. Colima Rd./Nogales St.	0.033	F	**0.028**	**E to F**
12. Fairway Dr./Valley Blvd.	0.016	B	0.023	D
13. Golden Springs Dr./Lemon Ave.*	0.019	C	**0.018**	**B to C**
14. Golden Springs Dr./Brea Canyon Rd.*	0.014	A	0.027	E
15. Brea Canyon Rd./Diamond Bar Blvd.*	0.016	B	0.018	C
16. Pathfinder Rd./Brea Canyon Rd.*	0.012	A	0.016	B
17. Pathfinder Rd./Fern Hollow Dr.*	0.023	D	0.016	B
18. Fairway Dr./Walnut Drive*	0.013	A	0.015	A
19. Brea Canyon Cutoff Rd./Fallow Field Dr.*	0.008	A	0.014	A

Denotes Intersection Not Required to be Analyzed by County's Memorandum of Understanding
Boldface Denotes Change in LOS

TABLE XIII - CHANGES BETWEEN EXISTING & EX.+AMBIENT HCM-BASED INTERSECTION LOS

	A.M. PEAK HOUR		P.M. PEAK HOUR	
Intersection	**Delay (Sec.)**	**LOS**	**Delay (Sec.)**	**LOS**
1. Fairway Dr./SR-60 E/B Ramps	0.2	B	0.6	B
2. Fairway Dr./SR-60 W/B Ramps	1.0	B	2.0	C
3. Brea Canyon Cutoff Rd./Reedview Dr.	0.1	B	0.2	B
4. Brea Canyon Cutoff Rd./SR-57 N/B Ramps	0.2	B	0.3	B
5. Brea Canyon Cutoff Rd./SR-57 S/B Ramps	0.2	B	0.5	B
6. Pathfinder Rd./SR-57 N/B Ramps	1.7	B	0.7	C
7. Pathfinder Rd./SR-57 S/B Ramps	1.2	B	0.4	B

As shown in Table XII, at some study intersections the LOS deteriorates with the addition of ambient increases in traffic. However, with the exception of the LOS during the P.M. peak hour at Colima Road and Fullerton Road, all LOS changes remain within an acceptable "D" or better, and intersections that operate at unacceptable LOS under existing traffic conditions will remain unchanged under existing plus ambient traffic conditions.

As shown in Table XIII, all six freeway interchange intersections and the unsignalized intersection of Reedview Drive (and the *Project* driveway) at Brea Canyon Cutoff Road, as analyzed using the HCM methodology, currently operate at acceptable LOS of "C" or better during both the A.M. and P.M. weekday peak hours. When the estimated ambient traffic to year 2012 is added to the existing traffic, the delay at each intersection is slightly increased, but all the LOS continue at acceptable LOS "C" or better.

Existing+Ambient+Project ADT & Roadway Segment LOS

In order to determine whether or not the proposed *Project* will result in potential traffic impacts, a comparison can be made between the projected existing plus ambient traffic conditions in the target year for *Project* completion (2012) and conditions that might be created with the addition of *Project*–generated traffic. These potential impacts can occur on roadway segments as well as intersections.

Table XIV summarizes the arterial roadway segment V/C ratio and LOS under the existing plus ambient plus *Project* traffic scenario for the weekday A.M. and P.M. peak hours of traffic. As shown, when *Project*-generated traffic is added to existing plus ambient traffic in the target build-out year 2012, the V/C ratios for roadway segments are expected to increase, but the LOS are projected to remain at an acceptable "D" or better.

TABLE XIV – EX.+AMBIENT+PROJECT ROADWAY SEGMENT LOS

	A.M. Peak Hour						P.M. Peak Hour					
	Northbound			Southbound			Northbound			Southbound		
Roadway Segment	**Count[1]**	**V/C[2]**	**LOS**	**Count**	**V/C**	**LOS**	**Count**	**V/C**	**LOS**	**Count**	**V/C**	**LOS**
Brea Canyon Cutoff Rd. s/o Colima[3]	875	0.583	A	711	0.474	A	1,047	0.698	B	1,214	0.809	D
Brea Canyon Cutoff Rd. s/o Pathfinder[3]	603	0.402	A	950	0.633	B	1,067	0.711	C	871	0.580	A
Brea Canyon Cutoff Rd. n/o Pathfinder[3]	583	0.388	A	645	0.430	A	917	0.611	B	875	0.583	A
Fairway Dr. n/o Colima Ave.[4]	983	0.307	A	647	0.202	A	929	0.290	A	1,408	0.489	A
Fairway Dr. n/o SR-60 Ramps[4]	1,236	0.386	A	825	0.257	A	1,130	0.353	A	1,507	0.470	A
*Colima between Nogales & Fairway[5]	742	0.154	A	806	0.167	A	1,145	0.238	A	1,200	0.250	A

Notes: Colima Between Nogales/Fairway Directional Data is Eastbound/Westbound
Capacity Per Lane Per Hour = 1,600 Vehicles, Except for Secondary Limited Highway = 750 Vehicles, per County of Los Angeles Traffic & Lighting Division of Public Works Dept.
[1] Peak Hour Directional Traffic Count on Roadway Segment
[2] V/C Ratio = Volume/Capacity Ratio
[3] Capacity Per Lane Per Hour = 750; 2 Lanes = 1,500 Per Direction
[4] Capacity Per Lane Per Hour = 1,600; 2 Lanes = 3,200 Per Direction
[5] Capacity Per Lane Per Hour = 1,600; 3 Lanes = 4,800 Per Direction

Existing+Ambient & Ex.+Ambient+Project Intersection LOS

Existing plus ambient plus *Project* traffic turn movements during the weekday A.M. and P.M. peak hours are depicted in Figures 35 and 36, respectively. The corresponding intersection V/C ratios and LOS, as calculated using the ICU method, are summarized in Table XV for all 19 intersections studied, while Table XVI summarizes the LOS for the 7 intersections analyzed using the HCM method.

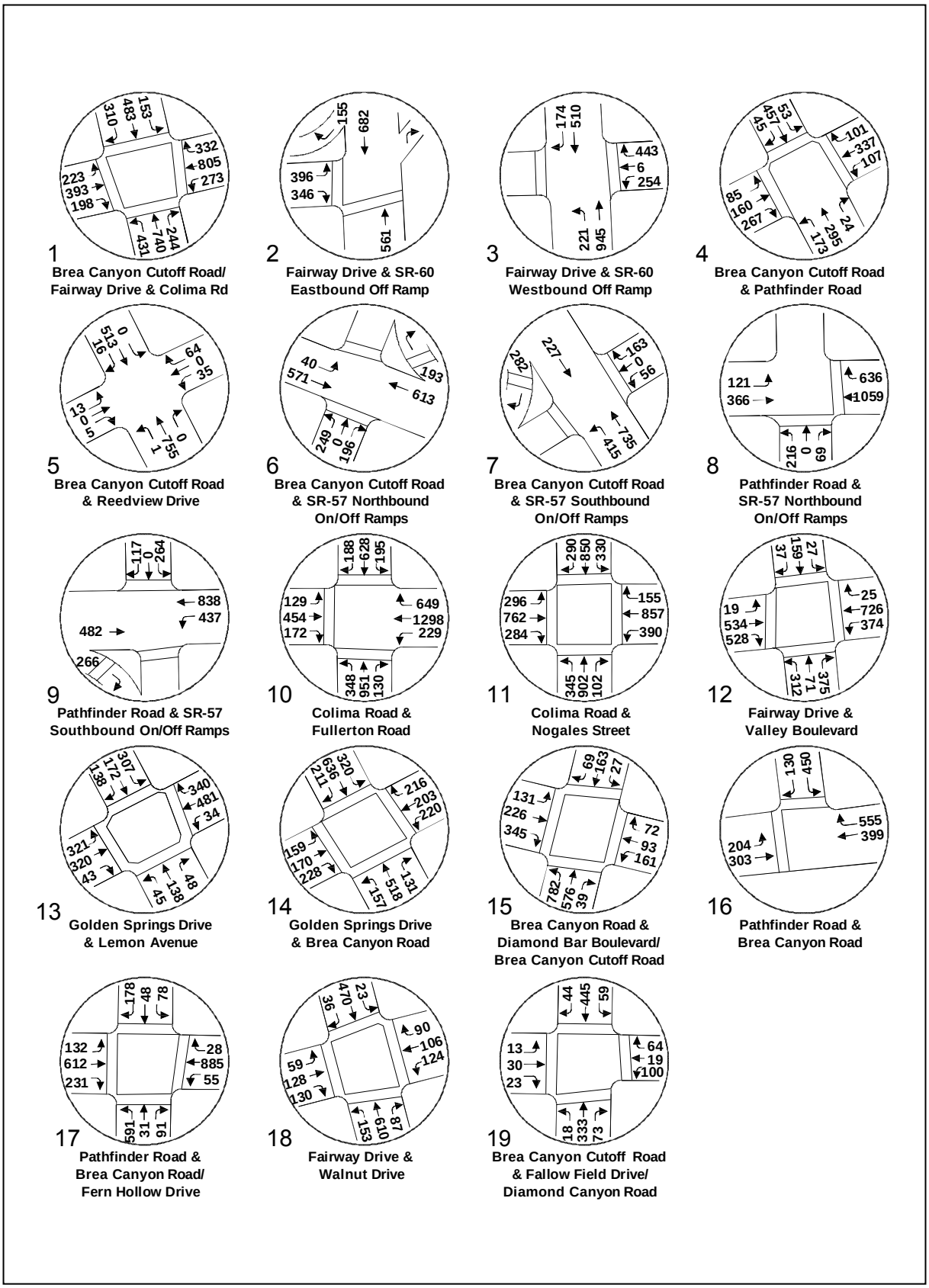

Figure 35 – Ex.+Ambient+Project A.M. Peak Hour Intersection Traffic

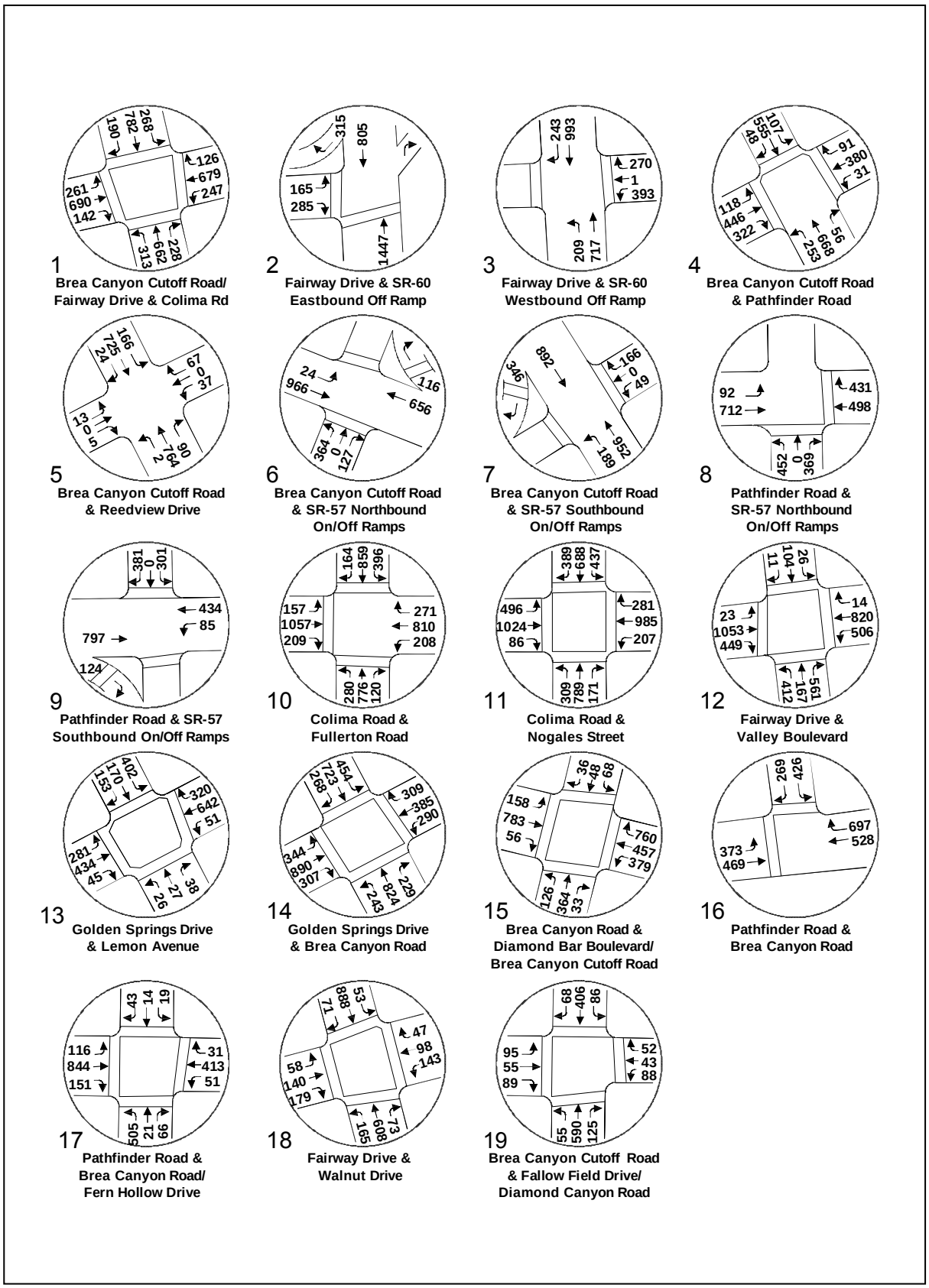

Figure 36 – Ex.+Ambient+Project P.M. Peak Hour Intersection Traffic

TABLE XV – EX.+AMBIENT & EX.+AMBIENT+PROJECT
ICU-BASED INTERSECTION LOS

	EXISTING+AMBIENT				EX.+AMBIENT+PROJECT			
	A.M. Peak Hour		P.M. Peak Hour		A.M. Peak Hour		P.M. Peak Hour	
Intersection	**ICU**	**LOS**	**ICU**	**LOS**	**ICU**	**LOS**	**ICU**	**LOS**
1. Brea Canyon Cutoff Rd./Colima Rd.	**0.944**	**E**	0.870	D	**0.993**	**E**	**0.930**	**E**
2. Fairway Dr./SR-60 E/B Ramps	0.524	A	0.690	B	0.534	A	0.708	C
3. Fairway Dr./SR-60 W/B Ramps	0.554	A	0.753	C	0.560	A	0.787	C
4. Brea Canyon Cutoff Rd./Pathfinder Rd.	0.703	C	0.875	D	0.722	C	0.894	D
5. Brea Canyon Cutoff Rd./Reedview Dr.	0.344	A	0.347	A	0.384	A	0.521	A
6. Brea Canyon Cutoff Rd./SR-57 N/B Ramps	0.472	A	0.515	A	0.472	A	0.548	A
7. Brea Canyon Cutoff Rd./SR-57 S/B Ramps	0.464	A	0.526	A	0.465	A	0.528	A
8. Pathfinder Rd./SR-57 N/B Ramps	0.638	B	0.596	A	0.642	B	0.596	A
9. Pathfinder Rd./SR-57 S/B Ramps	0.689	B	0.590	A	0.689	B	0.590	A
10. Colima Rd./Fullerton Rd.	**0.988**	**E**	0.901	D	**0.992**	**E**	**0.911**	**E**
11. Colima Rd./Nogales St.	**1.152**	**F**	**1.012**	**F**	**1.152**	**F**	**1.028**	**F**
12. Fairway Dr./Valley Blvd.	0.645	B	0.854	D	0.652	B	0.878	D
13. Golden Springs Dr./Lemon Ave.*	0.730	C	0.708	C	0.734	C	0.712	C
14. Golden Springs Dr./Brea Canyon Rd. *	0.542	A	**0.964**	**E**	0.543	A	**0.966**	**E**
15. Brea Canyon Rd./Diamond Bar Blvd.*	0.622	B	0.671	B	0.624	B	0.673	B
16. Pathfinder Rd./Brea Canyon Rd.*	0.508	A	0.642	B	0.508	A	0.646	B
17. Pathfinder Rd./Fern Hollow Dr.*	0.874	D	0.626	B	0.874	D	0.626	B
18. Walnut Drive North/Fairway Dr.*	0.525	A	0.597	A	0.533	A	0.611	B
19. Brea Canyon Cutoff Rd./Fallow Field Dr.*	0.359	A	0.513	A	0.359	A	0.522	A

Denotes Intersection Not Required to be Analyzed by County's Memorandum of Understanding
Boldface Denotes Unacceptable Level of Service

TABLE XVI - EX.+AMBIENT & EX.+AMBIENT+ PROJECT
HCM-BASED INTERSECTION LOS

	EXISTING+AMBIENT				EX.+AMBIENT+PROJECT			
	A.M. Peak Hour		P.M. Peak Hour		A.M. Peak Hour		P.M. Peak Hour	
Intersection	**Delay[1]**	**LOS**	**Delay[1]**	**LOS**	**Delay[1]**	**LOS**	**Delay[1]**	**LOS**
1. Fairway Dr./SR-60 E/B Ramps	11.6	B	11.1	B	11.6	B	12.6	B
2. Fairway Dr./SR-60 W/B Ramps	19.8	B	23.4	C	20.4	B	27.9	C
3. Brea Canyon Cutoff Rd./Reedview Dr.	12.8	B	14.6	B	14.1	B	26.2	D
4. Brea Canyon Cutoff Rd./SR-57 N/B Ramps	12.3	B	12.9	B	12.3	B	14.3	B
5. Brea Canyon Cutoff Rd./SR-57 S/B Ramps	11.5	B	12.3	B	11.6	B	12.3	B
6. Pathfinder Rd./SR-57 N/B Ramps	19.5	B	23.3	C	20.2	C	24.1	C
7. Pathfinder Rd./SR-57 S/B Ramps	19.3	B	15.3	B	19.3	B	15.3	B

[1] Worst Case Direction Average Intersection Delay Per Vehicle (In Seconds)

As shown in Tables XV and XVI, with the addition of *Project* traffic to the existing plus ambient traffic that will exist in 2012, all study intersections will operate at acceptable LOS of "A" to "D" with the exceptions of Brea Canyon Cutoff Road at Colima Road (projected to operate at LOS "E" during the weekday A.M. and P.M. peak hours); Colima Road at Fullerton Road (projected to operate at, LOS "E" during the A.M. and P.M. peak hours); Colima Road at Nogales Street (projected to operate at LOS "F" during both the A.M. and P.M. peak hours); Fairway Drive and Valley Boulevard (projected to operate at, LOS "E" during the P.M. peak hour); and Golden Springs Drive at Brea Canyon Road (projected to operate at, LOS

"E" during the P.M. peak hour). The incremental increases in V/C ratios and changes in LOS between existing plus ambient and existing plus ambient plus *Project* scenarios under the ICU method and the HCM method are provided in Table XVII and Table XVIII, respectively.

TABLE XVII - COMPARISON OF EX.+AMBIENT & EX.+AMBIENT+PROJECT ICU-BASED V/C RATIO & INTERSECTION LOS

	A.M. PEAK HOUR		P.M. PEAK HOUR	
Intersection	**V/C Change**	**LOS**	**V/C Change**	**LOS**
1. Brea Canyon Cutoff Rd./Colima Rd.	**0.049**	**E**	**0.060**	**D to E**
2. Fairway Dr./SR-60 E/B Ramps	0.010	A	0.018	B to C
3. Fairway Dr./SR-60 W/B Ramps	0.006	A	0.034	C
4. Brea Canyon Cutoff Rd./Pathfinder Rd.	0.019	B	0.019	D
5. Brea Canyon Cutoff Rd./Reedview Dr.	0.040	A	0.174	A
6. Brea Canyon Cutoff Rd./SR-57 N/B Ramps	0.000	A	0.033	A
7. Brea Canyon Cutoff Rd./SR-57 S/B Ramps	0.001	A	0.002	A
8. Pathfinder Rd./SR-57 N/B Ramps	0.004	B	0.000	A
9. Pathfinder Rd./SR-57 S/B Ramps	0.000	B	0.000	A
10. Colima Rd./Fullerton Rd.	0.004	E	0.010	D to E
11. Colima Rd./Nogales St.	0.000	F	**0.016**	**F**
12. Fairway Dr./Valley Blvd.	0.007	B	**0.024**	**D**
13. Golden Springs Dr./Lemon Ave.*	0.004	C	0.004	C
14. Golden Springs Dr./Brea Canyon Rd.*	0.001	A	0.002	E
15. Brea Canyon Rd./Diamond Bar Blvd.*	0.002	A	0.002	C
16. Pathfinder Rd./Brea Canyon Rd.*	0.000	A	0.004	B
17. Pathfinder Rd./Fern Hollow Dr.*	0.000	D	0.000	B
18. Fairway Dr./Walnut Dr.*	0.008	A	0.014	A to B
19. Brea Canyon Cutoff Rd./Fallow Field Dr.*	0.000	A	0.009	A

Denotes Intersection Not Required to be Analyzed by County's Memorandum of Understanding
Boldface Denotes V/C Exceeds "Significant Impact" Threshold for Given LOS (See Table IV)

TABLE XVIII - CHANGES BETWEEN EX.+AMBIENT & EX.+AMBIENT+PROJECT HCM-BASED INTERSECTION LOS

	A.M. PEAK HOUR		P.M. PEAK HOUR	
Intersection	**Delay (Sec.)**	**LOS**	**Delay (Sec.)**	**LOS**
1. Fairway Dr./SR-60 E/B Ramps	0.0	B	0.5	B
2. Fairway Dr./SR-60 W/B Ramps	0.6	B to C	4.5	C
3. Brea Canyon Cutoff Rd./Reedview Dr.	**1.3**	**B**	**11.6**	**B to D**
4. Brea Canyon Cutoff Rd./SR-57 N/B Ramps	0.0	B	1.4	B
5. Brea Canyon Cutoff Rd./SR-57 S/B Ramps	0.1	B	0.0	B
6. Pathfinder Rd./SR-57 N/B Ramps	0.7	C	0.8	C
7. Pathfinder Rd./SR-57 S/B Ramps	0.0	B	0.0	B

Boldface Denotes Change in LOS

As shown in Table XVII, with the addition of *Project* traffic to the existing plus ambient traffic, the V/C changes that are projected to occur at three study intersections exceed the threshold limits established by the County. Specifically:

1) the intersection of Brea Canyon Cutoff Road and Colima Road during the A.M. peak hour experiences a V/C increase greater than the 0.01 threshold at LOS "E" and during the P.M. peak hour experiences a V/C increase greater than the 0.02 threshold at LOS "D";

2) the intersection of Colima Road and Nogales Street experiences V/C increases greater than the 0.01 threshold during the P.M. peak hour; and

3) the intersection of Fairway Drive and Valley Boulevard experiences V/C increases greater than the 0.02 at LOS "D" threshold during the P.M. peak hour.

As shown in Table XVIII, under the HCM methodology, all six freeway interchange intersections and the unsignalized intersection of Reedview Drive/*Project* driveway at Brea Canyon Cutoff Road will operate at acceptable LOS of "D" or better during both the A.M. and P.M. peak hours when *Project* traffic is added to the existing plus ambient traffic. However, the LOS at Brea Canyon Cutoff Road and Reedview Drive will decrease from "B" to "D."

Mitigation Measures for Existing+Ambient+Project

The following mitigation improvements for the three intersections significantly impacted by increased traffic generated by the *Project* include the addition of traffic lanes and possible street widening within existing rights of way:

1) At the intersection of Brea Canyon Cutoff Road and Colima Road, an additional southbound through lane will reduce the V/C down to a level of less than significant. This improvement can be accomplished by striping changes, but may require reconstructing a portion of the existing raised median by 2 feet to the east or reducing the width by 2 feet for lane widths greater than 11 feet (see Figure 37).

2) At the intersection of Colima Road and Nogales Street, the addition of a separate northbound right turn lane will reduce the V/C to a level of less than significant. This improvement can be made by striping changes within the existing rights of way (see Figure 38).

3) At the intersection of Fairway Drive and Valley Boulevard, the addition of a southbound through lane will reduce the V/C down to a level of less than significant. This improvement can be accomplished by striping changes to the north leg and the installation of new traffic loops in each lane (see Figure 39) within the 40-foot curb to curb width of the street, but may require 2 to 4 feet of roadway widening within the existing 60-foot right of way to accommodate lane widths greater than 10 feet.

Table XIX provides a comparison between existing plus ambient plus project traffic and existing plus ambient plus mitigated project traffic (i.e., with implementation of mitigation improvements) for those intersections significantly impacted by increased traffic generated by the *Project*.

TABLE XIX – EX.+AMBIENT+PROJECT & EX.+AMBIENT +MITIGATED PROJECT ICU-BASED INTERSECTION LOS

	EX.+AMB.+PROJECT				EX.+AMB.+MITIGATED PROJECT			
	A.M. Peak Hour		P.M. Peak Hour		A.M. Peak Hour		P.M. Peak Hour	
Intersection	**ICU**	**LOS**	**ICU**	**LOS**	**ICU**	**LOS**	**ICU**	**LOS**
1. Brea Canyon Cutoff Rd./Colima Rd.	0.993	E	0.930	E	0.911	E	0.877	D
11. Colima Rd./Nogales St.	1.152	F	1.028	F	1.152	F	0.984	E
12. Fairway Dr./Valley Blvd.	0.652	B	0.878	D	0.591	A	0.850	D

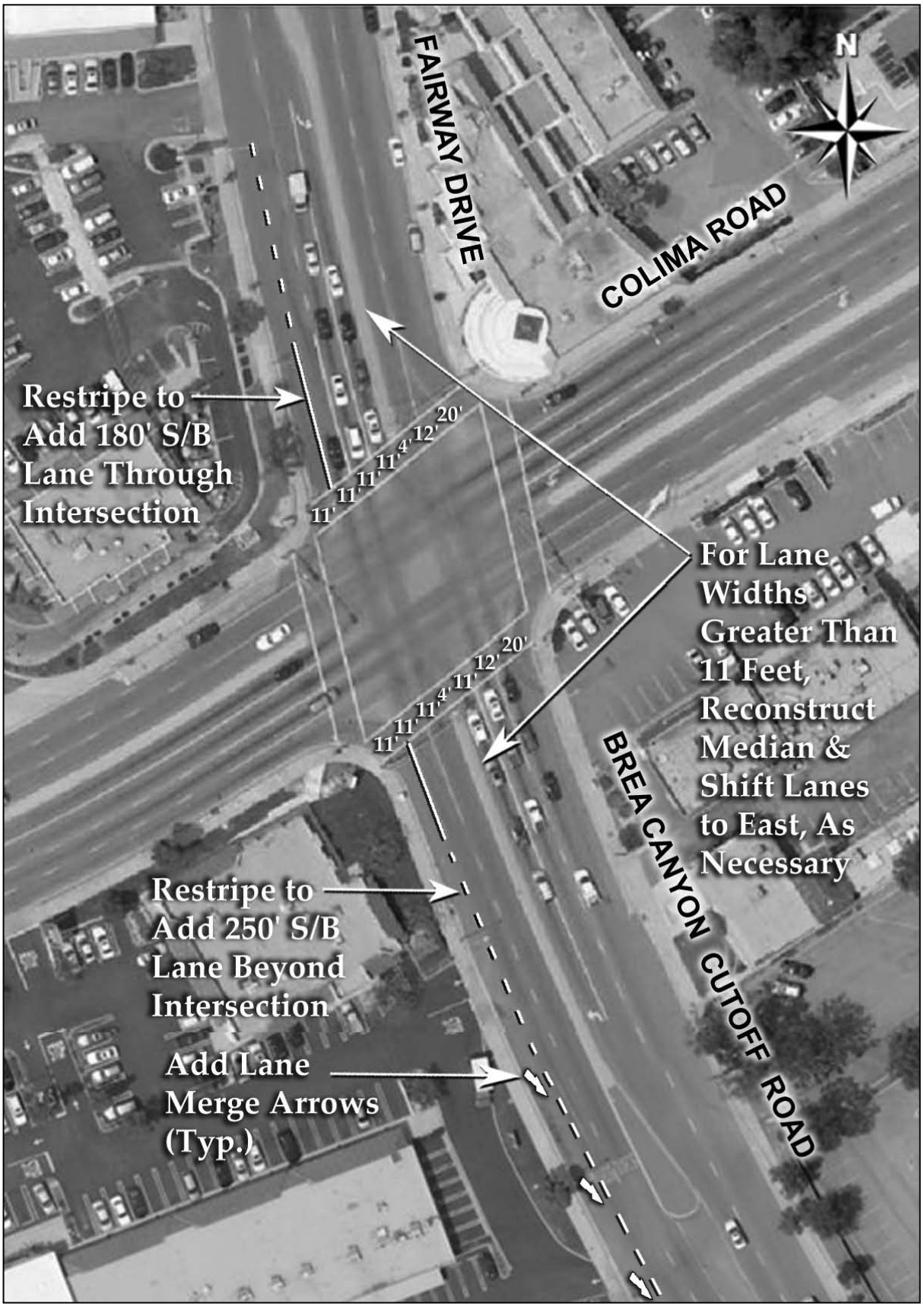

Figure 37 – Mitigation Improvements at Brea Canyon Cutoff Road & Colima Road

Figure 38 – Mitigation Improvements at Colima Road & Nogales Street

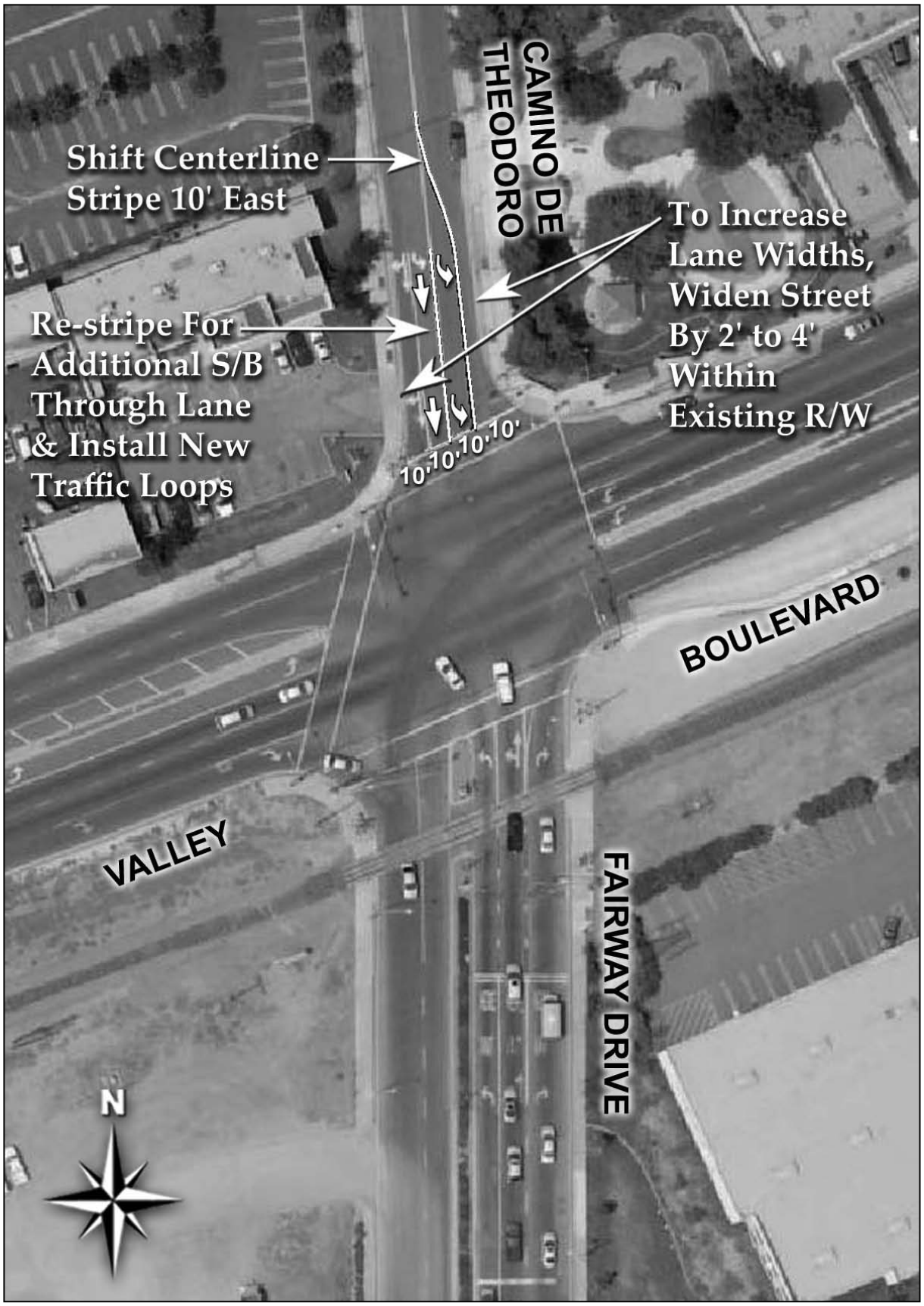

Figure 39 – Mitigation Improvements at Fairway Drive & Valley Boulevard

The incremental changes in V/C ratios and LOS resulting from the implementation of the above mitigation improvements are summarized in Table XX.

TABLE XX – COMPARISON OF EX.+AMBIENT+PROJECT & EX.+AMBIENT+ MITIGATED PROJECT ICU-BASED V/C RATIO & LOS

	A.M. PEAK HOUR		P.M. PEAK HOUR	
Intersection	**V/C Change**	**LOS**	**V/C Change**	**LOS**
1. Brea Canyon Cutoff Rd./Colima Rd.	-0.082	E	-0.053	D
11. Colima Rd./Nogales St.	-0.000	F	-0.044	E
12. Fairway Dr./Valley Blvd.	-0.061	B to A	-0.028	D

As noted in Table XX, with mitigation improvements, potential traffic impacts at all three intersections will not only be reduced to less than significant, but the V/C ratios will actually be improved over the existing plus ambient growth conditions.

Figure 40 illustrates the lane configurations before and after mitigation improvements are implemented at each of the impacted intersections.

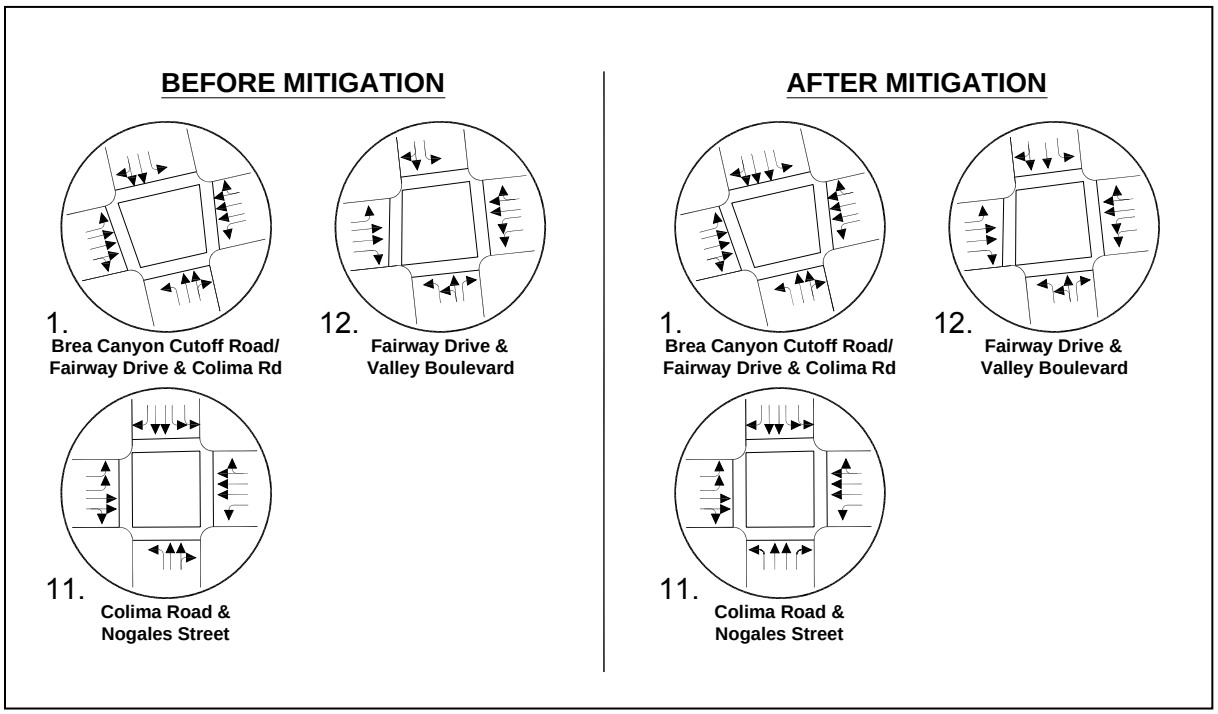

Figure 40 – Existing+Ambient+Project Intersections Before & After Mitigation

Existing+Ambient+Project+Related Projects ADT & Roadway Segment LOS

Cumulative impacts refer to the combined effects of traffic generated by related projects that are committed or known to be proposed for development within a defined study area. The County's list of related projects will generate varying amounts of additional traffic (see Table VI). While traffic impacts associated with each project may not be individually significant,

cumulatively, they can be significant, or have the potential of compounding or increasing the effects of traffic impacts associated with the *Project* in the target build-out year 2012. Table XXI summarizes the roadway segment V/C ratio and LOS under the existing plus ambient plus *Project* plus related projects traffic scenario for the weekday A.M. and P.M. peak hours of traffic. When traffic generated by the related projects is added to existing plus ambient plus *Project* traffic, the V/C ratios for roadway segments are expected to increases, but the LOS are projected to remain at an acceptable "D" or better.

TABLE XXI – EX.+AMBIENT+PROJECT+RELATED PROJECTS ROADWAY SEGMENT LOS

	A.M. Peak Hour						P.M. Peak Hour					
	Northbound			Southbound			Northbound			Southbound		
Roadway Segment	Count[1]	V/C[2]	LOS	Count	V/C	LOS	Count	V/C	LOS	Count	V/C	LOS
Brea Canyon Cutoff Rd. s/o Colima[3]	875	0.583	A	711	0.474	A	1,047	0.698	B	1,214	0.809	D
Brea Canyon Cutoff Rd. s/o Pathfinder[3]	603	0.402	A	950	0.633	B	1,067	0.711	C	871	0.580	A
Brea Canyon Cutoff Rd. n/o Pathfinder[3]	583	0.388	A	645	0.430	A	917	0.611	B	875	0.583	A
Fairway Dr. n/o Colima Ave.[4]	983	0.307	A	647	0.202	A	929	0.290	A	1,408	0.490	A
Fairway Dr. n/o SR-60 Ramps[4]	1,276	0.398	A	825	0.257	A	1,170	0.365	A	1,567	0.489	A
*Colima between Nogales & Fairway[5]	782	0.162	A	817	0.167	A	1,188	0.247	A	1,260	0.262	A

Notes: Colima Between Nogales/Fairway Directional Data is Eastbound/Westbound
Capacity Per Lane Per Hour = 1,600 Vehicles, Except for Secondary Limited Highway = 750 Vehicles, per County of Los Angeles Traffic & Lighting Division of Public Works Dept.

[1] Peak Hour Directional Traffic Count on Roadway Segment
[2] V/C Ratio = Volume/Capacity Ratio
[3] Capacity Per Lane Per Hour = 750 2 Lanes = 1,500 Per Direction
[4] Capacity Per Lane Per Hour = 1,600; 2 Lanes = 3,200 Per Direction
[5] Capacity Per Lane Per Hour = 1,600; 3 Lanes = 4,800 Per Direction

Existing+Ambient+Project+Related Projects Intersection LOS Comparisons

Cumulative traffic impacts at study intersections were analyzed by adding traffic generated by related projects during the weekday A.M. and P.M. peak hours to the existing plus ambient plus *Project* traffic scenario in the target build-out year 2012. Traffic projected to be generated from the *Site D Specific Plan* development in the City of Diamond Bar was added to 10 affected study intersections. For overlapping study intersections that were also analyzed in the Stadium Supplemental Environmental Impact Report (SEIR) for the *Los Angeles Stadium* project, the 2011 *Stadium* plus *Stadium* related projects traffic from SEIR were adjusted by adding one additional year of ambient traffic growth in order to reflect 2012 traffic conditions. The annual ambient traffic growth rate assumed in the SEIR is 1%, which is greater (and more conservative) than the annual ambient traffic growth rate of 0.78% assumed for this study. The resulting existing plus ambient plus *Project* plus related projects (including the *Stadium* plus *Stadium* related projects) traffic turn movements during the weekday A.M. and P.M. peak hours are depicted in Figures 41 and 42, respectively.

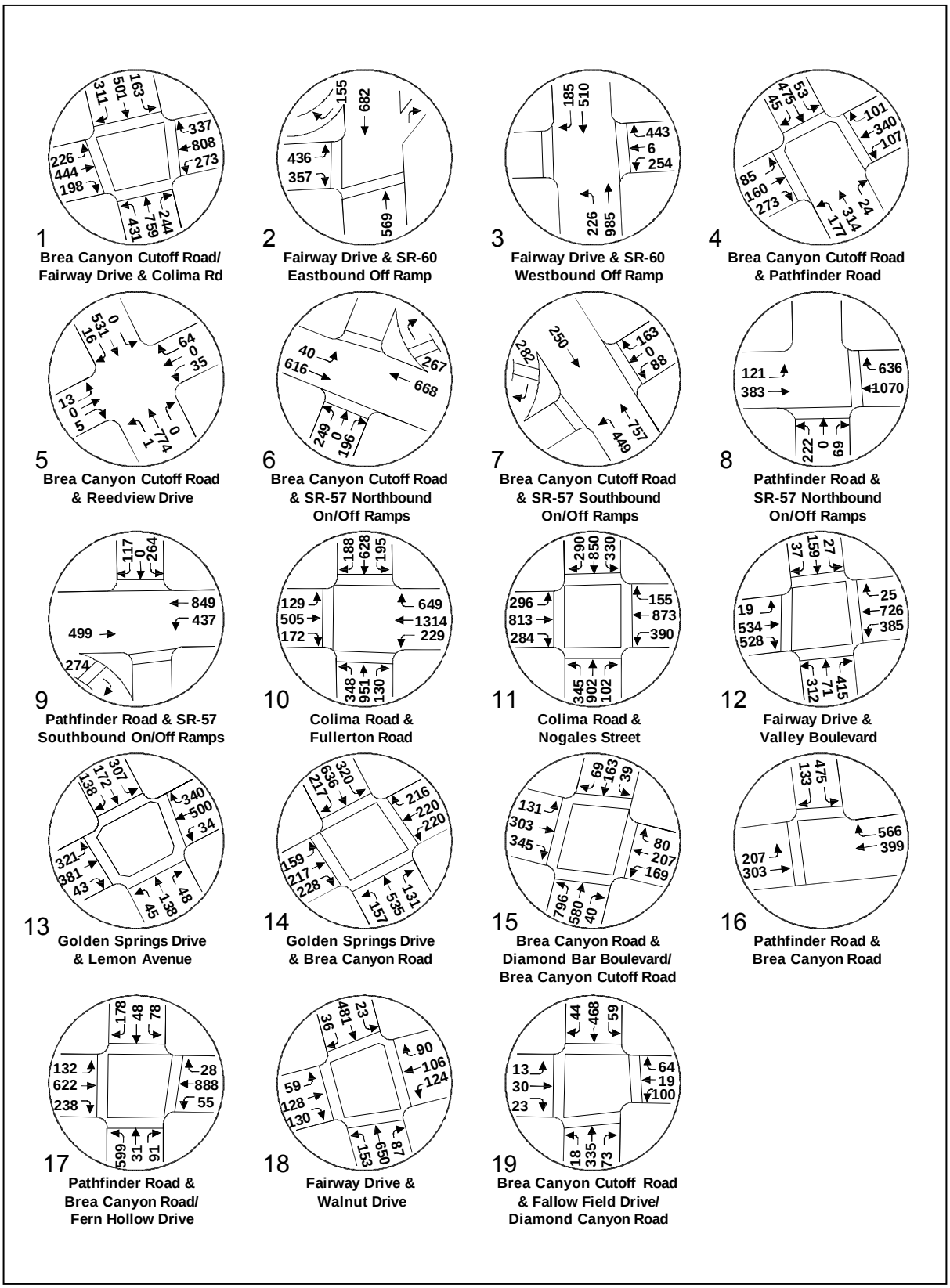

Figure 41 – Ex.+Ambient+Project+Related A.M. Peak Hour Intersection Traffic

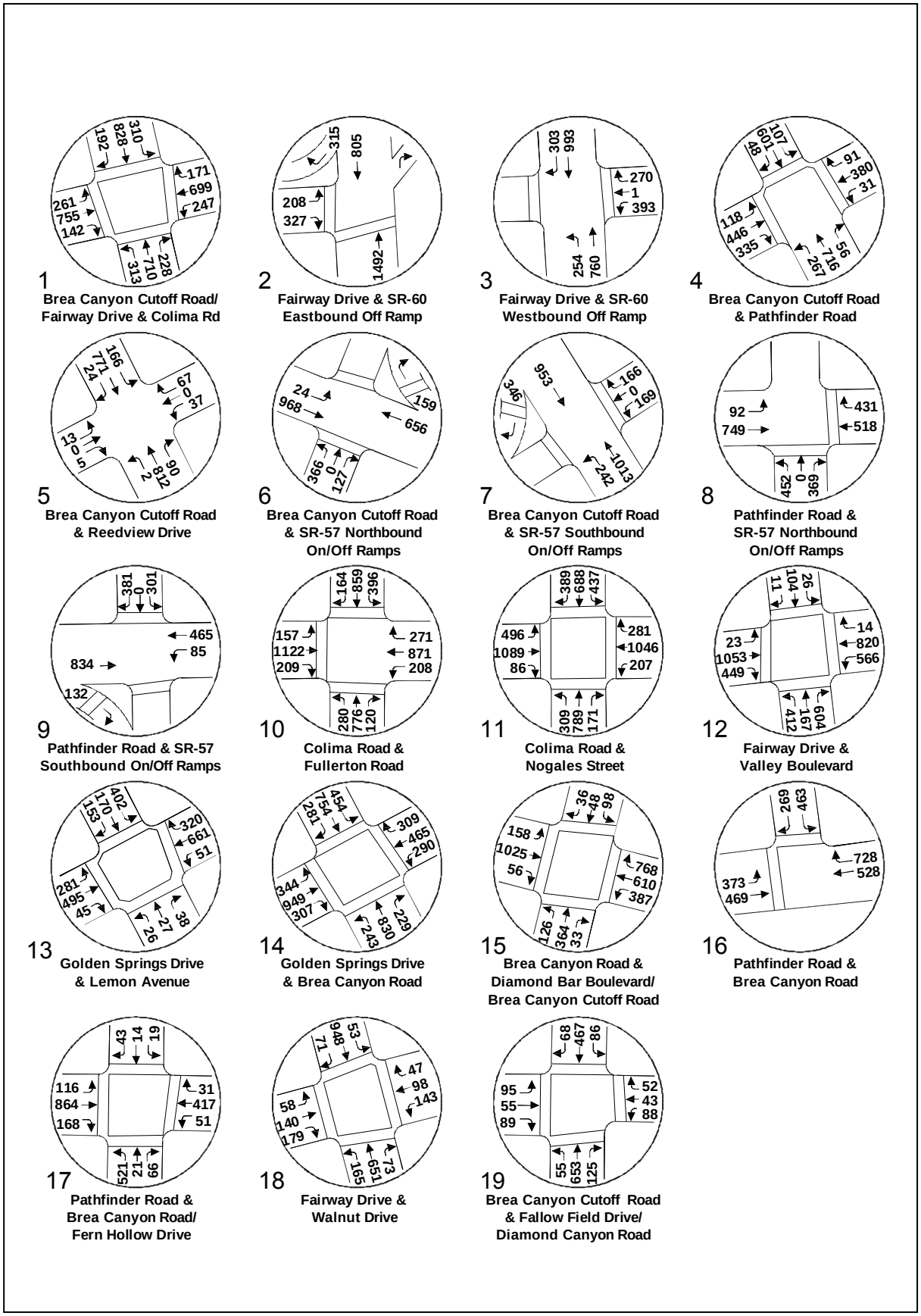

Figure 42 – Ex.+Ambient+Project+Related P.M. Peak Hour Intersection Traffic

Table XXII summarizes the A.M. and P.M. peak hour LOS for the existing plus ambient plus related projects traffic scenario, with and without the *Project*, under the ICU method, while Table XXIII provides comparisons for intersections analyzed under the HCM method.

TABLE XXII – EX.+AMBIENT+RELATED WITH & WITHOUT PROJECT ICU-BASED INTERSECTION LOS

	EX.+AMBIENT+RELATED WITHOUT PROJECT				EX.+AMBIENT+RELATED WITH PROJECT			
	A.M. Peak Hour		P.M. Peak Hour		A.M. Peak Hour		P.M. Peak Hour	
Intersection	**ICU**	**LOS**	**ICU**	**LOS**	**ICU**	**LOS**	**ICU**	**LOS**
1. Brea Canyon Cutoff Rd./Colima Rd.	**0.984**	**E**	**0.901**	**E**	**1.003**	**F**	**0.959**	**E**
2. Fairway Dr./SR-60 E/B Ramps	0.544	A	0.720	C	0.553	A	0.752	C
3. Fairway Dr./SR-60 W/B Ramps	0.557	A	0.781	C	0.563	A	0.815	D
4. Brea Canyon Cutoff Rd./Pathfinder Rd.	0.703	C	0.839	D	0.738	C	**0.936**	**E**
5. Brea Canyon Cutoff Rd./Reedview Dr.	0.344	A	0.347	B	0.390	A	0.536	A
6. Brea Canyon Cutoff Rd./SR-57 N/B Ramps	0.460	A	0.517	A	0.489	A	0.549	A
7. Brea Canyon Cutoff Rd./SR-57 S/B Ramps	0.472	A	0.528	A	0.514	A	0.655	B
8. Pathfinder Rd./SR-57 N/B Ramps	0.634	B	0.599	A	0.649	B	0.602	B
9. Pathfinder Rd./SR-57 S/B Ramps	0.692	B	0.597	A	0.694	B	0.602	B
10. Colima Rd./Fullerton Rd.	**0.991**	**E**	**0.914**	**E**	**0.995**	**E**	**0.925**	**E**
11. Colima Rd./Nogales St.	**1.168**	**F**	**1.032**	**F**	**1.168**	**F**	**1.048**	**F**
12. Fairway Dr./Valley Blvd.	0.649	B	0.874	D	0.656	B	0.889	D
13. Golden Springs Dr./Lemon Ave.	0.736	C	0.718	C	0.739	C	0.721	C
14. Golden Springs Dr./Brea Canyon Rd.	0.565	A	**0.984**	**E**	0.563	A	**0.986**	**E**
15. Brea Canyon Rd./Diamond Bar Blvd.	0.626	B	0.690	B	0.661	B	0.763	C
16. Pathfinder Rd./Brea Canyon Rd.	0.517	A	0.649	B	0.519	A	0.659	B
17. Pathfinder Rd./Fern Hollow Dr.	0.875	D	0.632	B	0.878	D	0.638	B
18. Walnut Drive North/Fairway Dr.	0.538	A	0.610	B	0.545	A	0.623	B
19. Brea Canyon Cutoff Rd./Fallow Field Dr.	0.359	A	0.505	A	0.360	A	0.542	A

Denotes Intersection Not Required to be Analyzed by County's Memorandum of Understanding
Boldface Denotes Unacceptable Level of Service

TABLE XXIII - EX.+AMBIENT+RELATED WITH & WITHOUT PROJECT HCM-BASED INTERSECTION LOS

	EX.+AMBIENT+RELATED WITHOUT PROJECT				EX.+AMBIENT+RELATED WITH PROJECT			
	A.M. Peak Hour		P.M. Peak Hour		A.M. Peak Hour		P.M. Peak Hour	
Intersection	**Delay[1]**	**LOS**	**Delay[1]**	**LOS**	**Delay[1]**	**LOS**	**Delay[1]**	**LOS**
1. Fairway Dr./SR-60 E/B Ramps	11.7	B	13.2	B	11.7	B	15.0	B
2. Fairway Dr./SR-60 W/B Ramps	20.0	B	26.4	C	20.5	C	31.5	C
3. Brea Canyon Cutoff Rd./Reedview Dr.	12.8	B	14.6	B	14.1	B	26.2	C
4. Brea Canyon Cutoff Rd./SR-57 N/B Ramps	12.3	B	12.9	B	12.3	B	14.4	B
5. Brea Canyon Cutoff Rd./SR-57 S/B Ramps	11.6	B	12.3	B	11.7	B	12.3	B
6. Pathfinder Rd./SR-57 N/B Ramps	19.5	B	23.6	C	19.7	C	24.6	C
7. Pathfinder Rd./SR-57 S/B Ramps	19.4	B	15.4	B	19.5	B	15.4	B

[1] Worst Case Direction Average Intersection Delay Per Vehicle (In Seconds)

As shown in Tables XXII and Table XXIII, with the addition of traffic from related projects with and without *Project*-generated traffic, all study intersections will operate at acceptable LOS of "A" to "D" with the exceptions of Brea Canyon Cutoff Road at Colima Road (projected to operate at LOS "F" and "E" during the weekday A.M. and P.M. peak hours, respectively);

Brea Canyon Cutoff Road at Pathfinder Road (projected to operate at LOS "E" during the weekday P.M. peak hour); Colima Road at Fullerton Road (projected to operate at, LOS "E" during the weekday A.M. and P.M. peak hours); Colima Road at Nogales Street (projected to operate at, LOS "F" during the weekday A.M. and P.M. peak hours); and Golden Springs Drive at Brea Canyon Road (projected to operate at, LOS "E" during the weekday P.M. peak hour). The incremental increases in V/C ratios (or increases in intersection delay), and changes in LOS between existing plus ambient plus *Project* and existing plus ambient plus *Project* plus related projects under the ICU and HCM methods are provided in Table XXIV and Table XXV, respectively.

TABLE XXIV - COMPARISON OF EX.+AMBIENT+PROJECT & EX.+AMBIENT+PROJECT+RELATED ICU-BASED V/C RATIO & LOS

	A.M. PEAK HOUR		P.M. PEAK HOUR	
Intersection	**V/C Change**	**LOS**	**V/C Change**	**LOS**
1. Brea Canyon Cutoff Rd./Colima Rd.	0.004	E	**0.016**	**E**
2. Fairway Dr./SR-60 E/B Ramps	0.020	B	0.030	B to C
3. Fairway Dr./SR-60 W/B Ramps	0.003	A	0.028	C to D
4. Brea Canyon Cutoff Rd./Pathfinder Rd.	0.000	B	0.000	D
5. Brea Canyon Cutoff Rd./Reedview Dr.	0.000	A	0.000	A
6. Brea Canyon Cutoff Rd./SR-57 N/B Ramps	0.000	A	0.001	A
7. Brea Canyon Cutoff Rd./SR-57 S/B Ramps	0.007	A	0.000	A
8. Pathfinder Rd./SR-57 N/B Ramps	0.000	B	0.007	A to B
9. Pathfinder Rd./SR-57 S/B Ramps	0.003	B	0.007	A
10. Colima Rd./Fullerton Rd.	0.003	E	**0.014**	**E**
11. Colima Rd./Nogales St.	**0.016**	**F**	**0.020**	**F**
12. Fairway Dr./Valley Blvd.	0.004	B	0.015	D
13. Golden Springs Dr./Lemon Ave.*	0.006	C	0.039	C
14. Golden Springs Dr./Brea Canyon Rd.*	0.024	A	**0.020**	**E**
15. Brea Canyon Rd./Diamond Bar Blvd.*	0.003	B	0.019	B
16. Pathfinder Rd./Brea Canyon Rd.*	0.009	D	0.007	C
17. Pathfinder Rd./Fern Hollow Dr.*	0.001	D	0.006	B
18. Fairway Dr./Walnut Dr.*	0.012	A	0.012	B
19. Brea Canyon Cutoff Rd./Fallow Field Dr.*	0.000	A	0.001	A

Denotes Intersection Not Required to be Analyzed by County's Memorandum of Understanding
Boldface Denotes V/C Exceeds "Significant Impact" Threshold for Given LOS (See Table IV)

TABLE XXV - COMPARISON OF EX.+AMBIENT+PROJECT & EX.+AMBIENT+PROJECT+RELATED HCM-BASED LOS

	A.M. PEAK HOUR		P.M. PEAK HOUR	
Intersection	**Delay (Sec.)**	**LOS**	**Delay (Sec.)**	**LOS**
1. Fairway Dr./SR-60 E/B Ramps	0.1	B	2.4	B
2. Fairway Dr./SR-60 W/B Ramps	0.1	C	3.4	C
3. Brea Canyon Cutoff Rd./Reedview Dr.	**1.3**	**B**	**11.6**	**B to D**
4. Brea Canyon Cutoff Rd./SR-57 N/B Ramps	0.0	B	0.1	B
5. Brea Canyon Cutoff Rd./SR-57 S/B Ramps	0.1	B	0.0	B
6. Pathfinder Rd./SR-57 N/B Ramps	0.0	B	0.5	B
7. Pathfinder Rd./SR-57 S/B Ramps	0.2	B	0.1	B

Boldface Denotes Change in LOS

As shown in Table XXIV, with the addition of related projects to the existing plus ambient plus *Project* traffic scenario, the V/C changes that are projected to occur at four study intersections exceed the threshold limits established by the County. Specifically: 1) the intersection of Brea Canyon Cutoff Road at Colima Road during the P.M. peak hour experiences a V/C increase greater than the 0.01 threshold at LOS "E/F" (although the LOS remains "E"); 2) the intersection of Colima Road and Fullerton Road during the P.M. peak hour experiences a V/C increase greater than the 0.01 threshold at LOS "E/F" (although the LOS remains "E"); 3) the intersection of Colima Road and Nogales Street experiences V/C increases greater than the 0.01 threshold during both the A.M. and P.M. peak hours, and the LOS during P.M. peak hour deteriorates from "E' to "F"; and 4) the intersection of Golden Springs Road and Brea Canyon Road experiences a V/C increase greater than the 0.01 threshold during the P.M. peak hour (although the LOS remains "E").

In order to determine whether the proposed *Project* will have a significant impacts under the assumptions of a 2012 baseline scenario that includes existing plus ambient plus related projects traffic, the incremental increases in V/C ratios (or increases in intersection delay), and changes in LOS between existing plus ambient plus related projects (without *Project*) and existing plus ambient plus related projects with *Project* were calculated. The results are provided in Table XXVI and Table XXVII, under the ICU and HCM method, respectively.

TABLE XXVI - COMPARISON OF EX.+AMBIENT+RELATED PROJECTS WITH & WITHOUT PROJECT ICU-BASED V/C RATIO & LOS

	A.M. PEAK HOUR		P.M. PEAK HOUR	
Intersection	**V/C Change**	**LOS**	**V/C Change**	**LOS**
1. Brea Canyon Cutoff Rd./Colima Rd.	**0.012**	**F**	**0.045**	**E**
2. Fairway Dr./SR-60 E/B Ramps	0.011	B	0.020	C
3. Fairway Dr./SR-60 W/B Ramps	0.006	A	0.034	C to D
4. Brea Canyon Cutoff Rd./Pathfinder Rd.	0.019	B	**0.024**	**D**
5. Brea Canyon Cutoff Rd./Reedview Dr.	0.040	A	0.174	A
6. Brea Canyon Cutoff Rd./SR-57 N/B Ramps	0.012	A	0.032	A
7. Brea Canyon Cutoff Rd./SR-57 S/B Ramps	0.000	A	0.000	A
8. Pathfinder Rd./SR-57 N/B Ramps	0.003	B	0.004	B
9. Pathfinder Rd./SR-57 S/B Ramps	0.000	B	0.000	A
10. Colima Rd./Fullerton Rd.	0.004	E	**0.011**	**E**
11. Colima Rd./Nogales St.	0.000	F	**0.016**	**E to F**
12. Fairway Dr./Valley Blvd.	0.007	B	0.015	D
13. Golden Springs Dr./Lemon Ave.*	0.000	C	0.004	C
14. Golden Springs Dr./Brea Canyon Rd.*	0.002	A	0.002	E
15. Brea Canyon Rd./Diamond Bar Blvd.*	0.001	A	0.002	B
16. Pathfinder Rd./Brea Canyon Rd.*	0.000	D	0.004	C
17. Pathfinder Rd./Fern Hollow Dr.*	0.000	D	0.000	B
18. Fairway Dr./Walnut Dr.*	0.007	A	0.013	B
19. Brea Canyon Cutoff Rd./Fallow Field Dr.*	0.000	A	0.018	A

Denotes Intersection Not Required to be Analyzed by County's Memorandum of Understanding
Boldface Denotes V/C Exceeds "Significant Impact" Threshold for Given LOS (See Table IV)

TABLE XXVII - COMPARISON OF EX.+AMBIENT+RELATED & EX.+AMBIENT+RELATED+PROJECT HCM-BASED LOS

	A.M. PEAK HOUR		P.M. PEAK HOUR	
Intersection	**Delay (Sec.)**	**LOS**	**Delay (Sec.)**	**LOS**
1. Fairway Dr./SR-60 E/B Ramps	0.0	B	1.8	B
2. Fairway Dr./SR-60 W/B Ramps	0.5	B	5.1	C
3. Brea Canyon Cutoff Rd./Reedview Dr.	**1.3**	**B**	**11.6**	**B to D**
4. Brea Canyon Cutoff Rd./SR-57 N/B Ramps	0.0	B	0.4	B
5. Brea Canyon Cutoff Rd./SR-57 S/B Ramps	0.1	B	0.0	B
6. Pathfinder Rd./SR-57 N/B Ramps	0.2	B	1.0	B
7. Pathfinder Rd./SR-57 S/B Ramps	0.1	B	0.0	B

Boldface Denotes Change in LOS

As shown in Table XXVI, with the addition of *Project* traffic to the existing plus ambient plus related projects baseline traffic scenario, the V/C changes that are projected to occur at four study intersections exceeds the threshold limits established by the County. Specifically: 1) the intersection of Brea Canyon Cutoff Road and Colima Road experiences a V/C increase greater than the 0.01 threshold at LOS "E" during the A.M. and P.M. peak hours; 2) Brea Canyon Cutoff Road and Pathfinder Road during the P.M. peak hour experiences a V/C increase greater than the 0.02 threshold (although the LOS remains "D"); 3) Colima Road and Fullerton Road experiences a V/C increase greater than the 0.01 threshold during the P.M. peak hour (although the LOS remains "E"); and 4) Colima Road and Nogales Street experiences a V/C increase greater than the 0.01 threshold during the P.M. peak hour, and the LOS during P.M. peak hour deteriorates from "E' to "F."

Mitigation Measures for Existing+Ambient+Project+Related Projects

All five intersections significantly impacted by increases in traffic generated by the addition of *Project* traffic to existing plus ambient plus related projects baseline traffic, can be mitigated to levels of less than significant with the following improvements:

1) As previously identified, at the intersection of Brea Canyon Cutoff Road and Colima Road the addition of a southbound through lane within existing right of way can be accomplished by striping changes, but may require reconstructing a portion of the existing raised median (see Figure 37).

2) At the intersection of Brea Canyon Cutoff Road and Pathfinder Road, re-striping the north leg to provide a second southbound through lane can be accomplished within existing right of way (see Figure 43).

3) At Colima Road and Fullerton Road, the addition of a separate northbound right turn lane on the south leg of the intersection will not require additional right of way (recently obtained by the County), but will require street widening (see Figure 44).

4) At the intersection of Colima Road and Nogales Street, in addition to the separate northbound right turn lane previously identified, a second northbound left will be required. This can be accomplished within the existing right of way by shifting all northbound approach lanes to the west to provide for dual left turn lanes (see Figure 45).

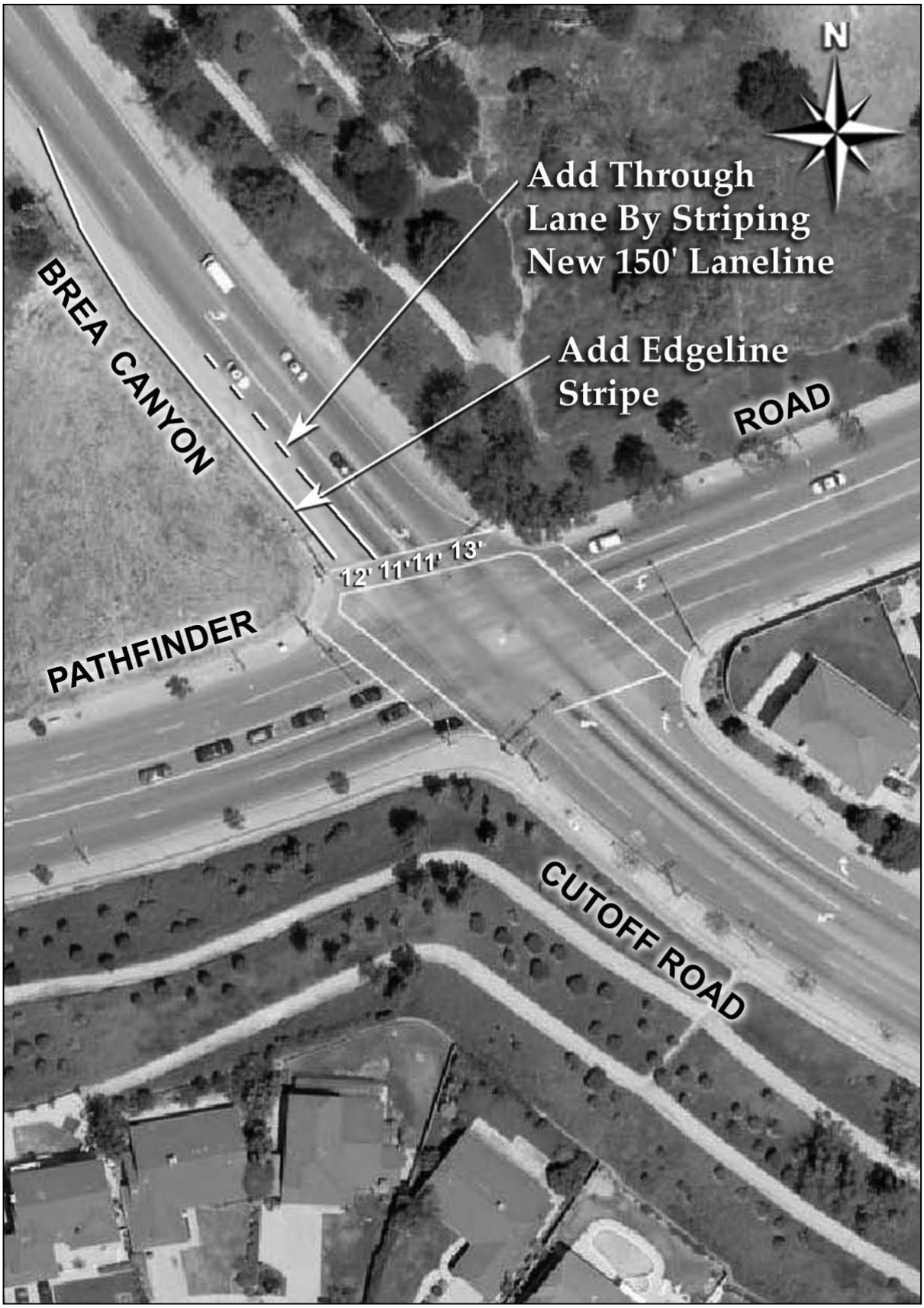

Figure 43 – Mitigation Improvements at Brea Canyon Cutoff Road & Pathfinder Road

Figure 44 – Mitigation Improvements at Colima Road & Fullerton Road

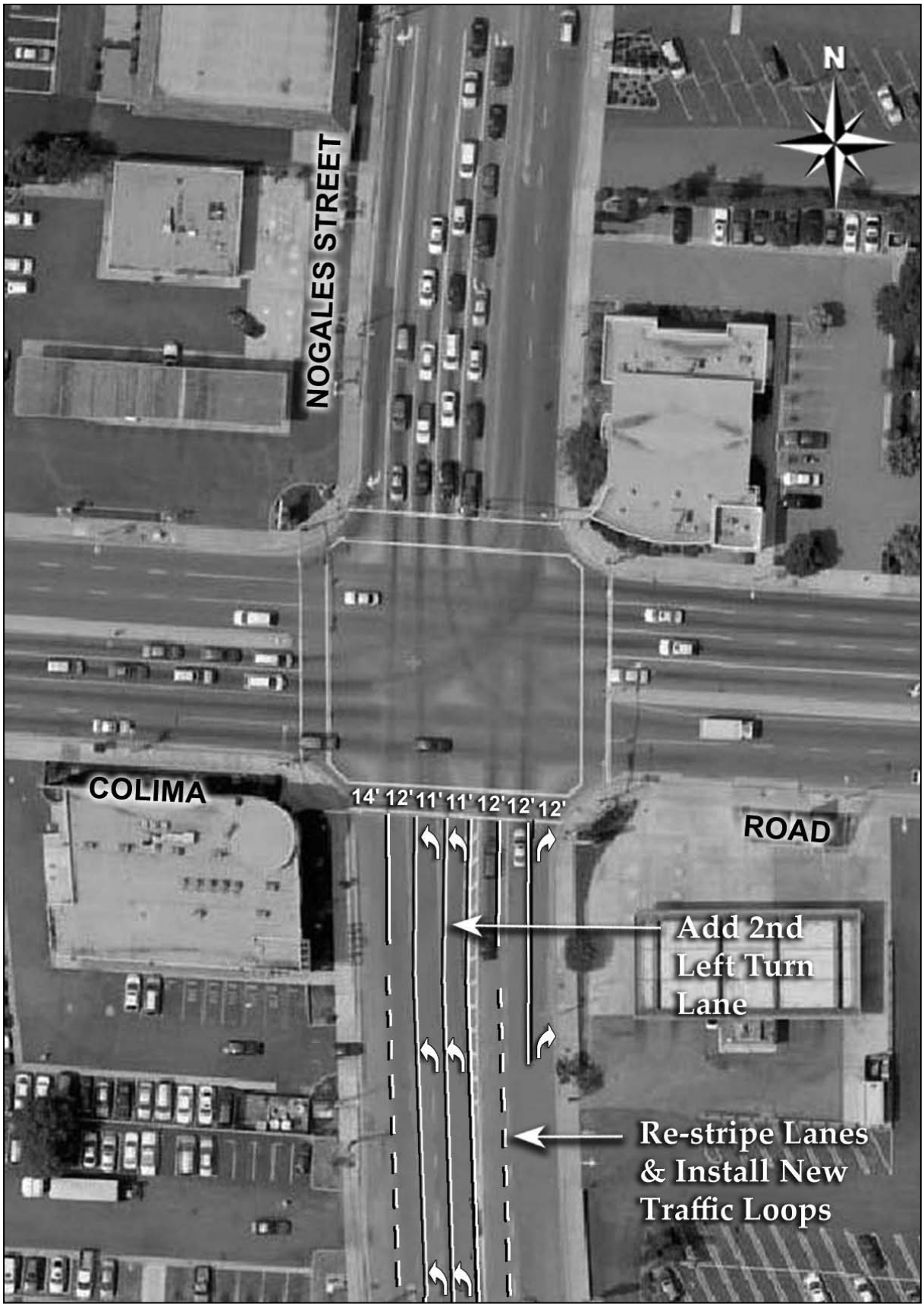

Figure 45 – Mitigation Improvements at Colima Road and Nogales Street

The mitigated incremental changes in V/C ratios and LOS are summarized in Table XXVIII, while Figure 46 illustrates the lane configurations before and after mitigation for the existing plus ambient plus *Project* plus related projects traffic scenario.

TABLE XXVIII – COMPARISON OF EX.+AMBIENT+RELATED+PROJECT & MITIGATED EX.+AMBIENT+RELATED+PROJECT ICU-BASED V/C RATIO & LOS

	A.M. PEAK HOUR		P.M. PEAK HOUR	
Intersection	**V/C Change**	**LOS**	**V/C Change**	**LOS**
1. Brea Canyon Cutoff Rd./Colima Rd.	-0.085	F to E	-0.028	E
4. Brea Canyon Cutoff Rd./Pathfinder Rd.	-0.163	C to A	-0.058	E to D
10. Colima Rd./Fullerton Rd.	-0.041	E	-0.001	E
11. Colima Rd./Nogales St.	-0.085	F	-0.053	F to E

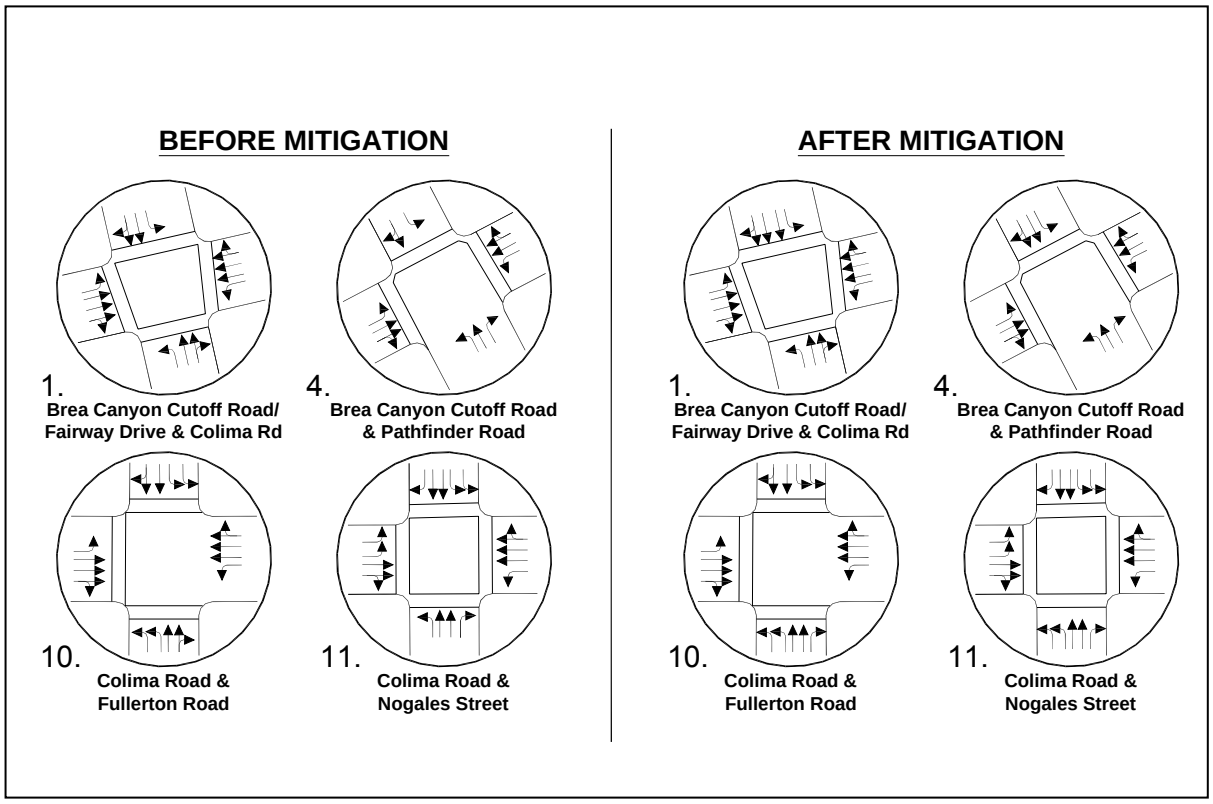

Figure 46 – Ex.+Amb.+Project+Related Projects Intersections Before & After Mitigation

Additional Comparisons of Cumulative Impacts

A comparison of existing plus ambient versus existing plus ambient plus *Project* plus related projects plus cumulative impacts are made in Table XXIX under the ICU method.

TABLE XXIX – EX.+AMBIENT & EX.+AMBIENT+ PROJECT+RELATED PROJECTS ICU-BASED INTERSECTION LOS

	EX.+AMBIENT				EX.+AMBIENT+RELATED PROJECTS WITH PROJECT			
	A.M. Peak Hour		P.M. Peak Hour		A.M. Peak Hour		P.M. Peak Hour	
Intersection	**ICU**	**LOS**	**ICU**	**LOS**	**ICU**	**LOS**	**ICU**	**LOS**
1. Brea Canyon Cutoff Rd./Colima Rd.	0.944	E	0.870	D	1.003	F	0.959	E
2. Fairway Dr./SR-60 E/B Ramps	0.524	A	0.690	B	0.553	A	0.752	C
3. Fairway Dr./SR-60 W/B Ramps	0.554	A	0.753	C	0.563	A	0.815	D
4. Brea Canyon Cutoff Rd./Pathfinder Rd.	0.703	C	0.875	D	0.738	C	0.936	E
5. Brea Canyon Cutoff Rd./Reedview Dr.	0.344	A	0.347	A	0.390	A	0.536	A
6. Brea Canyon Cutoff Rd./SR-57 N/B Ramps	0.472	A	0.515	A	0.489	A	0.549	A
7. Brea Canyon Cutoff Rd./SR-57 S/B Ramps	0.464	A	0.526	A	0.514	A	0.655	B
8. Pathfinder Rd./SR-57 N/B Ramps	0.638	B	0.596	A	0.649	B	0.602	B
9. Pathfinder Rd./SR-57 S/B Ramps	0.689	B	0.590	A	0.694	B	0.602	B
10. Colima Rd./Fullerton Rd.	0.988	E	0.901	D	0.995	E	0.925	E
11. Colima Rd./Nogales St.	1.152	F	1.012	F	1.168	F	1.048	F
12. Fairway Dr./Valley Blvd.	0.645	B	0.854	D	0.656	B	0.889	D
13. Golden Springs Dr./Lemon Ave.	0.730	C	0.708	C	0.739	C	0.721	C
14. Golden Springs Dr./Brea Canyon Rd.	0.542	A	0.964	E	0.563	A	0.986	E
15. Brea Canyon Rd./Diamond Bar Blvd.	0.622	B	0.671	B	0.661	B	0.763	C
16. Pathfinder Rd./Brea Canyon Rd.	0.508	A	0.642	B	0.519	A	0.659	B
17. Pathfinder Rd./Fern Hollow Dr.	0.874	D	0.626	B	0.878	D	0.638	B
18. Walnut Drive North/Fairway Dr.	0.525	A	0.597	A	0.545	A	0.623	B
19. Brea Canyon Cutoff Rd./Fallow Field Dr.	0.359	A	0.513	A	0.360	A	0.542	A

Denotes Intersection Not Required to be Analyzed by County's Memorandum of Understanding
Boldface Denotes Unacceptable Level of Service

VII. SITE TRAFFIC CONCERNS

Site traffic concerns, including proposed site access, internal circulation, and parking for the *Project*, were analyzed by superimposing the proposed *Project* site plan over the background of existing streets and surrounding land uses.

Site Access & Internal Circulation

A review of the site plan depicted in Figure 47 reveals an efficient internal circulation system, with convenient emergency access to all areas of the site and balanced distribution of parking provisions. A total of three driveways are proposed, with a main, centrally-located entrance driveway handling the bulk of ingress and egress traffic. However, the main driveway on Brea Canyon Cutoff Road, as currently depicted on the site plan, is not aligned with Reedview Drive. This design does not conform to the common traffic engineering practice of aligning opposing streets and driveways that are across from one another, in order to consolidate points of vehicular conflict and facilitate turn movements. Therefore, the site plan should be modified so that the main entrance to the *Project* site is aligned with Reedview Drive - forming the easterly "fourth leg" of the intersection. Due to amount of traffic anticipated to be generated by the proposed *Project*, this main entrance intersection (i.e., Brea Canyon Cutoff Road and Reedview Drive) may require traffic signalization (see *Traffic Signal Warrants* discussion below). Two secondary driveways into the *Project* site (one at each end of the frontage along Brea Canyon Cutoff Road) are needed to provide additional access and internal circulation. However, both secondary driveways should be restricted to

right turn in and out vehicular movements only. A large scale circulation plan is enclosed herewith depicting the proposed improvements along Brea Canyon Cutoff Road.

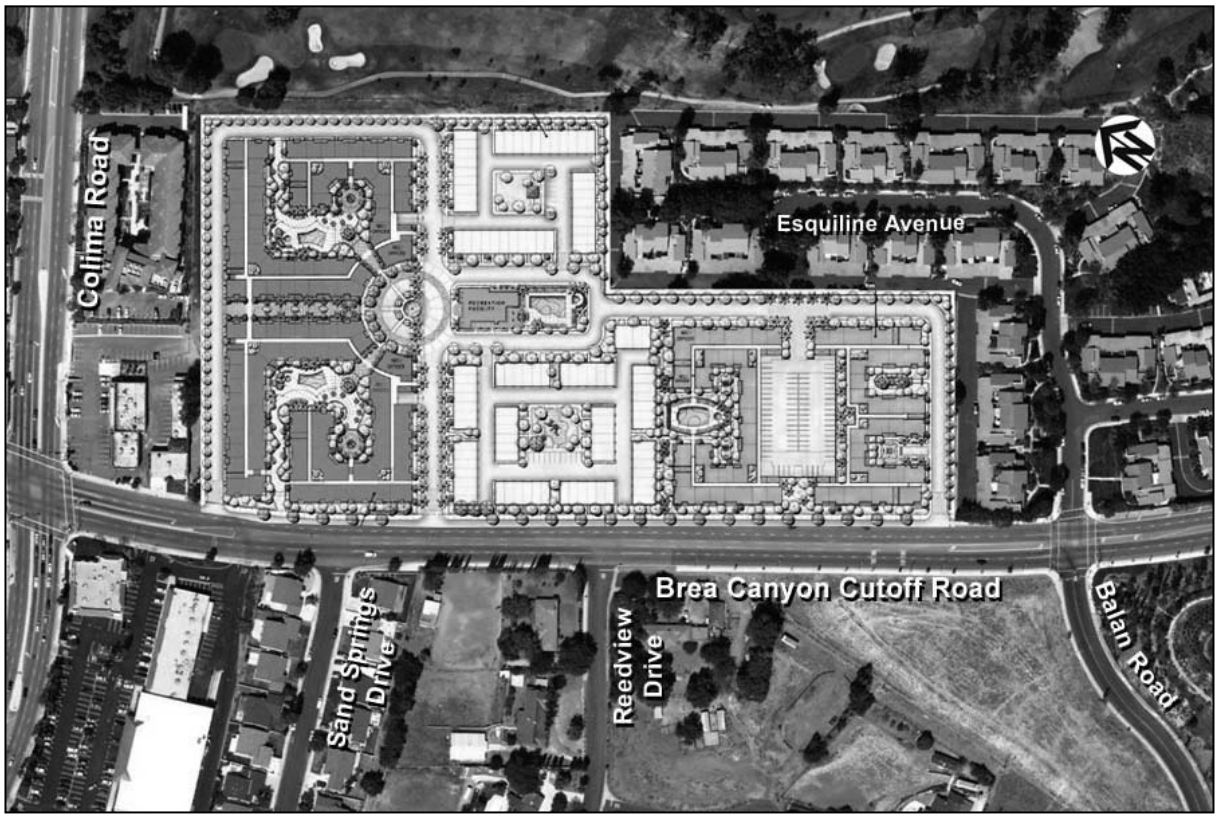

Figure 47 – Proposed Site Plan With Existing Streets

Transit Service

The proposed *Project* may generate a significant number of transit users. In fact, employees and residents of the *Project* will be encouraged the *Project* owner to use transit and ridesharing as an alternative to single-occupant, private vehicle commuting. Information on transit and ridesharing will be provided at the leasing office and periodically updated, as a service to residents. As streets and highways become more congested, and the cost of fuel continues to rise, more and more commuters will take to alternative modes of travel, including buses and trains. Fortunately, excellent public transit service is provided throughout the San Gabriel Valley by several agencies. The most prominent provider of transit service is Foothill Transit. Foothill Transit provides several east-west oriented bus routes, as well as destination-specific routes, in the vicinity of the *Project* site. Other public transportation providers include the Metropolitan Transportation Authority (MTA) and the Orange County Transportation Authority (OCTA). In addition to an express bus line that runs along the SR-60 freeway, MTA provides regional Metrolink rail service within the San Gabriel Valley corridor. The nearest Metrolink stop to the *Project* site is the City of Industry Metrolink Station, approximately 2 miles away. This station also features a large Park and Ride facility. OCTA provides express bus service along the SR-57 freeway for commuters into and out of Orange County. In addition to the Industry Metrolink Station, other Park and Ride facilities are strategically provided at interchanges along the SR-60 and SR-57 freeways (e.g., at Puente Hills Mall and at the Pathfinder Road interchange, respectively). These various transit

facilities and bus routes are depicted in Figure 48, along with popular destinations serviced by Foothill Transit. Unless otherwise noted, the route numbers identified in Figure 47 are those of Foothill Transit.

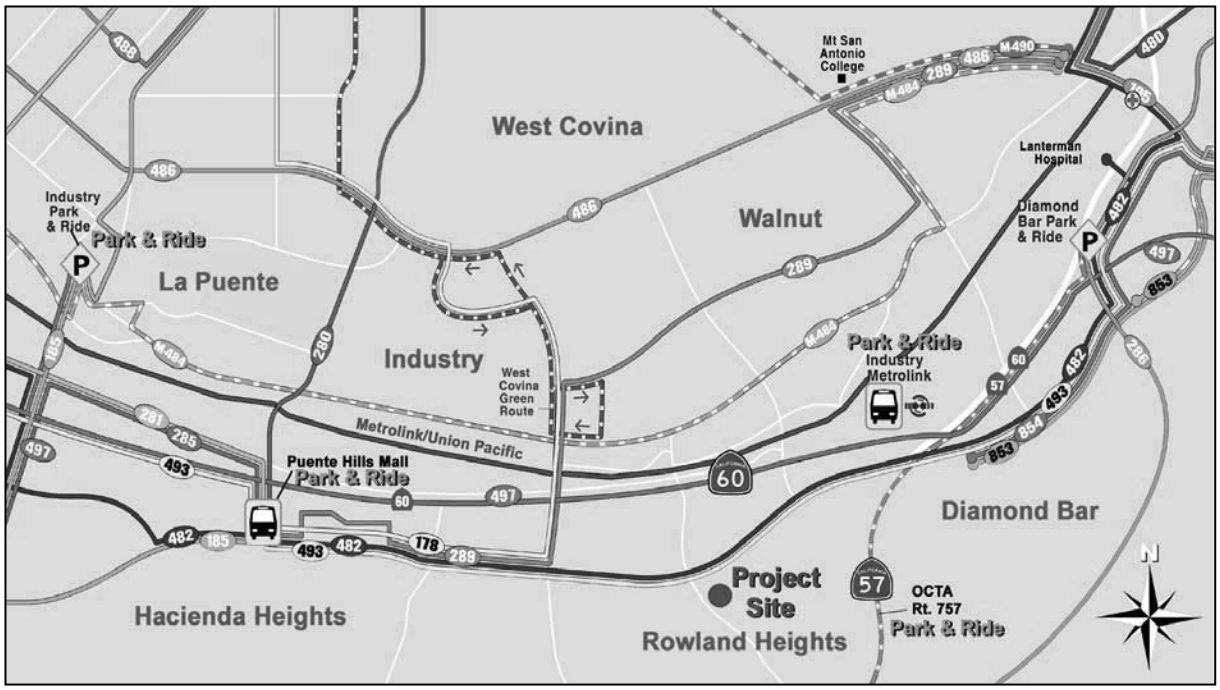

Figure 48 – Transit Facilities & Routes

Traffic Signal Warrants

Based on the County's recommendation that the main driveway to the *Project* on Brea Canyon Cutoff Road be located opposite existing Reedview Drive, a new four-legged intersection will result. If this intersection is controlled by stop signs only on the minor legs (i.e., Reedview Drive and the main driveway to the *Project*), the LOS is projected to deteriorate from "B" to "D" during the P.M. peak hour with the addition of *Project*-generated traffic. To determine whether or not this intersection will warrant signalization, an analysis was conducted employing the Caltrans Estimated Average Daily Traffic (EADT) Warrants.

An ADT of 19,907 vehicles on Brea Canyon Cutoff Road in the year 2012 was calculated by applying a 0.78 percent annual growth factor to the existing 2008 two-way ADT of 19,298 vehicles. From Table VII, the total outbound ADT generated by the *Project* is estimated to be 2,604 vehicles. With three driveways servicing the *Project*, right turn ingress and egress will be permitted at all three driveways. However, left turn ingress and egress will be permitted at only the main driveway opposite Reedview Drive. In order to determine the one-way approach (outbound) EADT on the main entrance driveway, 100% of the daily left turn egress traffic (or 911 vehicles) and 50% of the daily right turn egress traffic (or 846 vehicles) were assigned (for a total of 1,758 vehicles on the "minor street approach"). The remaining 50% of right turn egress traffic was assigned equally (i.e., 25% each) to the other two driveways. The resulting EADTs are noted in Figure 49, along with projected A.M. and P.M. peak hour turn movements into and out of the driveway entrances to the *Project* site. It should be noted that other than the main entrance driveway opposite Reedview Drive, turn movements at the other two driveways will be restricted to right turn in and right turn out only. The EADT Warrants Sheet may be found in the Appendix section of this report.

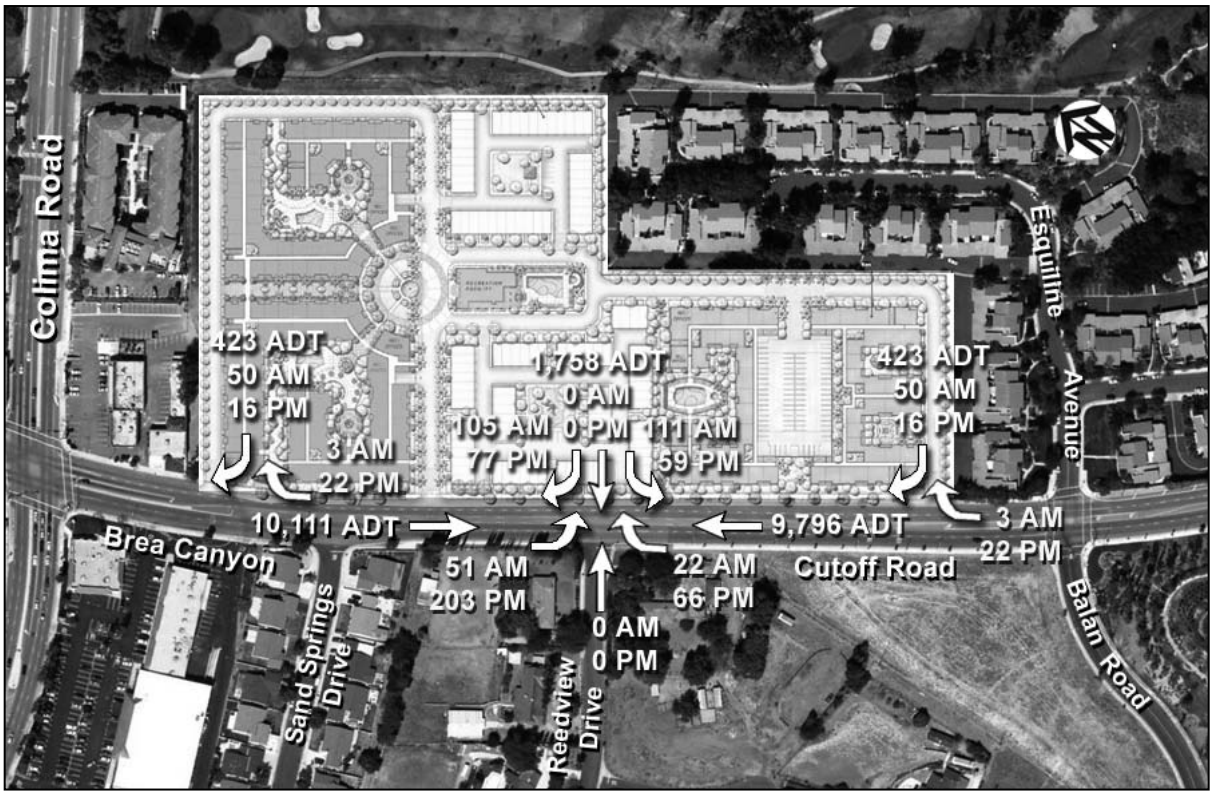

Figure 49 – *Canyon Residences* Estimated Traffic at Driveway Entrances

Based solely on the EADT volumes forecasted for the year 2012 at the intersection of Brea Canyon Cutoff Road and the main entrance driveway, it was determined that only one of the three EADT Warrants will be satisfied. Therefore, the intersection of Brea Canyon Cutoff Road and the main entrance driveway may not require traffic signalization prior to *Project* build-out. However, at *Project* build-out, traffic signalization may be warranted when actual counts are possible, and other factors such as traffic safety are taken into consideration.

Under the EADT Warrant 1 - Minimum Vehicle Volume, a two-way volume of at least 9,600 vehicles per day on the major street (i.e., Brea Canyon Cutoff Road) is required, at the same time the highest one-way approach volume on the minor leg (i.e., *Project* driveway) is at least 3,200 vehicles per day. This condition is not satisfied based on the volumes indicated in Figure 41, and the assumption that the *Project* driveway will feature two lanes outbound.

Under the EADT Warrant 2 – Interruption of Continuous Traffic, a two-way volume of at least 14,400 vehicles per day on the major street (i.e., Brea Canyon Cutoff Road) is required, at the same time the highest one-way approach volume on the minor leg (i.e., *Project* driveway) is at least 1,600 vehicles per day. This condition is satisfied based on the volumes indicated in Figure 41, and the assumption that the *Project* driveway will feature two lanes outbound.

Under the EADT Warrant 3 – Combination of Warrants, 80% of Warrant 1 is not satisfied (i.e., 80% of the minimum 3,200 vehicles per day one-way approach volume on the minor leg, or 2,560 vehicles per day), even though Warrant 2 is met. Therefore, the Combination of Warrants is not met.

Parking

By adhering to the County's current parking code for multi-family residential development, sufficient and evenly distributed parking is provided to accommodate residents, invited guests, deliveries, and other visitors. On-site parking provided for the *Project* includes approximately 1,350 spaces for residents and 194 spaces for guests, for a total 1,544 parking spaces for 775 dwelling units. Separate bicycle racks will also be provided throughout the *Project* site. There will be no parking allowed on-street on Brea Canyon Cutoff Road.

Internally, the subterranean parking garage for the podium building is accessed via two entrances. Within this parking garage, residents' parking is secured behind gated areas, while guests are allowed to park in designated spaces. The free-standing parking structure is accessed by a single driveway entrance. Inside the parking structure, residents' parking is secured within gated areas, while guests are allowed to park in designated spaces. For the townhome-style apartment buildings, attached garages are provided for residents, while guest and additional resident parking is provided in designated surface parking spaces.

VIII. OTHER TRAFFIC CONSIDERATIONS

Other traffic considerations include potential construction traffic impacts; traffic on nearby freeway segments and freeway ramps; and the requirements of the Congestion Management Program for Los Angeles County.

Construction Traffic

Temporary construction traffic will be generated during the demolition of existing buildings, pavement, landscaping, utilities, and other facilities; grading and excavation; and construction of the *Project.* Demolition is anticipated to take 3 months to complete. The majority of grading operations and excavation will take approximately 3 additional months to complete. The construction of site improvements (i.e., buildings, internal streets, parking facilities, etc.) will take approximately 30 months to complete.

Demolition - The volume of debris expected to be generated from the demolition of existing buildings, pavement, landscaping, utilities, and other facilities has been estimated at approximately 5,000 cubic yards (cy) in total. This volume of demolition debris will require approximately 250 truckloads to remove. Some of the debris will be recycled. Demolition and recycling process should occur over a period of approximately 12 weeks and average between 10 and 50 truckloads per day at 15- to 30-minute intervals.

Grading and Excavation- Due to the slope of the *Project* site and the proposed subterranean parking structure, grading and excavation activities will be required. Approximately 45,000 cy of dirt will be excavated and recompacted, and a total of 55,000 cy of material will be removed from the *Project* site. This volume of material require approximately 2,250 truckloads to remove. Grading and excavation should occur over a period of approximately 12 weeks and average between 50 and 100 truckloads per day at 10- to 20-minute intervals.

Truck Staging and Haul Routes - All truck staging will occur on Brea Canyon Cutoff Road or on the *Project* site itself. For construction trucks hauling demolition debris and material

from the *Project* site, the haul route would proceed north on Brea Canyon Cutoff Road, which becomes Fairway Drive, and then onto Highway 60. Depending upon what facility receives the demolition and earth material, trucks would proceed either east or west on Highway 60. It should be noted that the nearest County-approved dump site is the Puente Hills Landfill at 13130 Crossroads Parkway, in the City of Industry, approximately 11 miles to the west of the *Project* site via Route 60.

Construction Staging and Construction Worker Parking - All construction equipment will be staged on the *Project* site. Additionally, all construction worker parking can be easily accommodated on site. During construction of the *Project*, it is anticipated that a maximum of 200 workers, each driving their own vehicle, will be on-site at any given time. Most will be on-site early in the morning (by 7:00 A.M.), and remain on-site until the end of the work day (no later than 4:00 P.M.).The number of construction-related vehicle trips during the A.M. and P.M. peak hours will be significantly less than the vehicle trips currently generated by the school uses.

Freeway Segments

Caltrans indicates that the SR-57 Freeway between Brea Canyon (Cutoff) Road and Pathfinder Road, and the SR-60 at Fairway Drive operate at LOS "F." However, the 2009 completion of improvements to the SR-57/SR-60 interchange, including the extension of carpool lanes, has greatly enhanced traffic flow on SR-57 and improved the LOS. A new project under consideration is the SR-57/SR-60 Confluence at Grand Avenue, which will further improve mainline and on/off ramp traffic conditions. When these improvements are completed, freeway segment LOS should be further improved.

As for SR-60, carpool lanes are currently being installed in both the eastbound and westbound directions between SR-57 and the I-605 Freeway. The addition of these carpool lanes and on/off ramps improvements at selected interchanges will increase the carrying capacity of SR-60 through the San Gabriel Valley. SR-60 improvements are expected to be completed in 2010. Caltrans and the cities of Industry and Diamond Bar are also proposing the construction of a new freeway interchange at Lemon Avenue. Provided funding becomes available, a 2010 start date for construction (with a 2012 completion date) is planned. When these improvements are completed, freeway segment LOS should be further improved. However, the distribution and/or assignment of project-generated traffic are unaffected by the construction of this freeway interchange.

Freeway Ramp Capacities

The westbound SR-60 off ramp at Fairway Drive is approximately 1,150 feet in length, of which 675 feet of the ramp is two lanes wide (one exclusively for right turns, and the other for left and optional through movements), as measured from the back of the crosswalk stripe to apex of the gore stripe separating exit lane traffic from the mainline westbound through lane. These dimensions translate into a ramp storage (or queuing) capacity of 73 vehicles spaced every 25 feet. The alignment of the ramp is straight from the point of diversion from the mainline to the signalized Fairway Drive intersection.

Based on the A.M. peak hour traffic counts taken in February 2008 by **KHR Associates**, 681 vehicles used the westbound SR-60 off ramp at Fairway Drive. Of this total, 429 (or 63%) turned right (or northbound), 246 (36%) turned left (or southbound), and 2 (1%) went straight ahead (back onto the freeway). The existing A.M. peak hour LOS for the intersection of

Fairway Drive and the westbound SR-60 off ramp is "A" when calculated using the Intersection Capacity Utilization (ICU) methodology and "B" using the Highway Capacity Manual (HCM) methodology. Based on projected traffic from the proposed *Project*, no traffic will be added to the westbound SR-60 off ramp during the A.M. peak hour. With ambient traffic increases over the next two years and no contributing *Project* traffic, there will be no A.M. peak hour impacts to the intersection of Fairway Drive (i.e., LOS remain unchanged under both the ICU and HCM methodologies), and ramp capacity is unaffected.

Based on the P.M. peak hour traffic counts taken in February 2008 by **KHR Associates**, 631 vehicles used the westbound SR-60 off ramp at Fairway Drive. Of this total, 262 (or 42%) turned right (or northbound); 368 (58%) turned left (or southbound), and 1 (less than 1%) went straight ahead (back onto the freeway). The existing P.M. peak hour LOS for the intersection of Fairway Drive and the westbound SR-60 off ramp is "C" under both the ICU and HCM methodologies Based on projected traffic from the proposed *Project*, 13 additional vehicles (all turning left) will be added to the westbound SR-60 off ramp during the P.M. peak hour. This represents a 2% increase over existing off ramp traffic. With ambient traffic increases over the next two years, plus *Project* traffic, there will be no P.M. peak hour impacts to the intersection of the westbound SR-60 off ramp and Fairway Drive (i.e., LOS remain unchanged under both the ICU and HCM methodologies), and ramp capacity is unaffected.

The eastbound SR-60 off ramp at Fairway Drive is signalized, and features a curvilinear alignment approximately 1,300 feet in length, of which 800 feet is two lanes wide (one exclusively for left turns, and the other for right and optional left turns), as measured from the back of the crosswalk stripe to apex of the gore stripe separating exit lane traffic from the mainline westbound through lane. These dimensions translate into a ramp storage capacity of 84 vehicles spaced every 25-feet.

Based on the A.M. peak hour traffic counts taken in February 2008 by **KHR Associates**, 719 vehicles used the eastbound SR-60 off ramp at Fairway Drive. Of this total, 384 (or 53%) turned left (or northbound), and 335 (47%) turned right (or southbound). The existing A.M. peak hour level of service (LOS) for the intersection of Fairway Drive and the eastbound SR-60 off ramp is "A" when calculated using the ICU methodology and "B" using the HCM methodology. Based on projected traffic from the proposed *Project*, no traffic will be added to the eastbound SR-60 off ramp during the A.M. peak hour. With ambient traffic increases over the next two years and no contributing *Project* traffic, there will be no A.M. peak hour impacts to the intersection of the eastbound SR-60 off ramp and Fairway Drive (i.e., LOS remain unchanged under both the ICU and HCM methodologies), and ramp capacity is unaffected.

Based on the P.M. peak hour traffic counts taken in February 2008 by **KHR Associates**, 412 vehicles used the eastbound SR-60 off ramp at Fairway Drive. Of this total, 160 (or 39%) turned left or northbound), and 252 (61%) turned right (or southbound). The existing P.M. peak hour LOS for the intersection of Fairway Drive and the eastbound SR-60 off ramp is "B" under both the ICU and HCM methodologies Based on projected traffic from the proposed *Project*, 25 additional vehicles (all turning right) will be added to the westbound SR-60 off ramp during the P.M. peak hour. This represents a 6% increase over existing off ramp traffic. With ambient traffic increases over the next two years, plus *Project* traffic, there will be no P.M. peak hour impacts to the intersection of the eastbound SR-60 off ramp and Fairway Drive (i.e., LOS remain unchanged under both the ICU and HCM methodologies), and ramp capacity is unaffected.

Congestion Management Program

The Congestion Management Program (CMP) for Los Angeles County is intended to address the impact of the local growth on the regional transportation system by monitoring critical locations throughout the County. A review of the CMP arterial monitoring stations shows that none of the intersections required by the County to be studied for the *Project* are CMP stations. The nearest CMP intersection to the *Project* site is Grand Avenue and Diamond Bar Boulevard, over 3 miles to the east, in the City of Diamond Bar, and Azusa Avenue and Colima Road, over 3.5 miles to the west, in the City of La Puente. The *Project* is not anticipated to generate any significantly quantifiable amount of traffic to either of these two CMP intersections (i.e., the *Project* will not generate 50 or more trips during the A.M. or P.M. peak hour). As for arterial or freeway CMP locations, a segment of the Route 60 freeway from Hacienda Road to Azusa Avenue is identified as a CMP monitoring location. This segment of the Route 60 freeway is over 4 miles from the *Project* site, and is not anticipated to experience any significant measure of additional traffic as a result of the *Project* (i.e., the *Project* will not generate 150 or more trips in either direction during the A.M. or P.M. peak hour).

IX. FAIR SHARE COST PARTICIPATION

In addition to fully implementing improvements that are required to mitigate significant traffic impacts caused by the *Project,* the County of Los Angeles requires "fair share" cost participation for all mitigation measures identified to offset potential traffic impacts by the proposed *Project* and related projects. The County's formula for each of the five study intersections requiring a mitigation measure is based on a percentage of traffic generated by the *Project* relative to overall traffic generated by the *Project* and related projects. Using the highest traffic totals between the A.M. and P.M. peak hours, the percentage of fair share cost is equal to the *Project* traffic divided by *Project* plus related projects traffic or: Fair Share % = Highest Peak Hour Project Traffic ÷ Highest Peak Hour Project + Related Projects Traffic

Table XXX summarizes the calculation of fair share percentages to be contributed by the proposed *Project* at each significantly impacted intersection.

TABLE XXX – FAIR SHARE COST FOR MITIGATION MEASURES

Location	Highest Peak Hour Project Traffic	Highest Peak Hour Project + Related Traffic	Fair Share%
1. Brea Canyon Cutoff Rd./Colima Rd.	233	399	58.4%
4. Brea Canyon Cutoff Rd./Pathfinder Rd.	127	132	96.2%
10. Colima Rd./Fullerton Rd.	71	197	36.0%
11. Colima Rd./Nogales St.	71	197	36.0%
12. Fairway Dr./Valley Blvd.	89	192	46.4%

In addition to the fair share cost participation in mitigation measures for impacted locations, if a new traffic signal on Brea Canyon Cutoff Road at Reedview Drive is deemed warranted, it should be 100% funded and constructed by the *Project*.

It should be noted that the County has also initiated a program to upgrade traffic signals throughout the San Gabriel Valley, but it will take several years to complete constructed and become fully operational. When these upgrades are completed, some relief should come in

the form of improved traffic signal operations which will optimize timing and monitor traffic conditions in "real time." A traffic impact fee based on the number of trips generated by the *Project* is imposed to help fund these, and other, Countywide traffic improvements.

X. STUDY FINDINGS & CONCLUSIONS

Construction of the *Project* will result in up to 775 new apartment units. The traffic generated by the *Project* is expected to generate significant traffic impacts at some nearby intersections. As this traffic impact analysis reveals, implementation of mitigation measures could reduce the *Project*'s impact to less than significant at these intersections. The following findings are made in support of these conclusions:

1) The proposed *Project* is estimated to generate 5,208 daily trip ends during an average weekday 24-hour period of time.

2) During the morning (A.M.) peak period of weekday commute, the proposed *Project* is estimated to generate a gross amount of 395 A.M. peak hour trip ends (79 inbound, 316 outbound), with a net amount of 99 more peak hour trip ends than the 296 A.M. peak hour trip ends generated by current uses on the *Project* site.

3) During the late afternoon (P.M.) peak period of weekday commute, the proposed *Project* is estimated to generate a gross amount of 481 peak hour trip ends (313 inbound, 168 outbound) or 361 peak hour trip ends more than the 120 P.M. peak hour trip ends generated by current uses on the *Project* site.

4) Under all five analyzed traffic scenarios (i.e., existing traffic; existing plus ambient traffic; existing plus ambient plus *Project*; traffic; existing plus ambient plus related projects traffic, and existing plus ambient plus related projects plus *Project* traffic, all six roadway segments studied operate at acceptable levels of service of "D" or better, in both directions, during the A.M. and P.M. weekday peak hours.

5) Under existing traffic conditions, the levels of service at each of the study intersections during both the A.M. and P.M. peak hours of weekday commute fall within acceptable limits (i.e., "D" or better), except for Brea Canyon Cutoff Road and Colima Road (LOS "E" during A.M. peak hour); Colima Road and Fullerton Road (LOS "E" during A.M. peak hour), Colima Road and Nogales Street (LOS "F" and "E" during A.M. and P.M. peak hours, respectively), and Golden Springs Drive and Brea Canyon Road (LOS "E" during P.M. peak hour).

6) By the *Project* target build-out year of 2012, the levels of service at each of the study intersections during both the A.M. and P.M. peak hours of weekday commute are projected to stay within acceptable limits, with only ambient (or background) increases in traffic (i.e., no related project traffic or *Project*-generated traffic), except for the intersections of Brea Canyon Cutoff Road and Colima Road (LOS "E" during A.M. peak hour); Colima Road and Fullerton Road (LOS "E" during the A.M. peak hour); Colima Road and Nogales Street (LOS "F" during both the A.M. and P.M. peak hours, respectively); and Golden Springs Drive and Brea Canyon Road (LOS "E" during the P.M. peak hour).

7) For both the existing and existing plus ambient traffic scenarios, the freeway interchanges and the *Project* driveway/Reedview Drive and Brea Canyon Cutoff Road intersection operate at LOS "C" or better during the A.M. and P.M. peak hours.

8) In the *Project* target build-out year 2012, with the addition of *Project*-generated traffic, the levels of service at each of the study intersections during both the weekday A.M. and P.M. peak hours of traffic continue to operate at acceptable levels of service except for the intersections of Brea Canyon Cutoff Road and Colima Road (LOS "E" during both the A.M. and P.M. peak hours); Colima Road and Nogales Street (LOS "F" during the both A.M. and P.M. peak hours); and Golden Springs Drive and Brea Canyon Road (LOS "E" during the P.M. peak hour).

9) Per County of Los Angeles' methods of determination, without mitigation measures, when added to existing plus ambient traffic, the proposed *Project* would result in significant traffic impacts at three intersections: Brea Canyon Cutoff Road and Colima Road; Colima Road and Nogales Street; and Fairway Drive and Valley Boulevard.

10) Traffic impacts potentially created by the proposed *Project* can be mitigated to levels of less than significant through implementation of mitigation improvements within existing rights of way, as identified in this report.

11) Per County's methods of determination, without mitigation measures, when traffic from related projects is added to existing plus ambient plus proposed *Project* traffic, significant traffic impacts are projected to occur at four intersections: Brea Canyon Cutoff Road and Colima Road; Brea Canyon Cutoff Road and Pathfinder Road; Colima Road and Fullerton Road; and Colima Road and Nogales Street.

12) Traffic impacts created by the addition of related projects can be mitigated to levels of less than significant by implementing mitigation improvements within existing rights of way, as identified in this report.

XI. STUDY RECOMMENDATIONS

Based on the findings of the TIA, the proposed *Project* is not expected to generate significant traffic impacts that cannot be mitigated. Therefore, it is recommended that the proposed *Project* move forward with the following commitments:

1) Relocate the main driveway entrance to the *Project* site on Brea Canyon Cutoff Road to be directly opposite Reedview Drive, and install a traffic signal to allow safe and convenient left turn movements into and out of the project site.

2) Restrict all other driveway access to the *Project* site to right turn in and out only.

3) Encourage the use of alternative modes of transportation by providing convenient pedestrian pathways; secure bicycle storage facilities; and information regarding transit and ridesharing opportunities to employees and residents of the *Project*.

4) As identified in this report, fully implement improvements that are required to mitigate significant traffic impacts caused by the *Project,* and participate in the "fair-share" cost of improvements required to mitigate impacts with the addition of related projects.

XII. REFERENCES

1. Institute of Transportation Engineers' (ITE) *Trip Generation* manual, 7TH Ed., 2003.
2. Caltrans' *Guide for the Preparation of Traffic Impact Studies*, December 2002.
3. Transportation Research Board, *Highway Capacity Manual*, HCM 2000, October 2000.
4. County of Los Angeles' *Traffic Impact Analysis Report Guidelines*, January 1, 1997.
5. *Manual of Uniform Traffic Control Devices*, Federal Highway Administration, U.S. Department of Transportation, November 2003, revised May 2004.
6. *Traffic Manual*, State of California Department of Transportation Engineers, latest edition.
7. *Industry Business Center Final Environmental Impact Report,* The Planning Center, October 2004.
8. *Supplement to Industry Business Center EIR*, The Planning Center, September 2008.
9. *Route 57 Route Weave Improvement Project Initial Study Environmental Assessment*, Caltrans and Federal Highway Administration, U.S. Department of Transportation, July 2000.
10. *State Route 60 Lemon Avenue Interchange Initial Study Environmental Assessment*, Caltrans and Federal Highway Administration, U.S. Department of Transportation, January 2008.
11. *Draft Environmental Impact Report "Site D" Specific Plan* SCH No. 2008021014, City of Diamond Bar and Walnut Valley Unified School District, June 2009.

Appendix Section

Appendix A

Intersection Turn Movement Counts

KHR ASSOCIATES
INTERSECTION TURN MOVEMENT COUNTS

Project:	The Canyon	**Count Date:**	14-Feb-08
Location:	County of Los Angeles, California	**Count By:**	M. Avalos/G. Estrada
North-South Street:	Brea Canyon Cutoff Road	**A.M. Peak Hour:**	7:30 - 8:30 AM
East-West Street:	Colima Road	**P.M. Peak Hour:**	5:00 - 6:00 PM
Conditions:	Normal; Dry Pavement	**Input By:**	S. Carter

A.M. COUNT

Direction of Travel	Lane Movement	Number of Lanes	Time Period 7:00 7:15	7:15 7:30	7:30 7:45	7:45 8:00	8:00 8:15	8:15 8:30	8:30 8:45	8:45 9:00	Peak Hour
Eastbound	Left Turn	1	46	53	**44**	**67**	**48**	**57**	34	70	**216**
	Through	3	76	78	**110**	**106**	**86**	**79**	96	99	**381**
	Right Turn	0	30	31	**25**	**60**	**44**	**47**	27	33	**176**
Westbound	Left Turn	1	39	48	**69**	**82**	**63**	**47**	35	43	**261**
	Through	3	83	152	**226**	**216**	**144**	**194**	139	225	**780**
	Right Turn	0	61	76	**88**	**102**	**62**	**70**	30	45	**322**
Northbound	Left Turn	1	42	42	**69**	**99**	**72**	**117**	46	87	**357**
	Through	2	82	95	**114**	**202**	**124**	**160**	95	106	**600**
	Right Turn	1	47	38	**46**	**72**	**47**	**51**	40	36	**216**
Southbound	Left Turn	1	37	43	**34**	**30**	**39**	**45**	25	79	**148**
	Through	2	66	85	**102**	**141**	**71**	**124**	78	97	**438**
	Right Turn	1	56	48	**75**	**99**	**66**	**61**	70	78	**301**
Total Intersection			665	789	**1002**	**1276**	**866**	**1052**	715	998	**4,196**
Peak Hour Factor		0.82									

P.M. COUNT

Direction of Travel	Lane Movement	Number of Lanes	Time Period 4:00 4:15	4:15 4:30	4:30 4:45	4:45 5:00	5:00 5:15	5:15 5:30	5:30 5:45	5:45 6:00	Peak Hour
Eastbound	Left Turn	1	49	42	54	61	**60**	**52**	**71**	**70**	**253**
	Through	3	149	133	145	116	**157**	**145**	**182**	**185**	**669**
	Right Turn	0	35	22	15	31	**37**	**20**	**10**	**10**	**77**
Westbound	Left Turn	1	38	34	36	45	**60**	**52**	**62**	**50**	**224**
	Through	3	151	123	159	134	**156**	**155**	**173**	**174**	**658**
	Right Turn	0	30	27	25	41	**27**	**33**	**32**	**30**	**122**
Northbound	Left Turn	1	46	76	39	63	**52**	**61**	**70**	**87**	**270**
	Through	2	103	106	103	120	**158**	**130**	**147**	**146**	**581**
	Right Turn	1	36	46	51	48	**54**	**45**	**58**	**51**	**208**
Southbound	Left Turn	1	47	55	59	78	**40**	**43**	**80**	**97**	**260**
	Through	2	101	108	136	138	**135**	**171**	**174**	**157**	**637**
	Right Turn	1	35	33	37	37	**39**	**62**	**54**	**29**	**184**
Total Intersection			820	805	859	912	**975**	**969**	**1113**	**1086**	**4,143**
Peak Hour Factor		0.93									

KHR ASSOCIATES
INTERSECTION TURN MOVEMENT COUNTS

Project:	The Canyon	**Count Date:**	26-Feb-08
Location:	City of Rowland Heights, California	**Count By:**	R.Pangelinan
North-South Street:	Fairway Drive	**A.M. Peak Hour:**	7:45 - 8:45 AM
East-West Street:	East 60 Off-Ramp	**P.M. Peak Hour:**	5:00 - 6:00 PM
Conditions:	Normal; Dry Pavement	**Input By:**	S. Carter

A.M. COUNT

Direction of Travel	Lane Movement	Number of Lanes	Time Period 7:00 7:15	7:15 7:30	7:30 7:45	7:45 8:00	8:00 8:15	8:15 8:30	8:30 8:45	8:45 9:00	Peak Hour
Eastbound	Left Turn	2	58	70	81	**125**	**94**	**71**	**94**	64	**384**
	Through	0	0	0	0	**0**	**0**	**0**	**0**	0	**0**
	Right Turn	0	29	35	43	**100**	**91**	**69**	**75**	70	**335**
Westbound	Left Turn	0	0	0	0	**0**	**0**	**0**	**0**	0	**0**
	Through	0	0	0	0	**0**	**0**	**0**	**0**	0	**0**
	Right Turn	0	0	0	0	**0**	**0**	**0**	**0**	0	**0**
Northbound	Left Turn	0	0	0	0	**0**	**0**	**0**	**0**	0	**0**
	Through*	2	72	107	107	**118**	**132**	**101**	**164**	162	**515**
	Right Turn	0	0	0	0	**0**	**0**	**0**	**0**	0	**0**
Southbound	Left Turn	0	0	0	0	**0**	**0**	**0**	**0**	0	**0**
	Through**	2	91	140	135	**134**	**197**	**169**	**161**	176	**661**
	Right Turn	1	23	19	33	**33**	**41**	**46**	**30**	28	**150**
Total Intersection			273	371	399	**510**	**555**	**456**	**524**	500	**2,045**
Peak Hour Factor		0.92	* Shared Thru/Left Lane				** Shared Thru/Right Lane				

P.M. COUNT

Direction of Travel	Lane Movement	Number of Lanes	Time Period 4:00 4:15	4:15 4:30	4:30 4:45	4:45 5:00	5:00 5:15	5:15 5:30	5:30 5:45	5:45 6:00	Peak Hour
Eastbound	Left Turn	1	45	35	63	78	**58**	**48**	**29**	**25**	**160**
	Through	2	0	0	0	0	**0**	**0**	**0**	**0**	**0**
	Right Turn	0	35	49	66	31	**68**	**45**	**68**	**71**	**252**
Westbound	Left Turn	0	0	0	0	0	**0**	**0**	**0**	**0**	**0**
	Through	2	0	0	0	0	**0**	**0**	**0**	**0**	**0**
	Right Turn	1	0	0	0	0	**0**	**0**	**0**	**0**	**0**
Northbound	Left Turn	1	0	0	0	0	**0**	**0**	**0**	**0**	**0**
	Through*	1	254	244	243	270	**320**	**301**	**378**	**375**	**1,374**
	Right Turn	1	0	0	0	0	**0**	**0**	**0**	**0**	**0**
Southbound	Left Turn	0	0	0	0	0	**0**	**0**	**0**	**0**	**0**
	Through**	0	129	141	183	215	**198**	**139**	**173**	**196**	**706**
	Right Turn	0	47	49	69	55	**71**	**64**	**74**	**96**	**305**
Total Intersection			510	518	624	649	**715**	**597**	**722**	**763**	**2797**
Peak Hour Factor		0.92	* Shared Thru/Left Lane				** Shared Thru/Right Lane				

KHR ASSOCIATES
INTERSECTION TURN MOVEMENT COUNTS

Project:	The Canyon	**Count Date:**	26-Feb-08
Location:	City of Rowland Heights, California	**Count By:**	A.Morales
North-South Street:	Fairway Drive	**A.M. Peak Hour:**	7:45 - 8:45 AM
East-West Street:	West 60 Off-Ramp	**P.M. Peak Hour:**	4:45 - 5:45 PM
Conditions:	Normal; Dry Pavement	**Input By:**	S. Carter

A.M. COUNT

Direction of Travel	Lane Movement	Number of Lanes	Time Period 7:00 7:15	7:15 7:30	7:30 7:45	7:45 8:00	8:00 8:15	8:15 8:30	8:30 8:45	8:45 9:00	Peak Hour
Eastbound	Left Turn	0	0	0	0	**0**	**0**	**0**	**0**	0	**0**
	Through	0	0	0	0	**0**	**0**	**0**	**0**	0	**0**
	Right Turn	0	0	0	0	**0**	**0**	**0**	**0**	0	**0**
Westbound	Left Turn	1	94	60	53	**55**	**66**	**61**	**64**	104	**246**
	Through	0	0	0	1	**0**	**1**	**1**	**4**	0	**6**
	Right Turn	1	56	99	79	**110**	**100**	**111**	**108**	136	**429**
Northbound	Left Turn	1	35	45	40	**57**	**65**	**48**	**35**	44	**205**
	Through*	2	135	178	188	**241**	**236**	**229**	**191**	188	**897**
	Right Turn	0	0	0	0	**0**	**0**	**0**	**0**	0	**0**
Southbound	Left Turn	0	0	0	0	**0**	**0**	**0**	**0**	0	**0**
	Through**	2	76	96	120	**121**	**142**	**115**	**116**	91	**494**
	Right Turn	1	21	29	38	**34**	**36**	**56**	**43**	33	**169**
Total Intersection			417	507	519	**618**	**646**	**621**	**561**	596	**2,446**
Peak Hour Factor		0.95	* Shared Thru/Left Lane				** Shared Thru/Right Lane				

P.M. COUNT

Direction of Travel	Lane Movement	Number of Lanes	Time Period 4:00 4:15	4:15 4:30	4:30 4:45	4:45 5:00	5:00 5:15	5:15 5:30	5:30 5:45	5:45 6:00	Peak Hour
Eastbound	Left Turn	0	0	0	0	**0**	**0**	**0**	**0**	0	**0**
	Through	0	0	0	0	**0**	**0**	**0**	**0**	0	**0**
	Right Turn	0	0	0	0	**0**	**0**	**0**	**0**	0	**0**
Westbound	Left Turn	1	56	49	61	**71**	**110**	**98**	**89**	55	**368**
	Through	0	0	0	0	**1**	**0**	**0**	**0**	0	**1**
	Right Turn	1	47	52	54	**66**	**72**	**66**	**58**	57	**262**
Northbound	Left Turn	1	40	46	50	**53**	**41**	**42**	**57**	46	**193**
	Through*	2	159	136	132	**177**	**188**	**159**	**152**	184	**676**
	Right Turn	0	0	0	0	**0**	**0**	**0**	**0**	0	**0**
Southbound	Left Turn	0	0	0	0	**0**	**0**	**0**	**0**	0	**0**
	Through**	2	203	175	181	**201**	**244**	**220**	**236**	207	**901**
	Right Turn	1	79	55	68	**69**	**54**	**55**	**58**	58	**236**
Total Intersection			584	513	546	**638**	**709**	**640**	**650**	607	**2637**
Peak Hour Factor		0.93	* Shared Thru/Left Lane				** Shared Thru/Right Lane				

KHR ASSOCIATES
INTERSECTION TURN MOVEMENT COUNTS

Project:	The Canyon	**Count Date:**	6-Feb-08
Location:	City of Industry, California	**Count By:**	R.Pangelinan
North-South Street:	Brea Canyon Cutoff Road	**A.M. Peak Hour:**	7:30 - 8:30 AM
East-West Street:	Pathfinder Road	**P.M. Peak Hour:**	4:00 - 5:00 PM
Conditions:	Normal; Dry Pavement	**Input By:**	S. Carter

A.M. COUNT

Direction of Travel	Lane Movement	Number of Lanes	Time Period 7:00 7:15	7:15 7:30	7:30 7:45	7:45 8:00	8:00 8:15	8:15 8:30	8:30 8:45	8:45 9:00	Peak Hour
Eastbound	Left Turn	1	12	9	**13**	**32**	**16**	**21**	27	17	**82**
	Through	2	53	43	**37**	**41**	**33**	**44**	39	52	**155**
	Right Turn	0	54	61	**79**	**77**	**43**	**60**	55	58	**259**
Westbound	Left Turn	1	21	30	**18**	**27**	**33**	**26**	19	18	**104**
	Through	2	62	66	**83**	**81**	**98**	**65**	88	61	**327**
	Right Turn	0	11	26	**21**	**14**	**32**	**31**	25	22	**98**
Northbound	Left Turn	1	31	43	**36**	**42**	**38**	**52**	41	57	**168**
	Through	1	41	51	**59**	**70**	**89**	**68**	75	115	**286**
	Right Turn	1	6	9	**3**	**7**	**4**	**9**	7	0	**23**
Southbound	Left Turn	1	8	11	**7**	**11**	**19**	**10**	11	24	**47**
	Through	1	92	104	**125**	**122**	**79**	**88**	73	107	**414**
	Right Turn	0	18	19	**12**	**11**	**9**	**12**	10	12	**44**
Total Intersection			409	472	**493**	**535**	**493**	**486**	470	543	**2,007**
Peak Hour Factor		0.92									

P.M. COUNT

Direction of Travel	Lane Movement	Number of Lanes	Time Period 4:00 4:15	4:15 4:30	4:30 4:45	4:45 5:00	5:00 5:15	5:15 5:30	5:30 5:45	5:45 6:00	Peak Hour
Eastbound	Left Turn	1	**33**	**16**	**29**	**36**	45	32	44	59	**114**
	Through	2	**120**	**109**	**116**	**87**	129	105	140	98	**432**
	Right Turn	1	**59**	**82**	**109**	**62**	21	23	31	39	**312**
Westbound	Left Turn	1	**9**	**16**	**5**	**0**	12	8	6	8	**30**
	Through	2	**93**	**89**	**101**	**85**	106	81	110	101	**368**
	Right Turn	0	**9**	**23**	**38**	**6**	12	13	15	15	**76**
Northbound	Left Turn	1	**59**	**60**	**80**	**46**	65	73	51	58	**245**
	Through	1	**170**	**129**	**140**	**134**	149	127	164	106	**573**
	Right Turn	1	**17**	**4**	**12**	**21**	13	19	12	2	**54**
Southbound	Left Turn	1	**15**	**28**	**31**	**24**	15	42	29	12	**98**
	Through	1	**140**	**127**	**138**	**103**	115	140	122	124	**508**
	Right Turn	0	**15**	**19**	**8**	**5**	19	6	12	15	**47**
Total Intersection			**739**	**702**	**807**	**609**	701	669	736	637	**2857**
Peak Hour Factor		0.89									

KHR ASSOCIATES
INTERSECTION TURN MOVEMENT COUNTS

Project:	The Canyon	**Count Date:**	7-Feb-08
Location:	City of Industry, California	**Count By:**	R.Pangelinan
North-South Street:	Brea Canyon Cut-Off Road	**A.M. Peak Hour:**	7:45 - 8:45 AM
East-West Street:	Reedview Drive	**P.M. Peak Hour:**	5:00 - 6:00 PM
Conditions:	Normal; Dry Pavement	**Input By:**	S. Carter

A.M. COUNT

Direction of Travel	Lane Movement	Number of Lanes	Time Period 7:00 7:15	7:15 7:30	7:30 7:45	7:45 8:00	8:00 8:15	8:15 8:30	8:30 8:45	8:45 9:00	Peak Hour
Eastbound	Left Turn	1	3	0	0	**6**	**4**	**3**	**0**	1	**13**
	Through	0	0	0	0	**0**	**0**	**0**	**0**	0	**0**
	Right Turn	1	0	0	3	**1**	**0**	**0**	**4**	5	**5**
Westbound	Left Turn	0	0	0	0	**0**	**0**	**0**	**0**	0	**0**
	Through	0	0	0	0	**0**	**0**	**0**	**0**	0	**0**
	Right Turn	0	0	0	0	**0**	**0**	**0**	**0**	0	**0**
Northbound	Left Turn	1	0	0	0	**0**	**1**	**0**	**0**	8	**1**
	Through	2	123	122	143	**214**	**171**	**182**	**165**	150	**732**
	Right Turn	0	0	0	0	**0**	**0**	**0**	**0**	0	**0**
Southbound	Left Turn	0	0	0	0	**0**	**0**	**0**	**0**	0	**0**
	Through	2	86	106	103	**168**	**92**	**129**	**108**	125	**497**
	Right Turn	0	0	0	0	**3**	**4**	**5**	**4**	6	**16**
Total Intersection			212	228	249	**392**	**272**	**319**	**281**	295	**1,264**
Peak Hour Factor		0.81									

P.M. COUNT

Direction of Travel	Lane Movement	Number of Lanes	Time Period 4:00 4:15	4:15 4:30	4:30 4:45	4:45 5:00	5:00 5:15	5:15 5:30	5:30 5:45	5:45 6:00	Peak Hour
Eastbound	Left Turn	1	2	4	1	2	**1**	**6**	**5**	**1**	**13**
	Through	0	0	0	0	0	**0**	**0**	**0**	**0**	**0**
	Right Turn	1	0	1	0	0	**2**	**2**	**0**	**1**	**5**
Westbound	Left Turn	0	0	0	0	0	**0**	**0**	**0**	**0**	**0**
	Through	0	0	0	0	0	**0**	**0**	**0**	**0**	**0**
	Right Turn	0	0	0	0	0	**0**	**0**	**0**	**0**	**0**
Northbound	Left Turn	1	1	0	1	0	**0**	**1**	**1**	**0**	**2**
	Through	2	165	152	184	187	**156**	**196**	**190**	**199**	**741**
	Right Turn	0	0	0	0	0	**0**	**0**	**0**	**0**	**0**
Southbound	Left Turn	0	0	0	0	0	**0**	**0**	**0**	**0**	**0**
	Through	2	125	125	112	150	**159**	**181**	**176**	**187**	**703**
	Right Turn	0	0	2	7	5	**5**	**5**	**7**	**6**	**23**
Total Intersection			293	284	305	344	**323**	**391**	**379**	**394**	**1,487**
Peak Hour Factor		0.94									

KHR ASSOCIATES
INTERSECTION TURN MOVEMENT COUNTS

Project:	The Canyon	**Count Date:**	14-Feb-08
Location:	City of Industry, California	**Count By:**	R.Pangelinan
North-South Street:	North SR-57 On/Off-Ramp	**A.M. Peak Hour:**	7:30 - 8:30 AM
East-West Street:	Brea Canyon Cutoff Road	**P.M. Peak Hour:**	5:15 - 6:15 PM
Conditions:	Normal; Dry Pavement	**Input By:**	S. Carter

A.M. COUNT

Direction of Travel	Lane Movement	Number of Lanes	Time Period 7:00 7:15	7:15 7:30	7:30 7:45	7:45 8:00	8:00 8:15	8:15 8:30	8:30 8:45	8:45 9:00	Peak Hour
Eastbound	Left Turn	1	8	13	**8**	**10**	**9**	**12**	8	5	**39**
	Through	2	119	124	**131**	**135**	**133**	**125**	121	100	**524**
	Right Turn	0	0	0	**0**	**0**	**0**	**0**	0	0	**0**
Westbound	Left Turn	0	0	0	**0**	**0**	**0**	**0**	0	0	**0**
	Through	2	121	129	**143**	**149**	**147**	**155**	142	119	**594**
	Right Turn**	0	35	48	**55**	**58**	**43**	**31**	35	21	**187**
Northbound	Left Turn*	1	35	57	**67**	**57**	**61**	**56**	56	85	**241**
	Through*	0	0	0	**0**	**0**	**0**	**0**	0	0	**0**
	Right Turn	1	24	29	**39**	**52**	**56**	**43**	37	31	**190**
Southbound	Left Turn	0	0	0	**0**	**0**	**0**	**0**	0	0	**0**
	Through	0	0	0	**0**	**0**	**0**	**0**	0	0	**0**
	Right Turn	0	0	0	**0**	**0**	**0**	**0**	0	0	**0**
Total Intersection			342	400	**443**	**461**	**449**	**422**	399	361	**1,775**
Peak Hour Factor		0.96	* Shared Thru/Left Lane				** Free Flow Right Turn Lane				

P.M. COUNT

Direction of Travel	Lane Movement	Number of Lanes	Time Period 4:00 4:15	4:15 4:30	4:30 4:45	4:45 5:00	5:00 5:15	5:15 5:30	5:30 5:45	5:45 6:00	Peak Hour
Eastbound	Left Turn	1	4	**6**	**6**	**7**	**4**	5	4	10	**23**
	Through	2	176	**198**	**231**	**249**	**228**	182	154	143	**906**
	Right Turn	0	0	**0**	**0**	**0**	**0**	0	0	0	**0**
Westbound	Left Turn	0	0	**0**	**0**	**0**	**0**	0	0	0	**0**
	Through	2	121	**139**	**163**	**179**	**142**	122	108	98	**623**
	Right Turn**	0	20	**27**	**32**	**28**	**25**	27	25	30	**112**
Northbound	Left Turn*	1	67	**65**	**68**	**86**	**90**	87	80	67	**309**
	Through*	0	0	**0**	**0**	**0**	**0**	0	0	0	**0**
	Right Turn	1	198	**30**	**29**	**33**	**31**	26	25	22	**123**
Southbound	Left Turn	0	0	**0**	**0**	**0**	**0**	0	0	0	**0**
	Through	0	0	**0**	**0**	**0**	**0**	0	0	0	**0**
	Right Turn	0	0	**0**	**0**	**0**	**0**	0	0	0	**0**
Total Intersection			586	**465**	**529**	**582**	**520**	449	396	370	**2,096**
Peak Hour Factor		0.89	* Shared Thru/Left Lane				** Free Flow Right Turn Lane				

KHR ASSOCIATES
INTERSECTION TURN MOVEMENT COUNTS

Project:	The Canyon	**Count Date:**	14-Feb-08
Location:	City of Industry, California	**Count By:**	R.Pangelinan
North-South Street:	South SR-57 On/Off-Ramps	**A.M. Peak Hour:**	7:30 - 8:30 AM
East-West Street:	Brea Canyon Cutoff Road	**P.M. Peak Hour:**	5:30 - 6:30 PM
Conditions:	Normal; Dry Pavement	**Input By:**	S. Carter

A.M. COUNT

Direction of Travel	Lane Movement	Number of Lanes	Time Period 7:00 7:15	7:15 7:30	7:30 7:45	7:45 8:00	8:00 8:15	8:15 8:30	8:30 8:45	8:45 9:00	Peak Hour
Eastbound	Left Turn	0	0	0	**0**	**0**	**0**	**0**	0	0	**0**
	Through	2	33	45	**48**	**60**	**61**	**46**	46	41	**215**
	Right Turn**	1	44	43	**58**	**66**	**67**	**58**	56	52	**249**
Westbound	Left Turn	1	98	81	**100**	**106**	**111**	**85**	117	114	**402**
	Through	2	97	135	**166**	**183**	**198**	**165**	135	124	**712**
	Right Turn	0	0	0	**0**	**0**	**0**	**0**	0	0	**0**
Northbound	Left Turn	0	0	0	**0**	**0**	**0**	**0**	0	0	**0**
	Through	0	0	0	**0**	**0**	**0**	**0**	0	0	**0**
	Right Turn	0	0	0	**0**	**0**	**0**	**0**	0	0	**0**
Southbound	Left Turn*	1	5	12	**16**	**17**	**13**	**8**	8	14	**54**
	Through*	0	0	0	**0**	**0**	**0**	**0**	0	0	**0**
	Right Turn	1	25	33	**35**	**34**	**55**	**34**	22	13	**158**
Total Intersection			302	349	**423**	**466**	**505**	**396**	384	358	**1,790**
Peak Hour Factor		0.89	* Shared Thru/Left Lane				** Free Flow Right Turn Lane				

P.M. COUNT

Direction of Travel	Lane Movement	Number of Lanes	Time Period 4:00 4:15	4:15 4:30	4:30 4:45	4:45 5:00	5:00 5:15	5:15 5:30	5:30 5:45	5:45 6:00	Peak Hour
Eastbound	Left Turn	0	0	0	**0**	**0**	**0**	**0**	0	0	**0**
	Through	2	134	198	**200**	**224**	**232**	**203**	155	122	**859**
	Right Turn**	1	54	66	**82**	**88**	**76**	**65**	46	34	**311**
Westbound	Left Turn	1	25	33	**39**	**54**	**44**	**46**	44	37	**183**
	Through	2	156	189	**234**	**228**	**234**	**214**	186	156	**910**
	Right Turn	0	0	0	**0**	**0**	**0**	**0**	0	0	**0**
Northbound	Left Turn	0	0	0	**0**	**0**	**0**	**0**	0	0	**0**
	Through	0	0	0	**0**	**0**	**0**	**0**	0	0	**0**
	Right Turn	0	0	0	**0**	**0**	**0**	**0**	0	0	**0**
Southbound	Left Turn*	1	12	14	**14**	**11**	**11**	**11**	18	14	**47**
	Through*	0	0	0	**0**	**0**	**0**	**0**	0	0	**0**
	Right Turn	1	28	34	**41**	**44**	**40**	**36**	27	21	**161**
Total Intersection			409	534	**610**	**649**	**637**	**575**	476	384	**2,471**
Peak Hour Factor		0.95	* Shared Thru/Left Lane				** Free Flow Right Turn Lane				

KHR ASSOCIATES
INTERSECTION TURN MOVEMENT COUNTS

Project:	The Canyon	**Count Date:**	12-Feb-08
Location:	City of Industry, California	**Count By:**	R.Pangelinan
North-South Street:	North SR-57 On/Off-Ramps	**A.M. Peak Hour:**	7:15 - 8:15 AM
East-West Street:	Pathfinder Road	**P.M. Peak Hour:**	5:00 - 6:00 PM
Conditions:	Normal; Dry Pavement	**Input By:**	S. Carter

A.M. COUNT

Direction of Travel	Lane Movement	Number of Lanes	Time Period 7:00 7:15	7:15 7:30	7:30 7:45	7:45 8:00	8:00 8:15	8:15 8:30	8:30 8:45	8:45 9:00	Peak Hour
Eastbound	Left Turn	1	18	**35**	**23**	**13**	**38**	38	20	33	**109**
	Through	2	154	**181**	**199**	**236**	**220**	58	28	50	**836**
	Right Turn	0	0	**0**	**0**	**0**	**0**	0	0	0	**0**
Westbound	Left Turn	0	0	**0**	**0**	**0**	**0**	0	0	0	**0**
	Through	2	216	**178**	**251**	**308**	**249**	118	35	63	**986**
	Right Turn	1	53	**148**	**139**	**157**	**174**	148	119	82	**618**
Northbound	Left Turn*	1	24	**70**	**68**	**63**	**57**	48	47	36	**258**
	Through*	0	0	**0**	**0**	**0**	**0**	0	0	0	**0**
	Right Turn	1	6	**14**	**13**	**17**	**17**	22	19	12	**61**
Southbound	Left Turn	0	0	**0**	**0**	**0**	**0**	0	0	0	**0**
	Through	0	0	**0**	**0**	**0**	**0**	0	0	0	**0**
	Right Turn	0	0	**0**	**0**	**0**	**0**	0	0	0	**0**
Total Intersection			471	**626**	**693**	**794**	**755**	432	268	276	**2,868**
Peak Hour Factor		0.90	* Shared Thru/Left Lane								

P.M. COUNT

Direction of Travel	Lane Movement	Number of Lanes	Time Period 4:00 4:15	4:15 4:30	4:30 4:45	4:45 5:00	5:00 5:15	5:15 5:30	5:30 5:45	5:45 6:00	Peak Hour
Eastbound	Left Turn	1	24	15	15	20	**20**	**26**	**22**	**21**	**89**
	Through	2	112	134	149	172	**166**	**156**	**184**	**178**	**684**
	Right Turn	0	0	0	0	0	**0**	**0**	**0**	**0**	**0**
Westbound	Left Turn	0	0	0	0	0	**0**	**0**	**0**	**0**	**0**
	Through	2	137	142	56	127	**132**	**129**	**106**	**116**	**483**
	Right Turn	1	81	89	128	103	**98**	**123**	**114**	**83**	**418**
Northbound	Left Turn*	1	52	65	77	71	**96**	**119**	**121**	**102**	**438**
	Through*	0	0	0	0	0	**0**	**0**	**0**	**0**	**0**
	Right Turn	1	34	43	56	67	**88**	**93**	**95**	**82**	**358**
Southbound	Left Turn	0	0	0	0	0	**0**	**0**	**0**	**0**	**0**
	Through	0	0	0	0	0	**0**	**0**	**0**	**0**	**0**
	Right Turn	0	0	0	0	0	**0**	**0**	**0**	**0**	**0**
Total Intersection			440	488	481	560	**600**	**646**	**642**	**582**	**2,470**
Peak Hour Factor		0.96	* Shared Thru/Left Lane								

KHR ASSOCIATES
INTERSECTION TURN MOVEMENT COUNTS

Project:	The Canyon	**Count Date:**	12-Feb-08
Location:	City of Industry, California	**Count By:**	R.Pangelinan
North-South Street:	South SR-57 On/Off-Ramps	**A.M. Peak Hour:**	7:45 - 8:45 AM
East-West Street:	Pathfinder Road	**P.M. Peak Hour:**	5:00 - 6:00 PM
Conditions:	Normal; Dry Pavement	**Input By:**	S. Carter

A.M. COUNT

Direction of Travel	Lane Movement	Number of Lanes	Time Period 7:00 7:15	7:15 7:30	7:30 7:45	7:45 8:00	8:00 8:15	8:15 8:30	8:30 8:45	8:45 9:00	Peak Hour
Eastbound	Left Turn	0	0	0	0	**0**	**0**	**0**	**0**	0	**0**
	Through	2	95	114	112	**114**	**112**	**125**	**116**	52	**467**
	Right Turn**	1	42	52	64	**52**	**64**	**78**	**64**	33	**258**
Westbound	Left Turn	1	78	99	101	**93**	**109**	**115**	**107**	98	**424**
	Through	2	155	161	189	**196**	**199**	**213**	**204**	143	**812**
	Right Turn	0	0	0	0	**0**	**0**	**0**	**0**	0	**0**
Northbound	Left Turn	0	0	0	0	**0**	**0**	**0**	**0**	0	**0**
	Through	0	0	0	0	**0**	**0**	**0**	**0**	0	**0**
	Right Turn	0	0	0	0	**0**	**0**	**0**	**0**	0	**0**
Southbound	Left Turn*	1	20	34	32	**85**	**55**	**56**	**60**	34	**256**
	Through*	0	0	0	0	**0**	**0**	**0**	**0**	0	**0**
	Right Turn	1	13	23	16	**26**	**32**	**25**	**30**	24	**113**
Total Intersection			403	483	514	**566**	**571**	**612**	**581**	384	**2,330**
Peak Hour Factor		0.95	* Shared Thru/Left Lane				** Free Flow Right Turn Lane				

P.M. COUNT

Direction of Travel	Lane Movement	Number of Lanes	Time Period 4:00 4:15	4:15 4:30	4:30 4:45	4:45 5:00	5:00 5:15	5:15 5:30	5:30 5:45	5:45 6:00	Peak Hour
Eastbound	Left Turn	0	0	0	0	0	**0**	**0**	**0**	**0**	**0**
	Through	2	142	162	170	155	**172**	**210**	**205**	**186**	**773**
	Right Turn**	1	15	19	22	26	**24**	**32**	**34**	**30**	**120**
Westbound	Left Turn	1	19	28	15	20	**26**	**15**	**20**	**21**	**82**
	Through	2	68	79	89	98	**105**	**118**	**103**	**95**	**421**
	Right Turn	0	0	0	0	0	**0**	**0**	**0**	**0**	**0**
Northbound	Left Turn	0	0	0	0	0	**0**	**0**	**0**	**0**	**0**
	Through	0	0	0	0	0	**0**	**0**	**0**	**0**	**0**
	Right Turn	0	0	0	0	0	**0**	**0**	**0**	**0**	**0**
Southbound	Left Turn*	1	52	58	65	59	**76**	**71**	**76**	**69**	**292**
	Through*	0	0	0	0	0	**0**	**0**	**0**	**0**	**0**
	Right Turn	1	16	24	37	54	**78**	**98**	**93**	**88**	**357**
Total Intersection			312	370	398	412	**481**	**544**	**531**	**489**	**2,045**
Peak Hour Factor		0.94	* Shared Thru/Left Lane				** Free Flow Right Turn Lane				

KHR ASSOCIATES
INTERSECTION TURN MOVEMENT COUNTS

Project:	The Canyon	**Count Date:**	6-Feb-08
Location:	County of Los Angeles, California	**Count By:**	J. Rodriguez/J.
North-South Street:	Fullerton Road	**A.M. Peak Hour:**	8:00 - 9:00 AM
East-West Street:	Colima Road	**P.M. Peak Hour:**	5:00 - 6:00 PM
Conditions:	Normal; Dry Pavement	**Input By:**	S. Carter

A.M. COUNT

Direction of Travel	Lane Movement	Number of Lanes	Time Period 7:00 7:15	7:15 7:30	7:30 7:45	7:45 8:00	8:00 8:15	8:15 8:30	8:30 8:45	8:45 9:00	Peak Hour
Eastbound	Left Turn	1	33	53	45	35	**43**	**40**	**17**	**25**	**125**
	Through	3	131	101	121	147	**111**	**119**	**72**	**138**	**440**
	Right Turn	0	26	47	41	25	**45**	**42**	**38**	**42**	**167**
Westbound	Left Turn	1	55	52	62	66	**86**	**66**	**40**	**30**	**222**
	Through	3	225	214	257	228	**357**	**352**	**221**	**310**	**1,240**
	Right Turn	0	81	113	97	99	**210**	**199**	**98**	**122**	**629**
Northbound	Left Turn	2	55	60	76	80	**89**	**94**	**80**	**74**	**337**
	Through	2	117	123	135	185	**249**	**247**	**235**	**191**	**922**
	Right Turn	0	35	23	40	43	**36**	**26**	**32**	**32**	**126**
Southbound	Left Turn	2	40	34	55	43	**49**	**42**	**30**	**68**	**189**
	Through	2	145	138	186	125	**167**	**152**	**160**	**130**	**609**
	Right Turn	0	39	32	37	29	**43**	**47**	**45**	**47**	**182**
Total Intersection			982	990	1152	1105	**1485**	**1426**	**1068**	**1209**	**5,188**
Peak Hour Factor		0.87									

P.M. COUNT

Direction of Travel	Lane Movement	Number of Lanes	Time Period 4:00 4:15	4:15 4:30	4:30 4:45	4:45 5:00	5:00 5:15	5:15 5:30	5:30 5:45	5:45 6:00	Peak Hour
Eastbound	Left Turn	1	46	57	42	40	**32**	**41**	**31**	**48**	**152**
	Through	3	227	254	217	274	**230**	**287**	**212**	**246**	**975**
	Right Turn	0	25	40	41	49	**54**	**53**	**47**	**49**	**203**
Westbound	Left Turn	1	51	39	51	47	**50**	**43**	**61**	**48**	**202**
	Through	3	205	174	165	163	**180**	**182**	**206**	**198**	**766**
	Right Turn	0	63	65	53	48	**77**	**52**	**61**	**73**	**263**
Northbound	Left Turn	2	55	53	66	58	**58**	**76**	**67**	**70**	**271**
	Through	2	147	162	193	175	**173**	**213**	**201**	**165**	**752**
	Right Turn	0	25	35	30	30	**26**	**26**	**26**	**38**	**116**
Southbound	Left Turn	2	78	92	86	94	**79**	**118**	**92**	**95**	**384**
	Through	2	140	177	146	166	**164**	**212**	**197**	**260**	**833**
	Right Turn	0	28	18	30	34	**38**	**41**	**37**	**43**	**159**
Total Intersection			1090	1166	1120	1178	**1161**	**1344**	**1238**	**1333**	**5,076**
Peak Hour Factor		0.94									

KHR ASSOCIATES
INTERSECTION TURN MOVEMENT COUNTS

Project:	The Canyon	**Count Date:**	6-Feb-08
Location:	County of Los Angeles, California	**Count By:**	M. Avalos/G. Estrada
North-South Street:	Nogales Street	**A.M. Peak Hour:**	7:30 - 8:30 AM
East-West Street:	Colima Road	**P.M. Peak Hour:**	5:00 - 6:00 PM
Conditions:	Normal; Dry Pavement	**Input By:**	S. Carter

A.M. COUNT

Direction of Travel	Lane Movement	Number of Lanes	Time Period 7:00 7:15	7:15 7:30	7:30 7:45	7:45 8:00	8:00 8:15	8:15 8:30	8:30 8:45	8:45 9:00	Peak Hour
Eastbound	Left Turn	2	66	76	**78**	**71**	**70**	**68**	63	40	**287**
	Through	2	170	209	**200**	**213**	**178**	**148**	167	132	**739**
	Right Turn	0	36	60	**57**	**84**	**69**	**65**	53	24	**275**
Westbound	Left Turn	1	58	73	**101**	**101**	**89**	**87**	77	96	**378**
	Through	3	130	180	**197**	**215**	**208**	**192**	169	162	**812**
	Right Turn	0	24	35	**39**	**37**	**30**	**44**	30	15	**150**
Northbound	Left Turn	1	59	70	**97**	**89**	**81**	**67**	72	64	**334**
	Through	2	130	164	**211**	**223**	**223**	**217**	203	160	**874**
	Right Turn	0	24	18	**19**	**26**	**21**	**33**	29	15	**99**
Southbound	Left Turn	2	72	69	**68**	**77**	**85**	**90**	70	45	**320**
	Through	2	95	184	**214**	**205**	**209**	**196**	166	112	**824**
	Right Turn	1	27	52	**76**	**75**	**64**	**66**	58	37	**281**
Total Intersection			891	1190	**1357**	**1416**	**1327**	**1273**	1157	902	**5,373**
Peak Hour Factor		0.95									

P.M. COUNT

Direction of Travel	Lane Movement	Number of Lanes	Time Period 4:00 4:15	4:15 4:30	4:30 4:45	4:45 5:00	5:00 5:15	5:15 5:30	5:30 5:45	5:45 6:00	Peak Hour
Eastbound	Left Turn	2	75	85	88	120	**121**	**144**	**97**	**119**	**481**
	Through	2	181	210	238	209	**180**	**243**	**237**	**283**	**943**
	Right Turn	0	19	32	43	24	**14**	**31**	**20**	**18**	**83**
Westbound	Left Turn	1	35	44	33	33	**39**	**49**	**62**	**51**	**201**
	Through	3	177	185	154	176	**176**	**220**	**287**	**252**	**935**
	Right Turn	0	52	78	52	70	**52**	**59**	**87**	**74**	**272**
Northbound	Left Turn	1	58	72	54	34	**60**	**64**	**79**	**97**	**300**
	Through	2	141	143	187	153	**179**	**196**	**202**	**188**	**765**
	Right Turn	0	41	29	40	39	**27**	**43**	**53**	**43**	**166**
Southbound	Left Turn	2	77	91	71	95	**98**	**95**	**118**	**113**	**424**
	Through	2	119	110	133	124	**172**	**138**	**219**	**138**	**667**
	Right Turn	1	85	62	54	92	**90**	**135**	**61**	**91**	**377**
Total Intersection			1060	1141	1147	1169	**1208**	**1417**	**1522**	**1467**	**5,614**
Peak Hour Factor		0.92									

KHR ASSOCIATES
INTERSECTION TURN MOVEMENT COUNTS

Project:	The Canyon	**Count Date:**	6-Feb-08
Location:	City of Industry, California	**Count By:**	G. Estrada/M.Avalos
North-South Street:	Fairway Drive	**A.M. Peak Hour:**	7:30 - 8:30 AM
East-West Street:	Valley Boulevard	**P.M. Peak Hour:**	5:00 - 6:00 PM
Conditions:	Normal; Dry Pavement	**Input By:**	S. Carter

A.M. COUNT

Direction of Travel	Lane Movement	Number of Lanes	Time Period 7:00 7:15	7:15 7:30	7:30 7:45	7:45 8:00	8:00 8:15	8:15 8:30	8:30 8:45	8:45 9:00	Peak Hour
Eastbound	Left Turn	1	3	1	**2**	**2**	**2**	**12**	3	3	**18**
	Through	2	82	112	**108**	**129**	**156**	**125**	121	123	**518**
	Right Turn	1	64	123	**98**	**159**	**134**	**121**	119	107	**512**
Westbound	Left Turn	2	36	50	**77**	**108**	**87**	**91**	87	75	**363**
	Through	2	165	185	**191**	**186**	**164**	**163**	163	103	**704**
	Right Turn	0	1	1	**0**	**9**	**12**	**3**	2	5	**24**
Northbound	Left Turn*	2	72	69	**48**	**77**	**82**	**91**	82	66	**298**
	Through*	0	14	10	**8**	**12**	**17**	**17**	15	4	**54**
	Right Turn	1	43	78	**84**	**91**	**104**	**75**	73	80	**354**
Southbound	Left Turn	1	1	6	**7**	**9**	**7**	**3**	11	7	**26**
	Through**	1	32	25	**41**	**34**	**43**	**36**	32	33	**154**
	Right Turn**	0	6	9	**5**	**8**	**7**	**16**	10	11	**36**
Total Intersection			519	669	**669**	**824**	**815**	**753**	718	617	**3,061**
Peak Hour Factor		0.93	* Shared Thru/Left Lane			** Shared Thru/Right Lane					

P.M. COUNT

Direction of Travel	Lane Movement	Number of Lanes	Time Period 4:00 4:15	4:15 4:30	4:30 4:45	4:45 5:00	5:00 5:15	5:15 5:30	5:30 5:45	5:45 6:00	Peak Hour
Eastbound	Left Turn	1	2	5	2	6	**7**	**7**	**2**	**6**	**22**
	Through	2	180	245	215	276	**247**	**279**	**248**	**247**	**1,021**
	Right Turn	1	52	58	62	85	**92**	**115**	**122**	**94**	**423**
Westbound	Left Turn	2	73	67	60	61	**101**	**100**	**136**	**128**	**465**
	Through	2	141	152	165	186	**184**	**267**	**184**	**160**	**795**
	Right Turn	0	0	3	13	7	**4**	**7**	**1**	**2**	**14**
Northbound	Left Turn*	2	85	77	98	81	**102**	**111**	**99**	**83**	**395**
	Through*	0	27	17	18	20	**41**	**30**	**50**	**26**	**147**
	Right Turn	1	105	94	111	92	**130**	**150**	**152**	**102**	**534**
Southbound	Left Turn	1	6	6	6	9	**8**	**2**	**6**	**9**	**25**
	Through**	1	14	19	11	12	**17**	**16**	**29**	**26**	**88**
	Right Turn**	0	4	2	8	1	**3**	**0**	**1**	**7**	**11**
Total Intersection			689	745	769	836	**936**	**1084**	**1030**	**890**	**3940**
Peak Hour Factor		0.91	* Shared Thru/Left Lane			** Shared Thru/Right Lane					

KHR ASSOCIATES
INTERSECTION TURN MOVEMENT COUNTS

Project:	The Canyon	**Count Date:**	6-Feb-08
Location:	City of Diamond Bar, California	**Count By:**	S. Carter/A. Morales
North-South Street:	Lemon Avenue	**A.M. Peak Hour:**	7:30 - 8:30 AM
East-West Street:	Golden Springs Drive	**P.M. Peak Hour:**	5:00 - 6:00 PM
Conditions:	Normal; Dry Pavement	**Input By:**	S. Carter

A.M. COUNT

Direction of Travel	Lane Movement	Number of Lanes	Time Period 7:00 7:15	7:15 7:30	7:30 7:45	7:45 8:00	8:00 8:15	8:15 8:30	8:30 8:45	8:45 9:00	Peak Hour
Eastbound	Left Turn	1	79	88	**87**	**75**	**76**	**68**	67	48	**306**
	Through	2	48	52	**74**	**82**	**79**	**70**	56	70	**305**
	Right Turn	1	7	2	**8**	**26**	**5**	**3**	2	2	**42**
Westbound	Left Turn	1	5	1	**14**	**8**	**4**	**7**	10	6	**33**
	Through	2	82	53	**121**	**103**	**123**	**119**	72	147	**466**
	Right Turn	1	52	58	**62**	**85**	**92**	**91**	55	84	**330**
Northbound	Left Turn	1	5	5	**7**	**17**	**14**	**6**	6	2	**44**
	Through	1	20	29	**17**	**49**	**57**	**11**	7	9	**134**
	Right Turn	0	6	6	**13**	**16**	**13**	**5**	6	2	**47**
Southbound	Left Turn	2	44	81	**85**	**67**	**66**	**80**	86	68	**298**
	Through	0	24	15	**47**	**69**	**29**	**22**	5	2	**167**
	Right Turn	1	10	19	**38**	**34**	**38**	**24**	19	10	**134**
Total Intersection			382	409	**573**	**631**	**596**	**506**	391	450	**2,306**
Peak Hour Factor		0.91									

P.M. COUNT

Direction of Travel	Lane Movement	Number of Lanes	Time Period 4:00 4:15	4:15 4:30	4:30 4:45	4:45 5:00	5:00 5:15	5:15 5:30	5:30 5:45	5:45 6:00	Peak Hour
Eastbound	Left Turn	1	87	76	86	94	**66**	**54**	**89**	**59**	**268**
	Through	2	129	104	133	145	**128**	**89**	**77**	**121**	**415**
	Right Turn	1	11	16	21	13	**15**	**7**	**9**	**13**	**44**
Westbound	Left Turn	1	14	6	11	16	**13**	**9**	**10**	**17**	**49**
	Through	2	136	156	111	143	**179**	**136**	**162**	**133**	**610**
	Right Turn	1	54	59	49	44	**74**	**81**	**68**	**87**	**310**
Northbound	Left Turn	1	3	8	4	3	**6**	**3**	**2**	**14**	**25**
	Through	1	7	4	2	11	**4**	**0**	**13**	**9**	**26**
	Right Turn	0	9	5	12	6	**9**	**7**	**15**	**6**	**37**
Southbound	Left Turn	2	62	89	101	95	**63**	**71**	**124**	**132**	**390**
	Through	0	23	55	24	61	**53**	**33**	**36**	**43**	**165**
	Right Turn	1	33	10	24	22	**18**	**38**	**43**	**32**	**131**
Total Intersection			568	588	578	653	**628**	**528**	**648**	**666**	**2,470**
Peak Hour Factor		0.93									

KHR ASSOCIATES
INTERSECTION TURN MOVEMENT COUNTS

Project:	The Canyon	**Count Date:**	7-Feb-08
Location:	City of Diamond Bar, California	**Count By:**	S. Carter/A. Morales
North-South Street:	Brea Canyon Road	**A.M. Peak Hour:**	7:30 - 8:30 AM
East-West Street:	Golden Springs Drive	**P.M. Peak Hour:**	4:15 - 5:15 PM
Conditions:	Normal; Dry Pavement	**Input By:**	S. Carter

A.M. COUNT

Direction of Travel	Lane Movement	Number of Lanes	Time Period 7:00 7:15	7:15 7:30	7:30 7:45	7:45 8:00	8:00 8:15	8:15 8:30	8:30 8:45	8:45 9:00	Peak Hour
Eastbound	Left Turn	2	19	29	**31**	**42**	**48**	**33**	27	39	**154**
	Through	2	21	26	**43**	**53**	**25**	**39**	15	25	**160**
	Right Turn	1	30	66	**50**	**63**	**46**	**62**	44	52	**221**
Westbound	Left Turn	2	40	34	**38**	**50**	**60**	**65**	31	32	**213**
	Through	2	41	36	**42**	**40**	**80**	**35**	25	32	**197**
	Right Turn	1	52	60	**48**	**69**	**63**	**29**	35	22	**209**
Northbound	Left Turn	1	18	24	**37**	**45**	**38**	**32**	35	28	**152**
	Through	2	52	91	**96**	**176**	**140**	**90**	86	87	**502**
	Right Turn	0	29	34	**45**	**27**	**31**	**24**	36	23	**127**
Southbound	Left Turn	2	60	80	**96**	**96**	**72**	**46**	46	22	**310**
	Through	2	119	99	**145**	**142**	**183**	**147**	120	129	**617**
	Right Turn	1	37	48	**53**	**41**	**57**	**54**	34	52	**205**
Total Intersection			518	627	**724**	**844**	**843**	**656**	534	543	**3,067**
Peak Hour Factor		0.91									

P.M. COUNT

Direction of Travel	Lane Movement	Number of Lanes	Time Period 4:00 4:15	4:15 4:30	4:30 4:45	4:45 5:00	5:00 5:15	5:15 5:30	5:30 5:45	5:45 6:00	Peak Hour
Eastbound	Left Turn	2	47	**64**	**104**	**108**	**57**	46	55	22	**333**
	Through	2	114	**248**	**233**	**199**	**177**	120	96	65	**857**
	Right Turn	1	50	**98**	**93**	**52**	**55**	28	55	56	**298**
Westbound	Left Turn	2	90	**72**	**79**	**74**	**56**	55	36	21	**281**
	Through	2	70	**96**	**91**	**97**	**77**	64	47	49	**361**
	Right Turn	1	90	**83**	**92**	**60**	**65**	57	48	37	**300**
Northbound	Left Turn	1	58	**51**	**81**	**53**	**51**	50	27	20	**236**
	Through	2	114	**121**	**222**	**227**	**229**	159	150	84	**799**
	Right Turn	0	52	**67**	**65**	**48**	**42**	54	37	34	**222**
Southbound	Left Turn	2	89	**105**	**79**	**124**	**132**	80	53	56	**440**
	Through	2	184	**164**	**156**	**211**	**170**	169	155	112	**701**
	Right Turn	1	68	**52**	**72**	**52**	**84**	72	45	32	**260**
Total Intersection			1026	**1221**	**1367**	**1305**	**1195**	954	804	588	**5,088**
Peak Hour Factor		0.93									

KHR ASSOCIATES
INTERSECTION TURN MOVEMENT COUNTS

Project:	The Canyon	**Count Date:**	12-Feb-08
Location:	City of Diamond Bar, California	**Count By:**	A.Morales
North-South Street:	Brea Canyon Road	**A.M. Peak Hour:**	7:15 - 8:15 AM
East-West Street:	Diamond Bar Boulevard	**P.M. Peak Hour:**	4:45 - 5:45 PM
Conditions:	Normal; Dry Pavement	**Input By:**	S. Carter

A.M. COUNT

Direction of Travel	Lane Movement	Number of Lanes	Time Period 7:00 7:15	7:15 7:30	7:30 7:45	7:45 8:00	8:00 8:15	8:15 8:30	8:30 8:45	8:45 9:00	Peak Hour
Eastbound	Left Turn	1	10	**18**	**20**	**32**	**57**	13	15	19	**127**
	Through	2	49	**46**	**37**	**60**	**71**	46	47	47	**214**
	Right Turn	0	51	**79**	**95**	**101**	**59**	35	20	19	**334**
Westbound	Left Turn	1	37	**35**	**52**	**46**	**23**	36	26	32	**156**
	Through	2	7	**18**	**17**	**25**	**30**	6	11	7	**90**
	Right Turn	0	7	**16**	**21**	**15**	**18**	12	10	13	**70**
Northbound	Left Turn	2	202	**215**	**206**	**162**	**175**	157	142	120	**758**
	Through*	0	95	**125**	**139**	**148**	**146**	160	155	147	**558**
	Right Turn*	2	13	**7**	**3**	**11**	**17**	9	14	9	**38**
Southbound	Left Turn	1	8	**3**	**7**	**8**	**8**	9	3	3	**26**
	Through	2	77	**36**	**42**	**42**	**38**	21	34	30	**158**
	Right Turn	0	6	**11**	**11**	**20**	**25**	29	19	11	**67**
Total Intersection			562	**609**	**650**	**670**	**667**	533	496	457	**2,596**
Peak Hour Factor		0.97	* Shared Thru/Right Lane								

P.M. COUNT

Direction of Travel	Lane Movement	Number of Lanes	Time Period 4:00 4:15	4:15 4:30	4:30 4:45	4:45 5:00	5:00 5:15	5:15 5:30	5:30 5:45	5:45 6:00	Peak Hour
Eastbound	Left Turn	1	25	32	27	**37**	**42**	**41**	**33**	39	**153**
	Through	2	163	178	187	**171**	**188**	**201**	**193**	210	**753**
	Right Turn	0	16	9	9	**13**	**8**	**16**	**17**	18	**54**
Westbound	Left Turn	1	56	59	45	**80**	**89**	**104**	**94**	89	**367**
	Through	2	67	95	90	**113**	**110**	**117**	**90**	91	**430**
	Right Turn	0	103	179	178	**198**	**201**	**159**	**179**	175	**737**
Northbound	Left Turn	2	41	31	21	**27**	**29**	**36**	**30**	32	**122**
	Through*	0	71	60	89	**84**	**100**	**89**	**80**	66	**353**
	Right Turn*	2	7	6	9	**8**	**9**	**6**	**9**	7	**32**
Southbound	Left Turn	1	3	8	13	**11**	**25**	**16**	**14**	20	**66**
	Through	2	12	8	13	**14**	**10**	**5**	**18**	9	**47**
	Right Turn	0	11	10	9	**16**	**5**	**4**	**10**	5	**35**
Total Intersection			575	675	690	**772**	**816**	**794**	**767**	761	**3149**
Peak Hour Factor		0.96	* Shared Thru/Right Lane								

KHR ASSOCIATES
INTERSECTION TURN MOVEMENT COUNTS

Project:	The Canyon	**Count Date:**	7-Feb-08
Location:	City of Diamond Bar, California	**Count By:**	S. Carter
North-South Street:	Brea Canyon Road	**A.M. Peak Hour:**	7:30 - 8:30 AM
East-West Street:	Pathfinder Road	**P.M. Peak Hour:**	4:45 - 5:45 PM
Conditions:	Normal; Dry Pavement	**Input By:**	S. Carter

A.M. COUNT

Direction of Travel	Lane Movement	Number of Lanes	Time Period 7:00 7:15	7:15 7:30	7:30 7:45	7:45 8:00	8:00 8:15	8:15 8:30	8:30 8:45	8:45 9:00	Peak Hour
Eastbound	Left Turn	1	10	29	**53**	**45**	**52**	**48**	39	40	**198**
	Through	2	44	61	**64**	**93**	**68**	**64**	68	58	**289**
	Right Turn	0	0	0	**0**	**0**	**0**	**0**	0	0	**0**
Westbound	Left Turn	0	0	0	**0**	**0**	**0**	**0**	0	0	**0**
	Through	2	66	73	**81**	**115**	**82**	**109**	91	92	**387**
	Right Turn	1	99	112	**164**	**123**	**118**	**133**	99	78	**538**
Northbound	Left Turn	0	0	0	**0**	**0**	**0**	**0**	0	0	**0**
	Through	0	0	0	**0**	**0**	**0**	**0**	0	0	**0**
	Right Turn	0	0	0	**0**	**0**	**0**	**0**	0	0	**0**
Southbound	Left Turn	2	89	84	**130**	**86**	**108**	**112**	85	76	**436**
	Through	0	0	0	**0**	**0**	**0**	**0**	0	0	**0**
	Right Turn	1	30	38	**22**	**35**	**37**	**32**	26	31	**126**
Total Intersection			338	397	**514**	**497**	**465**	**498**	408	375	**1,974**
Peak Hour Factor		0.96									

P.M. COUNT

Direction of Travel	Lane Movement	Number of Lanes	Time Period 4:00 4:15	4:15 4:30	4:30 4:45	4:45 5:00	5:00 5:15	5:15 5:30	5:30 5:45	5:45 6:00	Peak Hour
Eastbound	Left Turn	1	43	65	59	**90**	**89**	**101**	**82**	47	**362**
	Through	2	91	95	93	**118**	**102**	**127**	**102**	78	**449**
	Right Turn	0	0	0	0	**0**	**0**	**0**	**0**	0	**0**
Westbound	Left Turn	0	0	0	0	**0**	**0**	**0**	**0**	0	**0**
	Through	2	113	118	142	**113**	**144**	**133**	**109**	119	**499**
	Right Turn	1	154	118	105	**160**	**186**	**175**	**155**	102	**676**
Northbound	Left Turn	0	0	0	0	**0**	**0**	**0**	**0**	0	**0**
	Through	0	0	0	0	**0**	**0**	**0**	**0**	0	**0**
	Right Turn	0	0	0	0	**0**	**0**	**0**	**0**	0	**0**
Southbound	Left Turn	2	101	103	102	**91**	**127**	**108**	**87**	68	**413**
	Through	0	0	0	0	**0**	**0**	**0**	**0**	0	**0**
	Right Turn	1	37	32	38	**63**	**52**	**84**	**62**	51	**261**
Total Intersection			539	531	539	**635**	**700**	**728**	**597**	465	**2,660**
Peak Hour Factor		0.91									

KHR ASSOCIATES
INTERSECTION TURN MOVEMENT COUNTS

Project:	The Canyon	**Count Date:**	7-Feb-08
Location:	City of Diamond Bar, California	**Count By:**	S. Carter/A. Morales
North-South Street:	Fern Hollow Drive/Brea Canyon Road	**A.M. Peak Hour:**	7:15 - 8:15 AM
East-West Street:	Pathfinder Road	**P.M. Peak Hour:**	4:45 - 5:45 PM
Conditions:	Normal; Dry Pavement	**Input By:**	S. Carter

A.M. COUNT

Direction of Travel	Lane Movement	Number of Lanes	Time Period 7:00 7:15	7:15 7:30	7:30 7:45	7:45 8:00	8:00 8:15	8:15 8:30	8:30 8:45	8:45 9:00	Peak Hour
Eastbound	Left Turn	1	7	**19**	**36**	**29**	**44**	11	5	11	**128**
	Through	2	129	**145**	**147**	**165**	**136**	57	26	55	**593**
	Right Turn	1	24	**52**	**39**	**55**	**78**	28	17	17	**224**
Westbound	Left Turn	1	24	**20**	**9**	**15**	**9**	4	6	9	**53**
	Through	2	186	**177**	**185**	**239**	**257**	164	110	102	**858**
	Right Turn	1	17	**12**	**5**	**6**	**4**	2	0	0	**27**
Northbound	Left Turn*	2	68	**106**	**164**	**162**	**141**	66	24	21	**573**
	Through*	0	4	**16**	**4**	**6**	**4**	18	5	6	**30**
	Right Turn	1	4	**23**	**22**	**30**	**13**	11	2	7	**88**
Southbound	Left Turn	0	16	**18**	**21**	**31**	**6**	2	2	5	**76**
	Through**	1	17	**18**	**4**	**20**	**5**	5	6	5	**47**
	Right Turn	0	15	**43**	**41**	**64**	**25**	36	20	22	**173**
Total Intersection			511	**649**	**677**	**822**	**722**	404	223	260	**2,870**
Peak Hour Factor		0.87	* Shared Left & Thru Lane				** Shared Left, Thru, & Right Turn Lane				

P.M. COUNT

Direction of Travel	Lane Movement	Number of Lanes	Time Period 4:00 4:15	4:15 4:30	4:30 4:45	4:45 5:00	5:00 5:15	5:15 5:30	5:30 5:45	5:45 6:00	Peak Hour
Eastbound	Left Turn	1	21	22	13	**29**	**20**	**27**	**36**	19	**112**
	Through	2	143	153	130	**176**	**211**	**183**	**248**	214	**818**
	Right Turn	1	30	35	24	**38**	**26**	**44**	**38**	36	**146**
Westbound	Left Turn	1	7	7	8	**14**	**9**	**12**	**14**	14	**49**
	Through	2	97	100	83	**88**	**106**	**108**	**98**	98	**400**
	Right Turn	1	1	2	3	**2**	**5**	**18**	**5**	4	**30**
Northbound	Left Turn*	2	107	122	89	**131**	**113**	**132**	**114**	88	**490**
	Through*	1	4	7	3	**7**	**9**	**2**	**2**	4	**20**
	Right Turn	1	16	15	15	**15**	**22**	**12**	**15**	11	**64**
Southbound	Left Turn	0	6	7	1	**6**	**5**	**5**	**2**	4	**18**
	Through**	1	4	2	2	**5**	**4**	**2**	**3**	4	**14**
	Right Turn	0	14	9	12	**11**	**10**	**9**	**8**	13	**42**
Total Intersection			450	481	383	**522**	**540**	**554**	**583**	509	**2,203**
Peak Hour Factor		0.94	* Shared Left & Thru Lane				** Shared Left, Thru, & Right Turn Lane				

KHR ASSOCIATES
INTERSECTION TURN MOVEMENT COUNTS

Project:	The Canyon	**Count Date:**	26-Feb-08
Location:	City of Industry, California	**Count By:**	S.Carter
North-South Street:	Fairway Drive	**A.M. Peak Hour:**	7:30 - 8:30 AM
East-West Street:	Walnut Drive	**P.M. Peak Hour:**	4:30 - 5:30 PM
Conditions:	Normal; Dry Pavement	**Input By:**	S. Carter

A.M. COUNT

Direction of Travel	Lane Movement	Number of Lanes	Time Period 7:00 7:15	7:15 7:30	7:30 7:45	7:45 8:00	8:00 8:15	8:15 8:30	8:30 8:45	8:45 9:00	Peak Hour
Eastbound	Left Turn	0	7	11	**16**	**13**	**17**	**11**	10	13	**57**
	Through	2	26	38	**43**	**37**	**25**	**19**	20	16	**124**
	Right Turn	0	18	22	**29**	**36**	**33**	**28**	22	17	**126**
Westbound	Left Turn	0	22	17	**27**	**37**	**30**	**26**	19	21	**120**
	Through	2	17	21	**26**	**25**	**23**	**29**	15	9	**103**
	Right Turn	0	14	18	**29**	**22**	**20**	**16**	8	5	**87**
Northbound	Left Turn	1	23	36	**33**	**41**	**39**	**35**	29	22	**148**
	Through*	2	98	115	**129**	**146**	**166**	**131**	124	112	**572**
	Right Turn*	0	16	25	**23**	**26**	**19**	**16**	11	14	**84**
Southbound	Left Turn	1	3	5	**4**	**1**	**7**	**10**	3	3	**22**
	Through*	3	76	84	**99**	**114**	**125**	**118**	101	97	**456**
	Right Turn*	0	2	5	**11**	**8**	**10**	**6**	3	0	**35**
Total Intersection			322	397	**469**	**506**	**514**	**445**	365	329	**1,934**
Peak Hour Factor		0.94	* Shared Thru/Right Lane								

P.M. COUNT

Direction of Travel	Lane Movement	Number of Lanes	Time Period 4:00 4:15	4:15 4:30	4:30 4:45	4:45 5:00	5:00 5:15	5:15 5:30	5:30 5:45	5:45 6:00	Peak Hour
Eastbound	Left Turn	0	19	23	**18**	**14**	**11**	**12**	11	7	**55**
	Through	2	44	49	**47**	**27**	**33**	**29**	31	26	**136**
	Right Turn	0	27	33	**42**	**36**	**45**	**51**	32	29	**174**
Westbound	Left Turn	0	35	28	**38**	**30**	**34**	**37**	24	28	**139**
	Through	2	22	24	**31**	**25**	**21**	**18**	17	13	**95**
	Right Turn	0	6	12	**11**	**11**	**15**	**9**	12	7	**46**
Northbound	Left Turn	1	25	26	**29**	**35**	**54**	**42**	36	30	**160**
	Through*	2	155	139	**132**	**146**	**157**	**135**	138	129	**570**
	Right Turn*	0	17	13	**19**	**17**	**21**	**14**	9	10	**71**
Southbound	Left Turn	1	15	10	**11**	**13**	**8**	**19**	13	10	**51**
	Through*	3	181	171	**219**	**195**	**201**	**184**	168	144	**799**
	Right Turn*	0	23	27	**19**	**13**	**20**	**17**	14	11	**69**
Total Intersection			569	555	**616**	**562**	**620**	**567**	505	444	**2365**
Peak Hour Factor		0.95	* Shared Thru/Right Lane								

KHR ASSOCIATES
INTERSECTION TURN MOVEMENT COUNTS

Project:	The Canyon	**Count Date:**	6-Feb-08
Location:	City of Industry, California	**Count By:**	R.Pangelinan
North-South Street:	Fallow Field	**A.M. Peak Hour:**	7:30 - 8:30 AM
East-West Street:	Brea Canyon Cutoff Road	**P.M. Peak Hour:**	4:15 - 5:15 PM
Conditions:	Normal; Dry Pavement	**Input By:**	S. Carter

A.M. COUNT

Direction of Travel	Lane Movement	Number of Lanes	Time Period 7:00 7:15	7:15 7:30	7:30 7:45	7:45 8:00	8:00 8:15	8:15 8:30	8:30 8:45	8:45 9:00	Peak Hour
Eastbound	Left Turn	1	1	5	**6**	**4**	**2**	**1**	2	2	**13**
	Through	1	4	9	**13**	**7**	**3**	**6**	7	3	**29**
	Right Turn	0	1	4	**3**	**4**	**9**	**6**	5	2	**22**
Westbound	Left Turn	1	11	14	**20**	**22**	**29**	**26**	19	17	**97**
	Through	1	2	2	**5**	**6**	**5**	**2**	1	1	**18**
	Right Turn	0	13	11	**19**	**14**	**16**	**13**	13	9	**62**
Northbound	Left Turn	1	2	5	**2**	**5**	**7**	**3**	1	1	**17**
	Through	2	55	62	**71**	**83**	**80**	**89**	74	69	**323**
	Right Turn	0	14	22	**19**	**22**	**17**	**13**	8	11	**71**
Southbound	Left Turn	1	4	7	**15**	**12**	**19**	**11**	6	2	**57**
	Through	2	74	86	**95**	**93**	**101**	**114**	91	87	**403**
	Right Turn	0	8	11	**14**	**13**	**9**	**7**	8	5	**43**
Total Intersection			189	238	**282**	**285**	**297**	**291**	235	209	**1,155**
Peak Hour Factor		0.97									

P.M. COUNT

Direction of Travel	Lane Movement	Number of Lanes	Time Period 4:00 4:15	4:15 4:30	4:30 4:45	4:45 5:00	5:00 5:15	5:15 5:30	5:30 5:45	5:45 6:00	Peak Hour
Eastbound	Left Turn	1	17	**18**	**23**	**27**	**24**	21	24	19	**92**
	Through	1	6	**8**	**9**	**16**	**20**	14	15	11	**53**
	Right Turn	0	14	**24**	**27**	**18**	**17**	11	13	10	**86**
Westbound		1	15	**16**	**21**	**25**	**23**	16	13	12	**85**
	Through	1	9	**14**	**10**	**8**	**10**	6	3	5	**42**
	Right Turn	0	12	**9**	**17**	**15**	**9**	11	7	4	**50**
Northbound	Left Turn	1	14	**19**	**7**	**15**	**12**	7	10	9	**53**
	Through	2	104	**119**	**126**	**145**	**152**	128	113	116	**542**
	Right Turn	0	20	**27**	**25**	**33**	**36**	29	21	23	**121**
Southbound	Left Turn	1	11	**16**	**22**	**27**	**18**	10	9	9	**83**
	Through	2	94	**85**	**89**	**91**	**72**	77	65	58	**337**
	Right Turn	0	15	**11**	**16**	**15**	**24**	19	16	14	**66**
Total Intersection			331	**366**	**392**	**435**	**417**	349	309	290	**1610**
Peak Hour Factor		0.93									

Appendix B

24-Hour Directional Counts

Traffic Data Services, Inc.

2223 Wellington Ave., Suite 315
Santa Ana, CA 92701

STREET : BREA CANYON CUTOFF
PARAMETERS : S/O COLIMA
CITY : DIAMOND BAR

Site: 02801V03
Date: 2/7/2008
Thursday

24 Hour Volume

Begin	NB		SB		Combined		Begin	NB		SB		Combined	
12:00 AM	19	65	17	65	36	130	12:00 PM	107	435	129	498	236	933
12:15 AM	32		26		58		12:15 PM	110		135		245	
12:30 AM	10		16		26		12:30 PM	100		112		212	
12:45 AM	4		6		10		12:45 PM	118		122		240	
1:00 AM	5	23	9	43	14	66	1:00 PM	125	460	133	526	258	986
1:15 AM	10		13		23		1:15 PM	107		124		231	
1:30 AM	4		13		17		1:30 PM	121		138		259	
1:45 AM	4		8		12		1:45 PM	107		131		238	
2:00 AM	7	25	9	26	16	51	2:00 PM	135	604	147	730	282	1334
2:15 AM	4		8		12		2:15 PM	142		172		314	
2:30 AM	3		8		11		2:30 PM	154		185		339	
2:45 AM	11		1		12		2:45 PM	173		226		399	
3:00 AM	7	18	8	26	15	44	3:00 PM	163	669	254	830	417	1499
3:15 AM	1		7		8		3:15 PM	187		208		395	
3:30 AM	5		8		13		3:30 PM	156		178		334	
3:45 AM	5		3		8		3:45 PM	163		190		353	
4:00 AM	4	39	5	44	9	83	4:00 PM	195	825	175	763	370	1588
4:15 AM	8		10		18		4:15 PM	195		173		368	
4:30 AM	11		11		22		4:30 PM	210		216		426	
4:45 AM	16		18		34		4:45 PM	225		199		424	
5:00 AM	24	115	24	122	48	237	5:00 PM	206	925	229	992	435	1917
5:15 AM	24		32		56		5:15 PM	221		251		472	
5:30 AM	29		32		61		5:30 PM	249		254		503	
5:45 AM	38		34		72		5:45 PM	249		258		507	
6:00 AM	67	280	39	259	106	539	6:00 PM	229	852	253	839	482	1691
6:15 AM	55		71		126		6:15 PM	215		202		417	
6:30 AM	64		73		137		6:30 PM	218		204		422	
6:45 AM	94		76		170		6:45 PM	190		180		370	
7:00 AM	129	656	84	541	213	1197	7:00 PM	141	514	174	569	315	1083
7:15 AM	152		97		249		7:15 PM	129		160		289	
7:30 AM	154		125		279		7:30 PM	134		125		259	
7:45 AM	221		235		456		7:45 PM	110		110		220	
8:00 AM	195	763	188	571	383	1334	8:00 PM	90	339	116	467	206	806
8:15 AM	209		151		360		8:15 PM	82		124		206	
8:30 AM	186		115		301		8:30 PM	83		106		189	
8:45 AM	173		117		290		8:45 PM	84		121		205	
9:00 AM	122	487	103	389	225	876	9:00 PM	72	274	96	347	168	621
9:15 AM	118		90		208		9:15 PM	67		84		151	
9:30 AM	112		91		203		9:30 PM	75		80		155	
9:45 AM	135		105		240		9:45 PM	60		87		147	
10:00 AM	120	414	103	386	223	800	10:00 PM	49	186	59	226	108	412
10:15 AM	106		79		185		10:15 PM	70		71		141	
10:30 AM	92		102		194		10:30 PM	31		53		84	
10:45 AM	96		102		198		10:45 PM	36		43		79	
11:00 AM	120	428	100	419	220	847	11:00 PM	39	100	37	124	76	224
11:15 AM	99		106		205		11:15 PM	20		34		54	
11:30 AM	98		111		209		11:30 PM	22		29		51	
11:45 AM	111		102		213		11:45 PM	19		24		43	

	NB	SB	Combined
24 Hour Volume	9496 (49.2%)	9802 (50.8%)	19298

	12:00 AM - 12:00 PM			12:00 PM - 12:00 AM		
	NB	SB	Combined	NB	SB	Combined
Count	3313	2891	6204	6183	6911	13094
	53.4 %	46.6 %		47.2 %	52.8 %	
Peak Hour	7:45 AM	7:30 AM	7:45 AM	5:15 PM	5:15 PM	5:15 PM
Volume	811	699	1500	948	1016	1964
Factor	0.92	0.74	0.82	0.95	0.98	0.97

Traffic Data Services, Inc.

2223 Wellington Ave., Suite 315
Santa Ana, CA 92701

STREET : BREA CANYON CUTOFF
PARAMETERS : S/O COLIMA
CITY : DIAMOND BAR

Site: 02801V03
Date: 2/8/2008
Friday

24 Hour Volume

Begin	NB		SB		Combined		Begin	NB		SB		Combined	
12:00 AM	14	48	41	88	55	136	12:00 PM	131	500	162	544	293	1044
12:15 AM	16		18		34		12:15 PM	118		126		244	
12:30 AM	7		13		20		12:30 PM	142		109		251	
12:45 AM	11		16		27		12:45 PM	109		147		256	
1:00 AM	9	29	15	42	24	71	1:00 PM	125	616	139	618	264	1234
1:15 AM	4		8		12		1:15 PM	158		148		306	
1:30 AM	10		10		20		1:30 PM	174		160		334	
1:45 AM	6		9		15		1:45 PM	159		171		330	
2:00 AM	3	21	5	27	8	48	2:00 PM	168	699	149	783	317	1482
2:15 AM	9		9		18		2:15 PM	167		205		372	
2:30 AM	3		3		6		2:30 PM	163		217		380	
2:45 AM	6		10		16		2:45 PM	201		212		413	
3:00 AM	11	21	7	22	18	43	3:00 PM	215	845	222	854	437	1699
3:15 AM	1		4		5		3:15 PM	227		190		417	
3:30 AM	4		7		11		3:30 PM	194		227		421	
3:45 AM	5		4		9		3:45 PM	209		215		424	
4:00 AM	8	46	6	44	14	90	4:00 PM	223	848	203	835	426	1683
4:15 AM	8		11		19		4:15 PM	200		230		430	
4:30 AM	14		11		25		4:30 PM	206		197		403	
4:45 AM	16		16		32		4:45 PM	219		205		424	
5:00 AM	21	102	17	123	38	225	5:00 PM	203	945	239	967	442	1912
5:15 AM	29		33		62		5:15 PM	234		225		459	
5:30 AM	17		39		56		5:30 PM	240		259		499	
5:45 AM	35		34		69		5:45 PM	268		244		512	
6:00 AM	55	288	56	333	111	621	6:00 PM	262	938	262	843	524	1781
6:15 AM	64		84		148		6:15 PM	270		238		508	
6:30 AM	64		91		155		6:30 PM	218		184		402	
6:45 AM	105		102		207		6:45 PM	188		159		347	
7:00 AM	107	597	93	532	200	1129	7:00 PM	185	673	224	700	409	1373
7:15 AM	144		117		261		7:15 PM	185		169		354	
7:30 AM	148		135		283		7:30 PM	161		151		312	
7:45 AM	198		187		385		7:45 PM	142		156		298	
8:00 AM	212	731	192	566	404	1297	8:00 PM	106	368	159	578	265	946
8:15 AM	191		125		316		8:15 PM	93		153		246	
8:30 AM	150		114		264		8:30 PM	96		135		231	
8:45 AM	178		135		313		8:45 PM	73		131		204	
9:00 AM	144	507	96	402	240	909	9:00 PM	91	343	123	520	214	863
9:15 AM	137		112		249		9:15 PM	82		114		196	
9:30 AM	109		91		200		9:30 PM	94		127		221	
9:45 AM	117		103		220		9:45 PM	76		156		232	
10:00 AM	123	477	85	411	208	888	10:00 PM	75	283	128	418	203	701
10:15 AM	104		108		212		10:15 PM	82		113		195	
10:30 AM	133		104		237		10:30 PM	72		96		168	
10:45 AM	117		114		231		10:45 PM	54		81		135	
11:00 AM	150	602	110	466	260	1068	11:00 PM	50	174	62	222	112	396
11:15 AM	143		117		260		11:15 PM	53		63		116	
11:30 AM	147		115		262		11:30 PM	42		44		86	
11:45 AM	162		124		286		11:45 PM	29		53		82	

	NB	SB	Combined
24 Hour Volume	10701 (49.5%)	10938 (50.5%)	21639

	12:00 AM - 12:00 PM			12:00 PM - 12:00 AM		
	NB	SB	Combined	NB	SB	Combined
Count	3469	3056	6525	7232	7882	15114
	53.2 %	46.8 %		47.8 %	52.2 %	
Peak Hour	7:45 AM	7:30 AM	7:30 AM	5:30 PM	5:30 PM	5:30 PM
Volume	751	639	1388	1040	1003	2043
Factor	0.89	0.83	0.86	0.96	0.96	0.97

Traffic Data Services, Inc.

2223 Wellington Ave., Suite 315
Santa Ana, CA 92701

STREET : BREA CANYON CUTOFF
PARAMETERS : S/O COLIMA
CITY : DIAMOND BAR

Site: 02801V03
Date: 2/9/2008
Saturday

24 Hour Volume

Begin	NB		SB		Combined		Begin	NB		SB		Combined	
12:00 AM	20	83	38	103	58	186	12:00 PM	167	637	188	737	355	1374
12:15 AM	18		35		53		12:15 PM	166		215		381	
12:30 AM	31		15		46		12:30 PM	156		150		306	
12:45 AM	14		15		29		12:45 PM	148		184		332	
1:00 AM	12	52	21	67	33	119	1:00 PM	155	565	201	776	356	1341
1:15 AM	16		16		32		1:15 PM	123		191		314	
1:30 AM	13		18		31		1:30 PM	143		199		342	
1:45 AM	11		12		23		1:45 PM	144		185		329	
2:00 AM	12	32	21	72	33	104	2:00 PM	145	525	201	755	346	1280
2:15 AM	4		24		28		2:15 PM	128		174		302	
2:30 AM	13		14		27		2:30 PM	120		199		319	
2:45 AM	3		13		16		2:45 PM	132		181		313	
3:00 AM	10	31	10	30	20	61	3:00 PM	152	553	199	761	351	1314
3:15 AM	9		6		15		3:15 PM	130		189		319	
3:30 AM	5		9		14		3:30 PM	127		195		322	
3:45 AM	7		5		12		3:45 PM	144		178		322	
4:00 AM	6	35	8	25	14	60	4:00 PM	130	560	224	814	354	1374
4:15 AM	14		8		22		4:15 PM	139		195		334	
4:30 AM	6		5		11		4:30 PM	152		188		340	
4:45 AM	9		4		13		4:45 PM	139		207		346	
5:00 AM	7	62	6	58	13	120	5:00 PM	149	598	200	740	349	1338
5:15 AM	8		20		28		5:15 PM	160		179		339	
5:30 AM	20		15		35		5:30 PM	165		189		354	
5:45 AM	27		17		44		5:45 PM	124		172		296	
6:00 AM	17	119	14	108	31	227	6:00 PM	154	563	170	621	324	1184
6:15 AM	28		25		53		6:15 PM	146		154		300	
6:30 AM	31		32		63		6:30 PM	139		170		309	
6:45 AM	43		37		80		6:45 PM	124		127		251	
7:00 AM	56	233	30	197	86	430	7:00 PM	133	432	153	586	286	1018
7:15 AM	64		48		112		7:15 PM	105		152		257	
7:30 AM	40		57		97		7:30 PM	91		152		243	
7:45 AM	73		62		135		7:45 PM	103		129		232	
8:00 AM	87	444	53	294	140	738	8:00 PM	92	336	148	541	240	877
8:15 AM	93		54		147		8:15 PM	88		158		246	
8:30 AM	118		92		210		8:30 PM	62		126		188	
8:45 AM	146		95		241		8:45 PM	94		109		203	
9:00 AM	129	563	123	542	252	1105	9:00 PM	72	292	133	440	205	732
9:15 AM	140		122		262		9:15 PM	77		95		172	
9:30 AM	127		144		271		9:30 PM	73		97		170	
9:45 AM	167		153		320		9:45 PM	70		115		185	
10:00 AM	162	602	154	688	316	1290	10:00 PM	85	285	105	321	190	606
10:15 AM	116		162		278		10:15 PM	73		95		168	
10:30 AM	152		196		348		10:30 PM	57		57		114	
10:45 AM	172		176		348		10:45 PM	70		64		134	
11:00 AM	158	620	174	733	332	1353	11:00 PM	53	170	69	195	122	365
11:15 AM	144		177		321		11:15 PM	46		50		96	
11:30 AM	157		190		347		11:30 PM	28		43		71	
11:45 AM	161		192		353		11:45 PM	43		33		76	

	NB	SB	Combined
24 Hour Volume	8392 (45.1%)	10204 (54.9%)	18596

	12:00 AM - 12:00 PM			**12:00 PM - 12:00 AM**		
	NB	SB	Combined	NB	SB	Combined
Count	2876	2917	5793	5516	7287	12803
	49.6 %	50.4 %		43.1 %	56.9 %	
Peak Hour	10:45 AM	11:00 AM	11:00 AM	12:00 PM	4:00 PM	4:45 PM
Volume	631	733	1353	637	814	1388
Factor	0.92	0.95	0.96	0.95	0.91	0.98

Traffic Data Services, Inc.

2223 Wellington Ave., Suite 315
Santa Ana, CA 92701

STREET : BREA CANYON CUTOFF
PARAMETERS : N/O PATHFINDER
CITY : DIAMOND BAR

Site: 02801V04
Date: 2/7/2008
Thursday

24 Hour Volume

Begin	SB		NB		Combined		Begin	SB		NB		Combined	
12:00 AM	15	54	31	100	46	154	12:00 PM	95	353	170	672	265	1025
12:15 AM	21		39		60		12:15 PM	99		189		288	
12:30 AM	11		19		30		12:30 PM	77		141		218	
12:45 AM	7		11		18		12:45 PM	82		172		254	
1:00 AM	9	38	19	61	28	99	1:00 PM	104	386	170	688	274	1074
1:15 AM	12		18		30		1:15 PM	85		161		246	
1:30 AM	13		17		30		1:30 PM	94		175		269	
1:45 AM	4		7		11		1:45 PM	103		182		285	
2:00 AM	4	23	11	49	15	72	2:00 PM	103	512	200	973	303	1485
2:15 AM	10		18		28		2:15 PM	125		234		359	
2:30 AM	8		12		20		2:30 PM	143		261		404	
2:45 AM	1		8		9		2:45 PM	141		278		419	
3:00 AM	6	23	11	33	17	56	3:00 PM	164	611	291	1158	455	1769
3:15 AM	6		7		13		3:15 PM	146		287		433	
3:30 AM	8		10		18		3:30 PM	156		294		450	
3:45 AM	3		5		8		3:45 PM	145		286		431	
4:00 AM	9	52	13	80	22	132	4:00 PM	150	595	307	1278	457	1873
4:15 AM	12		18		30		4:15 PM	123		280		403	
4:30 AM	13		20		33		4:30 PM	163		329		492	
4:45 AM	18		29		47		4:45 PM	159		362		521	
5:00 AM	29	156	47	236	76	392	5:00 PM	179	787	376	1594	555	2381
5:15 AM	34		53		87		5:15 PM	202		392		594	
5:30 AM	52		67		119		5:30 PM	195		403		598	
5:45 AM	41		69		110		5:45 PM	211		423		634	
6:00 AM	62	354	107	563	169	917	6:00 PM	204	675	396	1414	600	2089
6:15 AM	87		129		216		6:15 PM	168		378		546	
6:30 AM	97		147		244		6:30 PM	155		337		492	
6:45 AM	108		180		288		6:45 PM	148		303		451	
7:00 AM	129	564	224	1030	353	1594	7:00 PM	126	439	226	846	352	1285
7:15 AM	124		231		355		7:15 PM	122		227		349	
7:30 AM	129		240		369		7:30 PM	102		216		318	
7:45 AM	182		335		517		7:45 PM	89		177		266	
8:00 AM	148	505	299	1028	447	1533	8:00 PM	90	341	156	603	246	944
8:15 AM	132		283		415		8:15 PM	88		155		243	
8:30 AM	120		229		349		8:30 PM	86		150		236	
8:45 AM	105		217		322		8:45 PM	77		142		219	
9:00 AM	99	351	183	719	282	1070	9:00 PM	77	261	123	460	200	721
9:15 AM	85		184		269		9:15 PM	66		122		188	
9:30 AM	78		169		247		9:30 PM	62		116		178	
9:45 AM	89		183		272		9:45 PM	56		99		155	
10:00 AM	87	318	173	626	260	944	10:00 PM	46	172	91	313	137	485
10:15 AM	67		140		207		10:15 PM	47		86		133	
10:30 AM	81		156		237		10:30 PM	37		67		104	
10:45 AM	83		157		240		10:45 PM	42		69		111	
11:00 AM	84	301	167	615	251	916	11:00 PM	18	83	40	154	58	237
11:15 AM	71		137		208		11:15 PM	23		40		63	
11:30 AM	85		163		248		11:30 PM	21		38		59	
11:45 AM	61		148		209		11:45 PM	21		36		57	

	SB	NB	Combined
24 Hour Volume	7954 (34.2%)	15293 (65.8%)	23247

	12:00 AM - 12:00 PM			12:00 PM - 12:00 AM		
	SB	NB	Combined	SB	NB	Combined
Count	2739	5140	7879	5215	10153	15368
	34.8 %	65.2 %		33.9 %	66.1 %	
Peak Hour	7:30 AM	7:30 AM	7:30 AM	5:15 PM	5:15 PM	5:15 PM
Volume	591	1157	1748	812	1614	2426
Factor	0.81	0.86	0.85	0.96	0.95	0.96

Traffic Data Services, Inc.

2223 Wellington Ave., Suite 315
Santa Ana, CA 92701

STREET : BREA CANYON CUTOFF
PARAMETERS : N/O PATHFINDER
CITY : DIAMOND BAR

Site: 02801V04
Date: 2/8/2008
Friday

24 Hour Volume

Begin	SB		NB		Combined		Begin	SB		NB		Combined	
12:00 AM	28	64	40	103	68	167	12:00 PM	115	393	212	766	327	1159
12:15 AM	12		25		37		12:15 PM	93		192		285	
12:30 AM	10		15		25		12:30 PM	81		189		270	
12:45 AM	14		23		37		12:45 PM	104		173		277	
1:00 AM	10	30	20	56	30	86	1:00 PM	97	435	181	921	278	1356
1:15 AM	6		7		13		1:15 PM	102		219		321	
1:30 AM	7		17		24		1:30 PM	110		264		374	
1:45 AM	7		12		19		1:45 PM	126		257		383	
2:00 AM	3	21	10	47	13	68	2:00 PM	110	562	243	1148	353	1710
2:15 AM	9		16		25		2:15 PM	150		277		427	
2:30 AM	1		7		8		2:30 PM	164		312		476	
2:45 AM	8		14		22		2:45 PM	138		316		454	
3:00 AM	5	18	10	30	15	48	3:00 PM	145	646	306	1310	451	1956
3:15 AM	4		4		8		3:15 PM	166		342		508	
3:30 AM	5		6		11		3:30 PM	165		321		486	
3:45 AM	4		10		14		3:45 PM	170		341		511	
4:00 AM	5	39	9	66	14	105	4:00 PM	162	632	324	1315	486	1947
4:15 AM	13		17		30		4:15 PM	162		325		487	
4:30 AM	10		18		28		4:30 PM	142		315		457	
4:45 AM	11		22		33		4:45 PM	166		351		517	
5:00 AM	27	142	42	213	69	355	5:00 PM	180	765	371	1620	551	2385
5:15 AM	36		55		91		5:15 PM	197		385		582	
5:30 AM	43		58		101		5:30 PM	203		435		638	
5:45 AM	36		58		94		5:45 PM	185		429		614	
6:00 AM	60	364	94	569	154	933	6:00 PM	183	662	398	1448	581	2110
6:15 AM	89		136		225		6:15 PM	191		409		600	
6:30 AM	108		152		260		6:30 PM	140		346		486	
6:45 AM	107		187		294		6:45 PM	148		295		443	
7:00 AM	104	533	188	984	292	1517	7:00 PM	171	560	321	1136	492	1696
7:15 AM	116		213		329		7:15 PM	138		301		439	
7:30 AM	151		260		411		7:30 PM	117		257		374	
7:45 AM	162		323		485		7:45 PM	134		257		391	
8:00 AM	144	476	316	999	460	1475	8:00 PM	120	457	202	733	322	1190
8:15 AM	120		248		368		8:15 PM	135		208		343	
8:30 AM	104		208		312		8:30 PM	93		152		245	
8:45 AM	108		227		335		8:45 PM	109		171		280	
9:00 AM	82	360	196	754	278	1114	9:00 PM	81	400	158	668	239	1068
9:15 AM	95		197		292		9:15 PM	107		180		287	
9:30 AM	92		180		272		9:30 PM	93		163		256	
9:45 AM	91		181		272		9:45 PM	119		167		286	
10:00 AM	75	323	145	645	220	968	10:00 PM	106	327	172	561	278	888
10:15 AM	91		177		268		10:15 PM	84		155		239	
10:30 AM	77		154		231		10:30 PM	74		130		204	
10:45 AM	80		169		249		10:45 PM	63		104		167	
11:00 AM	75	328	152	760	227	1088	11:00 PM	46	161	96	301	142	462
11:15 AM	87		202		289		11:15 PM	42		76		118	
11:30 AM	84		199		283		11:30 PM	37		68		105	
11:45 AM	82		207		289		11:45 PM	36		61		97	

	SB	NB	Combined
24 Hour Volume	8698 (33.6%)	17153 (66.4%)	25851

	12:00 AM - 12:00 PM			12:00 PM - 12:00 AM		
	SB	NB	Combined	SB	NB	Combined
Count	2698	5226	7924	6000	11927	17927
	34.0 %	66.0 %		33.5 %	66.5 %	
Peak Hour	7:30 AM	7:30 AM	7:30 AM	5:15 PM	5:30 PM	5:30 PM
Volume	577	1147	1724	768	1671	2433
Factor	0.89	0.89	0.89	0.95	0.96	0.95

Traffic Data Services, Inc.

2223 Wellington Ave., Suite 315
Santa Ana, CA 92701

STREET : BREA CANYON CUTOFF
PARAMETERS : N/O PATHFINDER
CITY : DIAMOND BAR

Site: 02801V04
Date: 2/9/2008
Saturday

24 Hour Volume

Begin	SB		NB		Combined		Begin	SB		NB		Combined	
12:00 AM	27	72	41	143	68	215	12:00 PM	115	502	232	952	347	1454
12:15 AM	26		45		71		12:15 PM	157		283		440	
12:30 AM	12		38		50		12:30 PM	98		207		305	
12:45 AM	7		19		26		12:45 PM	132		230		362	
1:00 AM	13	46	27	93	40	139	1:00 PM	145	582	250	985	395	1567
1:15 AM	12		24		36		1:15 PM	148		241		389	
1:30 AM	12		24		36		1:30 PM	142		232		374	
1:45 AM	9		18		27		1:45 PM	147		262		409	
2:00 AM	15	47	20	66	35	113	2:00 PM	148	562	236	945	384	1507
2:15 AM	15		20		35		2:15 PM	145		247		392	
2:30 AM	11		15		26		2:30 PM	137		233		370	
2:45 AM	6		11		17		2:45 PM	132		229		361	
3:00 AM	9	30	17	55	26	85	3:00 PM	122	554	227	957	349	1511
3:15 AM	8		14		22		3:15 PM	167		263		430	
3:30 AM	6		12		18		3:30 PM	130		229		359	
3:45 AM	7		12		19		3:45 PM	135		238		373	
4:00 AM	6	21	14	51	20	72	4:00 PM	151	615	249	1051	400	1666
4:15 AM	7		15		22		4:15 PM	151		253		404	
4:30 AM	6		10		16		4:30 PM	135		257		392	
4:45 AM	2		12		14		4:45 PM	178		292		470	
5:00 AM	4	53	11	106	15	159	5:00 PM	139	584	230	1002	369	1586
5:15 AM	16		26		42		5:15 PM	149		268		417	
5:30 AM	15		32		47		5:30 PM	137		244		381	
5:45 AM	18		37		55		5:45 PM	159		260		419	
6:00 AM	11	86	28	181	39	267	6:00 PM	132	508	245	922	377	1430
6:15 AM	19		38		57		6:15 PM	130		235		365	
6:30 AM	27		51		78		6:30 PM	125		220		345	
6:45 AM	29		64		93		6:45 PM	121		222		343	
7:00 AM	22	170	55	307	77	477	7:00 PM	110	445	197	729	307	1174
7:15 AM	40		73		113		7:15 PM	129		195		324	
7:30 AM	49		75		124		7:30 PM	111		182		293	
7:45 AM	59		104		163		7:45 PM	95		155		250	
8:00 AM	32	220	79	524	111	744	8:00 PM	103	408	165	639	268	1047
8:15 AM	53		129		182		8:15 PM	117		184		301	
8:30 AM	72		150		222		8:30 PM	101		144		245	
8:45 AM	63		166		229		8:45 PM	87		146		233	
9:00 AM	87	379	179	765	266	1144	9:00 PM	85	335	141	567	226	902
9:15 AM	105		204		309		9:15 PM	84		146		230	
9:30 AM	101		190		291		9:30 PM	79		137		216	
9:45 AM	86		192		278		9:45 PM	87		143		230	
10:00 AM	104	453	226	875	330	1328	10:00 PM	83	270	147	511	230	781
10:15 AM	96		196		292		10:15 PM	84		149		233	
10:30 AM	131		226		357		10:30 PM	49		103		152	
10:45 AM	122		227		349		10:45 PM	54		112		166	
11:00 AM	103	481	212	939	315	1420	11:00 PM	48	159	102	313	150	472
11:15 AM	102		216		318		11:15 PM	41		77		118	
11:30 AM	138		251		389		11:30 PM	39		64		103	
11:45 AM	138		260		398		11:45 PM	31		70		101	

	SB	NB	Combined
24 Hour Volume	7582 (35.7%)	13678 (64.3%)	21260

	12:00 AM - 12:00 PM			12:00 PM - 12:00 AM		
	SB	NB	Combined	SB	NB	Combined
Count	2058	4105	6163	5524	9573	15097
	33.4 %	66.6 %		36.6 %	63.4 %	
Peak Hour	11:00 AM	11:00 AM	11:00 AM	4:00 PM	4:00 PM	4:00 PM
Volume	481	939	1420	615	1051	1666
Factor	0.87	0.90	0.89	0.86	0.90	0.89

Traffic Data Services, Inc.

2223 Wellington Ave., Suite 315
Santa Ana, CA 92701

STREET : BREA CANYON CUTOFF
PARAMETERS : S/O PATHFINDER
CITY : DIAMOND BAR

Site: 02801V05
Date: 2/7/2008
Thursday

24 Hour Volume

Begin	NB		SB		Combined		Begin	NB		SB		Combined	
12:00 AM	30	80	44	136	74	216	12:00 PM	81	349	177	734	258	1083
12:15 AM	16		39		55		12:15 PM	95		196		291	
12:30 AM	17		29		46		12:30 PM	72		162		234	
12:45 AM	17		24		41		12:45 PM	101		199		300	
1:00 AM	12	37	24	79	36	116	1:00 PM	81	368	187	807	268	1175
1:15 AM	11		21		32		1:15 PM	85		196		281	
1:30 AM	7		22		29		1:30 PM	101		205		306	
1:45 AM	7		12		19		1:45 PM	101		219		320	
2:00 AM	9	30	17	58	26	88	2:00 PM	114	558	214	1122	328	1680
2:15 AM	10		21		31		2:15 PM	136		268		404	
2:30 AM	4		11		15		2:30 PM	137		287		424	
2:45 AM	7		9		16		2:45 PM	171		353		524	
3:00 AM	5	15	10	42	15	57	3:00 PM	159	719	348	1409	507	2128
3:15 AM	2		8		10		3:15 PM	180		350		530	
3:30 AM	5		17		22		3:30 PM	171		350		521	
3:45 AM	3		7		10		3:45 PM	209		361		570	
4:00 AM	5	30	14	111	19	141	4:00 PM	191	806	365	1455	556	2261
4:15 AM	7		25		32		4:15 PM	184		310		494	
4:30 AM	10		33		43		4:30 PM	194		386		580	
4:45 AM	8		39		47		4:45 PM	237		394		631	
5:00 AM	10	64	49	327	59	391	5:00 PM	235	967	406	1755	641	2722
5:15 AM	13		69		82		5:15 PM	250		449		699	
5:30 AM	17		117		134		5:30 PM	235		440		675	
5:45 AM	24		92		116		5:45 PM	247		460		707	
6:00 AM	35	223	134	721	169	944	6:00 PM	226	882	423	1573	649	2455
6:15 AM	47		165		212		6:15 PM	226		413		639	
6:30 AM	71		201		272		6:30 PM	234		394		628	
6:45 AM	70		221		291		6:45 PM	196		343		539	
7:00 AM	112	471	290	1293	402	1764	7:00 PM	126	586	259	1035	385	1621
7:15 AM	98		290		388		7:15 PM	162		281		443	
7:30 AM	120		319		439		7:30 PM	157		264		421	
7:45 AM	141		394		535		7:45 PM	141		231		372	
8:00 AM	159	548	417	1286	576	1834	8:00 PM	97	374	182	720	279	1094
8:15 AM	165		348		513		8:15 PM	97		177		274	
8:30 AM	108		263		371		8:30 PM	100		179		279	
8:45 AM	116		258		374		8:45 PM	80		182		262	
9:00 AM	96	381	230	882	326	1263	9:00 PM	97	369	158	638	255	1007
9:15 AM	103		231		334		9:15 PM	105		182		287	
9:30 AM	91		212		303		9:30 PM	94		156		250	
9:45 AM	91		209		300		9:45 PM	73		142		215	
10:00 AM	85	313	175	719	260	1032	10:00 PM	76	236	128	419	204	655
10:15 AM	68		175		243		10:15 PM	72		128		200	
10:30 AM	85		182		267		10:30 PM	48		88		136	
10:45 AM	75		187		262		10:45 PM	40		75		115	
11:00 AM	87	348	175	675	262	1023	11:00 PM	35	130	57	223	92	353
11:15 AM	80		160		240		11:15 PM	35		55		90	
11:30 AM	88		174		262		11:30 PM	36		64		100	
11:45 AM	93		166		259		11:45 PM	24		47		71	

	NB	SB	Combined
24 Hour Volume	8884 (32.8%)	18219 (67.2%)	27103

	12:00 AM - 12:00 PM			12:00 PM - 12:00 AM		
	NB	SB	Combined	NB	SB	Combined
Count	2540	6329	8869	6344	11890	18234
	28.6 %	71.4 %		34.8 %	65.2 %	
Peak Hour	7:30 AM	7:30 AM	7:30 AM	5:00 PM	5:15 PM	5:15 PM
Volume	585	1478	2063	967	1772	2730
Factor	0.89	0.89	0.90	0.97	0.96	0.97

Traffic Data Services, Inc.

2223 Wellington Ave., Suite 315
Santa Ana, CA 92701

STREET : BREA CANYON CUTOFF
PARAMETERS : S/O PATHFINDER
CITY : DIAMOND BAR

Site: 02801V05
Date: 2/8/2008
Friday

24 Hour Volume

Begin	NB		SB		Combined		Begin	NB		SB		Combined	
12:00 AM	20	64	48	130	68	194	12:00 PM	126	479	228	895	354	1374
12:15 AM	18		35		53		12:15 PM	128		226		354	
12:30 AM	10		22		32		12:30 PM	119		214		333	
12:45 AM	16		25		41		12:45 PM	106		227		333	
1:00 AM	12	41	20	71	32	112	1:00 PM	96	553	216	1045	312	1598
1:15 AM	5		12		17		1:15 PM	140		265		405	
1:30 AM	14		22		36		1:30 PM	179		300		479	
1:45 AM	10		17		27		1:45 PM	138		264		402	
2:00 AM	15	42	20	62	35	104	2:00 PM	148	699	270	1312	418	2011
2:15 AM	10		17		27		2:15 PM	150		305		455	
2:30 AM	9		12		21		2:30 PM	189		371		560	
2:45 AM	8		13		21		2:45 PM	212		366		578	
3:00 AM	10	24	17	51	27	75	3:00 PM	206	856	375	1507	581	2363
3:15 AM	1		5		6		3:15 PM	234		381		615	
3:30 AM	5		16		21		3:30 PM	201		368		569	
3:45 AM	8		13		21		3:45 PM	215		383		598	
4:00 AM	5	27	11	93	16	120	4:00 PM	204	805	378	1530	582	2335
4:15 AM	6		26		32		4:15 PM	201		378		579	
4:30 AM	6		23		29		4:30 PM	200		379		579	
4:45 AM	10		33		43		4:45 PM	200		395		595	
5:00 AM	7	60	50	307	57	367	5:00 PM	229	963	420	1765	649	2728
5:15 AM	14		73		87		5:15 PM	240		415		655	
5:30 AM	18		92		110		5:30 PM	262		468		730	
5:45 AM	21		92		113		5:45 PM	232		462		694	
6:00 AM	30	228	105	743	135	971	6:00 PM	246	985	441	1693	687	2678
6:15 AM	48		184		232		6:15 PM	268		475		743	
6:30 AM	65		224		289		6:30 PM	257		419		676	
6:45 AM	85		230		315		6:45 PM	214		358		572	
7:00 AM	101	438	256	1210	357	1648	7:00 PM	220	834	391	1437	611	2271
7:15 AM	98		263		361		7:15 PM	216		366		582	
7:30 AM	93		297		390		7:30 PM	218		348		566	
7:45 AM	146		394		540		7:45 PM	180		332		512	
8:00 AM	158	525	398	1242	556	1767	8:00 PM	100	374	220	847	320	1221
8:15 AM	163		310		473		8:15 PM	99		233		332	
8:30 AM	103		264		367		8:30 PM	84		198		282	
8:45 AM	101		270		371		8:45 PM	91		196		287	
9:00 AM	118	420	254	925	372	1345	9:00 PM	89	368	192	815	281	1183
9:15 AM	106		227		333		9:15 PM	103		235		338	
9:30 AM	102		232		334		9:30 PM	92		195		287	
9:45 AM	94		212		306		9:45 PM	84		193		277	
10:00 AM	86	362	202	806	288	1168	10:00 PM	107	361	227	710	334	1071
10:15 AM	87		207		294		10:15 PM	98		188		286	
10:30 AM	81		187		268		10:30 PM	85		163		248	
10:45 AM	108		210		318		10:45 PM	71		132		203	
11:00 AM	88	484	162	876	250	1360	11:00 PM	88	268	139	442	227	710
11:15 AM	123		241		364		11:15 PM	72		121		193	
11:30 AM	144		236		380		11:30 PM	54		92		146	
11:45 AM	129		237		366		11:45 PM	54		90		144	

	NB	SB	Combined
24 Hour Volume	10260 (33.3%)	20514 (66.7%)	30774

	12:00 AM - 12:00 PM			12:00 PM - 12:00 AM		
	NB	SB	Combined	NB	SB	Combined
Count	2715	6516	9231	7545	13998	21543
	29.4 %	70.6 %		35.0 %	65.0 %	
Peak Hour	7:45 AM	7:30 AM	7:30 AM	5:30 PM	5:30 PM	5:30 PM
Volume	570	1399	1959	1008	1846	2854
Factor	0.87	0.88	0.88	0.94	0.97	0.96

Traffic Data Services, Inc.

2223 Wellington Ave., Suite 315
Santa Ana, CA 92701

STREET : BREA CANYON CUTOFF
PARAMETERS : S/O PATHFINDER
CITY : DIAMOND BAR

Site: 02801V05
Date: 2/9/2008
Saturday

24 Hour Volume

Begin	NB		SB		Combined		Begin	NB		SB		Combined	
12:00 AM	34	137	59	219	93	356	12:00 PM	133	487	286	1079	419	1566
12:15 AM	34		59		93		12:15 PM	127		293		420	
12:30 AM	40		59		99		12:30 PM	124		248		372	
12:45 AM	29		42		71		12:45 PM	103		252		355	
1:00 AM	25	83	39	132	64	215	1:00 PM	132	521	283	1144	415	1665
1:15 AM	16		30		46		1:15 PM	125		296		421	
1:30 AM	17		29		46		1:30 PM	115		261		376	
1:45 AM	25		34		59		1:45 PM	149		304		453	
2:00 AM	16	42	28	79	44	121	2:00 PM	110	478	290	1171	400	1649
2:15 AM	7		16		23		2:15 PM	126		295		421	
2:30 AM	9		18		27		2:30 PM	131		308		439	
2:45 AM	10		17		27		2:45 PM	111		278		389	
3:00 AM	14	42	22	77	36	119	3:00 PM	125	511	305	1184	430	1695
3:15 AM	11		23		34		3:15 PM	128		294		422	
3:30 AM	11		18		29		3:30 PM	126		294		420	
3:45 AM	6		14		20		3:45 PM	132		291		423	
4:00 AM	10	31	19	72	29	103	4:00 PM	142	552	301	1259	443	1811
4:15 AM	7		17		24		4:15 PM	131		320		451	
4:30 AM	5		18		23		4:30 PM	144		307		451	
4:45 AM	9		18		27		4:45 PM	135		331		466	
5:00 AM	6	55	21	159	27	214	5:00 PM	130	593	302	1269	432	1862
5:15 AM	11		37		48		5:15 PM	146		318		464	
5:30 AM	12		47		59		5:30 PM	166		332		498	
5:45 AM	26		54		80		5:45 PM	151		317		468	
6:00 AM	15	80	39	223	54	303	6:00 PM	148	540	295	1134	443	1674
6:15 AM	18		48		66		6:15 PM	141		288		429	
6:30 AM	18		62		80		6:30 PM	135		298		433	
6:45 AM	29		74		103		6:45 PM	116		253		369	
7:00 AM	23	135	59	355	82	490	7:00 PM	111	410	241	870	352	1280
7:15 AM	40		91		131		7:15 PM	107		229		336	
7:30 AM	33		99		132		7:30 PM	99		206		305	
7:45 AM	39		106		145		7:45 PM	93		194		287	
8:00 AM	51	281	104	598	155	879	8:00 PM	87	341	196	794	283	1135
8:15 AM	67		138		205		8:15 PM	95		226		321	
8:30 AM	68		168		236		8:30 PM	80		194		274	
8:45 AM	95		188		283		8:45 PM	79		178		257	
9:00 AM	98	381	210	888	308	1269	9:00 PM	71	306	163	661	234	967
9:15 AM	88		230		318		9:15 PM	89		175		264	
9:30 AM	84		206		290		9:30 PM	66		151		217	
9:45 AM	111		242		353		9:45 PM	80		172		252	
10:00 AM	114	438	222	929	336	1367	10:00 PM	107	369	183	650	290	1019
10:15 AM	108		230		338		10:15 PM	99		182		281	
10:30 AM	114		259		373		10:30 PM	98		156		254	
10:45 AM	102		218		320		10:45 PM	65		129		194	
11:00 AM	110	512	232	1060	342	1572	11:00 PM	78	222	135	384	213	606
11:15 AM	117		242		359		11:15 PM	49		81		130	
11:30 AM	136		282		418		11:30 PM	46		86		132	
11:45 AM	149		304		453		11:45 PM	49		82		131	

	NB	SB	Combined
24 Hour Volume	7547 (31.5%)	16390 (68.5%)	23937

	12:00 AM - 12:00 PM			12:00 PM - 12:00 AM		
	NB	SB	Combined	NB	SB	Combined
Count	2217	4791	7008	5330	11599	16929
	31.6 %	68.4 %		31.5 %	68.5 %	
Peak Hour	11:00 AM	11:00 AM	11:00 AM	5:15 PM	4:45 PM	5:15 PM
Volume	512	1060	1572	611	1283	1873
Factor	0.86	0.87	0.87	0.92	0.97	0.94

Traffic Data Services, Inc.

2223 Wellington Ave., Suite 315
Santa Ana, CA 92701

STREET : FAIRWAY DR
PARAMETERS : N/O COLIMA RD
CITY : DIAMOND BAR

Site: 02801V02
Date: 2/7/2008
Thursday

24 Hour Volume

Begin	NB		SB		Combined		Begin	NB		SB		Combined	
12:00 AM	19	77	29	111	48	188	12:00 PM	113	444	167	599	280	1043
12:15 AM	30		36		66		12:15 PM	113		149		262	
12:30 AM	15		24		39		12:30 PM	112		139		251	
12:45 AM	13		22		35		12:45 PM	106		144		250	
1:00 AM	7	33	26	91	33	124	1:00 PM	131	496	147	631	278	1127
1:15 AM	11		23		34		1:15 PM	106		160		266	
1:30 AM	10		21		31		1:30 PM	146		157		303	
1:45 AM	5		21		26		1:45 PM	113		167		280	
2:00 AM	9	32	25	47	34	79	2:00 PM	127	618	146	791	273	1409
2:15 AM	7		9		16		2:15 PM	166		197		363	
2:30 AM	3		8		11		2:30 PM	167		204		371	
2:45 AM	13		5		18		2:45 PM	158		244		402	
3:00 AM	7	21	11	57	18	78	3:00 PM	177	640	254	882	431	1522
3:15 AM	3		14		17		3:15 PM	157		233		390	
3:30 AM	2		19		21		3:30 PM	147		204		351	
3:45 AM	9		13		22		3:45 PM	159		191		350	
4:00 AM	4	44	14	64	18	108	4:00 PM	193	732	216	808	409	1540
4:15 AM	5		16		21		4:15 PM	173		185		358	
4:30 AM	16		19		35		4:30 PM	191		206		397	
4:45 AM	19		15		34		4:45 PM	175		201		376	
5:00 AM	36	159	20	134	56	293	5:00 PM	186	803	245	1165	431	1968
5:15 AM	26		32		58		5:15 PM	201		282		483	
5:30 AM	35		37		72		5:30 PM	203		353		556	
5:45 AM	62		45		107		5:45 PM	213		285		498	
6:00 AM	59	312	55	329	114	641	6:00 PM	200	703	305	1003	505	1706
6:15 AM	77		79		156		6:15 PM	181		255		436	
6:30 AM	73		87		160		6:30 PM	185		234		419	
6:45 AM	103		108		211		6:45 PM	137		209		346	
7:00 AM	128	648	143	576	271	1224	7:00 PM	130	455	203	675	333	1130
7:15 AM	133		107		240		7:15 PM	111		180		291	
7:30 AM	157		141		298		7:30 PM	117		142		259	
7:45 AM	230		185		415		7:45 PM	97		150		247	
8:00 AM	254	839	180	550	434	1389	8:00 PM	92	319	123	460	215	779
8:15 AM	229		146		375		8:15 PM	74		113		187	
8:30 AM	193		106		299		8:30 PM	74		111		185	
8:45 AM	163		118		281		8:45 PM	79		113		192	
9:00 AM	138	522	126	440	264	962	9:00 PM	91	264	122	432	213	696
9:15 AM	127		117		244		9:15 PM	48		93		141	
9:30 AM	129		79		208		9:30 PM	70		112		182	
9:45 AM	128		118		246		9:45 PM	55		105		160	
10:00 AM	130	428	127	450	257	878	10:00 PM	57	186	79	278	136	464
10:15 AM	94		93		187		10:15 PM	51		82		133	
10:30 AM	115		111		226		10:30 PM	40		65		105	
10:45 AM	89		119		208		10:45 PM	38		52		90	
11:00 AM	117	417	135	510	252	927	11:00 PM	28	103	42	156	70	259
11:15 AM	94		121		215		11:15 PM	25		38		63	
11:30 AM	103		131		234		11:30 PM	24		44		68	
11:45 AM	103		123		226		11:45 PM	26		32		58	

	NB	SB	Combined
24 Hour Volume	9295 (45.3%)	11239 (54.7%)	20534

	12:00 AM - 12:00 PM			12:00 PM - 12:00 AM		
	NB	SB	Combined	NB	SB	Combined
Count	3532	3359	6891	5763	7880	13643
	51.3 %	48.7 %		42.2 %	57.8 %	
Peak Hour	7:45 AM	7:30 AM	7:45 AM	5:15 PM	5:15 PM	5:15 PM
Volume	906	652	1523	817	1225	2042
Factor	0.89	0.88	0.88	0.96	0.87	0.92

Traffic Data Services, Inc.

2223 Wellington Ave., Suite 315
Santa Ana, CA 92701

STREET : FAIRWAY DR
PARAMETERS : N/O COLIMA RD
CITY : DIAMOND BAR

Site: 02801V02
Date: 2/8/2008
Friday

24 Hour Volume

Begin	NB		SB		Combined		Begin	NB		SB		Combined	
12:00 AM	21	52	37	112	58	164	12:00 PM	111	529	189	748	300	1277
12:15 AM	12		29		41		12:15 PM	121		183		304	
12:30 AM	11		27		38		12:30 PM	161		188		349	
12:45 AM	8		19		27		12:45 PM	136		188		324	
1:00 AM	10	31	28	86	38	117	1:00 PM	143	655	160	644	303	1299
1:15 AM	7		22		29		1:15 PM	146		155		301	
1:30 AM	8		17		25		1:30 PM	188		154		342	
1:45 AM	6		19		25		1:45 PM	178		175		353	
2:00 AM	4	20	11	42	15	62	2:00 PM	157	715	195	861	352	1576
2:15 AM	4		11		15		2:15 PM	196		212		408	
2:30 AM	5		6		11		2:30 PM	163		243		406	
2:45 AM	7		14		21		2:45 PM	199		211		410	
3:00 AM	9	28	13	39	22	67	3:00 PM	190	749	246	979	436	1728
3:15 AM	1		12		13		3:15 PM	175		230		405	
3:30 AM	7		5		12		3:30 PM	194		250		444	
3:45 AM	11		9		20		3:45 PM	190		253		443	
4:00 AM	5	47	19	65	24	112	4:00 PM	194	756	193	844	387	1600
4:15 AM	8		14		22		4:15 PM	177		221		398	
4:30 AM	21		13		34		4:30 PM	204		191		395	
4:45 AM	13		19		32		4:45 PM	181		239		420	
5:00 AM	18	108	15	128	33	236	5:00 PM	184	820	237	1073	421	1893
5:15 AM	24		31		55		5:15 PM	200		264		464	
5:30 AM	30		40		70		5:30 PM	217		281		498	
5:45 AM	36		42		78		5:45 PM	219		291		510	
6:00 AM	58	311	56	359	114	670	6:00 PM	220	817	296	958	516	1775
6:15 AM	65		92		157		6:15 PM	227		242		469	
6:30 AM	75		107		182		6:30 PM	194		209		403	
6:45 AM	113		104		217		6:45 PM	176		211		387	
7:00 AM	126	649	109	561	235	1210	7:00 PM	166	592	226	818	392	1410
7:15 AM	127		102		229		7:15 PM	150		214		364	
7:30 AM	171		144		315		7:30 PM	152		199		351	
7:45 AM	225		206		431		7:45 PM	124		179		303	
8:00 AM	268	824	168	536	436	1360	8:00 PM	108	375	156	577	264	952
8:15 AM	203		130		333		8:15 PM	97		126		223	
8:30 AM	163		108		271		8:30 PM	102		162		264	
8:45 AM	190		130		320		8:45 PM	68		133		201	
9:00 AM	167	547	112	567	279	1114	9:00 PM	93	407	154	612	247	1019
9:15 AM	140		159		299		9:15 PM	97		131		228	
9:30 AM	117		142		259		9:30 PM	107		169		276	
9:45 AM	123		154		277		9:45 PM	110		158		268	
10:00 AM	124	503	132	561	256	1064	10:00 PM	77	258	135	437	212	695
10:15 AM	110		149		259		10:15 PM	79		138		217	
10:30 AM	130		120		250		10:30 PM	61		73		134	
10:45 AM	139		160		299		10:45 PM	41		91		132	
11:00 AM	145	567	160	633	305	1200	11:00 PM	44	188	82	286	126	474
11:15 AM	135		151		286		11:15 PM	57		80		137	
11:30 AM	148		138		286		11:30 PM	41		60		101	
11:45 AM	139		184		323		11:45 PM	46		64		110	

	NB	SB	Combined
24 Hour Volume	10548 (45.7%)	12526 (54.3%)	23074

	12:00 AM - 12:00 PM			12:00 PM - 12:00 AM		
	NB	SB	Combined	NB	SB	Combined
Count	3687	3689	7376	6861	8837	15698
	50.0 %	50.0 %		43.7 %	56.3 %	
Peak Hour	7:30 AM	7:30 AM	7:30 AM	5:30 PM	5:15 PM	5:30 PM
Volume	867	648	1515	883	1132	1993
Factor	0.81	0.79	0.87	0.97	0.96	0.97

Traffic Data Services, Inc.

2223 Wellington Ave., Suite 315
Santa Ana, CA 92701

STREET : FAIRWAY DR
PARAMETERS : N/O COLIMA RD
CITY : DIAMOND BAR

Site: 02801V02
Date: 2/9/2008
Saturday

24 Hour Volume

Begin	NB		SB		Combined		Begin	NB		SB		Combined	
12:00 AM	21	89	34	139	55	228	12:00 PM	182	714	248	873	430	1587
12:15 AM	24		45		69		12:15 PM	170		229		399	
12:30 AM	21		35		56		12:30 PM	178		194		372	
12:45 AM	23		25		48		12:45 PM	184		202		386	
1:00 AM	16	65	25	107	41	172	1:00 PM	185	688	224	836	409	1524
1:15 AM	12		32		44		1:15 PM	177		218		395	
1:30 AM	19		28		47		1:30 PM	153		185		338	
1:45 AM	18		22		40		1:45 PM	173		209		382	
2:00 AM	14	42	27	83	41	125	2:00 PM	139	578	200	880	339	1458
2:15 AM	8		23		31		2:15 PM	160		227		387	
2:30 AM	13		20		33		2:30 PM	133		223		356	
2:45 AM	7		13		20		2:45 PM	146		230		376	
3:00 AM	6	33	16	49	22	82	3:00 PM	137	536	199	785	336	1321
3:15 AM	11		14		25		3:15 PM	128		183		311	
3:30 AM	8		14		22		3:30 PM	138		191		329	
3:45 AM	8		5		13		3:45 PM	133		212		345	
4:00 AM	8	37	9	40	17	77	4:00 PM	111	496	193	751	304	1247
4:15 AM	15		17		32		4:15 PM	119		172		291	
4:30 AM	7		10		17		4:30 PM	140		183		323	
4:45 AM	7		4		11		4:45 PM	126		203		329	
5:00 AM	7	68	8	82	15	150	5:00 PM	126	544	180	784	306	1328
5:15 AM	14		25		39		5:15 PM	136		174		310	
5:30 AM	19		23		42		5:30 PM	156		204		360	
5:45 AM	28		26		54		5:45 PM	126		226		352	
6:00 AM	18	118	22	135	40	253	6:00 PM	133	500	219	766	352	1266
6:15 AM	39		36		75		6:15 PM	128		184		312	
6:30 AM	28		40		68		6:30 PM	131		193		324	
6:45 AM	33		37		70		6:45 PM	108		170		278	
7:00 AM	53	235	53	252	106	487	7:00 PM	115	396	201	723	316	1119
7:15 AM	69		47		116		7:15 PM	98		191		289	
7:30 AM	43		69		112		7:30 PM	84		191		275	
7:45 AM	70		83		153		7:45 PM	99		140		239	
8:00 AM	78	394	67	418	145	812	8:00 PM	93	375	142	586	235	961
8:15 AM	77		93		170		8:15 PM	92		178		270	
8:30 AM	112		123		235		8:30 PM	99		137		236	
8:45 AM	127		135		262		8:45 PM	91		129		220	
9:00 AM	140	571	133	563	273	1134	9:00 PM	65	279	115	393	180	672
9:15 AM	137		159		296		9:15 PM	80		92		172	
9:30 AM	150		119		269		9:30 PM	56		90		146	
9:45 AM	144		152		296		9:45 PM	78		96		174	
10:00 AM	152	576	143	661	295	1237	10:00 PM	75	250	91	321	166	571
10:15 AM	145		167		312		10:15 PM	75		90		165	
10:30 AM	142		187		329		10:30 PM	46		71		117	
10:45 AM	137		164		301		10:45 PM	54		69		123	
11:00 AM	167	637	183	760	350	1397	11:00 PM	53	156	60	210	113	366
11:15 AM	140		192		332		11:15 PM	36		62		98	
11:30 AM	182		191		373		11:30 PM	33		54		87	
11:45 AM	148		194		342		11:45 PM	34		34		68	

	NB	SB	Combined
24 Hour Volume	8377 (42.8%)	11197 (57.2%)	19574

	12:00 AM - 12:00 PM			12:00 PM - 12:00 AM		
	NB	SB	Combined	NB	SB	Combined
Count	2865	3289	6154	5512	7908	13420
	46.6 %	53.4 %		41.1 %	58.9 %	
Peak Hour	11:00 AM	11:00 AM	11:00 AM	12:30 PM	2:00 PM	12:00 PM
Volume	637	760	1397	724	880	1587
Factor	0.88	0.98	0.94	0.98	0.96	0.92

Traffic Data Services, Inc.

2223 Wellington Ave., Suite 315
Santa Ana, CA 92701

STREET : FAIRWAY DR
PARAMETERS : N/O SR-60 INTERCHANGE
CITY : CITY OF INDUSTRY

Site: 02801V01
Date: 2/7/2008
Thursday

24 Hour Volume

Begin	NB		SB		Combined		Begin	NB		SB		Combined	
12:00 AM	45	195	39	102	84	297	12:00 PM	179	721	209	848	388	1569
12:15 AM	57		23		80		12:15 PM	171		222		393	
12:30 AM	60		26		86		12:30 PM	189		207		396	
12:45 AM	33		14		47		12:45 PM	182		210		392	
1:00 AM	32	164	27	109	59	273	1:00 PM	200	857	223	775	423	1632
1:15 AM	49		13		62		1:15 PM	205		187		392	
1:30 AM	50		33		83		1:30 PM	222		194		416	
1:45 AM	33		36		69		1:45 PM	230		171		401	
2:00 AM	33	140	26	99	59	239	2:00 PM	185	868	225	914	410	1782
2:15 AM	36		23		59		2:15 PM	240		208		448	
2:30 AM	43		23		66		2:30 PM	194		228		422	
2:45 AM	28		27		55		2:45 PM	249		253		502	
3:00 AM	36	135	30	125	66	260	3:00 PM	257	905	225	969	482	1874
3:15 AM	31		20		51		3:15 PM	250		244		494	
3:30 AM	23		31		54		3:30 PM	203		262		465	
3:45 AM	45		44		89		3:45 PM	195		238		433	
4:00 AM	32	232	26	193	58	425	4:00 PM	211	855	255	1020	466	1875
4:15 AM	43		39		82		4:15 PM	208		218		426	
4:30 AM	55		51		106		4:30 PM	244		288		532	
4:45 AM	102		77		179		4:45 PM	192		259		451	
5:00 AM	53	326	76	365	129	691	5:00 PM	277	1071	315	1399	592	2470
5:15 AM	75		80		155		5:15 PM	276		346		622	
5:30 AM	81		109		190		5:30 PM	276		390		666	
5:45 AM	117		100		217		5:45 PM	242		348		590	
6:00 AM	90	543	102	502	192	1045	6:00 PM	213	729	276	993	489	1722
6:15 AM	109		126		235		6:15 PM	175		279		454	
6:30 AM	148		138		286		6:30 PM	166		229		395	
6:45 AM	196		136		332		6:45 PM	175		209		384	
7:00 AM	186	1049	162	761	348	1810	7:00 PM	173	651	170	593	343	1244
7:15 AM	268		166		434		7:15 PM	169		159		328	
7:30 AM	284		186		470		7:30 PM	152		141		293	
7:45 AM	311		247		558		7:45 PM	157		123		280	
8:00 AM	271	1049	199	760	470	1809	8:00 PM	126	529	110	460	236	989
8:15 AM	308		168		476		8:15 PM	172		160		332	
8:30 AM	239		198		437		8:30 PM	127		100		227	
8:45 AM	231		195		426		8:45 PM	104		90		194	
9:00 AM	184	771	200	657	384	1428	9:00 PM	166	521	146	419	312	940
9:15 AM	204		142		346		9:15 PM	115		101		216	
9:30 AM	197		143		340		9:30 PM	125		93		218	
9:45 AM	186		172		358		9:45 PM	115		79		194	
10:00 AM	203	720	181	713	384	1433	10:00 PM	125	411	75	237	200	648
10:15 AM	213		164		377		10:15 PM	98		68		166	
10:30 AM	128		197		325		10:30 PM	97		36		133	
10:45 AM	176		171		347		10:45 PM	91		58		149	
11:00 AM	180	746	201	776	381	1522	11:00 PM	74	239	44	142	118	381
11:15 AM	169		180		349		11:15 PM	62		36		98	
11:30 AM	193		198		391		11:30 PM	53		40		93	
11:45 AM	204		197		401		11:45 PM	50		22		72	

	NB	SB	Combined
24 Hour Volume	14427 (50.9%)	13931 (49.1%)	28358

	12:00 AM - 12:00 PM			**12:00 PM - 12:00 AM**		
	NB	SB	Combined	NB	SB	Combined
Count	6070	5162	11232	8357	8769	17126
	54.0 %	46.0 %		48.8 %	51.2 %	
Peak Hour	7:30 AM	7:45 AM	7:30 AM	5:00 PM	5:00 PM	5:00 PM
Volume	1174	812	1974	1071	1399	2470
Factor	0.94	0.82	0.88	0.97	0.90	0.93

Traffic Data Services, Inc.

2223 Wellington Ave., Suite 315
Santa Ana, CA 92701

STREET : FAIRWAY DR
PARAMETERS : N/O SR-60 INTERCHANGE
CITY : CITY OF INDUSTRY

Site: 02801V01
Date: 2/8/2008
Friday

24 Hour Volume

Begin	NB		SB		Combined		Begin	NB		SB		Combined	
12:00 AM	37	186	22	99	59	285	12:00 PM	223	895	230	884	453	1779
12:15 AM	45		23		68		12:15 PM	213		234		447	
12:30 AM	64		26		90		12:30 PM	242		214		456	
12:45 AM	40		28		68		12:45 PM	217		206		423	
1:00 AM	35	156	24	114	59	270	1:00 PM	211	875	207	831	418	1706
1:15 AM	29		36		65		1:15 PM	195		213		408	
1:30 AM	44		25		69		1:30 PM	221		187		408	
1:45 AM	48		29		77		1:45 PM	248		224		472	
2:00 AM	31	135	42	106	73	241	2:00 PM	282	1034	217	957	499	1991
2:15 AM	31		19		50		2:15 PM	240		249		489	
2:30 AM	34		21		55		2:30 PM	258		257		515	
2:45 AM	39		24		63		2:45 PM	254		234		488	
3:00 AM	36	156	22	121	58	277	3:00 PM	229	956	240	1064	469	2020
3:15 AM	28		25		53		3:15 PM	229		218		447	
3:30 AM	42		35		77		3:30 PM	267		328		595	
3:45 AM	50		39		89		3:45 PM	231		278		509	
4:00 AM	32	230	34	201	66	431	4:00 PM	225	934	230	1032	455	1966
4:15 AM	32		37		69		4:15 PM	248		232		480	
4:30 AM	68		50		118		4:30 PM	248		283		531	
4:45 AM	98		80		178		4:45 PM	213		287		500	
5:00 AM	51	292	95	401	146	693	5:00 PM	258	979	327	1277	585	2256
5:15 AM	56		95		151		5:15 PM	226		304		530	
5:30 AM	67		100		167		5:30 PM	269		347		616	
5:45 AM	118		111		229		5:45 PM	226		299		525	
6:00 AM	96	571	99	525	195	1096	6:00 PM	231	793	294	966	525	1759
6:15 AM	107		132		239		6:15 PM	211		252		463	
6:30 AM	161		139		300		6:30 PM	173		223		396	
6:45 AM	207		155		362		6:45 PM	178		197		375	
7:00 AM	176	952	163	804	339	1756	7:00 PM	194	653	188	662	382	1315
7:15 AM	224		177		401		7:15 PM	161		171		332	
7:30 AM	248		227		475		7:30 PM	151		162		313	
7:45 AM	304		237		541		7:45 PM	147		141		288	
8:00 AM	269	1128	208	772	477	1900	8:00 PM	132	514	112	435	244	949
8:15 AM	321		196		517		8:15 PM	153		121		274	
8:30 AM	276		166		442		8:30 PM	121		105		226	
8:45 AM	262		202		464		8:45 PM	108		97		205	
9:00 AM	185	853	166	670	351	1523	9:00 PM	127	546	97	411	224	957
9:15 AM	218		170		388		9:15 PM	145		108		253	
9:30 AM	230		140		370		9:30 PM	145		108		253	
9:45 AM	220		194		414		9:45 PM	129		98		227	
10:00 AM	203	821	179	766	382	1587	10:00 PM	133	446	94	286	227	732
10:15 AM	234		209		443		10:15 PM	119		74		193	
10:30 AM	191		203		394		10:30 PM	108		66		174	
10:45 AM	193		175		368		10:45 PM	86		52		138	
11:00 AM	233	881	187	810	420	1691	11:00 PM	83	310	77	218	160	528
11:15 AM	233		193		426		11:15 PM	86		50		136	
11:30 AM	213		208		421		11:30 PM	63		27		90	
11:45 AM	202		222		424		11:45 PM	78		64		142	

	NB	SB	Combined
24 Hour Volume	15296 (51.5%)	14412 (48.5%)	29708

	12:00 AM - 12:00 PM			12:00 PM - 12:00 AM		
	NB	SB	Combined	NB	SB	Combined
Count	6361	5389	11750	8935	9023	17958
	54.1 %	45.9 %		49.8 %	50.2 %	
Peak Hour	7:45 AM	7:30 AM	7:30 AM	2:00 PM	5:00 PM	5:00 PM
Volume	1170	868	2010	1034	1277	2256
Factor	0.91	0.92	0.93	0.92	0.92	0.92

Traffic Data Services, Inc.

2223 Wellington Ave., Suite 315
Santa Ana, CA 92701

STREET : FAIRWAY DR
PARAMETERS : N/O SR-60 INTERCHANGE
CITY : CITY OF INDUSTRY

Site: 02801V01
Date: 2/9/2008
Saturday

24 Hour Volume

Begin	NB		SB		Combined		Begin	NB		SB		Combined	
12:00 AM	64	239	44	157	108	396	12:00 PM	219	911	231	904	450	1815
12:15 AM	64		36		100		12:15 PM	250		210		460	
12:30 AM	70		42		112		12:30 PM	228		249		477	
12:45 AM	41		35		76		12:45 PM	214		214		428	
1:00 AM	31	147	36	104	67	251	1:00 PM	231	957	185	796	416	1753
1:15 AM	33		20		53		1:15 PM	272		208		480	
1:30 AM	40		33		73		1:30 PM	225		195		420	
1:45 AM	43		15		58		1:45 PM	229		208		437	
2:00 AM	15	104	19	59	34	163	2:00 PM	217	832	201	838	418	1670
2:15 AM	35		20		55		2:15 PM	231		206		437	
2:30 AM	23		11		34		2:30 PM	217		194		411	
2:45 AM	31		9		40		2:45 PM	167		237		404	
3:00 AM	9	88	8	69	17	157	3:00 PM	207	827	202	815	409	1642
3:15 AM	27		14		41		3:15 PM	209		187		396	
3:30 AM	20		25		45		3:30 PM	180		174		354	
3:45 AM	32		22		54		3:45 PM	231		252		483	
4:00 AM	14	108	16	100	30	208	4:00 PM	175	615	201	820	376	1435
4:15 AM	24		25		49		4:15 PM	152		192		344	
4:30 AM	35		23		58		4:30 PM	153		206		359	
4:45 AM	35		36		71		4:45 PM	135		221		356	
5:00 AM	26	143	32	144	58	287	5:00 PM	148	644	220	767	368	1411
5:15 AM	16		31		47		5:15 PM	172		215		387	
5:30 AM	50		43		93		5:30 PM	187		188		375	
5:45 AM	51		38		89		5:45 PM	137		144		281	
6:00 AM	28	173	49	225	77	398	6:00 PM	202	648	190	590	392	1238
6:15 AM	41		45		86		6:15 PM	161		134		295	
6:30 AM	48		59		107		6:30 PM	167		153		320	
6:45 AM	56		72		128		6:45 PM	118		113		231	
7:00 AM	44	244	65	345	109	589	7:00 PM	151	526	115	397	266	923
7:15 AM	49		73		122		7:15 PM	104		86		190	
7:30 AM	64		107		171		7:30 PM	157		103		260	
7:45 AM	87		100		187		7:45 PM	114		93		207	
8:00 AM	106	516	89	481	195	997	8:00 PM	104	490	76	327	180	817
8:15 AM	106		103		209		8:15 PM	125		71		196	
8:30 AM	130		130		260		8:30 PM	136		87		223	
8:45 AM	174		159		333		8:45 PM	125		93		218	
9:00 AM	210	798	159	685	369	1483	9:00 PM	94	385	80	310	174	695
9:15 AM	188		177		365		9:15 PM	102		81		183	
9:30 AM	202		162		364		9:30 PM	101		80		181	
9:45 AM	198		187		385		9:45 PM	88		69		157	
10:00 AM	229	909	210	882	439	1791	10:00 PM	79	348	69	231	148	579
10:15 AM	226		229		455		10:15 PM	93		52		145	
10:30 AM	224		225		449		10:30 PM	93		56		149	
10:45 AM	230		218		448		10:45 PM	83		54		137	
11:00 AM	258	880	195	841	453	1721	11:00 PM	75	220	64	174	139	394
11:15 AM	229		214		443		11:15 PM	53		50		103	
11:30 AM	194		223		417		11:30 PM	49		30		79	
11:45 AM	199		209		408		11:45 PM	43		30		73	

	NB	SB	Combined
24 Hour Volume	11752 (51.5%)	11061 (48.5%)	22813

	12:00 AM - 12:00 PM			12:00 PM - 12:00 AM		
	NB	SB	Combined	NB	SB	Combined
Count	4349	4092	8441	7403	6969	14372
	51.5 %	48.5 %		51.5 %	48.5 %	
Peak Hour	10:30 AM	10:00 AM	10:15 AM	1:00 PM	12:00 PM	12:00 PM
Volume	941	882	1805	957	904	1815
Factor	0.91	0.96	0.99	0.88	0.91	0.95

Traffic Data Services, Inc.

2223 Wellington Ave., Suite 315
Santa Ana, CA 92701

STREET : COLIMA RD
PARAMETERS : BTN NOGLAES/FAIRWAY/BREA CYN CUTOFF
CITY : DIAMOND BAR

Site: 02801V06
Date: 2/7/2008
Thursday

24 Hour Volume

Begin	EB		WB		Combined		Begin	EB		WB		Combined	
12:00 AM	17	74	43	105	60	179	12:00 PM	162	690	190	735	352	1425
12:15 AM	25		20		45		12:15 PM	175		206		381	
12:30 AM	18		23		41		12:30 PM	163		170		333	
12:45 AM	14		19		33		12:45 PM	190		169		359	
1:00 AM	24	61	20	65	44	126	1:00 PM	187	700	161	645	348	1345
1:15 AM	10		17		27		1:15 PM	153		144		297	
1:30 AM	15		15		30		1:30 PM	173		170		343	
1:45 AM	12		13		25		1:45 PM	187		170		357	
2:00 AM	12	38	17	36	29	74	2:00 PM	180	855	164	699	344	1554
2:15 AM	16		10		26		2:15 PM	215		175		390	
2:30 AM	5		6		11		2:30 PM	225		170		395	
2:45 AM	5		3		8		2:45 PM	235		190		425	
3:00 AM	3	13	9	29	12	42	3:00 PM	245	1013	234	932	479	1945
3:15 AM	1		5		6		3:15 PM	278		261		539	
3:30 AM	4		11		15		3:30 PM	235		213		448	
3:45 AM	5		4		9		3:45 PM	255		224		479	
4:00 AM	5	41	14	58	19	99	4:00 PM	222	973	221	822	443	1795
4:15 AM	7		15		22		4:15 PM	243		208		451	
4:30 AM	10		16		26		4:30 PM	266		189		455	
4:45 AM	19		13		32		4:45 PM	242		204		446	
5:00 AM	24	119	31	203	55	322	5:00 PM	273	1070	238	1105	511	2175
5:15 AM	27		50		77		5:15 PM	245		262		507	
5:30 AM	30		49		79		5:30 PM	279		317		596	
5:45 AM	38		73		111		5:45 PM	273		288		561	
6:00 AM	60	329	90	489	150	818	6:00 PM	259	966	276	930	535	1896
6:15 AM	86		116		202		6:15 PM	259		211		470	
6:30 AM	80		128		208		6:30 PM	227		219		446	
6:45 AM	103		155		258		6:45 PM	221		224		445	
7:00 AM	147	632	150	652	297	1284	7:00 PM	206	685	188	632	394	1317
7:15 AM	132		148		280		7:15 PM	170		148		318	
7:30 AM	148		159		307		7:30 PM	171		155		326	
7:45 AM	205		195		400		7:45 PM	138		141		279	
8:00 AM	168	642	214	704	382	1346	8:00 PM	123	532	122	422	245	954
8:15 AM	188		194		382		8:15 PM	163		102		265	
8:30 AM	135		133		268		8:30 PM	128		87		215	
8:45 AM	151		163		314		8:45 PM	118		111		229	
9:00 AM	121	515	150	578	271	1093	9:00 PM	108	429	86	394	194	823
9:15 AM	122		151		273		9:15 PM	109		118		227	
9:30 AM	142		122		264		9:30 PM	117		99		216	
9:45 AM	130		155		285		9:45 PM	95		91		186	
10:00 AM	141	511	144	556	285	1067	10:00 PM	96	280	110	309	206	589
10:15 AM	116		133		249		10:15 PM	67		78		145	
10:30 AM	119		136		255		10:30 PM	62		68		130	
10:45 AM	135		143		278		10:45 PM	55		53		108	
11:00 AM	121	534	147	653	268	1187	11:00 PM	25	110	58	166	83	276
11:15 AM	143		168		311		11:15 PM	36		42		78	
11:30 AM	138		175		313		11:30 PM	20		32		52	
11:45 AM	132		163		295		11:45 PM	29		34		63	

	EB	WB	Combined
24 Hour Volume	11812 (49.8%)	11919 (50.2%)	23731

	12:00 AM - 12:00 PM			12:00 PM - 12:00 AM		
	EB	WB	Combined	EB	WB	Combined
Count	3509	4128	7637	8303	7791	16094
	45.9 %	54.1 %		51.6 %	48.4 %	
Peak Hour	7:30 AM	7:30 AM	7:30 AM	5:00 PM	5:15 PM	5:15 PM
Volume	709	762	1471	1070	1143	2199
Factor	0.86	0.89	0.92	0.96	0.90	0.92

Traffic Data Services, Inc.

2223 Wellington Ave., Suite 315
Santa Ana, CA 92701

STREET : COLIMA RD
PARAMETERS : BTN NOGLAES/FAIRWAY/BREA CYN CUTOFF
CITY : DIAMOND BAR

Site: 02801V06
Date: 2/8/2008
Friday

24 Hour Volume

Begin	EB		WB		Combined		Begin	EB		WB		Combined	
12:00 AM	36	78	34	92	70	170	12:00 PM	180	773	234	947	414	1720
12:15 AM	17		24		41		12:15 PM	175		251		426	
12:30 AM	13		20		33		12:30 PM	204		244		448	
12:45 AM	12		14		26		12:45 PM	214		218		432	
1:00 AM	14	42	17	62	31	104	1:00 PM	217	912	209	795	426	1707
1:15 AM	7		18		25		1:15 PM	212		202		414	
1:30 AM	14		12		26		1:30 PM	258		194		452	
1:45 AM	7		15		22		1:45 PM	225		190		415	
2:00 AM	11	41	14	44	25	85	2:00 PM	224	989	207	844	431	1833
2:15 AM	16		11		27		2:15 PM	275		212		487	
2:30 AM	6		10		16		2:30 PM	225		211		436	
2:45 AM	8		9		17		2:45 PM	265		214		479	
3:00 AM	8	34	16	38	24	72	3:00 PM	228	1022	253	984	481	2006
3:15 AM	6		12		18		3:15 PM	283		201		484	
3:30 AM	9		2		11		3:30 PM	250		261		511	
3:45 AM	11		8		19		3:45 PM	261		269		530	
4:00 AM	7	39	15	54	22	93	4:00 PM	291	1073	225	906	516	1979
4:15 AM	9		14		23		4:15 PM	265		214		479	
4:30 AM	12		9		21		4:30 PM	277		216		493	
4:45 AM	11		16		27		4:45 PM	240		251		491	
5:00 AM	12	96	24	175	36	271	5:00 PM	274	1174	287	1093	561	2267
5:15 AM	23		52		75		5:15 PM	290		228		518	
5:30 AM	30		36		66		5:30 PM	308		283		591	
5:45 AM	31		63		94		5:45 PM	302		295		597	
6:00 AM	60	320	73	452	133	772	6:00 PM	267	1032	284	1016	551	2048
6:15 AM	70		104		174		6:15 PM	283		243		526	
6:30 AM	87		119		206		6:30 PM	264		273		537	
6:45 AM	103		156		259		6:45 PM	218		216		434	
7:00 AM	133	598	114	598	247	1196	7:00 PM	243	890	220	863	463	1753
7:15 AM	112		137		249		7:15 PM	239		216		455	
7:30 AM	161		158		319		7:30 PM	209		233		442	
7:45 AM	192		189		381		7:45 PM	199		194		393	
8:00 AM	192	709	207	701	399	1410	8:00 PM	198	782	135	525	333	1307
8:15 AM	176		175		351		8:15 PM	192		138		330	
8:30 AM	155		158		313		8:30 PM	202		128		330	
8:45 AM	186		161		347		8:45 PM	190		124		314	
9:00 AM	129	520	177	837	306	1357	9:00 PM	213	780	157	610	370	1390
9:15 AM	143		204		347		9:15 PM	187		145		332	
9:30 AM	108		215		323		9:30 PM	185		211		396	
9:45 AM	140		241		381		9:45 PM	195		97		292	
10:00 AM	111	538	230	891	341	1429	10:00 PM	173	516	135	464	308	980
10:15 AM	149		229		378		10:15 PM	143		135		278	
10:30 AM	130		203		333		10:30 PM	119		107		226	
10:45 AM	148		229		377		10:45 PM	81		87		168	
11:00 AM	133	632	220	893	353	1525	11:00 PM	73	254	90	251	163	505
11:15 AM	159		229		388		11:15 PM	76		67		143	
11:30 AM	160		223		383		11:30 PM	44		50		94	
11:45 AM	180		221		401		11:45 PM	61		44		105	

	EB	WB	Combined
24 Hour Volume	13844 (49.5%)	14135 (50.5%)	27979

	12:00 AM - 12:00 PM			12:00 PM - 12:00 AM		
	EB	WB	Combined	EB	WB	Combined
Count	3647	4837	8484	10197	9298	19495
	43.0 %	57.0 %		52.3 %	47.7 %	
Peak Hour	7:30 AM	9:30 AM	11:00 AM	5:00 PM	5:30 PM	5:00 PM
Volume	721	915	1525	1174	1105	2267
Factor	0.94	0.95	0.95	0.95	0.94	0.95

Traffic Data Services, Inc.

2223 Wellington Ave., Suite 315
Santa Ana, CA 92701

STREET : COLIMA RD
PARAMETERS : BTN NOGLAES/FAIRWAY/BREA CYN CUTOFF
CITY : DIAMOND BAR

Site: 02801V06
Date: 2/9/2008
Saturday

24 Hour Volume

Begin	EB		WB		Combined		Begin	EB		WB		Combined	
12:00 AM	33	124	36	142	69	266	12:00 PM	256	955	322	1087	578	2042
12:15 AM	38		34		72		12:15 PM	264		255		519	
12:30 AM	26		47		73		12:30 PM	211		278		489	
12:45 AM	27		25		52		12:45 PM	224		232		456	
1:00 AM	25	81	19	91	44	172	1:00 PM	230	953	311	1096	541	2049
1:15 AM	14		25		39		1:15 PM	235		277		512	
1:30 AM	21		21		42		1:30 PM	251		272		523	
1:45 AM	21		26		47		1:45 PM	237		236		473	
2:00 AM	33	83	29	67	62	150	2:00 PM	216	1022	278	1052	494	2074
2:15 AM	25		23		48		2:15 PM	272		226		498	
2:30 AM	15		6		21		2:30 PM	262		273		535	
2:45 AM	10		9		19		2:45 PM	272		275		547	
3:00 AM	9	39	12	40	21	79	3:00 PM	254	966	255	914	509	1880
3:15 AM	16		14		30		3:15 PM	242		242		484	
3:30 AM	7		6		13		3:30 PM	241		210		451	
3:45 AM	7		8		15		3:45 PM	229		207		436	
4:00 AM	10	33	8	32	18	65	4:00 PM	252	969	182	767	434	1736
4:15 AM	12		12		24		4:15 PM	241		197		438	
4:30 AM	7		7		14		4:30 PM	243		184		427	
4:45 AM	4		5		9		4:45 PM	233		204		437	
5:00 AM	2	43	3	85	5	128	5:00 PM	230	957	218	942	448	1899
5:15 AM	8		25		33		5:15 PM	226		203		429	
5:30 AM	13		18		31		5:30 PM	259		239		498	
5:45 AM	20		39		59		5:45 PM	242		282		524	
6:00 AM	26	136	16	119	42	255	6:00 PM	204	819	330	1136	534	1955
6:15 AM	37		33		70		6:15 PM	219		272		491	
6:30 AM	37		35		72		6:30 PM	197		262		459	
6:45 AM	36		35		71		6:45 PM	199		272		471	
7:00 AM	59	268	47	209	106	477	7:00 PM	175	661	291	795	466	1456
7:15 AM	69		44		113		7:15 PM	154		204		358	
7:30 AM	65		54		119		7:30 PM	174		168		342	
7:45 AM	75		64		139		7:45 PM	158		132		290	
8:00 AM	75	382	92	474	167	856	8:00 PM	179	675	155	498	334	1173
8:15 AM	86		97		183		8:15 PM	201		130		331	
8:30 AM	94		113		207		8:30 PM	150		107		257	
8:45 AM	127		172		299		8:45 PM	145		106		251	
9:00 AM	170	628	174	705	344	1333	9:00 PM	152	533	101	390	253	923
9:15 AM	144		169		313		9:15 PM	122		107		229	
9:30 AM	151		170		321		9:30 PM	131		87		218	
9:45 AM	163		192		355		9:45 PM	128		95		223	
10:00 AM	162	667	214	867	376	1534	10:00 PM	122	363	106	351	228	714
10:15 AM	165		211		376		10:15 PM	94		102		196	
10:30 AM	174		221		395		10:30 PM	74		71		145	
10:45 AM	166		221		387		10:45 PM	73		72		145	
11:00 AM	190	788	263	1015	453	1803	11:00 PM	55	213	55	215	110	428
11:15 AM	182		227		409		11:15 PM	57		68		125	
11:30 AM	215		248		463		11:30 PM	46		47		93	
11:45 AM	201		277		478		11:45 PM	55		45		100	

	EB	WB	Combined
24 Hour Volume	12358 (48.6%)	13089 (51.4%)	25447

	12:00 AM - 12:00 PM			12:00 PM - 12:00 AM		
	EB	WB	Combined	EB	WB	Combined
Count	3272	3846	7118	9086	9243	18329
	46.0 %	54.0 %		49.6 %	50.4 %	
Peak Hour	11:00 AM	11:00 AM	11:00 AM	2:15 PM	5:45 PM	2:15 PM
Volume	788	1015	1803	1060	1146	2089
Factor	0.92	0.92	0.94	0.97	0.87	0.95

Appendix C

Existing & Existing+Ambient

ICU Calculations

KHR ASSOCIATES
INTERSECTION CAPACITY UTILIZATION ANALYSIS

Condition:	Existing & Existing + Ambient Growth	**Date:**	Tuesday, February 12, 2008
Location:	County of Los Angeles, California	**Horizon Date:**	2012
North-South Street:	Brea Canyon Cutoff Road	**Peak Hour:**	7:30 - 8:30 AM
East-West Street:	Colima Road	**Data Source:**	KHR
Annual Growth Rate:	0.78%	**Input By:**	S. Carter

Comments: County of Los Angeles Capacity Volume of Vehicles Per Hour Per Lane = 1600
County of Los Angeles Capacity Volume of Vehicles Per Hour For Dual Left-Turn Lanes = 2880
Ambient Growth Factor per County of Los Angeles = 0.078 % Per Year

Direction of Travel	Lane Movement	Number of Lanes	Capacity (Veh/Hr) On Green	Peak Hour Volume		Volume/Capacity Ratio	
				Existing (2008)	Existing+ Ambient (2012)	Existing (2008)	Existing+ Ambient (2012)
Eastbound	Left Turn	1	1600	216	223	0.135 *	0.139 *
	Through	3	4800	381	393	0.116	0.120
	Right Turn**	0	0	176	182	-	-
Westbound	Left Turn	1	1600	261	269	0.163	0.168
	Through	3	4800	780	805	0.230 *	0.237 *
	Right Turn**	0	0	322	332	-	-
Northbound	Left Turn	1	1600	357	368	0.223 *	0.230 *
	Through	2	3200	600	619	0.255	0.263
	Right Turn**	0	1600	216	223	-	-
Southbound	Left Turn	1	1600	148	153	0.093	0.096
	Through	2	3200	438	452	0.231 *	0.238 *
	Right Turn**	0	1600	301	310	-	-
		ICU Plus Lost Time Factor of 0.1				**0.919**	
		Existing (2008) Level of Service				**E**	
		ICU Plus Lost Time Factor of 0.1					**0.944**
		Existing Plus Ambient (2012) Level of Service					**E**

* Denotes Critical Movement
** Denotes Shared Movement With Through Lane (Added to Through for V/C Ratio)

KHR ASSOCIATES
INTERSECTION CAPACITY UTILIZATION ANALYSIS

Condition:	Existing & Existing + Ambient Growth	**Date:**	Tuesday, February 12, 2008
Location:	County of Los Angeles, California	**Horizon Date:**	2012
North-South Street:	Brea Canyon Cutoff Road	**Peak Hour:**	5:00 - 6:00 P.M.
East-West Street:	Colima Road	**Data Source:**	KHR
Annual Growth Rate:	0.78%	**Input By:**	S. Carter

Comments: County of Los Angeles Capacity Volume of Vehicles Per Hour Per Lane = 1600
County of Los Angeles Capacity Volume of Vehicles Per Hour For Dual Left-Turn Lanes = 2880
Ambient Growth Factor per County of Los Angeles = 0.078 % Per Year

Direction of Travel	Lane Movement	Number of Lanes	Capacity (Veh/Hr) On Green	Peak Hour Volume		Volume/Capacity Ratio	
				Existing (2008)	Existing+ Ambient (2012)	Existing (2008)	Existing+ Ambient (2012)
Eastbound	Left Turn	1	1600	253	261	0.158 *	0.163 *
	Through	3	4800	669	690	0.155	0.160
	Right Turn**	0	0	77	80	-	-
Westbound	Left Turn	1	1600	224	231	0.140	0.144
	Through	3	4800	658	679	0.163 *	0.168 *
	Right Turn**	0	0	122	126	-	-
Northbound	Left Turn	1	1600	270	279	0.169 *	0.174 *
	Through	2	3200	581	600	0.247	0.254
	Right Turn**	0	1600	208	215	-	-
Southbound	Left Turn	1	1600	260	268	0.163	0.168
	Through	2	3200	637	657	0.257 *	0.265 *
	Right Turn**	0	1600	184	190	-	-
		ICU Plus Lost Time Factor of 0.1				**0.846**	
		Existing (2008) Level of Service				**D**	
		ICU Plus Lost Time Factor of 0.1					**0.870**
		Existing Plus Ambient (2012) Level of Service					**D**

* Denotes Critical Movement
** Denotes Shared Movement With Through Lane (Added to Through for V/C Ratio)

KHR ASSOCIATES
INTERSECTION CAPACITY UTILIZATION ANALYSIS

Condition:	Existing & Existing + Ambient Growth	**Date:**	Tuesday, February 12, 2008
Location:	City of Industry, California	**Horizon Date:**	2012
North-South Street:	Fairway Drive	**Peak Hour:**	7:45 - 8:45 AM
East-West Street:	SR-60 E/B Ramps	**Data Source:**	KHR
Annual Growth Rate:	0.78%	**Input By:**	S. Carter

Comments: County of Los Angeles Capacity Volume of Vehicles Per Hour Per Lane = 1600
County of Los Angeles Capacity Volume of Vehicles Per Hour For Dual Left-Turn Lanes = 2880
Ambient Growth Factor per County of Los Angeles = 0.078 % Per Year

Direction of Travel	Lane Movement	Number of Lanes	Capacity (Veh/Hr) On Green	Peak Hour Volume		Volume/Capacity Ratio	
				Existing (2008)	Existing+ Ambient (2012)	Existing (2008)	Existing+ Ambient (2012)
Eastbound	Left Turn	2	2880	384	396	0.250 *	0.258 *
	Through	0	0	0	0	-	-
	Right Turn***	0	0	335	346	-	-
Westbound	Left Turn	0	0	0	0	-	-
	Through	0	0	0	0	-	-
	Right Turn	0	0	0	0	-	-
Northbound	Left Turn	0	0	0	0	-	-
	Through	2	3200	515	531	0.161 *	0.166 *
	Right Turn	0	0	0	0	-	-
Southbound	Left Turn	0	0	0	0	-	-
	Through	2	3200	661	682	0.207	0.213
	Right Turn**	1	1600	150	155	FREE	FLOW
		ICU Plus Lost Time Factor of 0.1				**0.511**	
		Existing (2008) Level of Service				**A**	
		ICU Plus Lost Time Factor of 0.1					**0.524**
		Existing Plus Ambient (2012) Level of Service					**A**

* Denotes Critical Movement
** Denotes Free-Flow: On-Ramp Right Turn Before Intersection
*** Denotes Lane Striping as Optional Left-Turn/Right-Turn Lane (Added to Left Turn for V/C Ratio)

KHR ASSOCIATES
INTERSECTION CAPACITY UTILIZATION ANALYSIS

Condition:	Existing & Existing + Ambient Growth	**Date:**	Tuesday, February 12, 2008
Location:	City of Industry, California	**Horizon Date:**	2012
North-South Street:	Fairway Drive	**Peak Hour:**	5:00 - 6:00 P.M.
East-West Street:	SR-60 E/B Ramps	**Data Source:**	KHR
Annual Growth Rate:	0.78%	**Input By:**	S. Carter

Comments: County of Los Angeles Capacity Volume of Vehicles Per Hour Per Lane = 1600
County of Los Angeles Capacity Volume of Vehicles Per Hour For Dual Left-Turn Lanes = 2880
Ambient Growth Factor per County of Los Angeles = 0.078 % Per Year

Direction of Travel	Lane Movement	Number of Lanes	Capacity (Veh/Hr) On Green	Peak Hour Volume		Volume/Capacity Ratio	
				Existing (2008)	Existing+ Ambient (2012)	Existing (2008)	Existing+ Ambient (2012)
Eastbound	Left Turn	2	2880	160	165	0.143 *	0.148 *
	Through	0	0	0	0	-	-
	Right Turn***	0	0	252	260	-	-
Westbound	Left Turn	0	0	0	0	-	-
	Through	0	0	0	0	-	-
	Right Turn	0	0	0	0	-	-
Northbound	Left Turn	0	0	0	0	-	-
	Through	2	3200	1374	1417	0.429 *	0.443 *
	Right Turn	0	0	0	0	-	-
Southbound	Left Turn	0	0	0	0	-	-
	Through	2	3200	706	728	0.221	0.228
	Right Turn**	1	1600	305	315	FREE	FLOW
		ICU Plus Lost Time Factor of 0.1				**0.672**	
		Existing (2008) Level of Service				**B**	
		ICU Plus Lost Time Factor of 0.1					**0.690**
		Existing Plus Ambient (2012) Level of Service					**B**

* Denotes Critical Movement
** Denotes Free-Flow: On-Ramp Right Turn Before Intersection
*** Denotes Lane Striping as Optional Left-Turn/Right-Turn Lane (Added to Left Turn for V/C Ratio)

KHR ASSOCIATES
INTERSECTION CAPACITY UTILIZATION ANALYSIS

Condition:	Existing & Existing + Ambient Growth	**Date:**	Tuesday, February 12, 2008
Location:	City of Industry, California	**Horizon Date:**	2012
North-South Street:	Fairway Drive	**Peak Hour:**	7:45 - 8:45 AM
East-West Street:	SR-60 W/B Ramps	**Data Source:**	KHR
Annual Growth Rate:	0.78%	**Input By:**	S. Carter

Comments: County of Los Angeles Capacity Volume of Vehicles Per Hour Per Lane = 1600
County of Los Angeles Capacity Volume of Vehicles Per Hour For Dual Left-Turn Lanes = 2880
Ambient Growth Factor per County of Los Angeles = 0.078 % Per Year

Direction of Travel	Lane Movement	Number of Lanes	Capacity (Veh/Hr) On Green	Peak Hour Volume		Volume/Capacity Ratio	
				Existing (2008)	Existing+ Ambient (2012)	Existing (2008)	Existing+ Ambient (2012)
Eastbound	Left Turn	0	0	0	0	-	-
	Through	0	0	0	0	-	-
	Right Turn	0	0	0	0	-	-
Westbound	Left Turn	1	1600	246	254	0.158 *	0.163 *
	Through**	0	0	6	6	-	-
	Right Turn	1	1600	429	443	0.268	0.277
Northbound	Left Turn	1	1600	205	211	0.128 *	0.132 *
	Through	2	3200	897	925	0.280	0.289
	Right Turn	0	0	0	0	-	-
Southbound	Left Turn	0	0	0	0	-	-
	Through	2	3200	494	510	0.154 *	0.159 *
	Right Turn	1	1600	169	174	0.106	0.109
		ICU Plus Lost Time Factor of 0.1				**0.540**	
		Existing (2008) Level of Service				**A**	
		ICU Plus Lost Time Factor of 0.1					**0.554**
		Existing Plus Ambient (2012) Level of Service					**A**

* Denotes Critical Movement
** Denotes Lane Striping as Optional Through/Turn Lane (Added to Left Turn for V/C Ratio)

KHR ASSOCIATES
INTERSECTION CAPACITY UTILIZATION ANALYSIS

Condition:	Existing & Existing + Ambient Growth	**Date:**	Tuesday, February 12, 2008
Location:	City of Industry, California	**Horizon Date:**	2012
North-South Street:	Fairway Drive	**Peak Hour:**	4:45 - 5:45 P.M.
East-West Street:	SR-60 W/B Ramps	**Data Source:**	KHR
Annual Growth Rate:	0.78%	**Input By:**	S. Carter

Comments: County of Los Angeles Capacity Volume of Vehicles Per Hour Per Lane = 1600
County of Los Angeles Capacity Volume of Vehicles Per Hour For Dual Left-Turn Lanes = 2880
Ambient Growth Factor per County of Los Angeles = 0.078 % Per Year

Direction of Travel	Lane Movement	Number of Lanes	Capacity (Veh/Hr) On Green	Peak Hour Volume		Volume/Capacity Ratio	
				Existing (2008)	Existing+ Ambient (2012)	Existing (2008)	Existing+ Ambient (2012)
Eastbound	Left Turn	0	0	0	0	-	-
	Through	0	0	0	0	-	-
	Right Turn	0	0	0	0	-	-
Westbound	Left Turn	1	1600	368	380	0.231 *	0.238 *
	Through**	0	0	1	1	-	-
	Right Turn	1	1600	262	270	0.164	0.169
Northbound	Left Turn	1	1600	193	199	0.121 *	0.124 *
	Through	2	3200	676	697	0.211	0.218
	Right Turn	0	0	0	0	-	-
Southbound	Left Turn	0	0	0	0	-	-
	Through	2	3200	901	929	0.282 *	0.290 *
	Right Turn	1	1600	236	243	0.148	0.152
		ICU Plus Lost Time Factor of 0.1				**0.733**	
		Existing (2008) Level of Service				**C**	
		ICU Plus Lost Time Factor of 0.1					**0.753**
		Existing Plus Ambient (2012) Level of Service					**C**

* Denotes Critical Movement
** Denotes Lane Striping as Optional Through/Turn Lane (Added to Left Turn for V/C Ratio)

KHR ASSOCIATES
INTERSECTION CAPACITY UTILIZATION ANALYSIS

Condition:	Existing & Existing + Ambient Growth	**Date:**	Tuesday, February 12, 2008
Location:	County of Los Angeles, California	**Horizon Date:**	2012
North-South Street:	Brea Canyon Cutoff Road	**Peak Hour:**	7:30 - 8:30 A.M.
East-West Street:	Pathfinder Road	**Data Source:**	KHR
Annual Growth Rate:	0.78%	**Input By:**	S. Carter

Comments: County of Los Angeles Capacity Volume of Vehicles Per Hour Per Lane = 1600
County of Los Angeles Capacity Volume of Vehicles Per Hour For Dual Left-Turn Lanes = 2880
Ambient Growth Factor per County of Los Angeles = 0.078 % Per Year

Direction of Travel	Lane Movement	Number of Lanes	Capacity (Veh/Hr) On Green	Peak Hour Volume		Volume/Capacity Ratio	
				Existing (2008)	Existing+ Ambient (2012)	Existing (2008)	Existing+ Ambient (2012)
Eastbound	Left Turn	1	1600	82	85	0.051	0.053
	Through	2	3200	155	160	0.129 *	0.133 *
	Right Turn**	0	0	259	267	-	-
Westbound	Left Turn	1	1600	104	107	0.065 *	0.067 *
	Through	2	3200	327	337	0.133	0.137
	Right Turn**	0	0	98	101	-	-
Northbound	Left Turn	1	1600	168	173	0.105 *	0.108 *
	Through	1	1600	286	295	0.179	0.184
	Right Turn	1	1600	23	24	0.014	0.015
Southbound	Left Turn	1	1600	47	48	0.029	0.030
	Through	1	1600	414	427	0.286 *	0.295 *
	Right Turn**	0	1600	44	45	-	-
		ICU Plus Lost Time Factor of 0.1				**0.686**	
		Existing (2008) Level of Service				**B**	
		ICU Plus Lost Time Factor of 0.1					**0.703**
		Existing Plus Ambient (2012) Level of Service					**C**

* Denotes Critical Movement
** Denotes Shared Movement With Through Lane (Added to Through for V/C Ratio)

KHR ASSOCIATES
INTERSECTION CAPACITY UTILIZATION ANALYSIS

Condition:	Existing & Existing + Ambient Growth	**Date:**	Tuesday, February 12, 2008
Location:	County of Los Angeles, California	**Horizon Date:**	2012
North-South Street:	Brea Canyon Cutoff Road	**Peak Hour:**	4:00 - 5:00 P.M.
East-West Street:	Pathfinder Road	**Data Source:**	KHR
Annual Growth Rate:	0.78%	**Input By:**	S. Carter

Comments: County of Los Angeles Capacity Volume of Vehicles Per Hour Per Lane = 1600
County of Los Angeles Capacity Volume of Vehicles Per Hour For Dual Left-Turn Lanes = 2880
Ambient Growth Factor per County of Los Angeles = 0.078 % Per Year

Direction of Travel	Lane Movement	Number of Lanes	Capacity (Veh/Hr) On Green	Peak Hour Volume		Volume/Capacity Ratio	
				Existing (2008)	Existing+ Ambient (2012)	Existing (2008)	Existing+ Ambient (2012)
Eastbound	Left Turn	1	1600	114	118	0.071	0.074
	Through	2	3200	432	446	0.233 *	0.240 *
	Right Turn**	0	0	312	322	-	-
Westbound	Left Turn	1	1600	30	31	0.019 *	0.019 *
	Through	2	3200	368	380	0.139	0.143
	Right Turn**	0	0	76	78	-	-
Northbound	Left Turn	1	1600	245	253	0.153 *	0.158 *
	Through	1	1600	573	591	0.358	0.369
	Right Turn	1	1600	54	56	0.034	0.035
Southbound	Left Turn	1	1600	98	101	0.061	0.063
	Through	1	1600	508	524	0.347 *	0.358 *
	Right Turn**	0	1600	47	48	-	-
		ICU Plus Lost Time Factor of 0.1				**0.851**	
		Existing (2008) Level of Service				**D**	
		ICU Plus Lost Time Factor of 0.1					**0.875**
		Existing Plus Ambient (2012) Level of Service					**D**

* Denotes Critical Movement
** Denotes Shared Movement With Through Lane (Added to Through for V/C Ratio)

KHR ASSOCIATES
INTERSECTION CAPACITY UTILIZATION ANALYSIS

Condition:	Existing & Existing + Ambient Growth	**Date:**	Tuesday, February 12, 2008
Location:	County of Los Angeles, California	**Horizon Date:**	2012
North-South Street:	Brea Canyon Cutoff Road	**Peak Hour:**	7:45 - 8:45 A.M.
East-West Street:	Reedview Drive	**Data Source:**	KHR
Annual Growth Rate:	0.78%	**Input By:**	S. Carter

Comments: County of Los Angeles Capacity Volume of Vehicles Per Hour Per Lane = 1600
County of Los Angeles Capacity Volume of Vehicles Per Hour For Dual Left-Turn Lanes = 2880
Ambient Growth Factor per County of Los Angeles = 0.078 % Per Year

Direction of Travel	Lane Movement	Number of Lanes	Capacity (Veh/Hr) On Green	Peak Hour Volume		Volume/Capacity Ratio	
				Existing (2008)	Existing+ Ambient (2012)	Existing (2008)	Existing+ Ambient (2012)
Eastbound	Left Turn	1	1600	13	13	0.008 *	0.008 *
	Through	0	0	0	0	-	-
	Right Turn**	0	0	5	5	-	-
Westbound	Left Turn	0	0	0	0	-	-
	Through	0	0	0	0	-	-
	Right Turn	0	0	0	0	-	-
Northbound	Left Turn	1	1600	1	1	0.001	0.001
	Through	2	3200	732	755	0.229 *	0.236 *
	Right Turn	0	0	0	0	-	-
Southbound	Left Turn	0	0	0	0	-	-
	Through	2	3200	497	513	0.160	0.165
	Right Turn**	0	0	16	16	-	-
		ICU Plus Lost Time Factor of 0.1				**0.337**	
		Existing (2008) Level of Service				**A**	
		ICU Plus Lost Time Factor of 0.1					**0.344**
		Existing Plus Ambient (2012) Level of Service					**A**

* Denotes Critical Movement
*** Denotes Shared Movement With Through Lane (Added to Through for V/C Ratio)

KHR ASSOCIATES
INTERSECTION CAPACITY UTILIZATION ANALYSIS

Condition:	Existing & Existing + Ambient Growth	**Date:**	Tuesday, February 12, 2008
Location:	County of Los Angeles, California	**Horizon Date:**	2012
North-South Street:	Brea Canyon Cutoff Road	**Peak Hour:**	5:00 - 6:00 P.M.
East-West Street:	Reedview Drive	**Data Source:**	KHR
Annual Growth Rate:	0.78%	**Input By:**	S. Carter

Comments: County of Los Angeles Capacity Volume of Vehicles Per Hour Per Lane = 1600
County of Los Angeles Capacity Volume of Vehicles Per Hour For Dual Left-Turn Lanes = 2880
Ambient Growth Factor per County of Los Angeles = 0.078 % Per Year

Direction of Travel	Lane Movement	Number of Lanes	Capacity (Veh/Hr) On Green	Peak Hour Volume		Volume/Capacity Ratio	
				Existing (2008)	Existing+ Ambient (2012)	Existing (2008)	Existing+ Ambient (2012)
Eastbound	Left Turn	1	1600	13	13	0.008 *	0.008 *
	Through	0	0	0	0	-	-
	Right Turn**	0	0	5	5	-	-
Westbound	Left Turn	0	0	0	0	-	-
	Through	0	0	0	0	-	-
	Right Turn	0	0	0	0	-	-
Northbound	Left Turn	1	1600	2	2	0.001	0.001
	Through	2	3200	741	764	0.232 *	0.239 *
	Right Turn	0	0	0	0	-	-
Southbound	Left Turn	0	0	0	0	-	-
	Through	2	3200	703	725	0.227	0.234
	Right Turn**	0	0	23	24	-	-
		ICU Plus Lost Time Factor of 0.1				**0.340**	
		Existing (2008) Level of Service				**A**	
		ICU Plus Lost Time Factor of 0.1					**0.347**
		Existing Plus Ambient (2012) Level of Service					**A**

* Denotes Critical Movement
** Denotes Shared Movement With Through Lane (Added to Through for V/C Ratio)

KHR ASSOCIATES
INTERSECTION CAPACITY UTILIZATION ANALYSIS

Condition:	Existing & Existing + Ambient Growth	**Date:**	Tuesday, February 12, 2008
Location:	City of Diamond Bar, California	**Horizon Date:**	2012
North-South Street:	SR-57 N/B Ramps	**Peak Hour:**	7:30 - 8:30 AM
East-West Street:	Brea Canyon Cutoff Road/Diamond Bar Blvd.	**Data Source:**	KHR
Annual Growth Rate:	0.78%	**Input By:**	S. Carter

Comments: County of Los Angeles Capacity Volume of Vehicles Per Hour Per Lane = 1600
County of Los Angeles Capacity Volume of Vehicles Per Hour For Dual Left-Turn Lanes = 2880
Ambient Growth Factor per County of Los Angeles = 0.078 % Per Year

Direction of Travel	Lane Movement	Number of Lanes	Capacity (Veh/Hr) On Green	Peak Hour Volume		Volume/Capacity Ratio	
				Existing (2008)	Existing+ Ambient (2012)	Existing (2008)	Existing+ Ambient (2012)
Eastbound	Left Turn	1	1600	39	40	0.024 *	0.025 *
	Through	2	3200	524	541	0.164	0.169
	Right Turn	0	0	0	0	-	-
Westbound	Left Turn	0	0	0	0	-	-
	Through	2	3200	594	613	0.186 *	0.192 *
	Right Turn**	1	1600	187	193	FREE	FLOW
Northbound	Left Turn	1	1600	241	249	0.151 *	0.156 *
	Through***	0	0	0	0	-	-
	Right Turn	1	1600	190	196	0.119	0.123
Southbound	Left Turn	0	0	0	0	-	-
	Through	0	0	0	0	-	-
	Right Turn	0	0	0	0	-	-
		ICU Plus Lost Time Factor of 0.1				**0.461**	
		Existing (2008) Level of Service				**A**	
		ICU Plus Lost Time Factor of 0.1					**0.472**
		Existing Plus Ambient (2012) Level of Service					**A**

* Denotes Critical Movement
** Denotes Free-Flow: On-Ramp Right Turn Before Intersection
**** Denotes Optional Left/Right Turn Lane (Added to Left Turn for V/C Ratio)

KHR ASSOCIATES
INTERSECTION CAPACITY UTILIZATION ANALYSIS

Condition:	Existing & Existing + Ambient Growth	**Date:**	Tuesday, February 12, 2008
Location:	City of Diamond Bar, California	**Horizon Date:**	2012
North-South Street:	SR-57 N/B Ramps	**Peak Hour:**	5:00 - 6:00 P.M.
East-West Street:	Brea Canyon Cutoff Road/Diamond Bar Blvd.	**Data Source:**	KHR
Annual Growth Rate:	0.78%	**Input By:**	S. Carter

Comments: County of Los Angeles Capacity Volume of Vehicles Per Hour Per Lane = 1600
County of Los Angeles Capacity Volume of Vehicles Per Hour For Dual Left-Turn Lanes = 2880
Ambient Growth Factor per County of Los Angeles = 0.078 % Per Year

Direction of Travel	Lane Movement	Number of Lanes	Capacity (Veh/Hr) On Green	Peak Hour Volume		Volume/Capacity Ratio	
				Existing (2008)	Existing+ Ambient (2012)	Existing (2008)	Existing+ Ambient (2012)
Eastbound	Left Turn	1	1600	23	24	0.014 *	0.015 *
	Through	2	3200	906	935	0.283	0.292
	Right Turn	0	0	0	0	-	-
Westbound	Left Turn	0	0	0	0	-	-
	Through	2	3200	623	643	0.195 *	0.201 *
	Right Turn**	1	1600	112	116	FREE	FLOW
Northbound	Left Turn	1	1600	309	319	0.193 *	0.199 *
	Through***	0	0	0	0	-	-
	Right Turn	1	1600	123	127	0.077	0.079
Southbound	Left Turn	0	0	0	0	-	-
	Through	0	0	0	0	-	-
	Right Turn	0	0	0	0	-	-
		ICU Plus Lost Time Factor of 0.1				**0.502**	
		Existing (2008) Level of Service				**A**	
		ICU Plus Lost Time Factor of 0.1					**0.515**
		Existing Plus Ambient (2012) Level of Service					**A**

* Denotes Critical Movement
** Denotes Free-Flow: On-Ramp Right Turn Before Intersection
**** Denotes Optional Left/Right Turn Lane (Added to Left Turn for V/C Ratio)

KHR ASSOCIATES
INTERSECTION CAPACITY UTILIZATION ANALYSIS

Condition:	Existing & Existing + Ambient Growth	**Date:**	Tuesday, February 12, 2008
Location:	City of Diamond Bar, California	**Horizon Date:**	2012
North-South Street:	SR-57 S/B Ramps	**Peak Hour:**	8:00 - 9:00 A.M.
East-West Street:	Brea Canyon Cutoff Road/Diamond Bar Blvd.	**Data Source:**	KHR
Annual Growth Rate:	0.78%	**Input By:**	S. Carter

Comments: County of Los Angeles Capacity Volume of Vehicles Per Hour Per Lane = 1600
County of Los Angeles Capacity Volume of Vehicles Per Hour For Dual Left-Turn Lanes = 2880
Ambient Growth Factor per County of Los Angeles = 0.078 % Per Year

Direction of Travel	Lane Movement	Number of Lanes	Capacity (Veh/Hr) On Green	Peak Hour Volume		Volume/Capacity Ratio	
				Existing (2008)	Existing+ Ambient (2012)	Existing (2008)	Existing+ Ambient (2012)
Eastbound	Left Turn	0	0	0	0	-	-
	Through	2	3200	215	222	0.067 *	0.069 *
	Right Turn**	1	1600	249	257	FREE	FLOW
Westbound	Left Turn	1	1600	402	415	0.251 *	0.259 *
	Through	2	3200	712	735	0.223	0.230
	Right Turn	0	0	0	0	-	-
Northbound	Left Turn	0	0	0	0	-	-
	Through	0	0	0	0	-	-
	Right Turn	0	0	0	0	-	-
Southbound	Left Turn	1	1600	54	56	0.034 *	0.035 *
	Through***	0	0	0	0	-	-
	Right Turn	1	1600	158	163	0.099	0.102
		ICU Plus Lost Time Factor of 0.1				**0.452**	
		Existing (2008) Level of Service				**A**	
		ICU Plus Lost Time Factor of 0.1					**0.464**
		Existing Plus Ambient (2012) Level of Service					**A**

* Denotes Critical Movement
** Denotes Free-Flow: On-Ramp Right Turn Before Intersection
*** Denotes Optional Thru/Left Turn Lane (Added to Left Turn for V/C Ratio)

KHR ASSOCIATES
INTERSECTION CAPACITY UTILIZATION ANALYSIS

Condition:	Existing & Existing + Ambient Growth	**Date:**	Tuesday, February 12, 2008
Location:	City of Diamond Bar, California	**Horizon Date:**	2012
North-South Street:	SR-57 S/B Ramps	**Peak Hour:**	5:00 - 6:00 P.M.
East-West Street:	Brea Canyon Cutoff Road/Diamond Bar Blvd.	**Data Source:**	KHR
Annual Growth Rate:	0.78%	**Input By:**	S. Carter

Comments: County of Los Angeles Capacity Volume of Vehicles Per Hour Per Lane = 1600
County of Los Angeles Capacity Volume of Vehicles Per Hour For Dual Left-Turn Lanes = 2880
Ambient Growth Factor per County of Los Angeles = 0.078 % Per Year

Direction of Travel	Lane Movement	Number of Lanes	Capacity (Veh/Hr) On Green	Peak Hour Volume		Volume/Capacity Ratio	
				Existing (2008)	Existing+ Ambient (2012)	Existing (2008)	Existing+ Ambient (2012)
Eastbound	Left Turn	0	0	0	0	-	-
	Through	2	3200	859	886	0.268 *	0.277 *
	Right Turn**	1	1600	311	321	FREE	FLOW
Westbound	Left Turn	1	1600	183	189	0.114 *	0.118 *
	Through	2	3200	910	939	0.284	0.293
	Right Turn	0	0	0	0	-	-
Northbound	Left Turn	0	0	0	0	-	-
	Through	0	0	0	0	-	-
	Right Turn	0	0	0	0	-	-
Southbound	Left Turn	1	1600	47	49	0.029 *	0.031 *
	Through***	0	0	0	0	-	-
	Right Turn	1	1600	161	166	0.101	0.104
		ICU Plus Lost Time Factor of 0.1				**0.512**	
		Existing (2008) Level of Service				**A**	
		ICU Plus Lost Time Factor of 0.1					**0.526**
		Existing Plus Ambient (2012) Level of Service					**A**

* Denotes Critical Movement
** Denotes Free-Flow: On-Ramp Right Turn Before Intersection
*** Denotes Optional Thru/Left Turn Lane (Added to Left Turn for V/C Ratio)

KHR ASSOCIATES
INTERSECTION CAPACITY UTILIZATION ANALYSIS

Condition:	Existing & Existing + Ambient Growth	**Date:**	Tuesday, February 12, 2008
Location:	City of Diamond Bar, California	**Horizon Date:**	2012
North-South Street:	SR-57 N/B Ramps	**Peak Hour:**	7:45 - 8:45 AM
East-West Street:	Pathfinder Road	**Data Source:**	KHR
Annual Growth Rate:	0.78%	**Input By:**	S. Carter

Comments: County of Los Angeles Capacity Volume of Vehicles Per Hour Per Lane = 1600
County of Los Angeles Capacity Volume of Vehicles Per Hour For Dual Left-Turn Lanes = 2880
Ambient Growth Factor per County of Los Angeles = 0.078 % Per Year

Direction of Travel	Lane Movement	Number of Lanes	Capacity (Veh/Hr) On Green	Peak Hour Volume		Volume/Capacity Ratio	
				Existing (2008)	Existing+ Ambient (2012)	Existing (2008)	Existing+ Ambient (2012)
Eastbound	Left Turn	1	1600	112	116	0.070 *	0.073 *
	Through	2	3200	355	366	0.111	0.114
	Right Turn	0	0	0	0	-	-
Westbound	Left Turn	0	0	0	0	-	-
	Through	2	3200	1027	1059	0.321 *	0.331 *
	Right Turn	1	1600	617	636	0.386	0.398
Northbound	Left Turn	1	1600	209	216	0.131 *	0.135 *
	Through**	0	0	0	0	-	-
	Right Turn	1	1600	67	69	0.042	0.043
Southbound	Left Turn	0	0	0	0	-	-
	Through	0	0	0	0	-	-
	Right Turn	0	0	0	0	-	-
		ICU Plus Lost Time Factor of 0.1				**0.622**	
		Existing (2008) Level of Service				**B**	
		ICU Plus Lost Time Factor of 0.1					**0.638**
		Existing Plus Ambient (2012) Level of Service					**B**

* Denotes Critical Movement
** Denotes Optional Thru/Left Turn Lane (Added to Left Turn for V/C Ratio)

KHR ASSOCIATES
INTERSECTION CAPACITY UTILIZATION ANALYSIS

Condition:	Existing & Existing + Ambient Growth	**Date:**	Tuesday, February 12, 2008
Location:	City of Diamond Bar, California	**Horizon Date:**	2012
North-South Street:	SR-57 N/B Ramps	**Peak Hour:**	5:00 - 6:00 P.M.
East-West Street:	Pathfinder Road	**Data Source:**	KHR
Annual Growth Rate:	0.78%	**Input By:**	S. Carter

Comments: County of Los Angeles Capacity Volume of Vehicles Per Hour Per Lane = 1600
County of Los Angeles Capacity Volume of Vehicles Per Hour For Dual Left-Turn Lanes = 2880
Ambient Growth Factor per County of Los Angeles = 0.078 % Per Year

Direction of Travel	Lane Movement	Number of Lanes	Capacity (Veh/Hr) On Green	Peak Hour Volume		Volume/Capacity Ratio	
				Existing (2008)	Existing+ Ambient (2012)	Existing (2008)	Existing+ Ambient (2012)
Eastbound	Left Turn	1	1600	89	92	0.056 *	0.058 *
	Through	2	3200	684	706	0.214	0.221
	Right Turn	0	0	0	0	-	-
Westbound	Left Turn	0	0	0	0	-	-
	Through	2	3200	483	498	0.151 *	0.156 *
	Right Turn	1	1600	418	431	0.261	0.269
Northbound	Left Turn	1	1600	438	452	0.274 *	0.283 *
	Through**	0	0	0	0	-	-
	Right Turn	1	1600	358	369	0.224	0.231
Southbound	Left Turn	0	0	0	0	-	-
	Through	0	0	0	0	-	-
	Right Turn	0	0	0	0	-	-
		ICU Plus Lost Time Factor of 0.1				**0.580**	
		Existing (2008) Level of Service				**A**	
		ICU Plus Lost Time Factor of 0.1					**0.596**
		Existing Plus Ambient (2012) Level of Service					**A**

* Denotes Critical Movement
** Denotes Optional Thru/Left Turn Lane (Added to Left Turn for V/C Ratio)

KHR ASSOCIATES
INTERSECTION CAPACITY UTILIZATION ANALYSIS

Condition:	Existing & Existing + Ambient Growth	**Date:**	Tuesday, February 12, 2008
Location:	City of Diamond Bar, California	**Horizon Date:**	2012
North-South Street:	SR-57 S/B Ramps	**Peak Hour:**	7:45 - 8:45 A.M.
East-West Street:	Pathfinder Road	**Data Source:**	KHR
Annual Growth Rate:	0.78%	**Input By:**	S. Carter

Comments: County of Los Angeles Capacity Volume of Vehicles Per Hour Per Lane = 1600
County of Los Angeles Capacity Volume of Vehicles Per Hour For Dual Left-Turn Lanes = 2880
Ambient Growth Factor per County of Los Angeles = 0.078 % Per Year

Direction of Travel	Lane Movement	Number of Lanes	Capacity (Veh/Hr) On Green	Peak Hour Volume		Volume/Capacity Ratio	
				Existing (2008)	Existing+ Ambient (2012)	Existing (2008)	Existing+ Ambient (2012)
Eastbound	Left Turn	0	0	0	0	-	-
	Through	2	3200	467	482	0.146 *	0.151 *
	Right Turn**	1	1600	258	266	FREE	FLOW
Westbound	Left Turn	1	1600	424	437	0.265 *	0.273 *
	Through	2	3200	812	838	0.254	0.262
	Right Turn	0	0	0	0	-	-
Northbound	Left Turn	0	0	0	0	-	-
	Through	0	0	0	0	-	-
	Right Turn	0	0	0	0	-	-
Southbound	Left Turn	1	1600	256	264	0.160 *	0.165 *
	Through***	0	0	0	0	-	-
	Right Turn	1	1600	113	117	0.071	0.073
		ICU Plus Lost Time Factor of 0.1				**0.671**	
		Existing (2008) Level of Service				**B**	
		ICU Plus Lost Time Factor of 0.1					**0.689**
		Existing Plus Ambient (2012) Level of Service					**B**

* Denotes Critical Movement
** Denotes Free-Flow: On-Ramp Right Turn Before Intersection
*** Denotes Optional Thru/Left Turn Lane (Added to Left Turn for V/C Ratio)

KHR ASSOCIATES
INTERSECTION CAPACITY UTILIZATION ANALYSIS

Condition:	Existing & Existing + Ambient Growth	**Date:**	Tuesday, February 12, 2008
Location:	City of Diamond Bar, California	**Horizon Date:**	2012
North-South Street:	SR-57 S/B Ramps	**Peak Hour:**	5:00 - 6:00 P.M.
East-West Street:	Pathfinder Road	**Data Source:**	KHR
Annual Growth Rate:	0.78%	**Input By:**	S. Carter

Comments: County of Los Angeles Capacity Volume of Vehicles Per Hour Per Lane = 1600
County of Los Angeles Capacity Volume of Vehicles Per Hour For Dual Left-Turn Lanes = 2880
Ambient Growth Factor per County of Los Angeles = 0.078 % Per Year

Direction of Travel	Lane Movement	Number of Lanes	Capacity (Veh/Hr) On Green	Peak Hour Volume		Volume/Capacity Ratio	
				Existing (2008)	Existing+ Ambient (2012)	Existing (2008)	Existing+ Ambient (2012)
Eastbound	Left Turn	0	0	0	0	-	-
	Through	2	3200	773	797	0.242 *	0.249 *
	Right Turn**	1	1600	120	124	FREE	FLOW
Westbound	Left Turn	1	1600	82	85	0.051 *	0.053 *
	Through	2	3200	421	434	0.132	0.136
	Right Turn	0	0	0	0	-	-
Northbound	Left Turn	0	0	0	0	-	-
	Through	0	0	0	0	-	-
	Right Turn	0	0	0	0	-	-
Southbound	Left Turn	1	1600	292	301	0.183 *	0.188 *
	Through***	0	0	0	0	-	-
	Right Turn	1	1600	357	368	0.223	0.230
		ICU Plus Lost Time Factor of 0.1				**0.575**	
		Existing (2008) Level of Service				**A**	
		ICU Plus Lost Time Factor of 0.1					**0.590**
		Existing Plus Ambient (2012) Level of Service					**A**

* Denotes Critical Movement
** Denotes Free-Flow: On-Ramp Right Turn Before Intersection
*** Denotes Optional Thru/Left Turn Lane (Added to Left Turn for V/C Ratio)

KHR ASSOCIATES
INTERSECTION CAPACITY UTILIZATION ANALYSIS

Condition:	Existing & Existing + Ambient Growth	**Date:**	Tuesday, February 12, 2008
Location:	County of Los Angeles, California	**Horizon Date:**	2012
North-South Street:	Fullerton Road	**Peak Hour:**	8:00 - 9:00 AM
East-West Street:	Colima Road	**Data Source:**	KHR
Annual Growth Rate:	0.78%	**Input By:**	S. Carter

Comments: County of Los Angeles Capacity Volume of Vehicles Per Hour Per Lane = 1600
County of Los Angeles Capacity Volume of Vehicles Per Hour For Dual Left-Turn Lanes = 2880
Ambient Growth Factor per County of Los Angeles = 0.078 % Per Year

Direction of Travel	Lane Movement	Number of Lanes	Capacity (Veh/Hr) On Green	Peak Hour Volume		Volume/Capacity Ratio	
				Existing (2008)	Existing+ Ambient (2012)	Existing (2008)	Existing+ Ambient (2012)
Eastbound	Left Turn	1	1600	125	129	0.078 *	0.081 *
	Through	3	4800	440	454	0.126	0.130
	Right Turn**	0	0	167	172	-	-
Westbound	Left Turn	1	1600	222	229	0.139	0.143
	Through	3	4800	1,240	1,279	0.389 *	0.402 *
	Right Turn**	0	0	629	649	-	-
Northbound	Left Turn	2	2880	337	348	0.117	0.121
	Through	2	3200	922	951	0.328 *	0.338 *
	Right Turn**	0	0	126	130	-	-
Southbound	Left Turn	2	2880	189	195	0.066 *	0.068 *
	Through	2	3200	609	628	0.247	0.255
	Right Turn**	0	0	182	188	-	-
		ICU Plus Lost Time Factor of 0.1				**0.961**	
		Existing (2008) Level of Service				**E**	
		ICU Plus Lost Time Factor of 0.1					**0.988**
		Existing Plus Ambient (2012) Level of Service					**E**

* Denotes Critical Movement
** Denotes Shared Movement With Through Lane (Added to Through for V/C Ratio)

KHR ASSOCIATES
INTERSECTION CAPACITY UTILIZATION ANALYSIS

Condition:	Existing & Existing + Ambient Growth	**Date:**	Tuesday, February 12, 2008
Location:	County of Los Angeles, California	**Horizon Date:**	2012
North-South Street:	Fullerton Road	**Peak Hour:**	5:00 - 6:00 P.M.
East-West Street:	Colima Road	**Data Source:**	KHR
Annual Growth Rate:	0.78%	**Input By:**	S. Carter

Comments: County of Los Angeles Capacity Volume of Vehicles Per Hour Per Lane = 1600
County of Los Angeles Capacity Volume of Vehicles Per Hour For Dual Left-Turn Lanes = 2880
Ambient Growth Factor per County of Los Angeles = 0.078 % Per Year

Direction of Travel	Lane Movement	Number of Lanes	Capacity (Veh/Hr) On Green	Peak Hour Volume		Volume/Capacity Ratio	
				Existing (2008)	Existing+ Ambient (2012)	Existing (2008)	Existing+ Ambient (2012)
Eastbound	Left Turn	1	1600	152	157	0.095	0.098
	Through	3	4800	975	1,006	0.245 *	0.253 *
	Right Turn**	0	0	203	209	-	-
Westbound	Left Turn	1	1600	202	208	0.126 *	0.130 *
	Through	3	4800	766	790	0.214	0.221
	Right Turn**	0	0	263	271	-	-
Northbound	Left Turn	2	2880	271	280	0.094	0.097
	Through	2	3200	752	776	0.271 *	0.280 *
	Right Turn**	0	0	116	120	-	-
Southbound	Left Turn	2	2880	384	396	0.133 *	0.138 *
	Through	2	3200	833	859	0.310	0.320
	Right Turn**	0	0	159	164	-	-
		ICU Plus Lost Time Factor of 0.1				**0.876**	
		Existing (2008) Level of Service				**D**	
		ICU Plus Lost Time Factor of 0.1					**0.901**
		Existing Plus Ambient (2012) Level of Service					**D**

* Denotes Critical Movement
** Denotes Shared Movement With Through Lane (Added to Through for V/C Ratio)

KHR ASSOCIATES
INTERSECTION CAPACITY UTILIZATION ANALYSIS

Condition:	Existing & Existing + Ambient Growth	**Date:**	Tuesday, February 12, 2008
Location:	County of Los Angeles, California	**Horizon Date:**	2012
North-South Street:	Nogales Street	**Peak Hour:**	7:30 - 8:30 AM
East-West Street:	Colima Road	**Data Source:**	KHR
Annual Growth Rate:	0.78%	**Input By:**	S. Carter

Comments: County of Los Angeles Capacity Volume of Vehicles Per Hour Per Lane = 1600
County of Los Angeles Capacity Volume of Vehicles Per Hour For Dual Left-Turn Lanes = 2880
Ambient Growth Factor per County of Los Angeles = 0.078 % Per Year

Direction of Travel	Lane Movement	Number of Lanes	Capacity (Veh/Hr) On Green	Peak Hour Volume		Volume/Capacity Ratio	
				Existing (2008)	Existing+ Ambient (2012)	Existing (2008)	Existing+ Ambient (2012)
Eastbound	Left Turn	2	2880	287	296	0.100	0.103
	Through	2	3200	739	762	0.317 *	0.327 *
	Right Turn**	0	0	275	284	-	-
Westbound	Left Turn	1	1600	378	390	0.236 *	0.244 *
	Through	3	4800	812	838	0.200	0.207
	Right Turn**	0	0	150	155	-	-
Northbound	Left Turn	1	1600	334	345	0.209 *	0.216 *
	Through	2	3200	874	902	0.304	0.314
	Right Turn**	0	0	99	102	-	-
Southbound	Left Turn	2	2880	320	330	0.111	0.115
	Through	2	3200	824	850	0.258 *	0.266 *
	Right Turn	1	1600	281	290	0.176	0.181
		ICU Plus Lost Time Factor of 0.1				**1.119**	
		Existing (2008) Level of Service				**F**	
		ICU Plus Lost Time Factor of 0.1					**1.152**
		Existing Plus Ambient (2012) Level of Service					**F**

* Denotes Critical Movement
** Denotes Shared Movement With Through Lane (Added to Through for V/C Ratio)

KHR ASSOCIATES
INTERSECTION CAPACITY UTILIZATION ANALYSIS

Condition:	Existing & Existing + Ambient Growth	**Date:**	Tuesday, February 12, 2008
Location:	County of Los Angeles, California	**Horizon Date:**	2012
North-South Street:	Nogales Street	**Peak Hour:**	5:00 - 6:00 P.M.
East-West Street:	Colima Road	**Data Source:**	KHR
Annual Growth Rate:	0.78%	**Input By:**	S. Carter

Comments: County of Los Angeles Capacity Volume of Vehicles Per Hour Per Lane = 1600
County of Los Angeles Capacity Volume of Vehicles Per Hour For Dual Left-Turn Lanes = 2880
Ambient Growth Factor per County of Los Angeles = 0.078 % Per Year

Direction of Travel	Lane Movement	Number of Lanes	Capacity (Veh/Hr) On Green	Peak Hour Volume		Volume/Capacity Ratio	
				Existing (2008)	Existing+ Ambient (2012)	Existing (2008)	Existing+ Ambient (2012)
Eastbound	Left Turn	2	2880	481	496	0.167	0.172
	Through	2	3200	943	973	0.321 *	0.331 *
	Right Turn**	0	0	83	86	-	-
Westbound	Left Turn	1	1600	201	207	0.126 *	0.129 *
	Through	3	4800	935	965	0.251	0.260
	Right Turn**	0	0	272	281	-	-
Northbound	Left Turn	1	1600	300	309	0.188	0.193
	Through	2	3200	765	789	0.291 *	0.300 *
	Right Turn**	0	0	166	171	-	-
Southbound	Left Turn	2	2880	424	437	0.147 *	0.152 *
	Through	2	3200	667	688	0.208	0.215
	Right Turn	1	1600	377	389	0.236	0.243
ICU Plus Lost Time Factor of 0.1						**0.984**	
Existing (2008) Level of Service						**E**	
ICU Plus Lost Time Factor of 0.1							**1.012**
Existing Plus Ambient (2012) Level of Service							**F**

* Denotes Critical Movement
** Denotes Shared Movement With Through Lane (Added to Through for V/C Ratio)

KHR ASSOCIATES
INTERSECTION CAPACITY UTILIZATION ANALYSIS

Condition:	Existing & Existing + Ambient Growth	**Date:**	Tuesday, February 12, 2008
Location:	City of Industry, California	**Horizon Date:**	2012
North-South Street:	Fairway Drive	**Peak Hour:**	7:30 - 8:30 AM
East-West Street:	Valley Boulevard	**Data Source:**	KHR
Annual Growth Rate:	0.78%	**Input By:**	S. Carter

Comments: County of Los Angeles Capacity Volume of Vehicles Per Hour Per Lane = 1600
County of Los Angeles Capacity Volume of Vehicles Per Hour For Dual Left-Turn Lanes = 2880
Ambient Growth Factor per County of Los Angeles = 0.078 % Per Year

Direction of Travel	Lane Movement	Number of Lanes	Capacity (Veh/Hr) On Green	Peak Hour Volume		Volume/Capacity Ratio	
				Existing (2008)	Existing+ Ambient (2012)	Existing (2008)	Existing+ Ambient (2012)
Eastbound	Left Turn	1	1600	18	19	0.011	0.012
	Through	2	3200	518	534	0.162 *	0.167 *
	Right Turn	1	1600	512	528	0.320	0.330
Westbound	Left Turn	2	2880	363	374	0.126 *	0.130 *
	Through**	2	3200	704	726	0.228	0.235
	Right Turn	0	0	24	25	-	-
Northbound	Left Turn	2	2880	298	307	0.122 *	0.126 *
	Through**	0	0	54	56	-	-
	Right Turn	1	1600	354	365	0.221	0.228
Southbound	Left Turn	1	1600	26	27	0.016	0.017
	Through	1	1600	154	159	0.119 *	0.123 *
	Right Turn***	0	0	36	37	-	-
		ICU Plus Lost Time Factor of 0.1				**0.629**	
		Existing (2008) Level of Service				**B**	
		ICU Plus Lost Time Factor of 0.1					**0.645**
		Existing Plus Ambient (2012) Level of Service					**B**

* Denotes Critical Movement
** Denotes Lane Striping as Optional Through/Turn Lane (Added to Left Turn for V/C Ratio)
*** Denotes Lane Striping as Optional Through/Turn Lane (Added to Through for V/C Ratio)

KHR ASSOCIATES
INTERSECTION CAPACITY UTILIZATION ANALYSIS

Condition:	Existing & Existing + Ambient Growth	**Date:**	Tuesday, February 12, 2008
Location:	City of Industry, California	**Horizon Date:**	2012
North-South Street:	Fairway Drive	**Peak Hour:**	5:00 - 6:00 P.M.
East-West Street:	Valley Boulevard	**Data Source:**	KHR
Annual Growth Rate:	0.78%	**Input By:**	S. Carter

Comments: County of Los Angeles Capacity Volume of Vehicles Per Hour Per Lane = 1600
County of Los Angeles Capacity Volume of Vehicles Per Hour For Dual Left-Turn Lanes = 2880
Ambient Growth Factor per County of Los Angeles = 0.078 % Per Year

Direction of Travel	Lane Movement	Number of Lanes	Capacity (Veh/Hr) On Green	Peak Hour Volume		Volume/Capacity Ratio	
				Existing (2008)	Existing+ Ambient (2012)	Existing (2008)	Existing+ Ambient (2012)
Eastbound	Left Turn	1	1600	22	23	0.014	0.014
	Through	2	3200	1,021	1,053	0.319 *	0.329 *
	Right Turn	1	1600	423	436	0.264	0.273
Westbound	Left Turn	2	2880	465	480	0.161 *	0.167 *
	Through**	2	3200	795	820	0.253	0.261
	Right Turn	0	0	14	14	-	-
Northbound	Left Turn	2	2880	395	407	0.188 *	0.194 *
	Through**	0	0	147	152	-	-
	Right Turn	1	1600	534	551	0.334	0.344
Southbound	Left Turn	1	1600	25	26	0.016	0.016
	Through	1	1600	88	91	0.062 *	0.064 *
	Right Turn***	0	0	11	11	-	-
		ICU Plus Lost Time Factor of 0.1				**0.831**	
		Existing (2008) Level of Service				**D**	
		ICU Plus Lost Time Factor of 0.1					**0.854**
		Existing Plus Ambient (2012) Level of Service					**D**

* Denotes Critical Movement
** Denotes Lane Striping as Optional Through/Turn Lane (Added to Left Turn for V/C Ratio)
*** Denotes Lane Striping as Optional Through/Turn Lane (Added to Through for V/C Ratio)

KHR ASSOCIATES
INTERSECTION CAPACITY UTILIZATION ANALYSIS

Condition:	Existing & Existing + Ambient Growth	**Date:**	Tuesday, February 12, 2008
Location:	City of Diamond Bar, California	**Horizon Date:**	2012
North-South Street:	Lemon Avenue	**Peak Hour:**	7:30 - 8:30 AM
East-West Street:	Golden Springs Drive	**Data Source:**	KHR
Annual Growth Rate:	0.78%	**Input By:**	S. Carter

Comments: County of Los Angeles Capacity Volume of Vehicles Per Hour Per Lane = 1600
County of Los Angeles Capacity Volume of Vehicles Per Hour For Dual Left-Turn Lanes = 2880
Ambient Growth Factor per County of Los Angeles = 0.078 % Per Year

Direction of Travel	Lane Movement	Number of Lanes	Capacity (Veh/Hr) On Green	Peak Hour Volume		Volume/Capacity Ratio	
				Existing (2008)	Existing+ Ambient (2012)	Existing (2008)	Existing+ Ambient (2012)
Eastbound	Left Turn	1	1600	306	316	0.191 *	0.198 *
	Through	2	3200	305	315	0.108	0.112
	Right Turn	0	1600	42	43	-	-
Westbound	Left Turn	1	1600	33	34	0.021	0.021
	Through	2	3200	466	481	0.146 *	0.150 *
	Right Turn	1	1600	330	340	0.206	0.213
Northbound	Left Turn	1	1600	44	45	0.028	0.028
	Through	1	1600	134	138	0.113 *	0.116 *
	Right Turn***	0	0	47	48	-	-
Southbound	Left Turn	2	2880	298	307	0.161 *	0.166 *
	Through**	0	0	167	172	-	-
	Right Turn	1	1600	134	138	0.084	0.086
			ICU Plus Lost Time Factor of 0.1			**0.711**	
			Existing (2008) Level of Service			**C**	
			ICU Plus Lost Time Factor of 0.1				**0.730**
			Existing Plus Ambient (2012) Level of Service				**C**

* Denotes Critical Movement
** Denotes Lane Striping as Optional Through/Turn Lane (Added to Left Turn for V/C Ratio)
*** Denotes Lane Striping as Optional Through/Turn Lane (Added to Through for V/C Ratio)

KHR ASSOCIATES
INTERSECTION CAPACITY UTILIZATION ANALYSIS

Condition:	Existing & Existing + Ambient Growth	**Date:**	Tuesday, February 12, 2008
Location:	City of Diamond Bar, California	**Horizon Date:**	2012
North-South Street:	Lemon Avenue	**Peak Hour:**	5:00 - 6:00 P.M.
East-West Street:	Golden Springs Drive	**Data Source:**	KHR
Annual Growth Rate:	0.78%	**Input By:**	S. Carter

Comments: County of Los Angeles Capacity Volume of Vehicles Per Hour Per Lane = 1600
County of Los Angeles Capacity Volume of Vehicles Per Hour For Dual Left-Turn Lanes = 2880
Ambient Growth Factor per County of Los Angeles = 0.078 % Per Year

Direction of Travel	Lane Movement	Number of Lanes	Capacity (Veh/Hr) On Green	Peak Hour Volume		Volume/Capacity Ratio	
				Existing (2008)	Existing+ Ambient (2012)	Existing (2008)	Existing+ Ambient (2012)
Eastbound	Left Turn	1	1600	268	276	0.168 *	0.173 *
	Through	2	3200	415	428	0.143	0.148
	Right Turn	0	1600	44	45	-	-
Westbound	Left Turn	1	1600	49	51	0.031	0.032
	Through	2	3200	610	629	0.191 *	0.197 *
	Right Turn	1	1600	310	320	0.194	0.200
Northbound	Left Turn	1	1600	25	26	0.016	0.016
	Through	1	1600	26	27	0.039 *	0.041 *
	Right Turn***	0	0	37	38	-	-
Southbound	Left Turn	2	2880	390	402	0.193 *	0.199 *
	Through**	0	0	165	170	-	-
	Right Turn	1	1600	131	135	0.082	0.084
			ICU Plus Lost Time Factor of 0.1			**0.690**	
			Existing (2008) Level of Service			**B**	
			ICU Plus Lost Time Factor of 0.1				**0.708**
			Existing Plus Ambient (2012) Level of Service				**C**

* Denotes Critical Movement
** Denotes Lane Striping as Optional Through/Turn Lane (Added to Left Turn for V/C Ratio)
*** Denotes Lane Striping as Optional Through/Turn Lane (Added to Through for V/C Ratio)

KHR ASSOCIATES
INTERSECTION CAPACITY UTILIZATION ANALYSIS

Condition:	Existing & Existing + Ambient Growth	**Date:**	Tuesday, February 12, 2008
Location:	City of Diamond Bar, California	**Horizon Date:**	2012
North-South Street:	Brea Canyon Road	**Peak Hour:**	7:30 - 8:30 AM
East-West Street:	Golden Springs Drive	**Data Source:**	KHR
Annual Growth Rate:	0.78%	**Input By:**	S. Carter

Comments: County of Los Angeles Capacity Volume of Vehicles Per Hour Per Lane = 1600
County of Los Angeles Capacity Volume of Vehicles Per Hour For Dual Left-Turn Lanes = 2880
Ambient Growth Factor per County of Los Angeles = 0.078 % Per Year

Direction of Travel	Lane Movement	Number of Lanes	Capacity (Veh/Hr) On Green	Peak Hour Volume		Volume/Capacity Ratio	
				Existing (2008)	Existing+ Ambient (2012)	Existing (2008)	Existing+ Ambient (2012)
Eastbound	Left Turn	2	2880	154	159	0.053	0.055
	Through	2	3200	160	165	0.050 *	0.052 *
	Right Turn	1	1600	221	228	0.138	0.143
Westbound	Left Turn	2	2880	213	220	0.074 *	0.076 *
	Through	2	3200	197	203	0.062	0.063
	Right Turn	1	1600	209	216	0.131	0.135
Northbound	Left Turn	1	1600	152	157	0.095	0.098
	Through	2	3200	502	518	0.197 *	0.203 *
	Right Turn**	0	0	127	131	-	-
Southbound	Left Turn	2	2880	310	320	0.108 *	0.111 *
	Through	2	3200	617	636	0.193	0.199
	Right Turn	1	1600	205	211	0.128	0.132

ICU Plus Lost Time Factor of 0.1	**0.528**	
Existing (2008) Level of Service	**A**	
ICU Plus Lost Time Factor of 0.1		**0.542**
Existing Plus Ambient (2012) Level of Service		**A**

* Denotes Critical Movement
** Denotes Right Turns Added to Through Movement for V/C Ratio

KHR ASSOCIATES
INTERSECTION CAPACITY UTILIZATION ANALYSIS

Condition:	Existing & Existing + Ambient Growth	**Date:**	Tuesday, February 12, 2008
Location:	City of Diamond Bar, California	**Horizon Date:**	2012
North-South Street:	Brea Canyon Road	**Peak Hour:**	4:15 - 5:15 P.M.
East-West Street:	Golden Springs Drive	**Data Source:**	KHR
Annual Growth Rate:	0.78%	**Input By:**	S. Carter

Comments: County of Los Angeles Capacity Volume of Vehicles Per Hour Per Lane = 1600
County of Los Angeles Capacity Volume of Vehicles Per Hour For Dual Left-Turn Lanes = 2880
Ambient Growth Factor per County of Los Angeles = 0.078 % Per Year

Direction of Travel	Lane Movement	Number of Lanes	Capacity (Veh/Hr) On Green	Peak Hour Volume		Volume/Capacity Ratio	
				Existing (2008)	Existing+ Ambient (2012)	Existing (2008)	Existing+ Ambient (2012)
Eastbound	Left Turn	2	2880	333	344	0.116	0.119
	Through	2	3200	857	884	0.268 *	0.276 *
	Right Turn	1	1600	298	307	0.186	0.192
Westbound	Left Turn	2	2880	281	290	0.098 *	0.101 *
	Through	2	3200	361	372	0.113	0.116
	Right Turn	1	1600	300	309	0.188	0.193
Northbound	Left Turn	1	1600	236	243	0.148	0.152
	Through	2	3200	799	824	0.319 *	0.329 *
	Right Turn**	0	0	222	229	-	-
Southbound	Left Turn	2	2880	440	454	0.153 *	0.158 *
	Through	2	3200	701	723	0.219	0.226
	Right Turn	1	1600	260	268	0.163	0.168
		ICU Plus Lost Time Factor of 0.1				**0.937**	
		Existing (2008) Level of Service				**E**	
		ICU Plus Lost Time Factor of 0.1					**0.964**
		Existing Plus Ambient (2012) Level of Service					**E**

* Denotes Critical Movement
** Denotes Right Turns Added to Through Movement for V/C Ratio

KHR ASSOCIATES
INTERSECTION CAPACITY UTILIZATION ANALYSIS

Condition:	Existing & Existing + Ambient Growth	**Date:**	Tuesday, February 12, 2008
Location:	City of Diamond Bar, California	**Horizon Date:**	2012
North-South Street:	Brea Canyon Road	**Peak Hour:**	7:15 - 8:15 AM
East-West Street:	Diamond Bar Boulevard	**Data Source:**	KHR
Annual Growth Rate:	0.78%	**Input By:**	S. Carter

Comments: County of Los Angeles Capacity Volume of Vehicles Per Hour Per Lane = 1600
County of Los Angeles Capacity Volume of Vehicles Per Hour For Dual Left-Turn Lanes = 2880
Ambient Growth Factor per County of Los Angeles = 0.078 % Per Year

Direction of Travel	Lane Movement	Number of Lanes	Capacity (Veh/Hr) On Green	Peak Hour Volume		Volume/Capacity Ratio	
				Existing (2008)	Existing+ Ambient (2012)	Existing (2008)	Existing+ Ambient (2012)
Eastbound	Left Turn	1	1600	127	131	0.079	0.082
	Through	2	3200	214	221	0.067 *	0.069 *
	Right Turn**	1	1600	334	345	0.209	0.216
Westbound	Left Turn	1	1600	156	161	0.098 *	0.101 *
	Through	2	3200	90	93	0.050	0.052
	Right Turn**	0	0	70	72	-	-
Northbound	Left Turn	2	2880	758	782	0.263 *	0.272 *
	Through***	1	1600	558	576	0.349	-
	Right Turn	1	1600	38	39	0.024	0.024
Southbound	Left Turn	1	1600	26	27	0.016	0.017
	Through	2	3200	158	163	0.078 *	0.081 *
	Right Turn**	0	0	67	69	-	-
		ICU Plus Lost Time Factor of 0.1				**0.606**	
		Existing (2008) Level of Service				**B**	
		ICU Plus Lost Time Factor of 0.1					**0.622**
		Existing Plus Ambient (2012) Level of Service					**B**

* Denotes Critical Movement
** Denotes Shared Movement With Through Lane (Added to Through for V/C Ratio)
*** Denotes Shared Movement With Right Turn (Allocated Entirely to Through for V/C Ratio)

KHR ASSOCIATES
INTERSECTION CAPACITY UTILIZATION ANALYSIS

Condition:	Existing & Existing + Ambient Growth	**Date:**	Tuesday, February 12, 2008
Location:	City of Diamond Bar, California	**Horizon Date:**	2012
North-South Street:	Brea Canyon Road	**Peak Hour:**	4:45 - 5:45 P.M.
East-West Street:	Diamond Bar Boulevard	**Data Source:**	KHR
Annual Growth Rate:	0.78%	**Input By:**	S. Carter

Comments: County of Los Angeles Capacity Volume of Vehicles Per Hour Per Lane = 1600
County of Los Angeles Capacity Volume of Vehicles Per Hour For Dual Left-Turn Lanes = 2880
Ambient Growth Factor per County of Los Angeles = 0.078 % Per Year

Direction of Travel	Lane Movement	Number of Lanes	Capacity (Veh/Hr) On Green	Peak Hour Volume		Volume/Capacity Ratio	
				Existing (2008)	Existing+ Ambient (2012)	Existing (2008)	Existing+ Ambient (2012)
Eastbound	Left Turn	1	1600	153	158	0.096	0.099
	Through	2	3200	753	777	0.235 *	0.243 *
	Right Turn****	1	1600	54	56	0.034	0.035
Westbound	Left Turn	1	1600	367	379	0.229 *	0.237 *
	Through	2	3200	430	444	0.365	0.376
	Right Turn**	0	0	737	760	-	-
Northbound	Left Turn	2	2880	122	126	0.042 *	0.044 *
	Through***	1	1600	353	364	0.221	-
	Right Turn	1	1600	32	33	0.020	0.021
Southbound	Left Turn	1	1600	66	68	0.041	0.043
	Through	2	3200	47	48	0.046 *	0.048 *
	Right Turn**	0	0	35	36	-	-
		ICU Plus Lost Time Factor of 0.1				**0.653**	
		Existing (2008) Level of Service				**B**	
		ICU Plus Lost Time Factor of 0.1					**0.671**
		Existing Plus Ambient (2012) Level of Service					**B**

* Denotes Critical Movement
** Denotes Shared Movement With Through Lane (Added to Through for V/C Ratio)
*** Denotes Shared Movement With Right Turn (Allocated Entirely to Through for V/C Ratio)

KHR ASSOCIATES
INTERSECTION CAPACITY UTILIZATION ANALYSIS

Condition:	Existing & Existing + Ambient Growth	**Date:**	Tuesday, February 12, 2008
Location:	City of Diamond Bar, California	**Horizon Date:**	2012
North-South Street:	Brea Canyon Road	**Peak Hour:**	7:30 - 8:30 AM
East-West Street:	Pathfinder Road	**Data Source:**	KHR
Annual Growth Rate:	0.78%	**Input By:**	S. Carter

Comments: County of Los Angeles Capacity Volume of Vehicles Per Hour Per Lane = 1600
County of Los Angeles Capacity Volume of Vehicles Per Hour For Dual Left-Turn Lanes = 2880
Ambient Growth Factor per County of Los Angeles = 0.078 % Per Year

Direction of Travel	Lane Movement	Number of Lanes	Capacity (Veh/Hr) On Green	Peak Hour Volume		Volume/Capacity Ratio	
				Existing (2008)	Existing+ Ambient (2012)	Existing (2008)	Existing+ Ambient (2012)
Eastbound	Left Turn	1	1600	198	204	0.124 *	0.128 *
	Through	2	3200	289	298	0.090	0.093
	Right Turn	0	0	0	0	-	-
Westbound	Left Turn	0	0	0	0	-	-
	Through	2	3200	387	399	0.121 *	0.125 *
	Right Turn	1	1600	538	555	0.336	0.347
Northbound	Left Turn	0	0	0	0	-	-
	Through	0	0	0	0	-	-
	Right Turn	0	0	0	0	-	-
Southbound	Left Turn	2	2880	436	450	0.151 *	0.156 *
	Through	0	0	0	0	-	-
	Right Turn	1	1600	126	130	0.079	0.081
		ICU Plus Lost Time Factor of 0.1				**0.496**	
		Existing (2008) Level of Service				**A**	
		ICU Plus Lost Time Factor of 0.1					**0.508**
		Existing Plus Ambient (2012) Level of Service					**A**

* Denotes Critical Movement

KHR ASSOCIATES
INTERSECTION CAPACITY UTILIZATION ANALYSIS

Condition:	Existing & Existing + Ambient Growth	**Date:**	Tuesday, February 12, 2008
Location:	City of Diamond Bar, California	**Horizon Date:**	2012
North-South Street:	Brea Canyon Road	**Peak Hour:**	4:45 - 5:45 P.M.
East-West Street:	Pathfinder Road	**Data Source:**	KHR
Annual Growth Rate:	0.78%	**Input By:**	S. Carter

Comments: County of Los Angeles Capacity Volume of Vehicles Per Hour Per Lane = 1600
County of Los Angeles Capacity Volume of Vehicles Per Hour For Dual Left-Turn Lanes = 2880
Ambient Growth Factor per County of Los Angeles = 0.078 % Per Year

Direction of Travel	Lane Movement	Number of Lanes	Capacity (Veh/Hr) On Green	Peak Hour Volume		Volume/Capacity Ratio	
				Existing (2008)	Existing+ Ambient (2012)	Existing (2008)	Existing+ Ambient (2012)
Eastbound	Left Turn	1	1600	362	373	0.226 *	0.233 *
	Through	2	3200	449	463	0.140	0.145
	Right Turn	0	0	0	0	-	-
Westbound	Left Turn	0	0	0	0	-	-
	Through	2	3200	499	515	0.156 *	0.161 *
	Right Turn	1	1600	676	697	0.423	0.436
Northbound	Left Turn	0	0	0	0	-	-
	Through	0	0	0	0	-	-
	Right Turn	0	0	0	0	-	-
Southbound	Left Turn	2	2880	413	426	0.143 *	0.148 *
	Through	0	0	0	0	-	-
	Right Turn	1	1600	261	269	0.163	0.168

ICU Plus Lost Time Factor of 0.1	**0.626**	
Existing (2008) Level of Service	**B**	
ICU Plus Lost Time Factor of 0.1		**0.642**
Existing Plus Ambient (2012) Level of Service		**B**

* Denotes Critical Movement

KHR ASSOCIATES
INTERSECTION CAPACITY UTILIZATION ANALYSIS

Condition:	Existing & Existing + Ambient Growth	**Date:**	Tuesday, February 12, 2008
Location:	City of Diamond Bar, California	**Horizon Date:**	2012
North-South Street:	Fern Hollow Drive/Brea Canyon Road	**Peak Hour:**	7:15 - 8:15 AM
East-West Street:	Pathfinder Road	**Data Source:**	KHR
Annual Growth Rate:	0.78%	**Input By:**	S. Carter

Comments: County of Los Angeles Capacity Volume of Vehicles Per Hour Per Lane = 1600
County of Los Angeles Capacity Volume of Vehicles Per Hour For Dual Left-Turn Lanes = 2880
Ambient Growth Factor per County of Los Angeles = 0.078 % Per Year

Direction of Travel	Lane Movement	Number of Lanes	Capacity (Veh/Hr) On Green	Peak Hour Volume		Volume/Capacity Ratio	
				Existing (2008)	Existing+ Ambient (2012)	Existing (2008)	Existing+ Ambient (2012)
Eastbound	Left Turn	1	1600	128	132	0.080 *	0.083 *
	Through	2	3200	593	612	0.185	0.191
	Right Turn	1	1600	224	231	0.140	0.144
Westbound	Left Turn	1	1600	53	55	0.033	0.034
	Through	2	3200	858	885	0.277 *	0.285 *
	Right Turn	0	1600	27	28	-	-
Northbound	Left Turn	2	2880	573	591	0.209 *	0.216 *
	Through***	0	0	30	31	-	-
	Right Turn	1	1600	88	91	0.055	0.057
Southbound	Left Turn**	0	0	76	78	-	-
	Through	1	1600	47	48	0.185 *	0.190 *
	Right Turn**	0	0	173	178	-	-
		ICU Plus Lost Time Factor of 0.1				**0.851**	
		Existing (2008) Level of Service				**D**	
		ICU Plus Lost Time Factor of 0.1					**0.874**
		Existing Plus Ambient (2012) Level of Service					**D**

* Denotes Critical Movement
** Denotes Shared Movement With Through Lane (Added to Through for V/C Ratio)
*** Denotes Shared Movement With Left Turn Lane (Added to Left Turn for V/C Ratio)

KHR ASSOCIATES
INTERSECTION CAPACITY UTILIZATION ANALYSIS

Condition:	Existing & Existing + Ambient Growth	**Date:**	Tuesday, February 12, 2008
Location:	City of Diamond Bar, California	**Horizon Date:**	2012
North-South Street:	Fern Hollow Drive/Brea Canyon Road	**Peak Hour:**	4:45 - 5:45 P.M.
East-West Street:	Pathfinder Road	**Data Source:**	KHR
Annual Growth Rate:	0.78%	**Input By:**	S. Carter

Comments: County of Los Angeles Capacity Volume of Vehicles Per Hour Per Lane = 1600
County of Los Angeles Capacity Volume of Vehicles Per Hour For Dual Left-Turn Lanes = 2880
Ambient Growth Factor per County of Los Angeles = 0.078 % Per Year

Direction of Travel	Lane Movement	Number of Lanes	Capacity (Veh/Hr) On Green	Peak Hour Volume		Volume/Capacity Ratio	
				Existing (2008)	Existing+ Ambient (2012)	Existing (2008)	Existing+ Ambient (2012)
Eastbound	Left Turn	1	1600	112	116	0.070	0.073
	Through	2	3200	818	844	0.256 *	0.264 *
	Right Turn	1	1600	146	151	0.091	0.094
Westbound	Left Turn	1	1600	49	51	0.031 *	0.032 *
	Through	2	3200	400	413	0.134	0.139
	Right Turn	0	1600	30	31	-	-
Northbound	Left Turn	2	2880	490	505	0.177 *	0.183 *
	Through***	0	0	20	21	-	-
	Right Turn	1	1600	64	66	0.040	0.041
Southbound	Left Turn**	0	0	18	19	-	-
	Through	1	1600	14	14	0.046 *	0.048 *
	Right Turn**	0	0	42	43	-	-
		ICU Plus Lost Time Factor of 0.1				**0.610**	
		Existing (2008) Level of Service				**B**	
		ICU Plus Lost Time Factor of 0.1					**0.626**
		Existing Plus Ambient (2012) Level of Service					**B**

* Denotes Critical Movement
** Denotes Shared Movement With Through Lane (Added to Through for V/C Ratio)
*** Denotes Shared Movement With Left Turn Lane (Added to Left Turn for V/C Ratio)

KHR ASSOCIATES
INTERSECTION CAPACITY UTILIZATION ANALYSIS

Condition:	Existing & Existing + Ambient Growth	**Date:**	Tuesday, February 12, 2008
Location:	City of Industry, California	**Horizon Date:**	2012
North-South Street:	Fairway Drive	**Peak Hour:**	7:45 - 8:45 A.M.
East-West Street:	North Walnut Drive	**Data Source:**	KHR
Annual Growth Rate:	0.78%	**Input By:**	S. Carter

Comments: County of Los Angeles Capacity Volume of Vehicles Per Hour Per Lane = 1600
County of Los Angeles Capacity Volume of Vehicles Per Hour For Dual Left-Turn Lanes = 2880
Ambient Growth Factor per County of Los Angeles = 0.078 % Per Year

Direction of Travel	Lane Movement	Number of Lanes	Capacity (Veh/Hr) On Green	Peak Hour Volume		Volume/Capacity Ratio	
				Existing (2008)	Existing+ Ambient (2012)	Existing (2008)	Existing+ Ambient (2012)
Eastbound	Left Turn**	0	0	57	59	-	-
	Through	2	3200	124	128	0.096 *	0.099 *
	Right Turn**	0	0	126	130	-	-
Westbound	Left Turn**	0	0	120	124	-	-
	Through	2	3200	103	106	0.097 *	0.100 *
	Right Turn**	0	0	87	90	-	-
Northbound	Left Turn	1	1600	148	153	0.093	0.096
	Through	2	3200	572	590	0.205 *	0.212 *
	Right Turn	0	1600	84	87	-	-
Southbound	Left Turn	1	1600	22	23	0.014 *	0.014 *
	Through	3	4800	456	470	0.102	0.105
	Right Turn**	0	0	35	36	-	-

ICU Plus Lost Time Factor of 0.1	**0.512**	
Existing (2008) Level of Service	**A**	
ICU Plus Lost Time Factor of 0.1		**0.525**
Existing Plus Ambient (2012) Level of Service		**A**

* Denotes Critical Movement
** Denotes Optional Through/Turn Lane (Added to Through for V/C Ratio)

KHR ASSOCIATES
INTERSECTION CAPACITY UTILIZATION ANALYSIS

Condition:	Existing & Existing + Ambient Growth	**Date:**	Tuesday, February 12, 2008
Location:	City of Industry, California	**Horizon Date:**	2012
North-South Street:	Fairway Drive	**Peak Hour:**	4:45 - 5:45 P.M.
East-West Street:	North Walnut Drive	**Data Source:**	KHR
Annual Growth Rate:	0.78%	**Input By:**	S. Carter

Comments: County of Los Angeles Capacity Volume of Vehicles Per Hour Per Lane = 1600
County of Los Angeles Capacity Volume of Vehicles Per Hour For Dual Left-Turn Lanes = 2880
Ambient Growth Factor per County of Los Angeles = 0.078 % Per Year

Direction of Travel	Lane Movement	Number of Lanes	Capacity (Veh/Hr) On Green	Peak Hour Volume		Volume/Capacity Ratio	
				Existing (2008)	Existing+ Ambient (2012)	Existing (2008)	Existing+ Ambient (2012)
Eastbound	Left Turn**	0	0	55	58	-	-
	Through	2	3200	136	140	0.114 *	0.118 *
	Right Turn**	0	0	174	179	-	-
Westbound	Left Turn**	0	0	139	143	-	-
	Through	2	3200	95	98	0.088 *	0.090 *
	Right Turn**	0	0	46	47	-	-
Northbound	Left Turn	1	1600	160	165	0.100 *	0.103 *
	Through	2	3200	570	588	0.200	0.207
	Right Turn	0	1600	71	73	-	-
Southbound	Left Turn	1	1600	51	53	0.032	0.033
	Through	3	4800	799	824	0.181 *	0.186 *
	Right Turn**	0	0	69	71	-	-
		ICU Plus Lost Time Factor of 0.1				**0.582**	
		Existing (2008) Level of Service				**A**	
		ICU Plus Lost Time Factor of 0.1					**0.597**
		Existing Plus Ambient (2012) Level of Service					**A**

* Denotes Critical Movement
** Denotes Optional Through/Turn Lane (Added to Through for V/C Ratio)

KHR ASSOCIATES
INTERSECTION CAPACITY UTILIZATION ANALYSIS

Condition:	Existing & Existing + Ambient Growth	**Date:**	Tuesday, February 12, 2008
Location:	City of Diamond Bar, California	**Horizon Date:**	2012
North-South Street:	Brea Canyon Cutoff Road	**Peak Hour:**	7:45 - 8:45 A.M.
East-West Street:	Fallow Field Drive	**Data Source:**	KHR
Annual Growth Rate:	0.78%	**Input By:**	S. Carter

Comments: County of Los Angeles Capacity Volume of Vehicles Per Hour Per Lane = 1600
County of Los Angeles Capacity Volume of Vehicles Per Hour For Dual Left-Turn Lanes = 2880
Ambient Growth Factor per County of Los Angeles = 0.078 % Per Year

Direction of Travel	Lane Movement	Number of Lanes	Capacity (Veh/Hr) On Green	Peak Hour Volume		Volume/Capacity Ratio	
				Existing (2008)	Existing+ Ambient (2012)	Existing (2008)	Existing+ Ambient (2012)
Eastbound	Left Turn	1	1600	13	13	0.008	0.008
	Through	1	1600	29	30	0.032 *	0.033 *
	Right Turn	0	1600	22	23	-	-
Westbound	Left Turn	1	1600	97	100	0.061 *	0.063 *
	Through	1	1600	18	19	0.050	0.052
	Right Turn**	0	0	62	64	-	-
Northbound	Left Turn	1	1600	17	18	0.011	0.011
	Through	2	3200	323	333	0.123 *	0.127 *
	Right Turn	0	0	71	73	-	-
Southbound	Left Turn	1	1600	57	59	0.036 *	0.037 *
	Through	2	3200	403	416	0.139	0.144
	Right Turn	0	0	43	44	-	-
		ICU Plus Lost Time Factor of 0.1				**0.351**	
		Existing (2008) Level of Service				**A**	
		ICU Plus Lost Time Factor of 0.1					**0.359**
		Existing Plus Ambient (2012) Level of Service					**A**

* Denotes Critical Movement
** Denotes Shared Movement With Through Lane (Added to Through for V/C Ratio)

KHR ASSOCIATES
INTERSECTION CAPACITY UTILIZATION ANALYSIS

Condition:	Existing & Existing + Ambient Growth	**Date:**	Tuesday, February 12, 2008
Location:	City of Diamond Bar, California	**Horizon Date:**	2012
North-South Street:	Brea Canyon Cutoff Road	**Peak Hour:**	4:30 - 5:30 P.M.
East-West Street:	Fallow Field Drive	**Data Source:**	KHR
Annual Growth Rate:	0.78%	**Input By:**	S. Carter

Comments: County of Los Angeles Capacity Volume of Vehicles Per Hour Per Lane = 1600
County of Los Angeles Capacity Volume of Vehicles Per Hour For Dual Left-Turn Lanes = 2880
Ambient Growth Factor per County of Los Angeles = 0.078 % Per Year

Direction of Travel	Lane Movement	Number of Lanes	Capacity (Veh/Hr) On Green	Peak Hour Volume		Volume/Capacity Ratio	
				Existing (2008)	Existing+ Ambient (2012)	Existing (2008)	Existing+ Ambient (2012)
Eastbound	Left Turn	1	1600	92	95	0.058	0.059
	Through	1	1600	53	55	0.087 *	0.090 *
	Right Turn**	0	1600	86	89	-	-
Westbound	Left Turn	1	1600	85	88	0.053 *	0.055 *
	Through	1	1600	42	43	0.058	0.059
	Right Turn**	0	0	50	52	-	-
Northbound	Left Turn	1	1600	53	55	0.033	0.034
	Through	2	3200	542	559	0.207 *	0.214 *
	Right Turn	0	0	121	125	-	-
Southbound	Left Turn	1	1600	83	86	0.052 *	0.054 *
	Through	2	3200	337	348	0.126	0.130
	Right Turn	0	0	66	68	-	-
		ICU Plus Lost Time Factor of 0.1				**0.499**	
		Existing (2008) Level of Service				**A**	
		ICU Plus Lost Time Factor of 0.1					**0.513**
		Existing Plus Ambient (2012) Level of Service					**A**

* Denotes Critical Movement
** Denotes Shared Movement With Through Lane (Added to Through for V/C Ratio)

Appendix D

Existing+Ambient+Project
Existing+Ambient+Related Projects
+Project ICU Calculations

KHR ASSOCIATES
INTERSECTION CAPACITY UTILIZATION ANALYSIS

Condition:	Ex.+Ambient+Project & Related+Project	**Date:**	Projected 2012
Location:	County of Los Angeles, California	**Horizon Date:**	2012
North-South Street:	Brea Canyon Cutoff Road/Fairway Drive	**Peak Hour:**	7:30 - 8:30 AM
East-West Street:	Colima Road	**Data Source:**	KHR
Annual Growth Rate:	0.78%	**Input By:**	S. Carter

Comments: County of Los Angeles Capacity Volume of Vehicles Per Hour Per Lane = 1600
County of Los Angeles Capacity Volume of Vehicles Per Hour For Dual Left-Turn Lanes = 2880
Ambient Growth Factor per County of Los Angeles = 0.078 % Per Year

Direction of Travel	Lane Movement	Number of Lanes	Capacity (Veh/Hr) On Green	Peak Hour Volume		Volume/Capacity Ratio	
				Existing+ Ambient +Project	Ex.+Ambient+ Related Projects +Project	Existing+ Ambient +Project	Ex.+Ambient+ Related Projects +Project
Eastbound	Left Turn	1	1600	223	226	0.139 *	0.141 *
	Through	3	4800	393	444	0.123	0.134
	Right Turn**	0	0	198	198	-	-
Westbound	Left Turn	1	1600	273	273	0.171	0.171
	Through	3	4800	805	808	0.237 *	0.239 *
	Right Turn**	0	0	332	337	-	-
Northbound	Left Turn	1	1600	431	431	0.269 *	0.269 *
	Through	2	3200	740	759	0.308	0.313
	Right Turn**	0	1600	244	244	-	-
Southbound	Left Turn	1	1600	153	163	0.096	0.102
	Through	2	3200	483	501	0.248 *	0.254 *
	Right Turn**	0	1600	310	311	-	-
				ICU Plus Lost Time Factor of 0.1		**0.993**	
				Ambient Plus Project Level of Service		**E**	
				ICU Plus Lost Time Factor of 0.1			**1.003**
				Cumulative Plus Project Level of Service			**F**

* Denotes Critical Movement
** Denotes Shared Movement With Through Lane (Added to Through for V/C Ratio)

KHR ASSOCIATES
INTERSECTION CAPACITY UTILIZATION ANALYSIS

Condition:	Ex.+Ambient+Project & Related+Project	**Date:**	Projected 2012
Location:	County of Los Angeles, California	**Horizon Date:**	2012
North-South Street:	Brea Canyon Cutoff Road/Fairway Drive	**Peak Hour:**	5:00 - 6:00 P.M.
East-West Street:	Colima Road	**Data Source:**	KHR
Annual Growth Rate:	0.78%	**Input By:**	S. Carter

Comments: County of Los Angeles Capacity Volume of Vehicles Per Hour Per Lane = 1600
County of Los Angeles Capacity Volume of Vehicles Per Hour For Dual Left-Turn Lanes = 2880
Ambient Growth Factor per County of Los Angeles = 0.078 % Per Year

Direction of Travel	Lane Movement	Number of Lanes	Capacity (Veh/Hr) On Green	Peak Hour Volume		Volume/Capacity Ratio	
				Existing+ Ambient +Project	Ex.+Ambient+ Related Projects +Project	Existing+ Ambient +Project	Ex.+Ambient+ Related Projects +Project
Eastbound	Left Turn	1	1600	261	261	0.163 *	0.163 *
	Through	3	4800	690	755	0.173	0.187
	Right Turn**	0	0	142	142	-	-
Westbound	Left Turn	1	1600	247	247	0.154	0.154
	Through	3	4800	679	699	0.168 *	0.181 *
	Right Turn**	0	0	126	171	-	-
Northbound	Left Turn	1	1600	313	313	0.196 *	0.196 *
	Through	2	3200	662	710	0.278	0.293
	Right Turn**	0	1600	228	228	-	-
Southbound	Left Turn	1	1600	268	310	0.168	0.194
	Through	2	3200	782	828	0.304 *	0.319 *
	Right Turn**	0	1600	190	192	-	-
				ICU Plus Lost Time Factor of 0.1		**0.930**	
				Ambient Plus Project Level of Service		**E**	
				ICU Plus Lost Time Factor of 0.1			**0.959**
				Cumulative Plus Project Level of Service			**E**

* Denotes Critical Movement
** Denotes Shared Movement With Through Lane (Added to Through for V/C Ratio)

KHR ASSOCIATES
INTERSECTION CAPACITY UTILIZATION ANALYSIS

Condition:	Ex.+Ambient+Project & Related+Project	**Date:**	Projected 2012
Location:	City of Industry, California	**Horizon Date:**	2012
North-South Street:	Fairway Drive	**Peak Hour:**	7:45 - 8:45 AM
East-West Street:	SR-60 E/B Ramps	**Data Source:**	KHR
Annual Growth Rate:	0.78%	**Input By:**	S. Carter

Comments: County of Los Angeles Capacity Volume of Vehicles Per Hour Per Lane = 1600
County of Los Angeles Capacity Volume of Vehicles Per Hour For Dual Left-Turn Lanes = 2880
Ambient Growth Factor per County of Los Angeles = 0.078 % Per Year

Direction of Travel	Lane Movement	Number of Lanes	Capacity (Veh/Hr) On Green	Peak Hour Volume		Volume/Capacity Ratio	
				Existing+ Ambient +Project	Ex.+Ambient+ Related Projects +Project	Existing+ Ambient +Project	Ex.+Ambient+ Related Projects +Project
Eastbound	Left Turn	2	2880	396	436	0.258 *	0.275 *
	Through	0	0	0	0	-	-
	Right Turn***	0	0	346	357	-	-
Westbound	Left Turn	0	0	0	0	-	-
	Through	0	0	0	0	-	-
	Right Turn	0	0	0	0	-	-
Northbound	Left Turn	0	0	0	0	-	-
	Through	2	3200	563	569	0.176 *	0.178 *
	Right Turn***	0	0	0	0	-	-
Southbound	Left Turn	0	0	0	0	-	-
	Through	2	3200	682	682	0.213	0.213
	Right Turn**	1	1600	155	155	FREE	FLOW
				ICU Plus Lost Time Factor of 0.1		**0.534**	
				Ambient Plus Project Level of Service		**A**	
				ICU Plus Lost Time Factor of 0.1			**0.553**
				Cumulative Plus Project Level of Service			**A**

* Denotes Critical Movement
** Denotes Free-Flow: On-Ramp Right Turn Before Intersection
*** Denotes Lane Striping as Optional Left-Turn/Right-Turn Lane (Added to Left Turn for V/C Ratio)

KHR ASSOCIATES
INTERSECTION CAPACITY UTILIZATION ANALYSIS

Condition:	Ex.+Ambient+Project & Related+Project	**Date:**	Projected 2012
Location:	City of Industry, California	**Horizon Date:**	2012
North-South Street:	Fairway Drive	**Peak Hour:**	5:00 - 6:00 P.M.
East-West Street:	SR-60 E/B Ramps	**Data Source:**	KHR
Annual Growth Rate:	0.78%	**Input By:**	S. Carter

Comments: County of Los Angeles Capacity Volume of Vehicles Per Hour Per Lane = 1600
County of Los Angeles Capacity Volume of Vehicles Per Hour For Dual Left-Turn Lanes = 2880
Ambient Growth Factor per County of Los Angeles = 0.078 % Per Year

Direction of Travel	Lane Movement	Number of Lanes	Capacity (Veh/Hr) On Green	Peak Hour Volume		Volume/Capacity Ratio	
				Existing+ Ambient +Project	Ex.+Ambient+ Related Projects +Project	Existing+ Ambient +Project	Ex.+Ambient+ Related Projects +Project
Eastbound	Left Turn	2	2880	165	208	0.156 *	0.186 *
	Through	0	0	0	0	-	-
	Right Turn***	0	0	285	327	-	-
Westbound	Left Turn	0	0	0	0	-	-
	Through	0	0	0	0	-	-
	Right Turn	0	0	0	0	-	-
Northbound	Left Turn	0	0	0	0	-	-
	Through	2	3200	1447	1492	0.452 *	0.466 *
	Right Turn	0	0	0	0	-	-
Southbound	Left Turn	0	0	0	0	-	-
	Through	2	3200	805	805	0.252	0.252
	Right Turn**	1	1600	315	315	FREE	FLOW
			ICU Plus Lost Time Factor of 0.1			**0.708**	
			Ambient Plus Project Level of Service			**C**	
			ICU Plus Lost Time Factor of 0.1				**0.752**
			Cumulative Plus Project Level of Service				**C**

* Denotes Critical Movement
** Denotes Free-Flow: On-Ramp Right Turn Before Intersection
*** Denotes Lane Striping as Optional Left-Turn/Right-Turn Lane (Added to Left Turn for V/C Ratio)

KHR ASSOCIATES
INTERSECTION CAPACITY UTILIZATION ANALYSIS

Condition:	Ex.+Ambient+Project & Related+Project	**Date:**	Projected 2012
Location:	City of Industry, California	**Horizon Date:**	2012
North-South Street:	Fairway Drive	**Peak Hour:**	7:45 - 8:45 AM
East-West Street:	SR-60 W/B On/Off-Ramp	**Data Source:**	KHR
Annual Growth Rate:	0.78%	**Input By:**	S. Carter

Comments: County of Los Angeles Capacity Volume of Vehicles Per Hour Per Lane = 1600
County of Los Angeles Capacity Volume of Vehicles Per Hour For Dual Left-Turn Lanes = 2880
Ambient Growth Factor per County of Los Angeles = 0.078 % Per Year

Direction of Travel	Lane Movement	Number of Lanes	Capacity (Veh/Hr) On Green	Peak Hour Volume: Existing+ Ambient +Project	Peak Hour Volume: Ex.+Ambient+ Related Projects +Project	Volume/Capacity Ratio: Existing+ Ambient +Project	Volume/Capacity Ratio: Ex.+Ambient+ Related Projects +Project
Eastbound	Left Turn	0	0	0	0	-	-
	Through	0	0	0	0	-	-
	Right Turn	0	0	0	0	-	-
Westbound	Left Turn	1	1600	254	254	0.163 *	0.163 *
	Through**	0	0	6	6	-	-
	Right Turn	1	1600	443	443	0.277	0.277
Northbound	Left Turn	1	1600	221	226	0.138 *	0.141 *
	Through	2	3200	945	985	0.295	0.308
	Right Turn	0	0	0	0	-	-
Southbound	Left Turn	0	0	0	0	-	-
	Through	2	3200	510	510	0.159 *	0.159 *
	Right Turn	1	1600	174	185	0.109	0.116
	ICU Plus Lost Time Factor of 0.1					**0.560**	
	Ambient Plus Project Level of Service					**A**	
	ICU Plus Lost Time Factor of 0.1						**0.563**
	Cumulative Plus Project Level of Service						**A**

* Denotes Critical Movement
** Denotes Lane Striping as Optional Through/Turn Lane (Added to Left Turn for V/C Ratio)

KHR ASSOCIATES
INTERSECTION CAPACITY UTILIZATION ANALYSIS

Condition:	Ex.+Ambient+Project & Related+Project	**Date:**	Projected 2012
Location:	City of Industry, California	**Horizon Date:**	2012
North-South Street:	Fairway Drive	**Peak Hour:**	4:45 - 5:45 P.M.
East-West Street:	SR-60 W/B On/Off Ramps	**Data Source:**	KHR
Annual Growth Rate:	0.78%	**Input By:**	S. Carter

Comments: County of Los Angeles Capacity Volume of Vehicles Per Hour Per Lane = 1600
County of Los Angeles Capacity Volume of Vehicles Per Hour For Dual Left-Turn Lanes = 2880
Ambient Growth Factor per County of Los Angeles = 0.078 % Per Year

Direction of Travel	Lane Movement	Number of Lanes	Capacity (Veh/Hr) On Green	Peak Hour Volume: Existing+ Ambient +Project	Peak Hour Volume: Ex.+Ambient+ Related Projects +Project	Volume/Capacity Ratio: Existing+ Ambient +Project	Volume/Capacity Ratio: Ex.+Ambient+ Related Projects +Project
Eastbound	Left Turn	0	0	0	0	-	-
	Through	0	0	0	0	-	-
	Right Turn	0	0	0	0	-	-
Westbound	Left Turn	1	1600	393	393	0.246 *	0.246 *
	Through**	0	0	1	1	-	-
	Right Turn	1	1600	270	270	0.169	0.169
Northbound	Left Turn	1	1600	209	254	0.131 *	0.159 *
	Through	2	3200	717	760	0.224	0.238
	Right Turn	0	0	0	0	-	-
Southbound	Left Turn	0	0	0	0	-	-
	Through	2	3200	993	993	0.310 *	0.310 *
	Right Turn	1	1600	243	303	0.152	0.189
	ICU Plus Lost Time Factor of 0.1					**0.787**	
	Ambient Plus Project Level of Service					**C**	
	ICU Plus Lost Time Factor of 0.1						**0.815**
	Cumulative Plus Project Level of Service						**D**

* Denotes Critical Movement
** Denotes Lane Striping as Optional Through/Turn Lane (Added to Left Turn for V/C Ratio)

KHR ASSOCIATES
INTERSECTION CAPACITY UTILIZATION ANALYSIS

Condition:	Ex.+Ambient+Project & Related+Project	**Date:**	Projected 2012
Location:	County of Los Angeles, California	**Horizon Date:**	2012
North-South Street:	Brea Canyon Cutoff Road	**Peak Hour:**	7:30 - 8:30 A.M.
East-West Street:	Pathfinder Road	**Data Source:**	KHR
Annual Growth Rate:	0.78%	**Input By:**	S. Carter

Comments: County of Los Angeles Capacity Volume of Vehicles Per Hour Per Lane = 1600
County of Los Angeles Capacity Volume of Vehicles Per Hour For Dual Left-Turn Lanes = 2880
Ambient Growth Factor per County of Los Angeles = 0.078 % Per Year

Direction of Travel	Lane Movement	Number of Lanes	Capacity (Veh/Hr) On Green	Peak Hour Volume		Volume/Capacity Ratio	
				Existing+ Ambient +Project	Ex.+Ambient+ Related Projects +Project	Existing+ Ambient +Project	Ex.+Ambient+ Related Projects +Project
Eastbound	Left Turn	1	1600	85	85	0.053	0.053
	Through	2	3200	160	160	0.133 *	0.135 *
	Right Turn**	0	0	267	273	-	-
Westbound	Left Turn	1	1600	107	107	0.067 *	0.067 *
	Through	2	3200	337	340	0.137	0.138
	Right Turn**	0	0	101	101	-	-
Northbound	Left Turn	1	1600	173	177	0.108 *	0.111 *
	Through	1	1600	295	314	0.184	0.196
	Right Turn	1	1600	24	24	0.015	0.015
Southbound	Left Turn	1	1600	53	53	0.033	0.033
	Through	1	1600	457	475	0.314 *	0.325 *
	Right Turn**	0	0	45	45	-	-
				ICU Plus Lost Time Factor of 0.1		**0.722**	
				Ambient Plus Project Level of Service		**C**	
				ICU Plus Lost Time Factor of 0.1			**0.738**
				Cumulative Plus Project Level of Service			**C**

* Denotes Critical Movement
** Denotes Shared Movement With Through Lane (Added to Through for V/C Ratio)

KHR ASSOCIATES
INTERSECTION CAPACITY UTILIZATION ANALYSIS

Condition:	Ex.+Ambient+Project & Related+Project	**Date:**	Projected 2012
Location:	County of Los Angeles, California	**Horizon Date:**	2012
North-South Street:	Brea Canyon Cutoff Road	**Peak Hour:**	4:00 - 5:00 P.M.
East-West Street:	Pathfinder Road	**Data Source:**	KHR
Annual Growth Rate:	0.78%	**Input By:**	S. Carter

Comments: County of Los Angeles Capacity Volume of Vehicles Per Hour Per Lane = 1600
County of Los Angeles Capacity Volume of Vehicles Per Hour For Dual Left-Turn Lanes = 2880
Ambient Growth Factor per County of Los Angeles = 0.078 % Per Year

Direction of Travel	Lane Movement	Number of Lanes	Capacity (Veh/Hr) On Green	Peak Hour Volume: Existing+ Ambient +Project	Peak Hour Volume: Ex.+Ambient+ Related Projects +Project	Volume/Capacity Ratio: Existing+ Ambient +Project	Volume/Capacity Ratio: Ex.+Ambient+ Related Projects +Project
Eastbound	Left Turn	1	1600	118	118	0.074	0.074
	Through	2	3200	446	446	0.240 *	0.244 *
	Right Turn**	0	0	322	335	-	-
Westbound	Left Turn	1	1600	31	31	0.019 *	0.019 *
	Through	2	3200	380	380	0.147	0.147
	Right Turn**	0	0	91	91	-	-
Northbound	Left Turn	1	1600	253	267	0.158 *	0.167 *
	Through	1	1600	668	716	0.418	0.448
	Right Turn	1	1600	56	56	0.035	0.035
Southbound	Left Turn	1	1600	107	107	0.067	0.067
	Through	1	1600	555	601	0.377 *	0.406 *
	Right Turn**	0	0	48	48	-	-
				ICU Plus Lost Time Factor of 0.1		**0.894**	
				Ambient Plus Project Level of Service		**D**	
				ICU Plus Lost Time Factor of 0.1			**0.936**
				Cumulative Plus Project Level of Service			**E**

* Denotes Critical Movement
** Denotes Shared Movement With Through Lane (Added to Through for V/C Ratio)

KHR ASSOCIATES
INTERSECTION CAPACITY UTILIZATION ANALYSIS

Condition:	Ex.+Ambient+Project & Related+Project	**Date:**	Projected 2012
Location:	County of Los Angeles, California	**Horizon Date:**	2012
North-South Street:	Brea Canyon Cutoff Road	**Peak Hour:**	7:45 - 8:45 A.M.
East-West Street:	Project Driveway/Reedview Drive	**Data Source:**	KHR
Annual Growth Rate:	0.78%	**Input By:**	S. Carter

Comments: County of Los Angeles Capacity Volume of Vehicles Per Hour Per Lane = 1600
County of Los Angeles Capacity Volume of Vehicles Per Hour For Dual Left-Turn Lanes = 2880
Ambient Growth Factor per County of Los Angeles = 0.078 % Per Year

Direction of Travel	Lane Movement	Number of Lanes	Capacity (Veh/Hr) On Green	Peak Hour Volume		Volume/Capacity Ratio	
				Existing+ Ambient +Project	Ex.+Ambient+ Related Projects +Project	Existing+ Ambient +Project	Ex.+Ambient+ Related Projects +Project
Eastbound	Left Turn	1	1600	13	13	0.008 *	0.008 *
	Through	0	0	0	0	-	-
	Right Turn**	0	0	5	5	-	-
Westbound	Left Turn	1	1600	35	35	0.022	0.022
	Through	0	0	0	0	-	-
	Right Turn	1	1600	64	64	0.040 *	0.040 *
Northbound	Left Turn	1	1600	1	1	0.001	0.001
	Through	2	3200	755	755	0.236 *	0.236 *
	Right Turn**	0	0	0	0	-	-
Southbound	Left Turn	1	1600	0	0	0.000 *	0.000 *
	Through	2	3200	513	513	0.165	0.165
	Right Turn**	0	0	16	16	-	-
				ICU Plus Lost Time Factor of 0.1		**0.384**	
				Ambient Plus Project Level of Service		**A**	
				ICU Plus Lost Time Factor of 0.1			**0.384**
				Cumulative Plus Project Level of Service			**A**

* Denotes Critical Movement
** Denotes Shared Movement With Through Lane (Added to Through for V/C Ratio)

KHR ASSOCIATES
INTERSECTION CAPACITY UTILIZATION ANALYSIS

Condition:	Ex.+Ambient+Project & Related+Project	**Date:**	Projected 2012
Location:	County of Los Angeles, California	**Horizon Date:**	2012
North-South Street:	Brea Canyon Cutoff Road	**Peak Hour:**	5:00 - 6:00 P.M.
East-West Street:	Project Driveway/Reedview Drive	**Data Source:**	KHR
Annual Growth Rate:	0.78%	**Input By:**	S. Carter

Comments: County of Los Angeles Capacity Volume of Vehicles Per Hour Per Lane = 1600
County of Los Angeles Capacity Volume of Vehicles Per Hour For Dual Left-Turn Lanes = 2880
Ambient Growth Factor per County of Los Angeles = 0.078 % Per Year

Direction of Travel	Lane Movement	Number of Lanes	Capacity (Veh/Hr) On Green	Peak Hour Volume		Volume/Capacity Ratio	
				Existing+ Ambient +Project	Ex.+Ambient+ Related Projects +Project	Existing+ Ambient +Project	Ex.+Ambient+ Related Projects +Project
Eastbound	Left Turn	1	1600	13	13	0.008 *	0.008 *
	Through	0	0	0	0	-	-
	Right Turn**	0	0	5	5	-	-
Westbound	Left Turn	1	1600	37	37	0.023	0.023
	Through	0	0	0	0	-	-
	Right Turn	1	1600	67	67	0.042 *	0.042 *
Northbound	Left Turn	1	1600	2	2	0.001	0.001
	Through	2	3200	764	764	0.267 *	0.267 *
	Right Turn**	0	0	90	90	-	-
Southbound	Left Turn	1	1600	166	166	0.104 *	0.104 *
	Through	2	3200	725	725	0.234	0.234
	Right Turn**	0	0	24	24	-	-
				ICU Plus Lost Time Factor of 0.1		**0.521**	
				Ambient Plus Project Level of Service		**A**	
				ICU Plus Lost Time Factor of 0.1			**0.521**
				Cumulative Plus Project Level of Service			**A**

* Denotes Critical Movement
*** Denotes Shared Movement With Through Lane (Added to Through for V/C Ratio)

KHR ASSOCIATES
INTERSECTION CAPACITY UTILIZATION ANALYSIS

Condition:	Ex.+Ambient+Project & Related+Project	**Date:**	Projected 2012
Location:	City of Diamond Bar, California	**Horizon Date:**	2012
North-South Street:	SR-57 N/B Ramps	**Peak Hour:**	7:30 - 8:30 AM
East-West Street:	Brea Canyon Cutoff Road/Diamond Bar Blvd.	**Data Source:**	KHR
Annual Growth Rate:	0.78%	**Input By:**	S. Carter

Comments: County of Los Angeles Capacity Volume of Vehicles Per Hour Per Lane = 1600
County of Los Angeles Capacity Volume of Vehicles Per Hour For Dual Left-Turn Lanes = 2880
Ambient Growth Factor per County of Los Angeles = 0.078 % Per Year

Direction of Travel	Lane Movement	Number of Lanes	Capacity (Veh/Hr) On Green	Peak Hour Volume		Volume/Capacity Ratio	
				Existing+ Ambient +Project	Ex.+Ambient+ Related Projects +Project	Existing+ Ambient +Project	Ex.+Ambient+ Related Projects +Project
Eastbound	Left Turn	1	1600	40	40	0.025 *	0.025 *
	Through	2	3200	571	571	0.178	0.178
	Right Turn	0	0	0	0	-	-
Westbound	Left Turn	0	0	0	0	-	-
	Through	2	3200	613	613	0.192 *	0.192 *
	Right Turn**	1	1600	193	193	FREE	FLOW
Northbound	Left Turn	1	1600	249	249	0.156 *	0.156 *
	Through***	0	0	0	0	-	-
	Right Turn	1	1600	196	196	0.123	0.123
Southbound	Left Turn	0	0	0	0	-	-
	Through	0	0	0	0	-	-
	Right Turn	0	0	0	0	-	-
			ICU Plus Lost Time Factor of 0.1			**0.472**	
			Ambient Plus Project Level of Service			**A**	
			ICU Plus Lost Time Factor of 0.1				**0.472**
			Cumulative Plus Project Level of Service				**A**

* Denotes Critical Movement
** Denotes Free-Flow: On-Ramp Right Turn Before Intersection
**** Denotes Optional Left/Right Turn Lane (Added to Left Turn for V/C Ratio)

KHR ASSOCIATES
INTERSECTION CAPACITY UTILIZATION ANALYSIS

Condition:	Ex.+Ambient+Project & Related+Project	**Date:**	Projected 2012
Location:	City of Diamond Bar, California	**Horizon Date:**	2012
North-South Street:	SR-57 N/B Ramps	**Peak Hour:**	5:00 - 6:00 P.M.
East-West Street:	Brea Canyon Cutoff Road/Diamond Bar Blvd.	**Data Source:**	KHR
Annual Growth Rate:	0.78%	**Input By:**	S. Carter

Comments: County of Los Angeles Capacity Volume of Vehicles Per Hour Per Lane = 1600
County of Los Angeles Capacity Volume of Vehicles Per Hour For Dual Left-Turn Lanes = 2880
Ambient Growth Factor per County of Los Angeles = 0.078 % Per Year

Direction of Travel	Lane Movement	Number of Lanes	Capacity (Veh/Hr) On Green	Peak Hour Volume		Volume/Capacity Ratio	
				Existing+ Ambient +Project	Ex.+Ambient+ Related Projects +Project	Existing+ Ambient +Project	Ex.+Ambient+ Related Projects +Project
Eastbound	Left Turn	1	1600	24	24	0.015 *	0.015 *
	Through	2	3200	966	966	0.302	0.302
	Right Turn	0	0	0	0	-	-
Westbound	Left Turn	0	0	0	0	-	-
	Through	2	3200	656	658	0.205 *	0.206 *
	Right Turn**	1	1600	116	116	FREE	FLOW
Northbound	Left Turn	1	1600	364	366	0.228 *	0.229 *
	Through***	0	0	0	0	-	-
	Right Turn	1	1600	127	127	0.079	0.079
Southbound	Left Turn	0	0	0		-	-
	Through	0	0	0		-	-
	Right Turn	0	0	0		-	-
			ICU Plus Lost Time Factor of 0.1			**0.548**	
			Ambient Plus Project Level of Service			**A**	
			ICU Plus Lost Time Factor of 0.1				**0.549**
			Cumulative Plus Project Level of Service				**A**

* Denotes Critical Movement
** Denotes Free-Flow: On-Ramp Right Turn Before Intersection
**** Denotes Optional Left/Right Turn Lane (Added to Left Turn for V/C Ratio)

KHR ASSOCIATES
INTERSECTION CAPACITY UTILIZATION ANALYSIS

Condition:	Ex.+Ambient+Project & Related+Project	**Date:**	Projected 2012
Location:	City of Diamond Bar, California	**Horizon Date:**	2012
North-South Street:	SR-57 S/B Ramps	**Peak Hour:**	8:00 - 9:00 A.M.
East-West Street:	Brea Canyon Cutoff Road/Diamond Bar Blvd.	**Data Source:**	KHR
Annual Growth Rate:	0.78%	**Input By:**	S. Carter

Comments: County of Los Angeles Capacity Volume of Vehicles Per Hour Per Lane = 1600
County of Los Angeles Capacity Volume of Vehicles Per Hour For Dual Left-Turn Lanes = 2880
Ambient Growth Factor per County of Los Angeles = 0.078 % Per Year

Direction of Travel	Lane Movement	Number of Lanes	Capacity (Veh/Hr) On Green	Peak Hour Volume		Volume/Capacity Ratio	
				Existing+ Ambient +Project	Ex.+Ambient+ Related Projects +Project	Existing+ Ambient +Project	Ex.+Ambient+ Related Projects +Project
Eastbound	Left Turn	0	0	0	0	-	-
	Through	2	3200	227	227	0.071 *	0.071 *
	Right Turn**	1	1600	282	282	FREE	FLOW
Westbound	Left Turn	1	1600	415	415	0.259 *	0.259 *
	Through	2	3200	735	735	0.230	0.230
	Right Turn	0	0	0	0	-	-
Northbound	Left Turn	0	0	0	0	-	-
	Through	0	0	0	0	-	-
	Right Turn	0	0	0	0	-	-
Southbound	Left Turn	1	1600	56	67	0.035 *	0.042 *
	Through***	0	0	0	0	-	-
	Right Turn	1	1600	163	163	0.102	0.102
			ICU Plus Lost Time Factor of 0.1			**0.465**	
			Ambient Plus Project Level of Service			**A**	
			ICU Plus Lost Time Factor of 0.1				**0.472**
			Cumulative Plus Project Level of Service				**A**

* Denotes Critical Movement
** Denotes Free-Flow: On-Ramp Right Turn Before Intersectior
*** Denotes Optional Thru/Left Turn Lane (Added to Left Turn for V/C Ratio)

KHR ASSOCIATES
INTERSECTION CAPACITY UTILIZATION ANALYSIS

Condition:	Ex.+Ambient+Project & Related+Project	**Date:**	Projected 2012
Location:	City of Diamond Bar, California	**Horizon Date:**	2012
North-South Street:	SR-57 S/B Ramps	**Peak Hour:**	5:00 - 6:00 P.M.
East-West Street:	Brea Canyon Cutoff Road/Diamond Bar Blvd.	**Data Source:**	KHR
Annual Growth Rate:	0.78%	**Input By:**	S. Carter

Comments: County of Los Angeles Capacity Volume of Vehicles Per Hour Per Lane = 1600
County of Los Angeles Capacity Volume of Vehicles Per Hour For Dual Left-Turn Lanes = 2880
Ambient Growth Factor per County of Los Angeles = 0.078 % Per Year

Direction of Travel	Lane Movement	Number of Lanes	Capacity (Veh/Hr) On Green	Peak Hour Volume: Existing+ Ambient +Project	Peak Hour Volume: Ex.+Ambient+ Related Projects +Project	Volume/Capacity Ratio: Existing+ Ambient +Project	Volume/Capacity Ratio: Ex.+Ambient+ Related Projects +Project
Eastbound	Left Turn	0	0	0	0	-	-
	Through	2	3200	892	892	0.279 *	0.279 *
	Right Turn**	1	1600	346	346	FREE	FLOW
Westbound	Left Turn	1	1600	189	189	0.118 *	0.118 *
	Through	2	3200	952	954	0.298	0.298
	Right Turn	0	0	0	0	-	-
Northbound	Left Turn	0	0	0	0	-	-
	Through	0	0	0	0	-	-
	Right Turn	0	0	0	0	-	-
Southbound	Left Turn	1	1600	49	49	0.031 *	0.031 *
	Through***	0	0	0	0	-	-
	Right Turn	1	1600	166	166	0.104	0.104
				ICU Plus Lost Time Factor of 0.1		**0.528**	
				Ambient Plus Project Level of Service		**A**	
				ICU Plus Lost Time Factor of 0.1			**0.528**
				Cumulative Plus Project Level of Service			**A**

* Denotes Critical Movement
** Denotes Free-Flow: On-Ramp Right Turn Before Intersection
*** Denotes Optional Thru/Left Turn Lane (Added to Left Turn for V/C Ratio)

KHR ASSOCIATES
INTERSECTION CAPACITY UTILIZATION ANALYSIS

Condition:	Ex.+Ambient+Project & Related+Project	**Date:**	Projected 2012
Location:	City of Diamond Bar, California	**Horizon Date:**	2012
North-South Street:	SR-57 N/B Ramps	**Peak Hour:**	7:45 - 8:45 AM
East-West Street:	Pathfinder Road	**Data Source:**	KHR
Annual Growth Rate:	0.78%	**Input By:**	S. Carter

Comments: County of Los Angeles Capacity Volume of Vehicles Per Hour Per Lane = 1600
County of Los Angeles Capacity Volume of Vehicles Per Hour For Dual Left-Turn Lanes = 2880
Ambient Growth Factor per County of Los Angeles = 0.078 % Per Year

Direction of Travel	Lane Movement	Number of Lanes	Capacity (Veh/Hr) On Green	Peak Hour Volume: Existing+ Ambient +Project	Peak Hour Volume: Ex.+Ambient+ Related Projects +Project	Volume/Capacity Ratio: Existing+ Ambient +Project	Volume/Capacity Ratio: Ex.+Ambient+ Related Projects +Project
Eastbound	Left Turn	1	1600	121	121	0.076 *	0.076 *
	Through	2	3200	366	376	0.114	0.118
	Right Turn	0	0	0	0	-	-
Westbound	Left Turn	0	0	0	0	-	-
	Through	2	3200	1059	1061	0.331 *	0.332 *
	Right Turn	1	1600	636	636	0.398	0.398
Northbound	Left Turn	1	1600	216	216	0.135 *	0.135 *
	Through***	0	0	0	0	-	-
	Right Turn	1	1600	69	69	0.043	0.043
Southbound	Left Turn	0	0	0	0	-	-
	Through	0	0	0	0	-	-
	Right Turn	0	0	0	0	-	-
				ICU Plus Lost Time Factor of 0.1		**0.642**	
				Ambient Plus Project Level of Service		**B**	
				ICU Plus Lost Time Factor of 0.1			**0.642**
				Cumulative Plus Project Level of Service			**B**

* Denotes Critical Movement
** Denotes Optional Thru/Left Turn Lane (Added to Left Turn for V/C Ratio)

KHR ASSOCIATES
INTERSECTION CAPACITY UTILIZATION ANALYSIS

Condition:	Ex.+Ambient+Project & Related+Project	**Date:**	Projected 2012
Location:	City of Diamond Bar, California	**Horizon Date:**	2012
North-South Street:	SR-57 N/B Ramps	**Peak Hour:**	5:00 - 6:00 P.M.
East-West Street:	Pathfinder Road	**Data Source:**	KHR
Annual Growth Rate:	0.78%	**Input By:**	S. Carter

Comments: County of Los Angeles Capacity Volume of Vehicles Per Hour Per Lane = 1600
County of Los Angeles Capacity Volume of Vehicles Per Hour For Dual Left-Turn Lanes = 2880
Ambient Growth Factor per County of Los Angeles = 0.078 % Per Year

Direction of Travel	Lane Movement	Number of Lanes	Capacity (Veh/Hr) On Green	Peak Hour Volume: Existing+ Ambient +Project	Peak Hour Volume: Ex.+Ambient+ Related Projects +Project	Volume/Capacity Ratio: Existing+ Ambient +Project	Volume/Capacity Ratio: Ex.+Ambient+ Related Projects +Project
Eastbound	Left Turn	1	1600	92	92	0.058 *	0.058 *
	Through	2	3200	712	732	0.223	0.229
	Right Turn	0	0	0	0	-	-
Westbound	Left Turn	0	0	0	0	-	-
	Through	2	3200	498	502	0.156 *	0.157 *
	Right Turn**	1	1600	431	431	FREE	FLOW
Northbound	Left Turn	1	1600	452	461	0.283 *	0.288 *
	Through***	0	0	0	0	-	-
	Right Turn	1	1600	369	369	0.231	0.231
Southbound	Left Turn	0	0	0	0	-	-
	Through	0	0	0	0	-	-
	Right Turn	0	0	0	0	-	-
				ICU Plus Lost Time Factor of 0.1		**0.596**	
				Ambient Plus Project Level of Service		**A**	
				ICU Plus Lost Time Factor of 0.1			**0.603**
				Cumulative Plus Project Level of Service			**B**

* Denotes Critical Movement
** Denotes Optional Thru/Left Turn Lane (Added to Left Turn for V/C Ratio)

KHR ASSOCIATES
INTERSECTION CAPACITY UTILIZATION ANALYSIS

Condition:	Ex.+Ambient+Project & Related+Project	**Date:**	Projected 2012
Location:	City of Diamond Bar, California	**Horizon Date:**	2012
North-South Street:	SR-57 S/B Ramps	**Peak Hour:**	7:45 - 8:45 A.M.
East-West Street:	Pathfinder Road	**Data Source:**	KHR
Annual Growth Rate:	0.78%	**Input By:**	S. Carter

Comments: County of Los Angeles Capacity Volume of Vehicles Per Hour Per Lane = 1600
County of Los Angeles Capacity Volume of Vehicles Per Hour For Dual Left-Turn Lanes = 2880
Ambient Growth Factor per County of Los Angeles = 0.078 % Per Year

Direction of Travel	Lane Movement	Number of Lanes	Capacity (Veh/Hr) On Green	Peak Hour Volume		Volume/Capacity Ratio	
				Existing+ Ambient +Project	Ex.+Ambient+ Related Projects +Project	Existing+ Ambient +Project	Ex.+Ambient+ Related Projects +Project
Eastbound	Left Turn	0	0	0	0	-	-
	Through	2	3200	482	492	0.151 *	0.154 *
	Right Turn**	1	1600	266	274	FREE	FLOW
Westbound	Left Turn	1	1600	437	437	0.273 *	0.273 *
	Through	2	3200	838	841	0.262	0.263
	Right Turn	0	0	0	0	-	-
Northbound	Left Turn	0	0	0	0	-	-
	Through	0	0	0	0	-	-
	Right Turn	0	0	0	0	-	-
Southbound	Left Turn	1	1600	264	264	0.165 *	0.165 *
	Through***	0	0	0	0	-	-
	Right Turn	1	1600	117	117	0.073	0.073
		ICU Plus Lost Time Factor of 0.1				**0.689**	
		Ambient Plus Project Level of Service				**B**	
		ICU Plus Lost Time Factor of 0.1					**0.692**
		Cumulative Plus Project Level of Service					**B**

* Denotes Critical Movement
** Denotes Free-Flow: On-Ramp Right Turn Before Intersectior
*** Denotes Optional Thru/Left Turn Lane (Added to Left Turn for V/C Ratic

KHR ASSOCIATES
INTERSECTION CAPACITY UTILIZATION ANALYSIS

Condition:	Ex.+Ambient+Project & Related+Project	**Date:**	Projected 2012
Location:	City of Diamond Bar, California	**Horizon Date:**	2012
North-South Street:	SR-57 S/B Ramps	**Peak Hour:**	5:00 - 6:00 P.M.
East-West Street:	Pathfinder Road	**Data Source:**	KHR
Annual Growth Rate:	0.78%	**Input By:**	S. Carter

Comments: County of Los Angeles Capacity Volume of Vehicles Per Hour Per Lane = 1600
County of Los Angeles Capacity Volume of Vehicles Per Hour For Dual Left-Turn Lanes = 2880
Ambient Growth Factor per County of Los Angeles = 0.078 % Per Year

Direction of Travel	Lane Movement	Number of Lanes	Capacity (Veh/Hr) On Green	Peak Hour Volume		Volume/Capacity Ratio	
				Existing+ Ambient +Project	Ex.+Ambient+ Related Projects +Project	Existing+ Ambient +Project	Ex.+Ambient+ Related Projects +Project
Eastbound	Left Turn	0	0	0	0	-	-
	Through	2	3200	797	817	0.249 *	0.255 *
	Right Turn**	1	1600	124	124	FREE	FLOW
Westbound	Left Turn	1	1600	85	85	0.053 *	0.053 *
	Through	2	3200	434	447	0.136	0.140
	Right Turn	0	0	0	0	-	-
Northbound	Left Turn	0	0	0	0	-	-
	Through	0	0	0	0	-	-
	Right Turn	0	0	0	0	-	-
Southbound	Left Turn	1	1600	301	301	0.188 *	0.188 *
	Through***	0	0	0	0	-	-
	Right Turn	1	1600	381	381	0.238	0.238
		ICU Plus Lost Time Factor of 0.1				**0.590**	
		Ambient Plus Project Level of Service				**A**	
		ICU Plus Lost Time Factor of 0.1					**0.597**
		Cumulative Plus Project Level of Service					**A**

* Denotes Critical Movement
** Denotes Free-Flow: On-Ramp Right Turn Before Intersection
*** Denotes Optional Thru/Left Turn Lane (Added to Left Turn for V/C Ratio)

KHR ASSOCIATES
INTERSECTION CAPACITY UTILIZATION ANALYSIS

Condition:	Ex.+Ambient+Project & Related+Project	**Date:**	Projected 2012
Location:	County of Los Angeles, California	**Horizon Date:**	2012
North-South Street:	Fullerton Raod	**Peak Hour:**	8:00 - 9:00 AM
East-West Street:	Colima Road	**Data Source:**	KHR
Annual Growth Rate:	0.78%	**Input By:**	S. Carter

Comments: County of Los Angeles Capacity Volume of Vehicles Per Hour Per Lane = 1600
County of Los Angeles Capacity Volume of Vehicles Per Hour For Dual Left-Turn Lanes = 2880
Ambient Growth Factor per County of Los Angeles = 0.078 % Per Year

Direction of Travel	Lane Movement	Number of Lanes	Capacity (Veh/Hr) On Green	Peak Hour Volume		Volume/Capacity Ratio	
				Existing+ Ambient +Project	Ex.+Ambient+ Related Projects +Project	Existing+ Ambient +Project	Ex.+Ambient+ Related Projects +Project
Eastbound	Left Turn	1	1600	129	129	0.081 *	0.081 *
	Through	3	4800	454	505	0.130	0.141
	Right Turn**	0	0	172	172	-	-
Westbound	Left Turn	1	1600	229	229	0.143	0.143
	Through	3	4800	1,298	1,314	0.406 *	0.409 *
	Right Turn**	0	0	649	649	-	-
Northbound	Left Turn	2	2880	348	348	0.121	0.121
	Through	2	3200	951	951	0.338 *	0.338 *
	Right Turn**	0	0	130	130	-	-
Southbound	Left Turn	2	2880	195	195	0.068 *	0.068 *
	Through	2	3200	628	628	0.255	0.255
	Right Turn**	0	0	188	188	-	-
ICU Plus Lost Time Factor of 0.1						**0.992**	
Ambient Plus Project Level of Service						**E**	
ICU Plus Lost Time Factor of 0.1							**0.995**
Cumulative Plus Project Level of Service							**E**

* Denotes Critical Movement
** Denotes Shared Movement With Through Lane (Added to Through for V/C Ratio)

KHR ASSOCIATES
INTERSECTION CAPACITY UTILIZATION ANALYSIS

Condition:	Ex.+Ambient+Project & Related+Project	**Date:**	Projected 2012
Location:	County of Los Angeles, California	**Horizon Date:**	2012
North-South Street:	Fullerton Road	**Peak Hour:**	5:00 - 6:00 P.M.
East-West Street:	Colima Road	**Data Source:**	KHR
Annual Growth Rate:	0.78%	**Input By:**	S. Carter

Comments: County of Los Angeles Capacity Volume of Vehicles Per Hour Per Lane = 1600
County of Los Angeles Capacity Volume of Vehicles Per Hour For Dual Left-Turn Lanes = 2880
Ambient Growth Factor per County of Los Angeles = 0.078 % Per Year

Direction of Travel	Lane Movement	Number of Lanes	Capacity (Veh/Hr) On Green	Peak Hour Volume		Volume/Capacity Ratio	
				Existing+ Ambient +Project	Ex.+Ambient+ Related Projects +Project	Existing+ Ambient +Project	Ex.+Ambient+ Related Projects +Project
Eastbound	Left Turn	1	1600	157	157	0.098	0.098
	Through	3	4800	1,057	1,122	0.264 *	0.277 *
	Right Turn**	0	0	209	209	-	-
Westbound	Left Turn	1	1600	208	208	0.130 *	0.130 *
	Through	3	4800	810	871	0.225	0.238
	Right Turn**	0	0	271	271	-	-
Northbound	Left Turn	2	2880	280	280	0.097	0.097
	Through	2	3200	776	776	0.280 *	0.280 *
	Right Turn**	0	0	120	120	-	-
Southbound	Left Turn	2	2880	396	396	0.138 *	0.138 *
	Through	2	3200	859	859	0.320	0.320
	Right Turn**	0	0	164	164	-	-
		ICU Plus Lost Time Factor of 0.1				**0.911**	
		Ambient Plus Project Level of Service				**E**	
		ICU Plus Lost Time Factor of 0.1					**0.925**
		Cumulative Plus Project Level of Service					**E**

* Denotes Critical Movement
** Denotes Shared Movement With Through Lane (Added to Through for V/C Ratio)

KHR ASSOCIATES
INTERSECTION CAPACITY UTILIZATION ANALYSIS

Condition:	Ex.+Ambient+Project & Related+Project	**Date:**	Projected 2012
Location:	County of Los Angeles, California	**Horizon Date:**	2012
North-South Street:	Nogales Street	**Peak Hour:**	7:30 - 8:30 AM
East-West Street:	Colima Road	**Data Source:**	KHR
Annual Growth Rate:	0.78%	**Input By:**	S. Carter

Comments: County of Los Angeles Capacity Volume of Vehicles Per Hour Per Lane = 1600
County of Los Angeles Capacity Volume of Vehicles Per Hour For Dual Left-Turn Lanes = 2880
Ambient Growth Factor per County of Los Angeles = 0.078 % Per Year

Direction of Travel	Lane Movement	Number of Lanes	Capacity (Veh/Hr) On Green	Peak Hour Volume		Volume/Capacity Ratio	
				Existing+ Ambient +Project	Ex.+Ambient+ Related Projects +Project	Existing+ Ambient +Project	Ex.+Ambient+ Related Projects +Project
Eastbound	Left Turn	2	2880	296	296	0.103	0.103
	Through	2	3200	762	813	0.327 *	0.343 *
	Right Turn**	0	0	284	284	-	-
Westbound	Left Turn	1	1600	390	390	0.244 *	0.244 *
	Through	3	4800	857	873	0.211	0.214
	Right Turn**	0	0	155	155	-	-
Northbound	Left Turn	1	1600	345	345	0.216 *	0.216 *
	Through	2	3200	902	902	0.314	0.314
	Right Turn**	0	0	102	102	-	-
Southbound	Left Turn	2	2880	330	330	0.115	0.115
	Through	2	3200	850	850	0.266 *	0.266 *
	Right Turn	1	1600	290	290	0.181	0.181
ICU Plus Lost Time Factor of 0.1						**1.152**	
Ambient Plus Project Level of Service						**F**	
ICU Plus Lost Time Factor of 0.1							**1.168**
Cumulative Plus Project Level of Service							**F**

* Denotes Critical Movement
** Denotes Shared Movement With Through Lane (Added to Through for V/C Ratio)

KHR ASSOCIATES
INTERSECTION CAPACITY UTILIZATION ANALYSIS

Condition:	Ex.+Ambient+Project & Related+Project	**Date:**	Projected 2012
Location:	County of Los Angeles, California	**Horizon Date:**	2012
North-South Street:	Nogales Street	**Peak Hour:**	5:00 - 6:00 P.M.
East-West Street:	Colima Road	**Data Source:**	KHR
Annual Growth Rate:	0.78%	**Input By:**	S. Carter

Comments: County of Los Angeles Capacity Volume of Vehicles Per Hour Per Lane = 1600
County of Los Angeles Capacity Volume of Vehicles Per Hour For Dual Left-Turn Lanes = 2880
Ambient Growth Factor per County of Los Angeles = 0.078 % Per Year

Direction of Travel	Lane Movement	Number of Lanes	Capacity (Veh/Hr) On Green	Peak Hour Volume		Volume/Capacity Ratio	
				Existing+ Ambient +Project	Ex.+Ambient+ Related Projects +Project	Existing+ Ambient +Project	Ex.+Ambient+ Related Projects +Project
Eastbound	Left Turn	2	2880	496	496	0.172	0.172
	Through	2	3200	1,024	1,089	0.347 *	0.367 *
	Right Turn**	0	0	86	86	-	-
Westbound	Left Turn	1	1600	207	207	0.129 *	0.129 *
	Through	3	4800	985	1,046	0.264	0.276
	Right Turn**	0	0	281	281	-	-
Northbound	Left Turn	1	1600	309	309	0.193	0.193
	Through	2	3200	789	789	0.300 *	0.300 *
	Right Turn**	0	0	171	171	-	-
Southbound	Left Turn	2	2880	437	437	0.152 *	0.152 *
	Through	2	3200	688	688	0.215	0.215
	Right Turn	1	1600	389	389	0.243	0.243
		ICU Plus Lost Time Factor of 0.1				**1.028**	
		Ambient Plus Project Level of Service				**F**	
		ICU Plus Lost Time Factor of 0.1					**1.048**
		Cumulative Plus Project Level of Service					**F**

* Denotes Critical Movement
** Denotes Shared Movement With Through Lane (Added to Through for V/C Ratio)

KHR ASSOCIATES
INTERSECTION CAPACITY UTILIZATION ANALYSIS

Condition:	Ex.+Ambient+Project & Related+Project	**Date:**	Projected 2012
Location:	City of Industry, California	**Horizon Date:**	2012
North-South Street:	Fairway Drive	**Peak Hour:**	7:30 - 8:30 AM
East-West Street:	Valley Boulevard	**Data Source:**	KHR
Annual Growth Rate:	0.78%	**Input By:**	S. Carter

Comments: County of Los Angeles Capacity Volume of Vehicles Per Hour Per Lane = 1600
County of Los Angeles Capacity Volume of Vehicles Per Hour For Dual Left-Turn Lanes = 2880
Ambient Growth Factor per County of Los Angeles = 0.078 % Per Year

Direction of Travel	Lane Movement	Number of Lanes	Capacity (Veh/Hr) On Green	Peak Hour Volume: Existing+ Ambient +Project	Peak Hour Volume: Ex.+Ambient+ Related Projects +Project	Volume/Capacity Ratio: Existing+ Ambient +Project	Volume/Capacity Ratio: Ex.+Ambient+ Related Projects +Project
Eastbound	Left Turn	1	1600	19	19	0.012	0.012
	Through	2	3200	534	534	0.167 *	0.167 *
	Right Turn	1	1600	528	528	0.330	0.330
Westbound	Left Turn	2	2880	374	385	0.130 *	0.134 *
	Through**	2	3200	726	726	0.235	0.235
	Right Turn	0	0	25	25	-	-
Northbound	Left Turn	2	2880	312	312	0.133 *	0.133 *
	Through**	0	0	71	71	-	-
	Right Turn	1	1600	375	415	0.234	0.259
Southbound	Left Turn	1	1600	27	27	0.017	0.017
	Through	1	1600	159	159	0.123 *	0.123 *
	Right Turn***	0	0	37	37	-	-
				ICU Plus Lost Time Factor of 0.1		**0.652**	
				Ambient Plus Project Level of Service		**B**	
				ICU Plus Lost Time Factor of 0.1			**0.656**
				Cumulative Plus Project Level of Service			**B**

* Denotes Critical Movement
** Denotes Lane Striping as Optional Through/Turn Lane (Added to Left Turn for V/C Ratio)
*** Denotes Lane Striping as Optional Through/Turn Lane (Added to Through for V/C Ratio)

KHR ASSOCIATES
INTERSECTION CAPACITY UTILIZATION ANALYSIS

Condition:	Ex.+Ambient+Project & Related+Project	**Date:**	Projected 2012
Location:	City of Industry, California	**Horizon Date:**	2012
North-South Street:	Fairway Drive	**Peak Hour:**	5:00 - 6:00 P.M.
East-West Street:	Valley Boulevard	**Data Source:**	KHR
Annual Growth Rate:	0.78%	**Input By:**	S. Carter

Comments: County of Los Angeles Capacity Volume of Vehicles Per Hour Per Lane = 1600
County of Los Angeles Capacity Volume of Vehicles Per Hour For Dual Left-Turn Lanes = 2880
Ambient Growth Factor per County of Los Angeles = 0.078 % Per Year

Direction of Travel	Lane Movement	Number of Lanes	Capacity (Veh/Hr) On Green	Peak Hour Volume: Existing+ Ambient +Project	Peak Hour Volume: Ex.+Ambient+ Related Projects +Project	Volume/Capacity Ratio: Existing+ Ambient +Project	Volume/Capacity Ratio: Ex.+Ambient+ Related Projects +Project
Eastbound	Left Turn	1	1600	23	23	0.014	0.014
	Through	2	3200	1,053	1,053	0.329 *	0.329 *
	Right Turn	1	1600	436	449	0.273	0.281
Westbound	Left Turn	2	2880	506	566	0.176 *	0.197 *
	Through**	2	3200	820	820	0.261	0.261
	Right Turn	0	0	14	14	-	-
Northbound	Left Turn	2	2880	412	412	0.201 *	0.201 *
	Through**	0	0	167	167	-	-
	Right Turn	1	1600	561	604	0.351	0.378
Southbound	Left Turn	1	1600	26	26	0.016	0.016
	Through	1	1600	104	104	0.072 *	0.072 *
	Right Turn***	0	0	11	11	-	-
				ICU Plus Lost Time Factor of 0.1		**0.878**	
				Ambient Plus Project Level of Service		**D**	
				ICU Plus Lost Time Factor of 0.1			**0.899**
				Cumulative Plus Project Level of Service			**D**

* Denotes Critical Movement
** Denotes Lane Striping as Optional Through/Turn Lane (Added to Left Turn for V/C Ratio)
*** Denotes Lane Striping as Optional Through/Turn Lane (Added to Through for V/C Ratio)

KHR ASSOCIATES
INTERSECTION CAPACITY UTILIZATION ANALYSIS

Condition:	Ex.+Ambient+Project & Related+Project	**Date:**	Projected 2012
Location:	City of Diamond Bar, California	**Horizon Date:**	2012
North-South Street:	Lemon Avenue	**Peak Hour:**	7:30 - 8:30 AM
East-West Street:	Golden Springs Drive	**Data Source:**	KHR
Annual Growth Rate:	0.78%	**Input By:**	S. Carter

Comments: County of Los Angeles Capacity Volume of Vehicles Per Hour Per Lane = 1600
County of Los Angeles Capacity Volume of Vehicles Per Hour For Dual Left-Turn Lanes = 2880
Ambient Growth Factor per County of Los Angeles = 0.078 % Per Year

Direction of Travel	Lane Movement	Number of Lanes	Capacity (Veh/Hr) On Green	Peak Hour Volume: Existing+ Ambient +Project	Peak Hour Volume: Ex.+Ambient+ Related Projects +Project	Volume/Capacity Ratio: Existing+ Ambient +Project	Volume/Capacity Ratio: Ex.+Ambient+ Related Projects +Project
Eastbound	Left Turn	1	1600	321	321	0.201 *	0.201 *
	Through	2	3200	320	381	0.113	0.133
	Right Turn	0	1600	43	43	-	-
Westbound	Left Turn	1	1600	34	34	0.021	0.021
	Through	2	3200	481	500	0.150 *	0.156 *
	Right Turn	1	1600	340	340	0.213	0.213
Northbound	Left Turn	1	1600	45	45	0.028	0.028
	Through	1	1600	138	138	0.116 *	0.116 *
	Right Turn***	0	0	48	48	-	-
Southbound	Left Turn	2	2880	307	307	0.166 *	0.166 *
	Through**	0	0	172	172	-	-
	Right Turn	1	1600	138	138	0.086	0.086
				ICU Plus Lost Time Factor of 0.1		**0.734**	
				Ambient Plus Project Level of Service		**C**	
				ICU Plus Lost Time Factor of 0.1			**0.739**
				Cumulative Plus Project Level of Service			**C**

* Denotes Critical Movement
** Denotes Lane Striping as Optional Through/Turn Lane (Added to Left Turn for V/C Ratio)
*** Denotes Lane Striping as Optional Through/Turn Lane (Added to Through for V/C Ratio)

KHR ASSOCIATES
INTERSECTION CAPACITY UTILIZATION ANALYSIS

Condition:	Ex.+Ambient+Project & Related+Project	**Date:**	Projected 2012
Location:	City of Diamond Bar, California	**Horizon Date:**	2012
North-South Street:	Lemon Avenue	**Peak Hour:**	5:00 - 6:00 P.M.
East-West Street:	Golden Springs Drive	**Data Source:**	KHR
Annual Growth Rate:	0.78%	**Input By:**	S. Carter

Comments: County of Los Angeles Capacity Volume of Vehicles Per Hour Per Lane = 1600
County of Los Angeles Capacity Volume of Vehicles Per Hour For Dual Left-Turn Lanes = 2880
Ambient Growth Factor per County of Los Angeles = 0.078 % Per Year

Direction of Travel	Lane Movement	Number of Lanes	Capacity (Veh/Hr) On Green	Peak Hour Volume: Existing+ Ambient +Project	Peak Hour Volume: Ex.+Ambient+ Related Projects +Project	Volume/Capacity Ratio: Existing+ Ambient +Project	Volume/Capacity Ratio: Ex.+Ambient+ Related Projects +Project
Eastbound	Left Turn	1	1600	276	281	0.173 *	0.176 *
	Through	2	3200	434	495	0.150	0.169
	Right Turn	0	1600	45	45	-	-
Westbound	Left Turn	1	1600	51	51	0.032	0.032
	Through	2	3200	642	661	0.201 *	0.207 *
	Right Turn	1	1600	320	320	0.200	0.200
Northbound	Left Turn	1	1600	26	26	0.016	0.016
	Through	1	1600	27	27	0.041 *	0.041 *
	Right Turn***	0	0	38	38	-	-
Southbound	Left Turn	2	2880	402	402	0.199 *	0.199 *
	Through**	0	0	170	170	-	-
	Right Turn	1	1600	153	153	0.096	0.096
				ICU Plus Lost Time Factor of 0.1		**0.712**	
				Ambient Plus Project Level of Service		**C**	
				ICU Plus Lost Time Factor of 0.1			**0.721**
				Cumulative Plus Project Level of Service			**C**

* Denotes Critical Movement
** Denotes Lane Striping as Optional Through/Turn Lane (Added to Left Turn for V/C Ratio)
*** Denotes Lane Striping as Optional Through/Turn Lane (Added to Through for V/C Ratio)

KHR ASSOCIATES
INTERSECTION CAPACITY UTILIZATION ANALYSIS

Condition:	Ex.+Ambient+Project & Related+Project	**Date:**	Projected 2012
Location:	City of Diamond Bar, California	**Horizon Date:**	2012
North-South Street:	Brea Canyon Road	**Peak Hour:**	7:30 - 8:30 AM
East-West Street:	Golden Springs Drive	**Data Source:**	KHR
Annual Growth Rate:	0.78%	**Input By:**	S. Carter

Comments: County of Los Angeles Capacity Volume of Vehicles Per Hour Per Lane = 1600
County of Los Angeles Capacity Volume of Vehicles Per Hour For Dual Left-Turn Lanes = 2880
Ambient Growth Factor per County of Los Angeles = 0.078 % Per Year

Direction of Travel	Lane Movement	Number of Lanes	Capacity (Veh/Hr) On Green	Peak Hour Volume: Existing+ Ambient +Project	Peak Hour Volume: Ex.+Ambient+ Related Projects +Project	Volume/Capacity Ratio: Existing+ Ambient +Project	Volume/Capacity Ratio: Ex.+Ambient+ Related Projects +Project
Eastbound	Left Turn	2	2880	159	159	0.055	0.055
	Through	2	3200	170	217	0.053 *	0.068 *
	Right Turn	1	1600	228	228	0.143	0.143
Westbound	Left Turn	2	2880	220	220	0.076 *	0.076 *
	Through	2	3200	203	220	0.063	0.069
	Right Turn	1	1600	216	216	0.135	0.135
Northbound	Left Turn	1	1600	157	157	0.098	0.098
	Through	2	3200	518	545	0.203 *	0.211 *
	Right Turn**	0	0	131	131	-	-
Southbound	Left Turn	2	2880	320	320	0.111 *	0.111 *
	Through	2	3200	636	636	0.199	0.199
	Right Turn	1	1600	211	217	0.132	0.136
				ICU Plus Lost Time Factor of 0.1		**0.543**	
				Ambient Plus Project Level of Service		**A**	
				ICU Plus Lost Time Factor of 0.1			**0.567**
				Cumulative Plus Project Level of Service			**A**

* Denotes Critical Movement
** Denotes Right Turns Added to Through Movement for V/C Ratio

KHR ASSOCIATES
INTERSECTION CAPACITY UTILIZATION ANALYSIS

Condition:	Ex.+Ambient+Project & Related+Project	**Date:**	Projected 2012
Location:	City of Diamond Bar, California	**Horizon Date:**	2012
North-South Street:	Brea Canyon Road	**Peak Hour:**	4:15 - 5:15 P.M.
East-West Street:	Golden Springs Drive	**Data Source:**	KHR
Annual Growth Rate:	0.78%	**Input By:**	S. Carter

Comments: County of Los Angeles Capacity Volume of Vehicles Per Hour Per Lane = 1600
County of Los Angeles Capacity Volume of Vehicles Per Hour For Dual Left-Turn Lanes = 2880
Ambient Growth Factor per County of Los Angeles = 0.078 % Per Year

Direction of Travel	Lane Movement	Number of Lanes	Capacity (Veh/Hr) On Green	Peak Hour Volume: Existing+ Ambient +Project	Peak Hour Volume: Ex.+Ambient+ Related Projects +Project	Volume/Capacity Ratio: Existing+ Ambient +Project	Volume/Capacity Ratio: Ex.+Ambient+ Related Projects +Project
Eastbound	Left Turn	2	2880	344	344	0.119	0.119
	Through	2	3200	890	949	0.278 *	0.297 *
	Right Turn	1	1600	307	307	0.192	0.192
Westbound	Left Turn	2	2880	290	290	0.101 *	0.101 *
	Through	2	3200	385	465	0.120	0.145
	Right Turn	1	1600	309	309	0.193	0.193
Northbound	Left Turn	1	1600	243	243	0.152	0.152
	Through	2	3200	824	830	0.329 *	0.331 *
	Right Turn**	0	0	229	229	-	-
Southbound	Left Turn	2	2880	454	454	0.158 *	0.158 *
	Through	2	3200	723	754	0.226	0.236
	Right Turn	1	1600	268	281	0.168	0.176
ICU Plus Lost Time Factor of 0.1						**0.966**	
Ambient Plus Project Level of Service						**E**	
ICU Plus Lost Time Factor of 0.1							**0.986**
Cumulative Plus Project Level of Service							**E**

* Denotes Critical Movement
** Denotes Right Turns Added to Through Movement for V/C Ratio

KHR ASSOCIATES
INTERSECTION CAPACITY UTILIZATION ANALYSIS

Condition:	Ex.+Ambient+Project & Related+Project	**Date:**	Projected 2012
Location:	City of Diamond Bar, California	**Horizon Date:**	2012
North-South Street:	Brea Canyon Road	**Peak Hour:**	7:15 - 8:15 AM
East-West Street:	Diamond Bar Boulevard	**Data Source:**	KHR
Annual Growth Rate:	0.78%	**Input By:**	S. Carter

Comments: County of Los Angeles Capacity Volume of Vehicles Per Hour Per Lane = 1600
County of Los Angeles Capacity Volume of Vehicles Per Hour For Dual Left-Turn Lanes = 2880
Ambient Growth Factor per County of Los Angeles = 0.078 % Per Year

Direction of Travel	Lane Movement	Number of Lanes	Capacity (Veh/Hr) On Green	Peak Hour Volume: Existing+ Ambient +Project	Peak Hour Volume: Ex.+Ambient+ Related Projects +Project	Volume/Capacity Ratio: Existing+ Ambient +Project	Volume/Capacity Ratio: Ex.+Ambient+ Related Projects +Project
Eastbound	Left Turn	1	1600	131	131	0.082	0.082
	Through	2	3200	226	303	0.071 *	0.095 *
	Right Turn**	1	1600	345	345	0.216	0.216
Westbound	Left Turn	1	1600	161	169	0.101 *	0.106 *
	Through	2	3200	93	207	0.052	0.090
	Right Turn**	0	0	72	80	-	-
Northbound	Left Turn	2	2880	782	796	0.272 *	0.276 *
	Through***	1	1600	576	580	-	-
	Right Turn	1	1600	39	40	0.024	0.025
Southbound	Left Turn	1	1600	27	39	0.017	0.024
	Through	2	3200	163	163	0.081 *	0.085 *
	Right Turn**	0	0	69	69	-	-
	ICU Plus Lost Time Factor of 0.1					**0.624**	
	Ambient Plus Project Level of Service					**B**	
	ICU Plus Lost Time Factor of 0.1						**0.661**
	Cumulative Plus Project Level of Service						**B**

* Denotes Critical Movement
** Denotes Shared Movement With Through Lane (Added to Through for V/C Ratio)
*** Denotes Shared Movement With Right Turn (Allocated Entirely to Through for V/C Ratio)

KHR ASSOCIATES
INTERSECTION CAPACITY UTILIZATION ANALYSIS

Condition:	Ex.+Ambient+Project & Related+Project	**Date:**	Projected 2012
Location:	City of Diamond Bar, California	**Horizon Date:**	2012
North-South Street:	Brea Canyon Road	**Peak Hour:**	4:45 - 5:45 P.M.
East-West Street:	Diamond Bar Boulevard	**Data Source:**	KHR
Annual Growth Rate:	0.78%	**Input By:**	S. Carter

Comments: County of Los Angeles Capacity Volume of Vehicles Per Hour Per Lane = 1600
County of Los Angeles Capacity Volume of Vehicles Per Hour For Dual Left-Turn Lanes = 2880
Ambient Growth Factor per County of Los Angeles = 0.078 % Per Year

Direction of Travel	Lane Movement	Number of Lanes	Capacity (Veh/Hr) On Green	Peak Hour Volume: Existing+ Ambient +Project	Peak Hour Volume: Ex.+Ambient+ Related Projects +Project	Volume/Capacity Ratio: Existing+ Ambient +Project	Volume/Capacity Ratio: Ex.+Ambient+ Related Projects +Project
Eastbound	Left Turn	1	1600	158	158	0.099	0.099
	Through	2	3200	783	1,025	0.245 *	0.320 *
	Right Turn**	1	1600	56	56	0.035	0.035
Westbound	Left Turn	1	1600	379	387	0.237 *	0.242 *
	Through	2	3200	457	610	0.380	0.431
	Right Turn**	0	0	760	768	-	-
Northbound	Left Turn	2	2880	126	126	0.044 *	0.044 *
	Through***	1	1600	364	364	-	-
	Right Turn	1	1600	33	33	0.021	0.021
Southbound	Left Turn	1	1600	68	98	0.043	0.061
	Through	2	3200	48	48	0.048 *	0.057 *
	Right Turn**	0	0	36	36	-	-
	ICU Plus Lost Time Factor of 0.1					**0.673**	
	Ambient Plus Project Level of Service					**B**	
	ICU Plus Lost Time Factor of 0.1						**0.763**
	Cumulative Plus Project Level of Service						**C**

* Denotes Critical Movement
** Denotes Shared Movement With Through Lane (Added to Through for V/C Ratio)
*** Denotes Shared Movement With Right Turn (Allocated Entirely to Through for V/C Ratio)

KHR ASSOCIATES
INTERSECTION CAPACITY UTILIZATION ANALYSIS

Condition:	Ex.+Ambient+Project & Related+Project	**Date:**	Projected 2012
Location:	City of Diamond Bar, California	**Horizon Date:**	2012
North-South Street:	Brea Canyon Road	**Peak Hour:**	7:30 - 8:30 AM
East-West Street:	Pathfinder Road	**Data Source:**	KHR
Annual Growth Rate:	0.78%	**Input By:**	S. Carter

Comments: County of Los Angeles Capacity Volume of Vehicles Per Hour Per Lane = 1600
County of Los Angeles Capacity Volume of Vehicles Per Hour For Dual Left-Turn Lanes = 2880
Ambient Growth Factor per County of Los Angeles = 0.078 % Per Year

Direction of Travel	Lane Movement	Number of Lanes	Capacity (Veh/Hr) On Green	Peak Hour Volume		Volume/Capacity Ratio	
				Existing+ Ambient +Project	Ex.+Ambient+ Related Projects +Project	Existing+ Ambient +Project	Ex.+Ambient+ Related Projects +Project
Eastbound	Left Turn	1	1600	204	207	0.128 *	0.129 *
	Through	2	3200	303	303	0.095	0.095
	Right Turn**	0	0	0	0	-	-
Westbound	Left Turn	0	0	0	0	-	-
	Through	2	3200	399	399	0.125 *	0.125 *
	Right Turn	1	1600	555	558	0.347	0.349
Northbound	Left Turn	0	0	0	0	-	-
	Through	0	0	0	0	-	-
	Right Turn	0	0	0	0	-	-
Southbound	Left Turn	2	2880	450	468	0.156 *	0.163 *
	Through	0	0	0	0	-	-
	Right Turn	1	1600	130	133	0.081	0.083
		ICU Plus Lost Time Factor of 0.1				**0.508**	
		Ambient Plus Project Level of Service				**A**	
		ICU Plus Lost Time Factor of 0.1					**0.517**
		Cumulative Plus Project Level of Service					**A**

* Denotes Critical Movement
** Separate Right Turn Through Lane to 57 S/B (However, Traffic Added to Through)

KHR ASSOCIATES
INTERSECTION CAPACITY UTILIZATION ANALYSIS

Condition:	Ex.+Ambient+Project & Related+Project	**Date:**	Projected 2012
Location:	City of Diamond Bar, California	**Horizon Date:**	2012
North-South Street:	Brea Canyon Road	**Peak Hour:**	4:45 - 5:45 P.M.
East-West Street:	Pathfinder Road	**Data Source:**	KHR
Annual Growth Rate:	0.78%	**Input By:**	S. Carter

Comments: County of Los Angeles Capacity Volume of Vehicles Per Hour Per Lane = 1600
County of Los Angeles Capacity Volume of Vehicles Per Hour For Dual Left-Turn Lanes = 2880
Ambient Growth Factor per County of Los Angeles = 0.078 % Per Year

Direction of Travel	Lane Movement	Number of Lanes	Capacity (Veh/Hr) On Green	Peak Hour Volume		Volume/Capacity Ratio	
				Existing+ Ambient +Project	Ex.+Ambient+ Related Projects +Project	Existing+ Ambient +Project	Ex.+Ambient+ Related Projects +Project
Eastbound	Left Turn	1	1600	373	373	0.233 *	0.233 *
	Through	2	3200	469	469	0.147	0.147
	Right Turn**	0	0	0	0	-	-
Westbound	Left Turn	0	0	0	0	-	-
	Through	2	3200	528	528	0.165 *	0.165 *
	Right Turn	1	1600	697	710	0.436	0.444
Northbound	Left Turn	0	0	0	0	-	-
	Through	0	0	0	0	-	-
	Right Turn	0	0	0	0	-	-
Southbound	Left Turn	2	2880	426	446	0.148 *	0.155 *
	Through	0	0	0	0	-	-
	Right Turn	1	1600	269	269	0.168	0.168
		ICU Plus Lost Time Factor of 0.1				**0.646**	
		Ambient Plus Project Level of Service				**B**	
		ICU Plus Lost Time Factor of 0.1					**0.653**
		Cumulative Plus Project Level of Service					**B**

* Denotes Critical Movement
** Separate Right Turn Through Lane to 57 S/B (However, Traffic Added to Through)

KHR ASSOCIATES
INTERSECTION CAPACITY UTILIZATION ANALYSIS

Condition:	Ex.+Ambient+Project & Related+Project	**Date:**	Projected 2012
Location:	City of Diamond Bar, California	**Horizon Date:**	2012
North-South Street:	Fern Hollow Drive/Brea Canyon Road	**Peak Hour:**	7:15 - 8:15 AM
East-West Street:	Pathfinder Road	**Data Source:**	KHR
Annual Growth Rate:	0.78%	**Input By:**	S. Carter

Comments: County of Los Angeles Capacity Volume of Vehicles Per Hour Per Lane = 1600
County of Los Angeles Capacity Volume of Vehicles Per Hour For Dual Left-Turn Lanes = 2880
Ambient Growth Factor per County of Los Angeles = 0.078 % Per Year

Direction of Travel	Lane Movement	Number of Lanes	Capacity (Veh/Hr) On Green	Peak Hour Volume		Volume/Capacity Ratio	
				Existing+ Ambient +Project	Ex.+Ambient+ Related Projects +Project	Existing+ Ambient +Project	Ex.+Ambient+ Related Projects +Project
Eastbound	Left Turn	1	1600	132	132	0.083 *	0.083 *
	Through	2	3200	612	622	0.191	0.194
	Right Turn	1	1600	231	231	0.144	0.144
Westbound	Left Turn	1	1600	55	55	0.034	0.034
	Through	2	3200	885	888	0.285 *	0.286 *
	Right Turn**	0	1600	28	28	-	-
Northbound	Left Turn	2	2880	591	591	0.216 *	0.216 *
	Through***	0	0	31	31	-	-
	Right Turn	1	1600	91	91	0.057	0.057
Southbound	Left Turn**	0	0	78	78	-	-
	Through	1	1600	48	48	0.190 *	0.190 *
	Right Turn**	0	0	178	178	-	-
		ICU Plus Lost Time Factor of 0.1				**0.874**	
		Ambient Plus Project Level of Service				**D**	
		ICU Plus Lost Time Factor of 0.1					**0.875**
		Cumulative Plus Project Level of Service					**D**

* Denotes Critical Movement
** Denotes Shared Movement With Through Lane (Added to Through for V/C Ratio)
*** Denotes Shared Movement With Left Turn Lane (Added to Left Turn for V/C Ratio)

KHR ASSOCIATES
INTERSECTION CAPACITY UTILIZATION ANALYSIS

Condition:	Ex.+Ambient+Project & Related+Project	**Date:**	Projected 2012
Location:	City of Diamond Bar, California	**Horizon Date:**	2012
North-South Street:	Fern Hollow Drive/Brea Canyon Road	**Peak Hour:**	4:45 - 5:45 P.M.
East-West Street:	Pathfinder Road	**Data Source:**	KHR
Annual Growth Rate:	0.78%	**Input By:**	S. Carter

Comments: County of Los Angeles Capacity Volume of Vehicles Per Hour Per Lane = 1600
County of Los Angeles Capacity Volume of Vehicles Per Hour For Dual Left-Turn Lanes = 2880
Ambient Growth Factor per County of Los Angeles = 0.078 % Per Year

Direction of Travel	Lane Movement	Number of Lanes	Capacity (Veh/Hr) On Green	Peak Hour Volume		Volume/Capacity Ratio	
				Existing+ Ambient +Project	Ex.+Ambient+ Related Projects +Project	Existing+ Ambient +Project	Ex.+Ambient+ Related Projects +Project
Eastbound	Left Turn	1	1600	116	116	0.073	0.073
	Through	2	3200	844	864	0.264 *	0.270 *
	Right Turn	1	1600	151	151	0.094	0.094
Westbound	Left Turn	1	1600	51	51	0.032 *	0.032 *
	Through	2	3200	413	417	0.139	0.140
	Right Turn**	0	1600	31	31	-	-
Northbound	Left Turn	2	2880	505	505	0.183 *	0.183 *
	Through***	0	0	21	21	-	-
	Right Turn	1	1600	66	66	0.041	0.041
Southbound	Left Turn**	0	0	19	19	-	-
	Through	1	1600	14	14	0.048 *	0.048 *
	Right Turn**	0	0	43	43	-	-
		ICU Plus Lost Time Factor of 0.1				**0.626**	
		Ambient Plus Project Level of Service				**B**	
		ICU Plus Lost Time Factor of 0.1					**0.632**
		Cumulative Plus Project Level of Service					**B**

* Denotes Critical Movement
** Denotes Shared Movement With Through Lane (Added to Through for V/C Ratio)
*** Denotes Shared Movement With Left Turn Lane (Added to Left Turn for V/C Ratio)

KHR ASSOCIATES
INTERSECTION CAPACITY UTILIZATION ANALYSIS

Condition:	Ex.+Ambient+Project & Related+Project	**Date:**	Projected 2012
Location:	City of Industry, California	**Horizon Date:**	2012
North-South Street:	Fairway Drive	**Peak Hour:**	7:45 - 8:45 A.M.
East-West Street:	North Walnut Drive	**Data Source:**	KHR
Annual Growth Rate:	0.78%	**Input By:**	S. Carter

Comments: County of Los Angeles Capacity Volume of Vehicles Per Hour Per Lane = 1600
County of Los Angeles Capacity Volume of Vehicles Per Hour For Dual Left-Turn Lanes = 2880
Ambient Growth Factor per County of Los Angeles = 0.078 % Per Year

Direction of Travel	Lane Movement	Number of Lanes	Capacity (Veh/Hr) On Green	Peak Hour Volume		Volume/Capacity Ratio	
				Existing+ Ambient +Project	Ex.+Ambient+ Related Projects +Project	Existing+ Ambient +Project	Ex.+Ambient+ Related Projects +Project
Eastbound	Left Turn**	0	0	59	59	-	-
	Through	2	3200	128	128	0.099 *	0.099 *
	Right Turn**	0	0	130	130	-	-
Westbound	Left Turn**	0	0	124	124	-	-
	Through	2	3200	106	106	0.100 *	0.100 *
	Right Turn**	0	0	90	90	-	-
Northbound	Left Turn	1	1600	153	153	0.096	0.096
	Through	2	3200	615	655	0.219 *	0.232 *
	Right Turn**	0	1600	87	87	-	-
Southbound	Left Turn	1	1600	23	23	0.014 *	0.014 *
	Through	3	4800	470	481	0.105	0.108
	Right Turn**	0	0	36	36	-	-
		ICU Plus Lost Time Factor of 0.1				**0.533**	
		Ambient Plus Project Level of Service				**A**	
		ICU Plus Lost Time Factor of 0.1					**0.545**
		Cumulative Plus Project Level of Service					**A**

* Denotes Critical Movement
** Denotes Optional Through/Turn Lane (Added to Through for V/C Ratio)

KHR ASSOCIATES
INTERSECTION CAPACITY UTILIZATION ANALYSIS

Condition:	Ex.+Ambient+Project & Related+Project	**Date:**	Projected 2012
Location:	City of Industry, California	**Horizon Date:**	2012
North-South Street:	Fairway Drive	**Peak Hour:**	4:45 - 5:45 P.M.
East-West Street:	North Walnut Drive	**Data Source:**	KHR
Annual Growth Rate:	0.78%	**Input By:**	S. Carter

Comments: County of Los Angeles Capacity Volume of Vehicles Per Hour Per Lane = 1600
County of Los Angeles Capacity Volume of Vehicles Per Hour For Dual Left-Turn Lanes = 2880
Ambient Growth Factor per County of Los Angeles = 0.078 % Per Year

Direction of Travel	Lane Movement	Number of Lanes	Capacity (Veh/Hr) On Green	Peak Hour Volume		Volume/Capacity Ratio	
				Existing+ Ambient +Project	Ex.+Ambient+ Related Projects +Project	Existing+ Ambient +Project	Ex.+Ambient+ Related Projects +Project
Eastbound	Left Turn**	0	0	58	58	-	-
	Through	2	3200	140	140	0.118 *	0.118 *
	Right Turn**	0	0	179	179	-	-
Westbound	Left Turn**	0	0	143	143	-	-
	Through	2	3200	98	98	0.090 *	0.090 *
	Right Turn**	0	0	47	47	-	-
Northbound	Left Turn	1	1600	165	165	0.103 *	0.103 *
	Through	2	3200	613	656	0.214	0.228
	Right Turn**	0	1600	73	73	-	-
Southbound	Left Turn	1	1600	53	53	0.033	0.033
	Through	3	4800	888	948	0.200 *	0.212 *
	Right Turn**	0	0	71	71	-	-
		ICU Plus Lost Time Factor of 0.1				**0.611**	
		Ambient Plus Project Level of Service				**B**	
		ICU Plus Lost Time Factor of 0.1					**0.623**
		Cumulative Plus Project Level of Service					**B**

* Denotes Critical Movement
** Denotes Optional Through/Turn Lane (Added to Through for V/C Ratio)

KHR ASSOCIATES
INTERSECTION CAPACITY UTILIZATION ANALYSIS

Condition:	Ex.+Ambient+Project & Related+Project	**Date:**	Projected 2012
Location:	City of Diamond Bar, California	**Horizon Date:**	2012
North-South Street:	Brea Canyon Cutoff Road	**Peak Hour:**	7:45 - 8:45 A.M.
East-West Street:	Fallow Field Drive	**Data Source:**	KHR
Annual Growth Rate:	0.78%	**Input By:**	S. Carter

Comments: County of Los Angeles Capacity Volume of Vehicles Per Hour Per Lane = 1600
County of Los Angeles Capacity Volume of Vehicles Per Hour For Dual Left-Turn Lanes = 2880
Ambient Growth Factor per County of Los Angeles = 0.078 % Per Year

Direction of Travel	Lane Movement	Number of Lanes	Capacity (Veh/Hr) On Green	Peak Hour Volume		Volume/Capacity Ratio	
				Existing+ Ambient +Project	Ex.+Ambient+ Related Projects +Project	Existing+ Ambient +Project	Ex.+Ambient+ Related Projects +Project
Eastbound	Left Turn	1	1600	13	13	0.008	0.008
	Through	1	1600	30	30	0.033 *	0.033 *
	Right Turn**	0	1600	23	23	-	-
Westbound	Left Turn	1	1600	100	100	0.063 *	0.063 *
	Through	1	1600	19	19	0.052	0.052
	Right Turn**	0	0	64	64	-	-
Northbound	Left Turn	1	1600	18	18	0.011	0.011
	Through	2	3200	333	333	0.127 *	0.127 *
	Right Turn	0	0	73	73	-	-
Southbound	Left Turn	1	1600	59	59	0.037 *	0.037 *
	Through	2	3200	446	446	0.153	0.153
	Right Turn	0	0	44	44	-	-
		ICU Plus Lost Time Factor of 0.1				**0.359**	
		Ambient Plus Project Level of Service				**A**	
		ICU Plus Lost Time Factor of 0.1					**0.359**
		Cumulative Plus Project Level of Service					**A**

* Denotes Critical Movement
** Denotes Shared Movement With Through Lane (Added to Through for V/C Ratio)

KHR ASSOCIATES
INTERSECTION CAPACITY UTILIZATION ANALYSIS

Condition:	Ex.+Ambient+Project & Related+Project	**Date:**	Projected 2012
Location:	City of Diamond Bar, California	**Horizon Date:**	2012
North-South Street:	Brea Canyon Cutoff Road	**Peak Hour:**	4:30 - 5:30 P.M.
East-West Street:	Fallow Field Drive	**Data Source:**	KHR
Annual Growth Rate:	0.78%	**Input By:**	S. Carter

Comments: County of Los Angeles Capacity Volume of Vehicles Per Hour Per Lane = 1600
County of Los Angeles Capacity Volume of Vehicles Per Hour For Dual Left-Turn Lanes = 2880
Ambient Growth Factor per County of Los Angeles = 0.078 % Per Year

Direction of Travel	Lane Movement	Number of Lanes	Capacity (Veh/Hr) On Green	Peak Hour Volume		Volume/Capacity Ratio	
				Existing+ Ambient +Project	Ex.+Ambient+ Related Projects +Project	Existing+ Ambient +Project	Ex.+Ambient+ Related Projects +Project
Eastbound	Left Turn	1	1600	95	95	0.059	0.059
	Through	1	1600	55	57	0.090 *	0.091 *
	Right Turn**	0	1600	89	89	-	-
Westbound	Left Turn	1	1600	88	88	0.055 *	0.055 *
	Through	1	1600	43	45	0.059	0.061
	Right Turn**	0	0	52	52	-	-
Northbound	Left Turn	1	1600	55	55	0.034	0.034
	Through	2	3200	590	590	0.223 *	0.223 *
	Right Turn	0	0	125	125	-	-
Southbound	Left Turn	1	1600	86	86	0.054 *	0.054 *
	Through	2	3200	406	406	0.148	0.148
	Right Turn	0	0	68	68	-	-
		ICU Plus Lost Time Factor of 0.1				**0.522**	
		Ambient Plus Project Level of Service				**A**	
		ICU Plus Lost Time Factor of 0.1					**0.523**
		Cumulative Plus Project Level of Service					**A**

* Denotes Critical Movement
** Denotes Shared Movement With Through Lane (Added to Through for V/C Ratio)

Appendix E

Existing+Ambient+Related Projects With & Without Proposed Project ICU Calculations

KHR ASSOCIATES
INTERSECTION CAPACITY UTILIZATION ANALYSIS

Condition:	Ex.+Ambient+Related Projects W/WO Project	**Date:**	Projected 2012
Location:	County of Los Angeles, California	**Horizon Date:**	2012
North-South Street:	Brea Canyon Cutoff Road/Fairway Drive	**Peak Hour:**	7:30 - 8:30 AM
East-West Street:	Colima Road	**Data Source:**	KHR
Annual Growth Rate:	0.78%	**Input By:**	S. Carter

Comments: County of Los Angeles Capacity Volume of Vehicles Per Hour Per Lane = 1600
County of Los Angeles Capacity Volume of Vehicles Per Hour For Dual Left-Turn Lanes = 2880
Ambient Growth Factor per County of Los Angeles = 0.078 % Per Year

Direction of Travel	Lane Movement	Number of Lanes	Capacity (Veh/Hr) On Green	Peak Hour Volume		Volume/Capacity Ratio	
				Ex.+Ambient+ Related Projects Only	Ex.+Ambient+ Related Projects +Project	Ex.+Ambient+ Related Projects Only	Ex.+Ambient+ Related Projects +Project
Eastbound	Left Turn	1	1600	226	226	0.141 *	0.141 *
	Through	3	4800	444	444	0.134	0.134
	Right Turn**	0	0	198	198	-	-
Westbound	Left Turn	1	1600	273	273	0.171	0.171
	Through	3	4800	808	808	0.238 *	0.239 *
	Right Turn**	0	0	332	337	-	-
Northbound	Left Turn	1	1600	412	431	0.258 *	0.269 *
	Through	2	3200	705	759	0.293	0.313
	Right Turn**	0	1600	234	244	-	-
Southbound	Left Turn	1	1600	163	163	0.102	0.102
	Through	2	3200	483	501	0.248 *	0.254 *
	Right Turn**	0	1600	311	311	-	-
		ICU Plus Lost Time Factor of 0.1				**0.984**	
		Ambient Plus Project Level of Service				**E**	
		ICU Plus Lost Time Factor of 0.1					**1.003**
		Cumulative Plus Project Level of Service					**F**

* Denotes Critical Movement
** Denotes Shared Movement With Through Lane (Added to Through for V/C Ratio)

KHR ASSOCIATES
INTERSECTION CAPACITY UTILIZATION ANALYSIS

Condition:	Ex.+Ambient+Related Projects W/WO Project	**Date:**	Projected 2012
Location:	County of Los Angeles, California	**Horizon Date:**	2012
North-South Street:	Brea Canyon Cutoff Road/Fairway Drive	**Peak Hour:**	5:00 - 6:00 P.M.
East-West Street:	Colima Road	**Data Source:**	KHR
Annual Growth Rate:	0.78%	**Input By:**	S. Carter

Comments: County of Los Angeles Capacity Volume of Vehicles Per Hour Per Lane = 1600
County of Los Angeles Capacity Volume of Vehicles Per Hour For Dual Left-Turn Lanes = 2880
Ambient Growth Factor per County of Los Angeles = 0.078 % Per Year

Direction of Travel	Lane Movement	Number of Lanes	Capacity (Veh/Hr) On Green	Peak Hour Volume		Volume/Capacity Ratio	
				Ex.+Ambient+ Related Projects Only	Ex.+Ambient+ Related Projects +Project	Ex.+Ambient+ Related Projects Only	Ex.+Ambient+ Related Projects +Project
Eastbound	Left Turn	1	1600	261	261	0.163 *	0.163 *
	Through	3	4800	755	755	0.176	0.187
	Right Turn**	0	0	91	142	-	-
Westbound	Left Turn	1	1600	234	247	0.146	0.154
	Through	3	4800	699	699	0.181 *	0.181 *
	Right Turn**	0	0	171	171	-	-
Northbound	Left Turn	1	1600	295	313	0.184 *	0.196 *
	Through	2	3200	626	710	0.263	0.293
	Right Turn**	0	1600	217	228	-	-
Southbound	Left Turn	1	1600	310	310	0.194	0.194
	Through	2	3200	680	828	0.273 *	0.319 *
	Right Turn**	0	1600	192	192	-	-
			ICU Plus Lost Time Factor of 0.1			**0.901**	
			Ambient Plus Project Level of Service			**E**	
			ICU Plus Lost Time Factor of 0.1				**0.959**
			Cumulative Plus Project Level of Service				**E**

* Denotes Critical Movement
** Denotes Shared Movement With Through Lane (Added to Through for V/C Ratio)

KHR ASSOCIATES
INTERSECTION CAPACITY UTILIZATION ANALYSIS

Condition:	Ex.+Ambient+Related Projects W/WO Project	**Date:**	Projected 2012
Location:	City of Industry, California	**Horizon Date:**	2012
North-South Street:	Fairway Drive	**Peak Hour:**	7:45 - 8:45 AM
East-West Street:	SR-60 E/B Ramps	**Data Source:**	KHR
Annual Growth Rate:	0.78%	**Input By:**	S. Carter

Comments: County of Los Angeles Capacity Volume of Vehicles Per Hour Per Lane = 1600
County of Los Angeles Capacity Volume of Vehicles Per Hour For Dual Left-Turn Lanes = 2880
Ambient Growth Factor per County of Los Angeles = 0.078 % Per Year

Direction of Travel	Lane Movement	Number of Lanes	Capacity (Veh/Hr) On Green	Peak Hour Volume		Volume/Capacity Ratio	
				Ex.+Ambient+ Related Projects Only	Ex.+Ambient+ Related Projects +Project	Ex.+Ambient+ Related Projects Only	Ex.+Ambient+ Related Projects +Project
Eastbound	Left Turn	2	2880	436	436	0.275 *	0.275 *
	Through	0	0	0	0	-	-
	Right Turn***	0	0	357	357	-	-
Westbound	Left Turn	0	0	0	0	-	-
	Through	0	0	0	0	-	-
	Right Turn	0	0	0	0	-	-
Northbound	Left Turn	0	0	0	0	-	-
	Through	2	3200	539	569	0.168 *	0.178 *
	Right Turn***	0	0	0	0	-	-
Southbound	Left Turn	0	0	0	0	-	-
	Through	2	3200	682	682	0.213	0.213
	Right Turn**	1	1600	155	155	FREE	FLOW
			ICU Plus Lost Time Factor of 0.1			**0.544**	
			Ambient Plus Project Level of Service			**A**	
			ICU Plus Lost Time Factor of 0.1				**0.553**
			Cumulative Plus Project Level of Service				**A**

* Denotes Critical Movement
** Denotes Free-Flow: On-Ramp Right Turn Before Intersection
*** Denotes Lane Striping as Optional Left-Turn/Right-Turn Lane (Added to Left Turn for V/C Ratio)

KHR ASSOCIATES
INTERSECTION CAPACITY UTILIZATION ANALYSIS

Condition:	Ex.+Ambient+Related Projects W/WO Project	**Date:**	Projected 2012
Location:	City of Industry, California	**Horizon Date:**	2012
North-South Street:	Fairway Drive	**Peak Hour:**	5:00 - 6:00 P.M.
East-West Street:	SR-60 E/B Ramps	**Data Source:**	KHR
Annual Growth Rate:	0.78%	**Input By:**	S. Carter

Comments: County of Los Angeles Capacity Volume of Vehicles Per Hour Per Lane = 1600
County of Los Angeles Capacity Volume of Vehicles Per Hour For Dual Left-Turn Lanes = 2880
Ambient Growth Factor per County of Los Angeles = 0.078 % Per Year

Direction of Travel	Lane Movement	Number of Lanes	Capacity (Veh/Hr) On Green	Peak Hour Volume		Volume/Capacity Ratio	
				Ex.+Ambient+ Related Projects Only	Ex.+Ambient+ Related Projects +Project	Ex.+Ambient+ Related Projects Only	Ex.+Ambient+ Related Projects +Project
Eastbound	Left Turn	2	2880	208	208	0.177 *	0.186 *
	Through	0	0	0	0	-	-
	Right Turn***	0	0	302	327	-	-
Westbound	Left Turn	0	0	0	0	-	-
	Through	0	0	0	0	-	-
	Right Turn	0	0	0	0	-	-
Northbound	Left Turn	0	0	0	0	-	-
	Through	2	3200	1417	1492	0.443 *	0.466 *
	Right Turn	0	0	0	0	-	-
Southbound	Left Turn	0	0	0	0	-	-
	Through	2	3200	728	805	0.228	0.252
	Right Turn**	1	1600	315	315	FREE	FLOW
				ICU Plus Lost Time Factor of 0.1		**0.720**	
				Ambient Plus Project Level of Service		**C**	
				ICU Plus Lost Time Factor of 0.1			**0.752**
				Cumulative Plus Project Level of Service			**C**

* Denotes Critical Movement
** Denotes Free-Flow: On-Ramp Right Turn Before Intersection
*** Denotes Lane Striping as Optional Left-Turn/Right-Turn Lane (Added to Left Turn for V/C Ratio)

KHR ASSOCIATES
INTERSECTION CAPACITY UTILIZATION ANALYSIS

Condition:	Ex.+Ambient+Related Projects W/WO Project	**Date:**	Projected 2012
Location:	City of Industry, California	**Horizon Date:**	2012
North-South Street:	Fairway Drive	**Peak Hour:**	7:45 - 8:45 AM
East-West Street:	SR-60 W/B On/Off-Ramp	**Data Source:**	KHR
Annual Growth Rate:	0.78%	**Input By:**	S. Carter

Comments: County of Los Angeles Capacity Volume of Vehicles Per Hour Per Lane = 1600
County of Los Angeles Capacity Volume of Vehicles Per Hour For Dual Left-Turn Lanes = 2880
Ambient Growth Factor per County of Los Angeles = 0.078 % Per Year

Direction of Travel	Lane Movement	Number of Lanes	Capacity (Veh/Hr) On Green	Peak Hour Volume		Volume/Capacity Ratio	
				Ex.+Ambient+ Related Projects Only	Ex.+Ambient+ Related Projects +Project	Ex.+Ambient+ Related Projects Only	Ex.+Ambient+ Related Projects +Project
Eastbound	Left Turn	0	0	0	0	-	-
	Through	0	0	0	0	-	-
	Right Turn	0	0	0	0	-	-
Westbound	Left Turn	1	1600	254	254	0.163 *	0.163 *
	Through**	0	0	6	6	-	-
	Right Turn	1	1600	443	443	0.277	0.277
Northbound	Left Turn	1	1600	216	226	0.135 *	0.141 *
	Through	2	3200	925	950	0.289	0.297
	Right Turn	0	0	0	0	-	-
Southbound	Left Turn	0	0	0	0	-	-
	Through	2	3200	510	510	0.159 *	0.159 *
	Right Turn	1	1600	176	176	0.110	0.110
		ICU Plus Lost Time Factor of 0.1				**0.557**	
		Ambient Plus Project Level of Service				**A**	
		ICU Plus Lost Time Factor of 0.1					**0.563**
		Cumulative Plus Project Level of Service					**A**

* Denotes Critical Movement
** Denotes Lane Striping as Optional Through/Turn Lane (Added to Left Turn for V/C Ratio)

KHR ASSOCIATES
INTERSECTION CAPACITY UTILIZATION ANALYSIS

Condition:	Ex.+Ambient+Related Projects W/WO Project	**Date:**	Projected 2012
Location:	City of Industry, California	**Horizon Date:**	2012
North-South Street:	Fairway Drive	**Peak Hour:**	4:45 - 5:45 P.M.
East-West Street:	SR-60 W/B On/Off Ramps	**Data Source:**	KHR
Annual Growth Rate:	0.78%	**Input By:**	S. Carter

Comments: County of Los Angeles Capacity Volume of Vehicles Per Hour Per Lane = 1600
County of Los Angeles Capacity Volume of Vehicles Per Hour For Dual Left-Turn Lanes = 2880
Ambient Growth Factor per County of Los Angeles = 0.078 % Per Year

Direction of Travel	Lane Movement	Number of Lanes	Capacity (Veh/Hr) On Green	Peak Hour Volume		Volume/Capacity Ratio	
				Ex.+Ambient+ Related Projects Only	Ex.+Ambient+ Related Projects +Project	Ex.+Ambient+ Related Projects Only	Ex.+Ambient+ Related Projects +Project
Eastbound	Left Turn	0	0	0	0	-	-
	Through	0	0	0	0	-	-
	Right Turn	0	0	0	0	-	-
Westbound	Left Turn	1	1600	380	393	0.238 *	0.246 *
	Through**	0	0	1	1	-	-
	Right Turn	1	1600	270	270	0.169	0.169
Northbound	Left Turn	1	1600	244	254	0.153 *	0.159 *
	Through	2	3200	697	722	0.218	0.226
	Right Turn	0	0	0	0	-	-
Southbound	Left Turn	0	0	0	0	-	-
	Through	2	3200	929	993	0.290 *	0.310 *
	Right Turn	1	1600	303	303	0.189	0.189
		ICU Plus Lost Time Factor of 0.1				**0.781**	
		Ambient Plus Project Level of Service				**C**	
		ICU Plus Lost Time Factor of 0.1					**0.815**
		Cumulative Plus Project Level of Service					**D**

* Denotes Critical Movement
** Denotes Lane Striping as Optional Through/Turn Lane (Added to Left Turn for V/C Ratio)

KHR ASSOCIATES
INTERSECTION CAPACITY UTILIZATION ANALYSIS

Condition:	Ex.+Ambient+Related Projects W/WO Project	**Date:**	Projected 2012
Location:	County of Los Angeles, California	**Horizon Date:**	2012
North-South Street:	Brea Canyon Cutoff Road	**Peak Hour:**	7:30 - 8:30 A.M.
East-West Street:	Pathfinder Road	**Data Source:**	KHR
Annual Growth Rate:	0.78%	**Input By:**	S. Carter

Comments: County of Los Angeles Capacity Volume of Vehicles Per Hour Per Lane = 1600
County of Los Angeles Capacity Volume of Vehicles Per Hour For Dual Left-Turn Lanes = 2880
Ambient Growth Factor per County of Los Angeles = 0.078 % Per Year

Direction of Travel	Lane Movement	Number of Lanes	Capacity (Veh/Hr) On Green	Peak Hour Volume		Volume/Capacity Ratio	
				Ex.+Ambient+ Related Projects Only	Ex.+Ambient+ Related Projects +Project	Ex.+Ambient+ Related Projects Only	Ex.+Ambient+ Related Projects +Project
Eastbound	Left Turn	1	1600	85	85	0.053	0.053
	Through	2	3200	160	160	0.133 *	0.135 *
	Right Turn**	0	0	267	273	-	-
Westbound	Left Turn	1	1600	107	107	0.067 *	0.067 *
	Through	2	3200	340	340	0.138	0.138
	Right Turn**	0	0	101	101	-	-
Northbound	Left Turn	1	1600	173	177	0.108 *	0.111 *
	Through	1	1600	295	314	0.184	0.196
	Right Turn	1	1600	24	24	0.015	0.015
Southbound	Left Turn	1	1600	48	53	0.030	0.033
	Through	1	1600	427	475	0.295 *	0.325 *
	Right Turn**	0	0	45	45	-	-
			ICU Plus Lost Time Factor of 0.1			**0.703**	
			Ambient Plus Project Level of Service			**C**	
			ICU Plus Lost Time Factor of 0.1				**0.738**
			Cumulative Plus Project Level of Service				**C**

* Denotes Critical Movement
** Denotes Shared Movement With Through Lane (Added to Through for V/C Ratio)

KHR ASSOCIATES
INTERSECTION CAPACITY UTILIZATION ANALYSIS

Condition:	Ex.+Ambient+Related Projects W/WO Project	**Date:**	Projected 2012
Location:	County of Los Angeles, California	**Horizon Date:**	2012
North-South Street:	Brea Canyon Cutoff Road	**Peak Hour:**	4:00 - 5:00 P.M.
East-West Street:	Pathfinder Road	**Data Source:**	KHR
Annual Growth Rate:	0.78%	**Input By:**	S. Carter

Comments: County of Los Angeles Capacity Volume of Vehicles Per Hour Per Lane = 1600
County of Los Angeles Capacity Volume of Vehicles Per Hour For Dual Left-Turn Lanes = 2880
Ambient Growth Factor per County of Los Angeles = 0.078 % Per Year

Direction of Travel	Lane Movement	Number of Lanes	Capacity (Veh/Hr) On Green	Peak Hour Volume		Volume/Capacity Ratio	
				Ex.+Ambient+ Related Projects Only	Ex.+Ambient+ Related Projects +Project	Ex.+Ambient+ Related Projects Only	Ex.+Ambient+ Related Projects +Project
Eastbound	Left Turn	1	1600	118	118	0.074	0.074
	Through	2	3200	446	446	0.236 *	0.244 *
	Right Turn**	0	0	309	335	-	-
Westbound	Left Turn	1	1600	31	31	0.019 *	0.019 *
	Through	2	3200	383	380	0.148	0.147
	Right Turn**	0	0	91	91	-	-
Northbound	Left Turn	1	1600	253	267	0.158 *	0.167 *
	Through	1	1600	593	716	0.371	0.448
	Right Turn	1	1600	56	56	0.035	0.035
Southbound	Left Turn	1	1600	93	107	0.058	0.067
	Through	1	1600	473	601	0.326 *	0.406 *
	Right Turn**	0	0	48	48	-	-
				ICU Plus Lost Time Factor of 0.1		**0.839**	
				Ambient Plus Project Level of Service		**D**	
				ICU Plus Lost Time Factor of 0.1			**0.936**
				Cumulative Plus Project Level of Service			**E**

* Denotes Critical Movement
** Denotes Shared Movement With Through Lane (Added to Through for V/C Ratio)

KHR ASSOCIATES
INTERSECTION CAPACITY UTILIZATION ANALYSIS

Condition:	Ex.+Ambient+Related Projects W/WO Project	**Date:**	Projected 2012
Location:	County of Los Angeles, California	**Horizon Date:**	2012
North-South Street:	Brea Canyon Cutoff Road	**Peak Hour:**	7:45 - 8:45 A.M.
East-West Street:	Project Driveway/Reedview Drive	**Data Source:**	KHR
Annual Growth Rate:	0.78%	**Input By:**	S. Carter

Comments: County of Los Angeles Capacity Volume of Vehicles Per Hour Per Lane = 1600
County of Los Angeles Capacity Volume of Vehicles Per Hour For Dual Left-Turn Lanes = 2880
Ambient Growth Factor per County of Los Angeles = 0.078 % Per Year

Direction of Travel	Lane Movement	Number of Lanes	Capacity (Veh/Hr) On Green	Peak Hour Volume		Volume/Capacity Ratio	
				Ex.+Ambient+ Related Projects Only	Ex.+Ambient+ Related Projects +Project	Ex.+Ambient+ Related Projects Only	Ex.+Ambient+ Related Projects +Project
Eastbound	Left Turn	1	1600	13	13	0.008 *	0.008 *
	Through	0	0	0	0	-	-
	Right Turn**	0	0	5	5	-	-
Westbound	Left Turn	1	1600	0	35	0.000	0.022
	Through	0	0	0	0	-	-
	Right Turn	1	1600	0	64	0.000 *	0.040 *
Northbound	Left Turn	1	1600	1	1	0.001	0.001
	Through	2	3200	755	755	0.236 *	0.236 *
	Right Turn**	0	0	0	0	-	-
Southbound	Left Turn	1	1600	0	0	0.000 *	0.000 *
	Through	2	3200	513	513	0.165	0.165
	Right Turn**	0	0	16	16	-	-
		ICU Plus Lost Time Factor of 0.1				**0.344**	
		Ambient Plus Project Level of Service				**A**	
		ICU Plus Lost Time Factor of 0.1					**0.384**
		Cumulative Plus Project Level of Service					**A**

* Denotes Critical Movement
** Denotes Shared Movement With Through Lane (Added to Through for V/C Ratio)

KHR ASSOCIATES
INTERSECTION CAPACITY UTILIZATION ANALYSIS

Condition:	Ex.+Ambient+Related Projects W/WO Project	**Date:**	Projected 2012
Location:	County of Los Angeles, California	**Horizon Date:**	2012
North-South Street:	Brea Canyon Cutoff Road	**Peak Hour:**	5:00 - 6:00 P.M.
East-West Street:	Project Driveway/Reedview Drive	**Data Source:**	KHR
Annual Growth Rate:	0.78%	**Input By:**	S. Carter

Comments: County of Los Angeles Capacity Volume of Vehicles Per Hour Per Lane = 1600
County of Los Angeles Capacity Volume of Vehicles Per Hour For Dual Left-Turn Lanes = 2880
Ambient Growth Factor per County of Los Angeles = 0.078 % Per Year

Direction of Travel	Lane Movement	Number of Lanes	Capacity (Veh/Hr) On Green	Peak Hour Volume		Volume/Capacity Ratio	
				Ex.+Ambient+ Related Projects Only	Ex.+Ambient+ Related Projects +Project	Ex.+Ambient+ Related Projects Only	Ex.+Ambient+ Related Projects +Project
Eastbound	Left Turn	1	1600	13	13	0.008 *	0.008 *
	Through	0	0	0	0	-	-
	Right Turn**	0	0	5	5	-	-
Westbound	Left Turn	1	1600	0	37	0.000	0.023
	Through	0	0	0	0	-	-
	Right Turn	1	1600	0	67	0.000 *	0.042 *
Northbound	Left Turn	1	1600	2	2	0.001	0.001
	Through	2	3200	764	764	0.239 *	0.267 *
	Right Turn**	0	0	0	90	-	-
Southbound	Left Turn	1	1600	0	166	0.000 *	0.104 *
	Through	2	3200	725	725	0.234	0.234
	Right Turn**	0	0	24	24	-	-
		ICU Plus Lost Time Factor of 0.1				**0.347**	
		Ambient Plus Project Level of Service				**A**	
		ICU Plus Lost Time Factor of 0.1					**0.521**
		Cumulative Plus Project Level of Service					**A**

* Denotes Critical Movement
*** Denotes Shared Movement With Through Lane (Added to Through for V/C Ratio)

KHR ASSOCIATES
INTERSECTION CAPACITY UTILIZATION ANALYSIS

Condition:	Ex.+Ambient+Related Projects W/WO Project	**Date:**	Projected 2012
Location:	City of Diamond Bar, California	**Horizon Date:**	2012
North-South Street:	SR-57 N/B Ramps	**Peak Hour:**	7:30 - 8:30 AM
East-West Street:	Brea Canyon Cutoff Road/Diamond Bar Blvd.	**Data Source:**	KHR
Annual Growth Rate:	0.78%	**Input By:**	S. Carter

Comments: County of Los Angeles Capacity Volume of Vehicles Per Hour Per Lane = 1600
County of Los Angeles Capacity Volume of Vehicles Per Hour For Dual Left-Turn Lanes = 2880
Ambient Growth Factor per County of Los Angeles = 0.078 % Per Year

Direction of Travel	Lane Movement	Number of Lanes	Capacity (Veh/Hr) On Green	Peak Hour Volume		Volume/Capacity Ratio	
				Ex.+Ambient+ Related Projects Only	Ex.+Ambient+ Related Projects +Project	Ex.+Ambient+ Related Projects Only	Ex.+Ambient+ Related Projects +Project
Eastbound	Left Turn	1	1600	40	40	0.025 *	0.025 *
	Through	2	3200	541	571	0.169	0.178
	Right Turn	0	0	0	0	-	-
Westbound	Left Turn	0	0	0	0	-	-
	Through	2	3200	613	613	0.192 *	0.192 *
	Right Turn**	1	1600	193	193	FREE	FLOW
Northbound	Left Turn	1	1600	229	249	0.143 *	0.156 *
	Through***	0	0	0	0	-	-
	Right Turn	1	1600	196	196	0.123	0.123
Southbound	Left Turn	0	0	0	0	-	-
	Through	0	0	0	0	-	-
	Right Turn	0	0	0	0	-	-
		ICU Plus Lost Time Factor of 0.1				**0.460**	
		Ambient Plus Project Level of Service				**A**	
		ICU Plus Lost Time Factor of 0.1					**0.472**
		Cumulative Plus Project Level of Service					**A**

* Denotes Critical Movement
** Denotes Free-Flow: On-Ramp Right Turn Before Intersection
**** Denotes Optional Left/Right Turn Lane (Added to Left Turn for V/C Ratio)

KHR ASSOCIATES
INTERSECTION CAPACITY UTILIZATION ANALYSIS

Condition:	Ex.+Ambient+Related Projects W/WO Project	**Date:**	Projected 2012
Location:	City of Diamond Bar, California	**Horizon Date:**	2012
North-South Street:	SR-57 N/B Ramps	**Peak Hour:**	5:00 - 6:00 P.M.
East-West Street:	Brea Canyon Cutoff Road/Diamond Bar Blvd.	**Data Source:**	KHR
Annual Growth Rate:	0.78%	**Input By:**	S. Carter

Comments: County of Los Angeles Capacity Volume of Vehicles Per Hour Per Lane = 1600
County of Los Angeles Capacity Volume of Vehicles Per Hour For Dual Left-Turn Lanes = 2880
Ambient Growth Factor per County of Los Angeles = 0.078 % Per Year

Direction of Travel	Lane Movement	Number of Lanes	Capacity (Veh/Hr) On Green	Peak Hour Volume		Volume/Capacity Ratio	
				Ex.+Ambient+ Related Projects Only	Ex.+Ambient+ Related Projects +Project	Ex.+Ambient+ Related Projects Only	Ex.+Ambient+ Related Projects +Project
Eastbound	Left Turn	1	1600	24	24	0.015 *	0.015 *
	Through	2	3200	935	966	0.292	0.302
	Right Turn	0	0	0	0	-	-
Westbound	Left Turn	0	0	0	0	-	-
	Through	2	3200	645	658	0.202 *	0.206 *
	Right Turn**	1	1600	116	116	FREE	FLOW
Northbound	Left Turn	1	1600	321	366	0.201 *	0.229 *
	Through***	0	0	0	0	-	-
	Right Turn	1	1600	127	127	0.079	0.079
Southbound	Left Turn	0	0	0	0	-	-
	Through	0	0	0	0	-	-
	Right Turn	0	0	0	0	-	-
			ICU Plus Lost Time Factor of 0.1			**0.517**	
			Ambient Plus Project Level of Service			**A**	
			ICU Plus Lost Time Factor of 0.1				**0.549**
			Cumulative Plus Project Level of Service				**A**

* Denotes Critical Movement
** Denotes Free-Flow: On-Ramp Right Turn Before Intersection
**** Denotes Optional Left/Right Turn Lane (Added to Left Turn for V/C Ratio)

KHR ASSOCIATES
INTERSECTION CAPACITY UTILIZATION ANALYSIS

Condition:	Ex.+Ambient+Related Projects W/WO Project	**Date:**	Projected 2012
Location:	City of Diamond Bar, California	**Horizon Date:**	2012
North-South Street:	SR-57 S/B Ramps	**Peak Hour:**	8:00 - 9:00 A.M.
East-West Street:	Brea Canyon Cutoff Road/Diamond Bar Blvd.	**Data Source:**	KHR
Annual Growth Rate:	0.78%	**Input By:**	S. Carter

Comments: County of Los Angeles Capacity Volume of Vehicles Per Hour Per Lane = 1600
County of Los Angeles Capacity Volume of Vehicles Per Hour For Dual Left-Turn Lanes = 2880
Ambient Growth Factor per County of Los Angeles = 0.078 % Per Year

Direction of Travel	Lane Movement	Number of Lanes	Capacity (Veh/Hr) On Green	Peak Hour Volume		Volume/Capacity Ratio	
				Ex.+Ambient+ Related Projects Only	Ex.+Ambient+ Related Projects +Project	Ex.+Ambient+ Related Projects Only	Ex.+Ambient+ Related Projects +Project
Eastbound	Left Turn	0	0	0	0	-	-
	Through	2	3200	227	227	0.071 *	0.071 *
	Right Turn**	1	1600	282	282	FREE	FLOW
Westbound	Left Turn	1	1600	415	415	0.259 *	0.259 *
	Through	2	3200	735	735	0.230	0.230
	Right Turn	0	0	0	0	-	-
Northbound	Left Turn	0	0	0	0	-	-
	Through	0	0	0	0	-	-
	Right Turn	0	0	0	0	-	-
Southbound	Left Turn	1	1600	67	67	0.042 *	0.042 *
	Through***	0	0	0	0	-	-
	Right Turn	1	1600	163	163	0.102	0.102
		ICU Plus Lost Time Factor of 0.1				**0.472**	
		Ambient Plus Project Level of Service				**A**	
		ICU Plus Lost Time Factor of 0.1					**0.472**
		Cumulative Plus Project Level of Service					**A**

* Denotes Critical Movement
** Denotes Free-Flow: On-Ramp Right Turn Before Intersectior
*** Denotes Optional Thru/Left Turn Lane (Added to Left Turn for V/C Ratio)

KHR ASSOCIATES
INTERSECTION CAPACITY UTILIZATION ANALYSIS

Condition:	Ex.+Ambient+Related Projects W/WO Project	**Date:**	Projected 2012
Location:	City of Diamond Bar, California	**Horizon Date:**	2012
North-South Street:	SR-57 S/B Ramps	**Peak Hour:**	5:00 - 6:00 P.M.
East-West Street:	Brea Canyon Cutoff Road/Diamond Bar Blvd.	**Data Source:**	KHR
Annual Growth Rate:	0.78%	**Input By:**	S. Carter

Comments: County of Los Angeles Capacity Volume of Vehicles Per Hour Per Lane = 1600
County of Los Angeles Capacity Volume of Vehicles Per Hour For Dual Left-Turn Lanes = 2880
Ambient Growth Factor per County of Los Angeles = 0.078 % Per Year

Direction of Travel	Lane Movement	Number of Lanes	Capacity (Veh/Hr) On Green	Peak Hour Volume		Volume/Capacity Ratio	
				Ex.+Ambient+ Related Projects Only	Ex.+Ambient+ Related Projects +Project	Ex.+Ambient+ Related Projects Only	Ex.+Ambient+ Related Projects +Project
Eastbound	Left Turn	0	0	0	0	-	-
	Through	2	3200	892	892	0.279 *	0.279 *
	Right Turn**	1	1600	346	346	FREE	FLOW
Westbound	Left Turn	1	1600	189	189	0.118 *	0.118 *
	Through	2	3200	954	954	0.298	0.298
	Right Turn	0	0	0	0	-	-
Northbound	Left Turn	0	0	0	0	-	-
	Through	0	0	0	0	-	-
	Right Turn	0	0	0	0	-	-
Southbound	Left Turn	1	1600	49	49	0.031 *	0.031 *
	Through***	0	0	0	0	-	-
	Right Turn	1	1600	166	166	0.104	0.104
		ICU Plus Lost Time Factor of 0.1				**0.528**	
		Ambient Plus Project Level of Service				**A**	
		ICU Plus Lost Time Factor of 0.1					**0.528**
		Cumulative Plus Project Level of Service					**A**

* Denotes Critical Movement
** Denotes Free-Flow: On-Ramp Right Turn Before Intersection
*** Denotes Optional Thru/Left Turn Lane (Added to Left Turn for V/C Ratio)

KHR ASSOCIATES
INTERSECTION CAPACITY UTILIZATION ANALYSIS

Condition:	Ex.+Ambient+Related Projects W/WO Project	**Date:**	Projected 2012
Location:	City of Diamond Bar, California	**Horizon Date:**	2012
North-South Street:	SR-57 N/B Ramps	**Peak Hour:**	7:45 - 8:45 AM
East-West Street:	Pathfinder Road	**Data Source:**	KHR
Annual Growth Rate:	0.78%	**Input By:**	S. Carter

Comments: County of Los Angeles Capacity Volume of Vehicles Per Hour Per Lane = 1600
County of Los Angeles Capacity Volume of Vehicles Per Hour For Dual Left-Turn Lanes = 2880
Ambient Growth Factor per County of Los Angeles = 0.078 % Per Year

Direction of Travel	Lane Movement	Number of Lanes	Capacity (Veh/Hr) On Green	Peak Hour Volume		Volume/Capacity Ratio	
				Ex.+Ambient+ Related Projects Only	Ex.+Ambient+ Related Projects +Project	Ex.+Ambient+ Related Projects Only	Ex.+Ambient+ Related Projects +Project
Eastbound	Left Turn	1	1600	108	121	0.068 *	0.076 *
	Through	2	3200	376	376	0.118	0.118
	Right Turn	0	0	0	0	-	-
Westbound	Left Turn	0	0	0	0	-	-
	Through	2	3200	1061	1061	0.332 *	0.332 *
	Right Turn	1	1600	636	636	0.398	0.398
Northbound	Left Turn	1	1600	216	216	0.135 *	0.135 *
	Through***	0	0	0	0	-	-
	Right Turn	1	1600	69	69	0.043	0.043
Southbound	Left Turn	0	0	0	0	-	-
	Through	0	0	0	0	-	-
	Right Turn	0	0	0	0	-	-
		ICU Plus Lost Time Factor of 0.1				**0.634**	
		Ambient Plus Project Level of Service				**B**	
		ICU Plus Lost Time Factor of 0.1					**0.642**
		Cumulative Plus Project Level of Service					**B**

* Denotes Critical Movement
** Denotes Optional Thru/Left Turn Lane (Added to Left Turn for V/C Ratio)

KHR ASSOCIATES
INTERSECTION CAPACITY UTILIZATION ANALYSIS

Condition:	Ex.+Ambient+Related Projects W/WO Project	**Date:**	Projected 2012
Location:	City of Diamond Bar, California	**Horizon Date:**	2012
North-South Street:	SR-57 N/B Ramps	**Peak Hour:**	5:00 - 6:00 P.M.
East-West Street:	Pathfinder Road	**Data Source:**	KHR
Annual Growth Rate:	0.78%	**Input By:**	S. Carter

Comments: County of Los Angeles Capacity Volume of Vehicles Per Hour Per Lane = 1600
County of Los Angeles Capacity Volume of Vehicles Per Hour For Dual Left-Turn Lanes = 2880
Ambient Growth Factor per County of Los Angeles = 0.078 % Per Year

Direction of Travel	Lane Movement	Number of Lanes	Capacity (Veh/Hr) On Green	Peak Hour Volume		Volume/Capacity Ratio	
				Ex.+Ambient+ Related Projects Only	Ex.+Ambient+ Related Projects +Project	Ex.+Ambient+ Related Projects Only	Ex.+Ambient+ Related Projects +Project
Eastbound	Left Turn	1	1600	86	92	0.054 *	0.058 *
	Through	2	3200	732	732	0.229	0.229
	Right Turn	0	0	0	0	-	-
Westbound	Left Turn	0	0	0	0	-	-
	Through	2	3200	502	502	0.157 *	0.157 *
	Right Turn**	1	1600	431	431	FREE	FLOW
Northbound	Left Turn	1	1600	461	461	0.288 *	0.288 *
	Through***	0	0	0	0	-	-
	Right Turn	1	1600	369	369	0.231	0.231
Southbound	Left Turn	0	0	0	0	-	-
	Through	0	0	0	0	-	-
	Right Turn	0	0	0	0	-	-
		ICU Plus Lost Time Factor of 0.1				**0.599**	
		Ambient Plus Project Level of Service				**A**	
		ICU Plus Lost Time Factor of 0.1					**0.603**
		Cumulative Plus Project Level of Service					**B**

* Denotes Critical Movement
** Denotes Optional Thru/Left Turn Lane (Added to Left Turn for V/C Ratio)

KHR ASSOCIATES
INTERSECTION CAPACITY UTILIZATION ANALYSIS

Condition:	Ex.+Ambient+Related Projects W/WO Project	**Date:**	Projected 2012
Location:	City of Diamond Bar, California	**Horizon Date:**	2012
North-South Street:	SR-57 S/B Ramps	**Peak Hour:**	7:45 - 8:45 A.M.
East-West Street:	Pathfinder Road	**Data Source:**	KHR
Annual Growth Rate:	0.78%	**Input By:**	S. Carter

Comments: County of Los Angeles Capacity Volume of Vehicles Per Hour Per Lane = 1600
County of Los Angeles Capacity Volume of Vehicles Per Hour For Dual Left-Turn Lanes = 2880
Ambient Growth Factor per County of Los Angeles = 0.078 % Per Year

Direction of Travel	Lane Movement	Number of Lanes	Capacity (Veh/Hr) On Green	Peak Hour Volume		Volume/Capacity Ratio	
				Ex.+Ambient+ Related Projects Only	Ex.+Ambient+ Related Projects +Project	Ex.+Ambient+ Related Projects Only	Ex.+Ambient+ Related Projects +Project
Eastbound	Left Turn	0	0	0	0	-	-
	Through	2	3200	492	492	0.154 *	0.154 *
	Right Turn**	1	1600	274	274	FREE	FLOW
Westbound	Left Turn	1	1600	437	437	0.273 *	0.273 *
	Through	2	3200	841	841	0.263	0.263
	Right Turn	0	0	0	0	-	-
Northbound	Left Turn	0	0	0	0	-	-
	Through	0	0	0	0	-	-
	Right Turn	0	0	0	0	-	-
Southbound	Left Turn	1	1600	264	264	0.165 *	0.165 *
	Through***	0	0	0	0	-	-
	Right Turn	1	1600	117	117	0.073	0.073
		ICU Plus Lost Time Factor of 0.1				**0.692**	
		Ambient Plus Project Level of Service				**B**	
		ICU Plus Lost Time Factor of 0.1					**0.692**
		Cumulative Plus Project Level of Service					**B**

* Denotes Critical Movement
** Denotes Free-Flow: On-Ramp Right Turn Before Intersection
*** Denotes Optional Thru/Left Turn Lane (Added to Left Turn for V/C Ratio)

KHR ASSOCIATES
INTERSECTION CAPACITY UTILIZATION ANALYSIS

Condition:	Ex.+Ambient+Related Projects W/WO Project	**Date:**	Projected 2012
Location:	City of Diamond Bar, California	**Horizon Date:**	2012
North-South Street:	SR-57 S/B Ramps	**Peak Hour:**	5:00 - 6:00 P.M.
East-West Street:	Pathfinder Road	**Data Source:**	KHR
Annual Growth Rate:	0.78%	**Input By:**	S. Carter

Comments: County of Los Angeles Capacity Volume of Vehicles Per Hour Per Lane = 1600
County of Los Angeles Capacity Volume of Vehicles Per Hour For Dual Left-Turn Lanes = 2880
Ambient Growth Factor per County of Los Angeles = 0.078 % Per Year

Direction of Travel	Lane Movement	Number of Lanes	Capacity (Veh/Hr) On Green	Peak Hour Volume		Volume/Capacity Ratio	
				Ex.+Ambient+ Related Projects Only	Ex.+Ambient+ Related Projects +Project	Ex.+Ambient+ Related Projects Only	Ex.+Ambient+ Related Projects +Project
Eastbound	Left Turn	0	0	0	0	-	-
	Through	2	3200	817	817	0.255 *	0.255 *
	Right Turn**	1	1600	124	124	FREE	FLOW
Westbound	Left Turn	1	1600	85	85	0.053 *	0.053 *
	Through	2	3200	447	447	0.140	0.140
	Right Turn	0	0	0	0	-	-
Northbound	Left Turn	0	0	0	0	-	-
	Through	0	0	0	0	-	-
	Right Turn	0	0	0	0	-	-
Southbound	Left Turn	1	1600	301	301	0.188 *	0.188 *
	Through***	0	0	0	0	-	-
	Right Turn	1	1600	368	381	0.230	0.238
		ICU Plus Lost Time Factor of 0.1				**0.597**	
		Ambient Plus Project Level of Service				**A**	
		ICU Plus Lost Time Factor of 0.1					**0.597**
		Cumulative Plus Project Level of Service					**A**

* Denotes Critical Movement
** Denotes Free-Flow: On-Ramp Right Turn Before Intersection
*** Denotes Optional Thru/Left Turn Lane (Added to Left Turn for V/C Ratio)

KHR ASSOCIATES
INTERSECTION CAPACITY UTILIZATION ANALYSIS

Condition:	Ex.+Ambient+Related Projects W/WO Project	**Date:**	Projected 2012
Location:	County of Los Angeles, California	**Horizon Date:**	2012
North-South Street:	Fullerton Road	**Peak Hour:**	8:00 - 9:00 AM
East-West Street:	Colima Road	**Data Source:**	KHR
Annual Growth Rate:	0.78%	**Input By:**	S. Carter

Comments: County of Los Angeles Capacity Volume of Vehicles Per Hour Per Lane = 1600
County of Los Angeles Capacity Volume of Vehicles Per Hour For Dual Left-Turn Lanes = 2880
Ambient Growth Factor per County of Los Angeles = 0.078 % Per Year

Direction of Travel	Lane Movement	Number of Lanes	Capacity (Veh/Hr) On Green	Peak Hour Volume		Volume/Capacity Ratio	
				Ex.+Ambient+ Related Projects Only	Ex.+Ambient+ Related Projects +Project	Ex.+Ambient+ Related Projects Only	Ex.+Ambient+ Related Projects +Project
Eastbound	Left Turn	1	1600	129	129	0.081 *	0.081 *
	Through	3	4800	505	505	0.141	0.141
	Right Turn**	0	0	172	172	-	-
Westbound	Left Turn	1	1600	229	229	0.143	0.143
	Through	3	4800	1,295	1,314	0.405 *	0.409 *
	Right Turn**	0	0	649	649	-	-
Northbound	Left Turn	2	2880	348	348	0.121	0.121
	Through	2	3200	951	951	0.338 *	0.338 *
	Right Turn**	0	0	130	130	-	-
Southbound	Left Turn	2	2880	195	195	0.068 *	0.068 *
	Through	2	3200	628	628	0.255	0.255
	Right Turn**	0	0	188	188	-	-

ICU Plus Lost Time Factor of 0.1	**0.991**	
Ambient Plus Project Level of Service	**E**	
ICU Plus Lost Time Factor of 0.1		**0.995**
Cumulative Plus Project Level of Service		**E**

* Denotes Critical Movement
** Denotes Shared Movement With Through Lane (Added to Through for V/C Ratio)

KHR ASSOCIATES
INTERSECTION CAPACITY UTILIZATION ANALYSIS

Condition:	Ex.+Ambient+Related Projects W/WO Project	**Date:**	Projected 2012
Location:	County of Los Angeles, California	**Horizon Date:**	2012
North-South Street:	Fullerton Road	**Peak Hour:**	5:00 - 6:00 P.M.
East-West Street:	Colima Road	**Data Source:**	KHR
Annual Growth Rate:	0.78%	**Input By:**	S. Carter

Comments: County of Los Angeles Capacity Volume of Vehicles Per Hour Per Lane = 1600
County of Los Angeles Capacity Volume of Vehicles Per Hour For Dual Left-Turn Lanes = 2880
Ambient Growth Factor per County of Los Angeles = 0.078 % Per Year

Direction of Travel	Lane Movement	Number of Lanes	Capacity (Veh/Hr) On Green	Peak Hour Volume		Volume/Capacity Ratio	
				Ex.+Ambient+ Related Projects Only	Ex.+Ambient+ Related Projects +Project	Ex.+Ambient+ Related Projects Only	Ex.+Ambient+ Related Projects +Project
Eastbound	Left Turn	1	1600	157	157	0.098	0.098
	Through	3	4800	1,071	1,122	0.267 *	0.277 *
	Right Turn**	0	0	209	209	-	-
Westbound	Left Turn	1	1600	208	208	0.130 *	0.130 *
	Through	3	4800	851	871	0.234	0.238
	Right Turn**	0	0	271	271	-	-
Northbound	Left Turn	2	2880	280	280	0.097	0.097
	Through	2	3200	776	776	0.280 *	0.280 *
	Right Turn**	0	0	120	120	-	-
Southbound	Left Turn	2	2880	396	396	0.138 *	0.138 *
	Through	2	3200	859	859	0.320	0.320
	Right Turn**	0	0	164	164	-	-
		ICU Plus Lost Time Factor of 0.1				**0.914**	
		Ambient Plus Project Level of Service				**E**	
		ICU Plus Lost Time Factor of 0.1					**0.925**
		Cumulative Plus Project Level of Service					**E**

* Denotes Critical Movement
** Denotes Shared Movement With Through Lane (Added to Through for V/C Ratio)

KHR ASSOCIATES
INTERSECTION CAPACITY UTILIZATION ANALYSIS

Condition:	Ex.+Ambient+Related Projects W/WO Project	**Date:**	Projected 2012
Location:	County of Los Angeles, California	**Horizon Date:**	2012
North-South Street:	Nogales Street	**Peak Hour:**	7:30 - 8:30 AM
East-West Street:	Colima Road	**Data Source:**	KHR
Annual Growth Rate:	0.78%	**Input By:**	S. Carter

Comments: County of Los Angeles Capacity Volume of Vehicles Per Hour Per Lane = 1600
County of Los Angeles Capacity Volume of Vehicles Per Hour For Dual Left-Turn Lanes = 2880
Ambient Growth Factor per County of Los Angeles = 0.078 % Per Year

Direction of Travel	Lane Movement	Number of Lanes	Capacity (Veh/Hr) On Green	Peak Hour Volume		Volume/Capacity Ratio	
				Ex.+Ambient+ Related Projects Only	Ex.+Ambient+ Related Projects +Project	Ex.+Ambient+ Related Projects Only	Ex.+Ambient+ Related Projects +Project
Eastbound	Left Turn	2	2880	296	296	0.103	0.103
	Through	2	3200	813	813	0.343 *	0.343 *
	Right Turn**	0	0	284	284	-	-
Westbound	Left Turn	1	1600	390	390	0.244 *	0.244 *
	Through	3	4800	854	873	0.210	0.214
	Right Turn**	0	0	155	155	-	-
Northbound	Left Turn	1	1600	345	345	0.216 *	0.216 *
	Through	2	3200	902	902	0.314	0.314
	Right Turn**	0	0	102	102	-	-
Southbound	Left Turn	2	2880	330	330	0.115	0.115
	Through	2	3200	850	850	0.266 *	0.266 *
	Right Turn	1	1600	290	290	0.181	0.181
			ICU Plus Lost Time Factor of 0.1			**1.168**	
			Ambient Plus Project Level of Service			**F**	
			ICU Plus Lost Time Factor of 0.1				**1.168**
			Cumulative Plus Project Level of Service				**F**

* Denotes Critical Movement
** Denotes Shared Movement With Through Lane (Added to Through for V/C Ratio)

KHR ASSOCIATES
INTERSECTION CAPACITY UTILIZATION ANALYSIS

Condition:	Ex.+Ambient+Related Projects W/WO Project	**Date:**	Projected 2012
Location:	County of Los Angeles, California	**Horizon Date:**	2012
North-South Street:	Nogales Street	**Peak Hour:**	5:00 - 6:00 P.M.
East-West Street:	Colima Road	**Data Source:**	KHR
Annual Growth Rate:	0.78%	**Input By:**	S. Carter

Comments: County of Los Angeles Capacity Volume of Vehicles Per Hour Per Lane = 1600
County of Los Angeles Capacity Volume of Vehicles Per Hour For Dual Left-Turn Lanes = 2880
Ambient Growth Factor per County of Los Angeles = 0.078 % Per Year

Direction of Travel	Lane Movement	Number of Lanes	Capacity (Veh/Hr) On Green	Peak Hour Volume		Volume/Capacity Ratio	
				Ex.+Ambient+ Related Projects Only	Ex.+Ambient+ Related Projects +Project	Ex.+Ambient+ Related Projects Only	Ex.+Ambient+ Related Projects +Project
Eastbound	Left Turn	2	2880	496	496	0.172	0.172
	Through	2	3200	1,038	1,089	0.351 *	0.367 *
	Right Turn**	0	0	86	86	-	-
Westbound	Left Turn	1	1600	207	207	0.129 *	0.129 *
	Through	3	4800	1,026	1,046	0.272	0.276
	Right Turn**	0	0	281	281	-	-
Northbound	Left Turn	1	1600	309	309	0.193	0.193
	Through	2	3200	789	789	0.300 *	0.300 *
	Right Turn**	0	0	171	171	-	-
Southbound	Left Turn	2	2880	437	437	0.152 *	0.152 *
	Through	2	3200	688	688	0.215	0.215
	Right Turn	1	1600	389	389	0.243	0.243
		ICU Plus Lost Time Factor of 0.1				**1.032**	
		Ambient Plus Project Level of Service				**F**	
		ICU Plus Lost Time Factor of 0.1					**1.048**
		Cumulative Plus Project Level of Service					**F**

* Denotes Critical Movement
** Denotes Shared Movement With Through Lane (Added to Through for V/C Ratio)

KHR ASSOCIATES
INTERSECTION CAPACITY UTILIZATION ANALYSIS

Condition:	Ex.+Ambient+Related Projects W/WO Project	**Date:**	Projected 2012
Location:	City of Industry, California	**Horizon Date:**	2012
North-South Street:	Fairway Drive	**Peak Hour:**	7:30 - 8:30 AM
East-West Street:	Valley Boulevard	**Data Source:**	KHR
Annual Growth Rate:	0.78%	**Input By:**	S. Carter

Comments: County of Los Angeles Capacity Volume of Vehicles Per Hour Per Lane = 1600
County of Los Angeles Capacity Volume of Vehicles Per Hour For Dual Left-Turn Lanes = 2880
Ambient Growth Factor per County of Los Angeles = 0.078 % Per Year

Direction of Travel	Lane Movement	Number of Lanes	Capacity (Veh/Hr) On Green	Peak Hour Volume: Ex.+Ambient+ Related Projects Only	Peak Hour Volume: Ex.+Ambient+ Related Projects +Project	Volume/Capacity Ratio: Ex.+Ambient+ Related Projects Only	Volume/Capacity Ratio: Ex.+Ambient+ Related Projects +Project
Eastbound	Left Turn	1	1600	19	19	0.012	0.012
	Through	2	3200	534	534	0.167 *	0.167 *
	Right Turn	1	1600	528	528	0.330	0.330
Westbound	Left Turn	2	2880	385	385	0.134 *	0.134 *
	Through**	2	3200	726	726	0.235	0.235
	Right Turn	0	0	25	25	-	-
Northbound	Left Turn	2	2880	307	312	0.126 *	0.133 *
	Through**	0	0	56	71	-	-
	Right Turn	1	1600	405	415	0.253	0.259
Southbound	Left Turn	1	1600	27	27	0.017	0.017
	Through	1	1600	159	159	0.123 *	0.123 *
	Right Turn***	0	0	37	37	-	-
				ICU Plus Lost Time Factor of 0.1		**0.649**	
				Ambient Plus Project Level of Service		**B**	
				ICU Plus Lost Time Factor of 0.1			**0.656**
				Cumulative Plus Project Level of Service			**B**

* Denotes Critical Movement
** Denotes Lane Striping as Optional Through/Turn Lane (Added to Left Turn for V/C Ratio)
*** Denotes Lane Striping as Optional Through/Turn Lane (Added to Through for V/C Ratio)

KHR ASSOCIATES
INTERSECTION CAPACITY UTILIZATION ANALYSIS

Condition:	Ex.+Ambient+Related Projects W/WO Project	**Date:**	Projected 2012
Location:	City of Industry, California	**Horizon Date:**	2012
North-South Street:	Fairway Drive	**Peak Hour:**	5:00 - 6:00 P.M.
East-West Street:	Valley Boulevard	**Data Source:**	KHR
Annual Growth Rate:	0.78%	**Input By:**	S. Carter

Comments: County of Los Angeles Capacity Volume of Vehicles Per Hour Per Lane = 1600
County of Los Angeles Capacity Volume of Vehicles Per Hour For Dual Left-Turn Lanes = 2880
Ambient Growth Factor per County of Los Angeles = 0.078 % Per Year

Direction of Travel	Lane Movement	Number of Lanes	Capacity (Veh/Hr) On Green	Peak Hour Volume: Ex.+Ambient+ Related Projects Only	Peak Hour Volume: Ex.+Ambient+ Related Projects +Project	Volume/Capacity Ratio: Ex.+Ambient+ Related Projects Only	Volume/Capacity Ratio: Ex.+Ambient+ Related Projects +Project
Eastbound	Left Turn	1	1600	23	23	0.014	0.014
	Through	2	3200	1,053	1,053	0.329 *	0.329 *
	Right Turn	1	1600	436	436	0.273	0.273
Westbound	Left Turn	2	2880	540	540	0.188 *	0.188 *
	Through**	2	3200	820	820	0.261	0.261
	Right Turn	0	0	14	14	-	-
Northbound	Left Turn	2	2880	407	412	0.194 *	0.201 *
	Through**	0	0	152	167	-	-
	Right Turn	1	1600	594	604	0.371	0.378
Southbound	Left Turn	1	1600	26	26	0.016	0.016
	Through	1	1600	91	104	0.064 *	0.072 *
	Right Turn***	0	0	11	11	-	-
			ICU Plus Lost Time Factor of 0.1			**0.874**	
			Ambient Plus Project Level of Service			**D**	
			ICU Plus Lost Time Factor of 0.1				**0.889**
			Cumulative Plus Project Level of Service				**D**

* Denotes Critical Movement
** Denotes Lane Striping as Optional Through/Turn Lane (Added to Left Turn for V/C Ratio)
*** Denotes Lane Striping as Optional Through/Turn Lane (Added to Through for V/C Ratio)

KHR ASSOCIATES
INTERSECTION CAPACITY UTILIZATION ANALYSIS

Condition:	Ex.+Ambient+Related Projects W/WO Project	**Date:**	Projected 2012
Location:	City of Diamond Bar, California	**Horizon Date:**	2012
North-South Street:	Lemon Avenue	**Peak Hour:**	7:30 - 8:30 AM
East-West Street:	Golden Springs Drive	**Data Source:**	KHR
Annual Growth Rate:	0.78%	**Input By:**	S. Carter

Comments: County of Los Angeles Capacity Volume of Vehicles Per Hour Per Lane = 1600
County of Los Angeles Capacity Volume of Vehicles Per Hour For Dual Left-Turn Lanes = 2880
Ambient Growth Factor per County of Los Angeles = 0.078 % Per Year

Direction of Travel	Lane Movement	Number of Lanes	Capacity (Veh/Hr) On Green	Peak Hour Volume		Volume/Capacity Ratio	
				Ex.+Ambient+ Related Projects Only	Ex.+Ambient+ Related Projects +Project	Ex.+Ambient+ Related Projects Only	Ex.+Ambient+ Related Projects +Project
Eastbound	Left Turn	1	1600	316	321	0.198 *	0.201 *
	Through	2	3200	376	381	0.131	0.133
	Right Turn	0	1600	43	43	-	-
Westbound	Left Turn	1	1600	34	34	0.021	0.021
	Through	2	3200	500	500	0.156 *	0.156 *
	Right Turn	1	1600	340	340	0.213	0.213
Northbound	Left Turn	1	1600	45	45	0.028	0.028
	Through	1	1600	138	138	0.116 *	0.116 *
	Right Turn***	0	0	48	48	-	-
Southbound	Left Turn	2	2880	307	307	0.166 *	0.166 *
	Through**	0	0	172	172	-	-
	Right Turn	1	1600	138	138	0.086	0.086
			ICU Plus Lost Time Factor of 0.1			**0.736**	
			Ambient Plus Project Level of Service			**C**	
			ICU Plus Lost Time Factor of 0.1				**0.739**
			Cumulative Plus Project Level of Service				**C**

* Denotes Critical Movement
** Denotes Lane Striping as Optional Through/Turn Lane (Added to Left Turn for V/C Ratio)
*** Denotes Lane Striping as Optional Through/Turn Lane (Added to Through for V/C Ratio)

KHR ASSOCIATES
INTERSECTION CAPACITY UTILIZATION ANALYSIS

Condition:	Ex.+Ambient+Related Projects W/WO Project	**Date:**	Projected 2012
Location:	City of Diamond Bar, California	**Horizon Date:**	2012
North-South Street:	Lemon Avenue	**Peak Hour:**	5:00 - 6:00 P.M.
East-West Street:	Golden Springs Drive	**Data Source:**	KHR
Annual Growth Rate:	0.78%	**Input By:**	S. Carter

Comments: County of Los Angeles Capacity Volume of Vehicles Per Hour Per Lane = 1600
County of Los Angeles Capacity Volume of Vehicles Per Hour For Dual Left-Turn Lanes = 2880
Ambient Growth Factor per County of Los Angeles = 0.078 % Per Year

Direction of Travel	Lane Movement	Number of Lanes	Capacity (Veh/Hr) On Green	Peak Hour Volume		Volume/Capacity Ratio	
				Ex.+Ambient+ Related Projects Only	Ex.+Ambient+ Related Projects +Project	Ex.+Ambient+ Related Projects Only	Ex.+Ambient+ Related Projects +Project
Eastbound	Left Turn	1	1600	276	281	0.173 *	0.176 *
	Through	2	3200	495	495	0.169	0.169
	Right Turn	0	1600	45	45	-	-
Westbound	Left Turn	1	1600	51	51	0.032	0.032
	Through	2	3200	661	661	0.207 *	0.207 *
	Right Turn	1	1600	320	320	0.200	0.200
Northbound	Left Turn	1	1600	26	26	0.016	0.016
	Through	1	1600	27	27	0.041 *	0.041 *
	Right Turn***	0	0	38	38	-	-
Southbound	Left Turn	2	2880	402	402	0.199 *	0.199 *
	Through**	0	0	170	170	-	-
	Right Turn	1	1600	135	153	0.084	0.096
				ICU Plus Lost Time Factor of 0.1		**0.718**	
				Ambient Plus Project Level of Service		**C**	
				ICU Plus Lost Time Factor of 0.1			**0.721**
				Cumulative Plus Project Level of Service			**C**

* Denotes Critical Movement
** Denotes Lane Striping as Optional Through/Turn Lane (Added to Left Turn for V/C Ratio)
*** Denotes Lane Striping as Optional Through/Turn Lane (Added to Through for V/C Ratio)

KHR ASSOCIATES
INTERSECTION CAPACITY UTILIZATION ANALYSIS

Condition:	Ex.+Ambient+Related Projects W/WO Project	**Date:**	Projected 2012
Location:	City of Diamond Bar, California	**Horizon Date:**	2012
North-South Street:	Brea Canyon Road	**Peak Hour:**	7:30 - 8:30 AM
East-West Street:	Golden Springs Drive	**Data Source:**	KHR
Annual Growth Rate:	0.78%	**Input By:**	S. Carter

Comments: County of Los Angeles Capacity Volume of Vehicles Per Hour Per Lane = 1600
County of Los Angeles Capacity Volume of Vehicles Per Hour For Dual Left-Turn Lanes = 2880
Ambient Growth Factor per County of Los Angeles = 0.078 % Per Year

Direction of Travel	Lane Movement	Number of Lanes	Capacity (Veh/Hr) On Green	Peak Hour Volume		Volume/Capacity Ratio	
				Ex.+Ambient+ Related Projects Only	Ex.+Ambient+ Related Projects +Project	Ex.+Ambient+ Related Projects Only	Ex.+Ambient+ Related Projects +Project
Eastbound	Left Turn	2	2880	159	159	0.055	0.055
	Through	2	3200	212	217	0.066 *	0.068 *
	Right Turn	1	1600	228	228	0.143	0.143
Westbound	Left Turn	2	2880	220	220	0.076 *	0.076 *
	Through	2	3200	220	220	0.069	0.069
	Right Turn	1	1600	216	216	0.135	0.135
Northbound	Left Turn	1	1600	157	157	0.098	0.098
	Through	2	3200	545	545	0.211 *	0.211 *
	Right Turn**	0	0	131	131	-	-
Southbound	Left Turn	2	2880	320	320	0.111 *	0.111 *
	Through	2	3200	636	636	0.199	0.199
	Right Turn	1	1600	217	217	0.136	0.136
			ICU Plus Lost Time Factor of 0.1			**0.565**	
			Ambient Plus Project Level of Service			**A**	
			ICU Plus Lost Time Factor of 0.1				**0.567**
			Cumulative Plus Project Level of Service				**A**

* Denotes Critical Movement
** Denotes Right Turns Added to Through Movement for V/C Ratio

KHR ASSOCIATES
INTERSECTION CAPACITY UTILIZATION ANALYSIS

Condition:	Ex.+Ambient+Related Projects W/WO Project	**Date:**	Projected 2012
Location:	City of Diamond Bar, California	**Horizon Date:**	2012
North-South Street:	Brea Canyon Road	**Peak Hour:**	4:15 - 5:15 P.M.
East-West Street:	Golden Springs Drive	**Data Source:**	KHR
Annual Growth Rate:	0.78%	**Input By:**	S. Carter

Comments: County of Los Angeles Capacity Volume of Vehicles Per Hour Per Lane = 1600
County of Los Angeles Capacity Volume of Vehicles Per Hour For Dual Left-Turn Lanes = 2880
Ambient Growth Factor per County of Los Angeles = 0.078 % Per Year

Direction of Travel	Lane Movement	Number of Lanes	Capacity (Veh/Hr) On Green	Peak Hour Volume		Volume/Capacity Ratio	
				Ex.+Ambient+ Related Projects Only	Ex.+Ambient+ Related Projects +Project	Ex.+Ambient+ Related Projects Only	Ex.+Ambient+ Related Projects +Project
Eastbound	Left Turn	2	2880	344	344	0.119	0.119
	Through	2	3200	943	949	0.295 *	0.297 *
	Right Turn	1	1600	307	307	0.192	0.192
Westbound	Left Turn	2	2880	290	290	0.101 *	0.101 *
	Through	2	3200	452	465	0.141	0.145
	Right Turn	1	1600	309	309	0.193	0.193
Northbound	Left Turn	1	1600	243	243	0.152	0.152
	Through	2	3200	830	830	0.331 *	0.331 *
	Right Turn**	0	0	229	229	-	-
Southbound	Left Turn	2	2880	454	454	0.158 *	0.158 *
	Through	2	3200	754	754	0.236	0.236
	Right Turn	1	1600	281	281	0.176	0.176
			ICU Plus Lost Time Factor of 0.1			**0.984**	
			Ambient Plus Project Level of Service			**E**	
			ICU Plus Lost Time Factor of 0.1				**0.986**
			Cumulative Plus Project Level of Service				**E**

* Denotes Critical Movement
** Denotes Right Turns Added to Through Movement for V/C Ratio

KHR ASSOCIATES
INTERSECTION CAPACITY UTILIZATION ANALYSIS

Condition:	Ex.+Ambient+Related Projects W/WO Project	**Date:**	Projected 2012
Location:	City of Diamond Bar, California	**Horizon Date:**	2012
North-South Street:	Brea Canyon Road	**Peak Hour:**	7:15 - 8:15 AM
East-West Street:	Diamond Bar Boulevard	**Data Source:**	KHR
Annual Growth Rate:	0.78%	**Input By:**	S. Carter

Comments: County of Los Angeles Capacity Volume of Vehicles Per Hour Per Lane = 1600
County of Los Angeles Capacity Volume of Vehicles Per Hour For Dual Left-Turn Lanes = 2880
Ambient Growth Factor per County of Los Angeles = 0.078 % Per Year

Direction of Travel	Lane Movement	Number of Lanes	Capacity (Veh/Hr) On Green	Peak Hour Volume		Volume/Capacity Ratio	
				Ex.+Ambient+ Related Projects Only	Ex.+Ambient+ Related Projects +Project	Ex.+Ambient+ Related Projects Only	Ex.+Ambient+ Related Projects +Project
Eastbound	Left Turn	1	1600	131	131	0.082	0.082
	Through	2	3200	232	303	0.073 *	0.095 *
	Right Turn**	1	1600	345	345	0.216	0.216
Westbound	Left Turn	1	1600	161	169	0.101 *	0.106 *
	Through	2	3200	133	207	0.064	0.087
	Right Turn**	0	0	72	72	-	-
Northbound	Left Turn	2	2880	782	796	0.272 *	0.276 *
	Through***	1	1600	576	580	-	-
	Right Turn	1	1600	39	40	0.024	0.025
Southbound	Left Turn	1	1600	27	39	0.017	0.024
	Through	2	3200	163	163	0.081 *	0.085 *
	Right Turn**	0	0	69	69	-	-
			ICU Plus Lost Time Factor of 0.1			**0.626**	
			Ambient Plus Project Level of Service			**B**	
			ICU Plus Lost Time Factor of 0.1				**0.661**
			Cumulative Plus Project Level of Service				**B**

* Denotes Critical Movement
** Denotes Shared Movement With Through Lane (Added to Through for V/C Ratio)
*** Denotes Shared Movement With Right Turn (Allocated Entirely to Through for V/C Ratio)

KHR ASSOCIATES
INTERSECTION CAPACITY UTILIZATION ANALYSIS

Condition:	Ex.+Ambient+Related Projects W/WO Project	**Date:**	Projected 2012
Location:	City of Diamond Bar, California	**Horizon Date:**	2012
North-South Street:	Brea Canyon Road	**Peak Hour:**	4:45 - 5:45 P.M.
East-West Street:	Diamond Bar Boulevard	**Data Source:**	KHR
Annual Growth Rate:	0.78%	**Input By:**	S. Carter

Comments: County of Los Angeles Capacity Volume of Vehicles Per Hour Per Lane = 1600
County of Los Angeles Capacity Volume of Vehicles Per Hour For Dual Left-Turn Lanes = 2880
Ambient Growth Factor per County of Los Angeles = 0.078 % Per Year

Direction of Travel	Lane Movement	Number of Lanes	Capacity (Veh/Hr) On Green	Peak Hour Volume: Ex.+Ambient+ Related Projects Only	Peak Hour Volume: Ex.+Ambient+ Related Projects +Project	Volume/Capacity Ratio: Ex.+Ambient+ Related Projects Only	Volume/Capacity Ratio: Ex.+Ambient+ Related Projects +Project
Eastbound	Left Turn	1	1600	158	158	0.099	0.099
	Through	2	3200	839	1,025	0.262 *	0.320 *
	Right Turn**	1	1600	56	56	0.035	0.035
Westbound	Left Turn	1	1600	379	387	0.237 *	0.242 *
	Through	2	3200	487	610	0.390	0.431
	Right Turn**	0	0	760	768	-	-
Northbound	Left Turn	2	2880	126	126	0.044 *	0.044 *
	Through***	1	1600	364	364	-	-
	Right Turn	1	1600	33	33	0.021	0.021
Southbound	Left Turn	1	1600	68	98	0.043	0.061
	Through	2	3200	48	48	0.048 *	0.057 *
	Right Turn**	0	0	36	36	-	-
				ICU Plus Lost Time Factor of 0.1		**0.690**	
				Ambient Plus Project Level of Service		**B**	
				ICU Plus Lost Time Factor of 0.1			**0.763**
				Cumulative Plus Project Level of Service			**C**

* Denotes Critical Movement
** Denotes Shared Movement With Through Lane (Added to Through for V/C Ratio)
*** Denotes Shared Movement With Right Turn (Allocated Entirely to Through for V/C Ratio)

KHR ASSOCIATES
INTERSECTION CAPACITY UTILIZATION ANALYSIS

Condition:	Ex.+Ambient+Related Projects W/WO Project	**Date:**	Projected 2012
Location:	City of Diamond Bar, California	**Horizon Date:**	2012
North-South Street:	Brea Canyon Road	**Peak Hour:**	7:30 - 8:30 AM
East-West Street:	Pathfinder Road	**Data Source:**	KHR
Annual Growth Rate:	0.78%	**Input By:**	S. Carter

Comments: County of Los Angeles Capacity Volume of Vehicles Per Hour Per Lane = 1600
County of Los Angeles Capacity Volume of Vehicles Per Hour For Dual Left-Turn Lanes = 2880
Ambient Growth Factor per County of Los Angeles = 0.078 % Per Year

Direction of Travel	Lane Movement	Number of Lanes	Capacity (Veh/Hr) On Green	Peak Hour Volume		Volume/Capacity Ratio	
				Ex.+Ambient+ Related Projects Only	Ex.+Ambient+ Related Projects +Project	Ex.+Ambient+ Related Projects Only	Ex.+Ambient+ Related Projects +Project
Eastbound	Left Turn	1	1600	207	207	0.129 *	0.129 *
	Through	2	3200	298	303	0.093	0.095
	Right Turn**	0	0	0	0	-	-
Westbound	Left Turn	0	0	0	0	-	-
	Through	2	3200	399	399	0.125 *	0.125 *
	Right Turn	1	1600	558	558	0.349	0.349
Northbound	Left Turn	0	0	0	0	-	-
	Through	0	0	0	0	-	-
	Right Turn	0	0	0	0	-	-
Southbound	Left Turn	2	2880	468	468	0.163 *	0.163 *
	Through	0	0	0	0	-	-
	Right Turn	1	1600	133	133	0.083	0.083
		ICU Plus Lost Time Factor of 0.1				**0.517**	
		Ambient Plus Project Level of Service				**A**	
		ICU Plus Lost Time Factor of 0.1					**0.517**
		Cumulative Plus Project Level of Service					**A**

* Denotes Critical Movement
** Separate Right Turn Through Lane to 57 S/B (However, Traffic Added to Through)

KHR ASSOCIATES
INTERSECTION CAPACITY UTILIZATION ANALYSIS

Condition:	Ex.+Ambient+Related Projects W/WO Project	**Date:**	Projected 2012
Location:	City of Diamond Bar, California	**Horizon Date:**	2012
North-South Street:	Brea Canyon Road	**Peak Hour:**	4:45 - 5:45 P.M.
East-West Street:	Pathfinder Road	**Data Source:**	KHR
Annual Growth Rate:	0.78%	**Input By:**	S. Carter

Comments: County of Los Angeles Capacity Volume of Vehicles Per Hour Per Lane = 1600
County of Los Angeles Capacity Volume of Vehicles Per Hour For Dual Left-Turn Lanes = 2880
Ambient Growth Factor per County of Los Angeles = 0.078 % Per Year

Direction of Travel	Lane Movement	Number of Lanes	Capacity (Veh/Hr) On Green	Peak Hour Volume		Volume/Capacity Ratio	
				Ex.+Ambient+ Related Projects Only	Ex.+Ambient+ Related Projects +Project	Ex.+Ambient+ Related Projects Only	Ex.+Ambient+ Related Projects +Project
Eastbound	Left Turn	1	1600	373	373	0.233 *	0.233 *
	Through	2	3200	463	469	0.145	0.147
	Right Turn**	0	0	0	0	-	-
Westbound	Left Turn	0	0	0	0	-	-
	Through	2	3200	515	528	0.161 *	0.165 *
	Right Turn	1	1600	710	710	0.444	0.444
Northbound	Left Turn	0	0	0	0	-	-
	Through	0	0	0	0	-	-
	Right Turn	0	0	0	0	-	-
Southbound	Left Turn	2	2880	446	446	0.155 *	0.155 *
	Through	0	0	0	0	-	-
	Right Turn	1	1600	269	269	0.168	0.168
		ICU Plus Lost Time Factor of 0.1				**0.649**	
		Ambient Plus Project Level of Service				**B**	
		ICU Plus Lost Time Factor of 0.1					**0.653**
		Cumulative Plus Project Level of Service					**B**

* Denotes Critical Movement
** Separate Right Turn Through Lane to 57 S/B (However, Traffic Added to Through)

KHR ASSOCIATES
INTERSECTION CAPACITY UTILIZATION ANALYSIS

Condition:	Ex.+Ambient+Related Projects W/WO Project	**Date:**	Projected 2012
Location:	City of Diamond Bar, California	**Horizon Date:**	2012
North-South Street:	Fern Hollow Drive/Brea Canyon Road	**Peak Hour:**	7:15 - 8:15 AM
East-West Street:	Pathfinder Road	**Data Source:**	KHR
Annual Growth Rate:	0.78%	**Input By:**	S. Carter

Comments: County of Los Angeles Capacity Volume of Vehicles Per Hour Per Lane = 1600
County of Los Angeles Capacity Volume of Vehicles Per Hour For Dual Left-Turn Lanes = 2880
Ambient Growth Factor per County of Los Angeles = 0.078 % Per Year

Direction of Travel	Lane Movement	Number of Lanes	Capacity (Veh/Hr) On Green	Peak Hour Volume		Volume/Capacity Ratio	
				Ex.+Ambient+ Related Projects Only	Ex.+Ambient+ Related Projects +Project	Ex.+Ambient+ Related Projects Only	Ex.+Ambient+ Related Projects +Project
Eastbound	Left Turn	1	1600	132	132	0.083 *	0.083 *
	Through	2	3200	622	622	0.194	0.194
	Right Turn	1	1600	231	231	0.144	0.144
Westbound	Left Turn	1	1600	55	55	0.034	0.034
	Through	2	3200	888	888	0.286 *	0.286 *
	Right Turn**	0	1600	28	28	-	-
Northbound	Left Turn	2	2880	591	591	0.216 *	0.216 *
	Through***	0	0	31	31	-	-
	Right Turn	1	1600	91	91	0.057	0.057
Southbound	Left Turn**	0	0	78	78	-	-
	Through	1	1600	48	48	0.190 *	0.190 *
	Right Turn**	0	0	178	178	-	-
		ICU Plus Lost Time Factor of 0.1				**0.875**	
		Ambient Plus Project Level of Service				**D**	
		ICU Plus Lost Time Factor of 0.1					**0.875**
		Cumulative Plus Project Level of Service					**D**

* Denotes Critical Movement
** Denotes Shared Movement With Through Lane (Added to Through for V/C Ratio)
*** Denotes Shared Movement With Left Turn Lane (Added to Left Turn for V/C Ratio)

KHR ASSOCIATES
INTERSECTION CAPACITY UTILIZATION ANALYSIS

Condition:	Ex.+Ambient+Related Projects W/WO Project	**Date:**	Projected 2012
Location:	City of Diamond Bar, California	**Horizon Date:**	2012
North-South Street:	Fern Hollow Drive/Brea Canyon Road	**Peak Hour:**	4:45 - 5:45 P.M.
East-West Street:	Pathfinder Road	**Data Source:**	KHR
Annual Growth Rate:	0.78%	**Input By:**	S. Carter

Comments: County of Los Angeles Capacity Volume of Vehicles Per Hour Per Lane = 1600
County of Los Angeles Capacity Volume of Vehicles Per Hour For Dual Left-Turn Lanes = 2880
Ambient Growth Factor per County of Los Angeles = 0.078 % Per Year

Direction of Travel	Lane Movement	Number of Lanes	Capacity (Veh/Hr) On Green	Peak Hour Volume		Volume/Capacity Ratio	
				Ex.+Ambient+ Related Projects Only	Ex.+Ambient+ Related Projects +Project	Ex.+Ambient+ Related Projects Only	Ex.+Ambient+ Related Projects +Project
Eastbound	Left Turn	1	1600	116	116	0.073	0.073
	Through	2	3200	864	864	0.270 *	0.270 *
	Right Turn	1	1600	151	151	0.094	0.094
Westbound	Left Turn	1	1600	51	51	0.032 *	0.032 *
	Through	2	3200	417	417	0.140	0.140
	Right Turn**	0	1600	31	31	-	-
Northbound	Left Turn	2	2880	505	505	0.183 *	0.183 *
	Through***	0	0	21	21	-	-
	Right Turn	1	1600	66	66	0.041	0.041
Southbound	Left Turn**	0	0	19	19	-	-
	Through	1	1600	14	14	0.048 *	0.048 *
	Right Turn**	0	0	43	43	-	-
		ICU Plus Lost Time Factor of 0.1				**0.632**	
		Ambient Plus Project Level of Service				**B**	
		ICU Plus Lost Time Factor of 0.1					**0.632**
		Cumulative Plus Project Level of Service					**B**

* Denotes Critical Movement
** Denotes Shared Movement With Through Lane (Added to Through for V/C Ratio)
*** Denotes Shared Movement With Left Turn Lane (Added to Left Turn for V/C Ratio)

KHR ASSOCIATES
INTERSECTION CAPACITY UTILIZATION ANALYSIS

Condition:	Ex.+Ambient+Related Projects W/WO Project	**Date:**	Projected 2012
Location:	City of Industry, California	**Horizon Date:**	2012
North-South Street:	Fairway Drive	**Peak Hour:**	7:45 - 8:45 A.M.
East-West Street:	North Walnut Drive	**Data Source:**	KHR
Annual Growth Rate:	0.78%	**Input By:**	S. Carter

Comments: County of Los Angeles Capacity Volume of Vehicles Per Hour Per Lane = 1600
County of Los Angeles Capacity Volume of Vehicles Per Hour For Dual Left-Turn Lanes = 2880
Ambient Growth Factor per County of Los Angeles = 0.078 % Per Year

Direction of Travel	Lane Movement	Number of Lanes	Capacity (Veh/Hr) On Green	Peak Hour Volume		Volume/Capacity Ratio	
				Ex.+Ambient+ Related Projects Only	Ex.+Ambient+ Related Projects +Project	Ex.+Ambient+ Related Projects Only	Ex.+Ambient+ Related Projects +Project
Eastbound	Left Turn**	0	0	59	59	-	-
	Through	2	3200	128	128	0.099 *	0.099 *
	Right Turn**	0	0	130	130	-	-
Westbound	Left Turn**	0	0	124	124	-	-
	Through	2	3200	106	106	0.100 *	0.100 *
	Right Turn**	0	0	90	90	-	-
Northbound	Left Turn	1	1600	153	153	0.096	0.096
	Through	2	3200	630	655	0.224 *	0.232 *
	Right Turn**	0	1600	87	87	-	-
Southbound	Left Turn	1	1600	23	23	0.014 *	0.014 *
	Through	3	4800	481	481	0.108	0.108
	Right Turn**	0	0	36	36	-	-
		ICU Plus Lost Time Factor of 0.1				**0.538**	
		Ambient Plus Project Level of Service				**A**	
		ICU Plus Lost Time Factor of 0.1					**0.545**
		Cumulative Plus Project Level of Service					**A**

* Denotes Critical Movement
** Denotes Optional Through/Turn Lane (Added to Through for V/C Ratio)

KHR ASSOCIATES
INTERSECTION CAPACITY UTILIZATION ANALYSIS

Condition:	Ex.+Ambient+Related Projects W/WO Project	**Date:**	Projected 2012
Location:	City of Industry, California	**Horizon Date:**	2012
North-South Street:	Fairway Drive	**Peak Hour:**	4:45 - 5:45 P.M.
East-West Street:	North Walnut Drive	**Data Source:**	KHR
Annual Growth Rate:	0.78%	**Input By:**	S. Carter

Comments: County of Los Angeles Capacity Volume of Vehicles Per Hour Per Lane = 1600
County of Los Angeles Capacity Volume of Vehicles Per Hour For Dual Left-Turn Lanes = 2880
Ambient Growth Factor per County of Los Angeles = 0.078 % Per Year

Direction of Travel	Lane Movement	Number of Lanes	Capacity (Veh/Hr) On Green	Peak Hour Volume		Volume/Capacity Ratio	
				Ex.+Ambient+ Related Projects Only	Ex.+Ambient+ Related Projects +Project	Ex.+Ambient+ Related Projects Only	Ex.+Ambient+ Related Projects +Project
Eastbound	Left Turn**	0	0	58	58	-	-
	Through	2	3200	140	140	0.118 *	0.118 *
	Right Turn**	0	0	179	179	-	-
Westbound	Left Turn**	0	0	143	143	-	-
	Through	2	3200	98	98	0.090 *	0.090 *
	Right Turn**	0	0	47	47	-	-
Northbound	Left Turn	1	1600	165	165	0.103 *	0.103 *
	Through	2	3200	631	656	0.220	0.228
	Right Turn**	0	1600	73	73	-	-
Southbound	Left Turn	1	1600	53	53	0.033	0.033
	Through	3	4800	884	948	0.199 *	0.212 *
	Right Turn**	0	0	71	71	-	-
		ICU Plus Lost Time Factor of 0.1				**0.610**	
		Ambient Plus Project Level of Service				**B**	
		ICU Plus Lost Time Factor of 0.1					**0.623**
		Cumulative Plus Project Level of Service					**B**

* Denotes Critical Movement
** Denotes Optional Through/Turn Lane (Added to Through for V/C Ratio)

KHR ASSOCIATES
INTERSECTION CAPACITY UTILIZATION ANALYSIS

Condition:	Ex.+Ambient+Related Projects W/WO Project	**Date:**	Projected 2012
Location:	City of Diamond Bar, California	**Horizon Date:**	2012
North-South Street:	Brea Canyon Cutoff Road	**Peak Hour:**	7:45 - 8:45 A.M.
East-West Street:	Fallow Field Drive	**Data Source:**	KHR
Annual Growth Rate:	0.78%	**Input By:**	S. Carter

Comments: County of Los Angeles Capacity Volume of Vehicles Per Hour Per Lane = 1600
County of Los Angeles Capacity Volume of Vehicles Per Hour For Dual Left-Turn Lanes = 2880
Ambient Growth Factor per County of Los Angeles = 0.078 % Per Year

Direction of Travel	Lane Movement	Number of Lanes	Capacity (Veh/Hr) On Green	Peak Hour Volume		Volume/Capacity Ratio	
				Ex.+Ambient+ Related Projects Only	Ex.+Ambient+ Related Projects +Project	Ex.+Ambient+ Related Projects Only	Ex.+Ambient+ Related Projects +Project
Eastbound	Left Turn	1	1600	13	13	0.008	0.008
	Through	1	1600	30	30	0.033 *	0.033 *
	Right Turn**	0	1600	23	23	-	-
Westbound	Left Turn	1	1600	100	100	0.063 *	0.063 *
	Through	1	1600	19	19	0.052	0.052
	Right Turn**	0	0	64	64	-	-
Northbound	Left Turn	1	1600	18	18	0.011	0.011
	Through	2	3200	333	333	0.127 *	0.127 *
	Right Turn	0	0	73	73	-	-
Southbound	Left Turn	1	1600	59	59	0.037 *	0.037 *
	Through	2	3200	416	446	0.144	0.153
	Right Turn	0	0	44	44	-	-
		ICU Plus Lost Time Factor of 0.1				**0.359**	
		Ambient Plus Project Level of Service				**A**	
		ICU Plus Lost Time Factor of 0.1					**0.359**
		Cumulative Plus Project Level of Service					**A**

* Denotes Critical Movement
** Denotes Shared Movement With Through Lane (Added to Through for V/C Ratio)

KHR ASSOCIATES
INTERSECTION CAPACITY UTILIZATION ANALYSIS

Condition:	Ex.+Ambient+Related Projects W/WO Project	**Date:**	Projected 2012
Location:	City of Diamond Bar, California	**Horizon Date:**	2012
North-South Street:	Brea Canyon Cutoff Road	**Peak Hour:**	4:30 - 5:30 P.M.
East-West Street:	Fallow Field Drive	**Data Source:**	KHR
Annual Growth Rate:	0.78%	**Input By:**	S. Carter

Comments: County of Los Angeles Capacity Volume of Vehicles Per Hour Per Lane = 1600
County of Los Angeles Capacity Volume of Vehicles Per Hour For Dual Left-Turn Lanes = 2880
Ambient Growth Factor per County of Los Angeles = 0.078 % Per Year

Direction of Travel	Lane Movement	Number of Lanes	Capacity (Veh/Hr) On Green	Peak Hour Volume		Volume/Capacity Ratio	
				Ex.+Ambient+ Related Projects Only	Ex.+Ambient+ Related Projects +Project	Ex.+Ambient+ Related Projects Only	Ex.+Ambient+ Related Projects +Project
Eastbound	Left Turn	1	1600	95	95	0.059	0.059
	Through	1	1600	57	57	0.091 *	0.091 *
	Right Turn**	0	1600	89	89	-	-
Westbound	Left Turn	1	1600	88	88	0.055 *	0.055 *
	Through	1	1600	45	45	0.061	0.061
	Right Turn**	0	0	52	52	-	-
Northbound	Left Turn	1	1600	55	55	0.034	0.034
	Through	2	3200	532	590	0.205 *	0.223 *
	Right Turn	0	0	125	125	-	-
Southbound	Left Turn	1	1600	86	86	0.054 *	0.054 *
	Through	2	3200	375	406	0.138	0.148
	Right Turn	0	0	68	68	-	-
		ICU Plus Lost Time Factor of 0.1				**0.505**	
		Ambient Plus Project Level of Service				**A**	
		ICU Plus Lost Time Factor of 0.1					**0.523**
		Cumulative Plus Project Level of Service					**A**

* Denotes Critical Movement
** Denotes Shared Movement With Through Lane (Added to Through for V/C Ratio)

Appendix F

Mitigated Existing+Ambient+Project & Mitigated Existing+Ambient+Related Projects + Project ICU Calculations

KHR ASSOCIATES
INTERSECTION CAPACITY UTILIZATION ANALYSIS

Condition:	Mitigated With Project	**Date:**	Projected 2012
Location:	County of Los Angeles, California	**Horizon Date:**	2012
North-South Street:	Brea Canyon Cutoff Road/Fairway Drive	**Peak Hour:**	7:30 - 8:30 AM
East-West Street:	Colima Road	**Data Source:**	KHR
Annual Growth Rate:	0.78%	**Input By:**	S. Carter

Comments: County of Los Angeles Capacity Volume of Vehicles Per Hour Per Lane = 1600

County of Los Angeles Capacity Volume of Vehicles Per Hour For Dual Left-Turn Lanes = 2880

Note: Boldface Denotes Mitigation Measure

Direction of Travel	Lane Movement	Number of Lanes	Capacity (Veh/Hr) On Green	Peak Hour Volume		Volume/Capacity Ratio	
				Existing+ Ambient +Project	Ex.+Amb. +Related +Project	Existing+ Ambient +Project	Ex.+Amb. +Related +Project
Eastbound	Left Turn	1	1600	223	226	0.139 *	0.141 *
	Through	3	4800	393	444	0.123	0.134
	Right Turn**	0	0	198	198	-	-
Westbound	Left Turn	1	1600	273	273	0.171	0.171
	Through	3	4800	805	808	0.237 *	0.239 *
	Right Turn**	0	0	332	337	-	-
Northbound	Left Turn	1	1600	431	431	0.269 *	0.269 *
	Through	2	3200	740	759	0.308	0.313
	Right Turn**	0	0	244	244	-	-
Southbound	Left Turn	1	1600	153	163	0.096	0.102
	Through	**3**	**4800**	**483**	**501**	**0.165 ***	**0.169 ***
	Right Turn**	0	0	310	311	-	-
		ICU Plus Lost Time Factor of 0.1				**0.911**	
		Ambient Plus Project Level of Service				**E**	
		ICU Plus Lost Time Factor of 0.1					**0.918**
		Cumulative Plus Project Level of Service					**E**

* Denotes Critical Movement

** Denotes Shared Movement With Through Lane (Added to Through for V/C Ratio)

KHR ASSOCIATES
INTERSECTION CAPACITY UTILIZATION ANALYSIS

Condition:	Mitigated With Project	**Date:**	Projected 2012
Location:	County of Los Angeles, California	**Horizon Date:**	2012
North-South Street:	Brea Canyon Cutoff Road/Fairway Drive	**Peak Hour:**	5:00 - 6:00 P.M.
East-West Street:	Colima Road	**Data Source:**	KHR
Annual Growth Rate:	0.78%	**Input By:**	S. Carter

Comments: County of Los Angeles Capacity Volume of Vehicles Per Hour Per Lane = 1600

County of Los Angeles Capacity Volume of Vehicles Per Hour For Dual Left-Turn Lanes = 2880

Note: Boldface Denotes Mitigation Measure

Direction of Travel	Lane Movement	Number of Lanes	Capacity (Veh/Hr) On Green	Peak Hour Volume		Volume/Capacity Ratio	
				Existing+ Ambient +Project	Ex.+Amb. +Related +Project	Existing+ Ambient +Project	Ex.+Amb. +Related +Project
Eastbound	Left Turn	1	1600	261	261	0.163 *	0.163 *
	Through	3	4800	690	755	0.173	0.187
	Right Turn**	0	0	142	142	-	-
Westbound	Left Turn	1	1600	247	247	0.154	0.154
	Through	3	4800	679	699	0.168 *	0.181 *
	Right Turn**	0	0	126	171	-	-
Northbound	Left Turn	1	1600	313	313	0.196	0.196
	Through	2	3200	662	710	0.278 *	0.293 *
	Right Turn**	0	0	228	228	-	-
Southbound	Left Turn	1	1600	268	310	0.168 *	0.194 *
	Through	**3**	**4800**	**782**	**828**	**0.203**	**0.213**
	Right Turn**	0	0	190	192	-	-
		ICU Plus Lost Time Factor of 0.1				**0.877**	
		Ambient Plus Project Level of Service				**D**	
		ICU Plus Lost Time Factor of 0.1					**0.931**
		Cumulative Plus Project Level of Service					**E**

* Denotes Critical Movement

** Denotes Shared Movement With Through Lane (Added to Through for V/C Ratio)

KHR ASSOCIATES
INTERSECTION CAPACITY UTILIZATION ANALYSIS

Condition:	Mitigated With Project + Related Projects	**Date:**	Projected 2012
Location:	County of Los Angeles, California	**Horizon Date:**	2012
North-South Street:	Brea Canyon Cutoff Road	**Peak Hour:**	7:30 - 8:30 A.M.
East-West Street:	Pathfinder Road	**Data Source:**	KHR
Annual Growth Rate:	0.78%	**Input By:**	S. Carter

Comments: County of Los Angeles Capacity Volume of Vehicles Per Hour Per Lane = 1600

County of Los Angeles Capacity Volume of Vehicles Per Hour For Dual Left-Turn Lanes = 2880

Note: Boldface Denotes Mitigation Measure

Direction of Travel	Lane Movement	Number of Lanes	Capacity (Veh/Hr) On Green	Peak Hour Volume		Volume/Capacity Ratio	
				Existing+ Ambient +Project	Ex.+Ambient+ Related Projects +Project	Existing+ Ambient +Project	Ex.+Ambient+ Related Projects +Project
Eastbound	Left Turn	1	1600	85	85	0.053	0.053
	Through	2	3200	160	160	0.133 *	0.135 *
	Right Turn**	0	0	267	273	-	-
Westbound	Left Turn	1	1600	107	107	0.067 *	0.067 *
	Through	2	3200	337	340	0.137	0.138
	Right Turn**	0	0	101	101	-	-
Northbound	Left Turn	1	1600	173	177	0.108 *	0.111 *
	Through	1	1600	295	314	0.184	0.196
	Right Turn	1	1600	24	24	0.015	0.015
Southbound	Left Turn	1	1600	53	53	0.033	0.033
	Through	**2**	**3200**	**457**	**475**	**0.157 ***	**0.163 ***
	Right Turn**	0	0	45	45	-	-
		ICU Plus Lost Time Factor of 0.1				**0.565**	
		Ambient Plus Project Level of Service				**A**	
		ICU Plus Lost Time Factor of 0.1					**0.575**
		Cumulative Plus Project Level of Service					**A**

* Denotes Critical Movement

** Denotes Shared Movement With Through Lane (Added to Through for V/C Ratio)

KHR ASSOCIATES
INTERSECTION CAPACITY UTILIZATION ANALYSIS

Condition:	Mitigated With Project + Related Projects	**Date:**	Projected 2012
Location:	County of Los Angeles, California	**Horizon Date:**	2012
North-South Street:	Brea Canyon Cutoff Road	**Peak Hour:**	4:00 - 5:00 P.M.
East-West Street:	Pathfinder Road	**Data Source:**	KHR
Annual Growth Rate:	0.78%	**Input By:**	S. Carter

Comments: County of Los Angeles Capacity Volume of Vehicles Per Hour Per Lane = 1600

County of Los Angeles Capacity Volume of Vehicles Per Hour For Dual Left-Turn Lanes = 2880

Note: Boldface Denotes Mitigation Measure

Direction of Travel	Lane Movement	Number of Lanes	Capacity (Veh/Hr) On Green	Peak Hour Volume		Volume/Capacity Ratio	
				Existing+ Ambient +Project	Ex.+Ambient+ Related Projects +Project	Existing+ Ambient +Project	Ex.+Ambient+ Related Projects +Project
Eastbound	Left Turn	1	1600	118	118	0.074	0.074
	Through	2	3200	446	446	0.240 *	0.244 *
	Right Turn**	0	0	322	335	-	-
Westbound	Left Turn	1	1600	31	31	0.019 *	0.019 *
	Through	2	3200	380	380	0.147	0.147
	Right Turn**	0	0	91	91	-	-
Northbound	Left Turn	1	1600	253	267	0.158	0.167
	Through	1	1600	668	716	0.418 *	0.448 *
	Right Turn	1	1600	56	56	0.035	0.035
Southbound	Left Turn	1	1600	107	107	0.067 *	0.067 *
	Through	**2**	**3200**	**555**	**601**	**0.188**	**0.203**
	Right Turn**	0	0	48	48	**-**	**-**
		ICU Plus Lost Time Factor of 0.1				**0.844**	
		Ambient Plus Project Level of Service				**D**	
		ICU Plus Lost Time Factor of 0.1					**0.878**
		Cumulative Plus Project Level of Service					**D**

* Denotes Critical Movement

** Denotes Shared Movement With Through Lane (Added to Through for V/C Ratio)

KHR ASSOCIATES
INTERSECTION CAPACITY UTILIZATION ANALYSIS

Condition:	Mitigated With Project	**Date:**	Projected 2012
Location:	County of Los Angeles, California	**Horizon Date:**	2012
North-South Street:	Fullerton Road	**Peak Hour:**	8:00 - 9:00 AM
East-West Street:	Colima Road	**Data Source:**	KHR
Annual Growth Rate:	0.78%	**Input By:**	S. Carter

Comments: County of Los Angeles Capacity Volume of Vehicles Per Hour Per Lane = 1600

County of Los Angeles Capacity Volume of Vehicles Per Hour For Dual Left-Turn Lanes = 2880

Note: Boldface Denotes Mitigation Measure

Direction of Travel	Lane Movement	Number of Lanes	Capacity (Veh/Hr) On Green	Peak Hour Volume		Volume/Capacity Ratio	
				Existing+ Ambient +Project	Ex.+Amb. +Related +Project	Existing+ Ambient +Project	Ex.+Amb. +Related +Project
Eastbound	Left Turn	1	1600	129	129	0.081 *	0.081 *
	Through	3	4800	454	505	0.130	0.141
	Right Turn**	0	0	172	172	-	-
Westbound	Left Turn	1	1600	229	229	0.143	0.143
	Through	3	4800	1,298	1,314	0.406 *	0.409 *
	Right Turn**	0	0	649	649	-	-
Northbound	Left Turn	2	2880	348	348	0.121	0.121
	Through	2	3200	951	951	0.297 *	0.297 *
	Right Turn	**1**	**1600**	**130**	**130**	**0.081**	**0.081**
Southbound	Left Turn	2	2880	195	195	0.068 *	0.068 *
	Through	2	3200	628	628	0.255	0.255
	Right Turn**	0	0	188	188	-	-
		ICU Plus Lost Time Factor of 0.1				**0.951**	
		Ambient Plus Project Level of Service				**E**	
		ICU Plus Lost Time Factor of 0.1					**0.954**
		Cumulative Plus Project Level of Service					**E**

* Denotes Critical Movement

*** Denotes New Exclusive Right Turn Lane

KHR ASSOCIATES
INTERSECTION CAPACITY UTILIZATION ANALYSIS

Condition:	Mitigated With Project	**Date:**	Projected 2012
Location:	County of Los Angeles, California	**Horizon Date:**	2012
North-South Street:	Fullerton Road	**Peak Hour:**	5:00 - 6:00 P.M.
East-West Street:	Colima Road	**Data Source:**	KHR
Annual Growth Rate:	0.78%	**Input By:**	S. Carter

Comments: County of Los Angeles Capacity Volume of Vehicles Per Hour Per Lane = 1600

County of Los Angeles Capacity Volume of Vehicles Per Hour For Dual Left-Turn Lanes = 2880

Note: Boldface Denotes Mitigation Measure

Direction of Travel	Lane Movement	Number of Lanes	Capacity (Veh/Hr) On Green	Peak Hour Volume		Volume/Capacity Ratio	
				Existing+ Ambient +Project	Ex.+Amb. +Related +Project	Existing+ Ambient +Project	Ex.+Amb. +Related +Project
Eastbound	Left Turn	1	1600	157	157	0.098	0.098
	Through	3	4800	1,057	1,122	0.264 *	0.277 *
	Right Turn**	0	0	209	209	-	-
Westbound	Left Turn	1	1600	208	208	0.130 *	0.130 *
	Through	3	4800	810	871	0.225	0.238
	Right Turn**	0	0	271	271	-	-
Northbound	Left Turn	2	2880	280	280	0.097 *	0.097 *
	Through	2	3200	776	776	0.243	0.243
	Right Turn	**1**	**1600**	**120**	**120**	**0.075**	**0.075**
Southbound	Left Turn	2	2880	396	396	0.138	0.138
	Through	2	3200	859	859	0.320 *	0.320 *
	Right Turn**	0	0	164	164	-	-
		ICU Plus Lost Time Factor of 0.1				**0.911**	
		Ambient Plus Project Level of Service				**E**	
		ICU Plus Lost Time Factor of 0.1					**0.924**
		Cumulative Plus Project Level of Service					**E**

* Denotes Critical Movement
** Denotes New Exclusive Right Turn Lane

KHR ASSOCIATES
INTERSECTION CAPACITY UTILIZATION ANALYSIS

Condition:	Mitigated With Project + Related Projects	**Date:**	Projected 2012
Location:	County of Los Angeles, California	**Horizon Date:**	2012
North-South Street:	Nogales Street	**Peak Hour:**	7:30 - 8:30 AM
East-West Street:	Colima Road	**Data Source:**	KHR
Annual Growth Rate:	0.78%	**Input By:**	S. Carter

Comments: County of Los Angeles Capacity Volume of Vehicles Per Hour Per Lane = 1600

County of Los Angeles Capacity Volume of Vehicles Per Hour For Dual Left-Turn Lanes = 2880

Note: Boldface Denotes Mitigation Measure

Direction of Travel	Lane Movement	Number of Lanes	Capacity (Veh/Hr) On Green	Peak Hour Volume		Volume/Capacity Ratio	
				Existing+ Ambient +Project	Ex.+Amb. +Related +Project	Existing+ Ambient +Project	Ex.+Amb. +Related +Project
Eastbound	Left Turn	2	2880	296	296	0.103	0.103
	Through	2	3200	762	813	0.327 *	0.343 *
	Right Turn**	0	0	284	284	-	-
Westbound	Left Turn	1	1600	390	390	0.244 *	0.244 *
	Through	3	4800	857	873	0.211	0.214
	Right Turn**	0	0	155	155	-	-
Northbound	Left Turn	1	1600	345	345	0.216 *	0.216 *
	Through	2	3200	902	902	0.282	0.282
	Right Turn* **	**1**	**1600**	**102**	**102**	**0.064**	**0.064**
Southbound	Left Turn	2	2880	330	330	0.115	0.115
	Through	2	3200	850	850	0.266 *	0.266 *
	Right Turn	1	1600	290	290	0.181	0.181
			ICU Plus Lost Time Factor of 0.1			**1.152**	
			Ambient Plus Project Level of Service			**F**	
			ICU Plus Lost Time Factor of 0.1				**1.168**
			Cumulative Plus Project Level of Service				**F**

* Denotes Critical Movement

** Denotes Shared Movement With Through Lane (Added to Through for V/C Ratio)

*** **Denotes Addition of Exclusive Right Turn Lane As Mitigation Measure**

KHR ASSOCIATES
INTERSECTION CAPACITY UTILIZATION ANALYSIS

Condition:	Mitigated With Project + Related Projects	**Date:**	Projected 2012
Location:	County of Los Angeles, California	**Horizon Date:**	2012
North-South Street:	Nogales Street	**Peak Hour:**	5:00 - 6:00 P.M.
East-West Street:	Colima Road	**Data Source:**	KHR
Annual Growth Rate:	0.78%	**Input By:**	S. Carter

Comments: County of Los Angeles Capacity Volume of Vehicles Per Hour Per Lane = 1600

County of Los Angeles Capacity Volume of Vehicles Per Hour For Dual Left-Turn Lanes = 2880

Note: Boldface Denotes Mitigation Measure

Direction of Travel	Lane Movement	Number of Lanes	Capacity (Veh/Hr) On Green	Peak Hour Volume		Volume/Capacity Ratio	
				Existing+ Ambient +Project	Ex.+Amb. +Related +Project	Existing+ Ambient +Project	Ex.+Amb. +Related +Project
Eastbound	Left Turn	2	2880	496	496	0.172	0.172
	Through	2	3200	1,024	1,089	0.347 *	0.367 *
	Right Turn**	0	0	86	86	-	-
Westbound	Left Turn	1	1600	207	207	0.129 *	0.129 *
	Through	3	4800	985	1,046	0.264	0.276
	Right Turn***	0	0	281	281	-	-
Northbound	Left Turn	1	1600	309	309	0.193 *	0.193 *
	Through	2	3200	789	789	0.247	0.247
	Right Turn* **	**1**	**1600**	**171**	**171**	**0.107**	**0.107**
Southbound	Left Turn	2	2880	437	437	0.152	0.152
	Through	2	3200	688	688	0.215 *	0.215 *
	Right Turn	1	1600	389	389	0.243	0.243
		ICU Plus Lost Time Factor of 0.1				**0.984**	
		Ambient Plus Project Level of Service				**E**	
		ICU Plus Lost Time Factor of 0.1					**1.005**
		Cumulative Plus Project Level of Service					**F**

* Denotes Critical Movement
** Denotes Shared Movement With Through Lane (Added to Through for V/C Ratio)
*** **Denotes Addition of Exclusive Right Turn Lane As Mitigation Measure**

KHR ASSOCIATES
INTERSECTION CAPACITY UTILIZATION ANALYSIS

Condition:	Mitigated With Project + Related Projects	**Date:**	Projected 2012
Location:	County of Los Angeles, California	**Horizon Date:**	2012
North-South Street:	Nogales Street	**Peak Hour:**	7:30 - 8:30 AM
East-West Street:	Colima Road	**Data Source:**	KHR
Annual Growth Rate:	0.78%	**Input By:**	S. Carter

Comments: County of Los Angeles Capacity Volume of Vehicles Per Hour Per Lane = 1600

County of Los Angeles Capacity Volume of Vehicles Per Hour For Dual Left-Turn Lanes = 2880

Note: Boldface Denotes Mitigation Measure

Direction of Travel	Lane Movement	Number of Lanes	Capacity (Veh/Hr) On Green	Peak Hour Volume		Volume/Capacity Ratio	
				Existing+ Ambient +Project	Ex.+Amb. +Related +Project	Existing+ Ambient +Project	Ex.+Amb. +Related +Project
Eastbound	Left Turn	2	2880	296	296	0.103	0.103
	Through	2	3200	762	813	0.327 *	0.343 *
	Right Turn**	0	0	284	284	-	-
Westbound	Left Turn	1	1600	390	390	0.244 *	0.244 *
	Through	3	4800	857	873	0.211	0.214
	Right Turn**	0	0	155	155	-	-
Northbound	**Left Turn*** **	**2**	**2880**	**345**	**345**	**0.120**	**0.120**
	Through	2	3200	902	902	0.314 *	0.282 *
	Right Turn** **	**1**	**1600**	102	**102**	**-**	**0.064**
Southbound	Left Turn	2	2880	330	330	0.115 *	0.115 *
	Through	2	3200	850	850	0.266	0.266
	Right Turn	1	1600	290	290	0.181	0.181
ICU Plus Lost Time Factor of 0.1						**1.099**	
Ambient Plus Project Level of Service						**F**	
ICU Plus Lost Time Factor of 0.1							**1.083**
Cumulative Plus Project Level of Service							**F**

* Denotes Critical Movement
** Denotes Shared Movement With Through Lane (Added to Through for V/C Ratio)
*** **Denotes Dual Left Turn Lane As Mitigation Measure**
**** **Denotes Addition of Exclusive Right Turn Lane As Mitigation Measure**

KHR ASSOCIATES
INTERSECTION CAPACITY UTILIZATION ANALYSIS

Condition:	Mitigated With Project + Related Projects	**Date:**	Projected 2012
Location:	County of Los Angeles, California	**Horizon Date:**	2012
North-South Street:	Nogales Street	**Peak Hour:**	5:00 - 6:00 P.M.
East-West Street:	Colima Road	**Data Source:**	KHR
Annual Growth Rate:	0.78%	**Input By:**	S. Carter

Comments: County of Los Angeles Capacity Volume of Vehicles Per Hour Per Lane = 1600

County of Los Angeles Capacity Volume of Vehicles Per Hour For Dual Left-Turn Lanes = 2880

Note: Boldface Denotes Mitigation Measure

Direction of Travel	Lane Movement	Number of Lanes	Capacity (Veh/Hr) On Green	Peak Hour Volume: Existing+ Ambient +Project	Peak Hour Volume: Ex.+Amb. +Related +Project	Volume/Capacity Ratio: Existing+ Ambient +Project	Volume/Capacity Ratio: Ex.+Amb. +Related +Project
Eastbound	Left Turn	2	2880	496	496	0.172	0.172
	Through	2	3200	1,024	1,089	0.347 *	0.367 *
	Right Turn**	0	0	86	86	-	-
Westbound	Left Turn	1	1600	207	207	0.129 *	0.129 *
	Through	3	4800	985	1,046	0.264	0.276
	Right Turn***	0	0	281	281	-	-
Northbound	**Left Turn*** **	**2**	**2880**	**309**	**309**	**0.107**	**0.107**
	Through	2	3200	789	789	0.300 *	0.247 *
	Right Turn** **	**1**	**1600**	171	**171**	**-**	**0.107**
Southbound	Left Turn	2	2880	437	437	0.152 *	0.152 *
	Through	2	3200	688	688	0.215	0.215
	Right Turn	1	1600	389	389	0.243	0.243
				ICU Plus Lost Time Factor of 0.1		**1.028**	
				Ambient Plus Project Level of Service		**F**	
				ICU Plus Lost Time Factor of 0.1			**0.995**
				Cumulative Plus Project Level of Service			**E**

* Denotes Critical Movement
** Denotes Shared Movement With Through Lane (Added to Through for V/C Ratio)
*** **Denotes Dual Left Turn Lane As Mitigation Measure**
**** **Denotes Addition of Exclusive Right Turn Lane As Mitigation Measure**

KHR ASSOCIATES
INTERSECTION CAPACITY UTILIZATION ANALYSIS

Condition:	Mitigated With Project	**Date:**	Projected 2012
Location:	City of Industry, California	**Horizon Date:**	2012
North-South Street:	Fairway Drive	**Peak Hour:**	7:30 - 8:30 AM
East-West Street:	Valley Boulevard	**Data Source:**	KHR
Annual Growth Rate:	0.78%	**Input By:**	S. Carter

Comments: County of Los Angeles Capacity Volume of Vehicles Per Hour Per Lane = 1600

County of Los Angeles Capacity Volume of Vehicles Per Hour For Dual Left-Turn Lanes = 2880

Note: Boldface Denotes Mitigation Measure

Direction of Travel	Lane Movement	Number of Lanes	Capacity (Veh/Hr) On Green	Peak Hour Volume		Volume/Capacity Ratio	
				Existing+ Ambient +Project	Ex.+Amb. +Related +Project	Existing+ Ambient +Project	Ex.+Amb. +Related +Project
Eastbound	Left Turn	1	1600	19	19	0.012	0.012
	Through	2	3200	534	534	0.167 *	0.167 *
	Right Turn	1	1600	528	528	0.330	0.330
Westbound	Left Turn	2	2880	374	385	0.130 *	0.134 *
	Through**	2	3200	726	726	0.235	0.235
	Right Turn	0	0	25	25	-	-
Northbound	Left Turn	2	2880	312	312	0.133 *	0.133 *
	Through**	0	0	71	71	-	-
	Right Turn	1	1600	375	415	0.234	0.259
Southbound	Left Turn	1	1600	27	27	0.017	0.017
	Through	**2**	**3200**	**159**	**159**	**0.061 ***	**0.061 ***
	Right Turn***	0	0	37	37	-	-
		ICU Plus Lost Time Factor of 0.1				**0.591**	
		Ambient Plus Project Level of Service				**A**	
		ICU Plus Lost Time Factor of 0.1					**0.595**
		Cumulative Plus Project Level of Service					**A**

* Denotes Critical Movement
** Denotes Lane Striping as Optional Through/Turn Lane (Added to Left Turn for V/C Ratio)
*** Denotes Lane Striping as Optional Through/Turn Lane (Added to Through for V/C Ratio)

KHR ASSOCIATES
INTERSECTION CAPACITY UTILIZATION ANALYSIS

Condition:	Mitigated With Project	**Date:**	Projected 2012
Location:	City of Industry, California	**Horizon Date:**	2012
North-South Street:	Fairway Drive	**Peak Hour:**	5:00 - 6:00 P.M.
East-West Street:	Valley Boulevard	**Data Source:**	KHR
Annual Growth Rate:	0.78%	**Input By:**	S. Carter

Comments: County of Los Angeles Capacity Volume of Vehicles Per Hour Per Lane = 1600

County of Los Angeles Capacity Volume of Vehicles Per Hour For Dual Left-Turn Lanes = 2880

Note: Boldface Denotes Mitigation Measure

Direction of Travel	Lane Movement	Number of Lanes	Capacity (Veh/Hr) On Green	Peak Hour Volume		Volume/Capacity Ratio	
				Existing+ Ambient +Project	Ex.+Amb. +Related +Project	Existing+ Ambient +Project	Ex.+Amb. +Related +Project
Eastbound	Left Turn	1	1600	23	23	0.014	0.014
	Through	2	3200	1,053	1,053	0.329 *	0.329 *
	Right Turn	1	1600	436	436	0.273	0.273
Westbound	Left Turn	2	2880	480	540	0.167 *	0.188 *
	Through**	2	3200	820	820	0.261	0.261
	Right Turn	0	0	14	14	-	-
Northbound	Left Turn	2	2880	407	407	0.203 *	0.203 *
	Through**	0	0	177	177	-	-
	Right Turn	1	1600	551	594	0.344	0.371
Southbound	Left Turn	1	1600	26	26	0.016	0.016
	Through	**2**	**3200**	**155**	**155**	**0.052 ***	**0.052 ***
	Right Turn***	0	0	11	11	-	-
		ICU Plus Lost Time Factor of 0.1				**0.850**	
		Ambient Plus Project Level of Service				**D**	
		ICU Plus Lost Time Factor of 0.1					**0.871**
		Cumulative Plus Project Level of Service					**D**

* Denotes Critical Movement
** Denotes Lane Striping as Optional Through/Turn Lane (Added to Left Turn for V/C Ratio)
*** Denotes Lane Striping as Optional Through/Turn Lane (Added to Through for V/C Ratio)

Appendix G
Existing HCS+ Calculations

SHORT REPORT

General Information		Site Information	
Analyst	*PDS*	Intersection	*SR-60 EB Fairway*
Agency or Co.	*KHR Assoicates*	Area Type	*All other areas*
Date Performed	*Tuesday, February 12, 2008*	Jurisdiction	*City of Industry*
Time Period	*7:45 - 8:45 AM*	Analysis Year	*2008*

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Number of Lanes	2		0					2			2	1
Lane Group	L	LR						T			T	R
Volume (vph)	384		335					515			661	150
% Heavy Vehicles	0		0					0			0	0
PHF	0.90		0.90					0.90			0.90	0.90
Pretimed/Actuated (P/A)	A		A					A			A	A
Startup Lost Time	2.0	2.0						2.0			2.0	2.0
Extension of Effective Green	2.0	2.0						2.0			2.0	2.0
Arrival Type	3	3						3			3	3
Unit Extension	3.0	3.0						3.0			3.0	3.0
Ped/Bike/RTOR Volume	0	0	0	0	0		0	0		0	0	0
Lane Width	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/Hour												
Bus Stops/Hour	0	0						0			0	0
Minimum Pedestrian Time		3.2			3.2			3.2			3.2	

Phasing	EB Only	02	03	04	Thru & RT	06	07	08
Timing	G = 25.3	G =	G =	G =	G = 24.7	G =	G =	G =
	Y = 3	Y =	Y =	Y =	Y = 3	Y =	Y =	Y =

Duration of Analysis (hrs) = *0.25* Cycle Length C = *56.0*

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
Adjusted Flow Rate	427	372						572			734	167
Lane Group Capacity	1334	614						1344			1344	600
v/c Ratio	0.32	0.61						0.43			0.55	0.28
Green Ratio	0.45	0.45						0.44			0.44	0.44
Uniform Delay d_1	9.8	11.6						10.8			11.5	10.0
Delay Factor k	0.11	0.19						0.11			0.15	0.11
Incremental Delay d_2	0.1	1.7						0.2			0.5	0.3
PF Factor	1.000	1.000						1.000			1.000	1.000
Control Delay	10.0	13.3						11.0			12.0	10.2
Lane Group LOS	A	B						B			B	B
Approach Delay	11.5						11.0			11.7		
Approach LOS	B						B			B		
Intersection Delay	11.4			Intersection LOS						B		

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SHORT REPORT

General Information		Site Information	
Analyst	*PDS*	Intersection	*SR-60 EB Fairway*
Agency or Co.	*KHR Assoicates*	Area Type	*All other areas*
Date Performed	*Tuesday, February 12, 2008*	Jurisdiction	*City of Industry*
Time Period	*5:00 - 6:00 PM*	Analysis Year	*2008*

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Number of Lanes	2		0					2			2	1
Lane Group	L	LR						T			T	R
Volume (vph)	160		252					1374			706	305
% Heavy Vehicles	0		0					0			0	0
PHF	0.90		0.90					0.90			0.90	0.90
Pretimed/Actuated (P/A)	A		A					A			A	A
Startup Lost Time	2.0	2.0						2.0			2.0	2.0
Extension of Effective Green	2.0	2.0						2.0			2.0	2.0
Arrival Type	3	3						3			3	3
Unit Extension	3.0	3.0						3.0			3.0	3.0
Ped/Bike/RTOR Volume	0	0	0	0	0		0	0		0	0	0
Lane Width	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/Hour												
Bus Stops/Hour	0	0						0			0	0
Minimum Pedestrian Time		3.2			3.2			3.2			3.2	

Phasing	EB Only	02	03	04	Thru & RT	06	07	08
Timing	G = 14.6	G =	G =	G =	G = 35.4	G =	G =	G =
	Y = 3	Y =	Y =	Y =	Y = 3	Y =	Y =	Y =

Duration of Analysis (hrs) = *0.25* Cycle Length C = *56.0*

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
Adjusted Flow Rate	178	280						1527			784	339
Lane Group Capacity	770	355						1926			1926	860
v/c Ratio	0.23	0.79						0.79			0.41	0.39
Green Ratio	0.26	0.26						0.63			0.63	0.63
Uniform Delay d_1	16.3	19.3						7.6			5.1	5.0
Delay Factor k	0.11	0.34						0.34			0.11	0.11
Incremental Delay d_2	0.2	11.3						2.4			0.1	0.3
PF Factor	1.000	1.000						1.000			1.000	1.000
Control Delay	16.4	30.6						10.0			5.2	5.3
Lane Group LOS	B	C						A			A	A
Approach Delay	25.1						10.0			5.3		
Approach LOS	C						A			A		
Intersection Delay	10.5			Intersection LOS						B		

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SHORT REPORT

General Information		Site Information	
Analyst	*PDS*	Intersection	*SR-60 WB Fairway*
Agency or Co.	*KHR Assoicates*	Area Type	*All other areas*
Date Performed	*Tuesday, February 12, 2008*	Jurisdiction	*City of Industry*
Time Period	*7:45 - 8:45 AM*	Analysis Year	*2008*

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Number of Lanes				0	1	1	1	2			2	1
Lane Group					LT	R	L	T			T	R
Volume (vph)				246	6	429	205	897			494	169
% Heavy Vehicles				0	0	0	0	0			0	0
PHF				0.90	0.90	0.90	0.90	0.90			0.90	0.90
Pretimed/Actuated (P/A)				A	A	A	A	A			A	A
Startup Lost Time					2.0	2.0	2.0	2.0			2.0	2.0
Extension of Effective Green					2.0	2.0	2.0	2.0			2.0	2.0
Arrival Type					3	3	3	3			3	3
Unit Extension					3.0	3.0	3.0	3.0			3.0	3.0
Ped/Bike/RTOR Volume	0	0		0	0	0	0	0		0	0	0
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/Hour												
Bus Stops/Hour					0	0	0	0			0	0
Minimum Pedestrian Time		3.2			3.2			3.2			3.2	

Phasing	WB Only	02	03	04	NB Only	Thru & RT	07	08
Timing	G = 23.3	G =	G =	G =	G = 10.4	G = 13.3	G =	G =
	Y = 3	Y =	Y =	Y =	Y = 3	Y = 3	Y =	Y =

Duration of Analysis (hrs) = *0.25* Cycle Length C = *56.0*

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
Adjusted Flow Rate					280	477	228	997			549	188
Lane Group Capacity					635	566	282	1452			723	962
v/c Ratio					0.44	0.84	0.81	0.69			0.76	0.20
Green Ratio					0.42	0.42	0.19	0.48			0.24	0.71
Uniform Delay d_1					11.7	14.7	21.8	11.4			19.9	2.8
Delay Factor k					0.11	0.38	0.35	0.26			0.31	0.11
Incremental Delay d_2					0.5	11.1	15.9	1.4			4.7	0.1
PF Factor					1.000	1.000	1.000	1.000			1.000	1.000
Control Delay					12.2	25.8	37.8	12.8			24.6	2.9
Lane Group LOS					B	C	D	B			C	A
Approach Delay				20.8			17.4			19.0		
Approach LOS				C			B			B		
Intersection Delay	18.8			Intersection LOS						B		

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SHORT REPORT

General Information		Site Information	
Analyst	*PDS*	Intersection	*SR-60 WB Fairway*
Agency or Co.	*KHR Assoicates*	Area Type	*All other areas*
Date Performed	*Tuesday, February 12, 2008*	Jurisdiction	*City of Industry*
Time Period	*4:45 - 5:45 PM*	Analysis Year	*2008*

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Number of Lanes				0	1	1	1	2			2	1
Lane Group					LT	R	L	T			T	R
Volume (vph)				368	1	262	193	676			901	236
% Heavy Vehicles				0	0	0	0	0			0	0
PHF				0.90	0.90	0.90	0.90	0.90			0.90	0.90
Pretimed/Actuated (P/A)				A	A	A	A	A			A	A
Startup Lost Time					2.0	2.0	2.0	2.0			2.0	2.0
Extension of Effective Green					2.0	2.0	2.0	2.0			2.0	2.0
Arrival Type					3	3	3	3			3	3
Unit Extension					3.0	3.0	3.0	3.0			3.0	3.0
Ped/Bike/RTOR Volume	0	0		0	0	0	0	0		0	0	0
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/Hour												
Bus Stops/Hour					0	0	0	0			0	0
Minimum Pedestrian Time		3.2			3.2			3.2			3.2	

Phasing	WB Only	02	03	04	NB Only	Thru & RT	07	08
Timing	G = 16.5	G =	G =	G =	G = 8.9	G = 21.6	G =	G =
	Y = 3	Y =	Y =	Y =	Y = 3	Y = 3	Y =	Y =
Duration of Analysis (hrs) = 0.25						Cycle Length C = 56.0		

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
Adjusted Flow Rate					410	291	214	751			1001	262
Lane Group Capacity					449	401	242	1822			1175	998
v/c Ratio					0.91	0.73	0.88	0.41			0.85	0.26
Green Ratio					0.29	0.29	0.16	0.60			0.39	0.73
Uniform Delay d_1					19.1	17.7	23.0	6.0			15.7	2.5
Delay Factor k					0.43	0.29	0.41	0.11			0.38	0.11
Incremental Delay d_2					23.0	6.5	29.7	0.2			6.2	0.1
PF Factor					1.000	1.000	1.000	1.000			1.000	1.000
Control Delay					42.0	24.2	52.7	6.2			21.9	2.6
Lane Group LOS					D	C	D	A			C	A
Approach Delay				34.6			16.5			17.9		
Approach LOS				C			B			B		
Intersection Delay	21.4			Intersection LOS						C		

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TWO-WAY STOP CONTROL SUMMARY

General Information

Analyst	*PDS*
Agency/Co.	*KHR Associates*
Date Performed	*Tuesday, February 12, 2008*
Analysis Time Period	*7:45 - 8:45 AM*

Site Information

Intersection	*Reedview Brea Cyn Cutoff Rd*
Jurisdiction	*County of Los Angeles*
Analysis Year	*2008*

Project Description *Existing AM Peak Hour*

East/West Street: *Reedview Drive* | North/South Street: *Brea Canyon Cutoff Road*

Intersection Orientation: *North-South* | Study Period (hrs): *0.25*

Vehicle Volumes and Adjustments

Major Street	Northbound			Southbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume (veh/h)	*1*	*732*			*497*	*16*
Peak-Hour Factor, PHF	*1.00*	*1.00*	*1.00*	*1.00*	*1.00*	*1.00*
Hourly Flow Rate, HFR (veh/h)	*1*	*732*	*0*	*0*	*497*	*16*
Percent Heavy Vehicles	*0*	--	--	*0*	--	--
Median Type	*Two Way Left Turn Lane*					
RT Channelized			*0*			*0*
Lanes	*1*	*2*	*0*	*0*	*2*	*1*
Configuration	*L*	*T*			*T*	*R*
Upstream Signal		*0*			*0*	

Minor Street	Eastbound			Westbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume (veh/h)	*13*		*5*			
Peak-Hour Factor, PHF	*1.00*	*1.00*	*1.00*	*1.00*	*1.00*	*1.00*
Hourly Flow Rate, HFR (veh/h)	*13*	*0*	*5*	*0*	*0*	*0*
Percent Heavy Vehicles	*0*	*0*	*0*	*0*	*0*	*0*
Percent Grade (%)	*0*			*0*		
Flared Approach		*N*			*N*	
Storage		*0*			*0*	
RT Channelized			*0*			*0*
Lanes	*1*	*0*	*1*	*0*	*0*	*0*
Configuration	*L*		*R*			

Delay, Queue Length, and Level of Service

Approach	Northbound	Southbound	Westbound			Eastbound		
Movement	1	4	7	8	9	10	11	12
Lane Configuration	*L*					*L*		*R*
v (veh/h)	*1*					*13*		*5*
C (m) (veh/h)	*1063*					*419*		*796*
v/c	*0.00*					*0.03*		*0.01*
95% queue length	*0.00*					*0.10*		*0.02*
Control Delay (s/veh)	*8.4*					*13.9*		*9.6*
LOS	*A*					*B*		*A*
Approach Delay (s/veh)	--	--				*12.7*		
Approach LOS	--	--				*B*		

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TWO-WAY STOP CONTROL SUMMARY

General Information

Analyst	*PDS*
Agency/Co.	*KHR Associates*
Date Performed	*Tuesday, February 12, 2008*
Analysis Time Period	*5:00 - 6:00 PM*

Site Information

Intersection	*Reedview Brea Cyn Cutoff Rd*
Jurisdiction	*County of Los Angeles*
Analysis Year	*2008*

Project Description *Existing PM Peak Hour*

East/West Street: *Reedview Drive* | North/South Street: *Brea Canyon Cutoff Road*

Intersection Orientation: *North-South* | Study Period (hrs): *0.25*

Vehicle Volumes and Adjustments

Major Street	Northbound			Southbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume (veh/h)	*2*	*741*			*703*	*23*
Peak-Hour Factor, PHF	*1.00*	*1.00*	*1.00*	*1.00*	*1.00*	*1.00*
Hourly Flow Rate, HFR (veh/h)	*2*	*741*	*0*	*0*	*703*	*23*
Percent Heavy Vehicles	*0*	--	--	*0*	--	--
Median Type	*Two Way Left Turn Lane*					
RT Channelized			*0*			*0*
Lanes	*1*	*2*	*0*	*0*	*2*	*1*
Configuration	*L*	*T*			*T*	*R*
Upstream Signal		*0*			*0*	

Minor Street	Eastbound			Westbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume (veh/h)	*13*		*5*			
Peak-Hour Factor, PHF	*1.00*	*1.00*	*1.00*	*1.00*	*1.00*	*1.00*
Hourly Flow Rate, HFR (veh/h)	*13*	*0*	*5*	*0*	*0*	*0*
Percent Heavy Vehicles	*0*	*0*	*0*	*0*	*0*	*0*
Percent Grade (%)	*0*			*0*		
Flared Approach		*N*			*N*	
Storage		*0*			*0*	
RT Channelized			*0*			*0*
Lanes	*1*	*0*	*1*	*0*	*0*	*0*
Configuration	*L*		*R*			

Delay, Queue Length, and Level of Service

Approach	Northbound	Southbound	Westbound			Eastbound		
Movement	1	4	7	8	9	10	11	12
Lane Configuration	*L*					*L*		*R*
v (veh/h)	*2*					*13*		*5*
C (m) (veh/h)	*886*					*341*		*696*
v/c	*0.00*					*0.04*		*0.01*
95% queue length	*0.01*					*0.12*		*0.02*
Control Delay (s/veh)	*9.1*					*16.0*		*10.2*
LOS	*A*					*C*		*B*
Approach Delay (s/veh)	--	--				*14.4*		
Approach LOS	--	--				*B*		

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SHORT REPORT

General Information		Site Information	
Analyst	*PDS*	Intersection	*SR-57 NB Brea Canyon Cutoff*
Agency or Co.	*KHR Assoicates*	Area Type	*All other areas*
Date Performed	*Tuesday, February 12, 2008*	Jurisdiction	*City of Diamond Bar*
Time Period	*7:30 - 8:30 AM*	Analysis Year	*2008*

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Number of Lanes	1	2			2		1		1			
Lane Group	L	T			T		L		R			
Volume (vph)	39	524			594		241		190			
% Heavy Vehicles	0	0			0		0		0			
PHF	0.90	0.90			0.90		0.90		0.90			
Pretimed/Actuated (P/A)	A	A			A		A		A			
Startup Lost Time	2.0	2.0			2.0		2.0		2.0			
Extension of Effective Green	2.0	2.0			2.0		2.0		2.0			
Arrival Type	3	3			3		3		3			
Unit Extension	3.0	3.0			3.0		3.0		3.0			
Ped/Bike/RTOR Volume	0	0		0	0		0	0	0	0	0	
Lane Width	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/Hour												
Bus Stops/Hour	0	0			0		0		0			
Minimum Pedestrian Time		3.2			3.2			3.2			3.2	

Phasing	Thru Only	EB Only	03	04	NB Only	06	07	08
Timing	G = 24.2	G = 7.2	G =	G =	G = 15.6	G =	G =	G =
	Y = 3	Y = 3	Y =	Y =	Y = 3	Y =	Y =	Y =

Duration of Analysis (hrs) = *0.25* Cycle Length C = *56.0*

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
Adjusted Flow Rate	43	582			660		268		211			
Lane Group Capacity	195	1871			1316		423		379			
v/c Ratio	0.22	0.31			0.50		0.63		0.56			
Green Ratio	0.13	0.61			0.43		0.28		0.28			
Uniform Delay d_1	21.9	5.1			11.5		17.7		17.2			
Delay Factor k	0.11	0.11			0.11		0.21		0.15			
Incremental Delay d_2	0.6	0.1			0.3		3.1		1.8			
PF Factor	1.000	1.000			1.000		1.000		1.000			
Control Delay	22.5	5.2			11.8		20.8		19.1			
Lane Group LOS	C	A			B		C		B			
Approach Delay	6.4			11.8			20.0					
Approach LOS	A			B			C					
Intersection Delay	12.1			Intersection LOS						B		

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SHORT REPORT

General Information		Site Information	
Analyst	*PDS*	Intersection	*SR-57 NB Brea Canyon Cutoff*
Agency or Co.	*KHR Assoicates*	Area Type	*All other areas*
Date Performed	*Tuesday, February 12, 2008*	Jurisdiction	*City of Diamond Bar*
Time Period	*5:00 - 6:00 PM*	Analysis Year	*2008*

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Number of Lanes	1	2			2		1		1			
Lane Group	L	T			T		L		R			
Volume (vph)	23	906			623		309		123			
% Heavy Vehicles	0	0			0		0		0			
PHF	0.90	0.90			0.90		0.90		0.90			
Pretimed/Actuated (P/A)	A	A			A		A		A			
Startup Lost Time	2.0	2.0			2.0		2.0		2.0			
Extension of Effective Green	2.0	2.0			2.0		2.0		2.0			
Arrival Type	3	3			3		3		3			
Unit Extension	3.0	3.0			3.0		3.0		3.0			
Ped/Bike/RTOR Volume	0	0		0	0		0	0	0	0	0	
Lane Width	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/Hour												
Bus Stops/Hour	0	0			0		0		0			
Minimum Pedestrian Time		3.2			3.2			3.2			3.2	

Phasing	Thru Only	EB Only	03	04	NB Only	06	07	08
Timing	G = 23.6	G = 7.2	G =	G =	G = 16.2	G =	G =	G =
	Y = 3	Y = 3	Y =	Y =	Y = 3	Y =	Y =	Y =

Duration of Analysis (hrs) = *0.25* Cycle Length C = *56.0*

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
Adjusted Flow Rate	26	1007			692		343		137			
Lane Group Capacity	195	1838			1284		440		393			
v/c Ratio	0.13	0.55			0.54		0.78		0.35			
Green Ratio	0.13	0.60			0.42		0.29		0.29			
Uniform Delay d_1	21.6	6.6			12.1		18.3		15.7			
Delay Factor k	0.11	0.15			0.14		0.33		0.11			
Incremental Delay d_2	0.3	0.3			0.5		8.7		0.5			
PF Factor	1.000	1.000			1.000		1.000		1.000			
Control Delay	21.9	6.9			12.6		27.0		16.3			
Lane Group LOS	C	A			B		C		B			
Approach Delay	7.3			12.6			23.9					
Approach LOS	A			B			C					
Intersection Delay	12.6			Intersection LOS						B		

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SHORT REPORT

General Information		Site Information	
Analyst	PDS	Intersection	SR-57 SB Brea Canyon Cutoff
Agency or Co.	KHR Assoicates	Area Type	All other areas
Date Performed	Tuesday, February 12, 2008	Jurisdiction	City of Diamond Bar
Time Period	8:00 - 9:00 AM	Analysis Year	2008

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Number of Lanes		2		1	2					1		1
Lane Group		T		L	T					L		R
Volume (vph)		215		402	712					54		158
% Heavy Vehicles		0		0	0					0		0
PHF		0.90		0.90	0.90					0.90		0.90
Pretimed/Actuated (P/A)		A		A	A					A		A
Startup Lost Time		2.0		2.0	2.0					2.0		2.0
Extension of Effective Green		2.0		2.0	2.0					2.0		2.0
Arrival Type		3		3	3					3		3
Unit Extension		3.0		3.0	3.0					3.0		3.0
Ped/Bike/RTOR Volume	0	0		0	0		0	0		0	0	0
Lane Width		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/Hour												
Bus Stops/Hour		0		0	0					0		0
Minimum Pedestrian Time		3.2			3.2			3.2			3.2	

Phasing	Thru Only	WB Only	03	04	SB Only	06	07	08
Timing	G = 8.1	G = 27.8	G =	G =	G = 11.1	G =	G =	G =
	Y = 3	Y = 3	Y =	Y =	Y = 3	Y =	Y =	Y =

Duration of Analysis (hrs) = 0.25 | Cycle Length C = 56.0

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
Adjusted Flow Rate		239		447	791					60		176
Lane Group Capacity		441		755	2116					301		270
v/c Ratio		0.54		0.59	0.37					0.20		0.65
Green Ratio		0.14		0.50	0.69					0.20		0.20
Uniform Delay d_1		22.2		10.1	3.5					18.7		20.7
Delay Factor k		0.14		0.18	0.11					0.11		0.23
Incremental Delay d_2		1.4		1.2	0.1					0.3		5.5
PF Factor		1.000		1.000	1.000					1.000		1.000
Control Delay		23.6		11.3	3.6					19.1		26.2
Lane Group LOS		C		B	A					B		C
Approach Delay	23.6			6.4						24.4		
Approach LOS	C			A						C		
Intersection Delay	11.3			Intersection LOS						B		

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SHORT REPORT

General Information		Site Information	
Analyst	*PDS*	Intersection	*SR-57 SB Brea Canyon Cutoff*
Agency or Co.	*KHR Assoicates*	Area Type	*All other areas*
Date Performed	*Tuesday, February 12, 2008*	Jurisdiction	*City of Diamond Bar*
Time Period	*5:00 - 6:00 PM*	Analysis Year	*2008*

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Number of Lanes		2		1	2					1		1
Lane Group		T		L	T					L		R
Volume (vph)		859		183	910					47		161
% Heavy Vehicles		0		0	0					0		0
PHF		0.90		0.90	0.90					0.90		0.90
Pretimed/Actuated (P/A)		A		A	A					A		A
Startup Lost Time		2.0		2.0	2.0					2.0		2.0
Extension of Effective Green		2.0		2.0	2.0					2.0		2.0
Arrival Type		3		3	3					3		3
Unit Extension		3.0		3.0	3.0					3.0		3.0
Ped/Bike/RTOR Volume	0	0		0	0		0	0		0	0	0
Lane Width		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/Hour												
Bus Stops/Hour		0		0	0					0		0
Minimum Pedestrian Time		3.2			3.2			3.2			3.2	

Phasing	Thru Only	WB Only	03	04	SB Only	06	07	08
Timing	G = 26.5	G = 10.6	G =	G =	G = 9.9	G =	G =	G =
	Y = 3	Y = 3	Y =	Y =	Y = 3	Y =	Y =	Y =

Duration of Analysis (hrs) = *0.25* Cycle Length C = *56.0*

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
Adjusted Flow Rate		954		203	1011					52		179
Lane Group Capacity		1441		288	2181					269		240
v/c Ratio		0.66		0.70	0.46					0.19		0.75
Green Ratio		0.47		0.19	0.72					0.18		0.18
Uniform Delay d_1		11.3		21.2	3.4					19.6		21.9
Delay Factor k		0.24		0.27	0.11					0.11		0.30
Incremental Delay d_2		1.1		7.6	0.2					0.4		12.0
PF Factor		1.000		1.000	1.000					1.000		1.000
Control Delay		12.5		28.9	3.5					20.0		33.9
Lane Group LOS		B		C	A					B		C
Approach Delay	12.5			7.8						30.8		
Approach LOS	B			A						C		
Intersection Delay	11.8			Intersection LOS						B		

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SHORT REPORT

General Information		Site Information	
Analyst	*PDS*	Intersection	*SR-57 NB Pathfinder*
Agency or Co.	*KHR Assoicates*	Area Type	*All other areas*
Date Performed	*Tuesday, February 12, 2008*	Jurisdiction	*City of Diamond Bar*
Time Period	*7:45 - 8:45 AM*	Analysis Year	*2008*

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Number of Lanes	1	2			2	1	1		1			
Lane Group	L	T			T	R	L		R			
Volume (vph)	112	355			1027	617	209		67			
% Heavy Vehicles	0	0			0	0	0		0			
PHF	0.90	0.90			0.90	0.90	0.90		0.90			
Pretimed/Actuated (P/A)	A	A			A	A	A		A			
Startup Lost Time	2.0	2.0			2.0	2.0	2.0		2.0			
Extension of Effective Green	2.0	2.0			2.0	2.0	2.0		2.0			
Arrival Type	3	3			3	3	3		3			
Unit Extension	3.0	3.0			3.0	3.0	3.0		3.0			
Ped/Bike/RTOR Volume	0	0		0	0	0	0	0	0	0	0	
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/Hour												
Bus Stops/Hour	0	0			0	0	0		0			
Minimum Pedestrian Time		3.2			3.2			3.2			3.2	

Phasing	Thru & RT	EB Only	03	04	NB Only	06	07	08
Timing	G = 38.5	G = 7.0	G =	G =	G = 11.4	G =	G =	G =
	Y = 3	Y = 3	Y =	Y =	Y = 3	Y =	Y =	Y =

Duration of Analysis (hrs) = *0.25* Cycle Length C = *65.9*

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
Adjusted Flow Rate	124	394			1141	686	232		74			
Lane Group Capacity	161	2242			1780	795	263		235			
v/c Ratio	0.77	0.18			0.64	0.86	0.88		0.31			
Green Ratio	0.11	0.74			0.58	0.58	0.17		0.17			
Uniform Delay d_1	28.7	2.6			9.1	11.5	26.6		23.8			
Delay Factor k	0.32	0.11			0.22	0.39	0.41		0.11			
Incremental Delay d_2	20.1	0.0			0.8	9.7	27.5		0.8			
PF Factor	1.000	1.000			1.000	1.000	1.000		1.000			
Control Delay	48.8	2.7			9.9	21.2	54.1		24.6			
Lane Group LOS	D	A			A	C	D		C			
Approach Delay	13.7			14.1			47.0					
Approach LOS	B			B			D					
Intersection Delay	17.8			Intersection LOS						B		

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SHORT REPORT

General Information		Site Information	
Analyst	PDS	Intersection	SR-57 NB Pathfinder
Agency or Co.	KHR Assoicates	Area Type	All other areas
Date Performed	Tuesday, February 12, 2008	Jurisdiction	City of Diamond Bar
Time Period	5:00 - 6:00 PM	Analysis Year	2008

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Number of Lanes	1	2			2	1	1		1			
Lane Group	L	T			T	R	L		R			
Volume (vph)	89	684			483	418	438		358			
% Heavy Vehicles	0	0			0	0	0		0			
PHF	0.90	0.90			0.90	0.90	0.90		0.90			
Pretimed/Actuated (P/A)	A	A			A	A	A		A			
Startup Lost Time	2.0	2.0			2.0	2.0	2.0		2.0			
Extension of Effective Green	2.0	2.0			2.0	2.0	2.0		2.0			
Arrival Type	3	3			3	3	3		3			
Unit Extension	3.0	3.0			3.0	3.0	3.0		3.0			
Ped/Bike/RTOR Volume	0	0		0	0	0	0	0	0	0	0	
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/Hour												
Bus Stops/Hour	0	0			0	0	0		0			
Minimum Pedestrian Time		3.2			3.2			3.2			3.2	

Phasing	Thru & RT	EB Only	03	04	NB Only	06	07	08
Timing	G = 24.9	G = 7.1	G =	G =	G = 25.0	G =	G =	G =
	Y = 3	Y = 3	Y =	Y =	Y = 3	Y =	Y =	Y =

Duration of Analysis (hrs) = 0.25 | Cycle Length C = 66.0

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
Adjusted Flow Rate	99	760			537	464	487		398			
Lane Group Capacity	164	1615			1149	513	576		515			
v/c Ratio	0.60	0.47			0.47	0.90	0.85		0.77			
Green Ratio	0.11	0.53			0.38	0.38	0.38		0.38			
Uniform Delay d_1	28.1	9.7			15.5	19.4	18.7		18.0			
Delay Factor k	0.19	0.11			0.11	0.43	0.38		0.32			
Incremental Delay d_2	6.2	0.2			0.3	19.5	11.2		7.2			
PF Factor	1.000	1.000			1.000	1.000	1.000		1.000			
Control Delay	34.3	9.9			15.8	38.9	29.9		25.2			
Lane Group LOS	C	A			B	D	C		C			
Approach Delay	12.7			26.5			27.8					
Approach LOS	B			C			C					
Intersection Delay	22.6			Intersection LOS						C		

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SHORT REPORT

General Information		Site Information	
Analyst	PDS	Intersection	SR-57 SB Pathfinder
Agency or Co.	KHR Assoicates	Area Type	All other areas
Date Performed	Tuesday, February 12, 2008	Jurisdiction	City of Diamond Bar
Time Period	7:45 - 8:45 AM	Analysis Year	2008

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Number of Lanes		2		1	2					1		2
Lane Group		T		L	T					L		R
Volume (vph)		467		424	812					256		113
% Heavy Vehicles		0		0	0					0		0
PHF		0.90		0.90	0.90					0.90		0.90
Pretimed/Actuated (P/A)		A		A	A					A		A
Startup Lost Time		2.0		2.0	2.0					2.0		2.0
Extension of Effective Green		2.0		2.0	2.0					2.0		2.0
Arrival Type		3		3	3					3		3
Unit Extension		3.0		3.0	3.0					3.0		3.0
Ped/Bike/RTOR Volume	0	0		0	0		0	0		0	0	0
Lane Width		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/Hour												
Bus Stops/Hour		0		0	0					0		0
Minimum Pedestrian Time		3.2			3.2			3.2			3.2	

Phasing	Thru Only	WB Only	03	04	SB Only	06	07	08
Timing	G = 13.5	G = 21.7	G =	G =	G = 11.8	G =	G =	G =
	Y = 3	Y = 3	Y =	Y =	Y = 3	Y =	Y =	Y =

Duration of Analysis (hrs) = 0.25 | Cycle Length C = 56.0

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
Adjusted Flow Rate		519		471	902					284		126
Lane Group Capacity		734		589	2078					320		507
v/c Ratio		0.71		0.80	0.43					0.89		0.25
Green Ratio		0.24		0.39	0.68					0.21		0.21
Uniform Delay d_1		19.4		15.2	4.0					21.5		18.4
Delay Factor k		0.27		0.34	0.11					0.41		0.11
Incremental Delay d_2		3.1		7.7	0.1					24.6		0.3
PF Factor		1.000		1.000	1.000					1.000		1.000
Control Delay		22.6		22.9	4.2					46.1		18.7
Lane Group LOS		C		C	A					D		B
Approach Delay	22.6			10.6						37.6		
Approach LOS	C			B						D		
Intersection Delay	18.1			Intersection LOS						B		

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SHORT REPORT

General Information		Site Information	
Analyst	PDS	Intersection	SR-57 SB Pathfinder
Agency or Co.	KHR Assoicates	Area Type	All other areas
Date Performed	Tuesday, February 12, 2008	Jurisdiction	City of Diamond Bar
Time Period	5:00 - 6:00 PM	Analysis Year	2008

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Number of Lanes		2		1	2					1		2
Lane Group		T		L	T					L		R
Volume (vph)		773		82	421					292		357
% Heavy Vehicles		0		0	0					0		0
PHF		0.90		0.90	0.90					0.90		0.90
Pretimed/Actuated (P/A)		A		A	A					A		A
Startup Lost Time		2.0		2.0	2.0					2.0		2.0
Extension of Effective Green		2.0		2.0	2.0					2.0		2.0
Arrival Type		3		3	3					3		3
Unit Extension		3.0		3.0	3.0					3.0		3.0
Ped/Bike/RTOR Volume	0	0		0	0		0	0		0	0	0
Lane Width		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/Hour												
Bus Stops/Hour		0		0	0					0		0
Minimum Pedestrian Time		3.2			3.2			3.2			3.2	

Phasing	Thru Only	WB Only	03	04	SB Only	06	07	08
Timing	G = 23.5	G = 7.0	G =	G =	G = 16.5	G =	G =	G =
	Y = 3	Y = 3	Y =	Y =	Y = 3	Y =	Y =	Y =

Duration of Analysis (hrs) = 0.25 | Cycle Length C = 56.0

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
Adjusted Flow Rate		859		91	468					324		397
Lane Group Capacity		1278		190	1822					448		709
v/c Ratio		0.67		0.48	0.26					0.72		0.56
Green Ratio		0.42		0.13	0.60					0.29		0.29
Uniform Delay d_1		13.1		22.8	5.3					17.7		16.7
Delay Factor k		0.24		0.11	0.11					0.28		0.16
Incremental Delay d_2		1.4		1.9	0.1					5.7		1.0
PF Factor		1.000		1.000	1.000					1.000		1.000
Control Delay		14.5		24.7	5.4					23.4		17.7
Lane Group LOS		B		C	A					C		B
Approach Delay	14.5			8.6						20.3		
Approach LOS	B			A						C		
Intersection Delay	14.9			Intersection LOS						B		

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Appendix H

Existing+Ambient

HCS+ Calculations

SHORT REPORT

General Information		Site Information	
Analyst	*PDS*	Intersection	*SR-60 EB Fairway*
Agency or Co.	*KHR Assoicates*	Area Type	*All other areas*
Date Performed	*Projected 2012*	Jurisdiction	*City of Industry*
Time Period	*7:45 - 8:45 AM*	Analysis Year	*2012*

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Number of Lanes	2		0					2			2	1
Lane Group	L	LR						T			T	R
Volume (vph)	396		346					531			682	155
% Heavy Vehicles	0		0					0			0	0
PHF	0.90		0.90					0.90			0.90	0.90
Pretimed/Actuated (P/A)	A		A					A			A	A
Startup Lost Time	2.0	2.0						2.0			2.0	2.0
Extension of Effective Green	2.0	2.0						2.0			2.0	2.0
Arrival Type	3	3						3			3	3
Unit Extension	3.0	3.0						3.0			3.0	3.0
Ped/Bike/RTOR Volume	0	0	0	0	0		0	0		0	0	0
Lane Width	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/Hour												
Bus Stops/Hour	0	0						0			0	0
Minimum Pedestrian Time		3.2			3.2			3.2			3.2	

Phasing	EB Only	02	03	04	Thru & RT	06	07	08
Timing	G = 25.0	G =	G =	G =	G = 25.0	G =	G =	G =
	Y = 3	Y =	Y =	Y =	Y = 3	Y =	Y =	Y =

Duration of Analysis (hrs) = *0.25* Cycle Length C = *56.0*

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
Adjusted Flow Rate	440	384						590			758	172
Lane Group Capacity	1318	607						1360			1360	607
v/c Ratio	0.33	0.63						0.43			0.56	0.28
Green Ratio	0.45	0.45						0.45			0.45	0.45
Uniform Delay d_1	10.1	12.0						10.6			11.4	9.8
Delay Factor k	0.11	0.21						0.11			0.15	0.11
Incremental Delay d_2	0.2	2.2						0.2			0.5	0.3
PF Factor	1.000	1.000						1.000			1.000	1.000
Control Delay	10.2	14.1						10.9			11.9	10.1
Lane Group LOS	B	B						B			B	B
Approach Delay	12.0						10.9			11.6		
Approach LOS	B						B			B		
Intersection Delay	11.6			Intersection LOS						B		

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SHORT REPORT

General Information		Site Information	
Analyst	*PDS*	Intersection	*SR-60 EB Fairway*
Agency or Co.	*KHR Assoicates*	Area Type	*All other areas*
Date Performed	*Projected 2012*	Jurisdiction	*City of Industry*
Time Period	*5:00 - 6:00 PM*	Analysis Year	*2012*

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Number of Lanes	2		0					2			2	1
Lane Group	L	LR						T			T	R
Volume (vph)	165		260					1417			728	315
% Heavy Vehicles	0		0					0			0	0
PHF	0.90		0.90					0.90			0.90	0.90
Pretimed/Actuated (P/A)	A		A					A			A	A
Startup Lost Time	2.0	2.0						2.0			2.0	2.0
Extension of Effective Green	2.0	2.0						2.0			2.0	2.0
Arrival Type	3	3						3			3	3
Unit Extension	3.0	3.0						3.0			3.0	3.0
Ped/Bike/RTOR Volume	0	0	0	0	0		0	0		0	0	0
Lane Width	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/Hour												
Bus Stops/Hour	0	0						0			0	0
Minimum Pedestrian Time		3.2			3.2			3.2			3.2	

Phasing	EB Only	02	03	04	Thru & RT	06	07	08
Timing	G = 13.9	G =	G =	G =	G = 36.1	G =	G =	G =
	Y = 3	Y =	Y =	Y =	Y = 3	Y =	Y =	Y =

Duration of Analysis (hrs) = *0.25* Cycle Length C = *56.0*

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
Adjusted Flow Rate	183	289						1574			809	350
Lane Group Capacity	733	338						1964			1964	877
v/c Ratio	0.25	0.86						0.80			0.41	0.40
Green Ratio	0.25	0.25						0.64			0.64	0.64
Uniform Delay d_1	16.9	20.1						7.3			4.8	4.8
Delay Factor k	0.11	0.39						0.35			0.11	0.11
Incremental Delay d_2	0.2	18.9						2.5			0.1	0.3
PF Factor	1.000	1.000						1.000			1.000	1.000
Control Delay	17.1	38.9						9.8			5.0	5.1
Lane Group LOS	B	D						A			A	A
Approach Delay	30.5						9.8			5.0		
Approach LOS	C						A			A		
Intersection Delay	11.1			Intersection LOS						B		

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SHORT REPORT

General Information		Site Information	
Analyst	*PDS*	Intersection	*SR-60 WB Fairway*
Agency or Co.	*KHR Assoicates*	Area Type	*All other areas*
Date Performed	*Projected 2012*	Jurisdiction	*City of Industry*
Time Period	*7:45 - 8:45 AM*	Analysis Year	*2012*

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Number of Lanes				0	1	1	1	2			2	1
Lane Group					LT	R	L	T			T	R
Volume (vph)				254	6	443	211	925			510	174
% Heavy Vehicles				0	0	0	0	0			0	0
PHF				0.90	0.90	0.90	0.90	0.90			0.90	0.90
Pretimed/Actuated (P/A)				A	A	A	A	A			A	A
Startup Lost Time					2.0	2.0	2.0	2.0			2.0	2.0
Extension of Effective Green					2.0	2.0	2.0	2.0			2.0	2.0
Arrival Type					3	3	3	3			3	3
Unit Extension					3.0	3.0	3.0	3.0			3.0	3.0
Ped/Bike/RTOR Volume	0	0		0	0	0	0	0		0	0	0
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/Hour												
Bus Stops/Hour					0	0	0	0			0	0
Minimum Pedestrian Time		3.2			3.2			3.2			3.2	

Phasing	WB Only	02	03	04	NB Only	Thru & RT	07	08
Timing	G = 23.0	G =	G =	G =	G = 10.6	G = 13.4	G =	G =
	Y = 3	Y =	Y =	Y =	Y = 3	Y = 3	Y =	Y =
Duration of Analysis (hrs) = 0.25						Cycle Length C = 56.0		

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
Adjusted Flow Rate					289	492	234	1028			567	193
Lane Group Capacity					627	559	288	1469			729	957
v/c Ratio					0.46	0.88	0.81	0.70			0.78	0.20
Green Ratio					0.41	0.41	0.19	0.48			0.24	0.70
Uniform Delay d_1					12.0	15.2	21.7	11.3			19.9	2.9
Delay Factor k					0.11	0.41	0.35	0.27			0.33	0.11
Incremental Delay d_2					0.5	15.0	16.1	1.5			5.4	0.1
PF Factor					1.000	1.000	1.000	1.000			1.000	1.000
Control Delay					12.5	30.3	37.8	12.8			25.3	3.0
Lane Group LOS					B	C	D	B			C	A
Approach Delay				23.7			17.5			19.6		
Approach LOS				C			B			B		
Intersection Delay	19.8			Intersection LOS						B		

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SHORT REPORT

General Information		Site Information	
Analyst	*PDS*	Intersection	*SR-60 WB Fairway*
Agency or Co.	*KHR Assoicates*	Area Type	*All other areas*
Date Performed	*Projected 2012*	Jurisdiction	*City of Industry*
Time Period	*4:45 - 5:45 PM*	Analysis Year	*2012*

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Number of Lanes				0	1	1	1	2			2	1
Lane Group					LT	R	L	T			T	R
Volume (vph)				380	1	270	199	697			929	243
% Heavy Vehicles				0	0	0	0	0			0	0
PHF				0.90	0.90	0.90	0.90	0.90			0.90	0.90
Pretimed/Actuated (P/A)				A	A	A	A	A			A	A
Startup Lost Time					2.0	2.0	2.0	2.0			2.0	2.0
Extension of Effective Green					2.0	2.0	2.0	2.0			2.0	2.0
Arrival Type					3	3	3	3			3	3
Unit Extension					3.0	3.0	3.0	3.0			3.0	3.0
Ped/Bike/RTOR Volume	0	0		0	0	0	0	0		0	0	0
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/Hour												
Bus Stops/Hour					0	0	0	0			0	0
Minimum Pedestrian Time		3.2			3.2			3.2			3.2	

Phasing	WB Only	02	03	04	NB Only	Thru & RT	07	08
Timing	G = 16.7	G =	G =	G =	G = 9.0	G = 21.3	G =	G =
	Y = 3	Y =	Y =	Y =	Y = 3	Y = 3	Y =	Y =

Duration of Analysis (hrs) = *0.25* Cycle Length C = *56.0*

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
Adjusted Flow Rate					423	300	221	774			1032	270
Lane Group Capacity					454	406	244	1811			1159	996
v/c Ratio					0.93	0.74	0.91	0.43			0.89	0.27
Green Ratio					0.30	0.30	0.16	0.59			0.38	0.73
Uniform Delay d_1					19.1	17.7	23.1	6.2			16.3	2.5
Delay Factor k					0.45	0.30	0.43	0.11			0.41	0.11
Incremental Delay d_2					26.1	7.0	33.7	0.2			8.9	0.1
PF Factor					1.000	1.000	1.000	1.000			1.000	1.000
Control Delay					45.2	24.7	56.8	6.3			25.1	2.7
Lane Group LOS					D	C	E	A			C	A
Approach Delay				36.7			17.5			20.5		
Approach LOS				D			B			C		
Intersection Delay	23.4			Intersection LOS						C		

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TWO-WAY STOP CONTROL SUMMARY

General Information

Analyst	*PDS*
Agency/Co.	*KHR Associates*
Date Performed	*Weekday*
Analysis Time Period	*7:45 - 8:45 AM*

Site Information

Intersection	*Reedview Brea Cyn Cutoff Rd.*
Jurisdiction	*County of Los Angeles*
Analysis Year	*2012*

Project Description *Existing Ambient AM Peak Hour*

East/West Street: *Reedview Drive* | North/South Street: *Brea Canyon Cutoff Road*

Intersection Orientation: *North-South* | Study Period (hrs): *0.25*

Vehicle Volumes and Adjustments

Major Street	Northbound			Southbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume (veh/h)	*1*	*755*			*513*	*16*
Peak-Hour Factor, PHF	*1.00*	*1.00*	*1.00*	*1.00*	*1.00*	*1.00*
Hourly Flow Rate, HFR (veh/h)	*1*	*755*	*0*	*0*	*513*	*16*
Percent Heavy Vehicles	*0*	--	--	*0*	--	--
Median Type	*Two Way Left Turn Lane*					
RT Channelized			*0*			*0*
Lanes	*1*	*2*	*0*	*0*	*2*	*1*
Configuration	*L*	*T*			*T*	*R*
Upstream Signal		*0*			*0*	

Minor Street	Eastbound			Westbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume (veh/h)	*13*		*5*			
Peak-Hour Factor, PHF	*1.00*	*1.00*	*1.00*	*1.00*	*1.00*	*1.00*
Hourly Flow Rate, HFR (veh/h)	*13*	*0*	*5*	*0*	*0*	*0*
Percent Heavy Vehicles	*0*	*0*	*0*	*0*	*0*	*0*
Percent Grade (%)	*0*			*0*		
Flared Approach		*N*			*N*	
Storage		*0*			*0*	
RT Channelized			*0*			*0*
Lanes	*1*	*0*	*1*	*0*	*0*	*0*
Configuration	*L*		*R*			

Delay, Queue Length, and Level of Service

Approach	Northbound	Southbound	Westbound			Eastbound		
Movement	1	4	7	8	9	10	11	12
Lane Configuration	*L*					*L*		*R*
v (veh/h)	*1*					*13*		*5*
C (m) (veh/h)	*1048*					*410*		*788*
v/c	*0.00*					*0.03*		*0.01*
95% queue length	*0.00*					*0.10*		*0.02*
Control Delay (s/veh)	*8.4*					*14.1*		*9.6*
LOS	*A*					*B*		*A*
Approach Delay (s/veh)	--	--				*12.8*		
Approach LOS	--	--				*B*		

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TWO-WAY STOP CONTROL SUMMARY

General Information

Analyst	*PDS*
Agency/Co.	*KHR Associates*
Date Performed	*Weekday*
Analysis Time Period	*5:00 - 6:00 PM*

Site Information

Intersection	*Reedview Brea Cyn Cutoff Rd.*
Jurisdiction	*County of Los Angeles*
Analysis Year	*2012*

Project Description *Existing Ambient PM Peak Hour*

East/West Street: *Reedview Drive* | North/South Street: *Brea Canyon Cutoff Road*

Intersection Orientation: *North-South* | Study Period (hrs): *0.25*

Vehicle Volumes and Adjustments

Major Street	Northbound			Southbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume (veh/h)	*2*	*764*			*725*	*24*
Peak-Hour Factor, PHF	*1.00*	*1.00*	*1.00*	*1.00*	*1.00*	*1.00*
Hourly Flow Rate, HFR (veh/h)	*2*	*764*	*0*	*0*	*725*	*24*
Percent Heavy Vehicles	*0*	--	--	*0*	--	--
Median Type	*Two Way Left Turn Lane*					
RT Channelized			*0*			*0*
Lanes	*1*	*2*	*0*	*0*	*2*	*1*
Configuration	*L*	*T*			*T*	*R*
Upstream Signal		*0*			*0*	

Minor Street	Eastbound			Westbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume (veh/h)	*13*		*5*			
Peak-Hour Factor, PHF	*1.00*	*1.00*	*1.00*	*1.00*	*1.00*	*1.00*
Hourly Flow Rate, HFR (veh/h)	*13*	*0*	*5*	*0*	*0*	*0*
Percent Heavy Vehicles	*0*	*0*	*0*	*0*	*0*	*0*
Percent Grade (%)	*0*			*0*		
Flared Approach		*N*			*N*	
Storage		*0*			*0*	
RT Channelized			*0*			*0*
Lanes	*1*	*0*	*1*	*0*	*0*	*0*
Configuration	*L*		*R*			

Delay, Queue Length, and Level of Service

Approach	Northbound	Southbound	Westbound			Eastbound		
Movement	1	4	7	8	9	10	11	12
Lane Configuration	*L*					*L*		*R*
v (veh/h)	*2*					*13*		*5*
C (m) (veh/h)	*869*					*331*		*687*
v/c	*0.00*					*0.04*		*0.01*
95% queue length	*0.01*					*0.12*		*0.02*
Control Delay (s/veh)	*9.2*					*16.3*		*10.3*
LOS	*A*					*C*		*B*
Approach Delay (s/veh)	--	--				*14.6*		
Approach LOS	--	--				*B*		

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SHORT REPORT

General Information		Site Information	
Analyst	*PDS*	Intersection	*SR-57 NB Brea Canyon Cutoff*
Agency or Co.	*KHR Assoicates*	Area Type	*All other areas*
Date Performed	*Projected 2012*	Jurisdiction	*City of Diamond Bar*
Time Period	*7:30 - 8:30 AM*	Analysis Year	*2012*

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Number of Lanes	1	2			2		1		1			
Lane Group	L	T			T		L		R			
Volume (vph)	40	541			613		249		196			
% Heavy Vehicles	0	0			0		0		0			
PHF	0.90	0.90			0.90		0.90		0.90			
Pretimed/Actuated (P/A)	A	A			A		A		A			
Startup Lost Time	2.0	2.0			2.0		2.0		2.0			
Extension of Effective Green	2.0	2.0			2.0		2.0		2.0			
Arrival Type	3	3			3		3		3			
Unit Extension	3.0	3.0			3.0		3.0		3.0			
Ped/Bike/RTOR Volume	0	0		0	0		0	0	0	0	0	
Lane Width	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/Hour												
Bus Stops/Hour	0	0			0		0		0			
Minimum Pedestrian Time		3.2			3.2			3.2			3.2	

Phasing	Thru Only	EB Only	03	04	NB Only	06	07	08
Timing	G = 23.3	G = 7.1	G =	G =	G = 16.6	G =	G =	G =
	Y = 3	Y = 3	Y =	Y =	Y = 3	Y =	Y =	Y =

Duration of Analysis (hrs) = *0.25* Cycle Length C = *56.0*

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
Adjusted Flow Rate	44	601			681		277		218			
Lane Group Capacity	193	1817			1267		451		403			
v/c Ratio	0.23	0.33			0.54		0.61		0.54			
Green Ratio	0.13	0.60			0.42		0.30		0.30			
Uniform Delay d_1	22.0	5.7			12.3		16.9		16.5			
Delay Factor k	0.11	0.11			0.14		0.20		0.14			
Incremental Delay d_2	0.6	0.1			0.5		2.5		1.5			
PF Factor	1.000	1.000			1.000		1.000		1.000			
Control Delay	22.6	5.8			12.8		19.4		18.0			
Lane Group LOS	C	A			B		B		B			
Approach Delay	6.9			12.8			18.8					
Approach LOS	A			B			B					
Intersection Delay	12.3			Intersection LOS						B		

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SHORT REPORT

General Information		Site Information	
Analyst	*PDS*	Intersection	*SR-57 NB Brea Canyon Cutoff*
Agency or Co.	*KHR Assoicates*	Area Type	*All other areas*
Date Performed	*Projected 2012*	Jurisdiction	*City of Diamond Bar*
Time Period	*5:00 - 6:00 PM*	Analysis Year	*2012*

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Number of Lanes	1	2			2		1		1			
Lane Group	L	T			T		L		R			
Volume (vph)	24	935			643		319		127			
% Heavy Vehicles	0	0			0		0		0			
PHF	0.90	0.90			0.90		0.90		0.90			
Pretimed/Actuated (P/A)	A	A			A		A		A			
Startup Lost Time	2.0	2.0			2.0		2.0		2.0			
Extension of Effective Green	2.0	2.0			2.0		2.0		2.0			
Arrival Type	3	3			3		3		3			
Unit Extension	3.0	3.0			3.0		3.0		3.0			
Ped/Bike/RTOR Volume	0	0		0	0		0	0	0	0	0	
Lane Width	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/Hour												
Bus Stops/Hour	0	0			0		0		0			
Minimum Pedestrian Time		3.2			3.2			3.2			3.2	

Phasing	Thru Only	EB Only	03	04	NB Only	06	07	08
Timing	G = 23.3	G = 7.1	G =	G =	G = 16.6	G =	G =	G =
	Y = 3	Y = 3	Y =	Y =	Y = 3	Y =	Y =	Y =

Duration of Analysis (hrs) = *0.25* Cycle Length C = *56.0*

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
Adjusted Flow Rate	27	1039			714		354		141			
Lane Group Capacity	193	1817			1267		451		403			
v/c Ratio	0.14	0.57			0.56		0.78		0.35			
Green Ratio	0.13	0.60			0.42		0.30		0.30			
Uniform Delay d_1	21.7	6.9			12.5		18.1		15.5			
Delay Factor k	0.11	0.17			0.16		0.33		0.11			
Incremental Delay d_2	0.3	0.4			0.6		8.9		0.5			
PF Factor	1.000	1.000			1.000		1.000		1.000			
Control Delay	22.1	7.4			13.1		26.9		16.0			
Lane Group LOS	C	A			B		C		B			
Approach Delay	7.7			13.1			23.8					
Approach LOS	A			B			C					
Intersection Delay	12.9			Intersection LOS						B		

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SHORT REPORT

General Information		Site Information	
Analyst	*PDS*	Intersection	*SR-57 SB Brea Canyon Cutoff*
Agency or Co.	*KHR Assoicates*	Area Type	*All other areas*
Date Performed	*Projected 2012*	Jurisdiction	*City of Diamond Bar*
Time Period	*8:00 - 9:00 AM*	Analysis Year	*2012*

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Number of Lanes		2		1	2					1		1
Lane Group		T		L	T					L		R
Volume (vph)		222		415	735					56		163
% Heavy Vehicles		0		0	0					0		0
PHF		0.90		0.90	0.90					0.90		0.90
Pretimed/Actuated (P/A)		A		A	A					A		A
Startup Lost Time		2.0		2.0	2.0					2.0		2.0
Extension of Effective Green		2.0		2.0	2.0					2.0		2.0
Arrival Type		3		3	3					3		3
Unit Extension		3.0		3.0	3.0					3.0		3.0
Ped/Bike/RTOR Volume	0	0		0	0		0	0		0	0	0
Lane Width		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/Hour												
Bus Stops/Hour		0		0	0					0		0
Minimum Pedestrian Time		3.2			3.2			3.2			3.2	

Phasing	Thru Only	WB Only	03	04	SB Only	06	07	08
Timing	G = 8.0	G = 27.8	G =	G =	G = 11.2	G =	G =	G =
	Y = 3	Y = 3	Y =	Y =	Y = 3	Y =	Y =	Y =

Duration of Analysis (hrs) = *0.25* Cycle Length C = *56.0*

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
Adjusted Flow Rate		247		461	817					62		181
Lane Group Capacity		435		755	2110					304		272
v/c Ratio		0.57		0.61	0.39					0.20		0.67
Green Ratio		0.14		0.50	0.69					0.20		0.20
Uniform Delay d_1		22.4		10.2	3.6					18.7		20.7
Delay Factor k		0.16		0.20	0.11					0.11		0.24
Incremental Delay d_2		1.8		1.5	0.1					0.3		6.0
PF Factor		1.000		1.000	1.000					1.000		1.000
Control Delay		24.1		11.6	3.7					19.0		26.7
Lane Group LOS		C		B	A					B		C
Approach Delay	24.1			6.6						24.8		
Approach LOS	C			A						C		
Intersection Delay	11.5			Intersection LOS						B		

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SHORT REPORT

General Information		Site Information	
Analyst	*PDS*	Intersection	*SR-57 SB Brea Canyon Cutoff*
Agency or Co.	*KHR Assoicates*	Area Type	*All other areas*
Date Performed	*Projected 2012*	Jurisdiction	*City of Diamond Bar*
Time Period	*5:00 - 6:00 PM*	Analysis Year	*2012*

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Number of Lanes		2		1	2					1		1
Lane Group		T		L	T					L		R
Volume (vph)		886		189	939					49		166
% Heavy Vehicles		0		0	0					0		0
PHF		0.90		0.90	0.90					0.90		0.90
Pretimed/Actuated (P/A)		A		A	A					A		A
Startup Lost Time		2.0		2.0	2.0					2.0		2.0
Extension of Effective Green		2.0		2.0	2.0					2.0		2.0
Arrival Type		3		3	3					3		3
Unit Extension		3.0		3.0	3.0					3.0		3.0
Ped/Bike/RTOR Volume	0	0		0	0		0	0		0	0	0
Lane Width		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/Hour												
Bus Stops/Hour		0		0	0					0		0
Minimum Pedestrian Time		3.2			3.2			3.2			3.2	

Phasing	Thru Only	WB Only	03	04	SB Only	06	07	08
Timing	G = 26.7	G = 10.4	G =	G =	G = 9.9	G =	G =	G =
	Y = 3	Y = 3	Y =	Y =	Y = 3	Y =	Y =	Y =

Duration of Analysis (hrs) = *0.25* Cycle Length C = *56.0*

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
Adjusted Flow Rate		984		210	1043					54		184
Lane Group Capacity		1452		282	2181					269		240
v/c Ratio		0.68		0.74	0.48					0.20		0.77
Green Ratio		0.48		0.19	0.72					0.18		0.18
Uniform Delay d_1		11.3		21.5	3.4					19.7		22.0
Delay Factor k		0.25		0.30	0.11					0.11		0.32
Incremental Delay d_2		1.3		10.3	0.2					0.4		13.8
PF Factor		1.000		1.000	1.000					1.000		1.000
Control Delay		12.6		31.8	3.6					20.0		35.8
Lane Group LOS		B		C	A					C		D
Approach Delay	12.6			8.3						32.2		
Approach LOS	B			A						C		
Intersection Delay	12.3			Intersection LOS						B		

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SHORT REPORT

General Information		Site Information	
Analyst	*PDS*	Intersection	*SR-57 NB Pathfinder*
Agency or Co.	*KHR Assoicates*	Area Type	*All other areas*
Date Performed	*Projected 2012*	Jurisdiction	*City of Diamond Bar*
Time Period	*7:45 - 8:45 AM*	Analysis Year	*2012*

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Number of Lanes	1	2			2	1	1		1			
Lane Group	L	T			T	R	L		R			
Volume (vph)	116	366			1059	636	216		69			
% Heavy Vehicles	0	0			0	0	0		0			
PHF	0.90	0.90			0.90	0.90	0.90		0.90			
Pretimed/Actuated (P/A)	A	A			A	A	A		A			
Startup Lost Time	2.0	2.0			2.0	2.0	2.0		2.0			
Extension of Effective Green	2.0	2.0			2.0	2.0	2.0		2.0			
Arrival Type	3	3			3	3	3		3			
Unit Extension	3.0	3.0			3.0	3.0	3.0		3.0			
Ped/Bike/RTOR Volume	0	0		0	0	0	0	0	0	0	0	
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/Hour												
Bus Stops/Hour	0	0			0	0	0		0			
Minimum Pedestrian Time		3.2			3.2			3.2			3.2	

Phasing	Thru & RT	EB Only	03	04	NB Only	06	07	08
Timing	G = 38.5	G = 7.0	G =	G =	G = 11.4	G =	G =	G =
	Y = 3	Y = 3	Y =	Y =	Y = 3	Y =	Y =	Y =

Duration of Analysis (hrs) = *0.25* Cycle Length C = *65.9*

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
Adjusted Flow Rate	129	407			1177	707	240		77			
Lane Group Capacity	161	2242			1780	795	263		235			
v/c Ratio	0.80	0.18			0.66	0.89	0.91		0.33			
Green Ratio	0.11	0.74			0.58	0.58	0.17		0.17			
Uniform Delay d_1	28.8	2.7			9.3	11.9	26.8		23.9			
Delay Factor k	0.34	0.11			0.24	0.41	0.43		0.11			
Incremental Delay d_2	24.4	0.0			0.9	12.1	33.4		0.8			
PF Factor	1.000	1.000			1.000	1.000	1.000		1.000			
Control Delay	53.2	2.7			10.2	24.0	60.1		24.7			
Lane Group LOS	D	A			B	C	E		C			
Approach Delay	14.8			15.4			51.5					
Approach LOS	B			B			D					
Intersection Delay	19.5			Intersection LOS						B		

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SHORT REPORT

General Information		Site Information	
Analyst	*PDS*	Intersection	*SR-57 NB Pathfinder*
Agency or Co.	*KHR Assoicates*	Area Type	*All other areas*
Date Performed	*Projected 2012*	Jurisdiction	*City of Diamond Bar*
Time Period	*5:00 - 6:00 PM*	Analysis Year	*2012*

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Number of Lanes	1	2			2	1	1		1			
Lane Group	L	T			T	R	L		R			
Volume (vph)	92	706			498	431	452		369			
% Heavy Vehicles	0	0			0	0	0		0			
PHF	0.90	0.90			0.90	0.90	0.90		0.90			
Pretimed/Actuated (P/A)	A	A			A	A	A		A			
Startup Lost Time	2.0	2.0			2.0	2.0	2.0		2.0			
Extension of Effective Green	2.0	2.0			2.0	2.0	2.0		2.0			
Arrival Type	3	3			3	3	3		3			
Unit Extension	3.0	3.0			3.0	3.0	3.0		3.0			
Ped/Bike/RTOR Volume	0	0		0	0	0	0	0	0	0	0	
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/Hour												
Bus Stops/Hour	0	0			0	0	0		0			
Minimum Pedestrian Time		3.2			3.2			3.2			3.2	

Phasing	Thru & RT	EB Only	03	04	NB Only	06	07	08
Timing	G = 24.9	G = 7.1	G =	G =	G = 25.0	G =	G =	G =
	Y = 3	Y = 3	Y =	Y =	Y = 3	Y =	Y =	Y =

Duration of Analysis (hrs) = *0.25* Cycle Length C = *66.0*

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
Adjusted Flow Rate	102	784			553	479	502		410			
Lane Group Capacity	164	1615			1149	513	576		612			
v/c Ratio	0.62	0.49			0.48	0.93	0.87		0.67			
Green Ratio	0.11	0.53			0.38	0.38	0.38		0.38			
Uniform Delay d_1	28.2	9.8			15.6	19.8	19.0		17.1			
Delay Factor k	0.21	0.11			0.11	0.45	0.40		0.24			
Incremental Delay d_2	7.1	0.2			0.3	24.4	13.7		2.8			
PF Factor	1.000	1.000			1.000	1.000	1.000		1.000			
Control Delay	35.3	10.0			16.0	44.1	32.7		19.9			
Lane Group LOS	D	B			B	D	C		B			
Approach Delay	12.9			29.0			27.0					
Approach LOS	B			C			C					
Intersection Delay	23.3			Intersection LOS						C		

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SHORT REPORT

General Information		Site Information	
Analyst	*PDS*	Intersection	*SR-57 SB Pathfinder*
Agency or Co.	*KHR Assoicates*	Area Type	*All other areas*
Date Performed	*Projected 2012*	Jurisdiction	*City of Diamond Bar*
Time Period	*7:45 - 8:45 AM*	Analysis Year	*2012*

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Number of Lanes		2		1	2					1		2
Lane Group		T		L	T					L		R
Volume (vph)		482		437	838					264		117
% Heavy Vehicles		0		0	0					0		0
PHF		0.90		0.90	0.90					0.90		0.90
Pretimed/Actuated (P/A)		A		A	A					A		A
Startup Lost Time		2.0		2.0	2.0					2.0		2.0
Extension of Effective Green		2.0		2.0	2.0					2.0		2.0
Arrival Type		3		3	3					3		3
Unit Extension		3.0		3.0	3.0					3.0		3.0
Ped/Bike/RTOR Volume	0	0		0	0		0	0		0	0	0
Lane Width		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/Hour												
Bus Stops/Hour		0		0	0					0		0
Minimum Pedestrian Time		3.2			3.2			3.2			3.2	

Phasing	Thru Only	WB Only	03	04	SB Only	06	07	08
Timing	G = 13.5	G = 21.7	G =	G =	G = 11.8	G =	G =	G =
	Y = 3	Y = 3	Y =	Y =	Y = 3	Y =	Y =	Y =

Duration of Analysis (hrs) = *0.25* Cycle Length C = *56.0*

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
Adjusted Flow Rate		536		486	931					293		130
Lane Group Capacity		734		589	2078					320		507
v/c Ratio		0.73		0.83	0.45					0.92		0.26
Green Ratio		0.24		0.39	0.68					0.21		0.21
Uniform Delay d_1		19.6		15.4	4.1					21.6		18.4
Delay Factor k		0.29		0.36	0.11					0.43		0.11
Incremental Delay d_2		3.7		9.4	0.2					29.7		0.3
PF Factor		1.000		1.000	1.000					1.000		1.000
Control Delay		23.3		24.8	4.2					51.3		18.7
Lane Group LOS		C		C	A					D		B
Approach Delay	23.3			11.3						41.3		
Approach LOS	C			B						D		
Intersection Delay	19.3			Intersection LOS						B		

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SHORT REPORT

General Information		Site Information	
Analyst	*PDS*	Intersection	*SR-57 SB Pathfinder*
Agency or Co.	*KHR Assoicates*	Area Type	*All other areas*
Date Performed	*Projected 2012*	Jurisdiction	*City of Diamond Bar*
Time Period	*5:00 - 6:00 PM*	Analysis Year	*2012*

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Number of Lanes		2		1	2					1		2
Lane Group		T		L	T					L		R
Volume (vph)		797		85	434					301		368
% Heavy Vehicles		0		0	0					0		0
PHF		0.90		0.90	0.90					0.90		0.90
Pretimed/Actuated (P/A)		A		A	A					A		A
Startup Lost Time		2.0		2.0	2.0					2.0		2.0
Extension of Effective Green		2.0		2.0	2.0					2.0		2.0
Arrival Type		3		3	3					3		3
Unit Extension		3.0		3.0	3.0					3.0		3.0
Ped/Bike/RTOR Volume	0	0		0	0		0	0		0	0	0
Lane Width		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/Hour												
Bus Stops/Hour		0		0	0					0		0
Minimum Pedestrian Time		3.2			3.2			3.2			3.2	

Phasing	Thru Only	WB Only	03	04	SB Only	06	07	08
Timing	G = 23.5	G = 7.0	G =	G =	G = 16.5	G =	G =	G =
	Y = 3	Y = 3	Y =	Y =	Y = 3	Y =	Y =	Y =

Duration of Analysis (hrs) = *0.25* Cycle Length C = *56.0*

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
Adjusted Flow Rate		886		94	482					334		409
Lane Group Capacity		1278		190	1822					448		709
v/c Ratio		0.69		0.49	0.26					0.75		0.58
Green Ratio		0.42		0.13	0.60					0.29		0.29
Uniform Delay d_1		13.3		22.9	5.4					17.9		16.8
Delay Factor k		0.26		0.11	0.11					0.30		0.17
Incremental Delay d_2		1.6		2.0	0.1					6.7		1.2
PF Factor		1.000		1.000	1.000					1.000		1.000
Control Delay		14.9		24.9	5.4					24.6		18.0
Lane Group LOS		B		C	A					C		B
Approach Delay	14.9			8.6						20.9		
Approach LOS	B			A						C		
Intersection Delay	15.3			Intersection LOS						B		

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Appendix I

Existing+Ambient+ Project

HCS+ Calculations

SHORT REPORT

General Information		Site Information	
Analyst	*PDS*	Intersection	*SR-60 EB Fairway*
Agency or Co.	*KHR Assoicates*	Area Type	*All other areas*
Date Performed	*Projected 2012*	Jurisdiction	*City of Industry*
Time Period	*7:45 - 8:45 AM*	Analysis Year	*2012*

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Number of Lanes	2		0					2			2	1
Lane Group	L	LR						T			T	R
Volume (vph)	396		346					566			682	155
% Heavy Vehicles	0		0					0			0	0
PHF	0.90		0.90					0.90			0.90	0.90
Pretimed/Actuated (P/A)	A		A					A			A	A
Startup Lost Time	2.0	2.0						2.0			2.0	2.0
Extension of Effective Green	2.0	2.0						2.0			2.0	2.0
Arrival Type	3	3						3			3	3
Unit Extension	3.0	3.0						3.0			3.0	3.0
Ped/Bike/RTOR Volume	0	0	0	0	0		0	0		0	0	0
Lane Width	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/Hour												
Bus Stops/Hour	0	0						0			0	0
Minimum Pedestrian Time		3.2			3.2			3.2			3.2	

Phasing	EB Only	02	03	04	Thru & RT	06	07	08
Timing	G = 25.0	G =	G =	G =	G = 25.0	G =	G =	G =
	Y = 3	Y =	Y =	Y =	Y = 3	Y =	Y =	Y =

Duration of Analysis (hrs) = *0.25* Cycle Length C = *56.0*

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
Adjusted Flow Rate	440	384						629			758	172
Lane Group Capacity	1318	607						1360			1360	607
v/c Ratio	0.33	0.63						0.46			0.56	0.28
Green Ratio	0.45	0.45						0.45			0.45	0.45
Uniform Delay d_1	10.1	12.0						10.8			11.4	9.8
Delay Factor k	0.11	0.21						0.11			0.15	0.11
Incremental Delay d_2	0.2	2.2						0.3			0.5	0.3
PF Factor	1.000	1.000						1.000			1.000	1.000
Control Delay	10.2	14.1						11.1			11.9	10.1
Lane Group LOS	B	B						B			B	B
Approach Delay	12.0						11.1			11.6		
Approach LOS	B						B			B		
Intersection Delay	11.6			Intersection LOS						B		

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SHORT REPORT

General Information		Site Information	
Analyst	*PDS*	Intersection	*SR-60 EB Fairway*
Agency or Co.	*KHR Assoicates*	Area Type	*All other areas*
Date Performed	*Projected 2012*	Jurisdiction	*City of Industry*
Time Period	*5:00 - 6:00 PM*	Analysis Year	*2012*

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Number of Lanes	2		0					2			2	1
Lane Group	L	LR						T			T	R
Volume (vph)	165		285					1452			805	315
% Heavy Vehicles	0		0					0			0	0
PHF	0.90		0.90					0.90			0.90	0.90
Pretimed/Actuated (P/A)	A		A					A			A	A
Startup Lost Time	2.0	2.0						2.0			2.0	2.0
Extension of Effective Green	2.0	2.0						2.0			2.0	2.0
Arrival Type	3	3						3			3	3
Unit Extension	3.0	3.0						3.0			3.0	3.0
Ped/Bike/RTOR Volume	0	0	0	0	0		0	0		0	0	0
Lane Width	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/Hour												
Bus Stops/Hour	0	0						0			0	0
Minimum Pedestrian Time		3.2			3.2			3.2			3.2	

Phasing	EB Only	02	03	04	Thru & RT	06	07	08
Timing	G = 14.9	G =	G =	G =	G = 35.1	G =	G =	G =
	Y = 3	Y =	Y =	Y =	Y = 3	Y =	Y =	Y =

Duration of Analysis (hrs) = *0.25* Cycle Length C = *56.0*

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
Adjusted Flow Rate	183	317						1613			894	350
Lane Group Capacity	785	362						1909			1909	852
v/c Ratio	0.23	0.88						0.84			0.47	0.41
Green Ratio	0.27	0.27						0.63			0.63	0.63
Uniform Delay d_1	16.1	19.7						8.3			5.5	5.3
Delay Factor k	0.11	0.40						0.38			0.11	0.11
Incremental Delay d_2	0.2	20.6						3.7			0.2	0.3
PF Factor	1.000	1.000						1.000			1.000	1.000
Control Delay	16.2	40.3						12.0			5.7	5.6
Lane Group LOS	B	D						B			A	A
Approach Delay	31.5						12.0			5.7		
Approach LOS	C						B			A		
Intersection Delay	12.6			Intersection LOS						B		

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SHORT REPORT

General Information		Site Information	
Analyst	*PDS*	Intersection	*SR-60 WB Fairway*
Agency or Co.	*KHR Assoicates*	Area Type	*All other areas*
Date Performed	*Projected 2012*	Jurisdiction	*City of Industry*
Time Period	*7:45 - 8:45 AM*	Analysis Year	*2012*

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Number of Lanes				0	1	1	1	2			2	1
Lane Group					LT	R	L	T			T	R
Volume (vph)				254	6	443	221	950			510	174
% Heavy Vehicles				0	0	0	0	0			0	0
PHF				0.90	0.90	0.90	0.90	0.90			0.90	0.90
Pretimed/Actuated (P/A)				A	A	A	A	A			A	A
Startup Lost Time					2.0	2.0	2.0	2.0			2.0	2.0
Extension of Effective Green					2.0	2.0	2.0	2.0			2.0	2.0
Arrival Type					3	3	3	3			3	3
Unit Extension					3.0	3.0	3.0	3.0			3.0	3.0
Ped/Bike/RTOR Volume	0	0		0	0	0	0	0		0	0	0
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/Hour												
Bus Stops/Hour					0	0	0	0			0	0
Minimum Pedestrian Time		3.2			3.2			3.2			3.2	

Phasing	WB Only	02	03	04	NB Only	Thru & RT	07	08
Timing	G = 23.1	G =	G =	G =	G = 11.0	G = 12.9	G =	G =
	Y = 3	Y =	Y =	Y =	Y = 3	Y = 3	Y =	Y =
Duration of Analysis (hrs) = 0.25						Cycle Length C = 56.0		

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
Adjusted Flow Rate					289	492	246	1056			567	193
Lane Group Capacity					629	561	299	1463			702	947
v/c Ratio					0.46	0.88	0.82	0.72			0.81	0.20
Green Ratio					0.41	0.41	0.20	0.48			0.23	0.70
Uniform Delay d_1					11.9	15.1	21.6	11.6			20.4	3.0
Delay Factor k					0.11	0.40	0.36	0.28			0.35	0.11
Incremental Delay d_2					0.5	14.6	16.7	1.8			7.0	0.1
PF Factor					1.000	1.000	1.000	1.000			1.000	1.000
Control Delay					12.5	29.8	38.3	13.4			27.4	3.1
Lane Group LOS					B	C	D	B			C	A
Approach Delay				23.4			18.1			21.2		
Approach LOS				C			B			C		
Intersection Delay	20.4			Intersection LOS						C		

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SHORT REPORT

General Information		Site Information	
Analyst	*PDS*	Intersection	*SR-60 WB Fairway*
Agency or Co.	*KHR Assoicates*	Area Type	*All other areas*
Date Performed	*Projected 2012*	Jurisdiction	*City of Industry*
Time Period	*4:45 - 5:45 PM*	Analysis Year	*2012*

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Number of Lanes				0	1	1	1	2			2	1
Lane Group					LT	R	L	T			T	R
Volume (vph)				393	1	270	209	722			993	243
% Heavy Vehicles				0	0	0	0	0			0	0
PHF				0.90	0.90	0.90	0.90	0.90			0.90	0.90
Pretimed/Actuated (P/A)				A	A	A	A	A			A	A
Startup Lost Time					2.0	2.0	2.0	2.0			2.0	2.0
Extension of Effective Green					2.0	2.0	2.0	2.0			2.0	2.0
Arrival Type					3	3	3	3			3	3
Unit Extension					3.0	3.0	3.0	3.0			3.0	3.0
Ped/Bike/RTOR Volume	0	0		0	0	0	0	0		0	0	0
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/Hour												
Bus Stops/Hour					0	0	0	0			0	0
Minimum Pedestrian Time		3.2			3.2			3.2			3.2	

Phasing	WB Only	02	03	04	NB Only	Thru & RT	07	08
Timing	G = 16.6	G =	G =	G =	G = 8.9	G = 21.5	G =	G =
	Y = 3	Y =	Y =	Y =	Y = 3	Y = 3	Y =	Y =
Duration of Analysis (hrs) = 0.25						Cycle Length C = 56.0		

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
Adjusted Flow Rate					438	300	232	802			1103	270
Lane Group Capacity					452	403	242	1817			1169	998
v/c Ratio					0.97	0.74	0.96	0.44			0.94	0.27
Green Ratio					0.30	0.30	0.16	0.60			0.38	0.73
Uniform Delay d_1					19.4	17.8	23.4	6.2			16.7	2.5
Delay Factor k					0.48	0.30	0.47	0.11			0.46	0.11
Incremental Delay d_2					34.3	7.4	46.3	0.2			14.8	0.1
PF Factor					1.000	1.000	1.000	1.000			1.000	1.000
Control Delay					53.7	25.1	69.6	6.4			31.5	2.6
Lane Group LOS					D	C	E	A			C	A
Approach Delay				42.1			20.6			25.8		
Approach LOS				D			C			C		
Intersection Delay	27.9			Intersection LOS						C		

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TWO-WAY STOP CONTROL SUMMARY

General Information

Analyst	*PDS*
Agency/Co.	*KHR Associates*
Date Performed	
Analysis Time Period	*7:45 - 8:45 AM*

Site Information

Intersection	*Reedview Dvwy Brea Cyn Cutoff*
Jurisdiction	*County of Los Angeles*
Analysis Year	*2012*

Project Description *Ex. Ambient Project AM Peak Hour*

East/West Street: *Reedview Dr. Project Driveway* North/South Street: *Brea Canyon Cutoff Road*

Intersection Orientation: *North-South* Study Period (hrs): *0.25*

Vehicle Volumes and Adjustments

Major Street	Northbound			Southbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume (veh/h)	*1*	*755*	*0*	*0*	*513*	*16*
Peak-Hour Factor, PHF	*1.00*	*1.00*	*1.00*	*1.00*	*1.00*	*1.00*
Hourly Flow Rate, HFR (veh/h)	*1*	*755*	*0*	*0*	*513*	*16*
Percent Heavy Vehicles	*0*	--	--	*0*	--	--
Median Type	*Two Way Left Turn Lane*					
RT Channelized			*0*			*0*
Lanes	*1*	*2*	*0*	*1*	*2*	*1*
Configuration	*L*	*T*	*TR*	*L*	*T*	*R*
Upstream Signal		*0*			*0*	

Minor Street	Eastbound			Westbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume (veh/h)	*13*		*5*	*35*		*64*
Peak-Hour Factor, PHF	*1.00*	*1.00*	*1.00*	*1.00*	*1.00*	*1.00*
Hourly Flow Rate, HFR (veh/h)	*13*	*0*	*5*	*35*	*0*	*64*
Percent Heavy Vehicles	*0*	*0*	*0*	*0*	*0*	*0*
Percent Grade (%)	*0*			*0*		
Flared Approach		*N*			*N*	
Storage		*0*			*0*	
RT Channelized			*0*			*0*
Lanes	*1*	*0*	*1*	*1*	*0*	*1*
Configuration	*L*		*R*	*L*		*R*

Delay, Queue Length, and Level of Service

Approach	Northbound	Southbound	Westbound			Eastbound		
Movement	1	4	7	8	9	10	11	12
Lane Configuration	*L*	*L*	*L*		*R*	*L*		*R*
v (veh/h)	*1*	*0*	*35*		*64*	*13*		*5*
C (m) (veh/h)	*1048*	*865*	*298*		*673*	*344*		*788*
v/c	*0.00*	*0.00*	*0.12*		*0.10*	*0.04*		*0.01*
95% queue length	*0.00*	*0.00*	*0.39*		*0.31*	*0.12*		*0.02*
Control Delay (s/veh)	*8.4*	*9.2*	*18.7*		*10.9*	*15.9*		*9.6*
LOS	*A*	*A*	*C*		*B*	*C*		*A*
Approach Delay (s/veh)	--	--	*13.7*			*14.1*		
Approach LOS	--	--	*B*			*B*		

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TWO-WAY STOP CONTROL SUMMARY

General Information

Analyst	*PDS*
Agency/Co.	*KHR Associates*
Date Performed	
Analysis Time Period	*5:00 - 6:00 PM*

Site Information

Intersection	*Reedview Dvwy Brea Cyn Cutoff*
Jurisdiction	*County of Los Angeles*
Analysis Year	*2012*

Project Description *Ex. Ambient Project PM Peak Hour*

East/West Street: *Reedview Dr. Project Driveway* | North/South Street: *Brea Canyon Cutoff Road*

Intersection Orientation: *North-South* | Study Period (hrs): *0.25*

Vehicle Volumes and Adjustments

Major Street	Northbound			Southbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume (veh/h)	*2*	*764*	*90*	*166*	*725*	*24*
Peak-Hour Factor, PHF	*1.00*	*1.00*	*1.00*	*1.00*	*1.00*	*1.00*
Hourly Flow Rate, HFR (veh/h)	*2*	*764*	*90*	*166*	*725*	*24*
Percent Heavy Vehicles	*0*	--	--	*0*	--	--
Median Type	*Two Way Left Turn Lane*					
RT Channelized			*0*			*0*
Lanes	*1*	*2*	*0*	*1*	*2*	*1*
Configuration	*L*	*T*	*TR*	*L*	*T*	*R*
Upstream Signal		*0*			*0*	

Minor Street	Eastbound			Westbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume (veh/h)	*13*		*5*	*37*		*67*
Peak-Hour Factor, PHF	*1.00*	*1.00*	*1.00*	*1.00*	*1.00*	*1.00*
Hourly Flow Rate, HFR (veh/h)	*13*	*0*	*5*	*37*	*0*	*67*
Percent Heavy Vehicles	*0*	*0*	*0*	*0*	*0*	*0*
Percent Grade (%)	*0*			*0*		
Flared Approach		*N*			*N*	
Storage		*0*			*0*	
RT Channelized			*0*			*0*
Lanes	*1*	*0*	*1*	*1*	*0*	*1*
Configuration	*L*		*R*	*L*		*R*

Delay, Queue Length, and Level of Service

Approach	Northbound	Southbound	Westbound			Eastbound		
Movement	1	4	7	8	9	10	11	12
Lane Configuration	*L*	*L*	*L*		*R*	*L*		*R*
v (veh/h)	*2*	*166*	*37*		*67*	*13*		*5*
C (m) (veh/h)	*869*	*794*	*182*		*632*	*145*		*687*
v/c	*0.00*	*0.21*	*0.20*		*0.11*	*0.09*		*0.01*
95% queue length	*0.01*	*0.79*	*0.74*		*0.35*	*0.29*		*0.02*
Control Delay (s/veh)	*9.2*	*10.7*	*29.8*		*11.4*	*32.3*		*10.3*
LOS	*A*	*B*	*D*		*B*	*D*		*B*
Approach Delay (s/veh)	--	--	*17.9*			*26.2*		
Approach LOS	--	--	*C*			*D*		

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SHORT REPORT

General Information		Site Information	
Analyst	*PDS*	Intersection	*SR-57 NB Brea Canyon Cutoff*
Agency or Co.	*KHR Assoicates*	Area Type	*All other areas*
Date Performed	*Projected 2012*	Jurisdiction	*City of Diamond Bar*
Time Period	*7:30 - 8:30 AM*	Analysis Year	*2012*

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Number of Lanes	1	2			2		1		1			
Lane Group	L	T			T		L		R			
Volume (vph)	40	571			613		252		196			
% Heavy Vehicles	0	0			0		0		0			
PHF	0.90	0.90			0.90		0.90		0.90			
Pretimed/Actuated (P/A)	A	A			A		A		A			
Startup Lost Time	2.0	2.0			2.0		2.0		2.0			
Extension of Effective Green	2.0	2.0			2.0		2.0		2.0			
Arrival Type	3	3			3		3		3			
Unit Extension	3.0	3.0			3.0		3.0		3.0			
Ped/Bike/RTOR Volume	0	0		0	0		0	0	0	0	0	
Lane Width	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/Hour												
Bus Stops/Hour	0	0			0		0		0			
Minimum Pedestrian Time		3.2			3.2			3.2			3.2	

Phasing	Thru Only	EB Only	03	04	NB Only	06	07	08
Timing	G = 23.4	G = 7.1	G =	G =	G = 16.5	G =	G =	G =
	Y = 3	Y = 3	Y =	Y =	Y = 3	Y =	Y =	Y =

Duration of Analysis (hrs) = *0.25* Cycle Length C = *56.0*

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
Adjusted Flow Rate	44	634			681		280		218			
Lane Group Capacity	193	1822			1273		448		401			
v/c Ratio	0.23	0.35			0.53		0.63		0.54			
Green Ratio	0.13	0.60			0.42		0.29		0.29			
Uniform Delay d_1	22.0	5.7			12.2		17.1		16.6			
Delay Factor k	0.11	0.11			0.14		0.21		0.14			
Incremental Delay d_2	0.6	0.1			0.4		2.7		1.5			
PF Factor	1.000	1.000			1.000		1.000		1.000			
Control Delay	22.6	5.8			12.7		19.8		18.1			
Lane Group LOS	C	A			B		B		B			
Approach Delay	6.9			12.7			19.1					
Approach LOS	A			B			B					
Intersection Delay	12.3			Intersection LOS						B		

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SHORT REPORT

General Information		Site Information	
Analyst	*PDS*	Intersection	*SR-57 NB Brea Canyon Cutoff*
Agency or Co.	*KHR Assoicates*	Area Type	*All other areas*
Date Performed	*Projected 2012*	Jurisdiction	*City of Diamond Bar*
Time Period	*5:00 - 6:00 PM*	Analysis Year	*2012*

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Number of Lanes	1	2			2		1		1			
Lane Group	L	T			T		L		R			
Volume (vph)	24	966			656		364		127			
% Heavy Vehicles	0	0			0		0		0			
PHF	0.90	0.90			0.90		0.90		0.90			
Pretimed/Actuated (P/A)	A	A			A		A		A			
Startup Lost Time	2.0	2.0			2.0		2.0		2.0			
Extension of Effective Green	2.0	2.0			2.0		2.0		2.0			
Arrival Type	3	3			3		3		3			
Unit Extension	3.0	3.0			3.0		3.0		3.0			
Ped/Bike/RTOR Volume	0	0		0	0		0	0	0	0	0	
Lane Width	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/Hour												
Bus Stops/Hour	0	0			0		0		0			
Minimum Pedestrian Time		3.2			3.2			3.2			3.2	

Phasing	Thru Only	EB Only	03	04	NB Only	06	07	08
Timing	G = 20.7	G = 7.1	G =	G =	G = 19.2	G =	G =	G =
	Y = 3	Y = 3	Y =	Y =	Y = 3	Y =	Y =	Y =

Duration of Analysis (hrs) = *0.25* Cycle Length C = *56.0*

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
Adjusted Flow Rate	27	1073			729		404		141			
Lane Group Capacity	193	1675			1126		521		466			
v/c Ratio	0.14	0.64			0.65		0.78		0.30			
Green Ratio	0.13	0.55			0.37		0.34		0.34			
Uniform Delay d_1	21.7	8.8			14.6		16.5		13.5			
Delay Factor k	0.11	0.22			0.22		0.32		0.11			
Incremental Delay d_2	0.3	0.8			1.3		7.2		0.4			
PF Factor	1.000	1.000			1.000		1.000		1.000			
Control Delay	22.1	9.6			15.9		23.7		13.9			
Lane Group LOS	C	A			B		C		B			
Approach Delay	9.9			15.9			21.2					
Approach LOS	A			B			C					
Intersection Delay	14.3			Intersection LOS						B		

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SHORT REPORT

General Information		Site Information	
Analyst	*PDS*	Intersection	*SR-57 SB Brea Canyon Cutoff*
Agency or Co.	*KHR Assoicates*	Area Type	*All other areas*
Date Performed	*Projected 2012*	Jurisdiction	*City of Diamond Bar*
Time Period	*8:00 - 9:00 AM*	Analysis Year	*2012*

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Number of Lanes		2		1	2					1		1
Lane Group		T		L	T					L		R
Volume (vph)		227		415	735					56		163
% Heavy Vehicles		0		0	0					0		0
PHF		0.90		0.90	0.90					0.90		0.90
Pretimed/Actuated (P/A)		A		A	A					A		A
Startup Lost Time		2.0		2.0	2.0					2.0		2.0
Extension of Effective Green		2.0		2.0	2.0					2.0		2.0
Arrival Type		3		3	3					3		3
Unit Extension		3.0		3.0	3.0					3.0		3.0
Ped/Bike/RTOR Volume	0	0		0	0		0	0		0	0	0
Lane Width		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/Hour												
Bus Stops/Hour		0		0	0					0		0
Minimum Pedestrian Time		3.2			3.2			3.2			3.2	

Phasing	Thru Only	WB Only	03	04	SB Only	06	07	08
Timing	G = 7.8	G = 27.9	G =	G =	G = 11.3	G =	G =	G =
	Y = 3	Y = 3	Y =	Y =	Y = 3	Y =	Y =	Y =

Duration of Analysis (hrs) = *0.25* Cycle Length C = *56.0*

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
Adjusted Flow Rate		252		461	817					62		181
Lane Group Capacity		424		757	2105					307		274
v/c Ratio		0.59		0.61	0.39					0.20		0.66
Green Ratio		0.14		0.50	0.69					0.20		0.20
Uniform Delay d_1		22.6		10.1	3.7					18.6		20.6
Delay Factor k		0.18		0.20	0.11					0.11		0.24
Incremental Delay d_2		2.3		1.4	0.1					0.3		5.8
PF Factor		1.000		1.000	1.000					1.000		1.000
Control Delay		24.9		11.6	3.8					18.9		26.4
Lane Group LOS		C		B	A					B		C
Approach Delay	24.9			6.6						24.5		
Approach LOS	C			A						C		
Intersection Delay	11.6			Intersection LOS						B		

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SHORT REPORT

General Information		Site Information	
Analyst	*PDS*	Intersection	*SR-57 SB Brea Canyon Cutoff*
Agency or Co.	*KHR Assoicates*	Area Type	*All other areas*
Date Performed	*Projected 2012*	Jurisdiction	*City of Diamond Bar*
Time Period	*5:00 - 6:00 PM*	Analysis Year	*2012*

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Number of Lanes		2		1	2					1		1
Lane Group		T		L	T					L		R
Volume (vph)		892		189	952					49		166
% Heavy Vehicles		0		0	0					0		0
PHF		0.90		0.90	0.90					0.90		0.90
Pretimed/Actuated (P/A)		A		A	A					A		A
Startup Lost Time		2.0		2.0	2.0					2.0		2.0
Extension of Effective Green		2.0		2.0	2.0					2.0		2.0
Arrival Type		3		3	3					3		3
Unit Extension		3.0		3.0	3.0					3.0		3.0
Ped/Bike/RTOR Volume	0	0		0	0		0	0		0	0	0
Lane Width		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/Hour												
Bus Stops/Hour		0		0	0					0		0
Minimum Pedestrian Time		3.2			3.2			3.2			3.2	

Phasing	Thru Only	WB Only	03	04	SB Only	06	07	08
Timing	G = 26.5	G = 10.6	G =	G =	G = 9.9	G =	G =	G =
	Y = 3	Y = 3	Y =	Y =	Y = 3	Y =	Y =	Y =

Duration of Analysis (hrs) = *0.25* Cycle Length C = *56.0*

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
Adjusted Flow Rate		991		210	1058					54		184
Lane Group Capacity		1441		288	2181					269		240
v/c Ratio		0.69		0.73	0.49					0.20		0.77
Green Ratio		0.47		0.19	0.72					0.18		0.18
Uniform Delay d_1		11.5		21.3	3.5					19.7		22.0
Delay Factor k		0.26		0.29	0.11					0.11		0.32
Incremental Delay d_2		1.4		9.0	0.2					0.4		13.8
PF Factor		1.000		1.000	1.000					1.000		1.000
Control Delay		12.9		30.4	3.6					20.0		35.8
Lane Group LOS		B		C	A					C		D
Approach Delay	12.9			8.1						32.2		
Approach LOS	B			A						C		
Intersection Delay	12.3			Intersection LOS						B		

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SHORT REPORT

General Information		Site Information	
Analyst	*PDS*	Intersection	*SR-57 NB Pathfinder*
Agency or Co.	*KHR Assoicates*	Area Type	*All other areas*
Date Performed	*Projected 2012*	Jurisdiction	*City of Diamond Bar*
Time Period	*7:45 - 8:45 AM*	Analysis Year	*2012*

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Number of Lanes	1	2			2	1	1		1			
Lane Group	L	T			T	R	L		R			
Volume (vph)	121	366			1059	636	216		69			
% Heavy Vehicles	0	0			0	0	0		0			
PHF	0.90	0.90			0.90	0.90	0.90		0.90			
Pretimed/Actuated (P/A)	A	A			A	A	A		A			
Startup Lost Time	2.0	2.0			2.0	2.0	2.0		2.0			
Extension of Effective Green	2.0	2.0			2.0	2.0	2.0		2.0			
Arrival Type	3	3			3	3	3		3			
Unit Extension	3.0	3.0			3.0	3.0	3.0		3.0			
Ped/Bike/RTOR Volume	0	0		0	0	0	0	0	0	0	0	
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/Hour												
Bus Stops/Hour	0	0			0	0	0		0			
Minimum Pedestrian Time		3.2			3.2			3.2			3.2	

Phasing	Thru & RT	EB Only	03	04	NB Only	06	07	08
Timing	G = 38.8	G = 7.0	G =	G =	G = 10.8	G =	G =	G =
	Y = 3	Y = 3	Y =	Y =	Y = 3	Y =	Y =	Y =

Duration of Analysis (hrs) = *0.25* Cycle Length C = *65.6*

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
Adjusted Flow Rate	134	407			1177	707	240		77			
Lane Group Capacity	162	2266			1802	804	250		224			
v/c Ratio	0.83	0.18			0.65	0.88	0.96		0.34			
Green Ratio	0.11	0.74			0.59	0.59	0.16		0.16			
Uniform Delay d_1	28.7	2.5			8.9	11.4	27.2		24.3			
Delay Factor k	0.37	0.11			0.23	0.41	0.47		0.11			
Incremental Delay d_2	28.4	0.0			0.9	11.0	45.7		0.9			
PF Factor	1.000	1.000			1.000	1.000	1.000		1.000			
Control Delay	57.1	2.5			9.8	22.4	72.9		25.2			
Lane Group LOS	E	A			A	C	E		C			
Approach Delay	16.1			14.5			61.3					
Approach LOS	B			B			E					
Intersection Delay	20.2			Intersection LOS						C		

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SHORT REPORT

General Information		Site Information	
Analyst	*PDS*	Intersection	*SR-57 NB Pathfinder*
Agency or Co.	*KHR Assoicates*	Area Type	*All other areas*
Date Performed	*Projected 2012*	Jurisdiction	*City of Diamond Bar*
Time Period	*5:00 - 6:00 PM*	Analysis Year	*2012*

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Number of Lanes	1	2			2	1	1		1			
Lane Group	L	T			T	R	L		R			
Volume (vph)	92	712			498	431	452		369			
% Heavy Vehicles	0	0			0	0	0		0			
PHF	0.90	0.90			0.90	0.90	0.90		0.90			
Pretimed/Actuated (P/A)	A	A			A	A	A		A			
Startup Lost Time	2.0	2.0			2.0	2.0	2.0		2.0			
Extension of Effective Green	2.0	2.0			2.0	2.0	2.0		2.0			
Arrival Type	3	3			3	3	3		3			
Unit Extension	3.0	3.0			3.0	3.0	3.0		3.0			
Ped/Bike/RTOR Volume	0	0		0	0	0	0	0	0	0	0	
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/Hour												
Bus Stops/Hour	0	0			0	0	0		0			
Minimum Pedestrian Time		3.2			3.2			3.2			3.2	

Phasing	Thru & RT	EB Only	03	04	NB Only	06	07	08
Timing	G = 25.5	G = 7.0	G =	G =	G = 24.4	G =	G =	G =
	Y = 3	Y = 3	Y =	Y =	Y = 3	Y =	Y =	Y =

Duration of Analysis (hrs) = *0.25* Cycle Length C = *65.9*

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
Adjusted Flow Rate	102	791			553	479	502		410			
Lane Group Capacity	161	1641			1179	526	563		504			
v/c Ratio	0.63	0.48			0.47	0.91	0.89		0.81			
Green Ratio	0.11	0.54			0.39	0.39	0.37		0.37			
Uniform Delay d_1	28.2	9.5			15.1	19.1	19.5		18.7			
Delay Factor k	0.21	0.11			0.11	0.43	0.42		0.35			
Incremental Delay d_2	7.9	0.2			0.3	20.0	16.4		9.9			
PF Factor	1.000	1.000			1.000	1.000	1.000		1.000			
Control Delay	36.1	9.7			15.4	39.2	35.9		28.6			
Lane Group LOS	D	A			B	D	D		C			
Approach Delay	12.7			26.4			32.6					
Approach LOS	B			C			C					
Intersection Delay	24.1			Intersection LOS						C		

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SHORT REPORT

General Information		Site Information	
Analyst	*PDS*	Intersection	*SR-57 SB Pathfinder*
Agency or Co.	*KHR Assoicates*	Area Type	*All other areas*
Date Performed	*Projected 2012*	Jurisdiction	*City of Diamond Bar*
Time Period	*7:45 - 8:45 AM*	Analysis Year	*2012*

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Number of Lanes		2		1	2					1		2
Lane Group		T		L	T					L		R
Volume (vph)		482		437	838					264		117
% Heavy Vehicles		0		0	0					0		0
PHF		0.90		0.90	0.90					0.90		0.90
Pretimed/Actuated (P/A)		A		A	A					A		A
Startup Lost Time		2.0		2.0	2.0					2.0		2.0
Extension of Effective Green		2.0		2.0	2.0					2.0		2.0
Arrival Type		3		3	3					3		3
Unit Extension		3.0		3.0	3.0					3.0		3.0
Ped/Bike/RTOR Volume	0	0		0	0		0	0		0	0	0
Lane Width		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/Hour												
Bus Stops/Hour		0		0	0					0		0
Minimum Pedestrian Time		3.2			3.2			3.2			3.2	

Phasing	Thru Only	WB Only	03	04	SB Only	06	07	08
Timing	G = 13.5	G = 21.7	G =	G =	G = 11.8	G =	G =	G =
	Y = 3	Y = 3	Y =	Y =	Y = 3	Y =	Y =	Y =

Duration of Analysis (hrs) = *0.25* Cycle Length C = *56.0*

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
Adjusted Flow Rate		536		486	931					293		130
Lane Group Capacity		734		589	2078					320		507
v/c Ratio		0.73		0.83	0.45					0.92		0.26
Green Ratio		0.24		0.39	0.68					0.21		0.21
Uniform Delay d_1		19.6		15.4	4.1					21.6		18.4
Delay Factor k		0.29		0.36	0.11					0.43		0.11
Incremental Delay d_2		3.7		9.4	0.2					29.7		0.3
PF Factor		1.000		1.000	1.000					1.000		1.000
Control Delay		23.3		24.8	4.2					51.3		18.7
Lane Group LOS		C		C	A					D		B
Approach Delay	23.3			11.3						41.3		
Approach LOS	C			B						D		
Intersection Delay	19.3			Intersection LOS						B		

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SHORT REPORT

General Information		Site Information	
Analyst	*PDS*	Intersection	*SR-57 SB Pathfinder*
Agency or Co.	*KHR Assoicates*	Area Type	*All other areas*
Date Performed	*Projected 2012*	Jurisdiction	*City of Diamond Bar*
Time Period	*5:00 - 6:00 PM*	Analysis Year	*2012*

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Number of Lanes		2		1	2					1		2
Lane Group		T		L	T					L		R
Volume (vph)		797		85	434					301		381
% Heavy Vehicles		0		0	0					0		0
PHF		0.90		0.90	0.90					0.90		0.90
Pretimed/Actuated (P/A)		A		A	A					A		A
Startup Lost Time		2.0		2.0	2.0					2.0		2.0
Extension of Effective Green		2.0		2.0	2.0					2.0		2.0
Arrival Type		3		3	3					3		3
Unit Extension		3.0		3.0	3.0					3.0		3.0
Ped/Bike/RTOR Volume	0	0		0	0		0	0		0	0	0
Lane Width		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/Hour												
Bus Stops/Hour		0		0	0					0		0
Minimum Pedestrian Time		3.2			3.2			3.2			3.2	

Phasing	Thru Only	WB Only	03	04	SB Only	06	07	08
Timing	G = 22.8	G = 7.0	G =	G =	G = 17.2	G =	G =	G =
	Y = 3	Y = 3	Y =	Y =	Y = 3	Y =	Y =	Y =

Duration of Analysis (hrs) = *0.25* Cycle Length C = *56.0*

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
Adjusted Flow Rate		886		94	482					334		423
Lane Group Capacity		1240		190	1784					467		739
v/c Ratio		0.71		0.49	0.27					0.72		0.57
Green Ratio		0.41		0.13	0.59					0.31		0.31
Uniform Delay d_1		13.9		22.9	5.7					17.2		16.3
Delay Factor k		0.28		0.11	0.11					0.28		0.17
Incremental Delay d_2		2.0		2.0	0.1					5.2		1.1
PF Factor		1.000		1.000	1.000					1.000		1.000
Control Delay		15.9		24.9	5.8					22.4		17.4
Lane Group LOS		B		C	A					C		B
Approach Delay	15.9			8.9						19.6		
Approach LOS	B			A						B		
Intersection Delay	15.3			Intersection LOS						B		

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Appendix J

Existing+Ambient+Related Projects

Without Project

HCS+ Calculations

SHORT REPORT

General Information		Site Information	
Analyst	*PDS*	Intersection	*SR-60 EB Fairway*
Agency or Co.	*KHR Assoicates*	Area Type	*All other areas*
Date Performed	*Ex Amb Related*	Jurisdiction	*City of Industry*
Time Period	*7:45 - 8:45 AM*	Analysis Year	*2012*

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Number of Lanes	2		0					2			2	1
Lane Group	L	LR						T			T	R
Volume (vph)	436		357					539			682	155
% Heavy Vehicles	0		0					0			0	0
PHF	0.90		0.90					0.90			0.90	0.90
Pretimed/Actuated (P/A)	A		A					A			A	A
Startup Lost Time	2.0	2.0						2.0			2.0	2.0
Extension of Effective Green	2.0	2.0						2.0			2.0	2.0
Arrival Type	3	3						3			3	3
Unit Extension	3.0	3.0						3.0			3.0	3.0
Ped/Bike/RTOR Volume	0	0	0	0	0		0	0		0	0	0
Lane Width	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/Hour												
Bus Stops/Hour	0	0						0			0	0
Minimum Pedestrian Time		3.2			3.2			3.2			3.2	

Phasing	EB Only	02	03	04	Thru & RT	06	07	08
Timing	G = 25.0	G =	G =	G =	G = 25.0	G =	G =	G =
	Y = 3	Y =	Y =	Y =	Y = 3	Y =	Y =	Y =

Duration of Analysis (hrs) = *0.25* Cycle Length C = *56.0*

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
Adjusted Flow Rate	484	397						599			758	172
Lane Group Capacity	1318	607						1360			1360	607
v/c Ratio	0.37	0.65						0.44			0.56	0.28
Green Ratio	0.45	0.45						0.45			0.45	0.45
Uniform Delay d_1	10.3	12.1						10.7			11.4	9.8
Delay Factor k	0.11	0.23						0.11			0.15	0.11
Incremental Delay d_2	0.2	2.5						0.2			0.5	0.3
PF Factor	1.000	1.000						1.000			1.000	1.000
Control Delay	10.4	14.7						10.9			11.9	10.1
Lane Group LOS	B	B						B			B	B
Approach Delay	12.3						10.9			11.6		
Approach LOS	B						B			B		
Intersection Delay	11.7			Intersection LOS						B		

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SHORT REPORT

General Information		Site Information	
Analyst	*PDS*	Intersection	*SR-60 EB Fairway*
Agency or Co.	*KHR Assoicates*	Area Type	*All other areas*
Date Performed	*Ex Amb Related*	Jurisdiction	*City of Industry*
Time Period	*5:00 - 6:00 PM*	Analysis Year	*2012*

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Number of Lanes	2		0					2			2	1
Lane Group	L	LR						T			T	R
Volume (vph)	207		303					1417			728	315
% Heavy Vehicles	0		0					0			0	0
PHF	0.90		0.90					0.90			0.90	0.90
Pretimed/Actuated (P/A)	A		A					A			A	A
Startup Lost Time	2.0	2.0						2.0			2.0	2.0
Extension of Effective Green	2.0	2.0						2.0			2.0	2.0
Arrival Type	3	3						3			3	3
Unit Extension	3.0	3.0						3.0			3.0	3.0
Ped/Bike/RTOR Volume	0	0	0	0	0		0	0		0	0	0
Lane Width	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/Hour												
Bus Stops/Hour	0	0						0			0	0
Minimum Pedestrian Time		3.2			3.2			3.2			3.2	

Phasing	EB Only	02	03	04	Thru & RT	06	07	08
Timing	G = 16.1	G =	G =	G =	G = 33.9	G =	G =	G =
	Y = 3	Y =	Y =	Y =	Y = 3	Y =	Y =	Y =

Duration of Analysis (hrs) = *0.25* Cycle Length C = *56.0*

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
Adjusted Flow Rate	230	337						1574			809	350
Lane Group Capacity	849	391						1844			1844	823
v/c Ratio	0.27	0.86						0.85			0.44	0.43
Green Ratio	0.29	0.29						0.61			0.61	0.61
Uniform Delay d_1	15.4	18.9						9.0			5.9	5.9
Delay Factor k	0.11	0.39						0.39			0.11	0.11
Incremental Delay d_2	0.2	17.6						4.1			0.2	0.4
PF Factor	1.000	1.000						1.000			1.000	1.000
Control Delay	15.6	36.5						13.2			6.1	6.2
Lane Group LOS	B	D						B			A	A
Approach Delay	28.0						13.2			6.1		
Approach LOS	C						B			A		
Intersection Delay	13.2			Intersection LOS						B		

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SHORT REPORT

General Information		Site Information	
Analyst	*PDS*	Intersection	*SR-60 WB Fairway*
Agency or Co.	*KHR Assoicates*	Area Type	*All other areas*
Date Performed	*Ex Amb Related*	Jurisdiction	*City of Industry*
Time Period	*7:45 - 8:45 AM*	Analysis Year	*2012*

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Number of Lanes				0	1	1	1	2			2	1
Lane Group					LT	R	L	T			T	R
Volume (vph)				254	6	443	216	925			510	185
% Heavy Vehicles				0	0	0	0	0			0	0
PHF				0.90	0.90	0.90	0.90	0.90			0.90	0.90
Pretimed/Actuated (P/A)				A	A	A	A	A			A	A
Startup Lost Time					2.0	2.0	2.0	2.0			2.0	2.0
Extension of Effective Green					2.0	2.0	2.0	2.0			2.0	2.0
Arrival Type					3	3	3	3			3	3
Unit Extension					3.0	3.0	3.0	3.0			3.0	3.0
Ped/Bike/RTOR Volume	0	0		0	0	0	0	0		0	0	0
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/Hour												
Bus Stops/Hour					0	0	0	0			0	0
Minimum Pedestrian Time		3.2			3.2			3.2			3.2	

Phasing	WB Only	02	03	04	NB Only	Thru & RT	07	08
Timing	G = 23.0	G =	G =	G =	G = 10.6	G = 13.4	G =	G =
	Y = 3	Y =	Y =	Y =	Y = 3	Y = 3	Y =	Y =
Duration of Analysis (hrs) = 0.25						Cycle Length C = 56.0		

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
Adjusted Flow Rate					289	492	240	1028			567	206
Lane Group Capacity					627	559	288	1469			729	957
v/c Ratio					0.46	0.88	0.83	0.70			0.78	0.22
Green Ratio					0.41	0.41	0.19	0.48			0.24	0.70
Uniform Delay d_1					12.0	15.2	21.8	11.3			19.9	2.9
Delay Factor k					0.11	0.41	0.37	0.27			0.33	0.11
Incremental Delay d_2					0.5	15.0	18.5	1.5			5.4	0.1
PF Factor					1.000	1.000	1.000	1.000			1.000	1.000
Control Delay					12.5	30.3	40.4	12.8			25.3	3.0
Lane Group LOS					B	C	D	B			C	A
Approach Delay				23.7			18.1			19.3		
Approach LOS				C			B			B		
Intersection Delay	20.0			Intersection LOS						B		

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SHORT REPORT

General Information		Site Information	
Analyst	*PDS*	Intersection	*SR-60 WB Fairway*
Agency or Co.	*KHR Assoicates*	Area Type	*All other areas*
Date Performed	*Ex Amb Related*	Jurisdiction	*City of Industry*
Time Period	*4:45 - 5:45 PM*	Analysis Year	*2012*

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Number of Lanes				0	1	1	1	2			2	1
Lane Group					LT	R	L	T			T	R
Volume (vph)				380	1	270	244	697			929	303
% Heavy Vehicles				0	0	0	0	0			0	0
PHF				0.90	0.90	0.90	0.90	0.90			0.90	0.90
Pretimed/Actuated (P/A)				A	A	A	A	A			A	A
Startup Lost Time					2.0	2.0	2.0	2.0			2.0	2.0
Extension of Effective Green					2.0	2.0	2.0	2.0			2.0	2.0
Arrival Type					3	3	3	3			3	3
Unit Extension					3.0	3.0	3.0	3.0			3.0	3.0
Ped/Bike/RTOR Volume	0	0		0	0	0	0	0		0	0	0
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/Hour												
Bus Stops/Hour					0	0	0	0			0	0
Minimum Pedestrian Time		3.2			3.2			3.2			3.2	

Phasing	WB Only	02	03	04	NB Only	Thru & RT	07	08
Timing	G = 19.9	G =	G =	G =	G = 12.6	G = 24.5	G =	G =
	Y = 3	Y =	Y =	Y =	Y = 3	Y = 3	Y =	Y =
Duration of Analysis (hrs) = 0.25						Cycle Length C = 66.0		

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
Adjusted Flow Rate					423	300	271	774			1032	337
Lane Group Capacity					460	410	290	1851			1131	977
v/c Ratio					0.92	0.73	0.93	0.42			0.91	0.34
Green Ratio					0.30	0.30	0.19	0.61			0.37	0.72
Uniform Delay d_1					22.3	20.7	26.3	6.8			19.7	3.5
Delay Factor k					0.44	0.29	0.45	0.11			0.43	0.11
Incremental Delay d_2					23.7	6.6	35.9	0.2			11.2	0.2
PF Factor					1.000	1.000	1.000	1.000			1.000	1.000
Control Delay					45.9	27.3	62.2	7.0			30.9	3.7
Lane Group LOS					D	C	E	A			C	A
Approach Delay				38.2			21.3			24.2		
Approach LOS				D			C			C		
Intersection Delay	26.4			Intersection LOS						C		

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TWO-WAY STOP CONTROL SUMMARY

General Information

Analyst	*PDS*
Agency/Co.	*KHR Associates*
Date Performed	*Weekday*
Analysis Time Period	*7:45 - 8:45 AM*

Site Information

Intersection	*Reedview Brea Cyn Cutoff Rd.*
Jurisdiction	*County of Los Angeles*
Analysis Year	*2012*

Project Description *Ex. Ambient Related AM Peak Hour*

East/West Street: *Reedview Drive* | North/South Street: *Brea Canyon Cutoff Road*

Intersection Orientation: *North-South* | Study Period (hrs): *0.25*

Vehicle Volumes and Adjustments

Major Street	Northbound			Southbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume (veh/h)	*1*	*755*			*513*	*16*
Peak-Hour Factor, PHF	*1.00*	*1.00*	*1.00*	*1.00*	*1.00*	*1.00*
Hourly Flow Rate, HFR (veh/h)	*1*	*755*	*0*	*0*	*513*	*16*
Percent Heavy Vehicles	*0*	--	--	*0*	--	--
Median Type	*Two Way Left Turn Lane*					
RT Channelized			*0*			*0*
Lanes	*1*	*2*	*0*	*0*	*2*	*1*
Configuration	*L*	*T*			*T*	*R*
Upstream Signal		*0*			*0*	

Minor Street	Eastbound			Westbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume (veh/h)	*13*		*5*			
Peak-Hour Factor, PHF	*1.00*	*1.00*	*1.00*	*1.00*	*1.00*	*1.00*
Hourly Flow Rate, HFR (veh/h)	*13*	*0*	*5*	*0*	*0*	*0*
Percent Heavy Vehicles	*0*	*0*	*0*	*0*	*0*	*0*
Percent Grade (%)	*0*			*0*		
Flared Approach		*N*			*N*	
Storage		*0*			*0*	
RT Channelized			*0*			*0*
Lanes	*1*	*0*	*1*	*0*	*0*	*0*
Configuration	*L*		*R*			

Delay, Queue Length, and Level of Service

Approach	Northbound	Southbound	Westbound			Eastbound		
Movement	1	4	7	8	9	10	11	12
Lane Configuration	*L*					*L*		*R*
v (veh/h)	*1*					*13*		*5*
C (m) (veh/h)	*1048*					*410*		*788*
v/c	*0.00*					*0.03*		*0.01*
95% queue length	*0.00*					*0.10*		*0.02*
Control Delay (s/veh)	*8.4*					*14.1*		*9.6*
LOS	*A*					*B*		*A*
Approach Delay (s/veh)	--	--				*12.8*		
Approach LOS	--	--				*B*		

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TWO-WAY STOP CONTROL SUMMARY

General Information

Analyst	*PDS*
Agency/Co.	*KHR Associates*
Date Performed	*Weekday*
Analysis Time Period	*5:00 - 6:00 PM*

Site Information

Intersection	*Reedview Brea Cyn Cutoff Rd.*
Jurisdiction	*County of Los Angeles*
Analysis Year	*2012*

Project Description *Ex. Ambient Related PM Peak Hour*

East/West Street: *Reedview Drive* | North/South Street: *Brea Canyon Cutoff Road*

Intersection Orientation: *North-South* | Study Period (hrs): *0.25*

Vehicle Volumes and Adjustments

Major Street	Northbound			Southbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume (veh/h)	*2*	*764*			*725*	*24*
Peak-Hour Factor, PHF	*1.00*	*1.00*	*1.00*	*1.00*	*1.00*	*1.00*
Hourly Flow Rate, HFR (veh/h)	*2*	*764*	*0*	*0*	*725*	*24*
Percent Heavy Vehicles	*0*	--	--	*0*	--	--
Median Type	*Two Way Left Turn Lane*					
RT Channelized			*0*			*0*
Lanes	*1*	*2*	*0*	*0*	*2*	*1*
Configuration	*L*	*T*			*T*	*R*
Upstream Signal		*0*			*0*	

Minor Street	Eastbound			Westbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume (veh/h)	*13*		*5*			
Peak-Hour Factor, PHF	*1.00*	*1.00*	*1.00*	*1.00*	*1.00*	*1.00*
Hourly Flow Rate, HFR (veh/h)	*13*	*0*	*5*	*0*	*0*	*0*
Percent Heavy Vehicles	*0*	*0*	*0*	*0*	*0*	*0*
Percent Grade (%)	*0*			*0*		
Flared Approach		*N*			*N*	
Storage		*0*			*0*	
RT Channelized			*0*			*0*
Lanes	*1*	*0*	*1*	*0*	*0*	*0*
Configuration	*L*		*R*			

Delay, Queue Length, and Level of Service

Approach	Northbound	Southbound	Westbound			Eastbound		
Movement	1	4	7	8	9	10	11	12
Lane Configuration	*L*					*L*		*R*
v (veh/h)	*2*					*13*		*5*
C (m) (veh/h)	*869*					*331*		*687*
v/c	*0.00*					*0.04*		*0.01*
95% queue length	*0.01*					*0.12*		*0.02*
Control Delay (s/veh)	*9.2*					*16.3*		*10.3*
LOS	*A*					*C*		*B*
Approach Delay (s/veh)	--	--				*14.6*		
Approach LOS	--	--				*B*		

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SHORT REPORT

General Information		Site Information	
Analyst	*PDS*	Intersection	*SR-57 NB □Brea Canyon Cutoff*
Agency or Co.	*KHR Assoicates*	Area Type	*All other areas*
Date Performed	*Ex□Amb□Related*	Jurisdiction	*City of Diamond Bar*
Time Period	*7:30 - 8:30 AM*	Analysis Year	*2012*

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Number of Lanes	1	2			2		1		1			
Lane Group	L	T			T		L		R			
Volume (vph)	40	541			613		249		196			
% Heavy Vehicles	0	0			0		0		0			
PHF	0.90	0.90			0.90		0.90		0.90			
Pretimed/Actuated (P/A)	A	A			A		A		A			
Startup Lost Time	2.0	2.0			2.0		2.0		2.0			
Extension of Effective Green	2.0	2.0			2.0		2.0		2.0			
Arrival Type	3	3			3		3		3			
Unit Extension	3.0	3.0			3.0		3.0		3.0			
Ped/Bike/RTOR Volume	0	0		0	0		0	0	0	0	0	
Lane Width	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/Hour												
Bus Stops/Hour	0	0			0		0		0			
Minimum Pedestrian Time		3.2			3.2			3.2			3.2	

Phasing	Thru Only	EB Only	03	04	NB Only	06	07	08
Timing	G = 23.3	G = 7.1	G =	G =	G = 16.6	G =	G =	G =
	Y = 3	Y = 3	Y =	Y =	Y = 3	Y =	Y =	Y =

Duration of Analysis (hrs) = *0.25* Cycle Length C = *56.0*

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
Adjusted Flow Rate	44	601			681		277		218			
Lane Group Capacity	193	1817			1267		451		403			
v/c Ratio	0.23	0.33			0.54		0.61		0.54			
Green Ratio	0.13	0.60			0.42		0.30		0.30			
Uniform Delay d_1	22.0	5.7			12.3		16.9		16.5			
Delay Factor k	0.11	0.11			0.14		0.20		0.14			
Incremental Delay d_2	0.6	0.1			0.5		2.5		1.5			
PF Factor	1.000	1.000			1.000		1.000		1.000			
Control Delay	22.6	5.8			12.8		19.4		18.0			
Lane Group LOS	C	A			B		B		B			
Approach Delay	6.9			12.8			18.8					
Approach LOS	A			B			B					
Intersection Delay	12.3			Intersection LOS						B		

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SHORT REPORT

General Information		Site Information	
Analyst	*PDS*	Intersection	*SR-57 NB □Brea Canyon Cutoff*
Agency or Co.	*KHR Assoicates*	Area Type	*All other areas*
Date Performed	*Ex□Amb□Related*	Jurisdiction	*City of Diamond Bar*
Time Period	*5:00 - 6:00 PM*	Analysis Year	*2012*

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Number of Lanes	1	2			2		1		1			
Lane Group	L	T			T		L		R			
Volume (vph)	24	937			643		321		127			
% Heavy Vehicles	0	0			0		0		0			
PHF	0.90	0.90			0.90		0.90		0.90			
Pretimed/Actuated (P/A)	A	A			A		A		A			
Startup Lost Time	2.0	2.0			2.0		2.0		2.0			
Extension of Effective Green	2.0	2.0			2.0		2.0		2.0			
Arrival Type	3	3			3		3		3			
Unit Extension	3.0	3.0			3.0		3.0		3.0			
Ped/Bike/RTOR Volume	0	0		0	0		0	0	0	0	0	
Lane Width	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/Hour												
Bus Stops/Hour	0	0			0		0		0			
Minimum Pedestrian Time		3.2			3.2			3.2			3.2	

Phasing	Thru Only	EB Only	03	04	NB Only	06	07	08
Timing	G = 19.1	G = 9.4	G =	G =	G = 18.5	G =	G =	G =
	Y = 3	Y = 3	Y =	Y =	Y = 3	Y =	Y =	Y =

Duration of Analysis (hrs) = *0.25* Cycle Length C = *56.0*

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
Adjusted Flow Rate	27	1041			714		357		141			
Lane Group Capacity	255	1713			1039		502		449			
v/c Ratio	0.11	0.61			0.69		0.71		0.31			
Green Ratio	0.17	0.56			0.34		0.33		0.33			
Uniform Delay d_1	19.7	8.1			15.9		16.4		14.0			
Delay Factor k	0.11	0.19			0.26		0.27		0.11			
Incremental Delay d_2	0.2	0.6			1.9		4.7		0.4			
PF Factor	1.000	1.000			1.000		1.000		1.000			
Control Delay	19.9	8.8			17.8		21.1		14.4			
Lane Group LOS	B	A			B		C		B			
Approach Delay	9.1			17.8			19.2					
Approach LOS	A			B			B					
Intersection Delay	14.0			Intersection LOS						B		

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SHORT REPORT

General Information		Site Information	
Analyst	*PDS*	Intersection	*SR-57 SB □Brea Canyon Cutoff*
Agency or Co.	*KHR Assoicates*	Area Type	*All other areas*
Date Performed	*Ex□Amb□Related*	Jurisdiction	*City of Diamond Bar*
Time Period	*8:00 - 9:00 AM*	Analysis Year	*2012*

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Number of Lanes		2		1	2					1		1
Lane Group		T		L	T					L		R
Volume (vph)		222		415	735					67		163
% Heavy Vehicles		0		0	0					0		0
PHF		0.90		0.90	0.90					0.90		0.90
Pretimed/Actuated (P/A)		A		A	A					A		A
Startup Lost Time		2.0		2.0	2.0					2.0		2.0
Extension of Effective Green		2.0		2.0	2.0					2.0		2.0
Arrival Type		3		3	3					3		3
Unit Extension		3.0		3.0	3.0					3.0		3.0
Ped/Bike/RTOR Volume	0	0		0	0		0	0		0	0	0
Lane Width		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/Hour												
Bus Stops/Hour		0		0	0					0		0
Minimum Pedestrian Time		3.2			3.2			3.2			3.2	

Phasing	Thru Only	WB Only	03	04	SB Only	06	07	08
Timing	G = 7.9	G = 27.8	G =	G =	G = 11.3	G =	G =	G =
	Y = 3	Y = 3	Y =	Y =	Y = 3	Y =	Y =	Y =

Duration of Analysis (hrs) = *0.25* Cycle Length C = *56.0*

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
Adjusted Flow Rate		247		461	817					74		181
Lane Group Capacity		430		755	2105					307		274
v/c Ratio		0.57		0.61	0.39					0.24		0.66
Green Ratio		0.14		0.50	0.69					0.20		0.20
Uniform Delay d_1		22.5		10.2	3.7					18.8		20.6
Delay Factor k		0.17		0.20	0.11					0.11		0.24
Incremental Delay d_2		1.9		1.5	0.1					0.4		5.8
PF Factor		1.000		1.000	1.000					1.000		1.000
Control Delay		24.4		11.6	3.8					19.2		26.4
Lane Group LOS		C		B	A					B		C
Approach Delay	24.4			6.6						24.3		
Approach LOS	C			A						C		
Intersection Delay	11.6			Intersection LOS						B		

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SHORT REPORT

General Information		Site Information	
Analyst	*PDS*	Intersection	*SR-57 SB Brea Canyon Cutoff*
Agency or Co.	*KHR Assoicates*	Area Type	*All other areas*
Date Performed	*Ex Amb Related*	Jurisdiction	*City of Diamond Bar*
Time Period	*5:00 - 6:00 PM*	Analysis Year	*2012*

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Number of Lanes		2		1	2					1		1
Lane Group		T		L	T					L		R
Volume (vph)		886		189	942					49		166
% Heavy Vehicles		0		0	0					0		0
PHF		0.90		0.90	0.90					0.90		0.90
Pretimed/Actuated (P/A)		A		A	A					A		A
Startup Lost Time		2.0		2.0	2.0					2.0		2.0
Extension of Effective Green		2.0		2.0	2.0					2.0		2.0
Arrival Type		3		3	3					3		3
Unit Extension		3.0		3.0	3.0					3.0		3.0
Ped/Bike/RTOR Volume	0	0		0	0		0	0		0	0	0
Lane Width		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/Hour												
Bus Stops/Hour		0		0	0					0		0
Minimum Pedestrian Time		3.2			3.2			3.2			3.2	

Phasing	Thru Only	WB Only	03	04	SB Only	06	07	08
Timing	G = 26.6	G = 10.5	G =	G =	G = 9.9	G =	G =	G =
	Y = 3	Y = 3	Y =	Y =	Y = 3	Y =	Y =	Y =

Duration of Analysis (hrs) = *0.25* Cycle Length C = *56.0*

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
Adjusted Flow Rate		984		210	1047					54		184
Lane Group Capacity		1447		285	2181					269		240
v/c Ratio		0.68		0.74	0.48					0.20		0.77
Green Ratio		0.47		0.19	0.72					0.18		0.18
Uniform Delay d_1		11.4		21.4	3.4					19.7		22.0
Delay Factor k		0.25		0.29	0.11					0.11		0.32
Incremental Delay d_2		1.3		9.6	0.2					0.4		13.8
PF Factor		1.000		1.000	1.000					1.000		1.000
Control Delay		12.7		31.1	3.6					20.0		35.8
Lane Group LOS		B		C	A					C		D
Approach Delay	12.7			8.2						32.2		
Approach LOS	B			A						C		
Intersection Delay	12.3			Intersection LOS						B		

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SHORT REPORT

General Information		Site Information	
Analyst	*PDS*	Intersection	*SR-57 NB Pathfinder*
Agency or Co.	*KHR Assoicates*	Area Type	*All other areas*
Date Performed	*Ex Amb Related*	Jurisdiction	*City of Diamond Bar*
Time Period	*7:45 - 8:45 AM*	Analysis Year	*2012*

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Number of Lanes	1	2			2	1	1		1			
Lane Group	L	T			T	R	L		R			
Volume (vph)	116	366			1059	636	216		69			
% Heavy Vehicles	0	0			0	0	0		0			
PHF	0.90	0.90			0.90	0.90	0.90		0.90			
Pretimed/Actuated (P/A)	A	A			A	A	A		A			
Startup Lost Time	2.0	2.0			2.0	2.0	2.0		2.0			
Extension of Effective Green	2.0	2.0			2.0	2.0	2.0		2.0			
Arrival Type	3	3			3	3	3		3			
Unit Extension	3.0	3.0			3.0	3.0	3.0		3.0			
Ped/Bike/RTOR Volume	0	0		0	0	0	0	0	0	0	0	
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/Hour												
Bus Stops/Hour	0	0			0	0	0		0			
Minimum Pedestrian Time		3.2			3.2			3.2			3.2	

Phasing	Thru & RT	EB Only	03	04	NB Only	06	07	08
Timing	G = 38.2	G = 7.0	G =	G =	G = 11.4	G =	G =	G =
	Y = 3	Y = 3	Y =	Y =	Y = 3	Y =	Y =	Y =

Duration of Analysis (hrs) = *0.25* Cycle Length C = *65.6*

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
Adjusted Flow Rate	129	407			1177	707	240		77			
Lane Group Capacity	162	2238			1774	792	264		236			
v/c Ratio	0.80	0.18			0.66	0.89	0.91		0.33			
Green Ratio	0.11	0.73			0.58	0.58	0.17		0.17			
Uniform Delay d_1	28.6	2.7			9.3	11.9	26.6		23.7			
Delay Factor k	0.34	0.11			0.24	0.42	0.43		0.11			
Incremental Delay d_2	23.6	0.0			0.9	12.5	32.6		0.8			
PF Factor	1.000	1.000			1.000	1.000	1.000		1.000			
Control Delay	52.2	2.7			10.3	24.4	59.2		24.5			
Lane Group LOS	D	A			B	C	E		C			
Approach Delay	14.6			15.6			50.8					
Approach LOS	B			B			D					
Intersection Delay	19.5			Intersection LOS						B		

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SHORT REPORT

General Information		Site Information	
Analyst	*PDS*	Intersection	*SR-57 NB Pathfinder*
Agency or Co.	*KHR Assoicates*	Area Type	*All other areas*
Date Performed	*Ex Amb Related*	Jurisdiction	*City of Diamond Bar*
Time Period	*5:00 - 6:00 PM*	Analysis Year	*2012*

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Number of Lanes	1	2			2	1	1		1			
Lane Group	L	T			T	R	L		R			
Volume (vph)	92	726			502	431	461		369			
% Heavy Vehicles	0	0			0	0	0		0			
PHF	0.90	0.90			0.90	0.90	0.90		0.90			
Pretimed/Actuated (P/A)	A	A			A	A	A		A			
Startup Lost Time	2.0	2.0			2.0	2.0	2.0		2.0			
Extension of Effective Green	2.0	2.0			2.0	2.0	2.0		2.0			
Arrival Type	3	3			3	3	3		3			
Unit Extension	3.0	3.0			3.0	3.0	3.0		3.0			
Ped/Bike/RTOR Volume	0	0		0	0	0	0	0	0	0	0	
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/Hour												
Bus Stops/Hour	0	0			0	0	0		0			
Minimum Pedestrian Time		3.2			3.2			3.2			3.2	

Phasing	Thru & RT	EB Only	03	04	NB Only	06	07	08
Timing	G = 24.9	G = 7.0	G =	G =	G = 25.1	G =	G =	G =
	Y = 3	Y = 3	Y =	Y =	Y = 3	Y =	Y =	Y =

Duration of Analysis (hrs) = *0.25* Cycle Length C = *66.0*

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
Adjusted Flow Rate	102	807			558	479	512		410			
Lane Group Capacity	161	1611			1149	513	578		614			
v/c Ratio	0.63	0.50			0.49	0.93	0.89		0.67			
Green Ratio	0.11	0.53			0.38	0.38	0.38		0.38			
Uniform Delay d_1	28.3	10.0			15.7	19.8	19.1		17.0			
Delay Factor k	0.21	0.11			0.11	0.45	0.41		0.24			
Incremental Delay d_2	7.9	0.2			0.3	24.4	15.3		2.8			
PF Factor	1.000	1.000			1.000	1.000	1.000		1.000			
Control Delay	36.2	10.2			16.0	44.1	34.4		19.8			
Lane Group LOS	D	B			B	D	C		B			
Approach Delay	13.1			29.0			27.9					
Approach LOS	B			C			C					
Intersection Delay	23.6			Intersection LOS						C		

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SHORT REPORT

General Information		Site Information	
Analyst	*PDS*	Intersection	*SR-57 SB Pathfinder*
Agency or Co.	*KHR Assoicates*	Area Type	*All other areas*
Date Performed	*Ex Amb Related*	Jurisdiction	*City of Diamond Bar*
Time Period	*7:45 - 8:45 AM*	Analysis Year	*2012*

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Number of Lanes		2		1	2					1		2
Lane Group		T		L	T					L		R
Volume (vph)		492		437	851					264		117
% Heavy Vehicles		0		0	0					0		0
PHF		0.90		0.90	0.90					0.90		0.90
Pretimed/Actuated (P/A)		A		A	A					A		A
Startup Lost Time		2.0		2.0	2.0					2.0		2.0
Extension of Effective Green		2.0		2.0	2.0					2.0		2.0
Arrival Type		3		3	3					3		3
Unit Extension		3.0		3.0	3.0					3.0		3.0
Ped/Bike/RTOR Volume	0	0		0	0		0	0		0	0	0
Lane Width		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/Hour												
Bus Stops/Hour		0		0	0					0		0
Minimum Pedestrian Time		3.2			3.2			3.2			3.2	

Phasing	Thru Only	WB Only	03	04	SB Only	06	07	08
Timing	G = 13.5	G = 21.7	G =	G =	G = 11.8	G =	G =	G =
	Y = 3	Y = 3	Y =	Y =	Y = 3	Y =	Y =	Y =

Duration of Analysis (hrs) = *0.25* Cycle Length C = *56.0*

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
Adjusted Flow Rate		547		486	946					293		130
Lane Group Capacity		734		589	2078					320		507
v/c Ratio		0.75		0.83	0.46					0.92		0.26
Green Ratio		0.24		0.39	0.68					0.21		0.21
Uniform Delay d_1		19.7		15.4	4.1					21.6		18.4
Delay Factor k		0.30		0.36	0.11					0.43		0.11
Incremental Delay d_2		4.2		9.4	0.2					29.7		0.3
PF Factor		1.000		1.000	1.000					1.000		1.000
Control Delay		23.8		24.8	4.3					51.3		18.7
Lane Group LOS		C		C	A					D		B
Approach Delay	23.8			11.2						41.3		
Approach LOS	C			B						D		
Intersection Delay	19.4			Intersection LOS						B		

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SHORT REPORT

General Information		Site Information	
Analyst	*PDS*	Intersection	*SR-57 SB Pathfinder*
Agency or Co.	*KHR Assoicates*	Area Type	*All other areas*
Date Performed	*Ex Amb Related*	Jurisdiction	*City of Diamond Bar*
Time Period	*5:00 - 6:00 PM*	Analysis Year	*2012*

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Number of Lanes		2		1	2					1		2
Lane Group		T		L	T					L		R
Volume (vph)		817		85	437					301		368
% Heavy Vehicles		0		0	0					0		0
PHF		0.90		0.90	0.90					0.90		0.90
Pretimed/Actuated (P/A)		A		A	A					A		A
Startup Lost Time		2.0		2.0	2.0					2.0		2.0
Extension of Effective Green		2.0		2.0	2.0					2.0		2.0
Arrival Type		3		3	3					3		3
Unit Extension		3.0		3.0	3.0					3.0		3.0
Ped/Bike/RTOR Volume	0	0		0	0		0	0		0	0	0
Lane Width		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/Hour												
Bus Stops/Hour		0		0	0					0		0
Minimum Pedestrian Time		3.2			3.2			3.2			3.2	

Phasing	Thru Only	WB Only	03	04	SB Only	06	07	08
Timing	G = 23.5	G = 7.0	G =	G =	G = 16.5	G =	G =	G =
	Y = 3	Y = 3	Y =	Y =	Y = 3	Y =	Y =	Y =

Duration of Analysis (hrs) = *0.25* Cycle Length C = *56.0*

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
Adjusted Flow Rate		908		94	486					334		409
Lane Group Capacity		1278		190	1822					448		709
v/c Ratio		0.71		0.49	0.27					0.75		0.58
Green Ratio		0.42		0.13	0.60					0.29		0.29
Uniform Delay d_1		13.4		22.9	5.4					17.9		16.8
Delay Factor k		0.27		0.11	0.11					0.30		0.17
Incremental Delay d_2		1.9		2.0	0.1					6.7		1.2
PF Factor		1.000		1.000	1.000					1.000		1.000
Control Delay		15.3		24.9	5.5					24.6		18.0
Lane Group LOS		B		C	A					C		B
Approach Delay	15.3			8.6						20.9		
Approach LOS	B			A						C		
Intersection Delay	15.4			Intersection LOS						B		

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Appendix K

Existing+Ambient+Related Projects

With Project

HCS+ Calculations

SHORT REPORT

General Information		Site Information	
Analyst	*PDS*	Intersection	*SR-60 EB Fairway*
Agency or Co.	*KHR Assoicates*	Area Type	*All other areas*
Date Performed	*Ex Amb Related Project*	Jurisdiction	*City of Industry*
Time Period	*7:45 - 8:45 AM*	Analysis Year	*2012*

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Number of Lanes	2		0					2			2	1
Lane Group	L	LR						T			T	R
Volume (vph)	436		357					574			682	155
% Heavy Vehicles	0		0					0			0	0
PHF	0.90		0.90					0.90			0.90	0.90
Pretimed/Actuated (P/A)	A		A					A			A	A
Startup Lost Time	2.0	2.0						2.0			2.0	2.0
Extension of Effective Green	2.0	2.0						2.0			2.0	2.0
Arrival Type	3	3						3			3	3
Unit Extension	3.0	3.0						3.0			3.0	3.0
Ped/Bike/RTOR Volume	0	0	0	0	0		0	0		0	0	0
Lane Width	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/Hour												
Bus Stops/Hour	0	0						0			0	0
Minimum Pedestrian Time		3.2			3.2			3.2			3.2	

Phasing	EB Only	02	03	04	Thru & RT	06	07	08
Timing	G = 25.0	G =	G =	G =	G = 25.0	G =	G =	G =
	Y = 3	Y =	Y =	Y =	Y = 3	Y =	Y =	Y =

Duration of Analysis (hrs) = *0.25* Cycle Length C = *56.0*

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
Adjusted Flow Rate	484	397						638			758	172
Lane Group Capacity	1318	607						1360			1360	607
v/c Ratio	0.37	0.65						0.47			0.56	0.28
Green Ratio	0.45	0.45						0.45			0.45	0.45
Uniform Delay d_1	10.3	12.1						10.9			11.4	9.8
Delay Factor k	0.11	0.23						0.11			0.15	0.11
Incremental Delay d_2	0.2	2.5						0.3			0.5	0.3
PF Factor	1.000	1.000						1.000			1.000	1.000
Control Delay	10.4	14.7						11.1			11.9	10.1
Lane Group LOS	B	B						B			B	B
Approach Delay	12.3						11.1			11.6		
Approach LOS	B						B			B		
Intersection Delay	11.7			Intersection LOS						B		

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SHORT REPORT

General Information		Site Information	
Analyst	*PDS*	Intersection	*SR-60 EB Fairway*
Agency or Co.	*KHR Assoicates*	Area Type	*All other areas*
Date Performed	*Ex Amb Related Project*	Jurisdiction	*City of Industry*
Time Period	*5:00 - 6:00 PM*	Analysis Year	*2012*

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Number of Lanes	2		0					2			2	1
Lane Group	L	LR						T			T	R
Volume (vph)	208		327					1452			805	315
% Heavy Vehicles	0		0					0			0	0
PHF	0.90		0.90					0.90			0.90	0.90
Pretimed/Actuated (P/A)	A		A					A			A	A
Startup Lost Time	2.0	2.0						2.0			2.0	2.0
Extension of Effective Green	2.0	2.0						2.0			2.0	2.0
Arrival Type	3	3						3			3	3
Unit Extension	3.0	3.0						3.0			3.0	3.0
Ped/Bike/RTOR Volume	0	0	0	0	0		0	0		0	0	0
Lane Width	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/Hour												
Bus Stops/Hour	0	0						0			0	0
Minimum Pedestrian Time		3.2			3.2			3.2			3.2	

Phasing	EB Only	02	03	04	Thru & RT	06	07	08
Timing	G = 16.1	G =	G =	G =	G = 33.9	G =	G =	G =
	Y = 3	Y =	Y =	Y =	Y = 3	Y =	Y =	Y =

Duration of Analysis (hrs) = *0.25* Cycle Length C = *56.0*

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
Adjusted Flow Rate	231	363						1613			894	350
Lane Group Capacity	849	391						1844			1844	823
v/c Ratio	0.27	0.93						0.87			0.48	0.43
Green Ratio	0.29	0.29						0.61			0.61	0.61
Uniform Delay d_1	15.4	19.4						9.3			6.2	5.9
Delay Factor k	0.11	0.44						0.40			0.11	0.11
Incremental Delay d_2	0.2	28.2						5.0			0.2	0.4
PF Factor	1.000	1.000						1.000			1.000	1.000
Control Delay	15.6	47.6						14.3			6.4	6.2
Lane Group LOS	B	D						B			A	A
Approach Delay	35.2						14.3			6.3		
Approach LOS	D						B			A		
Intersection Delay	15.0			Intersection LOS						B		

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SHORT REPORT

General Information		Site Information	
Analyst	*PDS*	Intersection	*SR-60 WB Fairway*
Agency or Co.	*KHR Assoicates*	Area Type	*All other areas*
Date Performed	*Ex Amb Related Project*	Jurisdiction	*City of Industry*
Time Period	*7:45 - 8:45 AM*	Analysis Year	*2012*

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Number of Lanes				0	1	1	1	2			2	1
Lane Group					LT	R	L	T			T	R
Volume (vph)				254	6	443	226	950			510	176
% Heavy Vehicles				0	0	0	0	0			0	0
PHF				0.90	0.90	0.90	0.90	0.90			0.90	0.90
Pretimed/Actuated (P/A)				A	A	A	A	A			A	A
Startup Lost Time					2.0	2.0	2.0	2.0			2.0	2.0
Extension of Effective Green					2.0	2.0	2.0	2.0			2.0	2.0
Arrival Type					3	3	3	3			3	3
Unit Extension					3.0	3.0	3.0	3.0			3.0	3.0
Ped/Bike/RTOR Volume	0	0		0	0	0	0	0		0	0	0
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/Hour												
Bus Stops/Hour					0	0	0	0			0	0
Minimum Pedestrian Time		3.2			3.2			3.2			3.2	

Phasing	WB Only	02	03	04	NB Only	Thru & RT	07	08
Timing	G = 22.9	G =	G =	G =	G = 11.2	G = 12.9	G =	G =
	Y = 3	Y =	Y =	Y =	Y = 3	Y = 3	Y =	Y =

Duration of Analysis (hrs) = *0.25*	Cycle Length C = *56.0*

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
Adjusted Flow Rate					289	492	251	1056			567	196
Lane Group Capacity					624	556	304	1474			702	942
v/c Ratio					0.46	0.88	0.83	0.72			0.81	0.21
Green Ratio					0.41	0.41	0.20	0.48			0.23	0.69
Uniform Delay d_1					12.1	15.3	21.5	11.4			20.4	3.1
Delay Factor k					0.11	0.41	0.36	0.28			0.35	0.11
Incremental Delay d_2					0.5	15.7	16.8	1.7			7.0	0.1
PF Factor					1.000	1.000	1.000	1.000			1.000	1.000
Control Delay					12.6	31.0	38.3	13.1			27.4	3.2
Lane Group LOS					B	C	D	B			C	A
Approach Delay				24.2			17.9			21.1		
Approach LOS				C			B			C		
Intersection Delay	20.5			Intersection LOS						C		

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SHORT REPORT

General Information		Site Information	
Analyst	*PDS*	Intersection	*SR-60 WB Fairway*
Agency or Co.	*KHR Assoicates*	Area Type	*All other areas*
Date Performed	*Ex Amb Related Project*	Jurisdiction	*City of Industry*
Time Period	*4:45 - 5:45 PM*	Analysis Year	*2012*

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Number of Lanes				0	1	1	1	2			2	1
Lane Group					LT	R	L	T			T	R
Volume (vph)				393	1	270	254	722			993	303
% Heavy Vehicles				0	0	0	0	0			0	0
PHF				0.90	0.90	0.90	0.90	0.90			0.90	0.90
Pretimed/Actuated (P/A)				A	A	A	A	A			A	A
Startup Lost Time					2.0	2.0	2.0	2.0			2.0	2.0
Extension of Effective Green					2.0	2.0	2.0	2.0			2.0	2.0
Arrival Type					3	3	3	3			3	3
Unit Extension					3.0	3.0	3.0	3.0			3.0	3.0
Ped/Bike/RTOR Volume	0	0		0	0	0	0	0		0	0	0
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/Hour												
Bus Stops/Hour					0	0	0	0			0	0
Minimum Pedestrian Time		3.2			3.2			3.2			3.2	

Phasing	WB Only	02	03	04	NB Only	Thru & RT	07	08
Timing	G = 22.5	G =	G =	G =	G = 13.6	G = 30.9	G =	G =
	Y = 3	Y =	Y =	Y =	Y = 3	Y = 3	Y =	Y =
Duration of Analysis (hrs) = 0.25						Cycle Length C = 76.0		

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
Adjusted Flow Rate					438	300	282	802			1103	337
Lane Group Capacity					451	403	272	1904			1238	1009
v/c Ratio					0.97	0.74	1.04	0.42			0.89	0.33
Green Ratio					0.30	0.30	0.18	0.63			0.41	0.74
Uniform Delay d_1					26.4	24.2	31.2	7.3			21.0	3.4
Delay Factor k					0.48	0.30	0.50	0.11			0.41	0.11
Incremental Delay d_2					34.8	7.4	64.4	0.2			8.4	0.2
PF Factor					1.000	1.000	1.000	1.000			1.000	1.000
Control Delay					61.3	31.5	95.6	7.4			29.4	3.6
Lane Group LOS					E	C	F	A			C	A
Approach Delay				49.2			30.4			23.4		
Approach LOS				D			C			C		
Intersection Delay	31.5			Intersection LOS						C		

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TWO-WAY STOP CONTROL SUMMARY

General Information

Analyst	*PDS*
Agency/Co.	*KHR Associates*
Date Performed	
Analysis Time Period	*7:45 - 8:45 AM*

Site Information

Intersection	*Reedview Dvwy Brea Cyn Cutoff*
Jurisdiction	*County of Los Angeles*
Analysis Year	*2012*

Project Description	*Ex. Ambient Related Project AM Peak Hour*
East/West Street: *Reedview Dr. Project Driveway*	North/South Street: *Brea Canyon Cutoff Road*
Intersection Orientation: *North-South*	Study Period (hrs): *0.25*

Vehicle Volumes and Adjustments

Major Street	Northbound			Southbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume (veh/h)	*1*	*755*	*0*	*0*	*513*	*16*
Peak-Hour Factor, PHF	*1.00*	*1.00*	*1.00*	*1.00*	*1.00*	*1.00*
Hourly Flow Rate, HFR (veh/h)	*1*	*755*	*0*	*0*	*513*	*16*
Percent Heavy Vehicles	*0*	--	--	*0*	--	--
Median Type	*Two Way Left Turn Lane*					
RT Channelized			*0*			*0*
Lanes	*1*	*2*	*0*	*1*	*2*	*1*
Configuration	*L*	*T*	*TR*	*L*	*T*	*R*
Upstream Signal		*0*			*0*	

Minor Street	Eastbound			Westbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume (veh/h)	*13*		*5*	*35*		*64*
Peak-Hour Factor, PHF	*1.00*	*1.00*	*1.00*	*1.00*	*1.00*	*1.00*
Hourly Flow Rate, HFR (veh/h)	*13*	*0*	*5*	*35*	*0*	*64*
Percent Heavy Vehicles	*0*	*0*	*0*	*0*	*0*	*0*
Percent Grade (%)		*0*			*0*	
Flared Approach		*N*			*N*	
Storage		*0*			*0*	
RT Channelized			*0*			*0*
Lanes	*1*	*0*	*1*	*1*	*0*	*1*
Configuration	*L*		*R*	*L*		*R*

Delay, Queue Length, and Level of Service

Approach	Northbound	Southbound	Westbound			Eastbound		
Movement	1	4	7	8	9	10	11	12
Lane Configuration	*L*	*L*	*L*		*R*	*L*		*R*
v (veh/h)	*1*	*0*	*35*		*64*	*13*		*5*
C (m) (veh/h)	*1048*	*865*	*298*		*673*	*344*		*788*
v/c	*0.00*	*0.00*	*0.12*		*0.10*	*0.04*		*0.01*
95% queue length	*0.00*	*0.00*	*0.39*		*0.31*	*0.12*		*0.02*
Control Delay (s/veh)	*8.4*	*9.2*	*18.7*		*10.9*	*15.9*		*9.6*
LOS	*A*	*A*	*C*		*B*	*C*		*A*
Approach Delay (s/veh)	--	--	*13.7*			*14.1*		
Approach LOS	--	--	*B*			*B*		

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TWO-WAY STOP CONTROL SUMMARY

General Information

Analyst	*PDS*
Agency/Co.	*KHR Associates*
Date Performed	
Analysis Time Period	*5:00 - 6:00 PM*

Site Information

Intersection	*Reedview Dvwy Brea Cyn Cutoff*
Jurisdiction	*County of Los Angeles*
Analysis Year	*2012*

Project Description *Ex. Ambient Related Project PM Peak Hour*

East/West Street: *Reedview Dr. Project Driveway* North/South Street: *Brea Canyon Cutoff Road*

Intersection Orientation: *North-South* Study Period (hrs): *0.25*

Vehicle Volumes and Adjustments

Major Street	Northbound			Southbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume (veh/h)	*2*	*764*	*90*	*166*	*725*	*24*
Peak-Hour Factor, PHF	*1.00*	*1.00*	*1.00*	*1.00*	*1.00*	*1.00*
Hourly Flow Rate, HFR (veh/h)	*2*	*764*	*90*	*166*	*725*	*24*
Percent Heavy Vehicles	*0*	--	--	*0*	--	--
Median Type	*Two Way Left Turn Lane*					
RT Channelized			*0*			*0*
Lanes	*1*	*2*	*0*	*1*	*2*	*1*
Configuration	*L*	*T*	*TR*	*L*	*T*	*R*
Upstream Signal		*0*			*0*	

Minor Street	Eastbound			Westbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume (veh/h)	*13*		*5*	*37*		*67*
Peak-Hour Factor, PHF	*1.00*	*1.00*	*1.00*	*1.00*	*1.00*	*1.00*
Hourly Flow Rate, HFR (veh/h)	*13*	*0*	*5*	*37*	*0*	*67*
Percent Heavy Vehicles	*0*	*0*	*0*	*0*	*0*	*0*
Percent Grade (%)	*0*			*0*		
Flared Approach		*N*			*N*	
Storage		*0*			*0*	
RT Channelized			*0*			*0*
Lanes	*1*	*0*	*1*	*1*	*0*	*1*
Configuration	*L*		*R*	*L*		*R*

Delay, Queue Length, and Level of Service

Approach	Northbound	Southbound	Westbound			Eastbound		
Movement	1	4	7	8	9	10	11	12
Lane Configuration	*L*	*L*	*L*		*R*	*L*		*R*
v (veh/h)	*2*	*166*	*37*		*67*	*13*		*5*
C (m) (veh/h)	*869*	*794*	*182*		*632*	*145*		*687*
v/c	*0.00*	*0.21*	*0.20*		*0.11*	*0.09*		*0.01*
95% queue length	*0.01*	*0.79*	*0.74*		*0.35*	*0.29*		*0.02*
Control Delay (s/veh)	*9.2*	*10.7*	*29.8*		*11.4*	*32.3*		*10.3*
LOS	*A*	*B*	*D*		*B*	*D*		*B*
Approach Delay (s/veh)	--	--	*17.9*			*26.2*		
Approach LOS	--	--	*C*			*D*		

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SHORT REPORT

General Information		Site Information	
Analyst	*PDS*	Intersection	*SR-57 NB □Brea Canyon Cutoff*
Agency or Co.	*KHR Assoicates*	Area Type	*All other areas*
Date Performed	*Ex□Amb□Related□Project*	Jurisdiction	*City of Diamond Bar*
Time Period	*7:30 - 8:30 AM*	Analysis Year	*2012*

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Number of Lanes	1	2			2		1		1			
Lane Group	L	T			T		L		R			
Volume (vph)	40	571			613		249		196			
% Heavy Vehicles	0	0			0		0		0			
PHF	0.90	0.90			0.90		0.90		0.90			
Pretimed/Actuated (P/A)	A	A			A		A		A			
Startup Lost Time	2.0	2.0			2.0		2.0		2.0			
Extension of Effective Green	2.0	2.0			2.0		2.0		2.0			
Arrival Type	3	3			3		3		3			
Unit Extension	3.0	3.0			3.0		3.0		3.0			
Ped/Bike/RTOR Volume	0	0		0	0		0	0	0	0	0	
Lane Width	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/Hour												
Bus Stops/Hour	0	0			0		0		0			
Minimum Pedestrian Time		3.2			3.2			3.2			3.2	

Phasing	Thru Only	EB Only	03	04	NB Only	06	07	08
Timing	G = 23.4	G = 7.1	G =	G =	G = 16.5	G =	G =	G =
	Y = 3	Y = 3	Y =	Y =	Y = 3	Y =	Y =	Y =

Duration of Analysis (hrs) = *0.25* | Cycle Length C = *56.0*

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
Adjusted Flow Rate	44	634			681		277		218			
Lane Group Capacity	193	1822			1273		448		401			
v/c Ratio	0.23	0.35			0.53		0.62		0.54			
Green Ratio	0.13	0.60			0.42		0.29		0.29			
Uniform Delay d_1	22.0	5.7			12.2		17.0		16.6			
Delay Factor k	0.11	0.11			0.14		0.20		0.14			
Incremental Delay d_2	0.6	0.1			0.4		2.6		1.5			
PF Factor	1.000	1.000			1.000		1.000		1.000			
Control Delay	22.6	5.8			12.7		19.6		18.1			
Lane Group LOS	C	A			B		B		B			
Approach Delay	6.9			12.7			19.0					
Approach LOS	A			B			B					
Intersection Delay	12.2			Intersection LOS						B		

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SHORT REPORT

General Information		Site Information	
Analyst	*PDS*	Intersection	*SR-57 NB □Brea Canyon Cutoff*
Agency or Co.	*KHR Assoicates*	Area Type	*All other areas*
Date Performed	*Ex□Amb□Related□Project*	Jurisdiction	*City of Diamond Bar*
Time Period	*5:00 - 6:00 PM*	Analysis Year	*2012*

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Number of Lanes	1	2			2		1		1			
Lane Group	L	T			T		L		R			
Volume (vph)	24	966			658		366		127			
% Heavy Vehicles	0	0			0		0		0			
PHF	0.90	0.90			0.90		0.90		0.90			
Pretimed/Actuated (P/A)	A	A			A		A		A			
Startup Lost Time	2.0	2.0			2.0		2.0		2.0			
Extension of Effective Green	2.0	2.0			2.0		2.0		2.0			
Arrival Type	3	3			3		3		3			
Unit Extension	3.0	3.0			3.0		3.0		3.0			
Ped/Bike/RTOR Volume	0	0		0	0		0	0	0	0	0	
Lane Width	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/Hour												
Bus Stops/Hour	0	0			0		0		0			
Minimum Pedestrian Time		3.2			3.2			3.2			3.2	

Phasing	Thru Only	EB Only	03	04	NB Only	06	07	08
Timing	G = 20.7	G = 7.1	G =	G =	G = 19.2	G =	G =	G =
	Y = 3	Y = 3	Y =	Y =	Y = 3	Y =	Y =	Y =

Duration of Analysis (hrs) = *0.25* | Cycle Length C = *56.0*

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
Adjusted Flow Rate	27	1073			731		407		141			
Lane Group Capacity	193	1675			1126		521		466			
v/c Ratio	0.14	0.64			0.65		0.78		0.30			
Green Ratio	0.13	0.55			0.37		0.34		0.34			
Uniform Delay d_1	21.7	8.8			14.6		16.5		13.5			
Delay Factor k	0.11	0.22			0.23		0.33		0.11			
Incremental Delay d_2	0.3	0.8			1.3		7.5		0.4			
PF Factor	1.000	1.000			1.000		1.000		1.000			
Control Delay	22.1	9.6			16.0		24.1		13.9			
Lane Group LOS	C	A			B		C		B			
Approach Delay	9.9			16.0			21.4					
Approach LOS	A			B			C					
Intersection Delay	14.4			Intersection LOS						B		

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SHORT REPORT

General Information		Site Information	
Analyst	*PDS*	Intersection	*SR-57 SB □Brea Canyon Cutoff*
Agency or Co.	*KHR Assoicates*	Area Type	*All other areas*
Date Performed	*Ex□Amb□Related□Project*	Jurisdiction	*City of Diamond Bar*
Time Period	*8:00 - 9:00 AM*	Analysis Year	*2012*

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Number of Lanes		2		1	2					1		1
Lane Group		T		L	T					L		R
Volume (vph)		227		415	735					67		163
% Heavy Vehicles		0		0	0					0		0
PHF		0.90		0.90	0.90					0.90		0.90
Pretimed/Actuated (P/A)		A		A	A					A		A
Startup Lost Time		2.0		2.0	2.0					2.0		2.0
Extension of Effective Green		2.0		2.0	2.0					2.0		2.0
Arrival Type		3		3	3					3		3
Unit Extension		3.0		3.0	3.0					3.0		3.0
Ped/Bike/RTOR Volume	0	0		0	0		0	0		0	0	0
Lane Width		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/Hour												
Bus Stops/Hour		0		0	0					0		0
Minimum Pedestrian Time		3.2			3.2			3.2			3.2	

Phasing	Thru Only	WB Only	03	04	SB Only	06	07	08
Timing	G = 7.8	G = 27.9	G =	G =	G = 11.3	G =	G =	G =
	Y = 3	Y = 3	Y =	Y =	Y = 3	Y =	Y =	Y =

Duration of Analysis (hrs) = *0.25* Cycle Length C = *56.0*

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
Adjusted Flow Rate		252		461	817					74		181
Lane Group Capacity		424		757	2105					307		274
v/c Ratio		0.59		0.61	0.39					0.24		0.66
Green Ratio		0.14		0.50	0.69					0.20		0.20
Uniform Delay d_1		22.6		10.1	3.7					18.8		20.6
Delay Factor k		0.18		0.20	0.11					0.11		0.24
Incremental Delay d_2		2.3		1.4	0.1					0.4		5.8
PF Factor		1.000		1.000	1.000					1.000		1.000
Control Delay		24.9		11.6	3.8					19.2		26.4
Lane Group LOS		C		B	A					B		C
Approach Delay	24.9			6.6						24.3		
Approach LOS	C			A						C		
Intersection Delay	11.7			Intersection LOS						B		

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SHORT REPORT

General Information		Site Information	
Analyst	*PDS*	Intersection	*SR-57 SB □Brea Canyon Cutoff*
Agency or Co.	*KHR Assoicates*	Area Type	*All other areas*
Date Performed	*Ex□Amb□Related□Project*	Jurisdiction	*City of Diamond Bar*
Time Period	*5:00 - 6:00 PM*	Analysis Year	*2012*

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Number of Lanes		2		1	2					1		1
Lane Group		T		L	T					L		R
Volume (vph)		892		189	954					49		166
% Heavy Vehicles		0		0	0					0		0
PHF		0.90		0.90	0.90					0.90		0.90
Pretimed/Actuated (P/A)		A		A	A					A		A
Startup Lost Time		2.0		2.0	2.0					2.0		2.0
Extension of Effective Green		2.0		2.0	2.0					2.0		2.0
Arrival Type		3		3	3					3		3
Unit Extension		3.0		3.0	3.0					3.0		3.0
Ped/Bike/RTOR Volume	0	0		0	0		0	0		0	0	0
Lane Width		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/Hour												
Bus Stops/Hour		0		0	0					0		0
Minimum Pedestrian Time		3.2			3.2			3.2			3.2	

Phasing	Thru Only	WB Only	03	04	SB Only	06	07	08
Timing	G = 26.5	G = 10.6	G =	G =	G = 9.9	G =	G =	G =
	Y = 3	Y = 3	Y =	Y =	Y = 3	Y =	Y =	Y =

Duration of Analysis (hrs) = *0.25* Cycle Length C = *56.0*

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
Adjusted Flow Rate		991		210	1060					54		184
Lane Group Capacity		1441		288	2181					269		240
v/c Ratio		0.69		0.73	0.49					0.20		0.77
Green Ratio		0.47		0.19	0.72					0.18		0.18
Uniform Delay d_1		11.5		21.3	3.5					19.7		22.0
Delay Factor k		0.26		0.29	0.11					0.11		0.32
Incremental Delay d_2		1.4		9.0	0.2					0.4		13.8
PF Factor		1.000		1.000	1.000					1.000		1.000
Control Delay		12.9		30.4	3.6					20.0		35.8
Lane Group LOS		B		C	A					C		D
Approach Delay	12.9			8.1						32.2		
Approach LOS	B			A						C		
Intersection Delay	12.3			Intersection LOS						B		

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SHORT REPORT

General Information		Site Information	
Analyst	*PDS*	Intersection	*SR-57 NB Pathfinder*
Agency or Co.	*KHR Assoicates*	Area Type	*All other areas*
Date Performed	*Ex Amb Related Project*	Jurisdiction	*City of Diamond Bar*
Time Period	*7:45 - 8:45 AM*	Analysis Year	*2012*

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Number of Lanes	1	2			2	1	1		1			
Lane Group	L	T			T	R	L		R			
Volume (vph)	121	376			1061	636	216		69			
% Heavy Vehicles	0	0			0	0	0		0			
PHF	0.90	0.90			0.90	0.90	0.90		0.90			
Pretimed/Actuated (P/A)	A	A			A	A	A		A			
Startup Lost Time	2.0	2.0			2.0	2.0	2.0		2.0			
Extension of Effective Green	2.0	2.0			2.0	2.0	2.0		2.0			
Arrival Type	3	3			3	3	3		3			
Unit Extension	3.0	3.0			3.0	3.0	3.0		3.0			
Ped/Bike/RTOR Volume	0	0		0	0	0	0	0	0	0	0	
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/Hour												
Bus Stops/Hour	0	0			0	0	0		0			
Minimum Pedestrian Time		3.2			3.2			3.2			3.2	

Phasing	Thru & RT	EB Only	03	04	NB Only	06	07	08
Timing	G = 38.6	G = 7.0	G =	G =	G = 11.4	G =	G =	G =
	Y = 3	Y = 3	Y =	Y =	Y = 3	Y =	Y =	Y =

Duration of Analysis (hrs) = *0.25* Cycle Length C = *66.0*

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
Adjusted Flow Rate	134	418			1179	707	240		77			
Lane Group Capacity	161	2243			1781	795	263		235			
v/c Ratio	0.83	0.19			0.66	0.89	0.91		0.33			
Green Ratio	0.11	0.74			0.58	0.58	0.17		0.17			
Uniform Delay d_1	28.9	2.7			9.3	11.9	26.8		23.9			
Delay Factor k	0.37	0.11			0.24	0.41	0.43		0.11			
Incremental Delay d_2	29.5	0.0			0.9	12.1	33.4		0.8			
PF Factor	1.000	1.000			1.000	1.000	1.000		1.000			
Control Delay	58.4	2.7			10.2	24.0	60.2		24.8			
Lane Group LOS	E	A			B	C	E		C			
Approach Delay	16.2			15.4			51.6					
Approach LOS	B			B			D					
Intersection Delay	19.7			Intersection LOS						B		

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SHORT REPORT

General Information		Site Information	
Analyst	*PDS*	Intersection	*SR-57 NB Pathfinder*
Agency or Co.	*KHR Assoicates*	Area Type	*All other areas*
Date Performed	*Ex Amb Related Project*	Jurisdiction	*City of Diamond Bar*
Time Period	*5:00 - 6:00 PM*	Analysis Year	*2012*

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Number of Lanes	1	2			2	1	1		1			
Lane Group	L	T			T	R	L		R			
Volume (vph)	92	732			502	431	461		369			
% Heavy Vehicles	0	0			0	0	0		0			
PHF	0.90	0.90			0.90	0.90	0.90		0.90			
Pretimed/Actuated (P/A)	A	A			A	A	A		A			
Startup Lost Time	2.0	2.0			2.0	2.0	2.0		2.0			
Extension of Effective Green	2.0	2.0			2.0	2.0	2.0		2.0			
Arrival Type	3	3			3	3	3		3			
Unit Extension	3.0	3.0			3.0	3.0	3.0		3.0			
Ped/Bike/RTOR Volume	0	0		0	0	0	0	0	0	0	0	
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/Hour												
Bus Stops/Hour	0	0			0	0	0		0			
Minimum Pedestrian Time		3.2			3.2			3.2			3.2	

Phasing	Thru & RT	EB Only	03	04	NB Only	06	07	08
Timing	G = 30.0	G = 7.2	G =	G =	G = 29.8	G =	G =	G =
	Y = 3	Y = 3	Y =	Y =	Y = 3	Y =	Y =	Y =

Duration of Analysis (hrs) = *0.25* Cycle Length C = *76.0*

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
Adjusted Flow Rate	102	813			558	479	512		410			
Lane Group Capacity	144	1611			1202	537	596		533			
v/c Ratio	0.71	0.50			0.46	0.89	0.86		0.77			
Green Ratio	0.09	0.53			0.39	0.39	0.39		0.39			
Uniform Delay d_1	33.4	11.5			17.0	21.5	21.2		20.1			
Delay Factor k	0.27	0.11			0.11	0.42	0.39		0.32			
Incremental Delay d_2	14.9	0.3			0.3	17.0	12.1		6.8			
PF Factor	1.000	1.000			1.000	1.000	1.000		1.000			
Control Delay	48.2	11.8			17.3	38.5	33.2		26.9			
Lane Group LOS	D	B			B	D	C		C			
Approach Delay	15.8			27.1			30.4					
Approach LOS	B			C			C					
Intersection Delay	24.6			Intersection LOS						C		

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SHORT REPORT

General Information		Site Information	
Analyst	*PDS*	Intersection	*SR-57 SB Pathfinder*
Agency or Co.	*KHR Assoicates*	Area Type	*All other areas*
Date Performed	*Ex Amb Related Project*	Jurisdiction	*City of Diamond Bar*
Time Period	*7:45 - 8:45 AM*	Analysis Year	*2012*

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Number of Lanes		2		1	2					1		2
Lane Group		T		L	T					L		R
Volume (vph)		492		437	841					264		117
% Heavy Vehicles		0		0	0					0		0
PHF		0.90		0.90	0.90					0.90		0.90
Pretimed/Actuated (P/A)		A		A	A					A		A
Startup Lost Time		2.0		2.0	2.0					2.0		2.0
Extension of Effective Green		2.0		2.0	2.0					2.0		2.0
Arrival Type		3		3	3					3		3
Unit Extension		3.0		3.0	3.0					3.0		3.0
Ped/Bike/RTOR Volume	0	0		0	0		0	0		0	0	0
Lane Width		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/Hour												
Bus Stops/Hour		0		0	0					0		0
Minimum Pedestrian Time		3.2			3.2			3.2			3.2	

Phasing	Thru Only	WB Only	03	04	SB Only	06	07	08
Timing	G = 13.5	G = 21.7	G =	G =	G = 11.8	G =	G =	G =
	Y = 3	Y = 3	Y =	Y =	Y = 3	Y =	Y =	Y =

Duration of Analysis (hrs) = *0.25* Cycle Length C = *56.0*

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
Adjusted Flow Rate		547		486	934					293		130
Lane Group Capacity		734		589	2078					320		507
v/c Ratio		0.75		0.83	0.45					0.92		0.26
Green Ratio		0.24		0.39	0.68					0.21		0.21
Uniform Delay d_1		19.7		15.4	4.1					21.6		18.4
Delay Factor k		0.30		0.36	0.11					0.43		0.11
Incremental Delay d_2		4.2		9.4	0.2					29.7		0.3
PF Factor		1.000		1.000	1.000					1.000		1.000
Control Delay		23.8		24.8	4.2					51.3		18.7
Lane Group LOS		C		C	A					D		B
Approach Delay	23.8			11.3						41.3		
Approach LOS	C			B						D		
Intersection Delay	19.5			Intersection LOS						B		

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SHORT REPORT

General Information		Site Information	
Analyst	*PDS*	Intersection	*SR-57 SB Pathfinder*
Agency or Co.	*KHR Assoicates*	Area Type	*All other areas*
Date Performed	*Ex Amb Related Project*	Jurisdiction	*City of Diamond Bar*
Time Period	*5:00 - 6:00 PM*	Analysis Year	*2012*

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Number of Lanes		2		1	2					1		2
Lane Group		T		L	T					L		R
Volume (vph)		817		85	447					301		381
% Heavy Vehicles		0		0	0					0		0
PHF		0.90		0.90	0.90					0.90		0.90
Pretimed/Actuated (P/A)		A		A	A					A		A
Startup Lost Time		2.0		2.0	2.0					2.0		2.0
Extension of Effective Green		2.0		2.0	2.0					2.0		2.0
Arrival Type		3		3	3					3		3
Unit Extension		3.0		3.0	3.0					3.0		3.0
Ped/Bike/RTOR Volume	0	0		0	0		0	0		0	0	0
Lane Width		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/Hour												
Bus Stops/Hour		0		0	0					0		0
Minimum Pedestrian Time		3.2			3.2			3.2			3.2	

Phasing	Thru Only	WB Only	03	04	SB Only	06	07	08
Timing	G = 23.4	G = 7.0	G =	G =	G = 16.6	G =	G =	G =
	Y = 3	Y = 3	Y =	Y =	Y = 3	Y =	Y =	Y =

Duration of Analysis (hrs) = *0.25* Cycle Length C = *56.0*

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
Adjusted Flow Rate		908		94	497					334		423
Lane Group Capacity		1273		190	1817					451		714
v/c Ratio		0.71		0.49	0.27					0.74		0.59
Green Ratio		0.42		0.13	0.60					0.30		0.30
Uniform Delay d_1		13.5		22.9	5.4					17.8		16.8
Delay Factor k		0.28		0.11	0.11					0.30		0.18
Incremental Delay d_2		1.9		2.0	0.1					6.4		1.3
PF Factor		1.000		1.000	1.000					1.000		1.000
Control Delay		15.4		24.9	5.5					24.2		18.1
Lane Group LOS		B		C	A					C		B
Approach Delay	15.4			8.6						20.8		
Approach LOS	B			A						C		
Intersection Delay	15.4			Intersection LOS						B		

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Appendix L

Los Angeles County Traffic Studies Unit Memorandum of Understanding

SCOPING FOR TRAFFIC STUDY

Project Name:	"The Canyon" Apartments

This Memorandum of Understanding (MOU) acknowledges Los Angeles County Department of Public Works, Traffic and Lighting Division (TLD) requirements of traffic impact analysis for the project and is subject to change:

Project Address:	1920 Brea Canyon Cutoff Road		
Project Description:	775-Unit Apartment Complex		
City:	Los Angeles County		
Project Buildout Year:	2010	**Ambient or CMP Growth Rate per Year:**	0.78%
Closest Intersection (Xtn) to the Project			
Xtn N/S Street Name:	Brea Canyon Cutoff Road		
Xtn E/W Street Name:	Reedview Drive		
Thomas Guide Pg+Grid:	679 – E5	**Los Angeles County Supervisorial District:**	4th

	Consultant	**Developer**
Company:	KHR Associates	Trammell Crow Residential
Name:	James H. Kawamura	Kim Paperin
Address:	4100 Newport Place Drive – Suite 200	949 South Coast Drive – Suite 400
City, State, Zip Code:	Newport Beach, CA 92660	Costa Mesa, CA 92626
Phone #:	949-756-6440	714-966-9355 x111
Fax #:	949-756-6444	714-966-9353
Email:	jkawamura@khrdesign.com	kpaperin@tcresidential.com

By: James H. Kawamura

Print Name: James H. Kawamura

Consultant/Developer's Representative — **Date** ~~1128/07~~ 01/23/08 R.M.

Reviewed By: Patrick Arakawa

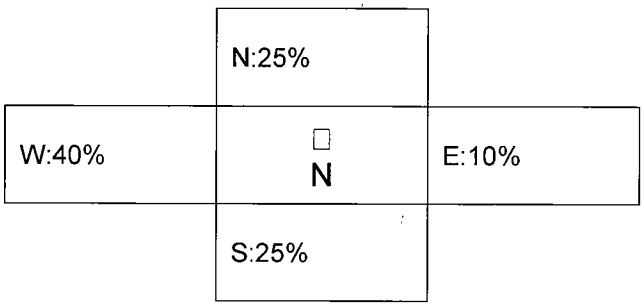
Print Name: Patrick Arakawa

TLD's Representative — **Date** 1/28/08

SCOPING FOR TRAFFIC STUDY

Project Name:	"The Canyon" Apartments

1. Traffic Distribution: Figure(s) illustrating project trip distribution in percentages and volumes at the studied intersections analyzed.



Trip Credit: Exact amount of credit subject to approval by TLD.

Transportation Demand Management (TDM)	Yes/<u>No</u>	
Existing Active Land Use	<u>Yes</u>/No	Current School Enrollment: 480 total for pre-school; elementary & secondary.
Previous Land Use	Yes/<u>No</u>	
Internal Trip Reduction	Yes/<u>No</u>	
Pass-by Trip Reduction	Yes/<u>No</u>	

SCOPING FOR TRAFFIC STUDY

Project Name:	"The Canyon" Apartments

2. Trip Generation

Trip Generation Rate(s) Source: I	I – Institute of Transportation Engineers; S – San Diego Traffic Generators; C – County; O – Other:	Edition: 7TH	

Land Use Code	Land Use	Rate Based on	Qty	*AVTE vs	ADT	Weekday a.m. peak		Weekday p.m. peak		Weekend peak hour	
						In	Out	In	Out	In	Out
220	Apartment	Avg/Eqn	775	0.51/Unit AM 0.62/Unit PM	See Below	79	316	312	168	N/A	N/A
220	Apartment	Avg/Eqn	775	6.72/Unit/Day 0.52/Unit/Weekend Peak Hour**	5,208	-	-	-	-	202**	201**
		Avg/Eqn									
		Avg/Eqn									
		Avg/Eqn									
		Avg/Eqn									
		Avg/Eqn									
		Avg/Eqn									
		Avg/Eqn									
		Avg/Eqn									

- * Average Vehicle Trip Ends.
- ** Weekend Peak Hour Directional Distribution Not Available in ITE Trip Generation Manual. Therefore, Assumed 50% In/50% Out Split.

SCOPING FOR TRAFFIC STUDY

Project Name:	"The Canyon" Apartments

3. Study Intersections: At minimum, the study shall include the following intersections. The list is subject to change after related projects, trip generation and distribution are determined. Consultant should check with adjoining Cities regarding their requirements in addition to the following County/City intersections. Documentation of the consultation from these agencies shall be included in the traffic study.

Xtn #	% County	Thomas Guide Page+Grid	N/S/E/W Street Name	City	Signalized	CMP
1	100	679-E5	Brea Canyon Cutoff Road/Fairway Drive & Colima Road	County	Yes/No	Yes/No
2	0	679-E4	SR-60 E/B Off Ramp & Fairway Drive	Industry	Yes/No	Yes/No
3	0	679-E3	SR-60 W/B Off Ramp & Fairway Drive	Industry	Yes/No	Yes/No
4	100	679-F6	Brea Canyon Cutoff Road & Pathfinder Road	County	Yes/No	Yes/No
5	100	679-E5	Brea Canyon Cutoff Road & Reedview Drive	County	Yes/No	Yes/No
6	0	679-G7	Brea Canyon Cutoff Road & SR-57 N/B Ramps	Diamond Bar	Yes/No	Yes/No
7	0	679-G7	Brea Canyon Cutoff Road & SR-57 S/B Ramps	Diamond Bar	Yes/No	Yes/No
8	0	679-H5	Pathfinder Road & SR-57 N/B Ramps	Diamond Bar	Yes/No	Yes/No
9	0	679-H5	Pathfinder Road & SR-57 S/B Ramps	Diamond Bar	Yes/No	Yes/No
10	100	679-A5	Colima Road & Fullerton Road	County	Yes/No	Yes/No

Cites to be consulted: Industry; Diamond Bar

SCOPING FOR TRAFFIC STUDY

Project Name:	"The Canyon" Apartments

Xtn #	% County	Thomas Guide Page+Grid	N⌉ S/E/W Street Name	City	Signalized	CMP
11	100	679-B5	Colima Road & Nogales Street	County	Yes/No	Yes/No
12	0	679-D3	Fairway Drive & Valley Boulevard	Industry	Yes/No	Yes/No

SCOPING FOR TRAFFIC STUDY

Project Name:	"The Canyon" Apartments

4. Related Projects: Consultant should check with Los Angeles County Department of Regional Planning and planning departments of adjoining Cities. Documentation of the consultation from these agencies shall be included in the traffic study. Related projects list shall be submitted to TLD for our review and approval before being incorporated in the study.

5. Congested Management Program (CMP): A CMP TIA is required for all projects required to prepare an Environmental Assessment based on local determination or projects requiring a traffic study. Where the project meets the criteria established in the Transportation Impact Analysis (TIA section of the County of Los Angeles' CMP TIA Land Use Analysis Guidelines, a CMP analysis must be prepared. At a minimum, the geographic area examined in the TIA must include the following:

- All CMP arterial monitoring intersections (see Appendix A, exhibit A-2, page A-15 of the 2002 Guidelines), including freeway on- or off-ramp intersections, where the proposed project will add 50 or more trips during either the a.m. or p.m. peak hours.
- Main line freeway monitoring locations (see Chapter 2, exhibit 2-4, page 16 of the 2002 Guidelines) where the project will add 150 or more trips, in either direction, during the a.m. or p.m. weekday peak hours.

A copy of the 2002 CMP Land Use Analysis Guidelines can be obtained by calling the CMP Hotline at (213) 922-2830.

6. Freeway Analysis: The potential traffic impact on the following Freeway(s) must be considered.

SR-60; SR-57

The applicant shall consult with the State of California Department of Transportation (Caltrans) to determine the California Environmental Quality Act levels of significance with regard to traffic impacts on Caltrans' freeway facilities. This consultation shall also include a determination of Caltrans requirements for the study of traffic impacts to its facilities and the mitigation of any such impacts. This analysis must follow the most current Caltrans' Guide for the Preparation of Traffic Impact Studies (December 2002) and can be obtained from
http://www.dot.ca.gov/hq/traffops/developserv/operationalsystems/reports/tisguide.pdf.
If Caltrans finds that the project has a significant impact on the freeway, Caltrans shall be requested to include the basis for this finding in their response. If fees are proposed to mitigate the freeway impact, Caltrans shall be requested to identify the specific project to which the fees will apply. These written comments from Caltrans shall be included with the traffic study and submitted to Public Works for review and approval. If a documented good faith effort is made to consult with Caltrans and written comments cannot be obtained from within a reasonable amount of time, an analysis of the freeway impact shall be made using the County of Los Angeles' CMP Land Use Analysis Guidelines.

SCOPING FOR TRAFFIC STUDY

Project Name:	"The Canyon" Apartments

7. Other:

-For the cumulative mitigation measures, a cost estimate and conceptual plan for the improvements shall be submitted to our Land Development Design and Review for review and approval. All proposed improvements shall be within the right-of-way.
ADT counts will taken on the following roadway segments:
1) Brea Canyon Cutoff s/o Colima Road;
2) Brea Canyon Cutoff s/o Pathfinder Road;
3) Brea Canyon Cutoff n/o Pathfinder Road;
4) Fairway Drive n/o Colima Road;
5) Fairway Drive n/o Route 60 Interchange;
6) Colima Road between Nogales Street and Fairway/Brea Canyon Cutoff;

This analysis must follow the most current Traffic Impact Analysis Report Guidelines.

SCOPING FOR TRAFFIC STUDY

Project Name:	"The Canyon" Apartments

Please return signed page 1 of 8 in person, by Mail or by Fax

In Person	By Mail
Los Angeles County Department of Public Works **Traffic and Lighting Division,** **Traffic Studies Section, Traffic Studies Unit** **1000 South Fremont Avenue** **Building A-9E, 4th Floor** **Alhambra, CA 91803-8800** **Our building, on the left with parking structure on the right. Check the following web site, for additional information: http://www.thealhambra.net**	**Los Angeles County Department of Public Works** **Traffic and Lighting Division,** **Traffic Studies Section, Traffic Studies Unit** **P.O. Box 1460** **Alhambra, CA 91802-1460**

By Fax

	Processing Engineer	Telephone No.	Fax No.	E-Mail Address
Y	Patrick ARAKAWA, P.E.	(626) 300-4867	(626) 300-4736	PArakawa @ladpw.org
	Todd LIMING	(626) 300-4826		Tliming@ladpw.org
	Ron MATSUOKA	(626) 300-4769		Rmatsuoka@ladpw.org

LOS ANGELES COUNTY DEPARTMENT OF PUBLIC WORKS
TRAFFIC AND LIGHTING DIVISION
APPLICATION FOR ENVIRONMENTAL IMPACT REPORT
TRAFFIC STUDY REVIEW SERVICES, ORDINANCE NO. 91-0101

Road Fund No:	B03	Revenue Source	9254	Program No:	R291

Department Receipt No.:		Date:	
Project No.:		Studies No.:	
Project Name:			
Applicant/Engineer:		Telephone No.:	
Company:		Fax No.:	
Address:			
City:		Zip:	

The traffic study (TS, required as part of the environmental review process, has been received. **Before a traffic study review can begin, the indicated fee must be paid to this Department.** The fee may be paid in person or mailed to:

In Person	By Mail
Cashier, First Floor (626) 458-6399 **Los Angeles County Department of Public Works** **900 South Fremont Avenue** **Alhambra, CA 91803-1331**	**Cashier, First Floor** **Los Angeles County Department of Public Works** **P.O. Box 1460** **Alhambra, CA 91802-1460**

Please **return this form** along with your payment to insure proper credit to your account. Make check payable to the **Los Angeles County Department of Public Works.**

TS review fees are based on the number of Average Daily Trips (ADT's) generated by the project and for six traffic conditions as indicated on page 5 of our 1997 guidelines, as follows:

ADT's		**FEE (Effective March 1, 2007)*	
1 - 1,000		$1,524	
1,001 - 5,000		$3,048	
5,001 - 10,000		**$3,809**	
10,001 and over		$4,571	
ADT For This Project:		Fee:	

* For additional information, http://planning.co.la.ca.us/
** Additional fee is required for additional traffic conditions/phases

	Processing Engineer	Telephone No.	Fax No.	E-Mail Address
Y	Patrick ARAKAWA, P.E.	(626) 300-4867	(626) 300-4736	PArakawa @ladpw.org
	Todd LIMING	(626) 300-4826		Tliming@ladpw.org
	Ron MATSUOKA	(626) 300-4769		Rmatsuoka@ladpw.org

cc: Cashier Note: Normal review time is 6-8 weeks after review fee is paid and receipt is received by Studies Unit.
P:\tlpub\WPFILES\FILES\STU\TSS Latest.doc Updated 01/31/07

Appendix M

Southlands Christian Schools

Traffic Correspondence

Southlands
CHURCH INTERNATIONAL

1920 South Brea Canyon Cutoff Road
Walnut, CA 91789 USA
tel 909.598.1964 **fax** 909.598.7161

Wednesday, June 11, 2008

To Whom It May Concern:

The Southlands Christian School (the "School") currently operates a pre-school, elementary, middle and high school at 1920 Brea Canyon Cutoff Rd. (the "Property"). The school hours of operation are 07h50 – 15h00. There are approximately 539 students attending the School.

Upon the sale of the Property, Southlands Church International (the "Church") and the School will be relocating operations to a new location outside of the immediate area. The Church will be relocating to Orange County. The School's relocation will not be in the immediate area.

I can be contacted at nick@southlands.net if you have any questions.

Sincerely,

Nicholas Saltas

KHR ASSOCIATES
CONSULTING ENGINEERS/SURVEYORS/PLANNERS

M E M O R A N D U M

Date: February 2, 2009
To: Distribution List (Via E-Mail Only)
From: Jim Kawamura, KHR Associates
Re: Results of Traffic Survey for Southlands Christian Schools, Rowland Heights, California
Distribution: Bill Winter, County of Los Angeles; Peter Gutierrez, Latham & Watkins; Kimberly Paperin, Trammell Crow Residential

---

Transmitted herein are the results of a traffic survey by **KHR Associates**, Newport Beach, California, of the Southlands Christian Schools, located at 1920 Brea Canyon Road, in Rowland Heights, California. The purpose of the traffic survey was to gather and interpret data that reflect existing school-related trip generation, and to validate the use of Institute of Transportation Engineers (ITE) trip generation rates for schools within the context of a traffic impact study for a proposed multi-family residential development on the present school site.

Background

Southlands Christian Schools (SCS) was established in 1979 as a ministry of Christian Chapel of Walnut Valley. Over the past 30 years, SCS has grown to include a pre-school, elementary school, middle school, and high school. SCS is accredited by both the Association of Christian Schools International (ACSI) and the Western Association of Schools and Colleges (WASC). The 15-acre SCS campus features various administrative and classroom buildings; a full-service cafeteria; computer lab; full science labs; gymnasium; high school park; career center; library; multi-purpose music room; and a sports field. Current total enrollment at SCS in 2008 was estimated at 480 students. Per the SCS directory, the faculty, staff, and administration at SCS total 51 people.

Driveway Counts

There are a total of 4 driveways that are used to access the existing SCS site (see Figure 1). The following access restrictions were noted:

1) The southernmost driveway (Driveway No. 1) on Brea Canyon Cutoff Road is restricted to right turn and left turn ingress only (i.e., no exits);
2) The next driveway to the north of Driveway No. 1 (Driveway No. 2) is restricted to right turn and left turn egress only (i.e., no entries);
3) The next driveway to the north (Driveway No. 3) is restricted to right turn and left turn ingress only (i.e., no exits); and

4100 Newport Place Drive – Suite 200 (949) 756-6440
Newport Beach, California 92660 Fax (949) 756-6444

4) The northernmost driveway (Driveway No. 4) is restricted to right turn egress only (i.e., no entries or left turn exiting).

Inbound and outbound vehicles were counted at all four driveways on Tuesday January 27, 2009, during the hours 7:00 to 9:00 AM and 2:00 to 4:00 PM. On the day of the count, the weather was clear and dry; there were no traffic incidents; and there were no unusual activities or events at the school.

The results are summarized in the attached "Driveway Ingress/Egress Counts" form, which indicates that the A.M. and P.M. peak hours of trip generation occur between 7:30 and 8:30 A.M., and 2:45 and 3:45, respectively. During the A.M. peak hour, a total of 454 trip ends were counted (including 237 inbound vehicles and 217 outbound vehicles). During the P.M. peak hour, a total of 352 trip ends were counted (including 182 inbound vehicles and 170 outbound vehicles).It should be noted that although on-street parking is permitted, no vehicles stopped or parked along Brea Canyon Cutoff Road to drop-off or pick-up passengers during the survey period.

Trip Generation

The following trip generation rates were calculated based on the driveway counts, and a student enrollment of 480. For comparison purposes, the ITE rate[1] and projected trip ends generated based on ITE rates are also shown.

A.M. Peak Hour

Direction of Travel	No. of Trips Counted	% of Trips	Calculated Trip Rate	ITE Trip Rate	No. of Trips Projected
Inbound	237	52.2%	0.49/Student	0.50/Student*	240
Outbound	217	47.8%	0.45/Student	0.40/Student*	192
Total	454	100.00%	0.95/Student	0.90/Student	432

* Based on a 55%/45% split of inbound/outbound trips, per ITE.

P.M. Peak Hour

Direction of Travel	No. of Trips Counted	% of Trips	Calculated Trip Rate	ITE Trip Rate	No. of Trips Projected
Inbound	182	51.7%	0.38/Student	0.29/Student**	139
Outbound	170	48.3%	0.35/Student	0.32/Student**	154
Total	352	100.00%	0.73/Student	0.61/Student	293

** Based on a 47%/53% split of inbound/outbound trips, per ITE.

[1] ***Trip Generation Manual*, 7th Ed., Institute of Transportation Engineers.**

It should also be noted that SCS has a year-round schedule of activities and events at the campus that extend into late afternoon and evening hours during the weekdays (i.e. after school hours). On the weekends, church, as well as school-related, activities and events generate intermittent vehicular and pedestrian traffic to the site.

Trip Distribution

In order to determine the distribution of inbound and outbound trips by direction the direction of travel before entering the SCS site and after leaving the site was noted for each vehicle. The results were as follows:

A.M. Peak Hour

Direction of Travel	Entering	% of Entering	Exiting	% of Exiting
Northbound	93	39.24%	174	80.18%
Southbound	144	60.76%	43	19.82%
Total	237	100.00%	217	100.00%

P.M. Peak Hour

Direction of Travel	Entering	% of Entering	Exiting	% of Exiting
Northbound	73	40.10%	132	77.64%
Southbound	109	59.89%	38	22.35%
Total	182	100.00%*	170	100.00%*

* Not Exactly 100.00% Due to Mathematical Rounding

It was noted that vehicles that entered the site in the northbound direction originated from the south (i.e., toward Pathfinder Road); vehicles that entered the site in the southbound direction originated from the north (i.e., toward Colima Road); vehicles that exited the site in the northbound direction were destined toward Colima Road; and vehicles that exited the site in the southbound direction were destined toward Pathfinder Road. Thus, of the total 454 trip ends generated during the A.M. peak hour, 318 (or 70.04%) originated and/or were destined to the north of the site, while 136 (or 29.96%) originated and/or were destined to the south of the site. Of the total 352 trip ends generated during the P.M. peak hour, 241 (or 68.47%) originated and/or were destined to the north of the site, while 111 (or 31.53%) originated and/or were destined to the south of the site.

School Alternatives

When SCS ceases operations at its present location, students, parents, teachers, and staff will have a choice of either discontinuing educational pursuits in the Rowland Heights area or switching to an alternative public or private school. Public school

choices are offered by either the Rowland Unified School District or the Walnut Valley Unified School District, depending on where the student lives. Private school choices are not bounded by geographic area. Regardless of the type of school or level of education offered, the one common feature of all school options is that all school sites are located either to the north or west of the SCS site.

Elementary Schools

Rowland Elementary School
2036 South Fullerton Road
Rowland Heights, CA 91748

Farjardo Elementary School
18550 E. Farjardo Street
Rowland Heights, CA 91748

Killian Elementary School
19100 Killian Avenue
Rowland Heights, CA 91748

Vejar Elementary School
20222 Vejar Road
Walnut, CA 91789

Middle Schools

Alvarado Intermediate School
1901 South Desire Avenue
Rowland Heights, CA 91748

Suzanne Middle School
525 Suzanne Road
Walnut, CA 91789

High Schools

Walnut High School
400 Pierre Road
Walnut, CA 91789

Rowland High School
2000 S. Otterbein Avenue
Rowland Heights, CA 91748

Private & Pre-Schools

Fullerton Christian Pre-School
2628 Fullerton Road
Rowland Heights, CA 91748

Phoenix Private Schools
1930 South Nogales Street
Rowland Heights, CA 91748

Preschool on the Hill
2804 Fullerton Road
Rowland Heights, CA 91748

Fairway Education Center
19560 Walnut Drive
Rowland Heights, CA 91748

Carrey Montessori
20813 Valley Boulevard
Walnut, CA 91789

La Petite Academy
800 Francesca Drive
Walnut, CA 91789

Hanwoori Sarang Church
20813 Valley Boulevard
Walnut, CA 91789

Kid Junction
20704 San Jose Hills Road
Walnut, CA 91789

Meritor Academy
20121 E. Alisu Ct.
Walnut, CA 91789

Other Considerations

If SCS relocates to another site “nearby,” it will undoubtedly be to the north or west of the present site because there are no comparable school sites available either immediately to the south or east of the present site. Because of hilly terrain; the lack of convenient roadways; and existing residential development, areas to the south and

east of the present SCS site are unlikely to yield a 15-acre replacement campus with comparable enrollment capacity and amenities.

If a new school site is established to the north or west of the present SCS site, the amount of traffic generated by the new site should be comparable to current volumes, if enrollment figures and amenities remain the same. If a new school site is established north of the present site, those who live south of the present site will probably continue to use Brea Canyon Cutoff Road for a portion of their daily school commute. If a new school site is established to the west of the present site, those who live south of the present site may discontinue use of Brea Canyon Cutoff Road altogether and use Pathfinder Road instead.

Conclusions

Based on the traffic survey conducted at the Southlands Christian Schools, the following conclusions are reached:

1) The existing site generates 454 weekday trip ends during the A.M. peak hour between 7:30 and 8:30 A.M., and 352 trip ends during the P.M. peak hour between 2:45 and 3:45. All traffic generated by SCS impact Brea Canyon Cutoff Road, with the morning traffic having the greatest impact since it coincides with the A.M. peak hour of weekday commuter traffic in the area.

2) The distribution of trips generated by SCS during both the A.M. and P.M. peak hours is approximately 70% to the north and 30% to the south – all by way of Brea Canyon Cutoff Road.

3) Assuming SCS students will either discontinue attending school in the area or enroll in an alternative school, the closing of SCS will result in approximately 454 fewer trips generated onto Brea Canyon Cutoff Road during the A.M. peak hour.

4) Once SCS ceases operations at the present site, 70% of the traffic generated by the SCS site during the A.M. and P.M. peak hours will be eliminated from Brea Canyon Cutoff Road between Colima Road and Pathfinder Road.

5) If SCS relocates to a new site in the vicinity of the present site, it will most likely be either to the north or west of the present site.

6) If SCS relocates to the north of the present site, up to 30% of the traffic generated by the present SCS site could continue to use Brea Canyon Cutoff Road between Colima Road and Pathfinder Road.

7) If SCS relocates to the west of the present site, traffic generated by the present SCS site could stop using Brea Canyon Cutoff Road altogether.

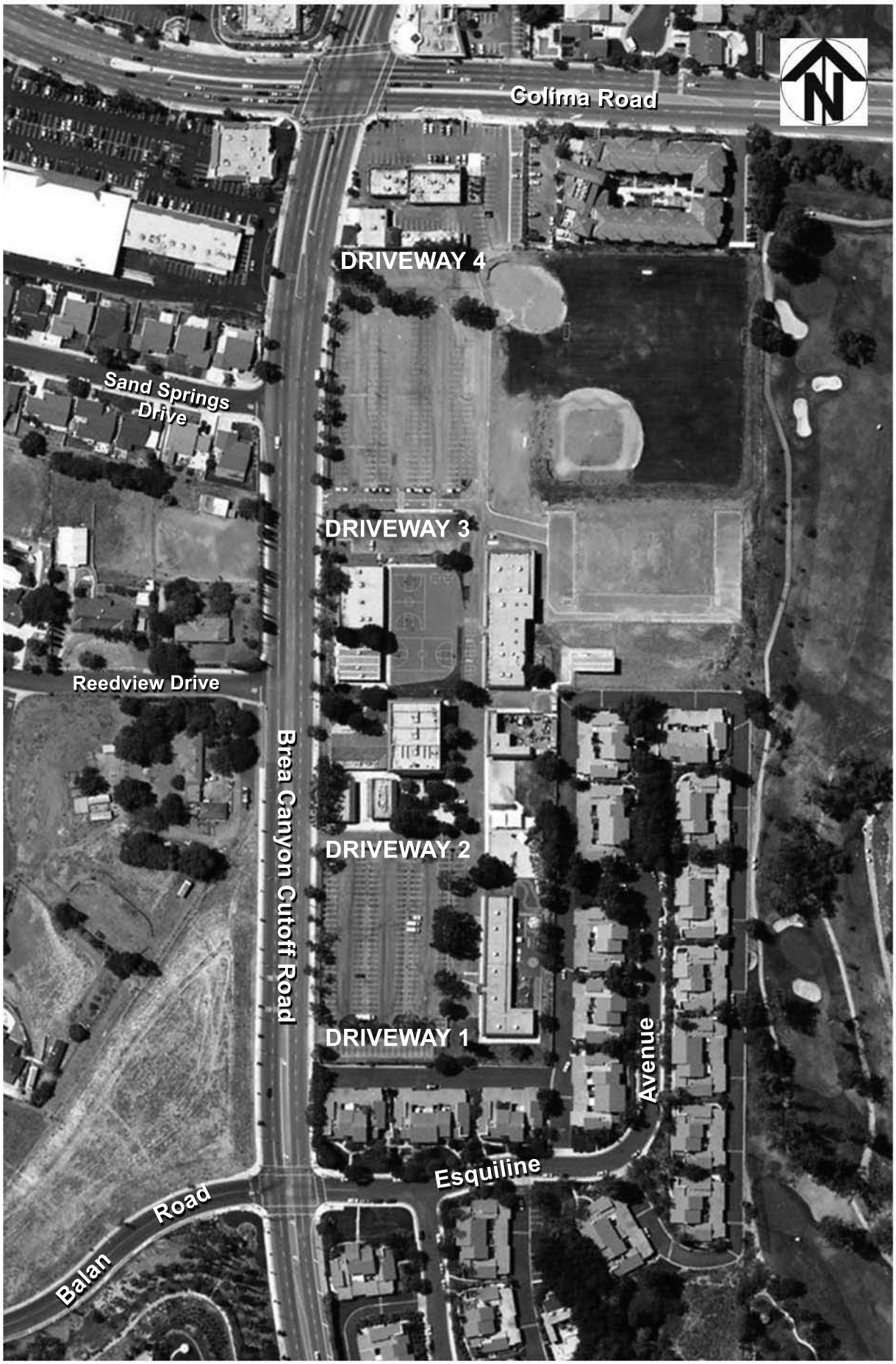


Figure 1 - Southlands Christian Schools Driveways

KHR ASSOCIATES
DRIVEWAY INGRESS/EGRESS COUNTS

Project:	Southlands Christian Schools	**Count Date:**	27-Jan-09
Location:	Rowland Heights, Los Angeles Co., California	**Count By:**	SC; RP; GE; AM
Land Use:	Pre-, Elementary, Middle, & High Schools	**A.M. Period:**	7:00 - 9:00 AM
Address:	1920 Brea Canyon Cut-Off Road	**P.M. Period:**	2:00 - 4:00 PM
Conditions:	Normal School Day; Dry & Clear Weather; No Incidents	**Input By:**	S. Carter

A.M. COUNT

Driveway No.	Movement	Number of Lanes	Time Period 7:00 7:15	7:15 7:30	**7:30 7:45**	**7:45 8:00**	**8:00 8:15**	**8:15 8:30**	8:30 8:45	8:45 9:00	**Peak Hour**
1	Left Turn In	1	3	9	**34**	**40**	**12**	**5**	6	7	**91**
1	Right Turn In	1	5	10	**13**	**30**	**11**	**9**	7	2	**63**
2	Left Turn Out	1	1	3	**14**	**24**	**1**	**4**	3	3	**43**
2	Right Turn Out	1	6	0	**23**	**26**	**9**	**12**	9	10	**70**
3	Left Turn In	1	3	3	**7**	**22**	**21**	**3**	0	0	**53**
3	Right Turn In	1	4	2	**5**	**18**	**7**	**0**	0	1	**30**
4	Right Turn Out	1	2	0	**18**	**39**	**32**	**15**	3	1	**104**
Total N/B Ingress			9	12	**18**	**48**	**18**	**9**	7	3	**93**
Total S/B Ingress			6	12	**41**	**62**	**33**	**8**	6	7	**144**
Total Ingress			15	24	**59**	**110**	**51**	**17**	13	10	**237**
Total N/B Egress			8	0	**41**	**65**	**41**	**27**	12	11	**174**
Total S/B Egress			1	3	**14**	**24**	**1**	**4**	3	3	**43**
Total Egress			9	3	**55**	**89**	**42**	**31**	15	14	**217**
Total Ingress & Egress			24	27	**114**	**199**	**93**	**48**	28	24	**454**

P.M. COUNT

Driveway No.	Movement	Number of Lanes	Time Period 2:00 2:15	2:15 2:30	2:30 2:45	**2:45 3:00**	**3:00 3:15**	**3:15 3:30**	**3:30 3:45**	3:45 4:00	**Peak Hour**
1	Left Turn In	1	1	0	0	**9**	**22**	**13**	**4**	2	**48**
1	Right Turn In	1	3	2	16	**13**	**20**	**7**	**3**	3	**43**
2	Left Turn Out	1	0	2	0	**1**	**29**	**8**	**5**	5	**43**
2	Right Turn Out	1	1	1	1	**2**	**23**	**19**	**9**	7	**53**
3	Left Turn In	1	2	3	9	**21**	**18**	**17**	**8**	4	**64**
3	Right Turn In	1	0	1	1	**3**	**9**	**4**	**6**	3	**22**
4	Right Turn Out	1	0	3	0	**10**	**39**	**38**	**18**	13	**105**
Total N/B Ingress			3	3	17	**16**	**29**	**11**	**9**	6	**73**
Total S/B Ingress			3	3	9	**30**	**40**	**30**	**12**	6	**109**
Total Ingress			6	6	26	**46**	**69**	**41**	**21**	12	**182**
Total N/B Egress			1	4	1	**12**	**62**	**57**	**27**	20	**132**
Total S/B Egress			0	2	0	**1**	**29**	**8**	**5**	5	**38**
Total Egress			1	6	1	**13**	**91**	**65**	**32**	25	**170**
Total Ingress & Egress			7	12	27	**59**	**160**	**106**	**53**	37	**352**

KHR ASSOCIATES
CONSULTING ENGINEERS/SURVEYORS/PLANNERS

M E M O R A N D U M

Date: February 19, 2009
To: Distribution List (Via E-Mail Only)
From: Jim Kawamura, KHR Associates
Re: Supplemental Analysis for Southlands Christian Schools, Rowland Heights, California
Distribution: Bill Winter, County of Los Angeles; Peter Gutierrez, Latham & Watkins; Kimberly Paperin, Trammell Crow Residential

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The results of a traffic survey by **KHR Associates**, Newport Beach, California, of the Southlands Christian Schools (SCS), located at 1920 Brea Canyon Road, in Rowland Heights, California were reported in a February 2, 2009 memorandum (see attached). This memorandum was reviewed by the County of Los Angeles staff, and it was requested that a supplemental analysis of the overlap period of trip generation between the existing school use and the proposed apartment use during the P.M. peak period be provided.

Background

The peak periods of trip generation for school uses are typically assumed to occur between 7:00 to 9:00 A.M. and between 2:00 to 4:00 P.M., weekdays. Traffic counts taken during these hours at SCS on Tuesday, January 27, 2009, by **KHR Associates** support this assumption.

While the A.M. peak period of trip generation for an apartment use generally coincides with that of a school use (i.e., 7:00 to 9:00 A.M., weekdays), empirical studies, such as those presented in the Institute of Transportation Engineers (ITE) *Trip Generation* manual indicate that the P.M. peak hour of trip generation for apartments occurs between 4:00 to 6:00 P.M. on weekdays.

In order to offset any new trips generated by the proposed apartment project during P.M. peak hour, trip generation by the existing school use must be established during an overlapping period of time with the apartment use.

Driveway Counts

Although not originally reported in the February 2, 2009 memorandum on the results of a traffic survey by **KHR Associates**, Newport Beach, California, of the SCS site, traffic counts taken on Tuesday, January 27, 2009, extended beyond the traditional 2:00 to 4:00 P.M. peak hour for school uses. Inbound and outbound vehicles were counted at all four study driveways between 4:00 and 5:00 P.M., as well. The results, provided

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herewith, show that between 4:00 and 5:00 P.M., 56 vehicles entered the SCS site and 64 vehicles exited. It should be noted that even after the 5:00 P.M. cut-off for the traffic counts taken on January 27, 2009, it was observed that some vehicles continued to enter and exit the SCS site.

Trip Generation

As indicated by the traffic count results, 120 trips (56 inbound trips and 64 outbound trips) were generated by SCS during the period 4:00 to 5:00 P.M. During this same hour, per the ITE *Trip Generation* manual, the proposed 775-unit apartment use is projected to generated 480 trip ends (with 312 inbound and 168 outbound).

Conclusions & Recommendations

Based on the traffic survey conducted at the Southlands Christian Schools, the following conclusions and recommendations are made:

1) Since the outbound directional distribution of trips generated by the existing school during the A.M. peak hour coincides with what is expected for the proposed apartment use, it is recommended that the maximum number of outbound trips allowed as a "trip credit" be limited to the trip ends actually counted at SCS (i.e., 217 outbound trips) rather than the total trips projected to be generated by the proposed apartment use per the ITE rate (i.e., 316 outbound trips).

2) Since the inbound directional distribution of trips generated by the existing school during the A.M. peak hour differs from what is expected for the proposed apartment use, it is recommended that the number of inbound trips allowed as a "trip credit" be limited to the 79 trip ends that are projected to be generated using the ITE rate, rather than the 240 trip ends actually counted at SCS.

3) Since the P.M. peak hour of traffic generated by a school use (2:45 to 3:45 P.M.) does not coincide with the P.M. peak hour of traffic generated by an apartment use (one hour between 4:00 and 6:00 P.M.), a full trip credit of 182 inbound and 170 outbound trips should not be allowed.

4) Since 56 inbound vehicles and 64 outbound vehicles were counted at SCS during the period of 4:00 to 5:00 P.M., trip credits of 56 inbound and 64 outbound trip should be allowed.

KHR ASSOCIATES
DRIVEWAY INGRESS/EGRESS COUNTS

Project:	Southlands Christian Schools	**Count Date:**	27-Jan-09
Location:	Rowland Heights, Los Angeles Co., California	**Count By:**	SC; RP; GE; AM
Land Use:	Pre-, Elementary, Middle, & High Schools	**A.M. Period:**	
Address:	1920 Brea Canyon Cut-Off Road	**P.M. Period:**	3:00 - 5:00 PM
Conditions:	Normal School Day; Dry & Clear Weather; No Incidents	**Input By:**	G. Estrada

P.M. COUNT

Driveway No.	Movement	Number of Lanes	Time Period 3:00 3:15	3:15 3:30	3:30 3:45	3:45 4:00	**4:00 4:15**	**4:15 4:30**	**4:30 4:45**	**4:45 5:00**	**4:00 to 5:00**
1	Left Turn In	1	22	13	4	2	**10**	**10**	**4**	**4**	**28**
1	Right Turn In	1	20	7	3	3	**4**	**2**	**5**	**1**	**12**
2	Left Turn Out	1	29	8	5	5	**5**	**2**	**4**	**4**	**15**
2	Right Turn Out	1	23	19	9	7	**10**	**7**	**6**	**2**	**25**
3	Left Turn In	1	18	17	8	4	**5**	**5**	**0**	**2**	**12**
3	Right Turn In	1	9	4	6	3	**2**	**0**	**2**	**0**	**4**
4	Right Turn Out	1	39	38	18	13	**10**	**10**	**1**	**3**	**24**
Total N/B Ingress			29	11	9	6	**6**	**2**	**7**	**1**	**16**
Total S/B Ingress			40	30	12	6	**15**	**15**	**4**	**6**	**40**
Total Ingress			69	41	21	12	**21**	**17**	**11**	**7**	**56**
Total N/B Egress			62	57	27	20	**20**	**17**	**7**	**5**	**49**
Total S/B Egress			29	8	5	5	**5**	**2**	**4**	**4**	**15**
Total Egress			91	65	32	25	**25**	**19**	**11**	**9**	**64**
Total Ingress & Egress			160	106	53	37	**46**	**36**	**22**	**16**	**120**

KHR ASSOCIATES
CONSULTING ENGINEERS/SURVEYORS/PLANNERS

M E M O R A N D U M

Date: March 10, 2009
To: Distribution List (Via E-Mail Only)
From: Jim Kawamura, KHR Associates
Re: Supplemental Trip Generation Information for Schools and Apartments
Distribution: Jeff Pletyak & Bill Winter, County of Los Angeles; Peter Gutierrez, Latham & Watkins; Kimberly Paperin, Trammell Crow Residential

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As a follow-up to the "Supplemental Analysis for Southlands Christian Schools, Rowland Heights, California," memorialized in a February 19, 2009 memorandum, the County of Los Angeles staff has requested additional information regarding the correlation between inbound and outbound trip generation for school uses and apartments during the A.M. and P.M. peak hours of weekday commute.

Peak Hours of Trip Generation

The peak periods of weekday commute typically occur between 7:00 and 9:00 A.M. and 4:00 to 6:00 P.M. Per the Institute of Transportation Engineers (ITE) *Trip Generation* manual, 7th Edition, the peak periods of weekday trip generation for apartments coincide with these commute hours (i.e., 7:00 and 9:00 A.M. and 4:00 to 6:00 P.M.). As with all ITE trip generation data, the *exact* hour of trip generation isn't specified since the empirical studies upon which ITE trip generation rates are based produce slightly varying results, with the presumed median peak hours being 7:30 to 8:30 A.M. and 4:30 to 5:30 P.M.

Per the ITE *Trip Generation* manual, the peak periods of weekday trip generation for elementary through high school uses occur between 7:00 and 9:00 A.M. and 2:00 to 4:00 P.M., with the presumed median peak hours to be 7:30 to 8:30 A.M. and 3:30 to 4:30 P.M. Thus, the A.M. peak hours of trip generation for apartments, schools, and weekday commute all coincide, while the P.M. peak hours of trip generation for apartments and weekday commute coincide, and the P.M. peak hour for schools is offset by approximately one hour toward non-peak traffic hours of the day.

Inbound Vs. Outbound Trip Generation

Apartments generate both inbound and outbound traffic during both the A.M. and P.M. peak hours. Large apartment complexes are not only places of residence, but also places of employment as well. This is partly the reason why there are significant numbers of inbound trips to apartments during the A.M. peak hour, and outbound trips from apartments during the P.M. peak hour.

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Newport Beach, California 92660 Fax (949) 756-6444

In the morning, 80% of all traffic generated during the A.M. peak hour is outbound, comprised mostly of residents going to work or school. The remaining 20% of all traffic generated is inbound trips. These inbound trips include apartment employees (such as office personnel and maintenance workers); daily deliveries (such as supplies, mail, newspapers, etc.); visitors (such as vendors and prospective tenants); and outside commuters arriving to pick-up apartment residents to go to work or school. In the afternoon, the reverse is true, with 65% of all traffic generated during the P.M. peak hour being inbound apartment residents arriving home. The outbound trips (35% of all trips) during the P.M. peak hour are comprised of apartment residents leaving to go shopping, night school, or for other activities; apartment employees leaving to go home; and outside commuters dropping of apartment residents and continuing with their travels.

Typical Large Apartment Population

Trammell Crow Residential, a prominent apartment developer, with properties throughout Southern California, provided the following statistics:

Daily On-Site Staff: 15 people
6 to 8 leasing agents
2 maintenance managers
2 maintenance techs
2 porters
2 cleaning staff

Additionally, on a less frequent basis:
Helium Tank Delivery -1 trip/month
Pest Control - 1 trip/week
Landscaping – 1 to 2 trips/week
Waste Management -1 to 2 trips/week
UPS - 2 trips/day
Fed Ex - 2 trips/day
Mail - 1 trip/day
Elevator Service -1 trip/month
Security - 4 trips/night
Marketing Guide Deliveries - 8 trips per/month (4 guides delivered twice a month)
Interior Plant Service - 1 trip/week

There are also 5 to 7 prospective tenant visits per day (double that during the grand opening and initial lease-up period).

In Closing

The additional information provided herein is intended to support the conclusions and recommendations made in the February 18, 2009 memorandum - specifically:

1) The existing use “trip credit” for the A.M. peak hour should be 217 outbound trip ends and 79 inbound trip ends.

2) The existing use “trip credit” for the P.M. peak hour should be 64 outbound trip ends and 56 inbound trip ends.

COUNTY OF LOS ANGELES

DEPARTMENT OF PUBLIC WORKS

"To Enrich Lives Through Effective and Caring Service"

GAIL FARBER, Director

900 SOUTH FREMONT AVENUE
ALHAMBRA, CALIFORNIA 91803-1331
Telephone: (626) 458-5100
http://dpw.lacounty.gov

ADDRESS ALL CORRESPONDENCE TO:
P.O. BOX 1460
ALHAMBRA, CALIFORNIA 91802-1460

IN REPLY PLEASE
REFER TO FILE: T-4

March 30, 2009

Mr. Jim Kawamura
KHR Associates
4100 Newport Place Drive, Suite 200
Newport Beach, CA 92660

Dear Mr. Kawamura:

CANYON RESIDENCES
SUPPLEMENTAL ANALYSIS
(FEBRUARY 2, FEBRUARY 19, AND MARCH 10, 2009)
CONDITIONAL USE PERMIT 08069
ROWLAND HEIGHTS AREA

As requested, we have reviewed the supplemental analyses dated February 2, February 19, and March 10, 2009, for the Canyon Residences project located at 1920 Brea Canyon Road in the unincorporated County of Los Angeles area of Rowland Heights.

The analyses present the results of a traffic survey performed at the Southlands Christian School, which currently occupies the site of the proposed Canyon Residences project. The purpose of the traffic survey is to gather and interpret data, which reflect the existing trip generation associated with the Southlands Christian School in order to validate the trip credits claimed in the project's Traffic Impact Analysis (TIA) dated June 16, 2008.

We generally agree with the conclusions included in the supplemental analyses. The TIA can be revised using the following trip credits:

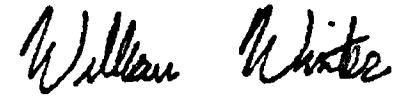
- 79 inbound trips during the a.m. peak hour
- 217 outbound trips during the a.m. peak hour
- 56 inbound trips during the p.m. peak hour
- 64 outbound trips during the p.m. peak hour

All previous review comments for this project are still applicable.

If you have any further questions regarding the review of this document, please contact Mr. Jeffrey Pletyak of our Traffic Studies Section at (626) 300-4704.

Very truly yours,

GAIL FARBER
Director of Public Works



WILLIAM J. WINTER
Assistant Deputy Director
Traffic and Lighting Division

IW:cn
P:\tlpub\WPFILES\FILES\STU\Isaac\EIR\the Canyon Residences\EIR 09047 The Canyon Residences SCS Trip Credit.DOC

Appendix N

Traffic Signal Warrants

State of California
Department of Transportation (Caltrans)
Traffic Signal Warrants
Existing Conditions

District: 7 **County:** Los Angeles **Route:** _____ **Post Mile:** _____

Major Street: Brea Canyon Cutoff Road (North-South) **Critical Approach Speed:** 45 **MPH**

Minor Street: Reedview Drive (East-West) **Critical Approach Speed:** 25 **MPH**

Calculated by: P. Spear **Date:** 3/3/2008 **Project Name:** Canyon Residences

Checked by: J. Kawamura **Date:** 3/3/2008 **Client:** Trammell Crow

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WARRANT 10 - Peak Hour Delay **SATISFIED:*** **YES** _____ **NO** X

REQUIREMENTS	FULFILLED	
1. The total delay experienced for traffic on one minor street approach controlled by a STOP sign equals or exceeds four vehicle-hours for a one-lane approach and five vehicle-hours for a two-lane approach; AND	Yes _____	No X
2. The volume on the same minor street approach equals or exceeds 100 vph for one moving lane of traffic or 150 vph for two moving lanes; AND	Yes _____	No X
3. The total entering volume serviced during the hour equals or exceeds 800 vph for for intersections with four or more approaches or 650 vph for intersections with three approaches	Yes X	No _____

**** All Parts Must Be Satisfied.***

WARRANT 11 - Peak Hour Volume **SATISFIED:*** **YES** _____ **NO** X

APPROACH LANES	One	2 or More	Hour Starting At 7:00 A.M.	8:00 A.M.	4:00 P.M.	5:00 P.M.
Both Approaches - Major Street		X	1,336	1,174	1,165	1,364
Highest Approach - Minor Street	X		2	3	9	5

**** Refer to Figure 9-8 (Urban Areas) or Figure 9-9 (Rural Areas) to determine if this warrant is satisfied.***

State of California
Department of Transportation (Caltrans)
Traffic Signal Warrants
Based on Estimated Average Daily Traffic

District: 7 **County:** Los Angeles **Route:** **Post Mile:**
Major Street: Brea Canyon Cutoff Road (North-South) **Critical Approach Speed:** 45 **MPH**
Minor Street: Reedview Drive (East-West) **Critical Approach Speed:** 25 **MPH**

Calculated by: P. Spear **Date:** 3/3/2008 **Project Name:** Canyon Residences
Checked by: J. Kawamura **Date:** 3/3/2008 **Client:** Trammell Crow

URBAN X **RURAL**

	Minimum Requirements EADT			
1. Minimum Vehicular	Vehicles per day on major street (total of both approaches)		Vehicles per day on higher-volume minor street approach (one direction only)	
Satisfied **Not Satisfied** X				
Number of lanes for moving traffic on each approach				
Major Street / **Minor Street**	Urban	Rural	Urban	Rural
1 / 1	8,000	5,600	2,400	1,680
2 or more / 1	9,600	6,720	2,400	1,680
2 or more / 2 or more	**9,600**	6,720	**3,200**	2,240
1 / 2 or more	8,000	5,600	3,200	2,240
2. Interruption of Continuous Traffic	Vehicles per day on major street (total of both approaches)		Vehicles per day on higher-volume minor street approach (one direction only)	
Satisfied X **Not Satisfied**				
Number of lanes for moving traffic on each approach				
Major Street / **Minor Street**	Urban	Rural	Urban	Rural
1 / 1	12,000	8,400	1,200	850
2 or more / 1	14,400	10,080	1,200	850
2 or more / 2 or more	**14,400**	10,080	**1,600**	1,120
1 / 2 or more	12,000	8,400	1,600	1,120
3. Combination				
Satisfied **Not Satisfied** X	**2 Warrants**		**2 Warrants**	
No one warrant satisfied, but the following warrants fulfilled 80% or more				
1 **2**				

Note: To be used only for NEW INTERSECTIONS or other locations where actual traffic volumes cannot be counted.

APPENDIX 5.8

Sewage Documentation

Sewer Area Study

PC 12124AS

TG 679(E-5)

CSMD INDEX 2305, 2306, 2348 & 2349

for

Canyon Residences

1920 Brea Canyon Cutoff Road
Rowland Heights, California
CUP # 2008-0069

December 23, 2009

Prepared for

Trammell Crow Residential

Prepared by

KHR ASSOCIATES
Consulting Engineers - Surveyors - Planners
4100 Newport Place Drive - Suite 200
Newport Beach, California 92660
Tele: 949-756-6440
Fax: 949-756-6444

REGISTERED PROFESSIONAL ENGINEER
JAMES H. KAWAMURA
No. 50560
Expiration: 03/31/10
CIVIL
STATE OF CALIFORNIA

Attestation

This report has been prepared by, and under the direction of, the undersigned, a duly Registered Civil Engineer in the State of California. Except as noted, the undersigned attests to the technical information contained herein, and has judged to be acceptable the qualifications of any technical specialists providing engineering data for this report, upon which findings, conclusions, and recommendations are based.

James H. Kawamura, P.E.
Registered Civil Engineer No. C30560
Exp. 3/31/10

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Sewer Area Study
Canyon Residences
Rowland Heights, California
December 23, 2009

Introduction

Trammell Crow Residential (TCR), Costa Mesa, California, proposes to construct a new multi-family residential Project known as *Canyon Residences* on a 15.3-acre site in an unincorporated community of the County of Los Angeles, California, known as Rowland Heights. Previous and existing uses on the Project site include the *Southlands Church* and the *Southlands Christian Schools*, respectively. Two alternative multi-family residential development scenarios are under consideration – one calling for 775 apartment units, and the other for 537 apartment units. In both cases, the *Southlands Church* and *Southlands Christian Schools* will vacate the premises and all existing uses will be demolished.

Due to the proposed changes in land use and intensity of development, the proposed Project will generate additional water consumption and sewer effluents. As a result, the adequacy of the existing infrastructure to maintain area wide sewer capacity is in question. In response to this concern, **TCR** commissioned **KHR Associates**, Newport Beach, California, to evaluate the proposed Project, quantify area wide and site specific sewer demand, and determine whether or not infrastructure upgrades are warranted.

This sewer area study report is informational only, and does not provide specific recommendations as to the design or construction of any new sewer facilities. The findings, conclusions, and recommendations presented in this report were independently derived by **KHR Associates**, and not necessarily shared by Trammell Crow Residential, the County of Los Angeles, or any other parties.

Existing Site Conditions

The existing *Southlands Christian Schools* include a preschool, an elementary school, and a secondary school. The most recent enrollment data indicates a total of 480 students attend the schools. All share common surface parking lots and playing fields. The main address for the *Southlands Christian Schools* complex is 1920 Brea Canyon Cutoff Road.

The existing site is situated on sloping terrain, with an elevation change of 54 feet from the highest point at the southerly end to the lowest point at the northerly end. The site is bounded to the north by a small commercial center and a senior housing complex (along Colima Road); the *Royal Vista Golf Club* to the east; a multi-family residential tract to the south, and Brea Canyon Cutoff Road to the

west. Figure 1 provides an aerial perspective of the general area within which the Project site is situated, while Figure 2 provides an aerial perspective of the Project site and immediate surroundings.

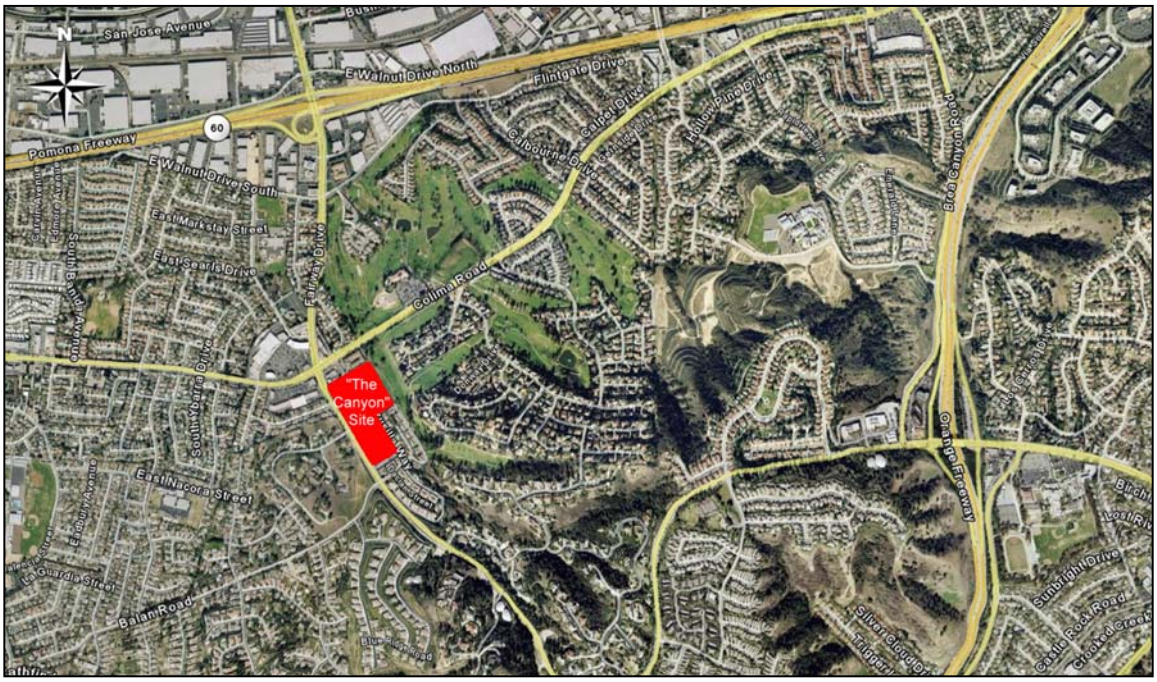


Figure 1 – Aerial Perspective of Project Area

Figure 2 – Aerial Perspective of Project Site

The current County of Los Angeles General Plan land use designation for the Project site is “Low Density Residential,” while the Rowland Heights Community Plan designation is “U1” (Urban-1). The current zoning designation is “A-1-20,000” (Light Agricultural), which allows single- and multi-family dwelling units, adult residential facilities, crops, family childcare homes, and various light agricultural uses. The proposed Project is also within the Rowland Heights Community Standard District (CSD), which implements the Community Plan and establishes standards for new development.

Existing Sewer System

The existing sewer system serving the Project site and surrounding neighborhood is provided and maintained by the County of Los Angeles Department of Public Works (County) and the County Sanitation Districts of Los Angeles County (Districts). Sewer improvement plans from the County indicate that an existing 8-inch vitrified clay pipe (VCP) sewer main is located in Brea Canyon Cutoff Road. This 8-inch sewer line bisects the subject site and slopes in an east to west direction within a recorded easement over the Project site. Downstream of the Project site, this sewer main remains 8-inch until it intercepts a 15-inch sewer main at the intersection of Searls Drive and Annadel Avenue. This 15-inch main then intercepts an 18-inch sewer main at the intersection of Walnut Avenue and Otterbein Avenue. This 18-inch main then conveys sewage into the Districts’ Joint Outfall H Unit 7C, a 30-inch diameter trunk line, located north of Brea Canyon Cutoff Road in San Jose Avenue at Otterbein Avenue. Additionally, sewer improvement plans from the County indicate that an existing 8-inch VCP sewer main is located in Sand Spring Drive, west of Brea Canyon Cutoff Road. This existing sewerage system also ultimately conveys sewage into the Districts’ 30-inch trunk line.

In response to a will serve request in a letter dated August 28, 2007, the Districts indicated that a portion of the Project area is outside of their jurisdictional boundaries and will require annexation into District 21 before sewerage service can be provided to the proposed development. A copy of the letter is included in the Appendix section of this report.

According to the Districts, their 30-inch trunk line has a designed capacity of 21.9 million gallons per day (mgd) and conveyed a peak flow of 1.4 mgd when last measured in 2005. The Districts have also indicated that a fee may be required for connecting directly or indirectly into their sewerage system. This connection fee is a capital facilities fee that is imposed in an amount sufficient to construct an incremental expansion of the sewerage system to accommodate the proposed Project. Connection fees must be paid prior to an issuance of the sewer permit to connect. When researching applicable development fees for the proposed Project, the Districts indicated that sewage flow “credit” will be given for the existing uses with proof of a demolition permit for the site.

Proposed Project

For the purposes of this analysis, **TCR** has indicated that the proposed Project will consist of one of the following scenarios: a 775-unit Project or a 537-unit Alternative Project. Both scenarios generally follow the same configuration of buildings and site layout depicted in Figure 5, with the difference being in the number of units in each building type, and the substitution of the podium building in the 775-unit Project with a wrap building in the 537-unit Alternative Project.

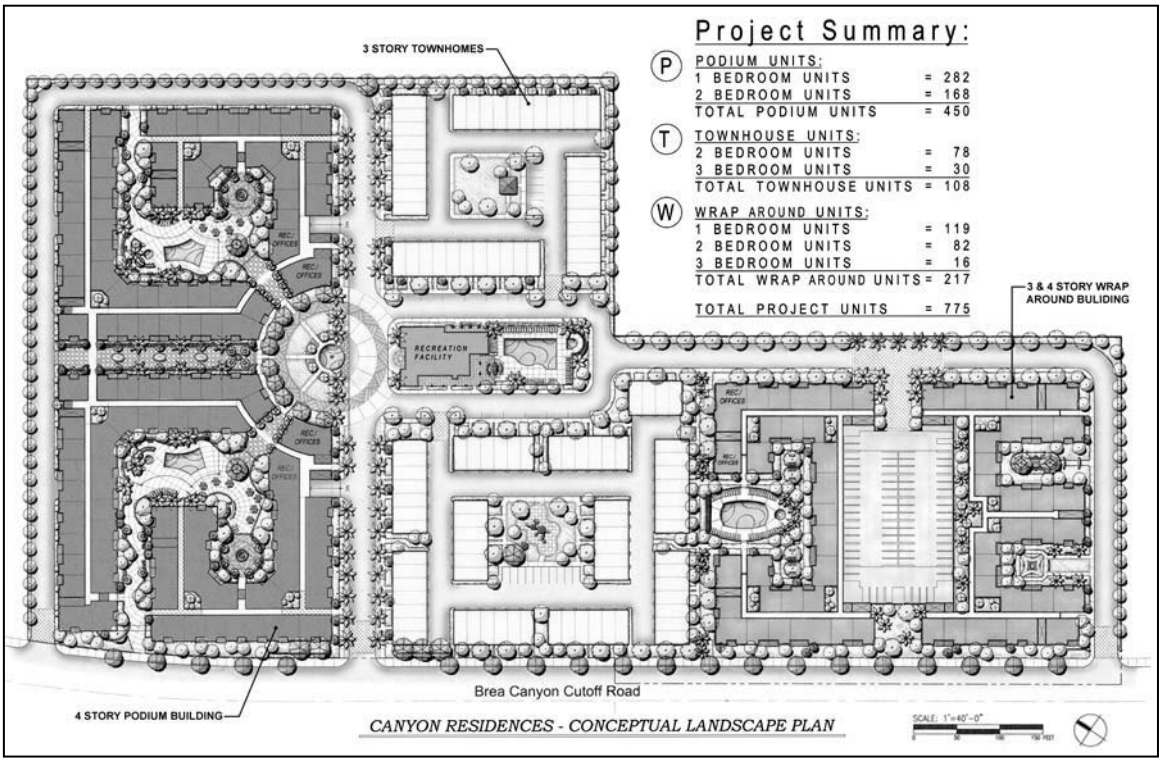


Figure 5 – Canyon Residences Site Plan

The Project consists of the following breakdown of units:

1- Bedroom	401 units
2- Bedroom	328 units
3- Bedroom	46 units
Total Units	775 units

The Alternative Project consists of the following breakdown of units:

1- Bedroom	213 units
2- Bedroom	248 units
3- Bedroom	76 units
Total Units	537 units

Sewer Service Area

The sewer service area that ties into the Districts' 30-inch trunk line via the Otterbein Avenue 18-inch main connection covers primarily agriculturally-zoned and R-1 residential uses to the south and southwest; residential and commercial uses to the west; and residential, commercial, and some heavy industrial uses to the northwest of the Project site. A total of approximately 1,501 acres lie within the sewer service area, including the 15-acre Project site.

The overall sewer service area, sub-areas, and key downstream sewer nodes are depicted in Figure 3, while Figure 4 illustrates the location, size, and routing of existing sewer mains in Brea Canyon Cutoff Road and Sand Spring Drive that could provide direct sewer connections for the Project site.

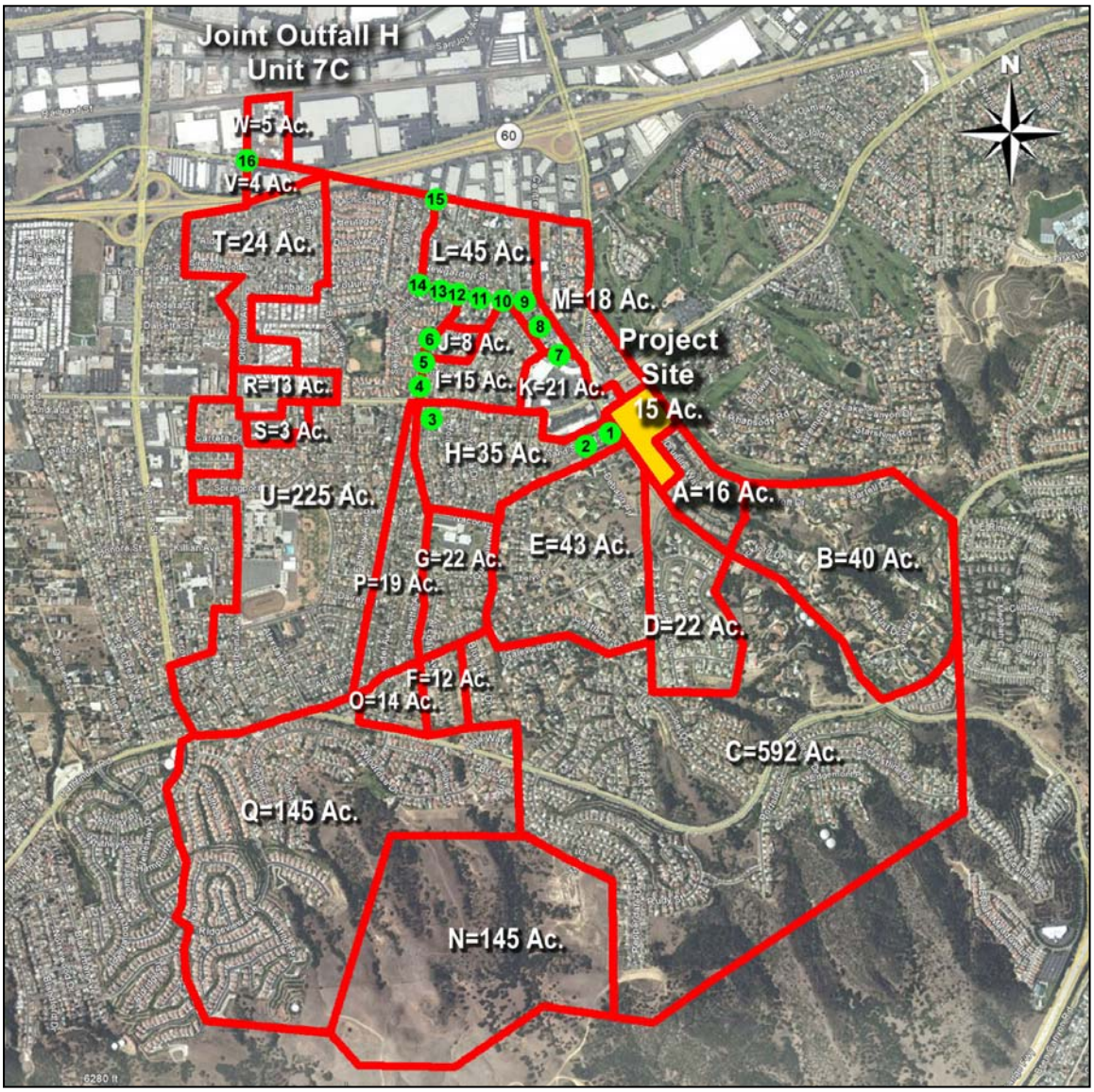


Figure 3 – Overall Sewer Service Area

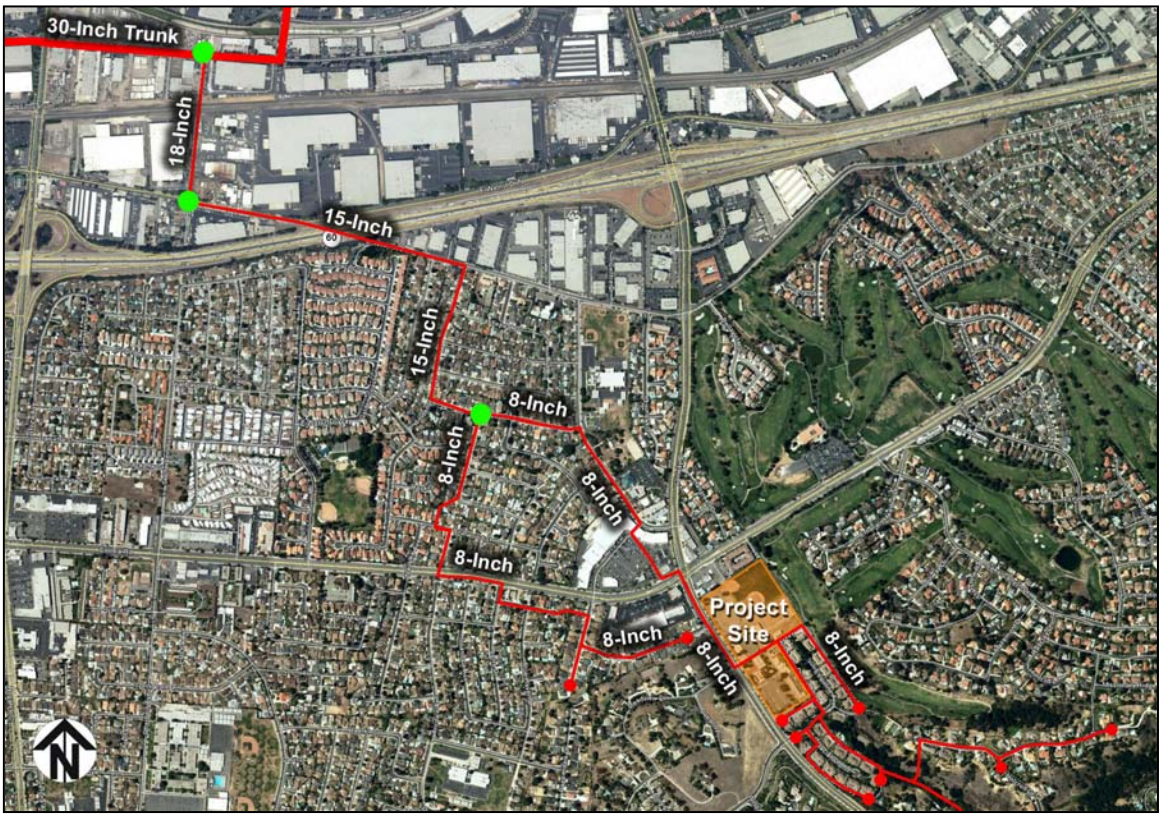


Figure 4 – Optional Sewer Mains Servicing Project Site

Sewer Capacity Analysis

The assumptions for analyzing sewer capacity include the use of the County's coefficients for sewage generation by zoning category, except where the exact number of units is known, and Kutter's formula for the flow of sewage in a pipe, with Kutter's roughness coefficient = 0.013. The County of Los Angeles Public Works Standard S-C4, "Flow Diagram for the Design of Circular Sanitary Sewers" (See Appendix Section), is used to determine the discharge in cubic feet per second (cfs). The tributary flow rates are calculated based on County coefficients ranging from 0.004 cfs per acre for single-family residential to 0.021 cfs per acre for heavy industry uses. For checking the capacity of existing pipes, sizes up to 15-inch are assumed to be 1/2 full at capacity, while sizes above 15-inch are assumed to be 3/4 full at capacity.

For the 775-unit Project, Table I provides an analysis of the sewer main line with sewer laterals connected only to the Brea Canyon Cutoff Road main line. Table II provides the same analysis with a secondary connection to the Sand Spring Drive main line at the terminal manhole. Table III provides an analysis of the 537-unit Alternative Project sewer laterals only to the Brea Canyon Cutoff Road. The County's Zoning Coefficient Table is provided in all three Tables, along with pipe sizes and slopes from manhole to manhole, and the County Private Contract plan number depicting each constructed sewer segment.

TABLE I - Trammell Crow Residential "Canyon Residences"
Sewer Area Study Flow Table

Street Name	Segment Up. MH	Segment Down. MH	Pipe Size (in.)	Pipe Slope (%)	Capacity (cfs) @ 1/2 Full*	Sub-Area (Acres)	Units or Zone Coefficient**	Sub-Area Flow (cfs)	Cumulative Flow (cfs)	County PC Plan No.***	Flow Depth of Flow (in.)	Flow Flow Depth/ 1/2 Pipe Dia.	Flow Cumulative Flow/Capacity
UPSTREAM R1 SUB-AREA TOTAL						**16.0**	**0.004**	**0.06**	**0.06**				
UPSTREAM NO BUILD HILLSIDE SUB-AREA TOTAL						**40.0**	**0.001**	**0.04**	**0.04**				
Brea Canyon Cutoff Rd.	***85***	***84***	***8***	***1.28%***	***0.63***	***1.0***	***52***	***0.05***	***0.16***	**12124AS**	***3.94***	***98.4%***	***24.7%***
Brea Canyon Cutoff Rd.	***85***	***84***	***8***	***1.28%***	***0.63***	***1.0***	***52***	***0.05***	***0.21***	**12124AS**	***3.94***	***00001***	***32.9%***
Brea Canyon Cutoff Rd.	***85***	***84***	***8***	***1.28%***	***0.63***	***1.0***	***52***	***0.05***	***0.26***	**12124AS**	***3.94***	***98.4%***	***41.1%***
Brea Canyon Cutoff Rd.	***84***	***83***	***8***	***1.64%***	***0.71***	***1.1***	***57***	***0.06***	***0.32***	**12124AS**	***3.84***	***96.0%***	***44.5%***
Brea Canyon Cutoff Rd.	***84***	***83***	***8***	***1.64%***	***0.71***	***1.1***	***57***	***0.06***	***0.37***	**12124AS**	***3.84***	***96.0%***	***52.5%***
Brea Canyon Cutoff Rd.	***84***	***83***	***8***	***1.64%***	***0.71***	***1.1***	***57***	***0.06***	***0.43***	**12124AS**	***3.84***	***96.0%***	***60.5%***
Brea Canyon Cutoff Rd.	***83***	***82***	***8***	***3.52%***	***1.04***	***1.6***	***83***	***0.08***	***0.51***	**12124AS**	***3.81***	***95.4%***	***49.2%***
Brea Canyon Cutoff Rd.	***83***	***82***	***8***	***3.52%***	***1.04***	***1.6***	***83***	***0.08***	***0.59***	**12124AS**	***3.81***	***95.4%***	***57.2%***
Brea Canyon Cutoff Rd.	***83***	***82***	***8***	***3.52%***	***1.04***	***1.6***	***83***	***0.08***	***0.68***	**12124AS**	***3.81***	***95.4%***	***65.1%***
Brea Canyon Cutoff Rd.	***82***	***81***	***8***	***2.56%***	***0.89***	***1.4***	***72***	***0.07***	***0.75***	**12124AS**	***3.90***	***97.5%***	***84.2%***
Brea Canyon Cutoff Rd.	***82***	***81***	***8***	***2.56%***	***0.89***	***1.4***	***72***	***0.07***	***0.82***	**12124AS**	***3.90***	***97.5%***	***92.4%***
Brea Canyon Cutoff Rd.	***82***	***81***	***8***	***2.56%***	***0.89***	***0.6***	***31***	***0.03***	***0.85***	**12124AS**	***1.67***	***41.8%***	***95.9%***
Brea Canyon Cutoff Rd.	***81***	***74***	***8***	***2.20%***	***0.82***	***0.5***	***26***	***0.03***	***0.88***	**12124AS**	***1.51***	***37.8%***	***107.2%***
Adjustment to Cumulative for Existing School to be Eliminated from Project Site									***-0.02***				
Brea Canyon Cutoff Rd.	81	74	8	2.20%	0.82	4.0	0.015	0.06	0.92	PC 9007	3.51	87.8%	**112.1%**
Colima Rd./Sewer Ease	74	632	8	3.20%	0.99	5.0	0.015	0.08	0.99	PC 10903	3.64	90.9%	100.4%
Sewer Ease	632	631	10	2.32%	1.66	6.0	0.015	0.09	1.08	PC 11057	3.25	65.1%	65.3%
Sewer Ease	631	72	10	2.08%	1.57	6.0	0.015	0.09	1.17	PC 11057	3.44	68.7%	74.7%
Sewer Ease	72	70	8	3.04%	0.97	5.0	0.015	0.08	1.25	PC 10903	3.71	92.8%	**128.8%**
Sewer Ease	70	69	8	3.00%	0.96	5.0	0.015	0.08	1.32	PC 10903	3.75	93.8%	**137.9%**
Brea Canyon Cutoff Rd.	69	642	8	3.20%	0.99	9.0	0.004	0.04	1.36	PC 9007	1.75	43.6%	**137.4%**
Brea Canyon Cutoff Rd.	642	538	8	2.40%	0.86	9.0	0.004	0.04	1.40	PC 8600	2.01	50.2%	**162.3%**
Searls Dr.	538	537	8	3.60%	1.05	5.0	0.004	0.02	1.42	PC 8600	0.91	22.9%	**134.8%**
Searls Dr.	537	536	8	1.52%	0.68	4.0	0.004	0.02	1.43	PC 8600	1.13	28.2%	**210.6%**
Searls Dr.	536	535	8	1.00%	0.55	2.0	0.004	0.01	1.44	PC 8600	0.70	17.5%	**261.8%**
Searls Dr.	535	534	8	1.00%	0.55	2.0	0.004	0.01	1.45	PC 8490	0.70	17.5%	**263.3%**
SAND SPRING R1 SUB-AREA TOTAL						**105.0**	**0.004**	**0.42**	**0.42**				
SAND SPRING COMMERCIAL SUB-AREA TOTAL						**20.0**	**0.015**	**0.30**	**0.30**				

Page 1 of 2

TABLE I - Trammell Crow Residential "Canyon Residences"
Sewer Area Study Flow Table

Total Cumulative Flow From Previous Page									**2.17**				
Searls Dr.	**534**	533	15	1.00%	3.22	5.0	0.004	0.02	2.17	PC 6178	0.56	7.5%	67.4%
Searls Dr.	533	525	15	1.40%	3.81	21.0	0.004	0.08	2.55	PC 6178	1.99	26.5%	67.0%
Lindengrove Ave.	525	526	15	1.12%	3.40	2.0	0.004	0.01	2.56	PC 6178	0.21	2.8%	75.2%
Lindengrove Ave.	526	516	15	0.80%	2.88	2.0	0.004	0.01	2.57	PC 6178	0.25	3.3%	89.2%
Lindengrove Ave.	516	517	15	1.28%	3.64	2.0	0.004	0.01	2.58	PC 6178	0.20	2.6%	70.8%
Lindengrove Ave.	517	498	15	2.32%	4.90	2.0	0.004	0.01	2.58	PC 6178	0.15	2.0%	52.7%
Walnut Ave.	498	489	15	0.92%	3.09	5.0	0.004	0.02	2.60	PC 6178	0.58	7.8%	84.4%
OTTERBEIN R1 SUB-AREA TOTAL						**710.0**	**0.004**	**2.84**	**2.84**				
OTTERBEIN AGRICULTURAL SUB-AREA TOTAL						**470.0**	**0.001**	**0.47**	**0.47**				
Otterbein Ave.	489	320	18	0.68%	6.48	2.0	0.021	0.04	5.96	PC 5558	0.70	7.8%	92.0%
Otterbein Ave.	320	317	18	0.60%	6.08	2.0	0.021	0.04	6.00	PC 5558	0.75	8.3%	98.6%
TRUNK CONNECTION	**317**	**Trunk**	**18**	**2.96%**	**13.51**	**5.0**	**0.021**	**0.11**	**6.10**	**PC 5558**	**0.84**	**9.3%**	**45.2%**

TOTAL TRIBUTARY AREA **1501.0** **ACRES**

NOTES:

Project Connection To Existing Sewer System Indicated in Bold Italicized Text.

R1 & Ag. (Agricultural) Sub-Areas Serviced by Otterbein Branch South of Walnut Avenue.

*** Per Los Angles County Guidelines, If Pipe Diameter is 18 in. or Greater, Capacity = Flow at 3/4 Full.**

Assumptions: n= 0.013 k= 1.49

**** Los Angeles County Zoning Coefficient Table:**

Agriculture	0.001	Per Acre
Residential		
R-1	0.004	Per Acre
R-2	0.008	Per Acre
R-3	0.012	Per Acre
R-4	0.016	Per Acre
Commercial		
C-1 through C-4	0.015	Per Acre
Heavy Industrial		
M-1 though M-4	0.021	Per Acre
Apartment/Condo	0.001	Per Unit
480-Student School	10.0	Gallons/Student/Day x 2.5 Peaking Factor

***** PC = Los Angeles County Private Contract No. for Sewer Improvements**

TABLE II - Trammell Crow Residential "Canyon Residences"
Sewer Area Study Flow Table With Secondary Connection to Sand Spring Drive

Street Name	Segment Up. MH	Segment Down. MH	Pipe Size (in.)	Pipe Slope (%)	Capacity (cfs) @ 1/2 Full*	Sub-Area (Acres)	Units or Zone Coefficient**	Sub-Area Flow (cfs)	Cumulative Flow (cfs)	County PC Plan No.***	Flow Depth of Flow (in.)	Flow Flow Depth/ 1/2 Pipe Dia.	Flow Cumulative Flow/Capacity
UPSTREAM R1 SUB-AREA TOTAL						**16.0**	**0.004**	**0.06**	**0.06**				
UPSTREAM HILLSIDE SUB-AREA TOTAL						**40.0**	**0.001**	**0.04**	**0.04**				
PRIMARY CONNECTIONS													
Brea Canyon Cutoff Rd.	***85***	***84***	***8***	***1.28%***	***0.63***	***1.0***	***52***	***0.05***	***0.16***	**12124AS**	***3.94***	***98.4%***	***24.7%***
Brea Canyon Cutoff Rd.	***85***	***84***	***8***	***1.28%***	***0.63***	***1.0***	***52***	***0.05***	***0.21***	**12124AS**	***3.94***	***98.4%***	***32.9%***
Brea Canyon Cutoff Rd.	***85***	***84***	***8***	***1.28%***	***0.63***	***1.0***	***52***	***0.05***	***0.26***	**12124AS**	***3.94***	***98.4%***	***41.1%***
Brea Canyon Cutoff Rd.	***84***	***83***	***8***	***1.64%***	***0.71***	***1.1***	***57***	***0.06***	***0.32***	**12124AS**	***3.84***	***96.0%***	***44.5%***
Brea Canyon Cutoff Rd.	***84***	***83***	***8***	***1.64%***	***0.71***	***1.1***	***57***	***0.06***	***0.37***	**12124AS**	***3.84***	***96.0%***	***52.5%***
Brea Canyon Cutoff Rd.	***84***	***83***	***8***	***1.64%***	***0.71***	***1.1***	***57***	***0.06***	***0.43***	**12124AS**	***3.84***	***96.0%***	***60.5%***
Brea Canyon Cutoff Rd.	***83***	***82***	***8***	***3.52%***	***1.04***	***1.6***	***83***	***0.08***	***0.51***	**12124AS**	***3.81***	***95.4%***	***49.2%***
Brea Canyon Cutoff Rd.	***83***	***82***	***8***	***3.52%***	***1.04***	***1.6***	***83***	***0.08***	***0.59***	**12124AS**	***3.81***	***95.4%***	***57.2%***
Brea Canyon Cutoff Rd.	***83***	***82***	***8***	***3.52%***	***1.04***	***1.5***	***77***	***0.08***	***0.67***	**12124AS**	***3.58***	***89.4%***	***64.6%***
Brea Canyon Cutoff Rd.	***82***	***81***	***8***	***2.56%***	***0.89***	***1.0***	***52***	***0.05***	***0.72***	**12124AS**	***2.79***	***69.7%***	***81.3%***
Brea Canyon Cutoff Rd.	***82***	***81***	***8***	***2.56%***	***0.89***	***1.0***	***52***	***0.05***	***0.78***	**12124AS**	***2.79***	***69.7%***	***87.1%***
Adjustment to Cumulative for Existing School to be Eliminated from Project Site									***-0.02***				
Brea Canyon Cutoff Rd.	81	74	8	2.20%	0.82	4.0	0.015	0.06	0.82	PC 9007	3.51	87.8%	99.5%
Colima Rd./Sewer Ease	74	632	8	3.20%	0.99	5.0	0.015	0.08	0.89	PC 10903	3.64	90.9%	90.0%
Sewer Ease	632	631	10	2.32%	1.57	6.0	0.015	0.09	0.98	PC 11057	3.44	68.8%	62.5%
Sewer Ease	631	72	10	2.08%	1.48	6.0	0.015	0.09	1.07	PC 11057	3.65	73.0%	72.3%
Sewer Ease	72	70	8	3.04%	0.97	5.0	0.015	0.08	1.15	PC 10903	3.71	92.8%	**118.1%**
Sewer Ease	70	69	8	3.00%	0.96	5.0	0.015	0.08	1.22	PC 10903	3.75	93.8%	**127.1%**
Brea Canyon Cutoff Rd.	69	642	8	3.20%	0.99	9.0	0.004	0.04	1.26	PC 9007	1.75	43.6%	**126.9%**
Brea Canyon Cutoff Rd.	642	538	8	2.40%	0.86	9.0	0.004	0.04	1.29	PC 8600	2.01	50.2%	**150.3%**
Searls Dr.	538	537	8	3.60%	1.05	5.0	0.004	0.02	1.31	PC 8600	0.91	22.9%	**125.0%**
Searls Dr.	537	536	8	1.52%	0.68	4.0	0.004	0.02	1.33	PC 8600	1.13	28.2%	**195.4%**
Searls Dr.	536	535	8	1.00%	0.55	2.0	0.004	0.01	1.34	PC 8600	0.70	17.5%	**243.0%**
Searls Dr.	535	534	8	1.00%	0.55	2.0	0.004	0.01	1.34	PC 8490	0.70	17.5%	**244.5%**

TABLE II - Trammell Crow Residential "Canyon Residences"
Sewer Area Study Flow Table With Secondary Connection to Sand Spring Drive

Total Cumulative Flow From Previous Page									**1.34**				
SECONDARY CONNECTION		***79***	***8***	***4.30%***	***1.25***	***2.0***	***103***	***0.10***	***0.10***	**12124AS**	***3.98***	***99.5%***	***8.3%***
Sand Spring Dr.	79	80	8	0.40%	0.38	5.0	0.004	0.02	0.12	PC 9314	2.53	63.2%	32.5%
Sand Spring Dr.	80	612	8	1.32%	0.69	5.0	0.004	0.02	0.14	PC 9314	1.39	34.8%	20.8%
Sand Spring Dr.	612	614	8	5.44%	1.40	5.0	0.004	0.02	0.16	PC 9314	0.69	17.1%	11.7%
Sand Spring Dr.	614	615	8	2.60%	0.97	5.0	0.004	0.02	0.18	PC 9314	0.99	24.8%	18.9%
Pepperdale Dr.	615	609	8	1.92%	0.83	5.0	0.004	0.02	0.20	PC 9314	1.15	28.8%	24.4%
Sewer Ease	609	608	8	1.06%	0.62	5.0	0.004	0.02	0.22	PC 9314	1.55	38.8%	36.1%
Sewer Ease	608	607	8	2.88%	1.02	5.0	0.004	0.02	0.24	PC 9314	0.94	23.5%	23.9%
Sewer Ease	607	606	8	6.96%	1.58	5.0	0.004	0.02	0.26	PC 9314	0.61	15.1%	16.6%
Andrada Dr.	606	605	8	2.88%	1.02	5.0	0.004	0.02	0.28	PC 8913	0.94	23.5%	27.8%
Andrada Dr.	605	604	8	2.04%	0.86	5.0	0.004	0.02	0.30	PC 8913	1.12	28.0%	35.4%
Andrada Dr.	604	603	8	1.00%	0.60	5.0	0.004	0.02	0.32	PC 8744R	1.60	40.0%	53.8%
Ybarra Dr.	603	602	8	1.64%	0.77	5.0	0.004	0.02	0.34	PC 8744R	1.25	31.2%	44.6%
Colima Rd.	602	601	8	5.28%	1.38	10.0	0.004	0.04	0.38	PC 8744R	1.39	34.8%	27.8%
Colima Rd.	601	586	8	0.72%	0.51	5.0	0.004	0.02	0.40	PC 8744R	1.88	47.1%	79.1%
Colima Rd.	586	585	15	0.40%	2.03	10.0	0.004	0.04	0.44	PC 8744R	1.77	23.6%	21.8%
Annadel Ave.	585	584	15	0.48%	2.23	10.0	0.015	0.15	0.59	PC 6178	6.06	80.8%	26.6%
Bluffwood St.	584	560	15	0.40%	2.03	10.0	0.004	0.04	0.63	PC 6178	1.77	23.6%	31.1%
Sewer Ease	560	562	15	0.40%	2.03	10.0	0.004	0.04	0.67	PC 6178	1.77	23.6%	33.1%
Annadel Ave.	562	563	15	0.40%	2.03	10.0	0.004	0.04	0.71	PC 6178	1.77	23.6%	35.1%
Annadel Ave.	563	544	15	0.80%	2.88	10.0	0.004	0.04	0.75	PC 6178	1.25	16.7%	26.2%
Annadel Ave.	544	**534**	15	1.00%	3.22	5.0	0.004	0.02	0.77	PC 6178	0.56	7.5%	24.0%
SECONDARY TOTAL						**142.0**	**0.004**	**0.57**	**0.77**				

TABLE II - Trammell Crow Residential "Canyon Residences"
Sewer Area Study Flow Table With Secondary Connection to Sand Spring Drive

Total Cumulative Flow From Previous Page									**2.12**				
Searls Dr.	**534**	533	15	1.00%	3.22	5.0	0.004	0.02	2.91	PC 6178	0.56	7.5%	90.5%
Searls Dr.	533	525	15	1.40%	3.81	21.0	0.004	0.08	3.00	PC 6178	1.99	26.5%	78.7%
Lindengrove Ave.	525	526	15	1.12%	3.40	2.0	0.004	0.01	3.00	PC 6178	0.21	2.8%	88.2%
Lindengrove Ave.	526	516	15	0.80%	2.88	2.0	0.004	0.01	3.01	PC 6178	0.25	3.3%	104.6%
Lindengrove Ave.	516	517	15	1.28%	3.64	2.0	0.004	0.01	3.02	PC 6178	0.20	2.6%	82.9%
Lindengrove Ave.	517	498	15	2.32%	4.90	2.0	0.004	0.01	3.03	PC 6178	0.15	2.0%	61.8%
Walnut Ave.	498	489	15	0.92%	3.09	5.0	0.004	0.02	3.05	PC 6178	0.58	7.8%	98.7%
OTTERBEIN R1 SUB-AREA TOTAL						**710.0**	**0.004**	**2.84**	**2.84**				
OTTERBEIN AGRICULTURAL SUB-AREA TOTAL						**470.0**	**0.001**	**0.47**	**0.47**				
Otterbein Ave.	489	320	18	0.68%	6.48	2.0	0.021	0.04	6.40	PC 5558	0.70	7.8%	98.8%
Otterbein Ave.	320	317	18	0.60%	6.08	2.0	0.021	0.04	6.44	PC 5558	0.75	8.3%	**105.9%**
TRUNK CONNECTION	**317**	**Trunk**	**18**	**2.96%**	**13.51**	**5.0**	**0.021**	**0.11**	**6.55**	**PC 5558**	**0.84**	**9.3%**	**48.5%**

TOTAL TRIBUTARY AREA **1501.0** **ACRES**

NOTES:

Project Connection To Existing Sewer System Indicated in Bold Italicized Text.

R1 & Ag. (Agricultural) Sub-Areas Serviced by Otterbein Branch South of Walnut Avenue.

*** Per Los Angles County Guidelines, If Pipe Diameter is 18 in. or Greater, Capacity = Flow at 3/4 Full.**

Assumptions: n= 0.013 k= 1.49

**** Los Angeles County Zoning Coefficient Table:**

Agriculture	0.001	Per Acre
Residential		
R-1	0.004	Per Acre
R-2	0.008	Per Acre
R-3	0.012	Per Acre
R-4	0.016	Per Acre
Commercial		
C-1 through C-4	0.015	Per Acre
Heavy Industrial		
M-1 though M-4	0.021	Per Acre
Apartment/Condo	0.001	Per Unit
480-Student School	10.0	Gallons/Student/Day x 2.5 Peaking Factor

***** PC = Los Angeles County Private Contract No. for Sewer Improvements**

TABLE III - Trammell Crow Residential 537-Unit "Canyon Residences"
Sewer Area Study Flow Table

Street Name	Segment Up. MH	Segment Down. MH	Pipe Size (in.)	Pipe Slope (%)	Capacity (cfs) @ 1/2 Full*	Sub-Area (Acres)	Units or Zone Coefficient**	Sub-Area Flow (cfs)	Cumulative Flow (cfs)	County PC Plan No.***	Flow Depth of Flow (in.)	Flow Flow Depth/ 1/2 Pipe Dia.	Flow Cumulative Flow/Capacity
UPSTREAM R1 SUB-AREA TOTAL						**16.0**	**0.004**	**0.06**	**0.06**				
UPSTREAM NO BUILD HILLSIDE SUB-AREA TOTAL						**40.0**	**0.001**	**0.04**	**0.04**				
Brea Canyon Cutoff Rd.	***85***	***84***	***8***	***1.28%***	***0.63***	***1.0***	***36***	***0.04***	***0.14***	**12124AS**	***2.73***	***68.2%***	***22.2%***
Brea Canyon Cutoff Rd.	***85***	***84***	***8***	***1.28%***	***0.63***	***1.0***	***36***	***0.04***	***0.18***	**12124AS**	***2.73***	***68.2%***	***27.9%***
Brea Canyon Cutoff Rd.	***85***	***84***	***8***	***1.28%***	***0.63***	***1.0***	***36***	***0.04***	***0.21***	**12124AS**	***2.73***	***68.2%***	***33.6%***
Brea Canyon Cutoff Rd.	***84***	***83***	***8***	***1.64%***	***0.71***	***1.1***	***39***	***0.04***	***0.25***	**12124AS**	***2.66***	***66.6%***	***35.3%***
Brea Canyon Cutoff Rd.	***84***	***83***	***8***	***1.64%***	***0.71***	***1.1***	***39***	***0.04***	***0.29***	**12124AS**	***2.66***	***66.6%***	***40.9%***
Brea Canyon Cutoff Rd.	***84***	***83***	***8***	***1.64%***	***0.71***	***1.1***	***39***	***0.04***	***0.33***	**12124AS**	***2.66***	***66.6%***	***46.4%***
Brea Canyon Cutoff Rd.	***83***	***82***	***8***	***3.52%***	***1.04***	***1.6***	***57***	***0.06***	***0.39***	**12124AS**	***2.64***	***66.1%***	***37.2%***
Brea Canyon Cutoff Rd.	***83***	***82***	***8***	***3.52%***	***1.04***	***1.6***	***57***	***0.06***	***0.44***	**12124AS**	***2.64***	***66.1%***	***42.7%***
Brea Canyon Cutoff Rd.	***83***	***82***	***8***	***3.52%***	***1.04***	***1.6***	***57***	***0.06***	***0.50***	**12124AS**	***2.64***	***66.1%***	***48.2%***
Brea Canyon Cutoff Rd.	***82***	***81***	***8***	***2.56%***	***0.89***	***1.4***	***50***	***0.05***	***0.55***	**12124AS**	***2.70***	***67.6%***	***62.0%***
Brea Canyon Cutoff Rd.	***82***	***81***	***8***	***2.56%***	***0.89***	***1.4***	***50***	***0.05***	***0.60***	**12124AS**	***2.70***	***67.6%***	***67.6%***
Brea Canyon Cutoff Rd.	***82***	***81***	***8***	***2.56%***	***0.89***	***0.6***	***21***	***0.02***	***0.62***	**12124AS**	***1.16***	***29.0%***	***70.0%***
Brea Canyon Cutoff Rd.	***81***	***74***	***8***	***2.20%***	***0.82***	***0.5***	***18***	***0.02***	***0.64***	**12124AS**	***1.05***	***26.2%***	***78.2%***
Adjustment to Cumulative for Existing School to be Eliminated from Project Site									***-0.02***				
Brea Canyon Cutoff Rd.	81	74	8	2.20%	0.82	4.0	0.015	0.06	0.68	PC 9007	3.51	87.8%	83.0%
Colima Rd./Sewer Ease	74	632	8	3.20%	0.99	5.0	0.015	0.08	0.76	PC 10903	3.64	90.9%	76.4%
Sewer Ease	632	631	10	2.32%	1.66	6.0	0.015	0.09	0.85	PC 11057	3.25	65.1%	51.0%
Sewer Ease	631	72	10	2.08%	1.57	6.0	0.015	0.09	0.94	PC 11057	3.44	68.7%	59.6%
Sewer Ease	72	70	8	3.04%	0.97	5.0	0.015	0.08	1.01	PC 10903	3.71	92.8%	**104.2%**
Sewer Ease	70	69	8	3.00%	0.96	5.0	0.015	0.08	1.09	PC 10903	3.75	93.8%	**113.1%**
Brea Canyon Cutoff Rd.	69	642	8	3.20%	0.99	9.0	0.004	0.04	1.12	PC 9007	1.75	43.6%	**113.3%**
Brea Canyon Cutoff Rd.	642	538	8	2.40%	0.86	9.0	0.004	0.04	1.16	PC 8600	2.01	50.2%	**134.7%**
Searls Dr.	538	537	8	3.60%	1.05	5.0	0.004	0.02	1.18	PC 8600	0.91	22.9%	**112.2%**
Searls Dr.	537	536	8	1.52%	0.68	4.0	0.004	0.02	1.19	PC 8600	1.13	28.2%	**175.6%**
Searls Dr.	536	535	8	1.00%	0.55	2.0	0.004	0.01	1.20	PC 8600	0.70	17.5%	**218.5%**
Searls Dr.	535	534	8	1.00%	0.55	2.0	0.004	0.01	1.21	PC 8490	0.70	17.5%	**220.0%**
SAND SPRING R1 SUB-AREA TOTAL						**105.0**	**0.004**	**0.42**	**0.42**				
SAND SPRING COMMERCIAL SUB-AREA TOTAL						**20.0**	**0.015**	**0.30**	**0.30**				

Page 1 of 2

TABLE III - Trammell Crow Residential 537-Unit "Canyon Residences"
Sewer Area Study Flow Table

Total Cumulative Flow From Previous Page									**2.17**				
Searls Dr.	**534**	533	15	1.00%	3.22	5.0	0.004	0.02	1.93	PC 6178	0.56	7.5%	60.0%
Searls Dr.	533	525	15	1.40%	3.81	21.0	0.004	0.08	2.31	PC 6178	1.99	26.5%	60.8%
Lindengrove Ave.	525	526	15	1.12%	3.40	2.0	0.004	0.01	2.32	PC 6178	0.21	2.8%	68.2%
Lindengrove Ave.	526	516	15	0.80%	2.88	2.0	0.004	0.01	2.33	PC 6178	0.25	3.3%	81.0%
Lindengrove Ave.	516	517	15	1.28%	3.64	2.0	0.004	0.01	2.34	PC 6178	0.20	2.6%	64.2%
Lindengrove Ave.	517	498	15	2.32%	4.90	2.0	0.004	0.01	2.35	PC 6178	0.15	2.0%	47.9%
Walnut Ave.	498	489	15	0.92%	3.09	5.0	0.004	0.02	2.37	PC 6178	0.58	7.8%	76.7%
OTTERBEIN R1 SUB-AREA TOTAL						**710.0**	**0.004**	**2.84**	**2.84**				
OTTERBEIN AGRICULTURAL SUB-AREA TOTAL						**470.0**	**0.001**	**0.47**	**0.47**				
Otterbein Ave.	489	320	18	0.68%	6.48	2.0	0.021	0.04	5.72	PC 5558	0.70	7.8%	88.3%
Otterbein Ave.	320	317	18	0.60%	6.08	2.0	0.021	0.04	5.76	PC 5558	0.75	8.3%	94.7%
TRUNK CONNECTION	**317**	**Trunk**	**18**	**2.96%**	**13.51**	**5.0**	**0.021**	**0.11**	**5.87**	**PC 5558**	**0.84**	**9.3%**	**43.4%**

TOTAL TRIBUTARY AREA **1501.0** **ACRES**

NOTES:

Project Connection To Existing Sewer System Indicated in Bold Italicized Text.

R1 & Ag. (Agricultural) Sub-Areas Serviced by Otterbein Branch South of Walnut Avenue.

*** Per Los Angles County Guidelines, If Pipe Diameter is 18 in. or Greater, Capacity = Flow at 3/4 Full.**

Assumptions: n= 0.013 k= 1.49

**** Los Angeles County Zoning Coefficient Table:**

Agriculture	0.001	Per Acre
Residential		
R-1	0.004	Per Acre
R-2	0.008	Per Acre
R-3	0.012	Per Acre
R-4	0.016	Per Acre
Commercial		
C-1 through C-4	0.015	Per Acre
Heavy Industrial		
M-1 though M-4	0.021	Per Acre
Apartment/Condo	0.001	Per Unit
480-Student School	10.0	Gallons/Student/Day x 2.5 Peaking Factor

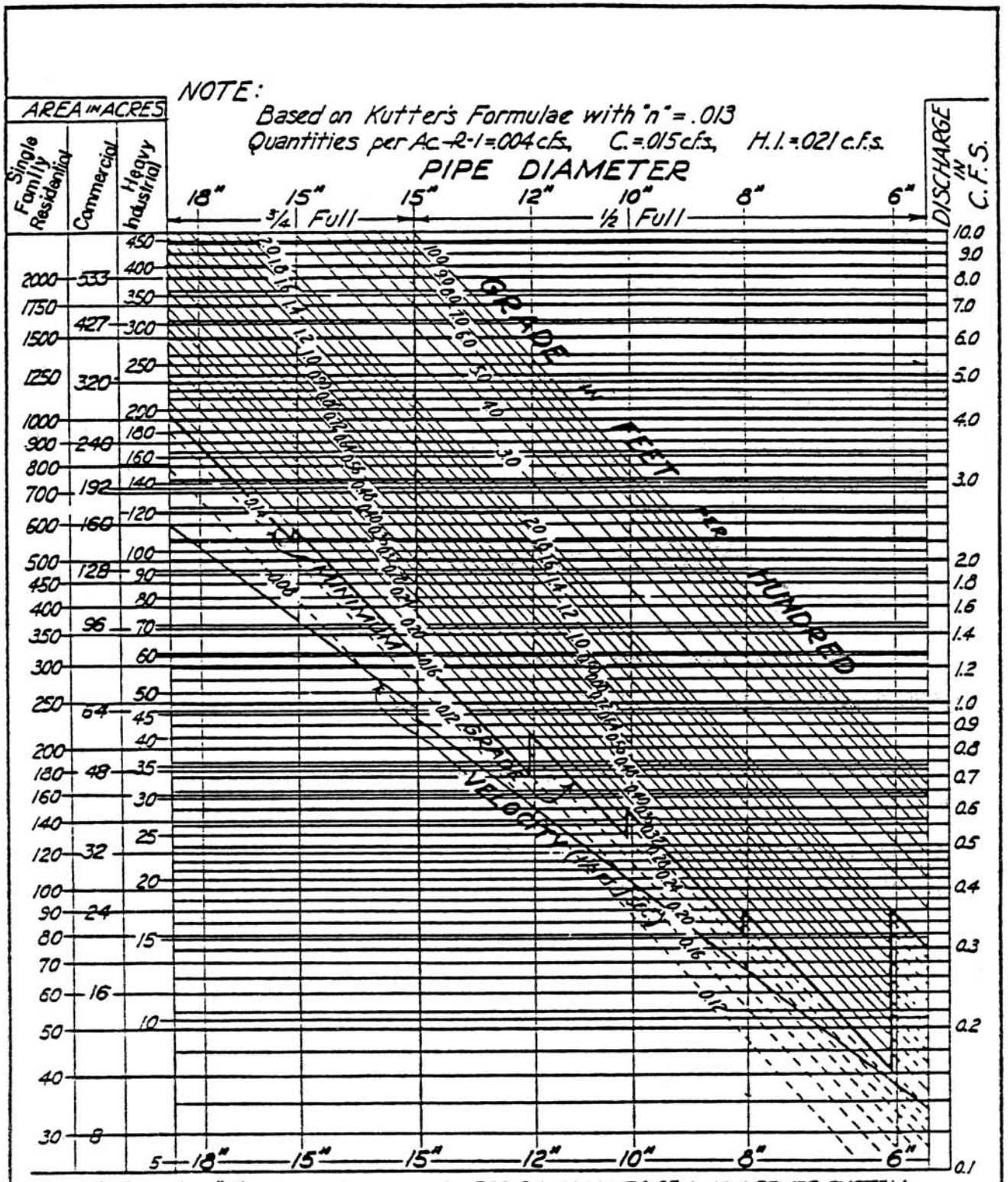
***** PC = Los Angeles County Private Contract No. for Sewer Improvements**

Conclusions

From Table I, it is noted that the maximum allowable Q in the 8-inch sewer main between Manhole Nos. 72 and 534 are calculated to be significantly exceeded under cumulative flow conditions. Slightly above capacity conditions are also calculated between Manhole Nos. 81 and 74. Upsizing of approximately 2,300 feet of 8-inch sewer pipe to 10-inch between Manhole Nos. 72 and 537, and 12-inch between Manhole Nos. 537 and 534 may be required to maintain acceptable cumulative Qs in the main line. Since this conclusion is based on formula-based calculations rather than actual flow measurements, prior to the replacement of these segments of sewer pipe, flow monitoring should be undertaken to validate actual flow conditions. Gauging of the segments in question should also be undertaken prior to flow monitoring to ensure optimal pipe conditions. Sewer main line replacements should only be undertaken as directed by the Los Angeles County Department of Public Works.

From Table III, it can be concluded that the 537-unit Alternative Project, with sewer laterals connected only to the Brea Canyon Cutoff Road main line, will have slightly less cumulative impacts on the existing sewer system, but that capacity will be exceeded between Manhole Nos. 70 and 534 (approximately 2,200 feet). As with the 775-unit Project, gauging and flow monitoring should be undertaken to determine actual flow conditions, and upsizing of sewer pipes should be in accordance with the directives of the Department of Public Works.

Appendix Section



NOTE: USE 15" 1/2 FULL FOR COMPUTING DESIGN CAPACITY OF A NEW SEWER SYSTEM.
USE 15" 3/4 FULL FOR CHECKING CAPACITY OF EXIST. SEWER SYSTEM.

FLOW DIAGRAM FOR THE DESIGN OF CIRCULAR SANITARY SEWERS

COUNTY OF LOS ANGELES
DEPARTMENT OF PUBLIC WORKS

ASSISTANT DEPUTY

COUNTY ENGINEER

COUNTY ENGINEER STANDARD **S-C4**

DATE: 3/80

DESIGN RCE 21043

NORMAL DROPS STRAIGHT THROUGH MANHOLES FOR MINIMUM GRADES OR GREATER EXCEPT AS NOTED BELOW

	INLET	8"	10"	12"	15"	18"
OUTLET	8"	.10	.10	.10	.10	.10
	10"	.17	.10	.10	.10	.10
	12"	.33	.17	.10	.10	.10
	15"	.58	.42	.25	℄	—
	18"	.80	.71	.63	.50	℄

NOTE: FOR RIGHT ANGLE CONNECTIONS, ADD 0.10 OF A FOOT TO EACH OF THE ABOVE VALUES.

WHEN PIPES ON BOTH SIDES OF THE MANHOLE ARE THE SAME SIZE AND THE AVERAGE OF THE GRADES ON BOTH SIDES EXCEEDS 2.50 %, AN AVERAGE DROP SHALL BE TAKEN ACROSS THE MANHOLE, NOT TO EXCEED .60, INSTEAD OF THE VALUES IN THE ABOVE TABLE.

NORMAL DROPS STRAIGHT THROUGH MANHOLES FOR GRADES LESS THAN MINIMUM EXCEPT AS NOTED BELOW

	INLET	8"	10"	12"	15"	18"
OUTLET	8"	℄	—	—	—	—
	10"	.10	℄	—	—	—
	12"	.18	.10	℄	—	—
	15"	.31	.23	.14	℄	
	18"	.80	.71	.63	.50	℄

NOTE: FOR RIGHT ANGLE CONNECTIONS ADD 0.10 OF A FOOT TO EACH OF THE ABOVE VALUES.

NOTES:
1. ℄ INDICATES NO DROP ACROSS M.H. AND ELEV. TO BE SHOWN AT THE CENTER OF MANHOLE.
2. FOR TRAP M.H.'S ALL INLETS TO BE AT SAME ELEVATION. OUTLET MAY BE 0.05 OF A FOOT LOWER.
3. PERMISSION FOR DEVIATIONS FROM THE ABOVE VALUES, OR SMALLER DROPS FOR PIPES OVER 18", TO BE APPROVED BY THE COUNTY ENGINEER.
4. THE MINIMUM GRADES FOR VARIOUS PIPE SIZES ARE DETERMINED BY THE CHART ON COUNTY ENGINEER STANDARD S-C4

TABLE FOR COMPUTING NORMAL DROPS THROUGH MANHOLES

COUNTY OF LOS ANGELES
DEPARTMENT OF PUBLIC WORKS

ASSISTANT DEPUTY

COUNTY ENGINEER

COUNTY ENGINEER STANDARD S-C5

DATE: 3/80

DESIGN RCE 10443

Estimated Average Daily Sewage Flows for Various Occupancies

Occupancy	Abbreviation	*Average daily flow	
Apartment Buildings:			
Bachelor or Single dwelling units	Apt	100	gal/D.U. → 150
1 bedroom dwelling units	Apt	150	gal/D.U. → 200
2 bedroom dwelling units	Apt	200	gal/D.U. → 250
3 bedroom or more dwelling units	Apt	250	gal/D.U. → use 300 GPD per SMD
Auditoriums, churches, etc.	Aud	5	gal/seat
Automobile parking	P	25	gal/1000 sq ft gross floor area
Bars, cocktails lounges, etc.	Bar	20	gal/seat
Commercial Shops & Stores	CS	100	gal/1000 sq ft gross floor area
Hospitals (surgical)	HS	500	gal/bed
Hospitals (convalescent)	HC	85	gal/bed
Hotels	H	150	gal/room
Medical Buildings	MB	300	gal/1000 sq ft gross floor area
Motels	M	150	gal/unit
Office Buildings	Off	200	gal/1000 sq ft gross floor area
Restaurants, cafeterias, etc.	R	50	gal/seat
Schools:			
Elementary or Jr. High	S	10	gal/student
High Schools	HS	15	gal/student
Universities or Colleges	U	20	gal/student
College Dormitories	CD	85	gal/student

*Multiply the average daily flow by 2.5 to obtain the peak flow

Zoning Coefficients

Zone	Coefficient (cfs/Acre)
Agriculture	**0.001**
Residential+:	
R-1	**0.004**
R-2	**0.008**
R-3	**0.012**
R-4	**0.016***
Commercial:	
C-1 through C-4	**0.015***
Heavy Industrial:	
M1 through M-4	**0.021***

***Individual building, commercial or industrial plant capacities shall be the determining factor when they exceed the coefficients shown**

+ Use 0.001 (cfs/unit) for condominiums only

Department of Public Works Response

COUNTY OF LOS ANGELES

DEPARTMENT OF PUBLIC WORKS

"To Enrich Lives Through Effective and Caring Service"

DEAN D. EFSTATHIOU, Acting Director

900 SOUTH FREMONT AVENUE
ALHAMBRA, CALIFORNIA 91803-1331
Telephone: (626) 458-5100
http://dpw.lacounty.gov

ADDRESS ALL CORRESPONDENCE TO:
P.O. BOX 1460
ALHAMBRA, CALIFORNIA 91802-1460

IN REPLY PLEASE
REFER TO FILE: SM-1

September 18, 2008

Ms. Debbie Roberts
Staff Planner
Impact Science, Inc.
234 East Colorado Boulevard, Suite 205
Pasadena, CA 91001

Dear Ms. Roberts:

REQUEST FOR INFORMATION
CANYON RESIDENCES PROJECTS
ENVIRONMENTAL IMPACT REPORT

As requested, we have reviewed the project description for preparation of an Environmental Impact Report (EIR) for the proposed project and offer the following answers to your questionnaire:

1. *Please describe the conveyance system (size of pipes and locations) that exists in the project vicinity that would serve the project. Are there any facilities currently on the site?*

   The Los Angeles County Department of Public Works (LACDPW) Consolidated Sewer Maintenance District (CSMD) is responsible for the operation and maintenance of the local sewers within the unincorporated area of Rowland Heights. As-built sewer plans of existing sewer system facilities within the projects' vicinity may be obtained at our Survey Division's Public Counter located at 900 South Fremont Avenue, Alhambra, California 91803, 4th floor.

2. *Where would the point of connection(s) be located for this project site?*

   The developer should hire a licensed Civil Engineer registered in the State of California to determine the appropriate point of connection(s) based on proposed sewer alignment and information obtained from the as-built sewer plans of the exiting sewer lines in the area.

3. *What improvement, if any, to the existing system will be necessary? Would the sewer pipes need to be increased in size near or beyond the project location to accommodate the increased wastewater generation?*

   The EIR should discuss the collection and disposal of the wastewater that would be generated by the proposed project, especially its potential impact on the available capacity in the existing local sewer lines for both peak dry- and wet-weather flows pursuant with the Statewide General Waste Discharge Requirements (Order No. 2006-0003). The EIR should also discuss the impact of the proposed project on the existing local and trunk sewer facilities.

   A sewer area study would be necessary to determine if there is adequate capacity in the downstream sewer system to accommodate the proposed development. An area study should be submitted to LACDPW's Land Development Division, Sewer & Water/Landscaping Section, for review and approval.

4. *Is a wastewater generation rate of 120 gpd/dwelling unit for a one bedroom and 160 gpd/dwelling unit for two bedroom apartments the current rate recommended by the LADPW? If not, please provide the preferred rate. Additionally, please provide the rate for three bedroom apartments. Would the existing wastewater system be able to accommodate this additional flow?*

   Sewer design coefficients are contained in Section 20.32.440 of the Los Angeles County Code (Title 20 – Utilities). Please see enclosed sample Area Study for typical design coefficients.

5. *What are the costs associated with the necessary alterations, new connections, and installation infrastructure, and how will these costs be covered? If fees are assessed, who pays and when?*

   The cost should be determined by the developer's engineer.

6. *Which wastewater treatment facility would process this project's effluent? What is the daily amount of effluent process by that facility? What is the maximum daily capacity of that wastewater treatment facility?*

   Please contact the County Sanitation Districts of Los Angeles County (CSD) at (562) 699-7411 for information on their wastewater treatment facilities.

7. *What standard conditions will apply to the project?*

   Sewer Maintenance Division will require that the proposed sewer construction comply with LACDPW sewer design standards. This will be in addition to compliance with CSD requirements for trunk sewer conveyance facilities.

8. *Are there any potential service problems in the project area?*

   Sewer Maintenance Division is not aware of any potential service problems in the project area.

9. *What mitigation measures does the Department's recommend for this project?*

   As indicated in question number three above, a sewer area study would be necessary to determine the availability of adequate capacity in the existing downstream sewer system for the proposed project. The area study should be submitted to LACDPW's Land Development Division, Sewer & Water/Landscaping Section, for review. Upon review of the document, Land Development Division can more accurately comment on the impacts of the project relative to sewer and mitigation measures if necessary.

10. *Is there anything else we should know about the Department or the Department's ability to serve the project?*

    As indicated in question one above, the LACDPW CSMD is responsible for the operation and maintenance of the local sewers within the unincorporated Los Angeles County area. Therefore, sewer development within the entire project area will be required to be annexed to the CSMD. In addition, please contact CSD for their designated fees and requirements.

If you have any questions, please contact Mr. Nicholas Agbobu at (626) 300-3382 or at nagbobu@dpw.lacounty.gov.

Very truly yours,

DEAN D. EFSTATHIOU
Acting Director of Public Works

MANUEL DEL REAL
Assistant Deputy Director
Sewer Maintenance Division

MH:dh
CynResidentProject

APPENDIX 5.10.1

Fire Services Documentation

Fire Department Letter Dated July 23, 2008

COUNTY OF LOS ANGELES

FIRE DEPARTMENT

1320 NORTH EASTERN AVENUE
LOS ANGELES, CALIFORNIA 90063-3294

(323) 890-4330

P. MICHAEL FREEMAN
FIRE CHIEF
FORESTER & FIRE WARDEN

RECEIVED
JUL 29 2008

July 23, 2008

Mr. Anthony Curzi
Department of Regional Planning
320 West Temple Street
Los Angeles, CA 90012-3225

Dear Mr. Curzi:

NOTICE OF PREPARATION, CANYON RESIDENCES PROJECT, PN. R2008-00549, ROWLAND HEIGHTS (FFER #200800169)

The Notice of Preparation has been reviewed by the Planning Division, Land Development Unit, Forestry Division, and Health Hazardous Materials Division of the County of Los Angeles Fire Department. The following are their comments:

PLANNING DIVISION:

1. The Notice of Preparation is correct. Fire Station 119 located at 20480 E. Pathfinder Road, Rowland Heights, CA 91789-4620, is approximately 1 mile from the project site. It has a 3-person engine company and a 2-person paramedic squad.

PROJECT IMPACT ON SERVICES:

2. Fire protection serving the area appears to be adequate for the existing development/land use. However, each additional development creates greater demands on existing resources. Although this project proposes an increase in density over the existing land uses on the site, in the absence of a cumulative impact, the project by itself will have a less than significant impact.

LAND DEVELOPMENT UNIT: GENERAL REQUIREMENTS:

1. The development of this project must comply with all applicable code and ordinance requirements for construction, access, water mains, fire flows and fire hydrants.

2. The proposed development may necessitate multiple ingress/egress access for the circulation of traffic, and emergency response issues.

3. This property is located within the area described by the Forester and Fire Warden as a Fire Zone 4, Very High Fire Hazard Severity Zone (VHFHSZ). All applicable fire code and ordinance requirements for construction, access, water mains, fire hydrants, fire flows, brush clearance and fuel modification plans, must be met.

4. Every building constructed shall be accessible to Fire Department apparatus by way of access roadways, with an all-weather surface of not less than the prescribed width. The roadway shall be extended to within 150 feet of all portions of the exterior walls when measured by an unobstructed route around the exterior of the building.

5. Fire Department requirements for access, fire flows and hydrants are addressed during the building permit stage.

COMMERCIAL/HIGH DENSITY REQUIREMENTS:

6. The development may require fire flows up to 5,000 gallons per minute at 20 pounds per square inch residual pressure for up to a five-hour duration. Final fire flows will be based on the size of the buildings, their relationship to other structures, property lines, and types of construction used.

7. Fire hydrant spacing shall be 300 feet and shall meet the following requirements:

   a. No portion of lot frontage shall be more than 200 feet via vehicular access from a public fire hydrant.

   b. No portion of a building shall exceed 400 feet via vehicular access from a properly spaced fire hydrant.

   c. When cul-de-sac depth exceeds 200 feet, hydrants will be required at the corner and mid-block.

   d. Additional hydrants will be required if the hydrant spacing exceeds specified distances.

8. Turning radii shall not be less than 32 feet. This measurement shall be determined at the centerline of the road. A Fire Department approved turning area shall be provided for all driveways exceeding 150 feet in length and at the end of all cul-de-sacs.

9. All on-site driveways shall provide a minimum unobstructed width of 28 feet, clear-to-sky. The 28-foot width does not allow for parking, and shall be designated as a "Fire Lane" and have appropriate signage. The centerline of the on-site driveway shall be located parallel to and within 30 feet of an exterior wall on one side of the proposed structure. The on-site driveway is to be within 150 feet of all portions of the exterior walls of the first story of any building.

10. The 28 feet in width shall be increased to:

    a. Provide 34 feet in width when parallel parking is allowed on one side of the access way.

    b. Provide 36 feet in width when parallel parking is allowed on both sides of the access way.

    c. Any access way less than 34 feet in width shall be labeled "Fire Lane" on the final recording map, and final building plans.

    d. For streets or driveways with parking restrictions: The entrance to the street/driveway and intermittent spacing distances of 150 feet shall be posted with Fire Department approved signs stating "NO PARKING - FIRE LANE" in three-inch high letters. Driveway labeling is necessary to ensure access for Fire Department use.

11. When serving land zoned for residential uses having a density of more than four units per net acre:

    a. A cul-de-sac shall be a minimum of 34 feet in width and shall not be more than 700 feet in length.

    b. The length of the cul-de-sac may be increased to 1000 feet if a minimum of 36 feet in width is provided.

    c. A Fire Department approved turning area shall be provided at the end of a cul-de-sac.

12. The County of Los Angeles Fire Department, Land Development Unit's comments are only general requirements. Specific fire and life safety requirements will be addressed at the building and fire plan check phase once official plans are received and fees are paid. There may be additional requirements during this time.

13. Should any questions arise regarding subdivision, water systems, or access, please contact the County of Los Angeles Fire Department, Land Development Unit's EIR Specialist at (323) 890-4243.

FORESTRY DIVISION – OTHER ENVIRONMENTAL CONCERNS:

1. The statutory responsibilities of the County of Los Angeles Fire Department, Forestry Division include erosion control, watershed management, rare and endangered species, vegetation, fuel modification for Very High Fire Hazard Severity Zones or Fire Zone 4, archeological and cultural resources, and the County Oak Tree Ordinance. Potential impacts in these areas should be addressed.

HEALTH HAZARDOUS MATERIALS DIVISION:

1. There are no comments at this time.

If you have any additional questions, please contact this office at (323) 890-4330.

Very truly yours,

JOHN R. TODD, CHIEF, FORESTRY DIVISION
PREVENTION SERVICES BUREAU

JRT:lj

Fire Department Letter Dated August 1, 2008

COUNTY OF LOS ANGELES

FIRE DEPARTMENT

1320 NORTH EASTERN AVENUE
LOS ANGELES, CALIFORNIA 90063-3294

(323) 890-4330

P. MICHAEL FREEMAN
FIRE CHIEF
FORESTER & FIRE WARDEN

August 1, 2008

Debbie Roberts, Staff Planner
Impact Sciences, Inc.
234 East Colorado Blvd, Suite 205
Pasadena, CA 91101

Dear Ms. Roberts:

NOTICE OF PREPARATION, RE: FIRE AND LIFE SAFETY - ENVIRONMENTAL IMPACT REPORT FOR THE CANYON RESIDENCES, ROWLAND HEIGHTS (FFER #200800197)

The Notice of Preparation has been reviewed by the Planning Division, Land Development Unit, Forestry Division, and Health Hazardous Materials Division of the County of Los Angeles Fire Department. The following are their comments:

PLANNING DIVISION:

1. Which fire stations are closest to the site and are considered to be the first, second, and third responders? Identify the nearest fire protection, paramedic, and hazardous materials unit.

   a. Fire Station 119 is the jurisdictional station (1st-due) for this project. It is located at 20480 E. Pathfinder Road, Rowland Heights, CA 91789-4620, approximately 1 mile from the project with an estimated response time of approximately 3.3 minutes. It is staffed with a 3-person engine company (1 Fire Captain, 1 Fire Fighter Specialist and 1 Fire Fighter) and a 2-person paramedic squad (2 Fire Fighter/Paramedics).

   b. Fire Station 145 is the 2nd-due station. It is located at 1525 S. Nogales Avenue, Rowland Heights, CA 91748-2256, approximately 1.25 miles from the project with an estimated response time of approximately 4 minutes. It is staffed with a 3-person engine company (1 Fire Captain, 1 Fire Fighter Specialist and 1 Fire Fighter) and a 2-person emergency support team (2 Fire Fighters).

c. Fire Station 43, located at 921 S. Stimson Avenue, Industry, CA 91745-1687, houses the closest Hazardous Materials Task Force unit to the project site.

2. Indicate whether any mutual aid agreements or other county/city joint response agreements exist, or would be necessary for the proposed project. If so, please describe which cities and what the mutual aid agreements entail.

   a. The project site and the surrounding area are all served by the Los Angeles County Fire Department.

3. Please indicate the staffing and equipment levels of the nearest fire stations as well as the distance and estimated response times to the project site.

   a. See response to question #1.

4. Does the Los Angeles County Fire Department identify a target emergency response time/distance? Is the average response time/distance to the project site considered adequate?

   a. The Fire Department uses national guidelines of a 5-minute response time for the 1st-arriving unit for Fire and EMS responses and 8 minutes for the advanced life support (paramedic) unit in urban areas. The estimated response time of 3.3 minutes to the project site is well within the guidelines for Fire and EMS 1st responses.

5. Are there any scheduled improvements to the Los Angeles County Fire Department services (facilities, equipment and firefighters) that could affect service in the project area?

   a. No.

6. Please identify existing and/or new infrastructure needed to serve the site.

   a. Fire protection servicing the area appears to be adequate for the existing development/land use.

7. What types and how many calls for service (fire, search and rescue, paramedic, hazmat) to the project area are currently received by the Department?

   a. During 2007, there were 1,007 emergency incidents in Station 119's jurisdiction, of which 23 were fires, 742 were medical, 4 were hazmat and 238 were other types. There were an additional 54 non-emergency calls for service.

8. What fire flow requirements would be required for the proposed project? Does the infrastructure in the project area adequately meet applicable requirements? If not, what could be done to meet these requirements?

   a. To be answered by Land Development.

9. Please identify existing and/or new infrastructure needed to serve the project.

   a. See response to question #6 above.

10. What mechanisms exist to ensure departmental growth at a rate sufficient to accommodate new demand for fire protection services resulting from ongoing regional development?

    a. The effects of new development are evaluated on a case by case basis and mitigation measures are imposed as needed.

11. Are there specific codes, guidelines and/or programs that will apply to the project based on its location?

    a. To be answered by Land Development.

12. Based on current staffing levels, response times, equipment and facilities as well as any planned improvements to the Los Angeles County Fire Department services, what effect would the project have on the ability of the Los Angeles County Fire Department to provide adequate service to the project and surrounding area?

    a. Each additional development creates greater demands on existing resources. However, in the absence of cumulative impact, this project is not expected to create a need for additional staffing or resources.

13. Will the ingress/egress and circulation plans for the proposed project be adequate for emergency access?

    a. To be answered by Land Development.

14. What measure would be required to reduce the impacts of the project on the Los Angeles County Fire Department?

    a. In the absence of cumulative impact, this project is expected to have a less than significant impact.

15. Are there any uses proposed for the Canyon Residences project, based on the project description provided, that would have new or unique types of fire protection requirements that, in turn, would cause special on- or off-site fire protection problems?

    a. No.

LAND DEVELOPMENT UNIT:

1. The Fire Prevention Division, Land Development Unit has no additional comments regarding this project. The conditions that were addressed in EIR #200800169, submitted 6/6/08, have not been changed at this time.

FORESTRY DIVISION – OTHER ENVIRONMENTAL CONCERNS:

1. The statutory responsibilities of the County of Los Angeles Fire Department, Forestry Division include erosion control, watershed management, rare and endangered species, vegetation, fuel modification for Very High Fire Hazard Severity Zones or Fire Zone 4, archeological and cultural resources, and the County Oak Tree Ordinance. Potential impacts in these areas should be addressed in the Draft Environmental Impact Report.

HEALTH HAZARDOUS MATERIALS DIVISION:

1. We have no comments.

If you have any additional questions, please contact this office at (323) 890-4330.

Very truly yours,

JOHN R. TODD, CHIEF, FORESTRY DIVISION
PREVENTION SERVICES BUREAU

JRT:lj

Fire Department Letter Dated October 31, 2008

COUNTY OF LOS ANGELES

FIRE DEPARTMENT

1320 NORTH EASTERN AVENUE
LOS ANGELES, CALIFORNIA 90063-3294
(323) 881-2404

P. MICHAEL FREEMAN
FIRE CHIEF
FORESTER & FIRE WARDEN

October 31, 2008

Debbie Roberts, Staff Planner
Impact Sciences, Inc.
234 East Colorado Blvd., Suite 205
Pasadena, CA 91101

Dear Ms. Roberts:

ENVIRONMENTAL IMPACT REPORT FOR THE CANYON RESIDENCES, ROWLAND HEIGHTS – REQUESTS FOR ADDITIONAL INFORMATION

This is in response to your additional questions regarding the Environmental Impact Report for the Canyon Residences Project in Rowland Heights.

In your letter dated September 16, 2008, you asked how cumulative projects impact the Los Angeles County Fire Department and also if these impacts would "be considered significant or require an increase in Los Angeles County Sheriff's Department services." Assuming you meant to inquire as to the impact on "Fire Department" services, as stated in our answer to question no. 12 in our letter dated August 1, 2008, this project is not expected to create a need for additional staffing or resources.

Your letter of October 13, 2008, questions how the adequacy of fire protection services for a given area is determined. As stated in our answer to question no. 4 in our August 1, 2008, letter, the Fire Department uses national guidelines of a 5-minute response time for the 1st arriving unit for Fire and EMS responses and 8 minutes for the advanced life support unit in urban areas. The estimated response time of 3.3 minutes to the project site is well within these guidelines, therefore, response times are adequate for this project location. In answer to your question no. 2 of the October 13 letter, Truck 118 which is housed in Fire Station 118 in the City of Industry and serves the Rowland Heights area has a ladder which is of sufficient height to access the top floor of this development.

I hope this information provides the clarification you were seeking.

Very truly yours,

DEBBIE AGUIRRE, CHIEF
PLANNING DIVISION

DA:lb

c: Acting Division Chief Frank Vidales

APPENDIX 5.10.2

Law Enforcement Documentation

Sheriff's Department Headquarters Letter Dated July 28, 2008

County of Los Angeles
Sheriff's Department Headquarters
4700 Ramona Boulevard
Monterey Park, California 91754-2169

Leroy D. Baca, Sheriff

July 28, 2008

Ms. Debbie Roberts
Staff Planner
Impact Sciences
234 E. Colorado Boulevard. Suite 205
Pasadena, CA 91101

Dear Ms. Roberts:

REQUEST FOR INFORMATION
PROPOSED CANYON RESIDENCES PROJECT

This is in response to your Request for Information dated June 3, 2008, requesting information and comments from the Walnut Sheriff's Station regarding the preparation of an Environmental Impact Report for the proposed Canyon Residences Project, in Rowland Heights. For our comments, please review the attached questionnaire and responses provided by Captain David E. Hahm of the Walnut Sheriff's Station.

In summary, the Station has provided specific statistics on staffing and calls responses, in answer to the questionnaire. The Station has no specific concerns regarding staffing and resources at this time. We reserve the right to address these issues in future reviews.

Should you have any additional questions regarding this matter, please contact Tom Bellizia, of my staff at (626) 300-3021.

Sincerely,

LEROY D. BACA, SHERIFF

Gary Tse by AF

Gary T. K. Tse, Director
Facilities Planning Bureau

LAW ENFORCEMENT QUESTIONNAIRE
CANYON RESIDENCE PROJECT
PROJECT NUMBER R 2008-00549

1) What reporting district is the project site located in, and what geographical area does the reporting district cover?

   A) The proposed project will be in Los Angeles County Sheriff's Department Walnut Station reporting district 2938. That area is bordered on the north by Walnut Drive, the south by Pathfinder Road, the west by Brea Canyon Cut-Off and the city of Diamond Bar on the east.

2) What types of crime have occurred in this reporting district during the last reporting year?

   A) See attached printout.

3) What is the current staffing of sworn patrol officers and other personnel at the station for the service area? How many of each are allocated to incorporated vs. unincorporated County areas? What populations (communities and number of people) do they serve? What is the current officer to population ratio in the incorporated areas and unincorporated areas? If it is not within the Department's desired ration of 1:1000, is it functionally adequate?

   A) What is the current staffing of sworn patrol officers and other personnel at the station for the service area?

      126 Sworn Staff
      45 Civilian Staff

   B) How many of each are allocated to incorporated vs. unincorporated County areas?

      1. Sworn Incorporated - 76
         Sworn Unincorporated - 50

      2. Civilian Incorporated - 27
         Civilian Unincorporated - 18

C) What populations (communities and number of people) do they serve?

1. City of Walnut
Population-32,070

2. City of Diamond Bar
Population-60,307

3. Unincorporated- Rowland Heights, Covina Hills
Population-62,224

D) What populations (communities and number of people) do they serve? What is the current officer to population ratio in the incorporated areas and unincorporated areas?

1. Incorporated - 1:1200

2. Unincorporated - 1:1200

E) If it is not within the Department's desired ration of 1:1000, is it functionally adequate?

1. Yes

4) How many patrol officers and radio cars are provided by the station?

A) 126 sworn officers are assigned to the station and 38 black and white radio cars are currently assigned to the station fleet.

5) What is the current response times to the project site for emergency response incidents, priority incidents, and non-emergency responses? Is this considered adequate? What is the target response time?

A) What is the current response times to the project site for emergency response incidents, priority incidents, and non-emergency responses?

Emergency - 4 Minutes
Priority - 9 Minutes
Routine - 30 Minutes

B) Is this considered adequate?

These times are considred adequate

C) What is the target response time?

Emergency - 5 Minutes
Priority - 10 Minutes
Routine - 30 Minutes

6) What types (emergency response, priority, and non-emergency) and how many calls for service are currently received for the project site, project area and reporting station?

A) See attached printout

7) Are there any scheduled improvements to Los Angeles County Sheriff's Department services (facilities, equipment, and officers) that could affect service to the project or the surrounding area?

A) No

8) Indicate whether any mutual aid agreements or any other county/city joint response agreements exist, or would be necessary for the proposed project. If so, please describe which cities and what the mutual aid agreements entail.

A) The Los Angeles County Sheriff's Department is responsible for law enforcement services in the areas that surround the project. Because of that, mutual aid agreements are not in place and would not be necessary.

9) Which stations would respond to a call from the project site? Which station would be the primary, secondary, and tertiary responder?

A) Walnut Station would be responsible for the primary response. The City of Industry Station would be second and San Dimas Station would be the tertiary responder.

10) Does the Department have any specific concerns regarding construction or operation of the Canyon Residences project that should be addressed in the Draft EIR?

A) Yes. The sheer volume of the population increase in a relatively small geographical area is of concern. An increase in the number of calls for service will undoubtedly occur. The number of vehicle trips through the area will also increase substantially. The California Highway Patrol is ultimately responsible for traffic matters in the unincorporated areas However, the Sheriff's Department will

always attempt to address traffic matters and respond to injury traffic collisions and assist until the arrival of the California Highway Patrol.

11) What mitigation measure(s) is suggested/required to reduce the impact(s) (for example, incorporation of project design features that would enhance or add security)?

A) None

12) What fees if any would be applicable to this project?

A) We are not aware of any fees that would be applicable.

Los Angeles County Sheriff's Department

CRIME INFORMATION REPORT

CRIME COUNTS BY THE UNIFORM REPORTING NUMBER'S(URN) AND STATISTICAL CODE

RD: 2934

REPORT PERIOD: 01/01/2007 to 12/31/2007

CRIME	STAT CODE SERIES	COUNT
ROBBERY, WEAPON	03-	2
ROBBERY, STRONG-ARM	04-	13
ASSAULT, AGGRAVATED	05-	10 *
BURGLARY, RESIDENCE	06-	26
BURGLARY, OTHER STRUCTURE	07-	12
GRAND THEFT	08-	13
GRAND THEFT VEHICLE (GTA)	09-	12 **
WORTHLESS DOCUMENTS/FORGERY	10-	6
FRAUD	11-	9
IDENTITY THEFT (GOODS/SERVICES/CREDIT)	11-	8
IDENTITY THEFT (UTILITIES)	11-	2
SEX FELONIES	12-	1
SEX MISDEMEANORS	13-	1
ASSAULT, NON-AGG	14-	7 *
ASSAULT, NON-AGGRAVATED	14-	6 *
WEAPON LAWS	15-	3
OFFENSES AGAINST FAMILY	17-	3
NARCOTICS	18-	22
LIQUOR LAWS	19-	6
DISORDERLY CONDUCT	21-	3
DRUNK DRIVING - VEHICLE/BOAT	24-	1
VEHICLE AND BOATING LAWS	25-	21
VANDALISM	26-	9
VANDALISM FELONY	26-	3
VANDALISM MISD	26-	9
RECEIVING STOLEN PROPERTY	29-	1
FELONIES, MISCELLANEOUS	33-	4
VEHICLE BURGLARY	34-	23
THEFT, PETTY ($400 OR LESS)	38-	15

Note: Reported counts reflect cases counted by the Uniform Reporting Number's (UCR) statistical code. Counts do not include adjustments to previously reported crimes. Counts include incidents which have not passed the Data Exception Report (DER). As such, this report may vary from UCR reports.

* Reflects the number of victims associated with the Uniform Reporting Number's (URN) statistical code

** Reflects the number of stolen vehicles involved with the cases for statistical codes 090,091,093,095,097,099,733, and number of cases for statistical codes 092,094,096, and 098.

Los Angeles County Sheriff's Department

CRIME INFORMATION REPORT

CRIME COUNTS BY THE UNIFORM REPORTING NUMBER'S(URN) AND STATISTICAL CODE

RD: 2934

REPORT PERIOD: 01/01/2007 to 12/31/2007

MISDEMEANORS, MISCELLANEOUS	39-	2
PERSONS MISSING OR FOUND	40-	7
SUSPECTED CHILD ABUSE REPORT - SCAR	41-	8
NON-CRIMINAL	44-	30
MENTALLY ILL	46-	2
ACCIDENTS, TRAFFIC-VEHICLE OR BOAT	47-	1
PERSONS DEAD	49-	3
MISCELLANEOUS	50-	19
REASONABLE CAUSE ARRESTS	60-	1
Non-criminal	71-	2
JUVENILE CITATION	72-	11
VEHICLE/BOAT, OTHER NON-CRIMINAL (excludes 733)	73-	58
VEHICLE/BOAT, OTHER NON-CRIMINAL	733	1 **
	TOTAL	396

Note: Reported counts reflect cases counted by the Uniform Reporting Number's (UCR) statistical code. Counts do not include adjustments to previously reported crimes. Counts include incidents which have not passed the Data Exception Report (DER). As such, this report may vary from UCR reports.

* Reflects the number of victims associated with the Uniform Reporting Number's (URN) statistical code

** Reflects the number of stolen vehicles involved with the cases for statistical codes 090,091,093,095,097,099,733, and number of cases for statistical codes 092,094,096, and 098.

CRIME INFORMATION REPORT
CRIME COUNTS BY THE UNIFORM REPORTING NUMBER'S(URN) AND STATISTICAL CODE
RD: 2934
REPORT PERIOD: 01/01/2007 to 12/31/2007

>> REPORT PARAMETERS <<

REPORT DATE RANGE

START DATE: **01/01/2007**

END DATE: **12/31/2007**

AGENCY ORI:

REPORTING DISTRICT: **2934**

RD GROUP: **-**

STREET NUMBER:

STREET NAME:

REPORT GROUPED BY: **NO GROUP SELECTED**

DISPLAY DETAIL CASES? **N**

DISPLAY SUMMARY PAGE? **N**

Note: Reported counts reflect cases counted by the Uniform Reporting Number's (UCR) statistical code. Counts do not include adjustments to previously reported crimes. Counts include incidents which have not passed the Data Exception Report (DER). As such, this report may vary from UCR reports.

* Reflects the number of victims associated with the Uniform Reporting Number's (URN) statistical code

** Reflects the number of stolen vehicles involved with the cases for statistical codes 090,091,093,095,097,099,733, and number of cases for statistical codes 092,094,096, and 098.

California Highway Patrol Letter Dated January 30, 2009

State of California—Business, Transportation and Housing Agency ARNOLD SCHWARZENEGGER, Governor

DEPARTMENT OF CALIFORNIA HIGHWAY PATROL
Santa Fe Springs Area
10051 Orr and Day Road
Santa Fe Springs, CA 90670-3597

(562) 868-0503
(800) 735-2929 (TT/TDD)
(800) 735-2922 (Voice)

January 30, 2009

File No.: 550.13318.14442

Impact Science
234 East Colorado Boulevard, Suite 205
Pasadena, CA 91101

Attn: Deborah Roberts

Re: Response to Environmental Impact Report (EIR) for The Canyon Residences

Dear Ms. Roberts:

The California Highway Patrol (CHP), Santa Fe Springs Area currently staffs approximately 99 officers for approximately 220 square miles of patrol responsibility. As one of the highest activity CHP offices in the state, the Santa Fe Springs Area is currently working at capacity with no additional staffing resources projected at this time.

After a review of your report, I have determined that this office requires no additional resources to support the planned development as outlined. Any construction related road closures or traffic hazards within the jurisdiction of the CHP will need to be reported immediately to this office in order to further establish resource deployment for supplemental traffic enforcement or control duties.

Sincerely,

D.J. MINOR, Captain
Commander

Sheriff's Department Headquarters Letter Dated April 30, 2009

County of Los Angeles
Sheriff's Department Headquarters
4700 Ramona Boulevard
Monterey Park, California 91754-2169

Leroy D. Baca, Sheriff

April 30, 2009

Debbie Roberts, Staff Planner
Impact Sciences, Inc.
234 East Colorado Boulevard, Suite 205
Pasadena, California 91101

Dear Ms. Roberts:

POLICE PROTECTION SERVICES
ENVIRONMENTAL IMPACT REPORT
CANYON RESIDENCES PROJECT, ROWLAND HEIGHTS, CALIFORNIA

In response to your letter, dated September 16, 2008, and e-mail, sent on January 28, 2009, requesting information for the Environmental Impact Report currently being prepared for the Canyon Residences Project in Rowland Heights, the Los Angeles County Sheriff's Department (LASD) is providing the following responses to your questions:

- LASD does not generate funding for itself within the unincorporated areas of Los Angeles County, such as the community of Rowland Heights. There are cities which contract and pay for LASD services within their community. However, overall funding for LASD facilities, staff and services is appropriated through the County's budget process in response to specific requests by the Sheriff.

- Our assessment of the cumulative impacts of projects in the Rowland Heights area on the Walnut/Diamond Bar Station is limited and does not provide a long range projection for future impacts of population growth. The primary reason for this is that LASD is not aware of all the projects being proposed in that specific area, nor of those projects which are approved and constructed. Additionally, information forecasting the cumulative impact on population of these projects is not provided to LASD. Even if this information was known, the decision to build or expand a Sheriff's Station, or to increase the number of deputies, is a complex one requiring thorough analysis of many factors. Therefore, it is not possible to assign a level of significance to one aspect of this analysis in isolation from all other factors.

- With regard to your e-mail request for clarification of LASD's response to question # 10 of your questionnaire, please note that, as stated in our response, LASD's concern is purely with the "sheer volume of population increase in a relatively small geographical area". We do not know of any reasonable mitigation measures for this concern. As with all government agencies, LASD's business model is based on the idea that population growth will lead to added tax revenues which will provide the resources to address the needs of the increased population. In our view, it is the role of planners and developers to create models for growth that do not overly burden the existing infrastructure, and allow sufficient time for municipal services to catch up with the increasing needs of the community.

Should you have any other questions concerning this matter, please contact Tom Bellizia, of my staff at (626) 300-3021.

Sincerely,

LEROY D. BACA, SHERIFF

Gary T. K. Tse, Director
Facilities Planning Bureau

APPENDIX 5.11

Water Service Documentation

Water Supply Assessment Dated June 2009

Water Supply Assessment

The Canyon Residences

Walnut Valley Water District
271 South Brea Canyon Road
Walnut, California 91789

June 2009

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EXECUTIVE SUMMARY

Implementation of the proposed Project would result in a net increase in the demand for potable water of approximately 165 acre-feet per year and a demand for recycled water of approximately 12 acre-feet per year. The Project's landscaping water demands would be met with recycled water. The analysis contained herein, and specifically shown in **Section 5.0,** demonstrates that the water supplies available in the Walnut Valley Water District are sufficient to accommodate the projected water demands for the proposed Project when combined with all existing and planned future uses within the Walnut Valley Water District service area. The water demands associated with the proposed Project fall within the projections for normal water years, a single-dry year, and multiple-dry years. In all three scenarios, sufficient water supplies would be available. As such, adequate water supplies exist within the Walnut Valley Water District over the 20-year planning horizon to accommodate the Project as proposed, in addition to the public water supplier's existing and planned future uses.

1.0 INTRODUCTION

The Walnut Valley Water District (Water District) has prepared this Water Supply Assessment (WSA) for the proposed Canyon Residences Project (Project), located in the unincorporated Los Angeles County community of Rowland Heights. This WSA has been drafted pursuant to the requirements of the California Water Code Section 10910(c)(3) and Public Resources Code Section 15155 of the *California Environmental Quality Act (CEQA) Guidelines*. Section 15155(a)(1)(A) of the *State CEQA Guidelines* defines a "water-demand project" as including a proposed residential development of more than 500 dwelling units. The Project, which proposes the construction of approximately 775 new residential dwelling units, meets this definition of a "water-demand project." In accordance with *State CEQA Guidelines* Section 15155(b), the County of Los Angeles Department of Regional Planning, which is serving as Lead Agency for the environmental review of this proposed Project, has requested a WSA from the Water District, which is the public water supplier that will serve this Project. The WSA has been prepared to comply with state law and applicable requirements in California Water Code Section 10910-10915.

1.1 PROJECT DESCRIPTION

The Project site, located at 1920 Brea Canyon Cutoff Road in the unincorporated Los Angeles County community of Rowland Heights, is located in the Water District's service area. The Water District was formed in 1952 for the purpose of importing a reliable source of water from the Metropolitan Water District of Southern California (MWD) to meet domestic and municipal water use needs.[1] The Water District service area is approximately 28 square miles and includes all of the City of Diamond Bar, portions of the cities of Industry, Pomona, Walnut, and West Covina, and the easterly section of the unincorporated area of Rowland Heights, which includes the proposed Project site. As of 2002, the population of the service area was estimated at 98,682.[2]

The Project would construct approximately 775 multi-family residential units on an approximately 15.7-acre site. Project construction is presently anticipated to be completed by the end of 2012. A summary of proposed Project components is shown in **Table 1.0-1, Summary of Project Characteristics**, below.

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1 Walnut Valley Water District. Amended 2005 Urban Water Management Plan (October 2007).

2 Walnut Valley Water District, Water System Master Plan, prepared by Daniel Boyle Engineering, December 2002.

Table 1-1
Summary of Project Characteristics

Unit Type	One Bedroom Units	Two Bedroom Units	Three Bedroom Units	Total No. of Units	Gross Floor Area (sf) [a]
Podium Buildings	282	168	0	450	499,500
Townhome Style Apartments	0	78	30	108	150,900
Wrap Around Buildings	119	82	16	217	266,000
Recreational Facility					7,850
(includes Social/Community Room and Business Center)					
Total	**401**	**328**	**46**	**775**	**924,250**

[a] *Gross square area encompasses leasable building space plus "accessory" nonleasable space including mechanical/electrical/maintenance rooms, corridors, stairwells, elevators, storage, etc., but excludes parking. The FAR (floor area ratio), a measure of the proposed Project's density, is the ratio of gross floor area to total lot gross square footage: 924,250/685,014=1.35).*

Source: Van Tilburg, Banvard & Soderbergh, AIA, March 2008

As designed, the Project would consist of three building types: Podium Buildings, Townhome Style Apartments, and Wrap-Around Buildings. The Podium Building would provide two four-story residential buildings above a concrete cap of structured parking. The Townhome-style apartments would consist of two three-story townhome-style apartment buildings with in-unit garage parking. The Wrap-Around Buildings would consist of three- and four-story buildings arrayed around landscaped courtyards and a four-level above-grade parking structure, allowing residents to park on the same level at which they reside, and shielding views of the parking structure from off-site vantages.

The Podium and Wrap-Around residential buildings would be arranged around landscaped courtyards**.** The Project also proposes landscaping throughout the Project site, and the proposed landscape program would comply with the County's Drought-Tolerant Landscaping Ordinance and include such elements as shade trees, flowers, landscaping lighting, landscaped building setbacks, low precipitation watering, and streetscape amenities. Additionally, the proposed Project would incorporate a recycled water system for irrigation purposes.

The anticipated timing for Project completion lies within the Water District's planning horizon for calculating "planned future uses" in the Water District's Urban Water Management Plan (UWMP). The Water District planning documents estimate water demand and supply through 2030, considering projected growth within the Water District's present service area as well as sphere of influence areas that may be incorporated or annexed into the service area in the future.

The Water District's 2002 Water System Master Plan (Master Plan) serves as the basis for population and water demand projections contained in the Amended 2005 UWMP.[3] The Master Plan estimates future water demand in its service area and sphere of influence by identifying future development projects identified by cities and counties and applying the appropriate water demand factors, and, for existing undeveloped and underdeveloped land uses, applying water demand factors based on applicable land use or zoning designations and assuming a variety of development conditions and densities.

Refer to **Section 4.3, Proposed Project Water Demands**, for a discussion of the estimated Project water service demands.

1.2 PURPOSE

Public Resources Code section 15155 of the *State CEQA Guidelines* requires Lead Agency consultation with water agencies in order to determine whether or not adequate water exists to serve a proposed project in addition to all existing, planned, and future water needs within the water agency's jurisdiction. Section 15155(a)(1)(A) of the *State CEQA Guidelines* defines a "water-demand project" as a residential development of more than 500 dwelling units. The Project, which proposes the construction of approximately 775 new residential dwelling units, meets this definition and, therefore, constitutes a "water-demand project." In accordance with *State CEQA Guidelines* Section 15155(b), the County of Los Angeles Department of Regional Planning, which is serving as Lead Agency for the environmental review of this proposed Project, has requested a WSA from the Water District, which is the public water supplier that will serve this Project.

The purpose of this WSA is to comply with the requirements of Section 10910 of the California Water Code by determining if:

> *The public water supplier's total projected water supplies available during normal, single-dry, and multiple-dry water years during a 20-year projection can meet the projected water demand of the proposed project, in addition to the public water supplier's existing and planned future uses, including agricultural and manufacturing uses.*

1.3 SUPPORTING DOCUMENTATION

The documents indicated below were consulted during the preparation of this document:

- Water System Master Plan, Walnut Valley Water District, December 2002
- Amended 2005 Urban Water Management Plan, Walnut Valley Water District, October 2007

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3 Walnut Valley Water District, Water System Master Plan, Chapter 3, Water Demands.

- Bulletin 132-04, Management of the California State Water Project, California Department of Water Resources, 2005
- Final State Water Project Delivery Reliability Report, California Department of Water Resources, 2007

1.4 WALNUT VALLEY WATER DISTRICT

The Walnut Valley Water District was formed on July 10, 1952, for the purpose of importing a firm and reliable source of water from the MWD to meet domestic and municipal water use needs. The primary functions of the Water District are to acquire, control, distribute, store, and conserve water for the beneficial use of inhabitants and water users located within its service area. The Water District's service area encompasses a number of suburban residential communities located approximately 20 miles east of downtown Los Angeles. The present service area includes all of the City of Diamond Bar together with portions of the cities of Walnut, Industry, West Covina, and Pomona, and the eastern portion of the unincorporated community of Rowland Heights. The Water District's service area encompasses 17,966 acres, or approximately 28 square miles.

1.4.1 Walnut Valley Water District Water System Master Plan

The Walnut Valley Water District Water System Master Plan, adopted in December 2002, is a planning document that provides recommended capital improvement plans for the potable water system to guide the Water District into the next decade and beyond. Water use data and information based on historical records was used as the basis for the Master Plan. The analysis, results, and conclusions were compared to the previous Master Plan, prepared in 1981, and special studies were conducted by the Water District, particularly the consideration of converting a portion of the existing potable water storage to recycled water use.

1.4.2 Walnut Valley Water District Recycled Water System Master Plan

The Walnut Valley Water District Recycled Water System Master Plan, adopted in June 1999, was prepared in recognition of the Water District's need to proactively identify infrastructure improvements by formulating long-range recycled water system management plans. The Recycled Water System Master Plan addresses the Water District's expanding system, considers current institutional settings, and considers local water resource issues. The Master Plan responds to current and future needs of the Water District's service area. It provides an analysis of recycled water system expansion potential and provides a detailed report of historic demand factors, and potential new customer demand for recycled water. The Master Plan also fully describes the infrastructure and facilities necessary to meet the Water District's long-term goals based on analysis of existing recycled water systems, future demand, expansion costs, and future supply sources.

1.4.3 Amended 2005 Urban Water Management Plan

An Urban Water Management Plan is a planning tool that generally guides the actions of water supply agencies. It provides managers and the public with a broad perspective on a number of water supply issues. It is not a substitute for project-specific planning documents. For example, the Legislature mandated that a plan include a section which "describes the opportunities for exchanges or water transfers on a short-term or long-term basis." (California Urban Water Planning Act, Article 2, Section 10630(d).)

California Water Code Section 10910(c)(2) provides that if the projected water demand associated with a proposed project was accounted for in the UWMP adopted by the retail water purveyor, then relevant information from that document may be incorporated into the WSA. The 2005 UWMP was adopted by the Water District Board of Directors on December 20, 2005, and was appropriately filed with the California Department of Water Resources (DWR) within 10 days following Board approval. Water District staff coordinated the preparation of the 2005 UWMP with the following local and regional agencies: City of Diamond Bar, City of Industry, City of Pomona, City of Walnut, City of West Covina, Los Angeles County Department of Regional Planning, and Three Valleys Municipal Water District (Three Valleys, or TVMWD).

The 2005 UWMP was amended in October 2007 to include information necessary to meet the requirements of California Water Code Division 6, Part 2.6 – Urban Water Management Planning. The Amended 2005 UWMP includes the following eight major sections:

- Plan Adoption and Coordination
- Service Area Information
- Demand Management Measure (DMM) Implementation
- Water Shortage Contingency Plan
- Recycled Water Planning
- Water Quality
- Water Supply Reliability
- Adoption and Implementation

2.0 EXISTING WATER RESOURCES

The first substantive requirement of a WSA is the identification and description of the existing water supply sources in the public water system that will serve the Project. Water Code Section 10910(d) requires the WSA to include an identification of any existing water supply entitlements, water rights, or water service contracts relevant to the identified water supply for the proposed Project, and a description of the quantities of water received in prior years by the public water system.

The current water supply for the Water District's service area is derived from five sources:

1. Colorado River Water from MWD
2. State Water Project (SWP) Water from MWD
3. Groundwater from the Puente Basin
4. Groundwater from the Spadra Basin
5. Recycled Water

These sources of water supply include imported supplies from MWD, transported via the Colorado River Aqueduct and the SWP California Aqueduct, and local supplies, consisting of groundwater and recycled water.

2.1 IMPORTED WATER

The Water District consumer's primary source of water is from surface water imported by the MWD through its designated wholesale agency, the Three Valleys Municipal Water District. Water supplied by Three Valleys to the Water District is obtained from the Colorado River and from northern California through the SWP. Water from the Colorado River and Northern California is blended and then processed at the MWD Weymouth Treatment Plant, in the City of La Verne. Once processed, Three Valleys purchases this blended and treated water from MWD. When surplus water is available, the Water District is also able to purchase SWP water purchased by Three Valleys from MWD and then treated by Three Valleys at its Miramar Treatment Plant, in the City of Claremont.[4]

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[4] Walnut Valley Water District. 2008. Water Supply. http://www.wvwd.com/Pages-Content/MeetDistrict/WaterSupply.htm

2.1.1 Colorado River Water

The Colorado River was the original source of water for MWD after the establishment of MWD in 1928. MWD has a legal entitlement to receive water from the Colorado River under a permanent service contract with the Secretary of the Interior. Water from the Colorado River or its tributaries is also available to other users in California, as well as users in the states of Arizona, Colorado, Nevada, New Mexico, Utah, and Wyoming, and to the country of Mexico.[5]

Water from the Colorado River is supplied to the MWD through the 242-mile-long Colorado River Aqueduct, which is owned and operated by the MWD. The Colorado River Aqueduct begins at Lake Havasu on the California-Arizona boarder and ends at Lake Mathews, near Riverside, California. Imported Colorado River water is treated at a filtration plant prior to use. To ensure a reliable supply of water in times of drought, Diamond Valley Lake, located near Hemet, in southwest Riverside County, stores water received from the Colorado River Aqueduct.[6]

After deducting for conveyance losses and considering maintenance requirements, up to 1.2 million acre-feet per year[7] of water may be conveyed through the Colorado River Aqueduct to MWD's member agencies, subject to availability of Colorado River water for delivery to MWD. Colorado River water delivery to MWD is dependant upon the availability of unused apportionment available to California. California is apportioned the use of 4.4 million acre-feet per year of water from the Colorado River, plus half of any surplus made available for use collectively in Arizona, California, and Nevada. In addition, California has historically been allowed to use Colorado River water apportioned to, but not used by, Arizona and Nevada when such supplies have been requested for use in California. Under the 1931 priority system[8] that formed the basis for distribution of Colorado River water to California, MWD holds the fourth priority right to 550,000 acre-feet per year of water. This is the last priority within California's basic apportionment of 4.4 million acre-feet. Based on MWD's Integrated Water Resources Plan Implementation Report, MWD expects that its fourth priority right to 550,000 acre-feet per year will be available every year for the next 20 years during all year types (i.e., wet, average, single-dry, and

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5 Metropolitan Water District of Southern California. 2008. Appendix A, Attached to official statement dated July 10, 2008, for $79,045,000: The Metropolitan Water District of Southern California Water Revenue Refunding Bonds, 2008 Series C.

6 Walnut Valley Water District. 2008. Water Supply. http://www.wvwd.com/Pages-Content/MeetDistrict/WaterSupply.htm

7 An acre-foot of water is the volume of water that covers one acre of land to one foot in depth.

8 The 1931 Agreement requires that the waters of the Colorado River available for use within the State of California under the Colorado River Compact and the Boulder Canyon Project Act shall be apportioned to the respective interests named in the Agreement and in amounts and with priorities provided in the agreement. The entire agreement is available for review at http://www.usbr.gov/lc/region/g1000/pdfiles/ca7pty.pdf.

multiple-dry years).[9] In addition, MWD holds the fifth priority right to 662,000 acre-feet of water, which is in excess of California's basic apportionment.

Until 2002, MWD had been able to take full advantage of (i.e., obtain) its fifth priority right as a result of the availability of surplus water and apportioned but unused water. However, Arizona and Nevada have increased their use of water from the Colorado River, leaving no unused apportionment available for California since the late 1990s. In addition, a severe drought in the Colorado River Basin has reduced storage in system reservoirs, resulting in no surplus water being available since 2002. Prior to 2002, MWD could divert over 1.2 million acre-feet in any year, but since that time, MWD deliveries of Colorado River water varied from a low of 633,000 acre-feet in 2006 to a high of 897,000 acre-feet in 2005. In 2007, MWD received approximately 713,500 acre-feet of Colorado River water.[10]

The Colorado River water apportioned to the MWD is combined with water from other sources, including from the SWP, and is provided to water customers, including Three Valleys, who then provides water to the Water District. In the year ending June 30, 2007, Three Valleys was one of the 10 largest water customers for the MWD, receiving 68,454 acre-feet of water.[11]

a. Current Environmental Concerns and Litigation Related to the Colorado River

Several lawsuits are currently pending that generally pertain to water availability and supplies in the West. The most prominent cases are briefly described below for purposes of providing an overview of ongoing litigation, but are not expected to affect the availability of water supplies in the Walnut Valley Water District, as discussed at the end of this section.

Litigation was filed in December 2007 against the Bureau of Reclamation by the non-profit Grand Canyon Trust, alleging the Bureau's planning and operation of the Glen Canyon Dam and Lake Powell does not comply with requirements of the National Environmental Policy Act (NEPA) and Federal Endangered Species Act (FESA) with regards to protection of the endangered humpback chub and razorback sucker. Grand Canyon Trust later named the US Fish and Wildlife Service (USFWS) as a defendant and MWD and other water districts have intervened in this case.[12]

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9 Metropolitan Water District, Integrated Water Resources Plan Implementation Report, 2008, pp. 1-2 through 1-10.

10 Metropolitan Water District of Southern California. 2008. Appendix A, Attached to official statement dated July 10, 2008, for $79,045,000 The Metropolitan Water District of Southern California Water Revenue Refunding Bonds, 2008 Series C.

11 Ibid.

12 Ibid.

A second lawsuit in 2006 was filed against MWD by the agricultural company Cadiz Incorporated (Cadiz) over the company's negotiations with MWD for facilities to store and return water from the Colorado River Aqueduct, and to transfer indigenous groundwater to MWD as a dry-year supply. In October 2002, MWD decided not to proceed with the Cadiz program. In January 2006, Cadiz served MWD with an action alleging that MWD breached agreements to complete environmental review and accept the pipeline right-of-way that could have been used by Cadiz with other potential project partners. As of April 1, 2009, the parties are engaged in court-ordered settlement negotiations.[13]

The Quantification Settlement Agreement (QSA), a 2003 agreement between MWD, Coachella Valley Water District (CVWD), and the Imperial Irrigation District establishing water use limits, proposes lining portions of the All-American and Coachella Canals to reduce water loss through seepage, as well as the transfer of agricultural water from the Salton Sea area to reduce the volume of agricultural runoff into the Salton Sea and the associated degradation of threatened or endangered bird habitat. Litigation related to the QSA has been filed but remains in the early stages as of April 1, 2009.

Finally, the Navajo Nation has filed litigation against the Department of the Interior's Bureau of Reclamation and Bureau of Indian Affairs, alleging that the Bureau of Reclamation has failed to determine the extent and quantity of Navajo Nation water rights in the Colorado River and that the Bureau of Indian Affairs has failed to otherwise protect the interest of the Navajo Nation. Negotiations are underway and the litigation has not delayed implementation of the QSA.

The outcome of this litigation is not expected to affect MWD's allocations to the Three Valleys, or, in turn, for Three Valleys' ability to meet the water demand of the Walnut Valley Water District, since future supply at the wholesale member agency and district levels is also affected by the wholesaler's access to alternative water supplies, implementation of and participation in conservation programs, and increasing use of reclaimed water, among other variables.

b. Environmental Considerations

Federal and state environmental laws protecting fish species and other wildlife species have the potential to affect Colorado River operations, thus changing certain hydropower operations and the amount of water deliveries to the Colorado River Aqueduct. A number of species that are listed as Endangered or Threatened under the state or federal endangered species acts are present in the area of the Lower Colorado River, including among others, the bonytail chub, razorback sucker, southwestern willow

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13 Metropolitan Water District of Southern California. 2008. Appendix A, Attached to official statement dated July 10, 2008, for $79,045,000. The Metropolitan Water District of Southern California Water Revenue Refunding Bonds, 2008 Series C.

flycatcher and Yuma clapper rail. To address environmental concerns, a broad-based state, federal, tribal, and private regional partnership that includes water hydroelectric power and wildlife management agencies in Arizona, California, and Nevada have developed a multi-species conservation program for the main stem of the Lower Colorado River (the Lower Colorado River Multi-Species Conservation Program (MSCP). The MSCP covers 27 species and habitat in the Lower Colorado River from Lake Mead to the Mexican border for a term of 50 years. The MSCP also covers operations of federal dams and power plants on the river that deliver water and hydroelectric power for use by MWD and other agencies. The MSCP allows MWD to obtain federal and state permits for any incidental take of protected species resulting from current and future power operations of its Colorado River facilities and to minimize any uncertainty from additional listings of endangered species.[14]

A second environmental issue concerning the Colorado River water supply is the presence of quagga mussels (*Dreissena rostriformis bugensis*), which were discovered for the first time in Lake Mead in January 2007. Quagga mussels, which are a non-native invasive species, can clog intakes and raw water conveyance systems, and alter or destroy fish habitats and affect lakes and beaches, if left unmanaged. In response to the finding of quagga mussels in Lake Mead, a three-week shutdown of the Colorado River Aqueduct for inspection, rehabilitation, and repairs was conducted in March 2007. Desiccation of mussels from emptying the aqueduct during the shutdown, followed by a week of chlorination to kill or limit spread of any remaining mussels after the aqueduct was placed back in service, was expected to help control any mussels occurring in the aqueduct. Shutdowns of the Colorado River Aqueduct in July 2007, October 2007, and March 2008 permitted additional quagga mussel inspection and treatment.[15]

MWD is currently working to enhance its ability to detect the mussels by studying mussel transport in conveyance systems, assessing the vulnerability of MWD raw water conveyance systems, studying the feasibility of boat cleaning facilities, and developing and implementing control strategies. Future quagga mussel control efforts are expected to include infrastructure upgrades and recommendations on boating practices or additional facilities to control the spread of mussels. In addition, funds have been approved for interim and permanent chlorination facilities to control the mussels. Therefore, quagga mussel infestation is not expected to impede the provision of Colorado River water to MWD.[16]

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14 Metropolitan Water District of Southern California. 2008. Appendix A, Attached to official statement dated July 10, 2008, for $79,045,000 The Metropolitan Water District of Southern California Water Revenue Refunding Bonds, 2008 Series C.

15 Ibid.

16 Ibid.

c. Existing Additional Water Sources

MWD has taken steps to augment its share of Colorado River water through agreements with other agencies that have rights to use such water. Such agreements include (1) an agreement with the Imperial Irrigation District for additional water storage conservation, (2) an agreement with the Central Arizona Water Conservation District (CAWCD) to demonstrate the feasibility of CAWCD storing Colorado River water in central Arizona for the benefit of an entity outside the State of Arizona, (3) an agreement with the CAWCD and the Southern Nevada Water Authority (SNWA) to fund the construction of a new 8,000 acre-feet off-stream regulating reservoir near the All-American Canal in Imperial County, (4) an agreement with the Palo Verde Irrigation District (PVID) for a Land Management, Crop Rotation, and Water Supply Program.

2.1.2 State Water Project

In addition to Colorado River water, the other major source of water for the MWD, and therefore Three Valleys and the Water District, is water from northern California transported via the SWP. The SWP is owned by the State of California and operated by the State Department of Water Resources.[17] Water from northern California is supplied to the MWD through the SWP's 444-mile-long California Aqueduct. Water from northern California originates in the Sacramento–San Joaquin Delta and is transported to Silverwood Lake, in Hesperia, California. Imported water from northern California is treated at a filtration plant prior to use. Diamond Valley Lake also stores water received from the California Aqueduct for use in times of drought.[18] SWP deliveries of water include Table A and Article 21 water amounts. The Table A and Article 21 contract provisions are described below.

a. Table A

The SWP contractual Table A amount is the maximum amount of water a SWP contractor may request each year from the SWP. Table A is used by the Department of Water Resources (DWR) in determining each contractor's proportionate share, or allocation, of the total SWP water supply DWR determines to be available each year. The reliability of SWP supplies is subject to annual hydrology, environmental and legal constraints, and planned improvements to the system. The Table A amount is not equivalent to actual deliveries of water in any given year. The total planned annual delivery capability of the SWP and the sum of all SWP contractors' maximum Table A amounts specified in the water supply contracts is

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17 Metropolitan Water District of Southern California. 2008. Appendix A, Attached to official statement dated July 10, 2008, for $79,045,000 The Metropolitan Water District of Southern California Water Revenue Refunding Bonds, 2008 Series C.

18 Walnut Valley Water District. 2008. Water Supply. http://www.wvwd.com/Pages-Content/MeetDistrict/WaterSupply.htm

approximately 4.2 million acre-feet per year, 4.1 million acre-feet per year of which is deliverable in certain wet years.[19] Of this 4.2 million acre-feet per year, the MWD has an annual Table A contract amount from the SWP of 1.91 million acre-feet per year, which is approximately 46 percent of the total Table A entitlement contracts in the state.[20] This Table A amount is the maximum and does not reflect the actual amount of water available to the MWD from the SWP, which varies from year to year based on climate, environmental, and legal considerations. Water received from the SWP by MWD over the past six years (2002 through 2007) varied from a low of 1.4 million acre-feet per year in 2002 to a high of 1.8 million acre-feet per year in 2004.

b. Article 21

Article 21 refers to a provision in the contract for delivering water that is available in addition to SWP Table A amounts. SWP Article 21 water is surplus water available from a California banking program in which state and regional water agencies can buy and sell surplus water. Article 21 water allocations are only available during wet years or years in which the supply of water is greater than the demand.

c. Effects of Environmental Concerns and Litigation

Future SWP deliveries are expected to be impacted by two significant factors. The first is climate change, which is altering hydrologic conditions in California. The second is significant restrictions on SWP operations (e.g., pumping), which would be carried out in accordance with federal and state court actions such as those intended to protect Delta smelt (*Hypomesus transpacificus*), a state-listed and federally listed threatened fish species.

First, with regards to climate change, changes in Sierra snowpack patterns (the source of the SWP's water supply in Lake Oroville), hydrologic patterns, sea level, rainfall intensity, and statewide water demands are all possible should atmospheric warming increase over time. The report indicated that water supply would be primarily affected by decreased snowpack in the Sierra Nevada and changing melt patterns, which could lead to reduced supplies in the future if actions are not taken to provide additional storage and to reduce the demand for water.

Second, in addition to climate change, various court actions have serious implications on imported SWP/CVP water supplies throughout California. For example, pumping operations were reduced in 2007

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19 California Department of Water Resources. 2005. Bulletin 132-04, Management of the California State Water Project.

20 California Department of Water Resources. 2008. *Final State Water Project Delivery Reliability Report, 2007: Table C.1 Maximum annual SWP Table A annual amounts (af)*, p. 121. http://baydeltaoffice.water.ca.gov /swpreliability/Final_DRR_2007_102108.pdf

due to concerns over the declining number of Delta smelt. Future related actions could limit the percentage of SWP water that can be delivered to SWP Contractors. DWR is presently in the process of determining what effect court-related actions will have on future SWP supplies. In another example, legal action associated with certain amendments to the State Water Contract (the "Monterey Agreement," which reflects the settlement of disputes regarding the allocation of State Water Project water) could also change the amount of water available to the SWP. While the permanent effects of these actions are not yet known, each of them could lead to a change in the methods of operation of the SWP and the reliability of water available through the SWP.

As a result of the concerns regarding availability of SWP supplies due to legal issues and the ongoing critically dry conditions on the SWP system, MWD began a process in July 2007 to develop an approved plan and formula for allocating supplies to its member agencies. As a result of that process, MWD staff developed a proposed Water Supply Allocation Plan (WSAP), which was approved by its Board of Directors on February 12, 2008. The WSAP provides a methodology for determining the reduction of import water supplies to each member agency and establishes a penalty rate structure should an agency exceed its allocation. Ultimately, the WSAP will form the basis for the urban water shortage contingency analysis required under Water Code Section 10631 and will be incorporated into MWD's Regional Urban Water Management Plan.

Based upon DWR SWP allocation projections, at its April 14, 2009 meeting, the MWD Board of Directors declared a WSAP Level 2 Regional Shortage from July 1, 2009 through June 30, 2010. Based on MWD's WSAP, import water supplies available to the District will be reduced during the allocation period. As a result, the District will be implementing an aggressive public education campaign to encourage its customers to conserve water.

2.2 LOCAL SUPPLIES

2.2.1. Groundwater

Water Code Section 10910(f) requires a WSA to include specific information describing groundwater resources, if the water supply for a proposed Project includes groundwater. Specific information required in Water Code Section 10910(f)(1) through (5) is addressed and evaluated below.

a. Water Code Section 10910(f)(1)

Water Code Section 10910(f)(1) requires a review of any information relevant to the identified water supply contained in the UWMP.

Groundwater from the two basins underlying the Water District (Puente Groundwater Basin and Spadra Groundwater Basin) is used to meet less than 1 percent of the potable water demand in the Water District, since the groundwater is generally of poor quality and is high in total dissolved solids and nitrate concentrations due to past agricultural practices. For this reason, groundwater is largely limited to use as a supply source for the recycled water system. The recycled water supply is typically augmented by groundwater from existing Water District wells throughout the year. In 2005, recycled water use was estimated at 1,817 acre-feet per year in the Water District service area, of which 10.3 percent, or approximately 182 acre-feet per year, is derived from local groundwater.[21]

b. Water Code Section 10910(f)(2)

Water Code Section 10910(f)(2) requires a description of any groundwater basin or basins from which the proposed Project will be supplied, including information concerning adjudication and overdraft. As previously stated, limited amounts of local groundwater within the Water District are currently used for non-potable applications. The Water District obtains local groundwater from the Puente Groundwater Basin (also knows as the Puente Subbasin), which underlies much of the Water District, and the Spadra Groundwater Basin, which lies along the northeasterly portion of the Water District.[22] The Puente Basin has been adjudicated and is governed by the Puente Basin Watermaster, who represents local producer/provider interests, including those of the Water District, the Rowland Water District (RWD), and the City of Industry. The Spadra Basin is unadjudicated and lies within the Pomona Region. **Figure 1** shows the location of the Main San Gabriel Basin and sub-basins.

Groundwater in the Puente and Spadra basins is generally of poor or impaired quality. This water is pumped for supplemental supply to the Water District's recycled water system, which is used as industrial process water and for landscape and agricultural irrigation.[23]

c. Water Code Section 10910(f)(3)

Water Code Section 10910(f)(3) requires a description and analysis of the amount and location of groundwater pumped by the public water system for the past five years from any groundwater basin from which the proposed Project will be supplied.

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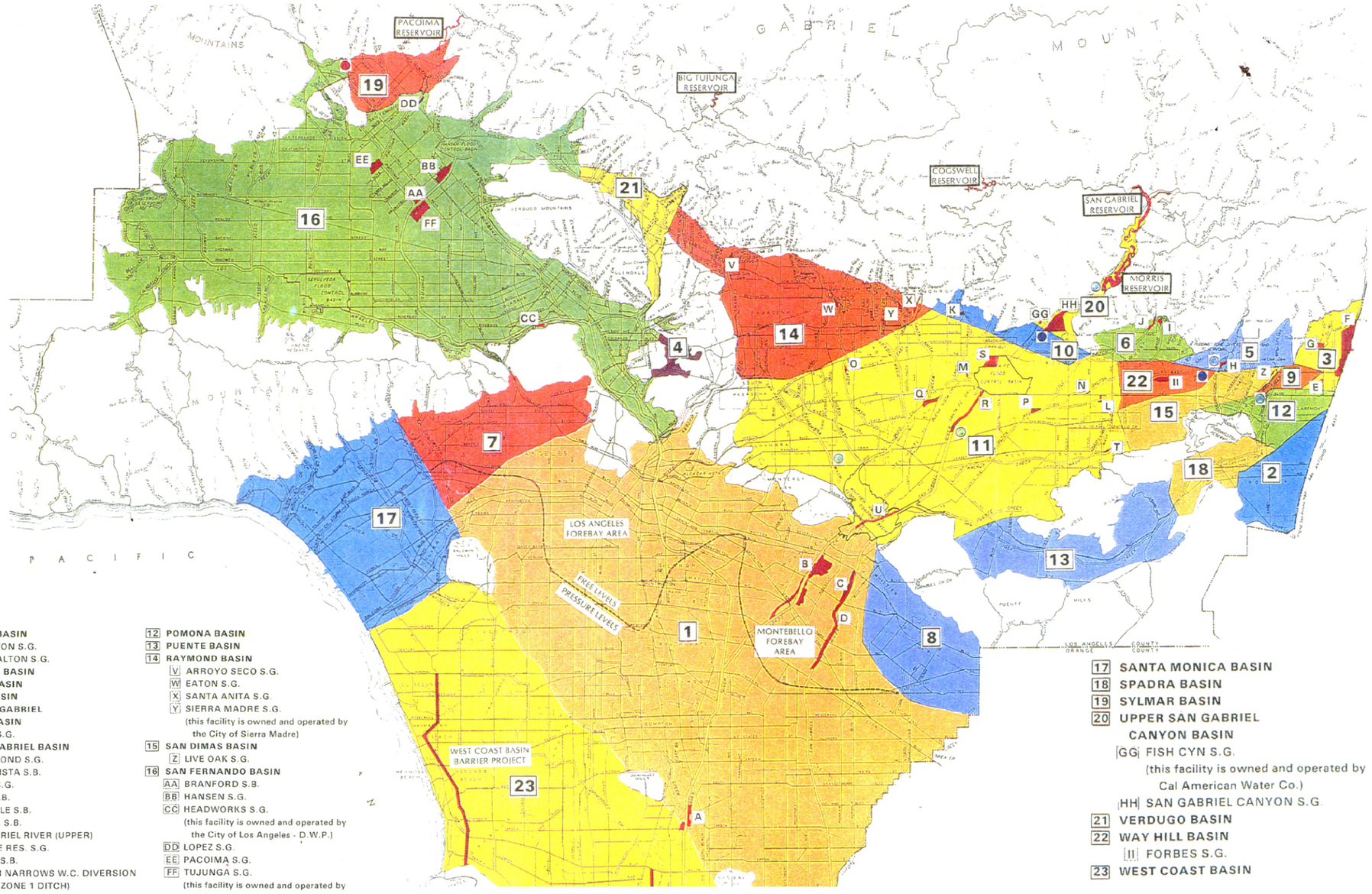
21 Walnut Valley Water District. Amended 2005 Urban Water Management Plan. October 2007.

22 The Main San Gabriel Basin covers approximately 167 square miles and underlies most of the San Gabriel Valley. The physical groundwater basin consists of two parts: the Main Basin and the Puente Basin (or Subbasin), which is tributary to the Main Basin and is hydraulically connected to it. However, the Puente Basin is not within the legal jurisdiction of the Main San Gabriel Basin Watermaster and is therefore considered a separate entity for management purposes.

23 Walnut Valley Water District. 2007.



NOT TO SCALE

SOURCE: Walnut Valley Water District - April 2009

FIGURE 1

Groundwater Basins

291-006•04/09

During the five-year period discussed in the Amended 2005 Urban Water Management Plan (2000–2004), annual groundwater quantities used to meet non-potable demand more than doubled from a total of 201 acre-feet per year in 2000 (6.9 percent of the Water District's recycled water supply) to 482 acre-feet per year in 2004 (10.3 percent of the recycled water supply).[24] Since then, the District's groundwater use to meet non-potable demands increased: 788.8 acre-feet per year in 2005–2006, 602.7 acre-feet per year in 2006–2007, and 744.4 in 2007–2008.[25] Groundwater from the Puente and Spadra Basins was pumped to supply the Water District's recycled water needs. The remainder of the Water District's recycled water supply was provided by treated wastewater from the County Sanitation Districts of Los Angeles County's (CSDLAC) Pomona Water Reclamation Plant (WRP).

d. Water Code Section 10910(f)(4)

Water Code Section 10910(f)(4) requires a description and analysis of the amount and location of groundwater that is projected to be pumped by the public water system from any basin from which the proposed Project will be supplied.

The projected amount of groundwater to be pumped by the Water District from the Puente Basin for the recycled water system use is expected to increase to 700 acre-feet per year by the year 2010 from 416 in 2003. The projected amount of groundwater to be pumped from the Spadra Basin is expected to increase to 484 acre-feet per year by the year 2010 from zero in 2002. From the year 2010 through the year 2030, the projected amount of groundwater pumped from the Puente and Spadra Basins is expected to remain steady at 700 acre-feet per year and 484 acre-feet per year, respectively. This groundwater supply is expected to make up 40.6 percent of the recycled water supply in the year 2010, decreasing to 25.2 percent of the recycled water supply by the year 2030.[26]

e. Water Code Section 10910(f)(5)

Water Code Section 10910(f)(5) requires an analysis of the sufficiency of the groundwater from the basin or basins from which the proposed Project will be supplied to meet the projected water demand associated with the proposed Project.

As discussed above, groundwater does not contribute significantly to the potable water demands of the Water District, and is limited to being a supply source for the recycled water system because groundwater from the two underlying basins is generally of poor quality and is high in total dissolved

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24 Walnut Valley Water District. Amended 2005 Urban Water Management Plan. October 2007.

25 Erik Hitchman, Chief Engineer, Assistant General Manager/Chief Engineer, Walnut Valley Water District, personal communication with Impact Sciences, March 12, 2009.

26 Walnut Valley Water District. Amended 2005 Urban Water Management Plan. October 2007.

solids and nitrate concentrations. The recycled water supply is augmented by groundwater from existing Water District wells throughout the year. Groundwater accounts for less than 4 percent of the total available water supply for the District.

2.2.2 Recycled Water

Currently, the Water District has three supply sources for its recycled water distribution system. The primary source is treated wastewater from the CSDLAC Pomona WRP, located near the Water District's northeasterly boundary. Impaired-quality groundwater (i.e., groundwater high in total dissolved solids) pumped from the Fairway, Industry, Lycoming, and Grand Crossing Wells in the Puente and Spadra Basins constitute a secondary source. Third, imported treated potable water from MWD is used only during extreme supply shortfalls or interruptions in service from Pomona Water Reclamation Plant and groundwater sources.[27] The recycled water supply is typically augmented by groundwater from existing Water District wells throughout the year, while "makeup" water is supplied from the Water District's potable water system when necessary during deficiencies or outages.

Recycled water is used for landscape irrigation at local schools, parks, golf courses, street medians, and public buildings. Recycled water is also used as process water for commercial and industrial operations and groundwater replenishment through other agencies.

The Water District first began supplying recycled water to customers in 1986 and currently provides in excess of 1,800 acre-feet per year of recycled water to over 210 customer connections. The recycled water supply system is capable of delivering up to 3,360 acre-feet per year.

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27 Walnut Valley Water District. Recycled Water System Master Plan. Prepared by Cathcart Garcia von Langen Engineers, June 1999.

3.0 PLANNED WATER RESOURCES

This section of the WSA includes information about the Water District's water supply sources, as detailed in the Amended 2005 Urban Water Management Plan. Future water sources include increased wholesale water supply and additional recycled water. Conservation efforts are also considered an important component of future available water supplies.[28]

3.1 WHOLESALE WATER SUPPLY

As previously discussed, the primary wholesale water supplier to Water District is Three Valleys. Water supplied to the Water District from Three Valleys is obtained from the Colorado River and from northern California through the State Water Project (SWP). Water from these two sources is blended and then processed at MWD's Weymouth Treatment Plant, in the City of La Verne. Once processed, Three Valleys purchases this blended and treated water from MWD. When surplus water is available, the Water District is also able to purchase SWP water purchased by Three Valleys from MWD and then treated by Three Valleys at its Miramar Treatment Plant, in the City of Claremont.[29]

As shown in **Table 3-1 Water District Demand Projections Provided to Three Valleys (Acre-Feet per Year)**, the amount of water the Water District will purchase from Three Valleys, will increase in future years, reaching 28,914 acre-feet per year by 2030.

Table 3-1
Water District Demand Projections Provided to Three Valleys (Acre-Feet per Year)[a]

Wholesaler Sources	2010	2015	2020	2025	2030
Water District Demand Projections Provided to Three Valleys	25,739	26,302	26,616	26,764	28,914
Existing Three Valleys Supply	33,400	31,983	33,810	32,166	32,845
Planned (Additional) Three Valleys Supply	563	2,288	2,488	2,358	2,400
Total Available Three Valleys Supply	33,963	34,271	36,298	34,524	35,245

[a] *Numbers may not add up precisely due to rounding.*
Source: 2005 Amended Urban Water Management Plan

28 Walnut Valley Water District. Water System Master Plan. Prepared by Daniel Boyle Engineering, December 2002.

29 Walnut Valley Water District. 2008. Water Supply. http://www.wvwd.com/Pages-Content/MeetDistrict/WaterSupply.htm

As shown in **Table 3-2, Three Valleys Identified and Quantified Water Sources Available (Acre-Feet per Year)**, the projected quantity of water available through Three Valleys by 2030, including existing and planned supplies, is 35,245 acre-feet per year.

Table 3-2
Three Valleys Identified and Quantified Water Sources Available (Acre-Feet per Year)

Wholesaler Sources	2010	2015	2020	2025	2030
Existing Three Valleys Supply	33,400	31,983	33,810	32,166	32,845
Planned Three Valleys Supply	563	2,288	2,488	2,358	2,400
Total Available Three Valleys Supply	33,962	34,270	36,298	34,524	35,245

Source: 2005 Amended Urban Water Management Plan

The projected reliability of water supply from Three Valleys over the next 20 years (expressed as a percentage of normal water year supply quantities available to the Water District) ranges from 92 percent to 109 percent.[30, 31] Factors potentially resulting in fluctuations in future water supply from MWD, and hence Three Valleys, include legal, environmental, climatic, and water quality factors associated with the Colorado River water supply, reliability of SWP water, and/or in-basin storage. However, projected fluctuations are considered only slight to moderate; that is, irrespective of inconsistencies in individual supply sources; the diversity and flexibility of sources, and the amount of regional storage capacity available are expected to offset the potential for deficits. Therefore, future water availability from Three Valleys, the wholesale provider for Water District, will be adequate to meet projected demand.[32]

3.2 RECYCLED WATER

Recycled water will be used to offset some of the increased future water needs of the Water District.

30 The term "reliability" refers to the likely ability of the water agencies to be able to supply water to Water District under several different scenarios. The reliability of MWD supplies is subject to annual hydrology, environmental and legal constraints, and planned improvements to the system.

31 Projected reliability is calculated for normal (average), single-dry, and multiple dry year scenarios. As required in Urban Water Management Plans, a "basis year for water supply data" is selected for each of these scenarios to account for seasonal or climatic variation and serve as a source of data for projections. For the Walnut Valley Water District, 1977 serves as the basis year for the normal year, during which it is anticipated that 109 percent of the projected demand of the Water District could be met by its wholesaler, Three Valleys Municipal Water District. The years 2000-2002 serve as the basis for the multiple dry year scenario, during which it is anticipated that approximately 92 percent of the Water District's demand could be met.

32 Walnut Valley Water District. Amended 2005 Urban Water Management Plan. October 2007.

As previously stated, the Water District currently utilizes impaired groundwater from the Puente and Spadra Basins for its recycled water system. Projected groundwater amounts to be pumped from these basins are shown in **Table 3-3, Groundwater Projected to be Pumped for Recycled System (Acre-Feet per Year)**, below. Although the amounts projected to be pumped are constant through 2030, those quantities as percentages of total recycled water supplies and total water supplies will decrease over time since total supplies will not be constant but are instead projected to grow.

Table 3-3
Groundwater Projected to be Pumped for Recycled Water System (Acre-Feet per Year)

Basin Name(s)	2010	2015	2020	2025	2030
Puente Basin	700	700	700	700	700
Spadra Basin	484	484	484	484	484
Total	1,184	1,184	1,184	1,184	1,184
Percent of Recycled Water Supply	40.6	30.7	27.7	26.0	25.2
Percent of Total Water Supply	4.1	3.9	3.8	3.8	3.5

Source: 2005 Amended Urban Water Management Plan

Total recycled water supplies are expected to increase by about 2,584 acre-feet per year from 2,915 in 2010 acre-feet per year to 4,700 acre-feet per year by 2030.[33] New recycled water supplies will come from two sources: recycled water from Los Angeles County Sanitation District's San Jose Creek Water Reclamation Plant and increased local groundwater pumping.

The Water District is participating in a project to obtain recycled water from the Los Angeles County Sanitation District's San Jose Creek Water Reclamation Plant, situated about 10 miles to the west of the Water District, in the City of Whittier. Recycled water from this plant would be suitable for groundwater replenishment, irrigation, and other non-potable uses. Once implemented, recycled water from the San Jose Creek Water Reclamation Plant, together with recycled water from the Pomona Water Reclamation Plant, is expected to virtually eliminate the need for potable makeup water except during an emergency outage.[34]

Local groundwater supplies are unaffected by single-year or multiple-year droughts; therefore, potential yields are expected to be the same as those for normal years.[35] Use of local groundwater supplies as a

33 Walnut Valley Water District. Amended 2005 Urban Water Management Plan. October 2007.

34 Ibid.

35 Walnut Valley Water District. Amended 2005 Urban Water Management Plan. Prepared October 2007.

supplemental source for meeting the Water District's recycled water demand is expected to offset projected average demands from proposed development in the Water District area through the planning year 2010.[36]

3.3 WATER CONSERVATION

The Water District is committed to implementing water conservation programs that result in a reduction in water demands, as well as increasing the public's awareness regarding conserving water. The Water District is signatory to the September 1991 MOU regarding urban water conservation in California (and amended thereafter) and is also an active member of the California Urban Water Conservation Council (CUWCC). Signatories must submit annual reports to the CUWCC outlining progress towards implementing Best Management Practices (BMPs) for water conservation. The Water District submitted its first annual report to the CUWCC in September 1992 and has submitted subsequent reports. Most recently, on December 17, 2008, Water District staff submitted the 2007 BMP report and the 2008 BMP Report to the CUWCC.[37]

Water conservation programs implemented by the Water District to reduce overall water demands and meet BMP requirements include indoor water surveys for single-family and multi-family accounts and outdoor water surveys for single-family accounts; survey programs for commercial, industrial, and institutional accounts; distribution of rebate money to commercial, industrial, and institutional accounts for replacement of inefficient fixtures; distribution of low-flow showerhead and toilet tank displacement devices; system water audits; prohibiting waste of water, as specified in Section 4.07 in the Water District's Rules and Regulations; hiring and support of a water conservation coordinator to carry out conservation programs; school education programs; and public information programs. Public information programs include newsletters, booths at public events, water bills with usage comparisons and billing inserts, display of water conservation messages through advertising, banners, yo-yos, sponges, etc.; residential landscape and irrigation training classes; and an annual distribution of high-efficiency toilets to qualified customers.

In addition, MWD sponsors a program providing Water District customers rebates on high-efficiency washing machines, high efficiency toilets, smart irrigation controllers, rotating spray nozzles and synthetic turf MWD also began a Public Sector Program in 2007 geared specifically towards providing funds to public agencies in order to improve water efficiency throughout their facilities. Since the

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36 Walnut Valley Water District. Water System Master Plan. Prepared by Daniel Boyle Engineering, December 2002.

37 Walnut Valley Water District. Amended 2005 Urban Water Management Plan. Appendix E, California Urban Water Conservation Council. Prepared October 2007.

inception of this program, the Water District has been working with public agencies within the Water District's service area to participate in MWD's program and has also developed a similar program to match funds awarded by MWD for the purchase and installation of water-efficient devices.[38]

In order to avoid significant cumulative impacts to water supply, the proposed Project will incorporate several water conservation measures to reduce the overall demand to the Water District. For example, in order to reduce the water demand for the Project, specific measures should be included in Project design, such as the use of xeriscaping (a form of low-water-demand landscaping) and drought tolerant/native plantings. In addition, weather-sensitive irrigation timers should be installed to ensure all landscaping receives only the specific amount of water that it needs.

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38 Walnut Valley Water District. Amended 2005 Urban Water Management Plan. Appendix E, California Urban Water Conservation Council. Prepared October 2007.

4.0 WATER USE

4.1 HISTORICAL WATER USE

a. Historical Water Use in the Walnut Valley Water District

Records of historical water consumption for 10 years are shown in **Table 4-1, Historical Water Use for the Water District**. The data is available through the year 2007–2008, and includes metered domestic potable water, recycled water, domestic makeup water, and exported water. Metered domestic potable water values were found through bi-monthly historical water consumption records. Recycled water data in **Table 4-1** includes the supply and demand of recycled water provided by the Water District from 1998 to 2008. The water provided through the recycled water system for non-domestic uses helps offset the need for additional potable water supplies. However, under some conditions (e.g., in some drier years when demand can be higher), the amount of recycled water produced is not sufficient to meet the demands, in which case potable water must be used to supplement the recycled water supply. The water provided to the recycled water system from the domestic system is known as "makeup" water.[39]

Unaccounted-for water demands are not included in **Table 4-1**. Unaccounted-for water consists of the portion of the water system demands that cannot be measured or accounted for directly. This water usage is always present in water systems and can be attributed to many factors. These include leaks in pipelines, main breaks, fire hydrant testing and flushing, storage tank drainage and maintenance, inaccurate meters, and un-metered services. The sources of unaccounted-for water are difficult, if not impossible, to pinpoint; therefore, it is assumed that the amount of unaccounted-for water is distributed equally throughout the water distribution system.[40]

It is noted that water consumption varies slightly from year to year, due to many factors, including changes in population, economics, weather, conservation efforts, and other factors. For example, water demands were significantly reduced in 1991, when conservation measures were imposed due to the drought, and again in 1998, due to unusually heavy rains associated with El Niño.[41]

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39 Walnut Valley Water District. Water System Master Plan. Prepared by Daniel Boyle Engineering, December 2002.

40 Ibid.

41 Ibid.

Table 4-1
Historical Water Use for the Water District 1998–2008

Year	Metered Domestic Potable Water (Acre-Feet per Year)	Recycled Water Supply[1] Acre-Feet per Year)	Groundwater Supply Acre-Feet per Year)	Domestic Makeup Water Acre-Feet per Year)	Purchased Water Use TVMWD/MWD Acre-Feet per Year)	Total Water Use (Acre-Feet per Year)
1998–99	20,283.0	767.1	103.2	16.1	21,169.4	22,560.2
1999–00	23,177.0	1,423.2	165.9	65.1	24,831.2	24,418.2
2000–01	21,672.9	823.2	234.9	323.2	23,054.1	23,552.3
2001–02	23,242.3	1,473.3	226.8	13.2	24,955.6	24,062.0
2002–03	22,286.2	661.1	373.4	722.1	24,042.8	24,035.7
2003–04	23,361.0	912.1	423.6	532.6	25,229.3	25,043.7
2004–05	21,188.0	1,007.4	321.4	51.7	22,568.5	21,909.7
2005–06	21,763.2	886.6	788.8	25.9	23,464.5	22,635.6
2006–07	23,940.6	1,506.7	602.7	13.4	26,063.4	24,943.1
2007–08	22,590.2	1,319.0	744.4	19.0	24,672.6	23,500.5
Average	**22,350.4**	**1,078.0**	**398.5**	**178.2**	**24,005.1**	**23,666.1**

[1] *Includes Pomona Water Reclamation Plant and Fairway Well.*
Source: Walnut Valley Water District, 2009.

b. Historical Water Use on the Project Site

The proposed Project site is currently owned by Southlands Christian Church. Until approximately 1970, the site was undeveloped/agricultural land. In approximately 1970, the first church buildings were constructed. Additional school buildings and facilities have been constructed on site since 1970, and Southlands Christian School also has been operating on the site since 1979. Consumer history information provided by the Water District for church water consumption shows an average water usage of 5,740 units or 574,000 cubic feet of water per year, over the last 18 years (from 1990 through 2007), which equates to 4,305,000 gallons of water or 13.21 acre-feet per year.[42]

4.2 FUTURE WATER USE

The amount of water delivered by the Water District to its service area in the recent past and projected to be delivered in the future is summarized in **Table 4-2, Projected Future Water Demands**. This table

[42] Walnut Valley Water District. Consumer History for Christian Chapel Walnut Valley, 1920 Brea Canyon Cutoff Road. Processed September 10, 2008.

summarizes the region's projected water demand as discussed in the Amended 2005 Urban Water Management Plan.[43]

Table 4-2
Projected Future Water Demands

Water Use	2005	2010	2015	2020	2025	2030
Domestic Water Deliveries	22,383	24,187	24,716	25,011	25,150	27,171
Sales to Other Agencies	3,522	0	0	0	0	0
Additional Uses & Losses	3,275	4,566	5,547	5,987	6,267	6,555
Totals	**29,180**	**28,754**	**30,264**	**30,999**	**31,417**	**33,726**

Source: Walnut Valley Water District, 2005 UWMP, Table 15.

The Water District UWMP includes projections of future water demand in the Water District, as set forth in the Water System Master Plan. According to the UWMP, the rapid growth in water demand experienced between 1975 and 1990 associated with residential and commercial development within the Water District has been supplanted by steady, stabilized expansion driven by infill and densification over the last decade. Therefore, the water demand projections shown in **Table 4-2**, above, are based on projections included in the Water System Master Plan, which anticipates development of presently undeveloped and underdeveloped land, in combination with anticipated infill development projections throughout the Water District.

As shown in **Table 4-2**, above, over the 20-year planning horizon, the Water District expects water demands in the Water District to increase by 1,510 acre-feet per year between 2010 and 2015; an increase of 735 acre-feet per year between 2015 and 2020; an increase of 418 acre-feet per year between 2020 and 2025; and an increase of 2,309 acre-feet per year between 2025 and 2030. Overall, between 2010 and 2030, Water District projects water demands throughout the Water District will increase by nearly 5,000 acre-feet per year to a total of 33,726 acre-feet per year.

43 The projected demand shown in Table 4-2 is approximately 4.5 percent less than the Water District demand projections provided to Three Valley and shown in Table 3-1 of this document, owing to a built-in margin for "unaccounted-for system losses" (primarily leaks) in projections provided by the Water District to its wholesaler.

4.3 PROPOSED PROJECT WATER DEMAND

4.3.1 Potable Water Demand

As previously discussed, the proposed Project would involve the construction of multi-family residential units on a 15.7-acre parcel. To determine the proposed potable water demand for the Project, a water demand factor of 3,000 gallons per day per acre of land with an adjustment factor of 1.02 was used for high-density residential development.[44] By applying the assigned water demand factor plus the adjustment factor to the gross area of the proposed Project, the estimated potable water demand is approximately 54 acre-feet per year.

However, an alternative calculation for the proposed potable water demand may also be used based on information provided by American Utility Management (AUM), a water metering company that has taken water measurements at multi-unit residential buildings built by the same developer and comparable to the proposed Project. According to AUM, the average apartment unit with one occupant uses approximately 3,000 gallons of water per month (or 0.11 acre-foot per year), while a unit with two occupants uses approximately 4,500 gallons per month (or 0.17 acre-foot per year).[45] For the purpose of estimating potable water demand for the proposed Project, it is assumed that 2.76 persons on average would occupy each unit (0.23 acre-foot per year per unit).

The proposed Project would construct 775 residential units. Using an estimate of 0.23 acre-foot per year per residential unit, thereby assuming that each of the proposed 775 residential units would be occupied by 2.76 persons, the estimated gross potable water demand for the proposed Project would be approximately 178 acre-feet per year.

Since no development within the District is comparable to the proposed Project and the estimated potable water demand using AUM's data is more conservative than the District's estimated demand, the District has elected to use the estimated gross demand of 178 acre-feet per year for the proposed Project. This number is likely conservative and overestimates actual future Project water demand, since the Project proposes a mix of 401 1-bedroom units, 328 2-bedroom units, and 46 3-bedroom units, and furthermore is proposed as a high-quality residential community that may therefore ultimately house fewer occupants per unit than the historical average within the Project's census tract.

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44 Walnut Valley Water District, Water System Master Plan. December 2002., Tables 3-7 and 3-13 on pp. 3-12 and 3-19.

45 American Utility Management, personal communication between Dan Witte at American Utility Management and Kimberly Paperin at Trammell Crow Residential, September 10, 2008.

As previously discussed, the existing church and school uses on the Project site annually consume an average of 13 acre-feet per year of water. Project implementation would therefore result in a net increase of approximately 165 acre-feet per year over existing conditions, based on the projected potable water need of 178 acre-feet per year with Project implementation minus the existing 13 acre-feet per year consumed by existing uses that would be replaced on the Project site.

As shown in **Table 4-2**, above, between 2010 and 2030, the Water District projects an increase in water demand of 4,972 acre-feet (2030 demand less demand in 2010, or 33,726 – 28,754). The net increase in annual potable water demand associated with Project implementation, 165 acre-feet per year, falls within this projected increase in water demand of 4,972 acre-feet, as it constitutes only 3.3 percent of projected demand.

Although the amount of water needed by the proposed project is already planned and accounted for in for in the growth projections included in the District's UWMP, in light of the current water supply conditions, and the District's dependence on imported water, the District is considering a requirement that all new development assist the District in ensuring that sources of water are available to meet its future needs.

The District has historically required developers to pay for the installation of facilities required to provide service to proposed projects. This proposed requirement would extend this concept that new development pay its own way, to include direct financial contribution to the District as it continues to provide long term water supply reliability to meet ongoing demands associated with proposed projects.

This may be accomplished through the implementation of projects or programs that will offset or reduce existing potable water demands, such as conservation or recycled water system expansion. The District may require the developer to directly fund its fair share of such projects or programs The District is also considering the establishment of a Water Supply Acquisition charge, based on proposed project gross acreage and demand factors, which would provide funding for implementation of these projects or programs or allow the District to obtain other sources of water to meet demands of new development.

4.3.2 Recycled Water Demand

Approximately 3.35 acres, or 146,274 square feet (sf), of the proposed Project site would be landscaped. This includes 16,896 sf of turf grass, 106,461 square feet of landscape plantings in at-grade planters, and 22,917 square feet of landscape plantings in planters above Podium Building parking. Plantings would comply with the *Drought Tolerant Landscape Guidelines* required by the County of Los Angeles Green Building Ordinance, which requires 75 percent of the plants used within the Project to be drought-tolerant. All proposed plants and landscaping possess "Medium" or "Low" water usage requirements as

outlined by the Water Use Classification of Landscape Species (WUCOLS) and within the County's *Drought Tolerant Landscape Guidelines*.[46]

Landscaping associated with the proposed Project is projected to require approximately 11.61 acre-feet per year for irrigation (9.51 acre-feet per year for plantings within planters and 2.1 acre-feet per year for turf grass).[47] The proposed Project would use recycled water to irrigate on-site landscaping. The landscape water demand factor was calculated using a worksheet developed by the University of California Cooperative Extension and the California Department of Water Sources. The worksheets are provided in **Appendix I, Landscape Water Demand Calculations**.

As discussed above, recycled water supplies available to the Water District are expected to increase by about 2,584 acre-feet per year from 2,915 acre-feet per year in 2010 (the closest year to Project buildout defined in the Recycled Water System Master Plan) to 4,700 acre-feet per year by 2030. The increase in annual recycled water demand associated with Project implementation, 12.02 acre-feet per year, would represent less than 1 percent of the projected recycled water supply for 2010. Accordingly, Project-related demand for recycled water would be accommodated within the projected increase in recycled water supply by the planned time of Project buildout.

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46 For example, a plant in the medium water requirement category in Los Angeles in July would have an estimated need for 2.6 to 3.9 inches of water or 1.6 to 2.4 gallons of water. Under the same conditions, but in the low water requirement category, a plant would require 0.6 to 1.9 inches of water or 0.4 to 1.2 gallons of water for the month of July.

47 The landscape water demand calculations are contained in **Appendix I**.

5.0 NORMAL, SINGLE-DRY YEAR, AND MULTIPLE-DRY YEAR PLANNING

The following sections summarize the existing and planned supplies during normal (average of all years hydrologic data from 1922 to 1991), single-dry (repeat of 1977 hydrology), and multiple-dry years (repeat of 1990–1992 hydrology). The text and tables were taken from the Amended 2005 UWMP, and updated by including the most recent reliability numbers from the SWP Delivery Reliability Report. Also included within this section is an analysis of whether or not sufficient water would be available during normal, single-dry, and multiple-dry years to serve existing and planned future uses within the Water District with implementation of the proposed Project.

5.1 NORMAL YEAR

Table 5-1, Projected Normal Year Supplies (Acre-Feet per Year), summarizes water supplies available to meet demands over the 25-year planning period during a normal year.

Table 5-1
Projected Normal Year Supplies (Acre-Feet per Year)

Water Supply Sources	2010	2015	2020	2025	2030
Wholesaler Supply (MWD Supply)	33,962	34,270	36,298	34,524	35,245
Local Supply					
Ground Water	1,184	1,184	1,184	1,184	1,184
Recycled Water	1,731	2,676	3,096	3,366	3,516
Totals	**36,877**	**38,130**	**40,578**	**39,074**	**39,945**

Source: Walnut Valley Water District, 2005 UWMP, Table 40.

Table 5-2, Projected Normal Year Demands (Acre-Feet per Year), summarizes all existing, planned future, and anticipated water use throughout the Water District during a normal, or average, water year.

Table 5-2
Projected Normal Year Demands (Acre-Feet per Year)

Water Use	2010	2015	2020	2025	2030
Domestic Water Deliveries	24,187	24,716	25,011	25,150	27,171
Sales to Other Agencies	0	0	0	0	0
Additional Uses & Losses	4,566	5,547	5,987	6,267	6,555
Totals	**28,754**	**30,264**	**30,999**	**31,417**	**33,726**

Source: Walnut Valley Water District, 2005 UWMP, Table 15.

When comparing the available water supplies (**Table 5-1**) with the projected water demands (**Table 5-2**) over the 20-year planning horizon, excess water supplies exist during each five-year increment. As previously discussed, implementation of the proposed Project would result in a net increase in the demand for potable water of approximately 165 acre-feet per year and falls within, and is therefore accounted for in, the Water District's normal water year projections, as shown in **Table 5-3**.

Table 5-3
District-Wide Water Consumption – Normal Water Year (Acre-Feet per Year)

Water Use	2010	2015	2020	2025	2030
Total Water Supplies	36,877	38,130	40,578	39,074	39,945
Total Water Demands	28,754	30,264	30,999	31,417	33,726
Excess Supplies	8,123	7,866	9,579	7,657	6,219

5.2 SINGLE-DRY YEAR

Table 5-4, Projected Single-Dry Year Supplies (Acre-Feet per Year), summarizes the existing and planned supplies available to meet demands during a single-dry year.

Table 5-4
Projected Single-Dry Year Supplies (Acre-Feet per Year)

Water Supply Sources	2010	2015	2020	2025	2030
Wholesaler Supply (MWD Supply)	35,290	37,522	36,473	34,252	34,954
Local Supply					
Ground Water	1,184	1,184	1,184	1,184	1,184
Recycled Water	1,731	2,676	3,096	3,366	3,516
Totals	**38,205**	**41,382**	**40,753**	**38,802**	**39,654**

Source: Walnut Valley Water District, 2005 UWMP, Table 43.

Table 5-5, Projected Single-Dry Year Demands (Acre-Feet per Year), summarizes all existing, planned future, and anticipated water use throughout the Water District during a single-dry water year.

Table 5-5
Projected Single-Dry Year Demands (Acre-Feet per Year)

Water Use	2010	2015	2020	2025	2030
Domestic Water Deliveries	31,629	33,290	34,099	34,559	37,099

Source: Walnut Valley Water District, 2005 UWMP, Table 44.

When comparing the available water supplies (**Table 5-4**) with the projected water demands (**Table 5-5**) over the 20-year planning horizon, excess water supplies exist during each five-year increment. As previously discussed, implementation of the proposed Project would result in a net increase in the demand for potable water of approximately 165 acre-feet per year and falls within, and is therefore accounted for in the Water District's single-dry year projections, as shown in **Table 5-6**, below.

Table 5-6
District-wide Water Consumption – Single-Dry Year (Acre-Feet per Year)

Water Use	2010	2015	2020	2025	2030
Total Water Supplies	38,205	41,382	40,753	38,802	39,654
Total Water Demands	31,629	33,290	34,099	34,559	37,099
Excess Supplies	6,576	8,092	6,654	4,243	2,555

5.3 MULTIPLE-DRY YEARS

Table 5-7, Multiple-Dry Years Supplies (Acre-Feet per Year) summarizes the existing and planned supplies available to meet demands during multiple-dry years.

Table 5-7
Projected Multiple-Dry Years Supplies (Acre-Feet per Year)

Water Supply Sources	2010	2015	2020	2025	2030
Wholesaler Supply (MWD Supply)	31,741	31,933	32,125	32,317	32,509
Local Supply					
Ground Water	797	894	990	1,087	1,184
Recycled Water	1,306	1,412	1,519	1,625	1,731
Totals	**33,844**	**34,239**	**34,634**	**35,029**	**35,424**

Source: Walnut Valley Water District, 2005 UWMP, Table 46.

Table 5-8, Projected Multiple-Dry Years Demands (Acre-Feet per Year), summarizes projected demand within the Water District during multiple-dry years.

Table 5-8
Projected Multiple-Dry Years Demand (Acre-Feet per Year)

Water Use	2010	2015	2020	2025	2030
Domestic Water Deliveries	29,555	29,929	30,304	30,679	31,054

Source: Walnut Valley Water District, 2005 UWMP, Table 47.

When comparing the available water supplies (**Table 5-7**) with the projected water demands (**Table 5-8**) over the 20-year planning horizon, excess water supplies exist during each five-year increment. As previously discussed, implementation of the proposed Project would result in a net increase in the demand for potable water of approximately 165 acre-feet per year and falls within, and is therefore accounted for in the Water District's multiple dry year projections, as shown in **Table 5-9**, below.

Table 5-9
District-wide Water Consumption – Multiple Dry Years (Acre-Feet per Year)

Water Use	2010	2015	2020	2025	2030
Total Water Supplies	33,844	34,239	34,634	35,029	35,424
Total Water Demands	29,555	29,929	30,304	30,679	31,054
Excess Supplies	4,289	4,310	4,330	4,350	4,370

6.0 CONCLUSION

The Water District's Amended 2005 UWMP is based on growth projections that reflect past development trends and population growth and consideration of the potential for additional growth within the water District's service area. The analysis contained herein, and specifically shown in **Section 5.0,** demonstrates that the water supplies available in the Water District are sufficient to accommodate the projected water demands for the proposed Project in combination with all existing and planned future uses within the Water District's service area. The water demands associated with the proposed Project fall within the projections during normal water years, a single-dry year, and multiple-dry years. In all three scenarios, sufficient water supplies would be available. Therefore, sufficient water supplies exist within the Water District over the 20-year planning horizon to accommodate the Project as proposed, in addition to the public water supplier's existing uses.

Although the amount of water needed by the proposed Project is already planned and accounted for in the growth projections included in the District's UWMP, in light of the current water supply conditions, and the District's dependence on imported water, the District is considering a requirement that all new development assist the District in ensuring that sources of water are available to meet its future needs.

The District has historically required developers to pay for the installation of facilities required to provide service to proposed projects. This proposed requirement would extend this concept that new development pay its own way, to include direct financial contribution to the District as it continues to provide long term water supply reliability to meet ongoing demands associated with proposed projects.

This may be accomplished through the implementation of projects or programs that will offset or reduce existing potable water demands, such as conservation or recycled water system expansion. The District may require the developer to directly fund its fair share of such projects or programs The District is also considering the establishment of a Water Supply Acquisition charge, based on proposed Project gross acreage and demand factors, which would provide funding for implementation of these projects or programs or allow the District to obtain other sources of water to meet demands of new development.

APPENDIX I

Landscape Water Demand Calculations

The following worksheets were adapted from *A Guide to Estimating Irrigation Water Needs of Landscape Plantings in California: Landscape Coefficient Method and WUCOLS III,* prepared by the University of California Cooperative Extension and the California Department of Water Resources (2000).

Density factor, microclimate factor, reference evapotranspiration, and irrigation efficiency contained herein are based on information contained within that guide.

Estimating Landscape Water Needs Worksheet for Turf Grass

Step 1: Calculate the Landscape Coefficient (K_L)

K_L formula: $K_L = k_s \times k_d \times k_{mc}$ ..... k_s = species factor
k_d = density factor
k_{mc} = microclimate factor

k_s = 0.8[1] (range = 0.1-0.9)
k_d = 1.0[2] (range = 0.5-1.3)
k_{mc} = 1.0 (range = 0.5-1.4)[3]

$K_L = 0.8(k_s) \times 1.0\ (k_d) \times 1.0\ (k_{mc}) = 0.8.$

Step 2. Calculate Landscape Evapotranspiration (ET_L)

ET_L formula: $ET_L = K_L \times ET_o$ ..... K_L = landscape coefficient
ET_o = reference evapotranspiration

K_L = 0.8 (calculated in Step 1)
ET_o = 54.75 inches per year[4]

$ET_L = 0.8\ (K_L) \times 54.75\ (ET_o) = 43.8$ inches.

---

1 The species factor assumes all the plants are within the medium water need category (0.4-0.6), which was the highest category achieved by the proposed plantings for the proposed Project. A species factor of 0.6 was used, as it is the most conservative factor within the medium water need category.

2 Since this estimate is to calculate the water usage per year for the life of the project, an average density factor was used. (The density factor would be lower when the plants are first planted and higher when the plants mature.)

3 The microclimate factor (which considers wind speed, temperature, light intensity, and humidity) assumes the average of the landscaping on the Project site is in an average climate area. (Areas near buildings, paving, and high reflective materials would have a higher microclimate factor and plantings that are shaded or protected from winds would have a lower microclimate factor.)

4 The combined average of the Daily Average Reference Evapotranspiration for San Bernardino/Pasadena was used, as San Bernardino and Pasadena are located in the same climate zones as the proposed Project.

Step 3. Calculate the Total Water to Apply (TWA)

TWA formula: TWA = ET_L / IE..... ET_L = landscape evapotranspiration
IE ..... IE = irrigation efficiency

ET_L = 43.8 inches (calculated in Step 2)
IE = 0.7[5]
TWA = ET_L / IE = 78.2 inches

Step 4. Calculate the Total Water Needs

TWA * Sf * C_g / C_{Af} = Turf Grass Water Needs in Acre Feet per Year
Sf = Square feet of landscaping
C_g = Inches to Gallons Conversion factor
C_{Af} = Gallons to Acre Feet Conversion Factor

TWA = 78.2 inches
Sf = 16,896
C_g = 0.62
C_{Af} = 325,851

Turf Grass Water Needs [Acre Feet per Year (AFY)] = 78.2 (TWA) * 16,896 (Sf) * 0.62 C_g) / 325,851 (C_{AF}) = 2.1 AFY.

---

5 This assumes that the Project would use a sprinkler system. An irrigation efficiency of 0.7 is typical for sprinkler systems.

Estimating Landscape Water Needs Worksheet for Plantings Within Planters

Step 1: Calculate the Landscape Coefficient (K_L)

K_L formula: $K_L = k_s \times k_d \times k_{mc}$ ..... k_s = species factor
k_d = density factor
k_{mc} = microclimate factor

k_s = 0.6[6] (range = 0.1-0.9)
k_d = 1.0[7] (range = 0.5-1.3)
k_{mc} = 1.0[8] (range = 0.5-1.4)

K_L = 0.6 (k_s) x 1.0 (k_d) x 1.0 (k_{mc}) = 0.6.

Step 2. Calculate Landscape Evapotranspiration (ET_L)

ET_L formula: $ET_L = K_L \times ET_o$ ..... K_L = landscape coefficient
ET_o = reference evapotranspiration

K_L = 0.6 (calculated in Step 1)
ET_o = 54.75 inches per year[9]

ET_L = 0.6 (K_L) x 54.75 (ET_o) = 32.85 inches.

Step 3. Calculate the Total Water to Apply (TWA)

TWA formula: TWA = ET_L / IE..... ET_L = landscape evapotranspiration
IE ..... IE = irrigation efficiency

ET_L = 32.85 inches (calculated in Step 2)
IE = 0.7[10]

TWA = ET_L / IE = 46.93 inches

---

6 The species factor assumes all the plants are within the medium water need category (0.4-0.6), which was the highest category achieved by the proposed plantings for the proposed Project. A species factor of 0.6 was used, as it is the most conservative factor within the medium water need category.

7 Since this estimate is to calculate the water usage per year for the life of the project, an average density factor was used. (The density factor would be lower when the plants are first planted and higher when the plants mature.)

8 The microclimate factor (which considers wind speed, temperature, light intensity, and humidity) assumes the average of the landscaping on the Project site is in an average climate area. (Areas near buildings, paving, and high reflective materials would have a higher microclimate factor and plantings that are shaded or protected from winds would have a lower microclimate factor.)

9 The combined average of the Daily Average Reference Evapotranspiration for San Bernardino/Pasadena was used, as San Bernardino and Pasadena are located in the same climate zones as the proposed Project.

10 This assumes that the Project would use a sprinkler system. An irrigation efficiency of 0.7 is typical for sprinkler systems.

Step 4. Calculate the Total Water Needs

TWA * Sf * C_g / C_{Af}= Turf Grass Water Needs in Acre Feet per Year
Sf = Square feet of landscaping
C_g = Inches to Gallons Conversion factor
C_{AF} = Gallons to Acre Feet Conversion Factor

TWA = 46.9 inches
Sf = 106,461
C_g = 0.62
C_{Af} = 325,851

Turf Grass Water Needs [Acre Feet per Year (AFY)] = 46.9 (TWA) * 106,461 (Sf) * 0.62 C_g) / 325,851 (C_{AF}) = 9.51 AFY.

Water Will Serve Letter Dated November 4, 2008

WALNUT VALLEY WATER DISTRICT

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Shawna Whallon
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LEGAL COUNSEL

H. Jess Senecal

271 South Brea Canyon Road
Walnut, California 91789-3002 • (909) 595-1268 • (626) 964-6551
Website: www.wvwd.com • Fax: (909) 594-9532

November 4, 2008

WILL SERVE LETTER

Trammell Crow Residential
949 South Coast Drive, Suite 400
Costa Mesa, CA 92626

RE: Water Service Availability -- The Canyon Residences
1920 Brea Canyon Cutoff Road, Rowland Heights

Dear Sirs:

The above referenced development ("Development"), located in the Rowland Heights Area of Los Angeles County, California, lies within the service area of Walnut Valley Water District ("District"). The District is prepared to provide water service to the Development subject to the following conditions and reservations:

1) Developer shall submit to District all plans, designs, and fire department requirements for the Development in order that the District may design the necessary water distribution system and other facilities required for the Development in accordance with District Rules and Regulations.

2) Developer shall grant District any and all easements required for water service, together with a policy of title insurance guaranteeing District's title to such easements.

3) In accordance with District Rules and Regulations, developer shall pay all required fees and charges, including any required deposit amounts in order to process plans, design and complete construction of the required on-site and off-site improvements.

4) The developer shall comply with District Rules and Regulations in force and effect at the time water service is requested and as those Rules and Regulations may be amended from time to time including, but not limited to, the payment of any and all District charges, fees, and expenses necessary to provide service to the subject Development.

5) The developer acknowledges that water service to the Development shall be subject to availability of water. In relying upon this representation to provide water service, developer is aware of the restrictions contained herein and the reliance by the District upon the Metropolitan Water District of Southern California as its sole supplier of water for domestic purposes. While there is currently no prohibition against additional connections, the District has the authority to reduce and restrict service connections. The developer further acknowledges that this letter does not constitute any guaranty that at the time of connection water service will be available for the Development.

6) Developer agrees that this water service letter is exclusive to the Development described above (and number of units, if indicated) and may not be transferred or assigned to any other person or for any other purpose without the District's written consent.

7) Provision of water service to the Development is contingent upon the Development meeting the requirements of any other governmental entity having jurisdiction over such development.

8) This letter and any representations made herein shall be null and void twelve (12) months from the date hereof if the water distribution system has not been installed. The developer shall not be entitled to any water connections not made at the time of the expiration of this letter.

9) At any time prior to connection and upon a finding by the Board of Directors that the District is unable to serve the property for reasons beyond its control, this letter may be revoked by the District.

10) The developer for itself and on behalf of its successors agrees to defend, at developer's expense, any action brought against the District, its agents, officers or employees because of the issuance of any approvals or authorizations obtained herein, or in the alternative, to relinquish such approvals. The developer agrees to reimburse the District for any costs, fees, or expenses the District may incur as a result of any such legal action. Developer further agrees that in conducting the defense of such action, District shall be entitled to engage its own attorneys, the expense of which shall be paid by developer.

11) All service pursuant to this letter shall be in accordance with District Rules and Regulations as they may be amended from time to time. By issuing this letter, the District does not guarantee any specific quantities, pressures, or flows with respect to service provided by the District.

If you concur with the above, please sign and return a copy of this letter to the undersigned. If you have any questions, please contact Tai Diep at Ext. 230.

Very truly yours,

WALNUT VALLEY WATER DISTRICT

Erik Hitchman

Erik Hitchman, Assistant General Manager/Chief Engineer

Accepted this _____ day of _____, 2008

TRAMMELL CROW RESIDENTIAL

By _____
(Signature)

_____
(Print Name)

_____
(Title)

APPENDIX 5.12

Sempra Utilities Will Serve Letter Dated August 22, 2007

Southern California
Gas Company
9400 Oakdale Avenue
Chatsworth, CA 91311-6511

The Gas Company

A Sempra Energy utility℠

August 22, 2007

Lizbhet Nunez
KHR Associates
4100 Newport Place Drive Suite 200
Newport Beach, CA 92660

Subject: Will Serve Letter for 1920 Brea Canyon Cutoff Rd.
Walnut, CA 91789
(APN: 8764-001-131 &-132)

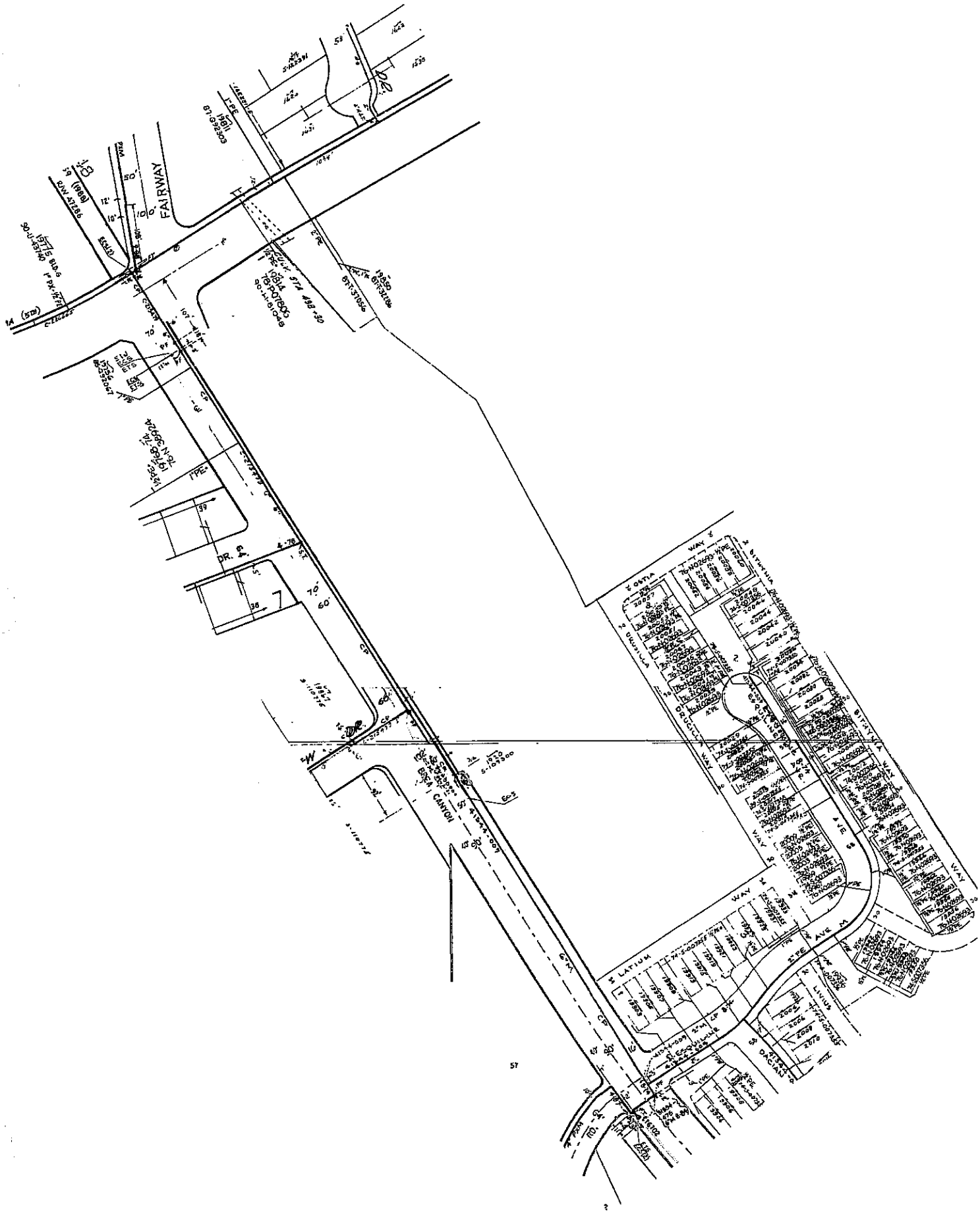
This letter is not to be interpreted as a contractual commitment to serve this proposed project, but only as an information service. Its intent is to notify you that Southern California Gas Company has adequate natural gas supply and facilities in the area where this project is proposed. This proposal **can** be serviced **without** significant impact on the environment from an existing **6" medium pressure main in Brea Canyon Cutoff Rd.**

Service would be in accordance with our policies and extension rules on file with the California Public Utilities Commission at the time contractual arrangements are made. The availability of natural gas service, as set forth in this letter, is based on present conditions of gas supply and regulatory policies. As a public utility, Southern California Gas Company is under the jurisdiction of the California Public Utilities Commission. We can also be affected by actions of federal regulatory agencies. Should these agencies take any action which affects gas supply or the condition under which service is available, gas service will be provided in accordance with the revised conditions.

Please phone **Mr. Richard Natividad, our Project Manager at (323-881-3558)**, if you have any questions. It may require up to 90 days to process your application for the installation of gas lines in your project.

Sincerely,

Mel Whiteaker
Technical Services, North Region
818-701-2565 or Fax 818-701-3380
mwhiteaker@semprautilities.com


FAIRWAY
BEAR CANYON
ST
AVE S
AVE M
WAY
LATIUM
OSTIA
DR.

APPENDIX 5.15

County of Los Angeles Public Library Letter Dated July 3, 2008

County of Los Angeles Public Library
7400 East Imperial Hwy., P.O. Box 7011, Downey, CA 90241-7011
(562) 940-8461, TELEFAX (562) 803-3032

Library

MARGARET DONNELLAN TODD
COUNTY LIBRARIAN

July 3, 2008

TO: Anthony Curzi
Impact Analysis Section
Department of Regional Planning

FROM: Terri Maguire
Chief Deputy County Librarian

SUBJECT: **NOTICE OF PREPARATION OF ENVIRONMENTAL IMPACT REPORT FOR CANYON RESIDENCES PROJECT PROJECT NO. R2008-00549**

This is to respond to your request for comments on the Notice of Preparation of an Environmental Impact Report (EIR) for the Canyon Residences Project.

The project site is situated within the service area of the County's Rowland Heights Library, which is located at 1850 Nogales Street, Rowland Heights, CA 91748. The size of this library is 14,863 gross sq. ft. The library's collection consists of 138,682 books and other library materials as of March 31, 2007 (latest data available).

The County Library's current service level guidelines for planning purposes are a minimum of 0.50 gross square foot of library facility space per capita and 2.75 items (books and other library materials) per capita. Based on its service area population of 50,263 (2000 U.S. Census), the Rowland Heights Library currently does not meet the facility space service level guideline in providing library services to the existing residents of its service area. This library has a shortage of a minimum of 10,269 gross sq. ft. of facility space.

The population increase that would result from the project's 775 residential units would create additional demand for library services and would adversely affect the service capacity of the Rowland Heights Library. In order to mitigate the impact of this project on library services, the applicant, or its successor in interest, will be required to pay the library facilities mitigation fee prior to the issuance of building permits. The proposed project is located in the County Library's Planning Area 4 (East San Gabriel). The mitigation fee for this area as of July 1, 2008, which is adjusted annually based on changes in the Consumer Price Index, is $788 per residential unit. Therefore, the applicant would be required to pay

a total mitigation fee of $610,700 ($788 x 775 residential units). The actual fee obligation for this project may be higher because the fee per residential unit will be that in effect at the time the building permits are issued.

Please ensure that this fee obligation is addressed in the EIR, mitigation monitoring plan and conditions of approval for this project.

In addition, please revise the language on Page 30, of the Initial Study, as follows:

Setting/Impacts d.

change "Maybe" to "Yes"

(second sentence)
.....The proposed construction.....~~could~~ would.....

Mitigation Measures/Other Considerations

Library Facilities Mitigation Fee box should be checked.

If you have any questions or require additional information regarding this matter, please contact Malou Rubio at (562) 940-8450.

TM:DF:MR:MB:dl
U:\DEVELOPER FEE\EIR\Canyon Residences Project - NOP.doc

c: David Flint, Assistant Director, Finance and Planning
Malou Rubio, Staff Services
Robert Seal, Public Services Administration

APPENDIX 5.18

Environmental Safety Documentation

Phase I Environmental Site Assessment
Southlands Church International
1920 Brea Canyon Cutoff Road
Rowland Heights, California 91789

September 6, 2007
LFR Project #002-11124-00

Prepared for
Trammell Crow Residential
949 South Coast Drive
Suite 400
Costa Mesa, California 92626

Prepared by
LFR Inc.
3150 Bristol Street, Suite 250
Costa Mesa, California 92626

LFR ENVIRONMENTAL MANAGEMENT & CONSULTING ENGINEERING

September 6, 2007 LFR Project #002-11124-00

Mr. Jeff Ganje
Vice President, Land Acquisitions
Trammell Crow Residential
949 South Coast Drive, Suite 400
Costa Mesa, California 92626

Subject: Phase I Environmental Site Assessment, Southlands Church International, 1920 Brea Canyon Cutoff Road, Rowland Heights, California

Dear Mr. Ganje:

LFR Inc. (LFR) is pleased to present the attached Phase I Environmental Site Assessment (ESA) report for the property located at 1920 Brea Canyon Cutoff Road, Rowland Heights, California. The conclusions presented in this report are based on the results of a reconnaissance-level site visit conducted by LFR personnel, and a review of available and pertinent background information. The ESA was conducted in accordance with established guidelines for Phase I ESA reports by Trammell Crow Residential (TCR) in 2007 and Prudential Real Estate Investors (PREI) scope of work for ESAs in 2001, a potential partner in this transaction.

LFR appreciates this opportunity to provide consulting services to TCR. If you have any questions concerning this project, or would like to discuss other environmental concerns, please contact me at 714-444-0111.

Sincerely,

Thomas S. Chandler
Principal Engineer

Attachment

cc: Harris Sanders, PREI

714.444.0111 m
714.444.0117 f
www.lfr.com
3150 Bristol Street, Suite 250
Costa Mesa, California 92626-7324
Offices Nationwide

EXECUTIVE SUMMARY

LFR Inc. (LFR) has prepared this Phase I Environmental Site Assessment (ESA) for the property at 1920 Brea Canyon Cutoff Road, in Rowland Heights, an unincorporated portion of Los Angeles County, California ("the Site"). The Site is located near the southeast corner of the intersection of Brea Canyon Cutoff and Colima Road and consists of approximately 15.5 acres of land that is improved with a church, a school, and several small structures. The earliest on-site structures were constructed in approximately 1970. This Phase I ESA was conducted on behalf of Trammell Crow Residential (TCR) and conforms to guidelines established for Phase I ESA reports by TCR in 2007 and Prudential Real Estate Investors (PREI) in 2001. PREI is a potential partner in this transaction.

The PREI Project Manager for this project is Mr. David White (telephone number 415-291-5021 and fax number 415-398-1025). LFR's project team includes Mr. Thomas Chandler, Ms. Janet Holtz, and Mr. Andy Shimizu (telephone number 714-444-0111 and fax number 714-444-0117). This report has been reviewed by Mr. Thomas Chandler, LFR's Deputy Prudential Coordinator for West Coast projects.

Background

Based on LFR's historical research, the Site appears as undeveloped/agricultural land on topographic maps and aerial photos from 1901 to 1968. Building permits indicate some of the current Site buildings were constructed in the early 1970s. Since development, the Site has been used as a church facility. Southlands Church has occupied the Site since approximately 1976. The Site may have been used for agricultural purposes at one time and it is possible that herbicides/pesticides were applied to the Site. However, based on the developed nature of the Site, which includes the buildings and asphalt and concrete pavement, it is unlikely that residual pesticides/herbicides, if present, would present an environmental concern to the Site.

Site Inspection

On the day of LFR's Site inspection, the irregular-shaped Site contained approximately nine stand-alone and interconnected structures that house a chapel, a gymnasium, a maintenance building, and classrooms for Southlands Church and Southlands Christian School, a pre-school through high school campus.

According to information on file with the Los Angeles County Assessor, the nine stand-alone and interconnected structures contain 43,864 square feet. There are asphalt-paved parking lots on the northwest and southwest corners of the Site; asphalt-paved basketball courts near the center of the Site; playground equipment near the southeast corner of the Site; and asphalt-paved driveways and concrete sidewalks located throughout the Site. The northeast corner of the Site contains athletic fields. Landscaping consisting of trees, grass, and shrubs is located throughout the Site in and

around the buildings. A small driveway is present near the center of the Site in a north-south direction.

Chemicals observed at the Site were limited to one-gallon containers of paint, four cylinders of helium, and three 1-gallon containers of gasoline for power hand tools. No issues of environmental concern related to these items were observed at the Site.

During the inspection, no distressed vegetation, monitoring wells or remediation systems were observed at the Site. There was no evidence of current aboveground storage tanks (ASTs) or underground storage tanks (USTs) at the Site.

Based on the date of building construction (1970s), it is possible that asbestos-containing materials (ACMs) and lead-based paint (LBP) are present in the Site buildings. LFR will submit an asbestos survey report under separate cover.

LFR did not observe evidence of water damage or microbial amplification at the Site.

The Site is bounded to the north by Summerville at Villa Colima Senior Residences at 19850 E. Colima Road, a parking lot and a Yamaha Music Store; on the east by a fairway of the Los Angeles Royal Vista Golf Course and condominiums; on the south by condominiums; and on the west by Brea Canyon Cutoff Road followed by a retail shopping center, single-family residences, and vacant land.

Regulatory Records

An environmental database report prepared by Environmental Data Resources, Inc. (EDR) was reviewed for local, state, and federal listings for properties within the site vicinity. Regulatory database lists were reviewed for cases pertaining to leaking underground storage tanks and aboveground storage tanks, hazardous waste sites, and abandoned sites within the specified radii of standards established by ASTM guidelines. The Site address is not listed on any environmental databases reviewed and no off-site facilities were listed on the databases reviewed that would appear to present an environmental concern for the Site.

There are several records on file for the Site address at the Los Angeles County Department of Public Works (DPW), regarding stormwater management; however, no environmental concerns were identified. No other records were found for the Site at any other local regulatory agencies researched.

Conclusions

LFR has performed a Phase I ESA of the Site in conformance with the scope and limitations of the American Society for Testing and Materials' (ASTM) Practice E 1527-05 for Phase I ESAs and TCR's and PREI's Requirements for Phase I ESAs. This assessment has revealed no evidence of environmental concerns in connection with the Site, and no further investigation is recommended at this time.

ACRONYMS

ACM	asbestos-containing material
APN	Assessor's Parcel Number
AST	aboveground storage tank
ASTM	American Society for Testing and Materials
AWP	Annual workplan
BEP	Bond Expenditure Program
bgs	below ground surface
CA WDS	California Waste Discharge System
CalPip	California Department of Agriculture Databases
CalSites	CalSites Database
CERCLA	Comprehensive Environmental Response, Compensation and Liability Act
CERCLIS	Comprehensive Environmental Response, Compensation, and Liability Information System
CFR	Code of Federal Regulations
CHMIRS	California Hazardous Material Incident Report System
CIWMB	California Integrated Waste Management Board
CLEANERS	California DTSC Drycleaners List
COAL GAS	Former Manufactured Gas (Coal Gas)
CONSENT	EPA Regional Offices Superfund Consent Decrees
CORRACTS	Corrective Action Report
DEED	List of Deed Restrictions
DEH	Department of Environmental Health
DELISTED	EPA Delisted NPL
DHS	California Department of Health Services
DOGGR	California Division of Oil, Gas, and Geothermal Resources
DPW	Los Angeles County Department of Public Works
DTSC	Department of Toxic Substances Control
DWR	California Department of Water Resources
EDR	Environmental Data Resources, Inc.
EHD	Environmental Health Division

EPA	United States Environmental Protection Agency
ERNS	Emergency Response Notification System
ESA	environmental site assessment
FID	Facility Inventory Database
FINDS	Facility Index System/Facility Identification Initiative Program Summary Report
FTTS	Federal Insecticide, Fungicide, & Rodenticide Act
HAZNET	Hazardous Waste Information System
LBP	lead-based paint
LFR	LFR Inc.
LQG	large quantity generator
LUST	leaking underground storage tank
MINES	Mines Master Index Files
MLTS	Material Licensing Tracking System
MSL	mean sea level
NPL	National Priority List
NPL Liens	Superfund Liens
NTIS	National Technical Information Service
OES	California Office of Emergency Services
PADS	PCB Activity Database
PCBs	polychlorinated biphenyls
PCE	tetrachloroethene
pC/l	picoCuries per liter of air
PID	photoionization detector
PLM	Polarized Light Microscopy
PMP	Property Mitigation Plan
PREI	Prudential Real Estate Investors
RAATS	RCRA Administrative Action Tracking System
RCRIS	Resource Conservation and Recovery Information System
ROD	Record of Decision
RWQCB	Regional Water Quality Control Board
SCS	Soil Conservation Service
SLIC	Spills, Leaks, Investigations and Cleanups

SQG	small quantity generator
SSTS	Section 7 Tracking Systems
SWAT	Solid Waste Assessment Test
SWF/LF (SWIS)	Solid Waste Information System
SWRCB	State Water Resources Control Board
TCE	trichloroethylene
TRIS	Toxic Chemical Release Inventory System
TSCA	Toxic Substance Control Act
TSD	Treatment, Storage and Disposal
USDA	United States Department of Agriculture
USGS	United States Geological Survey
UST	underground storage tank
VAP	Voluntary Assistance Program
VCP	Voluntary Cleanup Program
VOCs	volatile organic compounds
WMUDS	Waste Management Unit Database

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1.0 INTRODUCTION

LFR Inc. (LFR) has prepared this Phase I Environmental Site Assessment (ESA) for the Southlands Church property at 1920 Brea Canyon Cutoff Road, Rowland Heights, Los Angeles County, California ("the Site"). The Site is located near the southeast corner of the intersection of Brea Canyon Cutoff and Colima Road and consists of approximately 15.5 acres of land that is improved with a church, a school, and several small structures. The earliest on-site structures were constructed in approximately 1970. This Phase I ESA was conducted on behalf of Trammell Crow Residential (TCR) and conforms to guidelines established for Phase I ESA reports by TCR in 2007 and Prudential Real Estate Investors (PREI) in 2001. PREI is a potential partner in this transaction. This Phase I ESA has been reviewed by Mr. Thomas S. Chandler, LFR's Deputy Prudential Coordinator for West Coast projects.

1.1 Objective

TCR requested that LFR conduct a Phase I ESA of the Site. The objective of the ESA is to evaluate the potential for there to be environmental contamination present on the subject property, or whether such contamination could potentially occur in the future because of activities or conditions on or near the property. The Phase I ESA was conducted in accordance with the processes prescribed in the American Society for Testing and Materials' (ASTM) Practice E 1527-05, for TCR's guidelines for Phase I ESA's dated 2007 and the 2001 PREI's Environmental Site Assessment Scope of Work. The term *recognized environmental conditions* as defined by ASTM is the presence or likely presence of any *hazardous substances* or *petroleum products* on a *property* under conditions that indicate an existing release, a past release or the material threat of a release of any *hazardous substances* or *petroleum products* into structures on the *property* or into the ground, groundwater or surface water of the property. The term includes *hazardous substances* or *petroleum products* even under conditions in compliance with laws. The term is not intended to include *de minimis* conditions that generally do not present a material risk of harm to public health or the environment and that generally would not be the subject of an enforcement action if brought to the attention of appropriate governmental agencies.

This Phase I ESA includes information gathered from federal, state, and local agencies; personal interviews with people familiar with the Site and surrounding properties; and a site visit conducted by LFR representatives. The report is intended to meet the requirements of ASTM E 1527-05, for TCR's guidelines for Phase I ESA's dated 2007 and PREI's Environmental Site Assessment Scope of Work dated July 3, 2001.

1.2 Detailed Scope of Services

The Phase I ESA conducted by LFR included, but was not limited to, the following services:

- a reconnaissance-level site visit to look for evidence of the release(s) of hazardous materials and petroleum products and to assess the potential for on-site releases of hazardous materials and petroleum products
- drive-by observations of adjacent properties and the site vicinity
- interviews with people familiar with the Site
- review of regulatory agency files
- review of historical documents
- preparation of a report presenting our findings, including a summary of conclusions

1.3 Significant Assumptions

The purpose of this Phase I ESA is to provide appropriate inquiry into the previous ownership and use of the Site consistent with good commercial and customary practice in an effort to minimize liability. LFR also assumes that the information provided by the Client, regulatory database provider, and regulatory agencies is true and reliable.

1.4 Limitations and Exceptions

This document was prepared for the sole use of TCR and PREI and their successors and assignees, and may be relied upon by such parties. No other party should rely on the information contained herein without the prior written consent of LFR, TCR and PREI.

The opinions and recommendations presented in this report are based upon the scope of services, information obtained through the performance of the services, and the schedule as agreed upon by LFR and the original party for whom this report was originally prepared. This report is an instrument of professional service and was prepared in accordance with the generally accepted standards and level of skill and care under similar conditions and circumstances established by the environmental consulting industry. To the extent that LFR relied upon any information prepared by other parties not under contract to LFR, LFR makes no representation as to the accuracy or completeness of such information. Only the party for whom this report was originally prepared, and other specifically named parties, may make use of and rely upon the information in this report, in its entirety, for a period not to exceed 180 days in accordance with the American Society for Testing and Materials' (ASTM's) “Standard Practice for Environmental Site Assessments: Phase I Environmental Site Assessment Process” ASTM Designation E 1527-00 dated May 10, 2000, ASTM's “Standard Practice for Environmental Site Assessments: Phase I Environmental Site Assessment Process” ASTM Designation E 1527-05 dated November 1, 2005, and/or the Code of Federal Regulations (CFR) 40CFR Part 312 “Standards and Practices for All Appropriate Inquiries: Final Rule” dated November 1, 2005. After 180 days and prior to using the information contained herein, the report should be updated in accordance with ASTM Standards and Federal regulations.

The findings presented in this report apply solely to site conditions existing at the time when LFR's assessment was performed. It must be recognized, however, that an Environmental Site Assessment ("ESA") is intended for the purpose of evaluating the potential for contamination through limited research and investigative activities and in no way represents a conclusive or complete site characterization. Conditions in other parts of the project site may vary from those at the locations where data were collected. LFR's ability to interpret investigation results is related to the availability of the data and the extent of the investigation activities. As such, 100% confidence in ESA conclusions cannot reasonably be achieved.

LFR, therefore, does not provide any guarantees, certifications, or warranties (express or implied) that a property is free from environmental contamination. Furthermore, nothing contained in this document shall relieve any other party of its responsibility to abide by contract documents and all applicable laws, codes, regulations, or standards.

1.5 Special Terms and Conditions

The scope of work for this Phase I ESA did not include testing of electrical equipment for the potential presence of polychlorinated biphenyls (PCBs) or the assessment of natural hazards such as naturally occurring asbestos, radon gas or methane gas, assessment of the potential presence of radionuclides, or assessment of non-chemical hazards such as the potential for damage from earthquakes or floods. This Phase I ESA also did not include an extensive assessment of the environmental compliance status of the Site or of the businesses operating at the Site, or a health-based risk assessment.

2.0 SITE OVERVIEW

2.1 Site Location and Description

The approximately 15.5-acre Site is located near the southeast corner of the intersection of Brea Canyon Cutoff Road and Colima Road in Rowland Heights, California. The Site is improved with a church, a school, and several small structures. The first on-site structures were constructed in approximately 1970. The Site is identified as Los Angeles County Assessor's Parcel Number (APN) 8764-001-132. Ownership of the Site is vested in Southlands Church International.

2.2 Site and Vicinity General Characteristics

The Site Vicinity Map and Site Map with adjacent properties are presented as Figures 1 and 2, respectively. The irregular-shaped Site contains approximately nine stand-alone and interconnected structures that house a chapel, a gymnasium, a maintenance building, and classrooms for Southlands Church International and Southlands Christian School, a pre-school through high school campus. The Site vicinity is comprised of commercial, residential, and retail properties. A portion of a golf course is located

adjacent and east of the Site and the Pomona Freeway (60) is located approximately 0.6-mile north of the Site.

2.3 Site Improvements

According to information on file with the Los Angeles County Assessor, the nine stand-alone and interconnected structures contain 43,864 square feet. There are asphalt-paved parking lots on the northwest and southwest corners of the Site; asphalt-paved basketball courts near the center of the Site; playground equipment near the southeast corner of the Site; and asphalt-paved driveways and concrete sidewalks located throughout the Site. The northeast corner of the Site contains athletic fields. Landscaping consisting of trees, grass, and shrubs is located throughout the Site in and around the buildings.

Some of the buildings are constructed of wood and stucco, and others are constructed of wood. All of the buildings are single-story, with the exception of the gymnasium, which is constructed into a sloping hillside and has several below ground level classrooms.

2.4 Topography and Surface Water Characteristics

2.4.1 Topography

According to the United States Geological Survey (USGS) 7.5-Minute Series Topographic Map of the Yorba Linda, California, Quadrangle (1964, photorevised 1981), the Site is located at an elevation of approximately 630 feet above mean sea level (msl). The Site area and vicinity is slopes downward to the northwest towards the San Gabriel Valley.

2.4.2 Surface Water Characteristics

A walk-through Site inspection did not reveal conditions such as standing water that would indicate the presence of a wetland on the Site. According to the USGS topographic map for the Yorba Linda, California quadrangle, the Site is not listed as a designated wetland. In addition, the database report provided by Environmental Data Resources, Inc. (EDR) did not list any wetlands on or adjacent to the Site.

2.5 Geological Characterization

2.5.1 Surface Features

The observed soil at the Site was light-brown to brown in color and had a silty sand texture.

2.5.2 Subsurface Features

According to the EDR report, the geology of the Site is identified as part of the Quaternary Series of the Quaternary System and Cenozoic Era. According to the United States Department of Agriculture, Soil Conservation Service, the property is underlain by soils classified as the Calleguas soil component. The Calleguas classification is reported to consist of clay loam, which consists of silt-clay materials and fine-grained soils.

It should be noted that LFR has not drilled or sampled soil borings at the Site, and the local and regional geologic conditions described herein are based solely upon our experience and available literature regarding the area.

2.6 Hydrogeologic Characterization

2.6.1 Surface Water

Storm-water runoff from the Site flows onto adjacent streets and properties and into onsite storm drains.

2.6.2 Groundwater

The Site is located in the Puente Hills on the southeastern edge of the San Gabriel Valley Water Basin. "The San Gabriel Valley Groundwater Basin is located in eastern Los Angeles County and includes the water-bearing sediments underlying most of the San Gabriel Valley and includes a portion of the upper Santa Ana Valley that lies in Los Angeles County. This basin is bounded on the north by the Raymond fault and the contact between Quaternary sediments and consolidated basement rocks of the San Gabriel Mountains. Exposed consolidated rocks of the Repetto, Merced, and Puente Hills bound the basin on the south and west, and the Chino fault and the San Jose fault form the eastern boundary" (DWR 1966). "The Rio Hondo and San Gabriel drainages have their headwaters in the San Gabriel Mountains, then surface water flows southwest across the San Gabriel Valley and exits through the Whittier Narrows, a gap between the Merced and Puente Hills" (Groundwater Bulletin, 2004).

Water bearing formations in the San Gabriel Valley Groundwater Basin include unconsolidated to semi-consolidated alluvium deposited by streams flowing out of the San Gabriel Mountains. These deposits include Pleistocene and Holocene alluvium and the lower Pleistocene San Pedro Formation (Groundwater Bulletin, 2004).

Site specific groundwater information was not available. According to information maintained by the Los Angeles County Department of Public Works (DPW) on the Internet at http://dpw2.co.la.ca.us, the depth to groundwater at Well 1810b, located approximately 1.3-miles to the northwest of the Site was approximately 30.6 feet below ground surface (bgs), last measured on October 29, 2006. The Site is adjacent to

foothills and it is likely that the Site is on the fringe or beyond water bearing formations. The groundwater gradient is expected to be towards the north-northwest, towards the floor of the San Gabriel Valley.

3.0 USER-PROVIDED INFORMATION

LFR was not provided with any information from the Client.

3.1 Title Records

LFR reviewed an environmental lien report prepared by EDR. There were no environmental liens or activity and use limitations listed for the Site address. A copy of the environmental lien report is included in Appendix F.

3.2 Environmental Liens or Activity and Use Limitations

In accordance with ASTM 05 guidelines, LFR sent an environmental questionnaire to Mr. Jeff Ganje, Vice President, Land Acquisitions with TCR. Mr. Ganje completed the questionnaire on August 20, 2007. A copy of the questionnaire is included in Appendix D. Mr. Gange's responses did not indicate any environmental concerns for the Site.

3.3 Owner, Property Manager, and Occupant Information

The Site is owned and occupied by Southlands Church International. Southlands Christian School also occupies the property. There is no property manager.

3.4 Reason for Performing Phase I

The reason for performing this Phase I ESA was to evaluate the Site for the presence of environmental concerns in preparation for a property transfer.

3.5 Other

LFR was not provided with any other information.

4.0 SITE HISTORY

4.1 History of Property Use

LFR reviewed the historic usage of the Site and adjacent properties to assess whether prior owners of the Site or adjacent properties may have conducted activities that could

pose environmental concerns to the Site. LFR's research included conducting personal interviews with people familiar with the Site and reviewing local agency records, historical city directories, historical aerial photographs, historical Sanborn Fire Insurance Maps (Sanborn maps), and historical topographic maps associated with the Site. LFR's sources of information included the following:

- A City Directory Abstract intermittently covering the years from 1920 to 2006 was reviewed. A copy of the City Directory Abstract is included in Appendix B.
- Black-and-white aerial photographs dated 1928, 1938, 1947, 1952, 1968, 1976, 1989, 1994, and 2002 were provided by EDR. Copies of these aerial photographs are provided in Appendix B.
- Sanborn maps were not found for the Site and vicinity. A copy of the search letter is presented in Appendix B.
- Historical topographic maps dated 1901, 1902, 1928, 1949, 1964, 1964-1972, and 1964-1981 of the USGS Topographic Maps, Southern California Sheet, 60-Minute Series quadrangle; Corona, California 30-Minute Series quadrangle, La Brea, California 6-Minute Series quadrangle; and the 1949 and 1964 (with 1972 and 1981 photorevisions) Yorba Linda, California 7.5-Minute Series quadrangles, respectively, were reviewed. Copies of these topographic maps are included in Appendix B.

4.2 Historical Records Review

The following sections present the results of LFR's historical records review including aerial photographs, topographic maps, Sanborn maps, and city directories pertaining to the Site.

4.2.1 Historical City Directories

A City Directory Abstract intermittently covering the years from 1920 to 2006 was reviewed. There were no listings at the Site address in any of the directories.

4.2.2 Historical Aerial Photographs

EDR provided historical aerial photographs of the site vicinity for the years 1928, 1938, 1947, 1952, 1968, 1976, 1989, 1994, and 2002. These low-altitude, black-and-white photographs were reviewed to identify former land use on and in the vicinity of the Site. Brief descriptions of the site and vicinity, as observed in the aerial photographs, are presented below.

1928 and 1938

The 1928 and 1938 photographs depict the Site as agricultural land or possibly fallow agricultural land covered with low-lying vegetation. What appears to be an unlined stream with vegetation along the banks passes through the Site in a south-north direction. The surrounding land appears to be used for agricultural purposes. Brea Canyon Cutoff Road is depicted adjacent and west of the Site. There are several unidentified roads in the Site vicinity and Colima Road is depicted approximately 200 feet north of the Site in the 1938 photograph.

1947, 1952, and 1968

The Site and vicinity remain relatively unchanged in the 1947, 1952, and 1968 photographs. By 1968, several residences have been constructed to the west of the Site beyond Brea Canyon Cutoff Road.

1976

The 1976 photograph depicts what appears to be the chapel building and the two classroom buildings immediately to the south. An unidentified structure is present on the east side of the Site in an area that is currently undeveloped. The current asphalt-paved parking lot is present on the southwest corner of the Site. Several trees obscure the view near the southeast corner of the Site. The northern portion of the Site is undeveloped.

There is increased residential development in the Site vicinity and condominiums have been constructed immediately southeast of the Site. It also appears the land to the northeast of the Site is now a portion of a golf course. The Pomona Freeway is now visible approximately 0.6-mile north of the Site.

1989

The 1989 photograph depicts the current gymnasium building east of the chapel and the preschool building on the southeast corner of the Site. The school administration building and the classroom building to the south are now present to the north of the chapel. A stand of trees is visible near the north-central portion of the Site, which is a remnant from a stream depicted in earlier aerial photographs. There is increased residential development in the Site vicinity. A commercial building has been constructed adjacent to the northwest corner of the Site and the current senior apartment building is visible adjacent to the northeast corner of the Site.

1994 and 2002

The 1994 photograph depicts a new classroom to the east of the gymnasium, along with the maintenance building to the south. A parking lot has been constructed on the northwest corner of the Site. The northeast corner of the Site remains undeveloped.

By 2002, the stand of trees near the north-central portion of the Site is no longer present.

No environmental concerns were readily apparent through a review of aerial photographs. However, the Site may have been used for agricultural purposes at one time and it is possible that herbicides/pesticides were applied to the Site. Based on the mostly developed nature of the Site, which includes the building pads and asphalt and concrete pavement, it is unlikely that residual pesticides/herbicides, if present, would present an environmental concern to the Site.

4.2.3 Historical Topographic Maps

Historical topographic maps dated 1901, 1902, 1928, 1949, 1964, 1964-1972, and 1964-1981 of the USGS Topographic Maps, Southern California Sheet, 60-Minute Series quadrangle; Corona, California 30-Minute Series quadrangle, La Brea, California 6-Minute Series quadrangle; and the 1949 and 1964 (with 1972 and 1981 photorevisions) Yorba Linda, California 7.5-Minute Series quadrangles, respectively, were reviewed.

The 1901 and 1902 maps depict the Site and vicinity as undeveloped land. No specific Site features are evident.

The 1928 map depicts the Site as undeveloped land located between a dirt road to the west and a spring fed stream to the east on the north side of the Puente Hills.

The 1949 map is similar when compared to the 1928 map, except the stream to the east of the Site is no longer depicted on the map. Brea Canyon Cutoff Road is now clearly identified on the map to the west of the Site. Colima Road to the north of the Site is identified as 5th Avenue beyond a small, unidentified square-shaped structure.

The 1964 map depicts the Site as similar when compared to the 1949 map except a few scattered residences are depicted to the west of the Site beyond Brea Canyon Cutoff Road. The Site vicinity remains mostly undeveloped. A few additional structures are depicted to the north of the Site along Colima Road.

The 1964-1972 and 1964-1981 maps depict the Site as similar when compared to the 1964 map. Surrounding land use remains essentially unchanged from the 1964 map except there is increased residential development scattered throughout the area.

No features were depicted on or near the Site on the topographic maps reviewed that would present an environmental concern for the Site.

4.2.4 Historical Sanborn Maps

LFR requested that EDR perform a search of available Sanborn maps for the site vicinity. No Sanborn maps were found for the Site and vicinity. A copy of the search documentation is included in Appendix B.

4.3 Agency File Review

4.3.1 Los Angeles County Building and Planning Departments

LFR reviewed building permits for the Site at the Los Angles County Building Department office in La Puente, California. The permits were on microfilm and of poor quality, and therefore, difficult to read. A permit dated 1970 indicated plans for a septic system; however, according to Mr. Nick Saltas with Southlands Church International, the Site is connected to the municipal sewer system. Permits were reviewed dating from 1970 to 2000 for various church buildings and classrooms; however, it is unclear which permits apply to which building. No environmental concerns were identified during a review of building permits.

According to the Los Angeles County Planning Department, the Site is zoned U1-Urban 1, for 1.1 to 3.2 dwelling units per acre.

4.3.2 Los Angeles Regional Water Quality Control Board

LFR contacted the Los Angeles Regional Water Quality Control Board (RWQCB) for records concerning hazardous materials spills, USTs, and leaking USTs (LUSTs) at the Site. According to a response from the RWQCB, there are no records for the Site address with the LUST or the Spills, Leaks, Investigations, and Cleanup (SLIC) Unit. The State Water Resource's Control Board's Geotracker Internet database did not list the Site address in any RWQCB files.

4.3.3 Los Angeles County Department of Environmental Health, Public Health Investigations (PHI)

LFR requested information for the Site address from the PHI regarding hazardous materials and underground storage tanks. According to the PHI, there are no records for the Site address.

4.3.4 California Division of Oil, Gas, and Geothermal Resources

According to the California Division of Oil, Gas, and Geothermal Resources (DOGGR) Wildcat Map W1-5 dated June 29, 2006, there is no current or historical oil and gas drilling activity at the Site. The nearest well is a plugged and abandoned dry hole located approximately 0.25-mile west of the Site.

4.3.5 Los Angeles County Department of Public Works (DPW)

LFR requested information for the Site address at the DPW. According to file information, there was an inspection conducted by the DPW regarding three onsite storm drains dated March 7, 2007. The DPW requested that two of the storm drains be cleaned, and a reinspection was conducted on April 9, 2007, at which time both storm drains were observed to be clean and functional. There were no other documents in the file and no environmental concerns were identified.

4.4 Summary of Previous Environmental Reports

LFR was not provided with any previous environmental reports.

4.5 Summary of Historical Information

Based on LFR's historical research, the Site appears as undeveloped/agricultural land on topographic maps and aerial photos from 1901 to approximately 1970, when the first church buildings were constructed. Additional school buildings and facilities have been constructed since 1970. The Site is currently used by Southlands Church International and has been used by Southlands Christian School since 1979.

5.0 RECORDS REVIEW

5.1 Standard Environmental Record Sources

Regulatory agency database information was obtained from EDR, which maps and lists properties in federal and state environmental databases with existing conditions or status that may have the potential to affect the Site. The EDR report is provided as Appendix C.

5.1.1 Federal Environmental Record Sources

ASTM E 1527-05 guidance requires review of the following federal databases.

5.1.1.1 National Priorities List (1.0 mile)

The National Priorities List (NPL) is a subset of the Comprehensive Environmental Response, Compensation, and Liability Information System (CERCLIS) that identifies over 1,200 sites for priority cleanup under the Superfund program. An NPL site must meet or surpass a predetermined hazard ranking system score, be chosen as a state's top priority site, or meet three specific criteria set jointly by the United States Department of Health and Human Services and the United States Environmental Protection Agency (EPA). *Source: EPA.*

No properties listed on the NPL database are located within 1.0 mile of the Site.

5.1.1.2 Delisted NPL Site List (1.0 mile)

The Delisted NPL Site List includes properties that have been removed from the NPL.

No properties listed on the Delisted NPL Site List are located within 1.0 mile of the Site.

5.1.1.3 CERCLIS (0.5 mile)

CERCLIS contains data on potentially hazardous waste sites that have been reported to the EPA by states, municipalities, private companies, and private persons pursuant to the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA). The CERCLIS database includes sites that are either proposed for the NPL or in the screening and assessment phase for possible inclusion on the NPL. *Source: EPA/National Technical Information Service (NTIS)*.

No facilities listed on the CERCLIS database are located within 0.5 mile of the Site.

5.1.1.4 CERCLIS–No Further Remedial Action Planned (0.5 mile)

CERCLIS-No Further Remedial Action Planned (CERCLIS-NFRAP) contains data on sites where, following an initial investigation, contamination was removed quickly without the need for the site to placed on the NPL, or the contamination was not serious enough to required Federal Superfund action of NPL consideration. *Source: EPA/NTIS.*

There are no properties listed on the CERCLIS-NFRAP database located within 0.5 mile of the Site.

5.1.1.5 Corrective Action Report (1.0 mile)

The Corrective Action Report (CORRACTS) database identifies hazardous waste handlers with Resource Conservation and Recovery Act (RCRA) corrective action activity. *Source: EPA*.

No facilities listed on the CORRACTS database are located within a 1.0-mile radius of the Site.

5.1.1.6 RCRA Treatment, Storage, and Disposal Facilities (0.5 mile)

The RCRA Treatment, Storage, and Disposal (TSD) Facilities database includes selected information on facilities that generate, transport, store, treat, and/or dispose of hazardous waste, as defined by RCRA. *Source: EPA/NTIS.*

No properties listed on the TSD Facilities database are located within 0.5 mile of the Site.

5.1.1.7 RCRA Generators Lists (Site and adjoining)

RCRA large-quantity generators (LQG) are those facilities that generate at least 1,000 kilograms per month (kg/month) of non-acutely hazardous waste or meet other applicable RCRA requirements. RCRA small-quantity generators (SQG) are facilities that generate less than 1,000 kg/month of non-acutely hazardous waste or meet other applicable RCRA requirements.

There are no properties listed on the RCRA-LQG database located at the Site or adjacent to the Site.

One facility, LA Royal Vista Golf Course at 20055 E. Colima Road, is located adjacent and east of the Site at its closest point and is listed on the RCRA-SQG database. However, the portion of this property located adjacent to the Site consists of fairways and a green. The maintenance areas are not located near the Site and no violations are reported. Based on this information, this listing is not anticipated to impact the Site.

5.1.1.8 Federal Institutional Control/Engineering Control Registries (Site Only)

Federal institutional control and engineering control registries were requested in the database search.

The Site is not listed on the registries reported by EDR.

5.1.1.9 Emergency Response Notification System (Site Only)

The Emergency Response Notification System (ERNS) is a national database that records and stores information on reported releases of oil and hazardous substances. The database contains information on spill reports made to federal authorities including the EPA, United States Coast Guard, National Response Center, and Department of Transportation.

The Site is not listed on the ERNS database.

5.1.2 State Environmental Record Sources

ASTM E 1527-05 guidance requires review of the following state databases.

5.1.2.1 Historical Cal-Sites (Cal-Sites; 1.0 mile)

The Cal-Sites database contains potential or confirmed hazardous substance release properties. This database is no longer updated and has been replaced by ENVIROSTOR.

There are no properties listed on the Cal-Sites database located within 1.0 mile of the Site.

5.1.2.2 ENVIROSTOR (ENVIROSTOR; 1.0 mile)

The Envirostor database identifies sites that have known contamination or sites for which there may be a reason to investigate. The Envirostor database provides similar information that was available in Cal-Sites.

There is one property listed on the ENVIROSTOR database within a 1.0 mile radius of the Site. Based on distance from the Site (0.5 mile or more) and downgradient to crossgradient location, the Envirostor property is not anticipated to impact the Site.

5.1.2.3 Bond Expenditure Plan (BEP; 1.0 mile)

The Department of Health Services developed a site specific expenditure pan as the basis for an appropriation of Hazardous Substance Cleanup Bond Act funds. It is not updated.

No properties are listed on the BEP database within 1.0 mile of the Site.

5.1.2.4 State and Tribal-Equivalent SWF/LF, State Landfill (0.5 mile)

The State and Tribal-Equivalent Solid Waste Information System (SWF/LF), State Landfill database is an inventory of solid waste disposal facilities or landfills. These may be active or inactive facilities or open dumps that failed to meet RCRA Section 2004 criteria for solid waste landfills or disposal sites.

There is one property listed on the SWF/LF database located within 0.5 mile of the Site. Road Division 417 at 19865 Walnut Drive is located approximately 0.5-mile north of, and hydraulically crossgradient from the Site. The database reports a limited volume transfer station for construction/demolition debris, green materials, and mixed municipal waste. Based on the reported waste types, distance from the Site, and a hydraulically crossgradient location, this facility is not anticipated to impact the Site.

5.1.2.5 State and Tribal Leaking Underground Storage Tank Database (0.5 mile)

The State and Tribal Leaking Underground Storage Tank (LUST) database is a list of reported leaking UST incidents.

There are two LUST properties listed within a 0.5-mile radius of the Site. The closest facility is discussed below.

- **LA Royal Vista Golf Course** at 20055 E. Colima Road is located adjacent and east of the Site at its closest point in a hydraulically upgradient location relative to the Site. However, the portion of this property located adjacent to the Site consists of fairways and a green. The database lists a release to the soil only. Based on the media impacted and the fact that the release location is not located adjacent to the Site, this listing is not anticipated to impact the Site. The clubhouse for this facility is located approximately 0.2-mile northeast of, and hydraulically crossgradient from the Site. However, it is unknown if this is the location of the UST.

Based on the media affected, identified responsible party, case status, and hydraulically crossgradient location, the one remaining LUST listing is not anticipated to impact the Site.

5.1.2.5 State and Tribal Registered Underground Storage Tank (Site and Adjoining Properties)

There are no UST, HIST UST, or CA FID facility listings for USTs at the Site or adjacent properties.

6.1.2.6 Waste Management Unit Database System (WMUDS/SWAT, 0.5 mile)

This system is used by the SWRCB for tracking and inventory of waste management units. WMUDS comprises the following databases: facility information, scheduled inspections information, waste management unit information, Solid Waste Assessment Test (SWAT) program information, SWAT report summary information, SWAT report summary data, Chapter 15 information and monitoring parameters, TPCA program information, RCRA program information, closure information, and interested parties information. Source: SWRCB.

There are no WMUDS/SWAT facilities listed within 0.5 mile of the Site.

5.2 Additional Environmental Record Sources

The following databases were also checked by EDR:

- CONSENT (EPA Regional Offices Superfund Consent Decrees [1 mile])
- ROD (Records of Decision [1 mile])
- DELISTED NPL (EPA Delisted National Priority List [1 mile])
- FINDS (Facility Index System [target property])
- HMIRS (Hazardous Materials Information Reporting Systems [target property])
- MLTS (Material Licensing Tracking System [target property])

- MINES (Mines Master Index Files [0.25 mile])
- NPL LIENS (Superfund Liens [target property])
- PADS (PCB Activity Database System [target property])
- DOD (Department of Defense Site [1 mile])
- RAATS (RCRA Administrative Action Tracking System [target property])
- TRIS (Toxic Chemical Release Inventory System [target property])
- TSCA (Toxic Substances Control Act [target property])
- SSTS (Section 7 Tracking Systems [target property])
- FTTS (FIFRA/TSCA Tracking System [target property])
- AST (Aboveground Petroleum Storage Tank Facilities [target property])
- CLEANERS (California DTSC Drycleaners [0.25 mile])
- CA WDS (Waste Discharge System [target property])
- DEED (List of Deed Restrictions [target property])
- SCH (School Property Evaluation Program [0.25 mile])
- EMI (Emissions Inventory Data [target property])
- REF (Unconfirmed Properties Referred to Another Agency [0.25 mile])
- NFA (No Further Action Determination [0.25 mile])
- NFE (Properties Needing Further Evaluation [0.25 mile])
- U.S. Brownfields (U.S. Brownfields Listings [(0.5 mile])
- CA SLIC (Spills, Leaks, Investigations & Cleanup Cost Recovery Listing [0.5 mile])
- HAZNET (Hazardous Materials Database [target property])
- COAL GAS (Manufactured Gas Plants [1 mile])
- LA Co. Site Mitigation (Site Mitigation [target property])
- VCP (Voluntary Cleanup Program Properties [0.5 mile])

There are three facilities listed on the Cleaners database. All three facilities are located within a 0.1-mile radius of the Site in hydraulically crossgradient and downgradient locations. The closest dry cleaner is Professional Cleaners at 19800 Colima Road (listed twice) that is located approximately 80 feet north of, and hydraulically downgradient from the Site. The second dry cleaners, Canyon Point Cleaners, is located at 19735 E. Colima Road located over 300 feet northwest of the Site beyond Colima Road in a hydraulically crossgradient to downgradient location. This facility is also listed twice on the Orphan Summary. Neither of the cleaners is listed with any environmental remediation activities, and given their hydraulic location relative to the Site, neither is anticipated to impact the Site.

No other properties within their respective search distances were listed on the above databases that would appear to present an environmental concern for the Site. In addition, no facilities were listed on the Orphan Summary that would appear to present an environmental concern for the Site.

6.0 SITE RECONNAISSANCE

On August 20, 2007, Mr. Andy Shimizu, a representative of LFR, performed a reconnaissance-level assessment of the Site to observe general site conditions and indications of the possible release(s) of chemicals to the subsurface. A walkover site inspection was conducted to identify visible evidence of recognized environmental conditions. Mr. Shimizu was accompanied during the Site inspection by Mr. Sergio Garcia, Security with Southlands Christian Schools. Photographs taken during LFR's Site inspection are included in Appendix A. Mr. Shimizu's qualifications are presented in Appendix E.

6.1 Methodology and Limiting Conditions

LFR was provided full access to the Site. The methodology for the Site visit included visiting the buildings, then observing the exteriors and common areas of the Site.

6.2 General Site Conditions

6.2.1 Exterior Observations

On the day of LFR's Site inspection, the 15.5-acre Site was improved with approximately nine stand-alone and interconnected structures that house a chapel, a gymnasium, a maintenance building, and classrooms for Southlands Christian School, a pre-school through high school campus.

An asphalt-paved parking lot is located on the northwest corner of the Site. The northeast corner of the Site is developed with the school's athletic fields. The majority of the buildings are located near the center of the Site and include the Southlands Christian School Administrative offices and classrooms, two buildings containing classrooms and the school kitchen, a blacktop area with basketball courts, and a maintenance building that also houses the athletic department. Most of the buildings are constructed of wood and stucco; however, several of the buildings are constructed of wood.

There are a few parking spaces on the east-central portion of the Site, adjacent to a modular wood building. LFR observed several soil piles on the east side of the Site to the southeast of the parking spaces. According to Mr. Nick Saltas with Southlands Church International, the soil washed onto the Site from the adjacent golf course during a rainstorm, and has since been left in place.

The school gymnasium is constructed into the hillside, so that there are several classrooms located below ground level. The remaining structures are one-story. The chapel is located in a building to the west of the gymnasium, which is separated by a small walkway from two buildings containing classrooms to the south. The preschool building is located near the southeast corner of the Site.

A small driveway is present near the center of the Site in a north-south direction. Landscaping consisting of grass, trees and shrubs is located throughout the Site in and around the buildings.

A metal cabinet is used to store one-gallon containers of paint on the east side of the maintenance building. No evidence of leaks or stains was observed. LFR also observed two exterior metal storage containers on the east side of the maintenance building that contained excess text books and classroom furniture. According to Mr. Garcia, no on-site auto maintenance activities have taken place at the Site. Two metal storage containers were also observed near the northwest corner of the Site that reportedly contain football equipment.

LFR observed a circular metal plate in the asphalt pavement near the northwest corner of the Site. Neither Mr. Saltas nor Mr. Chris Morales, Maintenance Supervisor with Southlands Church International, was aware of its purpose; however, the plate appeared to be an access plate, possibly to the municipal sewer or a storm drain.

During the inspection, no distressed vegetation, monitoring wells or remediation systems were observed at the Site. There was no evidence of current aboveground storage tanks (ASTs) or underground storage tanks (USTs) at the Site.

6.2.2 Interior Observations

The interior of the buildings consists mostly of classroom space that includes carpeted floors, rows of desks, fluorescent lights, and drywall or wood paneling. Administrative areas included individual offices and work space.

LFR observed several compressed gas cylinders of helium and several one-gallon containers of gasoline stored on the concrete floor in the maintenance building near the center of the Site. The gasoline is used in the property's power tools. No evidence of leaks or stains was observed. There were no other potentially hazardous materials observed in the maintenance building or any of the other onsite buildings. LFR observed one janitorial closet located near the gymnasium that contained several one-gallon containers of glass cleaners and floor cleaners. No evidence of leaks or stains was observed.

No evidence of water intrusion or microbial amplification was observed in the Site buildings.

6.2.3 Hazardous Substances and Petroleum Products in Connection with Identified Uses

LFR investigated the presence of hazardous substances or petroleum products in connection with the Site. No hazardous substances or petroleum products were readily observed during this investigation with the exception of the gasoline containers discussed in Section 6.2.2.

6.2.4 Storage Tanks

No current or historical petroleum or chemical USTs or ASTs are known to be associated with the Site. No evidence of USTs such as vent pipes, fill pipes or access ways was identified during this investigation.

6.2.5 Odors

No readily noticeable strong, pungent or noxious odors were identified during this investigation.

6.2.6 Pools of Liquid

No readily visible standing surface water, pools or sumps containing liquids likely to be hazardous substances or petroleum products were identified during this investigation.

6.2.7 Drums

LFR observed three polyethylene 55-gallon drums on the east side of the maintenance building. According to Mr. Garcia, the drums are used to store water. LFR also observed one 55-gallon drum in the kitchen that is used to store cooking grease. No other storage drums were observed during this investigation.

6.2.8 Hazardous Substances and Petroleum Product Containers (Not Necessarily in Connection with Identified Uses)

No containers of hazardous substances or petroleum products were identified during this investigation with the exception of the gasoline containers described in Section 6.2.2.

6.2.9 Unidentified Substance Containers

No opened or damaged containers with unidentified contents suspected of being hazardous substances or petroleum products were identified during this investigation.

6.2.10 PCBs

During the Site visit, LFR looked for electrical or hydraulic equipment known to contain PCBs or likely to contain PCBs. As indicated in the ASTM standard, fluorescent light ballasts (which may or may not be present on the Site) were not evaluated as part of this Phase I ESA. LFR observed three pad-mounted electric transformers on the Site that are owned and maintained by Southern California Edison (SCE). No evidence of leaks or stains was observed in the vicinity of the transformers.

There are no elevators at the Site and no other electrical or hydraulic equipment known to contain PCBs or likely to contain PCBs was identified during this investigation.

6.2.11 Pits, Ponds or Lagoons

During the Site visit, LFR looked for pits, ponds or lagoons on the subject property. LFR also looked for pits, ponds and lagoons on adjoining properties to the extent that such features were visually and/or physically observed from the Site or identified in the interviews or records review. None were observed.

6.2.12 Stained Soil or Pavement

During the Site visit, LFR did not observe areas of stained soil and pavement.

6.2.13 Stressed Vegetation

During the Site visit, LFR looked for areas of stressed vegetation (from other than insufficient water). No areas of stressed vegetation were observed during this investigation.

6.2.14 Solid Waste

During the Site visit, LFR looked for areas that were apparently filled or graded by non-natural causes (or filled with material of unknown origin) suggesting trash construction debris, demolition debris or other solid waste disposal, or mounds or depressions suggesting trash or other solid waste disposal. No such areas were observed during this investigation.

6.2.15 Wastewater

During the Site visit, LFR looked for wastewater or other liquids (including storm water) or any discharge into a drain, ditch, underground injection system or stream on or adjacent to the Site. Wastewater was not observed discharging into any drains or underground injection systems.

6.2.16 Wells

During the Site visit, LFR looked for wells including dry wells, irrigation wells, injection wells, monitoring wells, abandoned wells or other wells. No wells were observed during this investigation.

6.2.17 Septic Systems

During the Site visit, LFR looked for indications of on-site septic systems or cesspools. No on-site septic systems or cesspools were observed during this investigation. The Site is connected to the municipal sewer system.

6.2.18 Heating/Cooling

During the Site visit, LFR observed roof-mounted heating, ventilating and air conditioning (HVAC) units on the building's roofs.

6.2.19 Stains or Corrosion

During the Site visit, LFR looked for stained areas or corrosion of floors, walls or ceilings. No areas of significant staining or corrosion were observed during this investigation.

6.2.20 Drains and Sumps

LFR observed a floor drain in the kitchen. No other drains or sumps were observed at the Site.

6.2.21 Water Intrusion

No evidence of water intrusion or microbial amplification was observed during the Site visit.

6.2.22 Asbestos-Containing Materials (ACMs)

Based on the original date of building construction (1970s), LFR is conducting an asbestos survey. The report will be submitted under separate cover.

6.2.23 Lead–Based Paint (LBP)

Based on the original date of building construction (1970s), it is possible that LBP is present at the Site. However, no areas of flaking or peeling paint were observed.

6.2.24 Radon

According to the U.S. EPA, the Site is located in a Zone 2, an area with expected radon levels to be >2.0 picoCuries/liter (pCi/L) of air and <4.0 pCi/L if air. Therefore, LFR concludes that radon gas is unlikely to represent an environmental concern to the Site and no further investigation regarding this issue appears warranted.

6.2.25 Current Uses of Adjoining Properties

LFR performed a drive-by reconnaissance of adjacent properties to observe businesses that may use, store, generate or dispose of hazardous materials. The adjacent properties are identified on Figure 2, and are described below:

- **North:** Summerville at Villa Colima Senior Residences at 19850 E. Colima Road, a parking lot and a Yamaha Music Store.
- **East:** A fairway of the Los Angeles Royal Vista Golf Course and condominiums.
- **South:** Condominiums.
- **West:** Brea Canyon Cutoff Road followed by a retail shopping center, single-family residences, and vacant land.

None of the adjacent properties are anticipated to impact the Site.

7.0 INTERVIEWS

7.1 Interviews with Site Contacts

LFR interviewed Mr. Nick Saltas with Southlands Church International, Mr. Sergio Garcia, Campus Security, with Southlands Church Christian School and Mr. Chris Morales, Maintenance Supervisor with Southlands Church Christian School regarding the Site. Information from the interviews is included throughout the report.

7.2 Interviews with Local Government Officials

LFR contacted the County of Los Angeles, the RWQCB, the PHI, and the DTSC to obtain additional information pertaining to the Site. This information is included throughout the report.

8.0 FINDINGS

This section identifies known or suspect environmental concerns, historical environmental concerns, and *de minimis* conditions obtained during the ESA.

8.1 Known or Suspect Environmental Concerns

LFR identified no known or suspect environmental concerns during this Phase I ESA.

8.2 Historical Environmental Concerns

LFR identified no historical environmental concerns during this Phase I ESA.

8.3 De Minimis Conditions

LFR identified a building permit for a septic system in 1970. It is unknown if the septic system was ever installed or removed. If a septic system is encountered during redevelopment activities, the system should be abandoned in accordance with local regulatory guidelines.

9.0 OPINION

The findings noted above did not indicate the presence of environmental concerns in connection with the Site.

10.0 CONCLUSIONS

LFR has performed a Phase I ESA of the Site in conformance with the scope and limitations of ASTM Practice E 1527-05 for Phase I ESAs, TCR's 2007 scope of work for Phase I ESAs, and the 2001 Prudential Real Estate Investors Requirements for Phase I ESAs. This assessment has revealed no evidence of environmental concerns in connection with the Site, and no further investigation is recommended at this time.

11.0 DEVIATIONS / DATA GAPS

No deviations from the ASTM practice or significant data gaps were identified during the conduct of this Phase I ESA.

12.0 ADDITIONAL SERVICES

No additional services were provided as part of this Phase I ESA.

13.0 REFERENCES

ASTM International. 2005. Standard Practice for Environmental Site Assessments: Phase I Environmental Site Assessment Process, Designation E 1527-05.

California Department of Water Resources (DWR). 1966 Planned utilization of groundwater basins, San Gabriel Valley; Appendix A: Geohydrology. Bulletin 104-2.

California Division of Oil, Gas, and Geothermal Resources (DOGGR). 2006. Regional Wildcat Map W1-5, Los Angeles and Orange Counties. June 29.

California's Groundwater Bulletin 118. 2004. South Coast Hydrologic Region, San Gabriel Valley Groundwater Basin. February 27.

California Regional Water Quality Control Board, Los Angeles Region. 2007. Records Request. August.

Environmental Data Resources, Inc. (EDR). 2007a. The EDR Radius Map with GeoCheck, Inquiry Number 02004336.2r. August 14.

_____. 2007b The EDR Aerial Photo Decade Package, Inquiry Number 2004336.5. August 15.

_____. 2007c. The EDR Historical Topographic Map Report, Inquiry Number 2004336.4. August 14.

_____. 2007c. Sanborn Map Report, Inquiry Number 2004336.3s. August 14.

_____. 2007d. The EDR City Directory Abstract, Number 2004336.6. August 14.

_____. 2007e. The EDR Environmental Lien Search Report, Project Number 02004336.7. August 15.

U.S. Geological Survey. 1964, photorevised 1981. 7.5 Minute Series Topographic Map, Yorba Linda, California Quadrangle.

14.0 SIGNATURES OF ENVIRONMENTAL PROFESSIONALS

The environmental assessment described herein was conducted by the undersigned employees of LFR. LFR's investigation consisted solely of the activities described in the Introduction of this report, and in accordance with the Prudential Contract for Phase I Environmental Site Assessments signed prior to initiation of the assessment, as applicable.

We declare that, to the best of our professional knowledge and belief, we meet the definition of environmental professional as defined in §312.10 of 40 Code of Federal Regulations (CFR) 312, and we have the specific qualifications based on education, training, and experience to assess a property of the nature, history, and setting of the subject property. We have developed and performed all appropriate inquiries in conformance with the standards and practices set forth in 40 CFR Part 312.

Report Prepared By:

9-6-07

Andy Shimizu, REA #07753 Date
Project Scientist

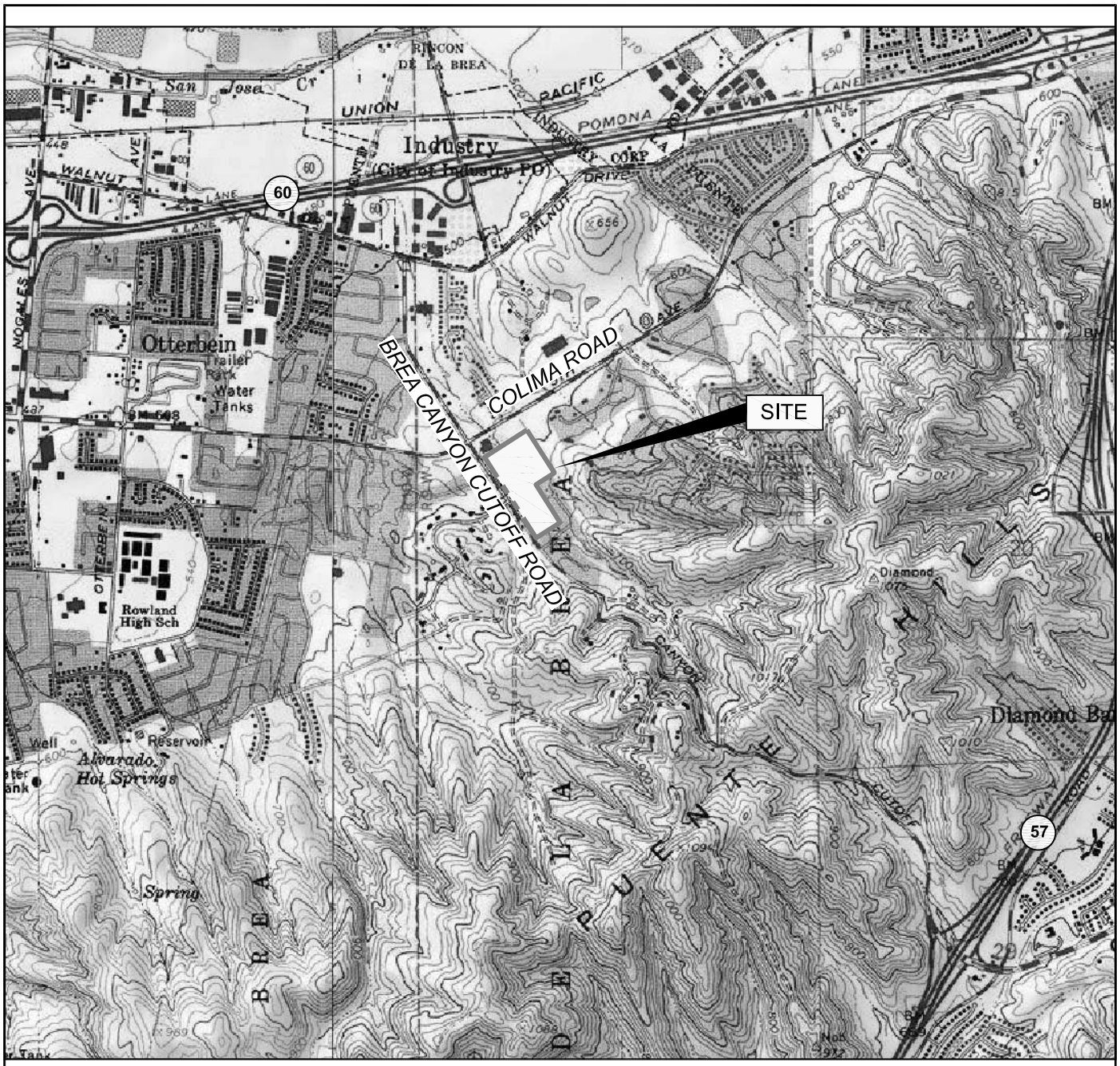
Report Reviewed By:

9-6-07

Janet Holtz, REA #04488 Date
Due Diligence Group Manager

9-6-07

Thomas S. Chandler Date
Principal Engineer



MAP SOURCE: National Geographic Holdings, TOPO! 2001, Yorba Linda, CA, 1981.

0 1,000 2,000 4,000 feet

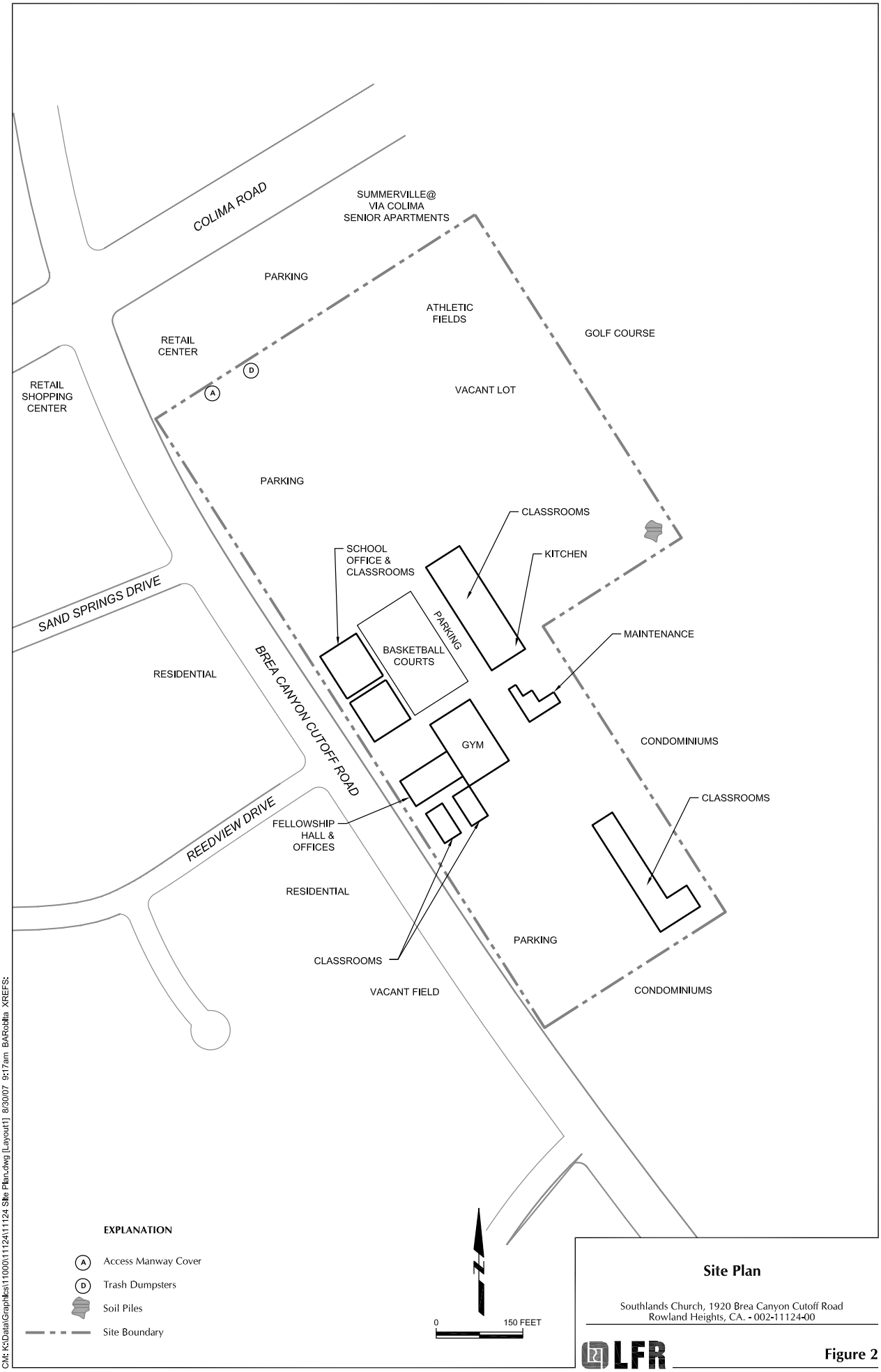
Vicinity Map

Southlands Church, 1920 Brea Canyon Cutoff Road
Rowland Heights, CA. - 002-11124-00

LFR

Figure 1

CM: K:□Data□Graphics□11000□11124□11124 Vicinity Map.dwg [Layout1] 8/28/07 1:35pm BARobita XREFS:



Site Plan

Southlands Church, 1920 Brea Canyon Cutoff Road
Rowland Heights, CA. - 002-11124-00

LFR

Figure 2

CM: K:\Data\Graphics\11000\111124\111124 Site Plan.dwg [Layout1] 8/30/07 9:17am BARobita XREFS:

APPENDIX A

Site Photographs

Photo 1 View of main school entrance.

Photo 2 View of Site looking northeast across Brea Canyon Cutoff Road.

Site Photographs

Photo 3 View of Site looking north.

Photo 4 View of chapel looking south.

Site Photographs

Photo 5 View of athletic field on the north side of Site looking east with golf course in background.

Photo 6 View of Site looking southwest.

Site Photographs

Photo 7 View of north side of Site looking west.

Photo 8 View of Site from northeast corner.

Site Photographs

Photo 9 View of soil piles on east side of Site.

Photo 10 View of central access road looking south.

Site Photographs

Photo 11 View of typical classroom building.

Photo 12 View of preschool building on southeast corner of Site.

Site Photographs

Photo 13 View of walkway towards chapel looking east.

Photo 14 View of music room.

Site Photographs

Photo 15 View of typical classroom.

Photo 16 View of paint storage near maintenance building.

Site Photographs

Photo 17 View of storage area near maintenance building.

Photo 18 View of manhole accessway on north side of Site.

Photo 19 View of chapel.

Photo 20 View of gymnasium.

Photo 21 View of central driveway looking north.

Photo 22 View of play area on southeast side of Site looking north.

Site Photographs

Photo 23 View of maintenance building looking northeast.

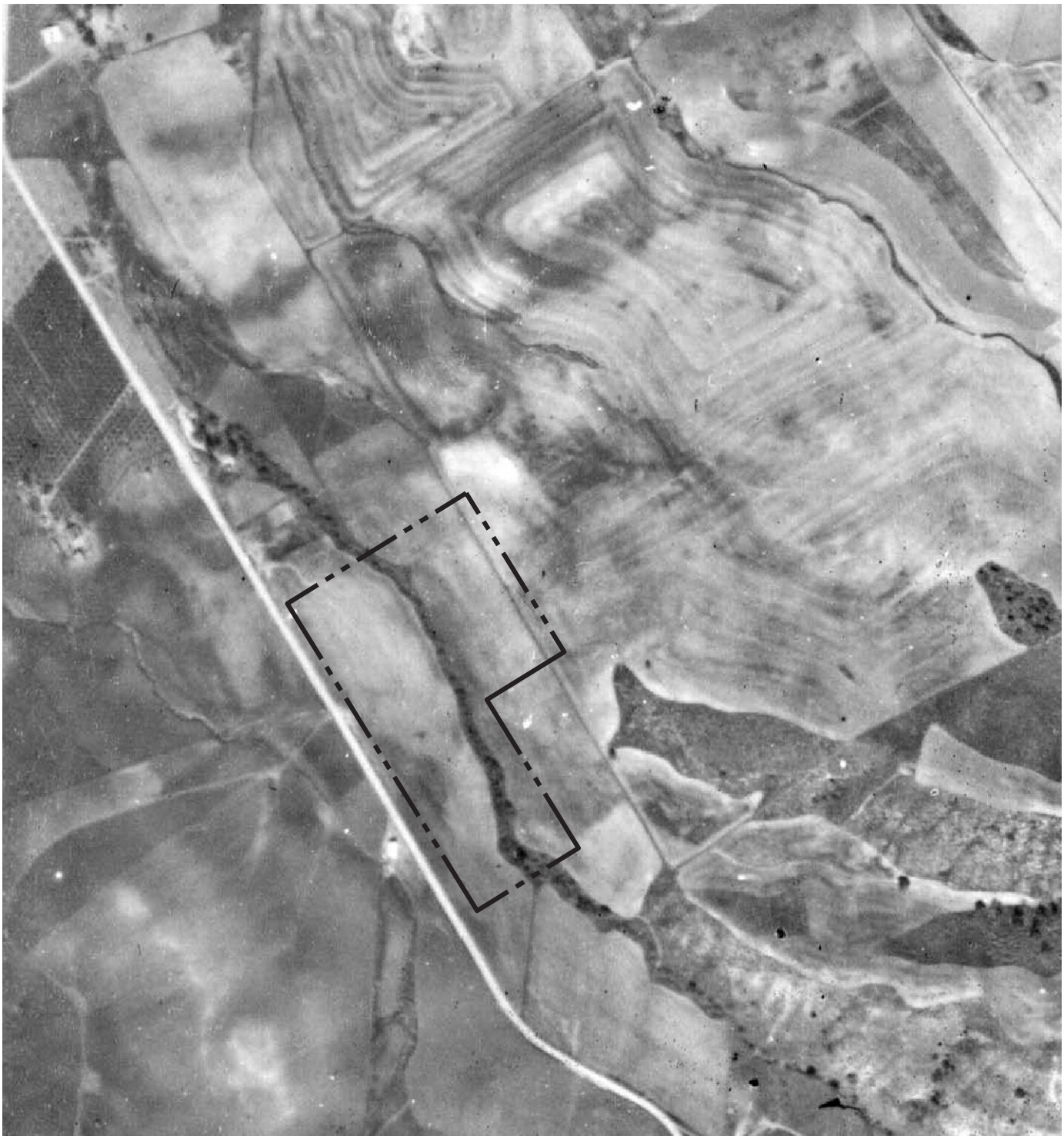
Photo 24 View of storage area on east side of maintenance building.

Photo 25 View of drum of cooking grease in kitchen.

Photo 26 View of Site looking southwest.

APPENDIX B

Historical Research Documentation



Site Boundary

0 500 ft

Aerial Photograph
1928

Southlands Church, 1920 Brea Canyon Cutoff Road
Rowland Heights, CA. - 002-11124-00

LFR

Figure 3a

CM: K:\Data\Graphics\11000\11124\11124 Historical Map.dwg [A1928] 8/30/07 9:21am BARobita XREFS:

Site Boundary

0 555 ft

Aerial Photograph
1938

Southlands Church, 1920 Brea Canyon Cutoff Road
Rowland Heights, CA. - 002-11124-00

LFR

Figure 3b

CM: K:\Data\Graphics\11000\11124\11124 Historical Map.dwg [a1938] 8/30/07 9:21am BARobita XREFS:

Site Boundary

0 666 ft

Aerial Photograph
1947

Southlands Church, 1920 Brea Canyon Cutoff Road
Rowland Heights, CA. - 002-11124-00

LFR

Figure 3c

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Site Boundary

0 555 ft

Aerial Photograph
1952

Southlands Church, 1920 Brea Canyon Cutoff Road
Rowland Heights, CA. - 002-11124-00

LFR

Figure 3d

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Site Boundary

0 480 ft

Aerial Photograph
1968

Southlands Church, 1920 Brea Canyon Cutoff Road
Rowland Heights, CA. - 002-11124-00

LFR

Figure 3e

CM: K:\Data\Graphics\11000\11124\11124 Historical Map.dwg [A1968] 8/30/07 9:23am BARobita XREFS:

Site Boundary

0 666 ft

Aerial Photograph
1976

Southlands Church, 1920 Brea Canyon Cutoff Road
Rowland Heights, CA. - 002-11124-00

LFR

Figure 3f

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Site Boundary

0 666 ft

Aerial Photograph
1989

Southlands Church, 1920 Brea Canyon Cutoff Road
Rowland Heights, CA. - 002-11124-00

LFR

Figure 3g

CM: K:□Data□Graphics□11000□11124□11124 Historical Map.dwg [A1989] 8/28/07 1:26pm BARobita XREFS:

Site Boundary

0 666 ft

Aerial Photograph
1994

Southlands Church, 1920 Brea Canyon Cutoff Road
Rowland Heights, CA. - 002-11124-00

LFR

Figure 3h

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Site Boundary

0 666 ft

Aerial Photograph
2002

Southlands Church, 1920 Brea Canyon Cutoff Road
Rowland Heights, CA. - 002-11124-00

LFR

Figure 3i

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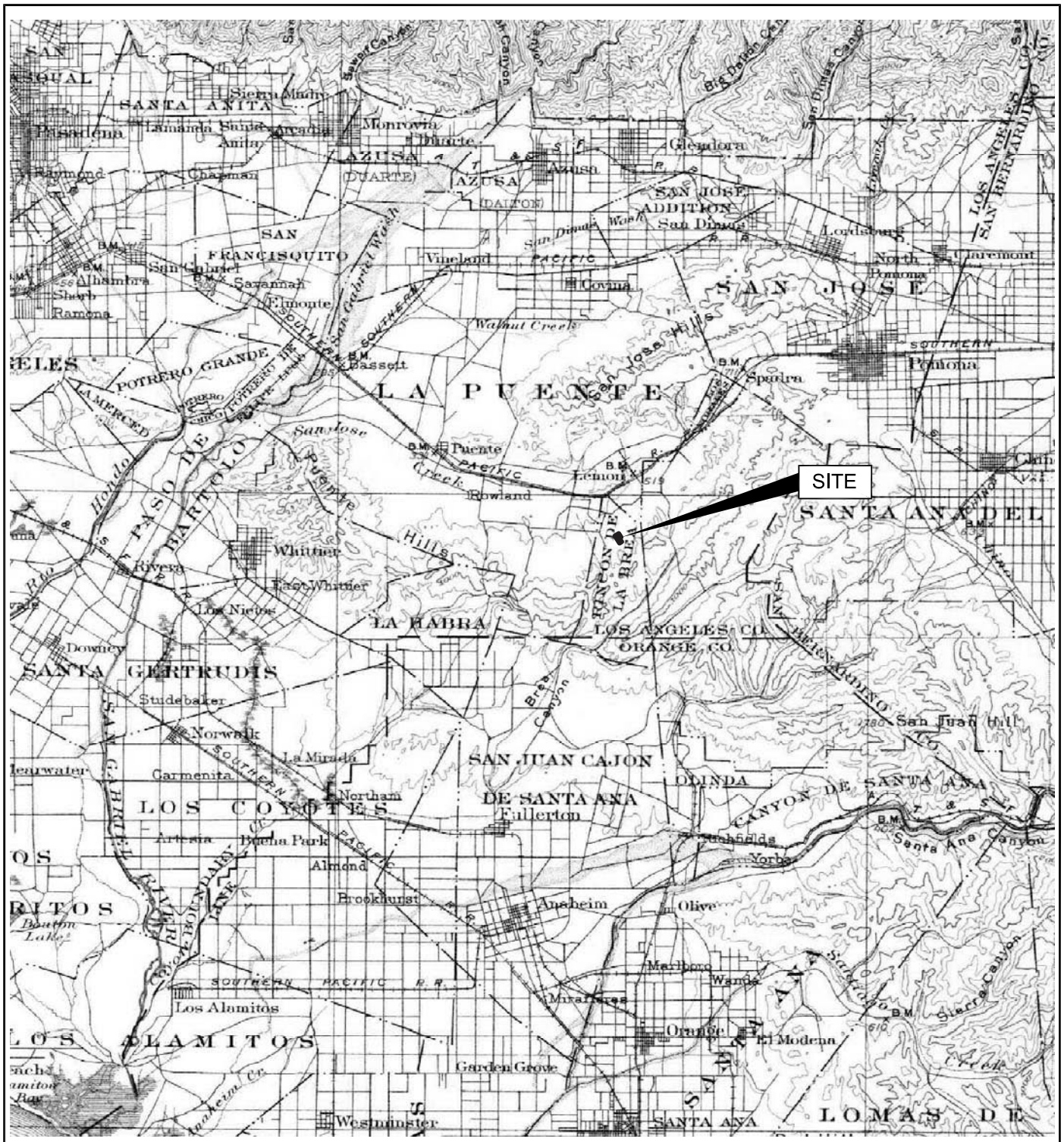

0 20833 ft

Historical Topo
1901

Southlands Church, 1920 Brea Canyon Cutoff Road
Rowland Heights, CA. - 002-11124-00

LFR

Figure 4a

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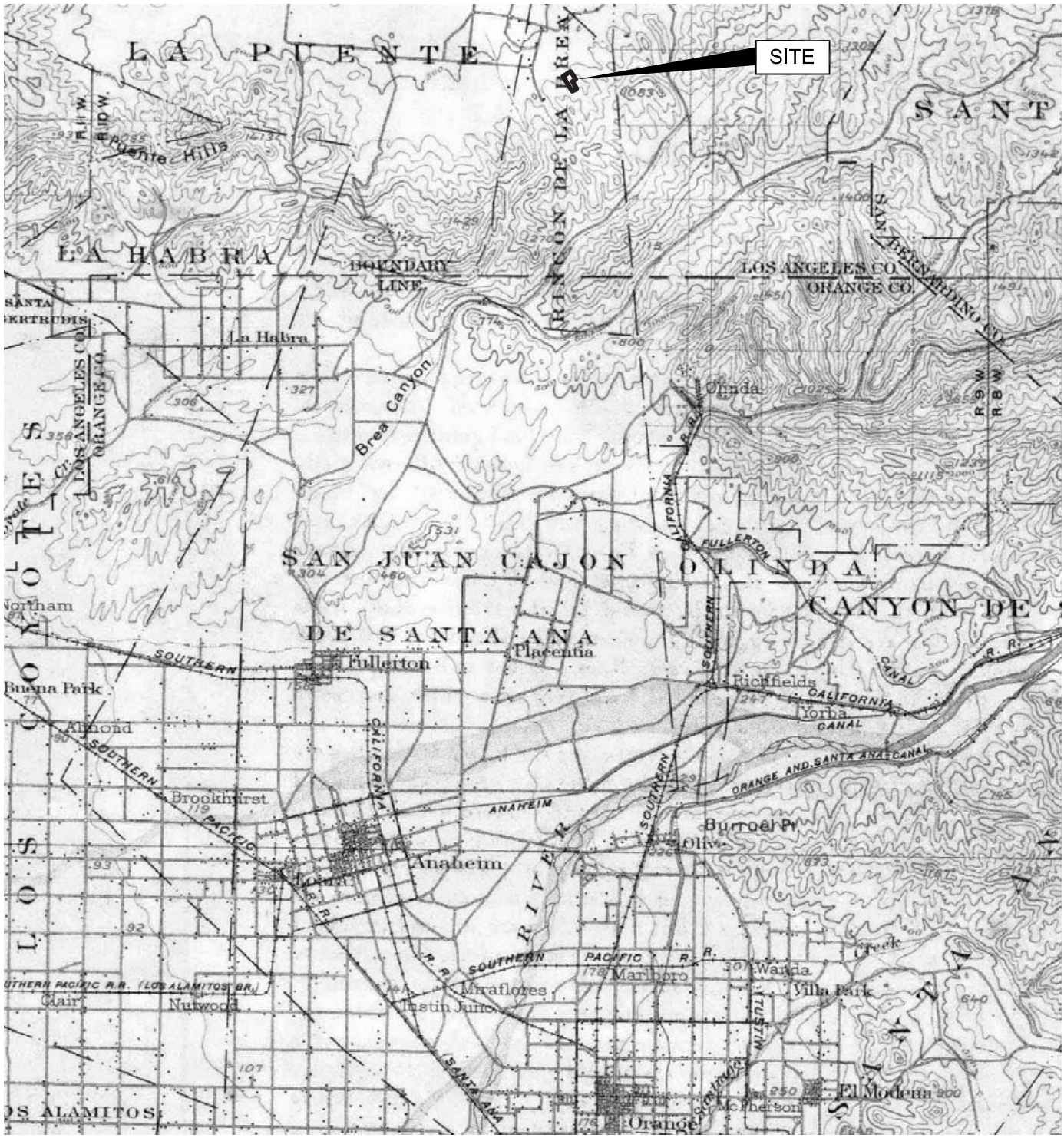

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Historical Topo
1902

Southlands Church, 1920 Brea Canyon Cutoff Road
Rowland Heights, CA. - 002-11124-00

LFR

Figure 4b

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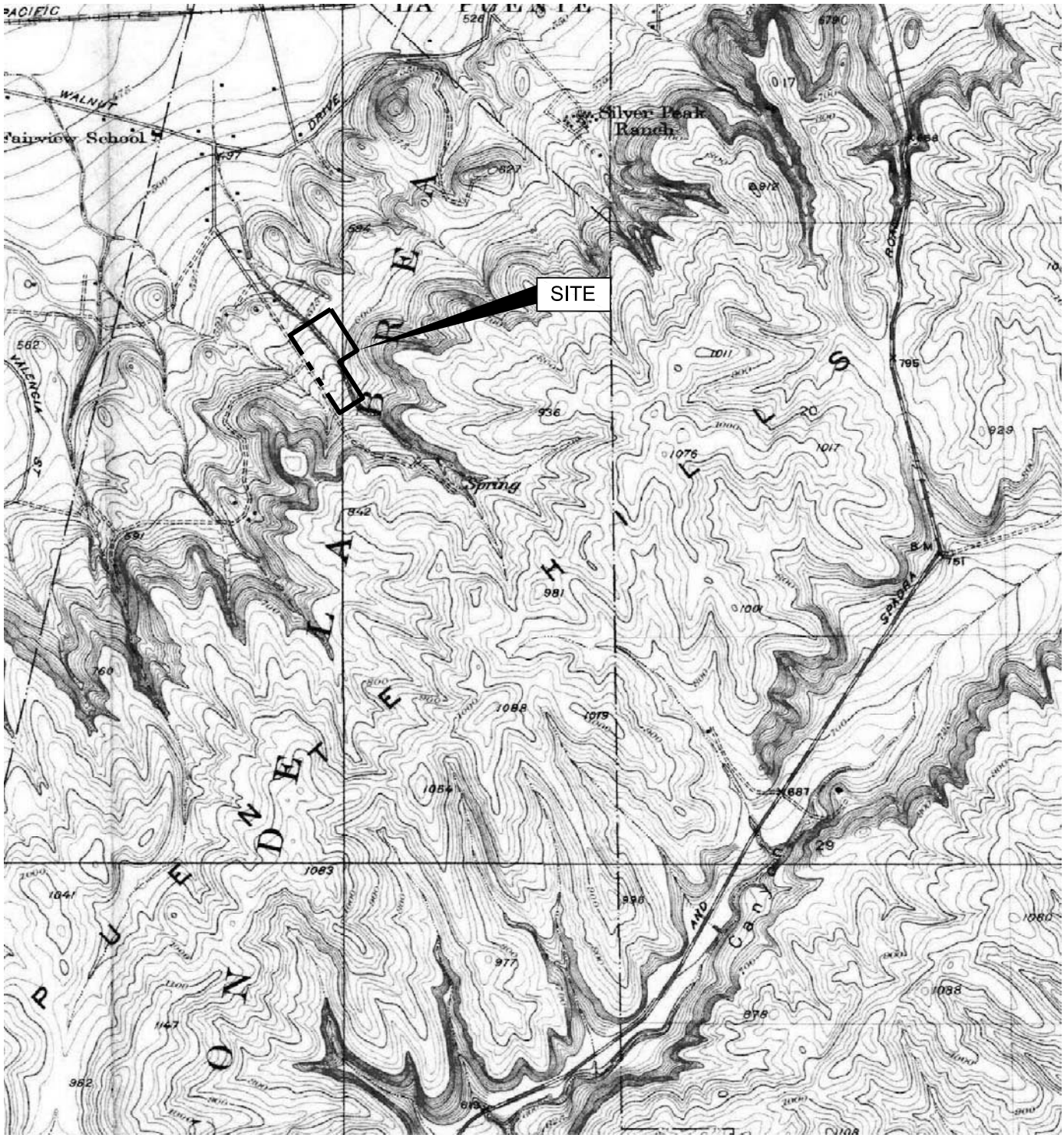


Site Boundary

0 2000 ft

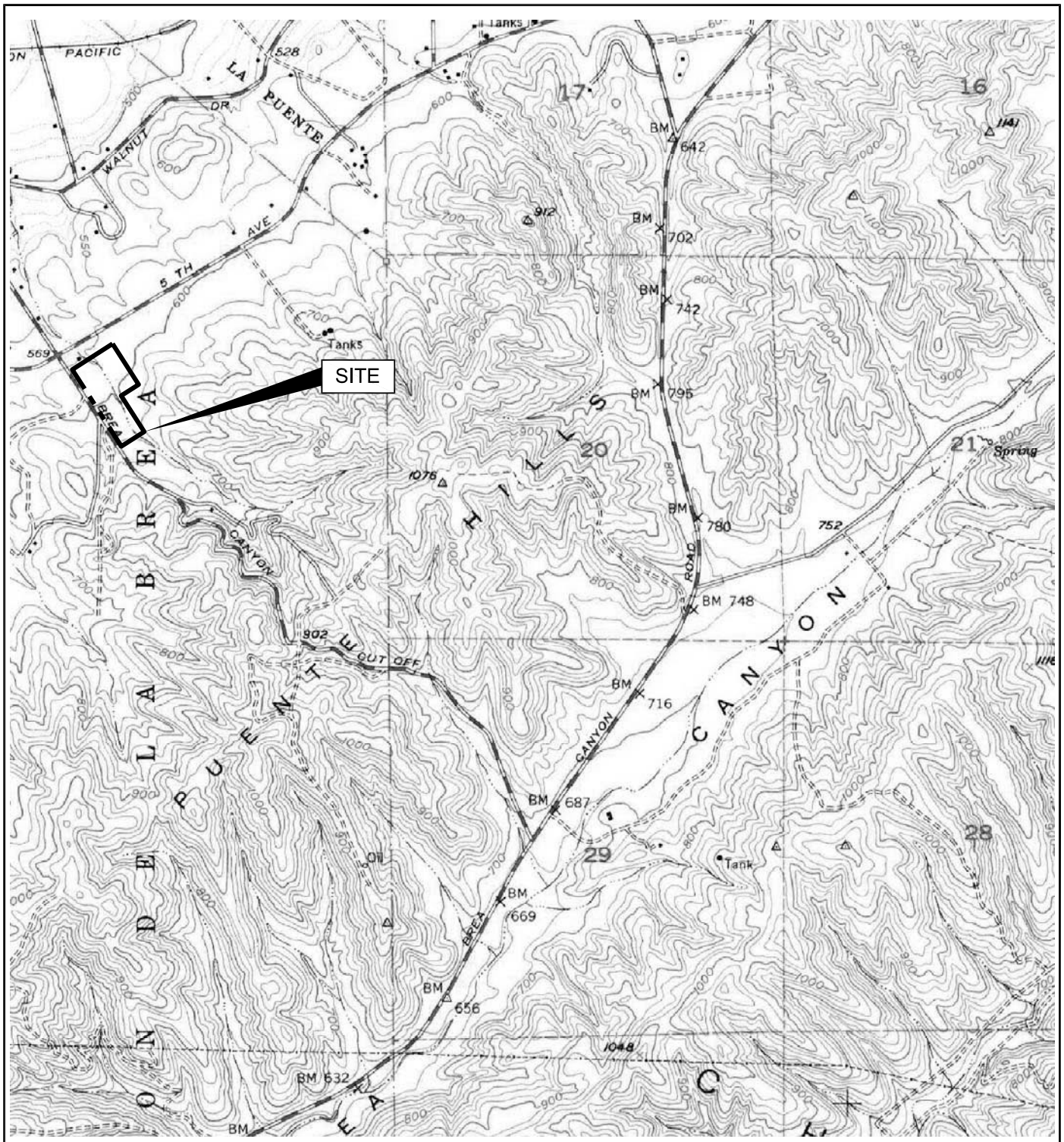
Historical Topo
1928

Southlands Church, 1920 Brea Canyon Cutoff Road
Rowland Heights, CA. - 002-11124-00

LFR

Figure 4c

CM: K:□Data□Graphics□11000□11124□11124 Historical Map.dwg [T1928] 8/28/07 1:28pm BARobita XREFS:



Site Boundary

0 2000 ft

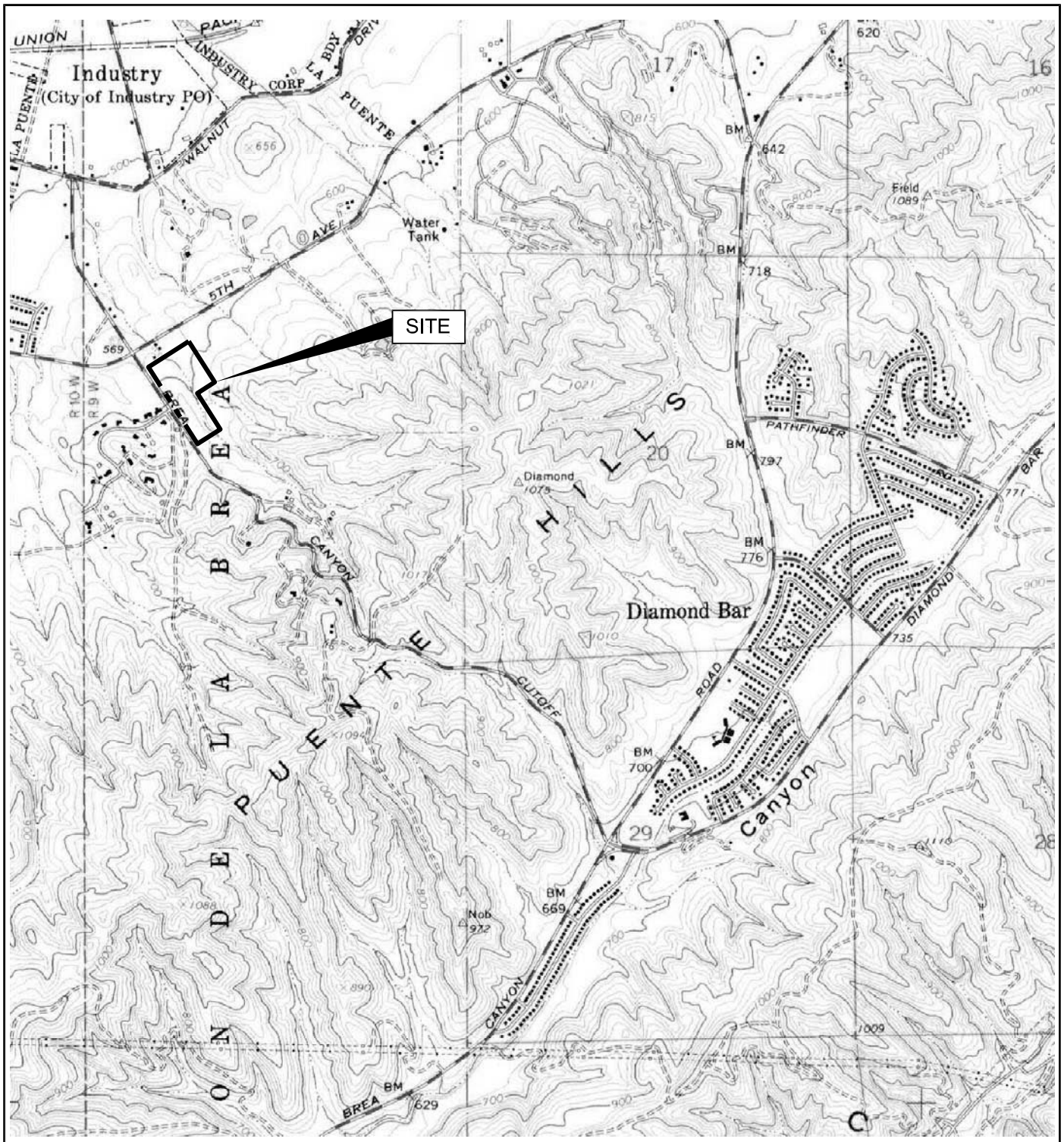
Historical Topo
1949

Southlands Church, 1920 Brea Canyon Cutoff Road
Rowland Heights, CA. - 002-11124-00

LFR

Figure 4d

CM: K:□Data□Graphics□11000□11124□11124 Historical Map.dwg [T1949] 8/28/07 1:28pm BARobita XREFS:



Site Boundary

0 2000 ft

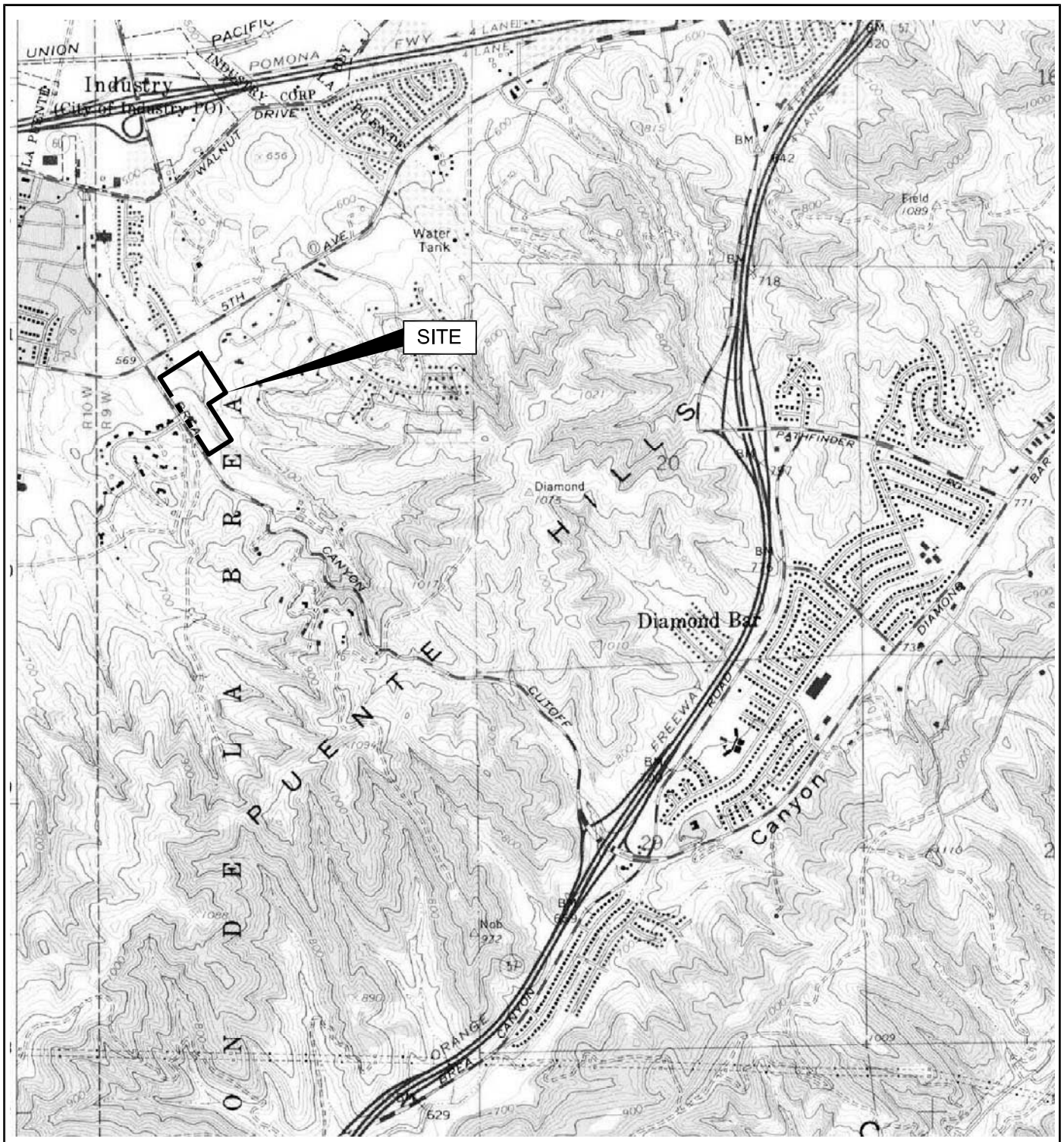
Historical Topo
1964

Southlands Church, 1920 Brea Canyon Cutoff Road
Rowland Heights, CA. - 002-11124-00

LFR

Figure 4e

CM: K:□Data□Graphics□11000□11124□11124 Historical Map.dwg [T1964] 8/28/07 1:29pm BARobita XREFS:



0 2000 ft

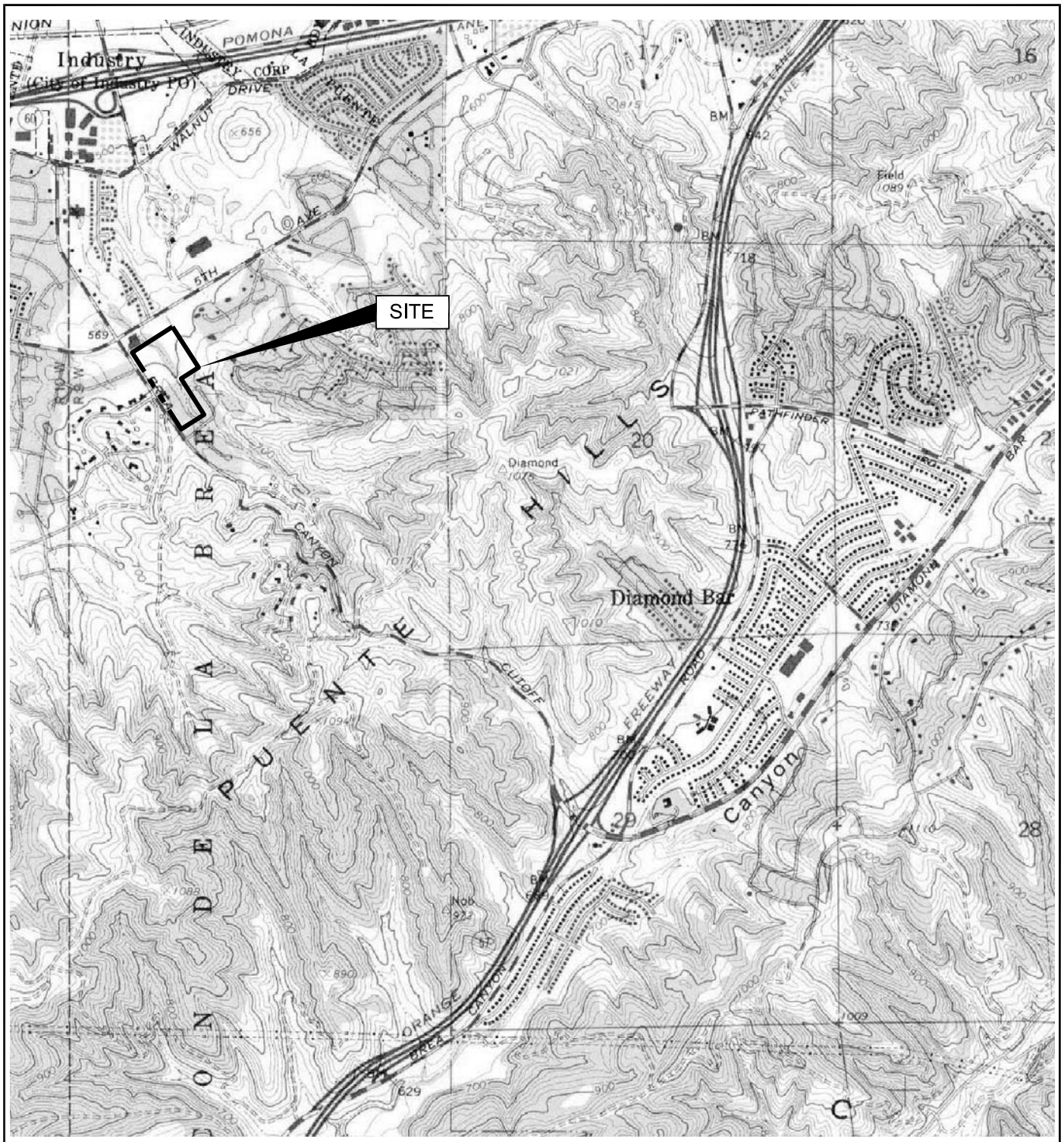
Historical Topo
1972

Southlands Church, 1920 Brea Canyon Cutoff Road
Rowland Heights, CA. - 002-11124-00

LFR

Figure 4f

CM: K:□Data□Graphics□11000□11124□11124 Historical Map.dwg [T1972] 8/28/07 1:29pm BARobita XREFS:



0 2000 ft

Historical Topo
1981

Southlands Church, 1920 Brea Canyon Cutoff Road
Rowland Heights, CA. - 002-11124-00

LFR

Figure 4g

CM: K:□Data□Graphics□11000□11124□11124 Historical Map.dwg [T1981] 8/28/07 1:29pm BARobita XREFS:

The EDR-City Directory
Abstract

Brea Canyon Cutoff
1920 Brea Canyone Cutoff Rd.
ROWLAND HEIGHTS, CA 91789

Inquiry Number: 2004336.6

Tuesday, August 14, 2007

EDR® Environmental Data Resources Inc

The Standard in Environmental Risk Information

440 Wheelers Farms Road
Milford, Connecticut 06461

Nationwide Customer Service

Telephone: 1-800-352-0050
Fax: 1-800-231-6802
Internet: www.edrnet.com

EDR City Directory Abstract

Environmental Data Resources, Inc.'s (EDR) City Directory Abstract is a screening report designed to assist environmental professionals in evaluating potential liability on a target property resulting from past activities. EDR's City Directory Abstract includes a search and abstract of available city directory data. For each address, the directory lists the name of the corresponding occupant at five year intervals.

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Please contact EDR at 1-800-352-0050
with any questions or comments.

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SUMMARY

- ***City Directories:***

Business directories including city, cross reference and telephone directories were reviewed, if available, at approximately five year intervals for the years spanning 1920 through 2006. (These years are not necessarily inclusive.) A summary of the information obtained is provided in the text of this report.

This report compiles information by geocoding the subject properties (that is, plotting the latitude and longitude for such subject properties and obtaining data concerning properties within 1/8th of a mile of the subject properties). There is no warranty or guarantee that geocoding will report or list all properties within the specified radius of the subject properties and any such warranty or guarantee is expressly disclaimed. Accordingly, some properties within the aforementioned radius and the information concerning those properties may not be referenced in this report.

Date EDR Searched Historical Sources: August 14, 2007

Target Property:
1920 Brea Canyone Cutoff Rd.
ROWLAND HEIGHTS, CA 91789

Year	***Uses***	***Source***
1920	Address Not Listed in Research Source	Los Angeles Directory Co.
1921	Address Not Listed in Research Source	Los Angeles Directory Co.
1923	Address Not Listed in Research Source	Los Angeles Directory Co.
1924	Address Not Listed in Research Source	Los Angeles Directory Co.
1925	Address Not Listed in Research Source	Los Angeles Directory Co.
1926	Address Not Listed in Research Source	Los Angeles Directory Co.
1927	Address Not Listed in Research Source	Kaasen Directory Company Publishers
1928	Address Not Listed in Research Source	Los Angeles Directory Co.
1929	Address Not Listed in Research Source	Los Angeles Directory Co.
1930	Address Not Listed in Research Source	Los Angeles Directory Co.
1931	Address Not Listed in Research Source	Los Angeles Directory Company Publishers
1932	Address Not Listed in Research Source	Los Angeles Directory Co.
1933	Address Not Listed in Research Source	Los Angeles Directory Co.
1934	Address Not Listed in Research Source	Los Angeles Directory Co.
1935	Address Not Listed in Research Source	Los Angeles Directory Co.
1936	Address Not Listed in Research Source	Los Angeles Directory Co.

Year	***Uses***	***Source***
1937	Address Not Listed in Research Source	Los Angeles Directory Co.
1938	Address Not Listed in Research Source	Los Angeles Directory Company Publishers
1939	Address Not Listed in Research Source	Los Angeles Directory Co.
1940	Address Not Listed in Research Source	Los Angeles Directory Co.
1942	Address Not Listed in Research Source	Los Angeles Directory Co.
1944	Address Not Listed in Research Source	R. L. Polk & Co.
1945	Address Not Listed in Research Source	R. L. Polk & Co.
1946	Address Not Listed in Research Source	Los Angeles Directory Co.
1947	Address Not Listed in Research Source	Pacific Directory Co.
1948	Address Not Listed in Research Source	Los Angeles Directory Co.
1949	Address Not Listed in Research Source	Los Angeles Directory Co.
1950	Address Not Listed in Research Source	Pacific Telephone
1951	Address Not Listed in Research Source	Los Angeles Directory Co Publishers
1952	Address Not Listed in Research Source	Los Angeles Directory Co.
1954	Address Not Listed in Research Source	R. L. Polk & Co.
1955	Address Not Listed in Research Source	R. L. Polk & Co.
1956	Address Not Listed in Research Source	Pacific Telephone
1957	Address Not Listed in Research Source	Pacific Telephone
1958	Address Not Listed in Research Source	Pacific Telephone
1960	Address Not Listed in Research Source	Pacific Telephone

Year	***Uses***	***Source***
1961	Address Not Listed in Research Source	Luskey Brothers & Co
1962	Address Not Listed in Research Source	Pacific Telephone
1963	Address Not Listed in Research Source	Pacific Telephone
1964	Address Not Listed in Research Source	Pacific Telephone
1965	Address Not Listed in Research Source	GTE
1966	Address Not Listed in Research Source	Pacific Telephone
1967	Address Not Listed in Research Source	R. L. Polk & Co.
1969	Address Not Listed in Research Source	Pacific Telephone
1970	Address Not Listed in Research Source	R. L. Polk & Co.
1971	Address Not Listed in Research Source	B&G Publications
1972	Address Not Listed in Research Source	R. L. Polk & Co.
1975	Address Not Listed in Research Source	Pacific Telephone
1976	Address Not Listed in Research Source	R.L. Polk & co Publishers
1980	Address Not Listed in Research Source	Pacific Telephone
1981	Address Not Listed in Research Source	Pacific Telephone
1985	Address Not Listed in Research Source	Pacific Bell
1986	Address Not Listed in Research Source	Pacific Bell
1990	Address Not Listed in Research Source	Pacific Bell
1991	Address Not Listed in Research Source	Pacific Bell
1995	Address Not Listed in Research Source	Pacific Bell Telephone

Year	Uses	Source
1996	Address Not Listed in Research Source	GTE
1999	Address Not Listed in Research Source	Haines Company
2000	Address Not Listed in Research Source	Pacific Bell Telephone
2001	Address Not Listed in Research Source	Haines & Company, Inc.
2003	Address Not Listed in Research Source	Haines & Company
2004	Address Not Listed in Research Source	Haines Company
2006	Address Not Listed in Research Source	Haines Company

Adjoining Properties

SURROUNDING

Multiple Addresses
ROWLAND HEIGHTS, CA 91789

Year	Uses	Source
1920	Address Not Listed in Research Source	Los Angeles Directory Co.
1921	Address Not Listed in Research Source	Los Angeles Directory Co.
1923	Address Not Listed in Research Source	Los Angeles Directory Co.
1924	Address Not Listed in Research Source	Los Angeles Directory Co.
1925	Address Not Listed in Research Source	Los Angeles Directory Co.
1926	Address Not Listed in Research Source	Los Angeles Directory Co.
1927	Address Not Listed in Research Source	Kaasen Directory Company Publishers
1928	Address Not Listed in Research Source	Los Angeles Directory Co.
1929	Address Not Listed in Research Source	Los Angeles Directory Co.
1930	Address Not Listed in Research Source	Los Angeles Directory Co.

Year	Uses	Source
1931	Address Not Listed in Research Source	Los Angeles Directory Company Publishers
1932	Address Not Listed in Research Source	Los Angeles Directory Co.
1933	Address Not Listed in Research Source	Los Angeles Directory Co.
1934	Address Not Listed in Research Source	Los Angeles Directory Co.
1935	Address Not Listed in Research Source	Los Angeles Directory Co.
1936	Address Not Listed in Research Source	Los Angeles Directory Co.
1937	Address Not Listed in Research Source	Los Angeles Directory Co.
1938	Address Not Listed in Research Source	Los Angeles Directory Company Publishers
1939	Address Not Listed in Research Source	Los Angeles Directory Co.
1940	Address Not Listed in Research Source	Los Angeles Directory Co.
1942	Address Not Listed in Research Source	Los Angeles Directory Co.
1944	Address Not Listed in Research Source	R. L. Polk & Co.
1945	Address Not Listed in Research Source	R. L. Polk & Co.
1946	Address Not Listed in Research Source	Los Angeles Directory Co.
1947	Address Not Listed in Research Source	Pacific Directory Co.
1948	Address Not Listed in Research Source	Los Angeles Directory Co.
1949	Address Not Listed in Research Source	Los Angeles Directory Co.
1950	Address Not Listed in Research Source	Pacific Telephone
1951	Address Not Listed in Research Source	Los Angeles Directory Co Publishers
1952	Address Not Listed in Research Source	Los Angeles Directory Co.

Year	***Uses***	***Source***
1954	Address Not Listed in Research Source	R. L. Polk & Co.
1955	Address Not Listed in Research Source	R. L. Polk & Co.
1956	****BREA CANYON CUT OFF RD**** ENDRES FRANK H (1843)	Pacific Telephone
1957	Address Not Listed in Research Source	Pacific Telephone
1958	Address Not Listed in Research Source	Pacific Telephone
1960	****BREA CANYON CUT OFF RD**** LARSON JACK R (1843)	Pacific Telephone
1961	Address Not Listed in Research Source	Luskey Brothers & Co
1962	Address Not Listed in Research Source	Pacific Telephone
1963	Address Not Listed in Research Source	Pacific Telephone
1964	Address Not Listed in Research Source	Pacific Telephone
1965	Address Not Listed in Research Source	GTE
1966	Address Not Listed in Research Source	Pacific Telephone
1967	Address Not Listed in Research Source	R. L. Polk & Co.
1969	Address Not Listed in Research Source	Pacific Telephone
1970	Address Not Listed in Research Source	R. L. Polk & Co.
1971	Address Not Listed in Research Source	B&G Publications
1972	Address Not Listed in Research Source	R. L. Polk & Co.
1975	****BREA CANYON CUT OFF RD**** LA VIOLA JAS (1843) WEAVER HARVEY H (2100)	Pacific Telephone
1976	Address Not Listed in Research Source	R.L. Polk & co Publishers

Year	***Uses***	***Source***
1980	****DACIAN DR****	Pacific Telephone
	NICHOLS J M WALNUT (2071)	
	****BREA CANYON CUT OFF RD****	Pacific Telephone
	LA VIOLA JAS (1843)	
1981	Address Not Listed in Research Source	Pacific Telephone
1985	****BREA CANYON CUT OFF RD****	Pacific Bell
	LA VIOLA JAS (1843)	
1986	Address Not Listed in Research Source	Pacific Bell
1990	Address Not Listed in Research Source	Pacific Bell
1991	Address Not Listed in Research Source	Pacific Bell
1995	Address Not Listed in Research Source	Pacific Bell Telephone
1996	Address Not Listed in Research Source	GTE
1999	Address Not Listed in Research Source	Haines Company
2000	Address Not Listed in Research Source	Pacific Bell Telephone
2001	Address Not Listed in Research Source	Haines & Company, Inc.
2003	****BICKFORD DR E****	Haines & Company
	ALCALDE MARINA (20303)	
	YANG STEVE (20310)	
	YANG STEVE (20310)	
	YANCESOLEDEAD (20325)	
	LEE SANDY (20335)	
	LEEJOHN (20335)	
	CHEN WALLACE (20345)	
	D J FENCE&MASONRY (20350)	
	RAMOS KEN 00 A (20350)	
	****DACIAN ST****	Haines & Company
	HOU HENRY (2006)	
	OU TSAI LING P (2006)	
	YANG BIN (2008)	
	UTTERBACKCHERYL (2010)	
	ARRIETA FRANK (2016)	

Year	Uses	Source
2003 (continued)		
	OCRAINE JOHN (2018)	
	SPILLMAN DENNIS (2019)	
	XXXX (2020)	
	OSTEELEJEAN (2021)	
	BAYHA DONALD L (2022)	
	WANG LEI (2023)	
	OROMUNHO (2025)	
	HAN FREDERICK (2027)	
	LEAF ROBIN (2028)	
	PARKJUNE (2028)	
	MONDALAMAR IO (2030)	
	FISHER MABEL (2031)	
	XXXX (2032)	
	DANG LINH (2033)	
	LU PI Y (2033)	
	TSAI MELODY (2033)	
	ADAMS CHRNS (2034)	
	TORREYSON FULTON 4TH (2034)	
	TORREYSONTRACEY (2034)	
	YOUNG JA (2035)	
	PRICE GAYLE (2036)	
	COLLINS CARIL (2037)	
	ROMAN JUANNA (2044)	
	ALLEY ERIC (2045)	
	KIM JASON S (2046)	
	BECKMAN L (2047)	
	OBUCKLE ROBER (2047)	
	ODELL MAUREEN (2048)	
	GRODT VIRGINIA (2050)	
	WEBB ELABETALH (2054)	
	LUCERO ISABEL (2055)	
	GQINGWEN (2057)	
	WANG YVONNE (2057)	
	BRYANT ANTONIO (2058)	
	LEE M (2058)	
	SWARTZ ALLEN (2059)	
	TI NG JULIA (2060)	
	WEI CHIHR (2060)	
	RUIZ AURORA (2061)	
	CHAO JOANNE (2063)	
	ROUSSELJUAN A (2067)	
	OH MI H (2068)	
	SHIN KUM (2069)	

Year	***Uses***	***Source***
2003 (continued)		
	WANG FONG (2070)	
	LEESUE (2071)	
	0 MURESANTRACY (2072)	
	CHEN NAQIANG (2073)	
	OLIN PEL (2075)	
2004	Address Not Listed in Research Source	Haines Company
2006	Address Not Listed in Research Source	Haines Company

Certified Sanborn® Map Report

Sanborn® Library search results
Certification # E635-4E0F-8921

Brea Canyon Cutoff
1920 Brea Canyone Cutoff Rd.
ROWLAND HEIGHTS, CA 91789

Inquiry Number 2004336.3s

August 14, 2007

EDR® Environmental Data Resources Inc

The Standard in Environmental Risk Information

440 Wheelers Farms Rd
Milford, Connecticut 06461

Nationwide Customer Service

Telephone: 1-800-352-0050
Fax: 1-800-231-6802
Internet: www.edrnet.com

Certified Sanborn® Map Report

8/14/07

Site Name:	**Client Name:**
Brea Canyon Cutoff	LFR Inc
1920 Brea Canyone Cutoff Rd.	3150 Bristol Street
ROWLAND HEIGHTS, CA	Costa Mesa, CA 92626
EDR Inquiry # 2004336.3s	Contact: Ryan Terwilliger

EDR® Environmental Data Resources Inc

The complete Sanborn Library collection has been searched by EDR, and fire insurance maps covering the target property location provided by LFR Inc were identified for the years listed below. The certified Sanborn Library search results in this report can be authenticated by visiting www.edrnet.com/sanborn and entering the certification number. Only Environmental Data Resources Inc. (EDR) is authorized to grant rights for commercial reproduction of maps by Sanborn Library LLC, the copyright holder for the collection.

Certified Sanborn Results:

Site Name:	Brea Canyon Cutoff
Address:	1920 Brea Canyone Cutoff Rd.
City, State, Zip:	ROWLAND HEIGHTS, CA 91789
Cross Street:	
P.O. #	JRT
Project:	Brea Canyon
Certification #	E635-4E0F-8921

Sanborn® Library search results
Certification # E635-4E0F-8921

UNMAPPED PROPERTY

This report certifies that the complete holdings of the Sanborn Library, LLC collection have been searched based on client supplied target property information, and fire insurance maps covering the target property were not found.

The Sanborn Library includes more than 1.2 million Sanborn fire insurance maps, which track historical property usage in approximately 12,000 American cities and towns. Collections searched:

- ✔ Library of Congress
- ✔ University Publications of America
- ✔ EDR Private Collection

Total Maps: 0

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APPENDIX C

Regulatory Records Documentation

The EDR Radius Map
with GeoCheck®

Brea Canyon Cutoff
1920 Brea Canyone Cutoff Rd.
ROWLAND HEIGHTS, CA 91789

Inquiry Number: 02004336.2r

August 14, 2007

EDR® Environmental Data Resources Inc

The Standard in Environmental Risk Information

440 Wheelers Farms Road
Milford, Connecticut 06461

Nationwide Customer Service

Telephone: 1-800-352-0050
Fax: 1-800-231-6802
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GEOCHECK ADDENDUM

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EXECUTIVE SUMMARY

A search of available environmental records was conducted by Environmental Data Resources, Inc (EDR). The report was designed to assist parties seeking to meet the search requirements of EPA's Standards and Practices for All Appropriate Inquiries (40 CFR Part 312), the ASTM Standard Practice for Environmental Site Assessments (E 1527-05) or custom requirements developed for the evaluation of environmental risk associated with a parcel of real estate.

TARGET PROPERTY INFORMATION

ADDRESS

1920 BREA CANYONE CUTOFF RD.
ROWLAND HEIGHTS, CA 91789

COORDINATES

Latitude (North):	33.983800 - 33˚ 59' 1.7''
Longitude (West):	117.867400 - 117˚ 52' 2.6''
Universal Tranverse Mercator:	Zone 11
UTM X (Meters):	419879.3
UTM Y (Meters):	3760504.2
Elevation:	629 ft. above sea level

USGS TOPOGRAPHIC MAP ASSOCIATED WITH TARGET PROPERTY

Target Property Map:	33117-H7 YORBA LINDA, CA
Most Recent Revision:	1981
West Map:	33117-H8 LA HABRA, CA
Most Recent Revision:	1981

TARGET PROPERTY SEARCH RESULTS

The target property was not listed in any of the databases searched by EDR.

DATABASES WITH NO MAPPED SITES

No mapped sites were found in EDR's search of available ("reasonably ascertainable ") government records either on the target property or within the search radius around the target property for the following databases:

FEDERAL RECORDS

NPL..... National Priority List
Proposed NPL..... Proposed National Priority List Sites
Delisted NPL..... National Priority List Deletions
NPL LIENS..... Federal Superfund Liens
CERCLIS..... Comprehensive Environmental Response, Compensation, and Liability Information System
CERC-NFRAP..... CERCLIS No Further Remedial Action Planned
CORRACTS..... Corrective Action Report

EXECUTIVE SUMMARY

RCRA-TSDF Resource Conservation and Recovery Act Information
RCRA-LQG Resource Conservation and Recovery Act Information
ERNS Emergency Response Notification System
HMIRS Hazardous Materials Information Reporting System
US ENG CONTROLS Engineering Controls Sites List
US INST CONTROL Sites with Institutional Controls
DOD Department of Defense Sites
FUDS Formerly Used Defense Sites
US BROWNFIELDS A Listing of Brownfields Sites
CONSENT Superfund (CERCLA) Consent Decrees
ROD Records Of Decision
UMTRA Uranium Mill Tailings Sites
ODI Open Dump Inventory
TRIS Toxic Chemical Release Inventory System
TSCA Toxic Substances Control Act
FTTS FIFRA/ TSCA Tracking System - FIFRA (Federal Insecticide, Fungicide, & Rodenticide Act)/TSCA (Toxic Substances Control Act)
SSTS Section 7 Tracking Systems
LIENS 2 CERCLA Lien Information
RADINFO Radiation Information Database
US CDL Clandestine Drug Labs
HIST FTTS FIFRA/TSCA Tracking System Administrative Case Listing
ICIS Integrated Compliance Information System
LUCIS Land Use Control Information System
DOT OPS Incident and Accident Data
PADS PCB Activity Database System
MLTS Material Licensing Tracking System
MINES Mines Master Index File
FINDS Facility Index System/Facility Registry System
RAATS RCRA Administrative Action Tracking System

STATE AND LOCAL RECORDS

HIST Cal-Sites Historical Calsites Database
CA BOND EXP. PLAN Bond Expenditure Plan
SCH School Property Evaluation Program
Toxic Pits Toxic Pits Cleanup Act Sites
WMUDS/SWAT Waste Management Unit Database
CA WDS Waste Discharge System
CA FID UST Facility Inventory Database
SLIC Statewide SLIC Cases
AOCONCERN San Gabriel Valley Areas of Concern
UST Active UST Facilities
HIST UST Hazardous Substance Storage Container Database
AST Aboveground Petroleum Storage Tank Facilities
LIENS Environmental Liens Listing
SWEEPS UST SWEEPS UST Listing
CHMIRS California Hazardous Material Incident Report System
Notify 65 Proposition 65 Records
LA Co. Site Mitigation Site Mitigation List
DEED Deed Restriction Listing
VCP Voluntary Cleanup Program Properties
LOS ANGELES CO. HMS HMS: Street Number List
WIP Well Investigation Program Case List
CDL Clandestine Drug Labs

EXECUTIVE SUMMARY

RESPONSE State Response Sites
HAZNET Facility and Manifest Data
EMI Emissions Inventory Data
HAULERS Registered Waste Tire Haulers Listing

TRIBAL RECORDS

INDIAN RESERV Indian Reservations
INDIAN LUST Leaking Underground Storage Tanks on Indian Land
INDIAN UST Underground Storage Tanks on Indian Land

EDR PROPRIETARY RECORDS

Manufactured Gas Plants EDR Proprietary Manufactured Gas Plants
EDR Historical Auto Stations EDR Proprietary Historic Gas Stations
EDR Historical Cleaners EDR Proprietary Historic Dry Cleaners

SURROUNDING SITES: SEARCH RESULTS

Surrounding sites were identified in the following databases.

Elevations have been determined from the USGS Digital Elevation Model and should be evaluated on a relative (not an absolute) basis. Relative elevation information between sites of close proximity should be field verified. Sites with an elevation equal to or higher than the target property have been differentiated below from sites with an elevation lower than the target property.
Page numbers and map identification numbers refer to the EDR Radius Map report where detailed data on individual sites can be reviewed.

Sites listed in ***bold italics*** are in multiple databases.

Unmappable (orphan) sites are not considered in the foregoing analysis.

FEDERAL RECORDS

RCRAInfo: RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. RCRAInfo replaces the data recording and reporting abilities of the Resource Conservation and Recovery Information System(RCRIS). The database includes selective information on sites which generate, transport, store , treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Conditionally exempt small quantity generators (CESQGs) generate less than 100 kg of hazardous waste, or less than 1 kg of acutely hazardous waste per month. Small quantity generators (SQGs) generate between 100 kg and 1,000 kg of hazardous waste per month Large quantity generators generate over 1,000 kilograms (kg) of hazardous waste, or over 1 kg of acutely hazardous waste per month. Transporters are individuals or entities that move hazardous waste from the generator offsite to a facility that can recycle, treat, store, or dispose of the waste. TSDFs treat, store, or dispose of the waste.

A review of the RCRA-SQG list, as provided by EDR, and dated 06/13/2006 has revealed that there are 2 RCRA-SQG sites within approximately 0.25 miles of the target property.

Lower Elevation	Address	Dist / Dir	Map ID	Page
PROFESSIONAL CLEANERS	***19800 COLIMA RD***	***0 - 1/8 NNW***	***A3***	***10***
LA ROYAL VISTA GOLF COURSE	***20055 E COLLIMA RD***	***1/8 - 1/4 NE***	***6***	***17***

EXECUTIVE SUMMARY

STATE AND LOCAL RECORDS

SWF/LF: The Solid Waste Facilities/Landfill Sites records typically contain an inventory of solid waste disposal facilities or landfills in a particular state. The data come from the Integrated Waste Management Board's Solid Waste Information System (SWIS) database.

A review of the SWF/LF list, as provided by EDR, and dated 06/11/2007 has revealed that there is 1 SWF/LF site within approximately 0.5 miles of the target property.

Lower Elevation	Address	Dist / Dir	Map ID	Page
ROAD DIVISION 417	19865 WALNUT DRIVE	1/4 - 1/2 NNW	7	19

CORTESE: This database identifies public drinking water wells with detectable levels of contamination, hazardous substance sites selected for remedial action, sites with known toxic material identified through the abandoned site assessment program, sites with USTs having a reportable release and all solid waste disposal facilities from which there is known migration. The source is the California Environmental Protection Agency/Office of Emergency Information.

A review of the Cortese list, as provided by EDR, and dated 04/01/2001 has revealed that there are 2 Cortese sites within approximately 0.5 miles of the target property.

Lower Elevation	Address	Dist / Dir	Map ID	Page
LA ROYAL VISTA GOLF COURSE	***20055 COLIMA RD E***	***1/8 - 1/4 NE***	***5***	***14***
ROAD MAINTENANCE #117	***19865 WALNUT DR E***	***1/4 - 1/2 N***	***8***	***20***

SWRCY: A listing of recycling facilities in California.

A review of the SWRCY list, as provided by EDR, and dated 07/09/2007 has revealed that there is 1 SWRCY site within approximately 0.5 miles of the target property.

Lower Elevation	Address	Dist / Dir	Map ID	Page
TOMRA PACIFIC INC/ALBERTSONS #	19725 COLIMA RD	1/8 - 1/4 W	4	14

LUST: The Leaking Underground Storage Tank Incident Reports contain an inventory of reported leaking underground storage tank incidents. The data come from the State Water Resources Control Board Leaking Underground Storage Tank Information System.

A review of the LUST list, as provided by EDR, and dated 07/10/2007 has revealed that there are 2 LUST sites within approximately 0.5 miles of the target property.

Lower Elevation	Address	Dist / Dir	Map ID	Page
LA ROYAL VISTA GOLF COURSE	***20055 COLIMA RD E***	***1/8 - 1/4 NE***	***5***	***14***
Facility Status: Leak being confirmed				
ROAD MAINTENANCE #117	***19865 WALNUT DR E***	***1/4 - 1/2 N***	***8***	***20***
Facility Status: Suspension of Work Letter from Cleanup Fund				

EXECUTIVE SUMMARY

DRYCLEANERS: A list of drycleaner related facilities that have EPA ID numbers. These are facilities with certain SIC codes: power laundries, family and commercial; garment pressing and cleaners' agents; linen supply; coin-operated laundries and cleaning; drycleaning plants except rugs; carpet and upholster cleaning; industrial launderers; laundry and garment services.

A review of the CLEANERS list, as provided by EDR, and dated 07/31/2007 has revealed that there are 3 CLEANERS sites within approximately 0.25 miles of the target property.

Lower Elevation	Address	Dist / Dir	Map ID	Page
CANYON POINT CLEANERS	***19735 E COLIMA RD STE 1***	***0 - 1/8 NNW***	***1***	***6***
PROFESSIONAL CLEANERS	19800 E COLIMA RD	0 - 1/8 NNW	A2	9
PROFESSIONAL CLEANERS	***19800 COLIMA RD***	***0 - 1/8 NNW***	***A3***	***10***

ENVIROSTOR: The Department of Toxic Substances Control's (DTSC's) Site Mitigation and Brownfields Reuse Program's (SMBRP's) EnviroStor database identifes sites that have known contamination or sites for which there may be reasons to investigate further. The database includes the following site types: Federal Superfund sites (National Priorities List (NPL)); State Response, including Military Facilities and State Superfund; Voluntary Cleanup; and School sites. EnviroStor provides similar information to the information that was available in CalSites, and provides additional site information, including, but not limited to, identification of formerly-contaminated properties that have been released for reuse, properties where environmental deed restrictions have been recorded to prevent inappropriate land uses, and risk characterization information that is used to assess potential impacts to public health and the environment at contaminated sites.

A review of the ENVIROSTOR list, as provided by EDR, and dated 05/29/2007 has revealed that there is 1 ENVIROSTOR site within approximately 1 mile of the target property.

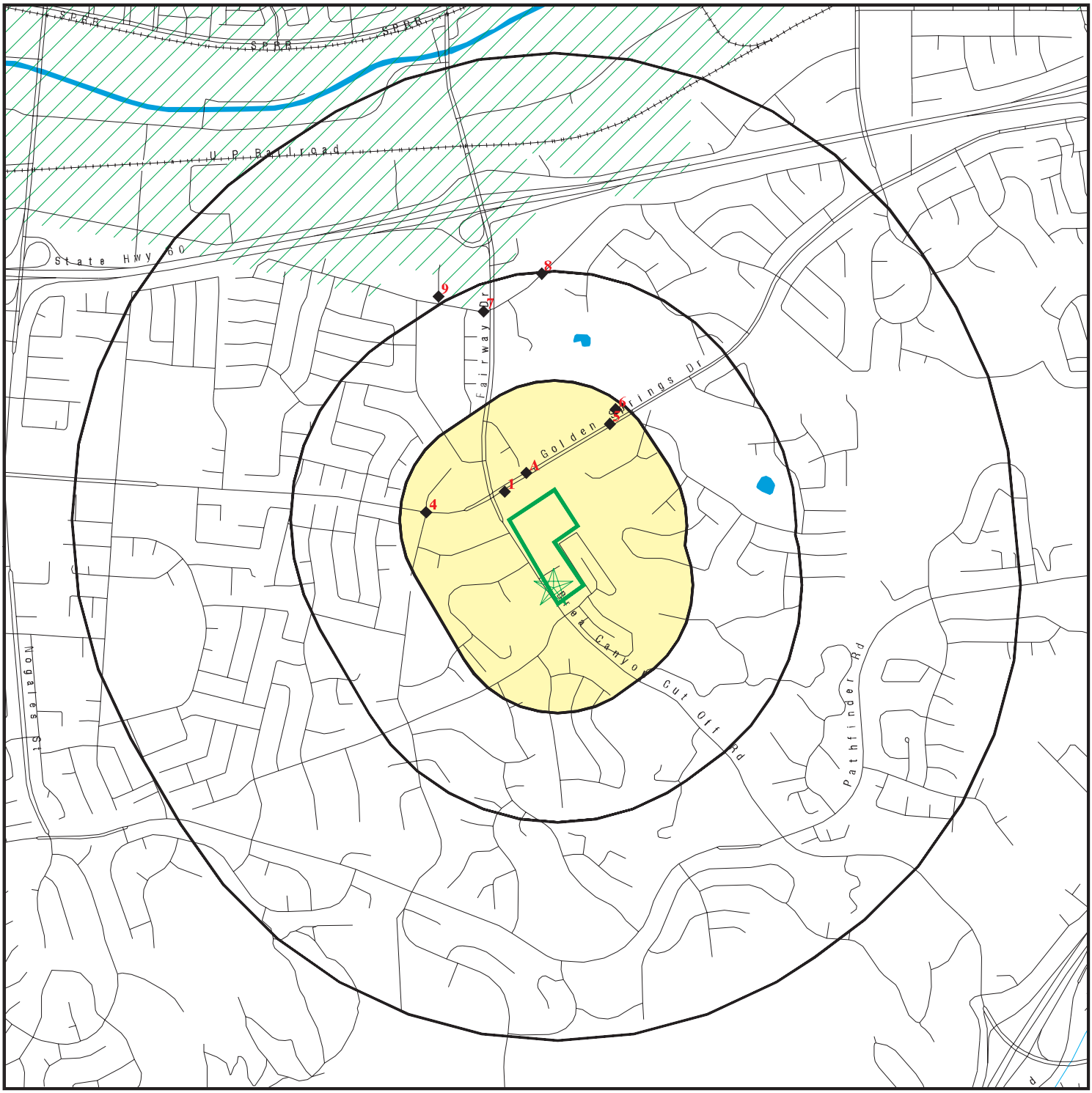
Lower Elevation	Address	Dist / Dir	Map ID	Page
CALIFORNIA MACHINE SPECIALTIES	***1180 CENTRE DRIVE***	***1/2 - 1 NNW***	***9***	***23***
Facility Status: No Further Action				

EXECUTIVE SUMMARY

Due to poor or inadequate address information, the following sites were not mapped:

Site Name	Database(s)
ARCO #3004	SWEEPS UST
CANYON POINT CLEANERS AND LAUNDRY	CLEANERS
CANYON POINT CLEANERS LAUNDRY	CLEANERS
LEWIS CLEANERS	CLEANERS
1X MCKESSON DRUG CO	HAZNET, LUST, CHMIRS
CHEVRON NO 91175	RCRA-LQG

OVERVIEW MAP - 02004336.2r



Target Property

Sites at elevations higher than or equal to the target property

Sites at elevations lower than the target property

Manufactured Gas Plants

National Priority List Sites

Dept. Defense Sites

0 1/4 1/2 1 Miles

Indian Reservations BIA

Oil & Gas pipelines

100-year flood zone

500-year flood zone

Areas of Concern

This report includes Interactive Map Layers to display and/or hide map information. The legend includes only those icons for the default map view.

SITE NAME: Brea Canyon Cutoff	CLIENT: LFR Inc
ADDRESS: 1920 Brea Canyone Cutoff Rd. ROWLAND HEIGHTS CA 91789	CONTACT: Ryan Terwilliger
LAT/LONG: 33.9838 / 117.8674	INQUIRY #: 02004336.2r
	DATE: August 14, 2007 9:35 am

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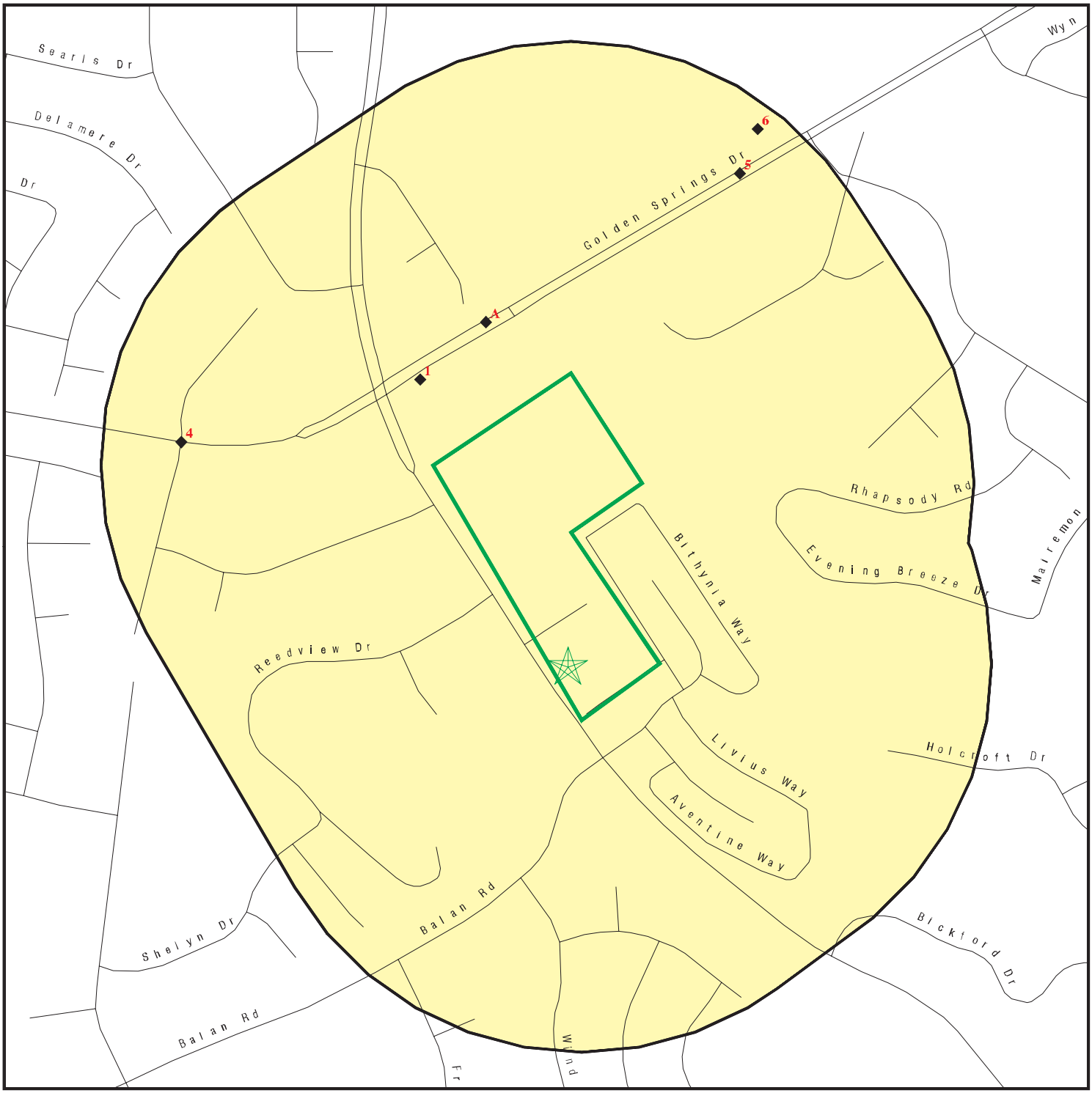
DETAIL MAP - 02004336.2r



Target Property

Sites at elevations higher than or equal to the target property

Sites at elevations lower than the target property

Manufactured Gas Plants

Sensitive Receptors

National Priority List Sites

Dept. Defense Sites

0 1/16 1/8 1/4 Miles

Indian Reservations BIA

Oil & Gas pipelines

100-year flood zone

500-year flood zone

Areas of Concern

This report includes Interactive Map Layers to display and/or hide map information. The legend includes only those icons for the default map view.

SITE NAME: Brea Canyon Cutoff	CLIENT: LFR Inc
ADDRESS: 1920 Brea Canyone Cutoff Rd. ROWLAND HEIGHTS CA 91789	CONTACT: Ryan Terwilliger
LAT/LONG: 33.9838 / 117.8674	INQUIRY #: 02004336.2r
	DATE: August 14, 2007 9:35 am

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MAP FINDINGS SUMMARY

Database	Target Property	Search Distance (Miles)	< 1/8	1/8 - 1/4	1/4 - 1/2	1/2 - 1	> 1	Total Plotted
FEDERAL RECORDS								
NPL		1.000	0	0	0	0	NR	0
Proposed NPL		1.000	0	0	0	0	NR	0
Delisted NPL		1.000	0	0	0	0	NR	0
NPL LIENS		TP	NR	NR	NR	NR	NR	0
CERCLIS		0.500	0	0	0	NR	NR	0
CERC-NFRAP		0.500	0	0	0	NR	NR	0
CORRACTS		1.000	0	0	0	0	NR	0
RCRA TSD		0.500	0	0	0	NR	NR	0
RCRA Lg. Quan. Gen.		0.250	0	0	NR	NR	NR	0
RCRA Sm. Quan. Gen.		0.250	1	1	NR	NR	NR	2
ERNS		TP	NR	NR	NR	NR	NR	0
HMIRS		TP	NR	NR	NR	NR	NR	0
US ENG CONTROLS		0.500	0	0	0	NR	NR	0
US INST CONTROL		0.500	0	0	0	NR	NR	0
DOD		1.000	0	0	0	0	NR	0
FUDS		1.000	0	0	0	0	NR	0
US BROWNFIELDS		0.500	0	0	0	NR	NR	0
CONSENT		1.000	0	0	0	0	NR	0
ROD		1.000	0	0	0	0	NR	0
UMTRA		0.500	0	0	0	NR	NR	0
ODI		0.500	0	0	0	NR	NR	0
TRIS		TP	NR	NR	NR	NR	NR	0
TSCA		TP	NR	NR	NR	NR	NR	0
FTTS		TP	NR	NR	NR	NR	NR	0
SSTS		TP	NR	NR	NR	NR	NR	0
LIENS 2		TP	NR	NR	NR	NR	NR	0
RADINFO		TP	NR	NR	NR	NR	NR	0
CDL		TP	NR	NR	NR	NR	NR	0
HIST FTTS		TP	NR	NR	NR	NR	NR	0
ICIS		TP	NR	NR	NR	NR	NR	0
LUCIS		0.500	0	0	0	NR	NR	0
DOT OPS		TP	NR	NR	NR	NR	NR	0
PADS		TP	NR	NR	NR	NR	NR	0
MLTS		TP	NR	NR	NR	NR	NR	0
MINES		0.250	0	0	NR	NR	NR	0
FINDS		TP	NR	NR	NR	NR	NR	0
RAATS		TP	NR	NR	NR	NR	NR	0
STATE AND LOCAL RECORDS								
Hist Cal-Sites		1.000	0	0	0	0	NR	0
CA Bond Exp. Plan		1.000	0	0	0	0	NR	0
SCH		0.250	0	0	NR	NR	NR	0
Toxic Pits		1.000	0	0	0	0	NR	0
State Landfill		0.500	0	0	1	NR	NR	1
WMUDS/SWAT		0.500	0	0	0	NR	NR	0
CA WDS		TP	NR	NR	NR	NR	NR	0
Cortese		0.500	0	1	1	NR	NR	2

MAP FINDINGS SUMMARY

Database	Target Property	Search Distance (Miles)	< 1/8	1/8 - 1/4	1/4 - 1/2	1/2 - 1	> 1	Total Plotted
SWRCY		0.500	0	1	0	NR	NR	1
LUST		0.500	0	1	1	NR	NR	2
CA FID UST		0.250	0	0	NR	NR	NR	0
SLIC		0.500	0	0	0	NR	NR	0
AOCONCERN		1.000	0	0	0	0	NR	0
UST		0.250	0	0	NR	NR	NR	0
HIST UST		0.250	0	0	NR	NR	NR	0
AST		0.250	0	0	NR	NR	NR	0
LIENS		TP	NR	NR	NR	NR	NR	0
SWEEPS UST		0.250	0	0	NR	NR	NR	0
CHMIRS		TP	NR	NR	NR	NR	NR	0
Notify 65		1.000	0	0	0	0	NR	0
LA Co. Site Mitigation		TP	NR	NR	NR	NR	NR	0
DEED		0.500	0	0	0	NR	NR	0
VCP		0.500	0	0	0	NR	NR	0
DRYCLEANERS		0.250	3	0	NR	NR	NR	3
Los Angeles Co. HMS		TP	NR	NR	NR	NR	NR	0
WIP		0.250	0	0	NR	NR	NR	0
CDL		TP	NR	NR	NR	NR	NR	0
RESPONSE		1.000	0	0	0	0	NR	0
HAZNET		TP	NR	NR	NR	NR	NR	0
EMI		TP	NR	NR	NR	NR	NR	0
ENVIROSTOR		1.000	0	0	0	1	NR	1
HAULERS		TP	NR	NR	NR	NR	NR	0
TRIBAL RECORDS								
INDIAN RESERV		1.000	0	0	0	0	NR	0
INDIAN LUST		0.500	0	0	0	NR	NR	0
INDIAN UST		0.250	0	0	NR	NR	NR	0
EDR PROPRIETARY RECORDS								
Manufactured Gas Plants		1.000	0	0	0	0	NR	0
EDR Historical Auto Stations		0.250	0	0	NR	NR	NR	0
EDR Historical Cleaners		0.250	0	0	NR	NR	NR	0

NOTES:

TP = Target Property

NR = Not Requested at this Search Distance

Sites may be listed in more than one database

Map ID Direction Distance Distance (ft.) Elevation	Site	Database(s)	EDR ID Number EPA ID Number
1 **NNW** **< 1/8** **312 ft.**	**CANYON POINT CLEANERS** **19735 E COLIMA RD STE 1** **ROWLAND HEIGHTS, CA 91748**	**HAZNET** **CLEANERS**	**S103954770** **N/A**

Relative:
Lower

Actual:
576 ft.

HAZNET:

Gepaid:	CAL000041127
Contact:	SANG Y LEE
Telephone:	7144473685
Facility Addr2:	Not reported
Mailing Name:	Not reported
Mailing Address:	19735 COLIMA RD STE 1
Mailing City,St,Zip:	ROWLAND HEIGHTS, CA 917483227
Gen County:	Los Angeles
TSD EPA ID:	CAD981397417
TSD County:	Los Angeles
Waste Category:	Halogenated solvents (chloroform, methyl chloride, perchloroethylene, etc.)
Disposal Method:	Recycler
Tons:	.1668
Facility County:	Los Angeles

Gepaid:	CAL000041127
Contact:	SANG Y LEE
Telephone:	9095950627
Facility Addr2:	Not reported
Mailing Name:	Not reported
Mailing Address:	19735 COLIMA RD STE 1
Mailing City,St,Zip:	ROWLAND HEIGHTS, CA 917483227
Gen County:	Los Angeles
TSD EPA ID:	NVR000076158
TSD County:	99
Waste Category:	Not reported
Disposal Method:	Not reported
Tons:	Not reported
Facility County:	Not reported

Gepaid:	CAL000041127
Contact:	SANG Y LEE
Telephone:	7144473685
Facility Addr2:	Not reported
Mailing Name:	Not reported
Mailing Address:	19735 COLIMA RD STE 1
Mailing City,St,Zip:	ROWLAND HEIGHTS, CA 917483227
Gen County:	Los Angeles
TSD EPA ID:	CAD981397417
TSD County:	Los Angeles
Waste Category:	Halogenated solvents (chloroform, methyl chloride, perchloroethylene, etc.)
Disposal Method:	Recycler
Tons:	.3794
Facility County:	Los Angeles

Gepaid:	CAL000041127
Contact:	SANG Y LEE
Telephone:	7144473685
Facility Addr2:	Not reported
Mailing Name:	Not reported
Mailing Address:	19735 COLIMA RD STE 1

CANYON POINT CLEANERS (Continued) **S103954770**

Mailing City,St,Zip: ROWLAND HEIGHTS, CA 917483227
Gen County: Los Angeles
TSD EPA ID: CAD981397417
TSD County: Los Angeles
Waste Category: Not reported
Disposal Method: Recycler
Tons: .0000
Facility County: Los Angeles

Gepaid: CAL000041127
Contact: SANG Y LEE
Telephone: 9095950627
Facility Addr2: Not reported
Mailing Name: Not reported
Mailing Address: 19735 COLIMA RD STE 1
Mailing City,St,Zip: ROWLAND HEIGHTS, CA 917483227
Gen County: Los Angeles
TSD EPA ID: NVR000076158
TSD County: 99
Waste Category: Not reported
Disposal Method: Not reported
Tons: Not reported
Facility County: Not reported

Click this hyperlink while viewing on your computer to access
5 additional CA_HAZNET: record(s) in the EDR Site Report.

CLEANERS:
EPA Id: CAL000041127
NAICS Code: 81232
NAICS Description: Drycleaning and Laundry Services (except Coin-Operated)
SIC Code: 7219
Create Date: 2/15/1991
Facility Active: No
Inactive Date: 6/30/2004
Facility Addr2: Not reported
Mailing Name: Not reported
Mailing Address: 19735 COLIMA RD STE 1
Mailing Address 2: Not reported
Mailing State: CA
Mailing Zip: 917483227
Region Code: 3
Owner Name: SANG Y LEE
Owner Address: 2517 HERLINDA LN
Owner Address 2: Not reported
Owner Telephone: Not reported
Contact Name: SANG Y LEE
Contact Address: 2517 HERLINDA LN
Contact Address 2: Not reported
Contact Telephone: 9095950627
SIC Description: Laundry and Garment Services NEC (except diaper service and clothing alteration and repair)Drycleaning Plants Except Rug CleaningGarment Pressing and Agents for Laundries and DrycleanersPower Laundries Family and Commercial

EPA Id: CAL000041127
NAICS Code: 81232
NAICS Description: Drycleaning and Laundry Services (except Coin-Operated)

CANYON POINT CLEANERS (Continued) **S103954770**

SIC Code: 7211
Create Date: 2/15/1991
Facility Active: No
Inactive Date: 6/30/2004
Facility Addr2: Not reported
Mailing Name: Not reported
Mailing Address: 19735 COLIMA RD STE 1
Mailing Address 2: Not reported
Mailing State: CA
Mailing Zip: 917483227
Region Code: 3
Owner Name: SANG Y LEE
Owner Address: 2517 HERLINDA LN
Owner Address 2: Not reported
Owner Telephone: Not reported
Contact Name: SANG Y LEE
Contact Address: 2517 HERLINDA LN
Contact Address 2: Not reported
Contact Telephone: 9095950627
SIC Description: Laundry and Garment Services NEC (except diaper service and clothing alteration and repair)Drycleaning Plants Except Rug CleaningGarment Pressing and Agents for Laundries and DrycleanersPower Laundries Family and Commercial

EPA Id: CAL000041127
NAICS Code: 81232
NAICS Description: Drycleaning and Laundry Services (except Coin-Operated)
SIC Code: 7212
Create Date: 2/15/1991
Facility Active: No
Inactive Date: 6/30/2004
Facility Addr2: Not reported
Mailing Name: Not reported
Mailing Address: 19735 COLIMA RD STE 1
Mailing Address 2: Not reported
Mailing State: CA
Mailing Zip: 917483227
Region Code: 3
Owner Name: SANG Y LEE
Owner Address: 2517 HERLINDA LN
Owner Address 2: Not reported
Owner Telephone: Not reported
Contact Name: SANG Y LEE
Contact Address: 2517 HERLINDA LN
Contact Address 2: Not reported
Contact Telephone: 9095950627
SIC Description: Laundry and Garment Services NEC (except diaper service and clothing alteration and repair)Drycleaning Plants Except Rug CleaningGarment Pressing and Agents for Laundries and DrycleanersPower Laundries Family and Commercial

EPA Id: CAL000041127
NAICS Code: 81232
NAICS Description: Drycleaning and Laundry Services (except Coin-Operated)
SIC Code: 7216
Create Date: 2/15/1991
Facility Active: No
Inactive Date: 6/30/2004
Facility Addr2: Not reported

CANYON POINT CLEANERS (Continued) **S103954770**

Mailing Name: Not reported
Mailing Address: 19735 COLIMA RD STE 1
Mailing Address 2: Not reported
Mailing State: CA
Mailing Zip: 917483227
Region Code: 3
Owner Name: SANG Y LEE
Owner Address: 2517 HERLINDA LN
Owner Address 2: Not reported
Owner Telephone: Not reported
Contact Name: SANG Y LEE
Contact Address: 2517 HERLINDA LN
Contact Address 2: Not reported
Contact Telephone: 9095950627
SIC Description: Laundry and Garment Services NEC (except diaper service and clothing alteration and repair)Drycleaning Plants Except Rug CleaningGarment Pressing and Agents for Laundries and DrycleanersPower Laundries Family and Commercial

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A2
NNW
< 1/8
357 ft.

Relative:
Lower

Actual:
584 ft.

PROFESSIONAL CLEANERS **CLEANERS** **S106858554**
19800 E COLIMA RD **N/A**
WALNUT, CA 91789

Site 1 of 2 in cluster A

CLEANERS:
EPA Id: CAL000289840
NAICS Code: 81231
NAICS Description: Coin-Operated Laundries and Drycleaners
SIC Code: 7215
Create Date: 12/29/2004
Facility Active: No
Inactive Date: 6/30/2006
Facility Addr2: Not reported
Mailing Name: Not reported
Mailing Address: 19800 E COLIMA RD
Mailing Address 2: Not reported
Mailing State: CA
Mailing Zip: 917893411
Region Code: 3
Owner Name: JAY HONG
Owner Address: 19800 E COLIMA RD
Owner Address 2: Not reported
Owner Telephone: Not reported
Contact Name: JAY HONG
Contact Address: 19800 EAST COLIMA RD
Contact Address 2: Not reported
Contact Telephone: 9095982959
SIC Description: Coin-Operated Laundry and Drycleaning

Map ID Direction Distance Distance (ft.) Elevation	Site	Database(s)	EDR ID Number EPA ID Number
A3 NNW < 1/8 357 ft.	**PROFESSIONAL CLEANERS 19800 COLIMA RD WALNUT, CA 91789**	**RCRA-SQG FINDS HAZNET LOS ANGELES CO. HMS CLEANERS**	**1000686555 CAD983638768**

Site 2 of 2 in cluster A

Relative:
Lower

Actual:
584 ft.

RCRAInfo:

Owner: HANNAH CHAE
(714) 598-2959
EPA ID: CAD983638768

Contact: HANNAH CHAE
(714) 598-2959

Classification: Small Quantity Generator
TSDF Activities: Not reported

Violation Status: No violations found

FINDS:
Other Pertinent Environmental Activity Identified at Site

RCRAInfo is a national information system that supports the Resource Conservation and Recovery Act (RCRA) program through the tracking of events and activities related to facilities that generate, transport, and treat, store, or dispose of hazardous waste. RCRAInfo allows RCRA program staff to track the notification, permit, compliance, and corrective action activities required under RCRA.

HAZNET:

Gepaid:	CAD983638768
Contact:	KENNETH K KIM
Telephone:	7145982959
Facility Addr2:	Not reported
Mailing Name:	Not reported
Mailing Address:	19800 COLIMA RD
Mailing City,St,Zip:	WALNUT, CA 917890000
Gen County:	Los Angeles
TSD EPA ID:	CAD981397417
TSD County:	Los Angeles
Waste Category:	Halogenated solvents (chloroform, methyl chloride, perchloroethylene, etc.)
Disposal Method:	Recycler
Tons:	.6462
Facility County:	Los Angeles

Gepaid:	CAD983638768
Contact:	KENNETH K KIM
Telephone:	7145982959
Facility Addr2:	Not reported
Mailing Name:	Not reported
Mailing Address:	19800 COLIMA RD
Mailing City,St,Zip:	WALNUT, CA 917890000
Gen County:	Los Angeles
TSD EPA ID:	CAD981397417
TSD County:	Los Angeles
Waste Category:	Halogenated solvents (chloroform, methyl chloride, perchloroethylene,

PROFESSIONAL CLEANERS (Continued) **1000686555**

	etc.)
Disposal Method:	Not reported
Tons:	.2293
Facility County:	Los Angeles

Gepaid:	CAL000172868
Contact:	JAMES SUNG
Telephone:	9095982959
Facility Addr2:	Not reported
Mailing Name:	Not reported
Mailing Address:	19800 E COLIMA RD
Mailing City,St,Zip:	WALNUT, CA 917893411
Gen County:	Los Angeles
TSD EPA ID:	CAD981397417
TSD County:	Los Angeles
Waste Category:	Halogenated solvents (chloroform, methyl chloride, perchloroethylene, etc.)
Disposal Method:	Recycler
Tons:	.2293
Facility County:	Los Angeles

Gepaid:	CAL000172868
Contact:	JIN HA KIM OWNER
Telephone:	9095982959
Facility Addr2:	Not reported
Mailing Name:	Not reported
Mailing Address:	19800 E COLIMA RD
Mailing City,St,Zip:	WALNUT, CA 917893411
Gen County:	Los Angeles
TSD EPA ID:	CAD008302903
TSD County:	Los Angeles
Waste Category:	Halogenated solvents (chloroform, methyl chloride, perchloroethylene, etc.)
Disposal Method:	Not reported
Tons:	Not reported
Facility County:	Los Angeles

Gepaid:	CAL000172868
Contact:	JIN HA KIM OWNER
Telephone:	9095982959
Facility Addr2:	Not reported
Mailing Name:	Not reported
Mailing Address:	19800 E COLIMA RD
Mailing City,St,Zip:	WALNUT, CA 917893411
Gen County:	Los Angeles
TSD EPA ID:	CAD008302903
TSD County:	Los Angeles
Waste Category:	Halogenated solvents (chloroform, methyl chloride, perchloroethylene, etc.)
Disposal Method:	Recycler
Tons:	0.21
Facility County:	Los Angeles

Click this hyperlink while viewing on your computer to access
15 additional CA_HAZNET: record(s) in the EDR Site Report.

PROFESSIONAL CLEANERS (Continued) **1000686555**

LOS ANGELES CO. HMS:

Region: LA
Facility Id: 008945-032606
Facility Status: Closed
Area: 6
Permit Number: 000373298
Permit Status: Closed
Facility Type: I01

Region: LA
Facility Id: 008945-022162
Facility Status: Closed
Area: 6
Permit Number: 000219782
Permit Status: Closed
Facility Type: I01

Region: LA
Facility Id: 008945-031767
Facility Status: Closed
Area: 6
Permit Number: 000323434
Permit Status: Closed
Facility Type: I01

Region: LA
Facility Id: 008945-044775
Facility Status: Permit
Area: 6
Permit Number: 000444223
Permit Status: Permit
Facility Type: I01

Region: LA
Facility Id: 008945-044387
Facility Status: OPEN
Area: 6
Permit Number: Not reported
Permit Status: Not reported
Facility Type: Not reported

Region: LA
Facility Id: 008945-044779
Facility Status: OPEN
Area: 6
Permit Number: Not reported
Permit Status: Not reported
Facility Type: Not reported

CLEANERS:

EPA Id: CAD983638768
NAICS Code: Not reported
NAICS Description: Not reported
SIC Code: Not reported
Create Date: 6/1/1992
Facility Active: No

PROFESSIONAL CLEANERS (Continued) **1000686555**

Inactive Date: 6/30/1999
Facility Addr2: Not reported
Mailing Name: Not reported
Mailing Address: 19800 COLIMA RD
Mailing Address 2: Not reported
Mailing State: CA
Mailing Zip: 917890000
Region Code: 9
Owner Name: KENNETH K KIM
Owner Address: 19800 COLIMA RD
Owner Address 2: Not reported
Owner Telephone: Not reported
Contact Name: HANNAH CHAN
Contact Address: INACT 99VQ FINAL NOTICE - BATCH
Contact Address 2: 4/11/00
Contact Telephone: --
SIC Description: Not reported

EPA Id: CAL000127972
NAICS Code: Not reported
NAICS Description: Not reported
SIC Code: Not reported
Create Date: 5/3/1995
Facility Active: No
Inactive Date: 6/30/1998
Facility Addr2: Not reported
Mailing Name: Not reported
Mailing Address: 19800 E COLIMA RD
Mailing Address 2: Not reported
Mailing State: CA
Mailing Zip: 917893411
Region Code: 3
Owner Name: HANNAH CHAE
Owner Address: 19800 EAST COLIMA ROAD
Owner Address 2: Not reported
Owner Telephone: Not reported
Contact Name: HANNAH CHAE/OWNER
Contact Address: INACT PER 98VQ FINAL NOTICE
Contact Address 2: - BATCH 4/27
Contact Telephone: 9095982959
SIC Description: Not reported

EPA Id: CAL000172868
NAICS Code: Not reported
NAICS Description: Not reported
SIC Code: Not reported
Create Date: 8/5/1999
Facility Active: No
Inactive Date: 12/21/2004
Facility Addr2: Not reported
Mailing Name: Not reported
Mailing Address: 19800 E COLIMA RD
Mailing Address 2: Not reported
Mailing State: CA
Mailing Zip: 917893411
Region Code: 3
Owner Name: JIN HA KIM NEW OWNER

PROFESSIONAL CLEANERS (Continued) **1000686555**

Owner Address: 19800 EAST COLIMA ROAD
Owner Address 2: Not reported
Owner Telephone: Not reported
Contact Name: JIN HA KIM OWNER
Contact Address: 19800 EAST COLIMA RD
Contact Address 2: Not reported
Contact Telephone: 9095982959
SIC Description: Not reported

4
West
1/8-1/4
1005 ft.

TOMRA PACIFIC INC/ALBERTSONS #6537
19725 COLIMA RD
ROWLAND HEIGHTS, CA 91748

SWRCY **S107137932**
N/A

Relative:
Lower

Actual:
564 ft.

SWRCY:

Certification Status:	O
Facility Phone Number:	Not reported
Date facility became certified:	05/28/03
Date facility began operating:	05/29/03
Date facility ceased operating:	Still operating
Whether The Facility Is Grandfathered:	Not reported
Convenience Zone Where Faciltiy Located:	1120
Convenience Zone Where Faciltiy Located 2:	3849
Convenience Zone Where Faciltiy Located 3:	0
Convenience Zone Where Faciltiy Located 4:	0
Convenience Zone Where Faciltiy Located 5:	0
Convenience Zone Where Faciltiy Located 6:	0
Convenience Zone Where Faciltiy Located 7:	0
Aluminum Beverage Containers Redeemed:	AL
Glass Beverage Containers Redeemed:	GL
Plastic Beverage Containers Redeemed:	PL
Other mat beverage containers redeemed:	Not reported
Refillable Beverage Containers Redeemed:	Not reported

5
NE
1/8-1/4
1041 ft.

LA ROYAL VISTA GOLF COURSE
20055 COLIMA RD E
WALNUT, CA 91789

LUST **S104025615**
Cortese **N/A**

Relative:
Lower

Actual:
600 ft.

LUST:

Region:	STATE
Case Type:	Soil only
Cross Street:	FAIRWAY DR
Enf Type:	Not reported
Funding:	Not reported
How Discovered:	Tank Closure
How Stopped:	Not reported
Leak Cause:	UNK
Leak Source:	UNK
Global Id:	T0603704702
Stop Date:	Not reported
Confirm Leak:	1997-03-24 00:00:00
Workplan:	Not reported
Prelim Assess:	Not reported
Pollution Char:	Not reported
Remed Plan:	Not reported

LA ROYAL VISTA GOLF COURSE (Continued) **S104025615**

Remed Action:	Not reported
Monitoring:	Not reported
Close Date:	Not reported
Discover Date:	1997-03-20 00:00:00
Enforcement Dt:	Not reported
Release Date:	1997-03-24 00:00:00
Review Date:	1997-03-24 00:00:00
Enter Date:	1997-07-17 00:00:00
MTBE Date:	Not reported
GW Qualifier:	Not reported
Soil Qualifier:	Not reported
Max MTBE GW ppb:	Not reported
Max MTBE Soil ppb:	Not reported
County:	19
Org Name:	Not reported
Reg Board:	Los Angeles Region
Status:	Leak being confirmed
Chemical:	Hydrocarbons
Contact Person:	Not reported
Responsible Party:	LA ROYAL VISTA GOLF COURSE
RP Address:	20055 E. COLIMA RD., WALNUT CA 91789
Interim:	Not reported
Oversight Prgm:	LUST
MTBE Class:	*
MTBE Conc:	0
MTBE Fuel:	0
MTBE Tested:	Not Required to be Tested.
Staff:	YR
Staff Initials:	JA
Lead Agency:	Local Agency
Local Agency:	19000
Hydr Basin #:	(???)
Beneficial:	Not reported
Priority:	Not reported
Cleanup Fund Id:	Not reported
Work Suspended:	Not reported
Local Case #:	Not reported
Case Number:	R-05889
Qty Leaked:	Not reported
Abate Method:	Other
Operator:	LARRY WOEFEL
Water System Name:	SKYLINE MUTUAL
Well Name:	Not reported
Distance To Lust:	0
Waste Discharge Global ID:	W0603700090
Waste Disch Assigned Name:	1900090-001GEN
Summary:	NONE WAS PROPOSED

LUST:

Region:	4
Staff:	UNK
County:	Los Angeles
Local Agency:	19000
Lead Agency:	Local Agency
Case Type:	Soil
Status:	Leak being confirmed
Substance:	Hydrocarbons

LA ROYAL VISTA GOLF COURSE (Continued) **S104025615**

Cross Street:	FAIRWAY DR
Global ID:	T0603704702
Enforcement Type:	Not reported
Date Leak Discovered:	3/20/1997
Date Leak Record Entered:	7/17/1997
How Leak Discovered:	Tank Closure
How Leak Stopped:	Not reported
Cause of Leak:	UNK
Leak Source:	UNK
Date Leak Stopped:	Not reported
Date Confirmation Began:	3/24/1997
Operator:	LARRY WOEFEL
Water System:	SKYLINE MUTUAL
Well Name:	Not reported
Approx. Dist To Production Well (ft):	4389.4333329473310204900107605
Abatement Method Used at the Site:	OT
Source of Cleanup Funding:	OT
Date Leak First Reported:	3/24/1997
Preliminary Site Assessment Workplan Submitted:	Not reported
Preliminary Site Assessment Began:	Not reported
Pollution Characterization Began:	Not reported
Remediation Plan Submitted:	Not reported
Remedial Action Underway:	Not reported
Post Remedial Action Monitoring Began:	Not reported
Date the Case was Closed:	Not reported
Date Case Last Changed on Database:	3/24/1997
Enforcement Action Date:	Not reported
Historical Max MTBE Date:	Not reported
Hist Max MTBE Conc in Groundwater:	Not reported
Hist Max MTBE Conc in Soil:	Not reported
Significant Interim Remedial Action Taken:	Not reported
GW Qualifier:	Not reported
Soil Qualifier:	Not reported
Organization:	Not reported
Regional Board:	04
Owner Contact:	Not reported
Responsible Party:	LA ROYAL VISTA GOLF COURSE
RP Address:	20055 E. COLIMA RD., WALNUT CA 91789
Program:	LUST
Lat/Long:	33.9893715 / -1
Local Agency Staff:	Not reported
Beneficial Use:	Not reported
Priority:	Not reported
Cleanup Fund Id:	Not reported
Suspended:	Not reported
Local Case No:	Not reported
Substance Quantity:	Not reported
Assigned Name:	1900090-001GEN
W Global ID:	W0603700090
Summary:	NONE WAS PROPOSED

Cortese:

Region:	CORTESE
Facility Addr2:	Not reported

6 NE 1/8-1/4 1222 ft. | **LA ROYAL VISTA GOLF COURSE**
20055 E COLLIMA RD
WALNUT, CA 91789 | **RCRA-SQG, FINDS, HAZNET** | **1000818672**
CAD983645771

Relative: Lower

Actual: 596 ft.

RCRAInfo:

Owner: LOS ANGELES ROYAL VISTA G C
(714) 595-7471

EPA ID: CAD983645771

Contact: ALFRED LUNA
(714) 595-3317

Classification: Small Quantity Generator
TSDF Activities: Not reported

Violation Status: No violations found

FINDS:
Other Pertinent Environmental Activity Identified at Site

RCRAInfo is a national information system that supports the Resource Conservation and Recovery Act (RCRA) program through the tracking of events and activities related to facilities that generate, transport, and treat, store, or dispose of hazardous waste. RCRAInfo allows RCRA program staff to track the notification, permit, compliance, and corrective action activities required under RCRA.

HAZNET:

Gepaid:	CAD983645771
Contact:	Not reported
Telephone:	0
Facility Addr2:	Not reported
Mailing Name:	Not reported
Mailing Address:	20055 GOLDEN SPRINGS DR # E
Mailing City,St,Zip:	WALNUT, CA 917893502
Gen County:	Los Angeles
TSD EPA ID:	CAT000613893
TSD County:	Los Angeles
Waste Category:	Aqueous solution with less than 10% total organic residues
Disposal Method:	Transfer Station
Tons:	0.14
Facility County:	Los Angeles

Gepaid:	CAD983645771
Contact:	LOS ANGELES ROYAL VISTA G C
Telephone:	7145957471
Facility Addr2:	Not reported
Mailing Name:	Not reported
Mailing Address:	20055 GOLDEN SPRINGS DR # E
Mailing City,St,Zip:	WALNUT, CA 917893502
Gen County:	Los Angeles
TSD EPA ID:	CAT000613893
TSD County:	Los Angeles
Waste Category:	Aqueous solution with less than 10% total organic residues
Disposal Method:	Transfer Station
Tons:	.4170

LA ROYAL VISTA GOLF COURSE (Continued) **1000818672**

Facility County:	Los Angeles

Gepaid:	CAD983645771
Contact:	LOS ANGELES ROYAL VISTA G C
Telephone:	7145957471
Facility Addr2:	Not reported
Mailing Name:	Not reported
Mailing Address:	20055 GOLDEN SPRINGS DR # E
Mailing City,St,Zip:	WALNUT, CA 917893502
Gen County:	Los Angeles
TSD EPA ID:	CAT080013352
TSD County:	Los Angeles
Waste Category:	Waste oil and mixed oil
Disposal Method:	Recycler
Tons:	.6255
Facility County:	Los Angeles

Gepaid:	CAD983645771
Contact:	--
Telephone:	Not reported
Facility Addr2:	Not reported
Mailing Name:	Not reported
Mailing Address:	20055 GOLDEN SPRINGS DR STE E
Mailing City,St,Zip:	WALNUT, CA 917893502
Gen County:	Los Angeles
TSD EPA ID:	CAT000613893
TSD County:	Los Angeles
Waste Category:	Aqueous solution with less than 10% total organic residues
Disposal Method:	Transfer Station
Tons:	0.13
Facility County:	Not reported

Gepaid:	CAD983645771
Contact:	--
Telephone:	Not reported
Facility Addr2:	Not reported
Mailing Name:	Not reported
Mailing Address:	20055 GOLDEN SPRINGS DR STE E
Mailing City,St,Zip:	WALNUT, CA 917893502
Gen County:	Los Angeles
TSD EPA ID:	CAT000613893
TSD County:	Los Angeles
Waste Category:	Aqueous solution with less than 10% total organic residues
Disposal Method:	Transfer Station
Tons:	0.13
Facility County:	Not reported

Click this hyperlink while viewing on your computer to access
2 additional CA_HAZNET: record(s) in the EDR Site Report.

7 NNW 1/4-1/2 2318 ft. | **ROAD DIVISION 417**
19865 WALNUT DRIVE
WALNUT, CA | **SWF/LF** | **S105964542**
N/A

Relative: Lower

Actual: 513 ft.

LF:

Region:	STATE
Facility ID:	19-AA-0391
Facility Telephone:	Not reported
Facility Telephone 2:	Not reported
Lat/Long:	33.99442 / -117.86802
Land Owner:	Not reported
Owner Name:	Los Angeles Co Public Works Road M. Div
Owner Telephone:	6264583981
Owner Address:	Not reported
Owner Address2:	P.O. Box 1460
Owner City,St,Zip:	Alhambra, CA 91802-1460
Operator:	Los Angeles Co Public Works Road M. Div
Operator Phone:	6264583981
Operator Address:	Not reported
Operator Address2:	P.O. Box 1460
Operator City,St,Zip:	Alhambra, CA 91802-1460
Operator's Status:	Active
Permit Date:	4/29/2003
Permit Status:	Notification
Permitted Acreage:	0.00
Activity:	Limited Volume Transfer Operation
Regulation Status:	Notification
Land Use:	Not reported
Landuse Name:	Not reported
GIS Source:	External
Category:	Transfer/Processing
Unit Number:	01
Inspection Frequency:	Quarterly
Accepted Waste:	Construction/demolition,Green Materials,Mixed municipal
Year Opened:	Not reported
Year Closed:	Not reported
Closure Date:	/ /
Closure Type:	Not reported
Closure Approve:	Not reported
Disposal Acreage:	Not reported
Status:	Not reported
Swisnumber:	Not reported
Aka:	Not reported
Type Of Waste:	Not reported
Disposal Area:	Not reported
SWFP Date:	Not reported
WDR Number:	Not reported
Dates Operation:	Not reported
Dt Of Field Units:	Not reported
Surface Condition:	Not reported
Landfill Gas:	Not reported
Leachate:	Not reported
Emrgncy Response:	Not reported
Lea Date:	Not reported
Restrictions:	Not reported
Fill Area:	Not reported
Type Of Refuse:	Not reported
Avg Depth Of Fill:	Not reported

ROAD DIVISION 417 (Continued) **S105964542**

Addtl Expansion Area:	Not reported
Site Size:	Not reported
Site Type:	Not reported
Site Description:	Not reported
Reassess Site:	Not reported
Location:	Not reported
Parcel Num:	Not reported
Issue & Observations:	Not reported
Other Observations:	Not reported
Date:	Not reported
Address:	Not reported
Prep By:	Not reported
DOHS Number:	Not reported
CUP Number:	Not reported
CIWMB:	Not reported
Program Type:	Not reported
Public Notice:	Not reported
PERMTIER:	Not reported
Recommendations:	Not reported
Othr Recommendation:	Not reported
Sig. Change Since Last Visit:	Not reported
Priority For Site Assessment:	Not reported
Permitted Throughput with Units:	10
Actual Throughput with Units:	Cu Yards/day
Permitted Capacity with Units:	60
Remaining Capacity:	Not reported
Remaining Capacity with Units:	Cu Yards/day
Last Waste Tire Inspection Count:	Not reported
Last Waste Tire Inspection Date:	Not reported
Original Waste Tire Count:	Not reported
Original Waste Tire Count Date:	Not reported

8
North
1/4-1/2
2615 ft.

ROAD MAINTENANCE #117
19865 WALNUT DR E
WALNUT, CA 91789

HAZNET **S102435919**
LUST **N/A**
Cortese

Relative:
Lower

Actual:
517 ft.

HAZNET:

Gepaid:	CAC002454391
Contact:	ANNA ETCHEBARREN/ATE ENVIRON
Telephone:	6263360094
Facility Addr2:	Not reported
Mailing Name:	Not reported
Mailing Address:	900 S FREMONT
Mailing City,St,Zip:	ALHAMBRA, CA 918030000
Gen County:	Los Angeles
TSD EPA ID:	Not reported
TSD County:	Los Angeles
Waste Category:	Other organic solids
Disposal Method:	Transfer Station
Tons:	0.04
Facility County:	Not reported

LUST:

Region:	STATE
Case Type:	Soil only
Cross Street:	FAIRWAY DR.

ROAD MAINTENANCE #117 (Continued) **S102435919**

Enf Type:	Not reported
Funding:	Not reported
How Discovered:	Tank Closure
How Stopped:	Not reported
Leak Cause:	UNK
Leak Source:	UNK
Global Id:	T0603703651
Stop Date:	1989-05-02 00:00:00
Confirm Leak:	Not reported
Workplan:	Not reported
Prelim Assess:	Not reported
Pollution Char:	2005-02-22 00:00:00
Remed Plan:	Not reported
Remed Action:	Not reported
Monitoring:	Not reported
Close Date:	1992-06-09 00:00:00
Discover Date:	1989-05-02 00:00:00
Enforcement Dt:	Not reported
Release Date:	1992-06-09 00:00:00
Review Date:	1992-06-11 00:00:00
Enter Date:	1992-05-27 00:00:00
MTBE Date:	Not reported
GW Qualifier:	Not reported
Soil Qualifier:	Not reported
Max MTBE GW ppb:	Not reported
Max MTBE Soil ppb:	Not reported
County:	19
Org Name:	Not reported
Reg Board:	Los Angeles Region
Status:	Suspension of Work Letter from Cleanup Fund
Chemical:	Diesel
Contact Person:	Not reported
Responsible Party:	DON ELIASON
RP Address:	900 S. FREMONT AVE., ALHAMBRA, 91803
Interim:	Not reported
Oversight Prgm:	LUST
MTBE Class:	*
MTBE Conc:	0
MTBE Fuel:	0
MTBE Tested:	Not Required to be Tested.
Staff:	YR
Staff Initials:	JA
Lead Agency:	Local Agency
Local Agency:	19000
Hydr Basin #:	(???)
Beneficial:	Not reported
Priority:	Not reported
Cleanup Fund Id:	Not reported
Work Suspended:	Not reported
Local Case #:	8448-10710
Case Number:	I-10710
Qty Leaked:	Not reported
Abate Method:	Not reported
Operator:	HELLING, DENNIS
Water System Name:	SKYLINE MUTUAL
Well Name:	Not reported
Distance To Lust:	0

ROAD MAINTENANCE #117 (Continued) **S102435919**

Waste Discharge Global ID: W0603700090
Waste Disch Assigned Name: 1900090-001GEN
Summary: Not reported

LUST:

Region:	4
Staff:	UNK
County:	Los Angeles
Local Agency:	19000
Lead Agency:	Local Agency
Case Type:	Soil
Status:	Case Closed
Substance:	Diesel
Cross Street:	FAIRWAY DR.
Global ID:	T0603703651
Enforcement Type:	Not reported
Date Leak Discovered:	5/2/1989
Date Leak Record Entered:	5/27/1992
How Leak Discovered:	Tank Closure
How Leak Stopped:	Not reported
Cause of Leak:	UNK
Leak Source:	UNK
Date Leak Stopped:	5/2/1989
Date Confirmation Began:	Not reported
Operator:	HELLING, DENNIS
Water System:	SKYLINE MUTUAL
Well Name:	Not reported
Approx. Dist To Production Well (ft):	6335.138556146013271450957611
Abatement Method Used at the Site:	Not reported
Source of Cleanup Funding:	Not reported
Date Leak First Reported:	6/9/1992
Preliminary Site Assessment Workplan Submitted:	Not reported
Preliminary Site Assessment Began:	Not reported
Pollution Characterization Began:	Not reported
Remediation Plan Submitted:	Not reported
Remedial Action Underway:	Not reported
Post Remedial Action Monitoring Began:	Not reported
Date the Case was Closed:	6/9/1992
Date Case Last Changed on Database:	6/11/1992
Enforcement Action Date:	Not reported
Historical Max MTBE Date:	Not reported
Hist Max MTBE Conc in Groundwater:	Not reported
Hist Max MTBE Conc in Soil:	Not reported
Significant Interim Remedial Action Taken:	Not reported
GW Qualifier:	Not reported
Soil Qualifier:	Not reported
Organization:	Not reported
Regional Board:	04
Owner Contact:	Not reported
Responsible Party:	DON ELIASON
RP Address:	900 S. FREMONT AVE., ALHAMBRA, 91803
Program:	LUST
Lat/Long:	33.9942714 / -1
Local Agency Staff:	Not reported
Beneficial Use:	Not reported
Priority:	Not reported
Cleanup Fund Id:	Not reported

ROAD MAINTENANCE #117 (Continued) **S102435919**

Suspended:	Not reported
Local Case No:	Not reported
Substance Quantity:	Not reported
Assigned Name:	1900090-001GEN
W Global ID:	W0603700090
Summary:	Not reported

Cortese:

Region:	CORTESE
Facility Addr2:	19865 WALNUT DR E

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9 NNW 1/2-1 2722 ft. | **CALIFORNIA MACHINE SPECIALTIES** | **VCP** | **S101089786**
1180 CENTRE DRIVE | **ENVIROSTOR** | **N/A**
CITY OF INDUSTRY, CA 91789

Relative: Lower

Actual: 502 ft.

VCP:

Facility ID:	19760015
Site Type:	Voluntary Cleanup
Site Type Detail:	Voluntary Cleanup
Acres:	Not reported
National Priorities List:	NO
Cleanup Oversight Agencies:	NONE SPECIFIED
Lead Agency:	NONE SPECIFIED
Lead Agency Description:	Not reported
Project Manager:	Not reported
Supervisor:	Harlan Jeche
Division Branch:	So Cal - Glendale
Site Code:	Not reported
Assembly:	58
Senate:	24
Status:	No Further Action
Status Date:	1994-07-18 00:00:00
Restricted Use:	NO
Funding:	Responsible Party
Lat/Long:	33.9933333333333 / -117.871944444444
Alias Name:	19760015
Alias Type:	Envirostor ID Number
APN:	NONE SPECIFIED
APN Description:	Not reported
Comments:	The Department enters into a PEA Equivalent Agreement with the RPs for the California Machine Specialties site.Review of May, 1994 PEA completed. DTSC concurs with PEA's recommendation of 'No Further Action at the Site.' The site is a machine shop in business since 1980.
Completed Area Name:	PROJECT WIDE
Completed Sub Area Name:	Not reported
Completed Document Type:	Preliminary Endangerment Assessment Report
Completed Date:	/ /
Completed Area Name:	PROJECT WIDE
Completed Sub Area Name:	Not reported
Completed Document Type:	* Order
Completed Date:	/ /
Confirmed:	NONE SPECIFIED
Confirmed Description:	Not reported
Future Area Name:	Not reported
Future Sub Area Name:	Not reported

CALIFORNIA MACHINE SPECIALTIES (Continued) **S101089786**

Future Document Type:	Not reported
Future Due Date:	Not reported
Media Affected:	NONE SPECIFIED
Media Affected Desc:	Not reported
Management Required:	NONE SPECIFIED
Management Required Desc:	Not reported
Potential:	NONE SPECIFIED
Potenital Description:	Not reported
Schedule Area Name:	Not reported
Schedule Sub Area Name:	Not reported
Schedule Document Type:	Not reported
Schedule Due Date:	Not reported
Schedule Revised Date:	Not reported
PastUse:	NONE SPECIFIED

ENVIROSTOR:

Site Type:	Voluntary Cleanup
Site Type Detailed:	Voluntary Cleanup
Acres:	Not reported
NPL:	NO
Regulatory Agencies:	NONE SPECIFIED
Lead Agency:	NONE SPECIFIED
Program Manager:	Not reported
Supervisor:	Harlan Jeche
Division Branch:	So Cal - Glendale
Facility ID:	19760015
Site Code:	Not reported
Assembly:	58
Senate:	24
Special Program:	Voluntary Cleanup Program
Status:	**No Further Action**
Status Date:	1994-07-18 00:00:00
Restricted Use:	NO
Funding:	Responsible Party
Latitude:	33.9933333333333
Longitude:	-117.871944444444
Alias Name:	19760015
Alias Type:	Envirostor ID Number
APN:	NONE SPECIFIED
APN Description:	Not reported
Comments:	The Department enters into a PEA Equivalent Agreement with the RPs for the California Machine Specialties site.Review of May, 1994 PEA completed. DTSC concurs with PEA's recommendation of 'No Further Action at the Site.' The site is a machine shop in business since 1980.
Completed Area Name:	PROJECT WIDE
Completed Sub Area Name:	Not reported
Completed Document Type:	Preliminary Endangerment Assessment Report
Completed Date:	/ /
Completed Area Name:	PROJECT WIDE
Completed Sub Area Name:	Not reported
Completed Document Type:	* Order
Completed Date:	/ /
Confirmed:	NONE SPECIFIED
Confirmed Description:	Not reported
Future Area Name:	Not reported
Future Sub Area Name:	Not reported

CALIFORNIA MACHINE SPECIALTIES (Continued) **S101089786**

Future Document Type:	Not reported
Future Due Date:	Not reported
Media Affected:	NONE SPECIFIED
Media Affected Desc:	Not reported
Management Required:	NONE SPECIFIED
Management Required Desc:	Not reported
Potential:	NONE SPECIFIED
Potenital Description:	Not reported
Schedule Area Name:	Not reported
Schedule Sub Area Name:	Not reported
Schedule Document Type:	Not reported
Schedule Due Date:	Not reported
Schedule Revised Date:	Not reported
PastUse:	NONE SPECIFIED

ORPHAN SUMMARY

City	EDR ID	Site Name	Site Address	Zip	Database(s)
DIAMOND BAR	1007200513	CHEVRON NO 91175	21095 E GOLDEN SPRINGS	91789	RCRA-LQG
LOS ANGELES COUNTY	S105642458	1X MCKESSON DRUG CO	2		HAZNET, LUST, CHMIRS
ROWLAND HEIGHTS	S108540624	CANYON POINT CLEANERS AND LAUNDRY	19735 COLIMA RD STE D1	91748	CLEANERS
ROWLAND HEIGHTS	S106167609	CANYON POINT CLEANERS LAUNDRY	19735 E COLIMA ROAD D1	91748	CLEANERS
ROWLAND HEIGHTS	S106166609	LEWIS CLEANERS	19061 E COLIMA	91748	CLEANERS
ROWLAND HEIGHTS	S106922772	ARCO #3004	1881 COLIMA RD	91748	SWEEPS UST

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

To maintain currency of the following federal and state databases, EDR contacts the appropriate governmental agency on a monthly or quarterly basis, as required.

Number of Days to Update: Provides confirmation that EDR is reporting records that have been updated within 90 days from the date the government agency made the information available to the public.

FEDERAL RECORDS

NPL: National Priority List

National Priorities List (Superfund). The NPL is a subset of CERCLIS and identifies over 1,200 sites for priority cleanup under the Superfund Program. NPL sites may encompass relatively large areas. As such, EDR provides polygon coverage for over 1,000 NPL site boundaries produced by EPA's Environmental Photographic Interpretation Center (EPIC) and regional EPA offices.

Date of Government Version: 04/20/2007
Date Data Arrived at EDR: 05/03/2007
Date Made Active in Reports: 07/05/2007
Number of Days to Update: 63

Source: EPA
Telephone: N/A
Last EDR Contact: 07/31/2007
Next Scheduled EDR Contact: 10/29/2007
Data Release Frequency: Quarterly

NPL Site Boundaries

Sources:

EPA's Environmental Photographic Interpretation Center (EPIC)
Telephone: 202-564-7333

EPA Region 1
Telephone 617-918-1143

EPA Region 6
Telephone: 214-655-6659

EPA Region 3
Telephone 215-814-5418

EPA Region 7
Telephone: 913-551-7247

EPA Region 4
Telephone 404-562-8033

EPA Region 8
Telephone: 303-312-6774

EPA Region 5
Telephone 312-886-6686

EPA Region 9
Telephone: 415-947-4246

EPA Region 10
Telephone 206-553-8665

Proposed NPL: Proposed National Priority List Sites

A site that has been proposed for listing on the National Priorities List through the issuance of a proposed rule in the Federal Register. EPA then accepts public comments on the site, responds to the comments, and places on the NPL those sites that continue to meet the requirements for listing.

Date of Government Version: 04/20/2007
Date Data Arrived at EDR: 05/03/2007
Date Made Active in Reports: 07/05/2007
Number of Days to Update: 63

Source: EPA
Telephone: N/A
Last EDR Contact: 08/03/2007
Next Scheduled EDR Contact: 10/29/2007
Data Release Frequency: Quarterly

DELISTED NPL: National Priority List Deletions

The National Oil and Hazardous Substances Pollution Contingency Plan (NCP) establishes the criteria that the EPA uses to delete sites from the NPL. In accordance with 40 CFR 300.425.(e), sites may be deleted from the NPL where no further response is appropriate.

Date of Government Version: 04/20/2007
Date Data Arrived at EDR: 05/03/2007
Date Made Active in Reports: 06/25/2007
Number of Days to Update: 53

Source: EPA
Telephone: N/A
Last EDR Contact: 08/03/2007
Next Scheduled EDR Contact: 10/29/2007
Data Release Frequency: Quarterly

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

NPL LIENS: Federal Superfund Liens

Federal Superfund Liens. Under the authority granted the USEPA by CERCLA of 1980, the USEPA has the authority to file liens against real property in order to recover remedial action expenditures or when the property owner received notification of potential liability. USEPA compiles a listing of filed notices of Superfund Liens.

Date of Government Version: 10/15/1991
Date Data Arrived at EDR: 02/02/1994
Date Made Active in Reports: 03/30/1994
Number of Days to Update: 56

Source: EPA
Telephone: 202-564-4267
Last EDR Contact: 05/21/2007
Next Scheduled EDR Contact: 08/20/2007
Data Release Frequency: No Update Planned

CERCLIS: Comprehensive Environmental Response, Compensation, and Liability Information System

CERCLIS contains data on potentially hazardous waste sites that have been reported to the USEPA by states, municipalities, private companies and private persons, pursuant to Section 103 of the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA). CERCLIS contains sites which are either proposed to or on the National Priorities List (NPL) and sites which are in the screening and assessment phase for possible inclusion on the NPL.

Date of Government Version: 02/27/2007
Date Data Arrived at EDR: 03/21/2007
Date Made Active in Reports: 04/27/2007
Number of Days to Update: 37

Source: EPA
Telephone: 703-412-9810
Last EDR Contact: 06/20/2007
Next Scheduled EDR Contact: 09/17/2007
Data Release Frequency: Quarterly

CERCLIS-NFRAP: CERCLIS No Further Remedial Action Planned

Archived sites are sites that have been removed and archived from the inventory of CERCLIS sites. Archived status indicates that, to the best of EPA's knowledge, assessment at a site has been completed and that EPA has determined no further steps will be taken to list this site on the National Priorities List (NPL), unless information indicates this decision was not appropriate or other considerations require a recommendation for listing at a later time. This decision does not necessarily mean that there is no hazard associated with a given site; it only means that, based upon available information, the location is not judged to be a potential NPL site.

Date of Government Version: 03/21/2007
Date Data Arrived at EDR: 04/27/2007
Date Made Active in Reports: 05/25/2007
Number of Days to Update: 28

Source: EPA
Telephone: 703-412-9810
Last EDR Contact: 06/15/2007
Next Scheduled EDR Contact: 09/17/2007
Data Release Frequency: Quarterly

CORRACTS: Corrective Action Report

CORRACTS identifies hazardous waste handlers with RCRA corrective action activity.

Date of Government Version: 03/14/2007
Date Data Arrived at EDR: 03/20/2007
Date Made Active in Reports: 04/27/2007
Number of Days to Update: 38

Source: EPA
Telephone: 800-424-9346
Last EDR Contact: 06/04/2007
Next Scheduled EDR Contact: 09/03/2007
Data Release Frequency: Quarterly

RCRA: Resource Conservation and Recovery Act Information

RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. RCRAInfo replaces the data recording and reporting abilities of the Resource Conservation and Recovery Information System (RCRIS). The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Conditionally exempt small quantity generators (CESQGs) generate less than 100 kg of hazardous waste, or less than 1 kg of acutely hazardous waste per month. Small quantity generators (SQGs) generate between 100 kg and 1,000 kg of hazardous waste per month. Large quantity generators (LQGs) generate over 1,000 kilograms (kg) of hazardous waste, or over 1 kg of acutely hazardous waste per month. Transporters are individuals or entities that move hazardous waste from the generator off-site to a facility that can recycle, treat, store, or dispose of the waste. TSDFs treat, store, or dispose of the waste.

Date of Government Version: 06/13/2006
Date Data Arrived at EDR: 06/28/2006
Date Made Active in Reports: 08/23/2006
Number of Days to Update: 56

Source: EPA
Telephone: (415) 495-8895
Last EDR Contact: 07/16/2007
Next Scheduled EDR Contact: 09/17/2007
Data Release Frequency: Quarterly

ERNS: Emergency Response Notification System

Emergency Response Notification System. ERNS records and stores information on reported releases of oil and hazardous substances.

Date of Government Version: 12/31/2006
Date Data Arrived at EDR: 01/24/2007
Date Made Active in Reports: 03/12/2007
Number of Days to Update: 47

Source: National Response Center, United States Coast Guard
Telephone: 202-267-2180
Last EDR Contact: 07/23/2007
Next Scheduled EDR Contact: 10/22/2007
Data Release Frequency: Annually

HMIRS: Hazardous Materials Information Reporting System

Hazardous Materials Incident Report System. HMIRS contains hazardous material spill incidents reported to DOT.

Date of Government Version: 03/05/2007
Date Data Arrived at EDR: 04/17/2007
Date Made Active in Reports: 05/14/2007
Number of Days to Update: 27

Source: U.S. Department of Transportation
Telephone: 202-366-4555
Last EDR Contact: 07/18/2007
Next Scheduled EDR Contact: 10/15/2007
Data Release Frequency: Annually

US ENG CONTROLS: Engineering Controls Sites List

A listing of sites with engineering controls in place. Engineering controls include various forms of caps, building foundations, liners, and treatment methods to create pathway elimination for regulated substances to enter environmental media or effect human health.

Date of Government Version: 04/20/2007
Date Data Arrived at EDR: 04/26/2007
Date Made Active in Reports: 05/25/2007
Number of Days to Update: 29

Source: Environmental Protection Agency
Telephone: 703-603-8905
Last EDR Contact: 07/02/2007
Next Scheduled EDR Contact: 10/01/2007
Data Release Frequency: Varies

US INST CONTROL: Sites with Institutional Controls

A listing of sites with institutional controls in place. Institutional controls include administrative measures, such as groundwater use restrictions, construction restrictions, property use restrictions, and post remediation care requirements intended to prevent exposure to contaminants remaining on site. Deed restrictions are generally required as part of the institutional controls.

Date of Government Version: 04/20/2007
Date Data Arrived at EDR: 04/26/2007
Date Made Active in Reports: 05/25/2007
Number of Days to Update: 29

Source: Environmental Protection Agency
Telephone: 703-603-8905
Last EDR Contact: 07/02/2007
Next Scheduled EDR Contact: 10/01/2007
Data Release Frequency: Varies

DOD: Department of Defense Sites

This data set consists of federally owned or administered lands, administered by the Department of Defense, that have any area equal to or greater than 640 acres of the United States, Puerto Rico, and the U.S. Virgin Islands.

Date of Government Version: 12/31/2005
Date Data Arrived at EDR: 11/10/2006
Date Made Active in Reports: 01/11/2007
Number of Days to Update: 62

Source: USGS
Telephone: 703-692-8801
Last EDR Contact: 08/09/2007
Next Scheduled EDR Contact: 11/05/2007
Data Release Frequency: Semi-Annually

FUDS: Formerly Used Defense Sites

The listing includes locations of Formerly Used Defense Sites properties where the US Army Corps of Engineers is actively working or will take necessary cleanup actions.

Date of Government Version: 12/31/2005
Date Data Arrived at EDR: 09/20/2006
Date Made Active in Reports: 11/22/2006
Number of Days to Update: 63

Source: U.S. Army Corps of Engineers
Telephone: 202-528-4285
Last EDR Contact: 08/13/2007
Next Scheduled EDR Contact: 10/01/2007
Data Release Frequency: Varies

US BROWNFIELDS: A Listing of Brownfields Sites

Included in the listing are brownfields properties addresses by Cooperative Agreement Recipients and brownfields properties addressed by Targeted Brownfields Assessments. Targeted Brownfields Assessments-EPA's Targeted Brownfields Assessments (TBA) program is designed to help states, tribes, and municipalities--especially those without EPA Brownfields Assessment Demonstration Pilots--minimize the uncertainties of contamination often associated with brownfields. Under the TBA program, EPA provides funding and/or technical assistance for environmental assessments at brownfields sites throughout the country. Targeted Brownfields Assessments supplement and work with other efforts under EPA's Brownfields Initiative to promote cleanup and redevelopment of brownfields. Cooperative Agreement Recipients-States, political subdivisions, territories, and Indian tribes become Brownfields Cleanup Revolving Loan Fund (BCRLF) cooperative agreement recipients when they enter into BCRLF cooperative agreements with the U.S. EPA. EPA selects BCRLF cooperative agreement recipients based on a proposal and application process. BCRLF cooperative agreement recipients must use EPA funds provided through BCRLF cooperative agreement for specified brownfields-related cleanup activities.

Date of Government Version: 04/04/2007
Date Data Arrived at EDR: 04/04/2007
Date Made Active in Reports: 05/25/2007
Number of Days to Update: 51

Source: Environmental Protection Agency
Telephone: 202-566-2777
Last EDR Contact: 06/11/2007
Next Scheduled EDR Contact: 09/10/2007
Data Release Frequency: Semi-Annually

CONSENT: Superfund (CERCLA) Consent Decrees

Major legal settlements that establish responsibility and standards for cleanup at NPL (Superfund) sites. Released periodically by United States District Courts after settlement by parties to litigation matters.

Date of Government Version: 08/23/2006
Date Data Arrived at EDR: 03/06/2007
Date Made Active in Reports: 04/10/2007
Number of Days to Update: 35

Source: Department of Justice, Consent Decree Library
Telephone: Varies
Last EDR Contact: 07/24/2007
Next Scheduled EDR Contact: 10/22/2007
Data Release Frequency: Varies

ROD: Records Of Decision

Record of Decision. ROD documents mandate a permanent remedy at an NPL (Superfund) site containing technical and health information to aid in the cleanup.

Date of Government Version: 03/27/2007
Date Data Arrived at EDR: 03/27/2007
Date Made Active in Reports: 04/27/2007
Number of Days to Update: 31

Source: EPA
Telephone: 703-416-0223
Last EDR Contact: 07/02/2007
Next Scheduled EDR Contact: 10/01/2007
Data Release Frequency: Annually

UMTRA: Uranium Mill Tailings Sites

Uranium ore was mined by private companies for federal government use in national defense programs. When the mills shut down, large piles of the sand-like material (mill tailings) remain after uranium has been extracted from the ore. Levels of human exposure to radioactive materials from the piles are low; however, in some cases tailings were used as construction materials before the potential health hazards of the tailings were recognized.

Date of Government Version: 12/31/2005
Date Data Arrived at EDR: 11/08/2006
Date Made Active in Reports: 01/29/2007
Number of Days to Update: 82

Source: Department of Energy
Telephone: 505-845-0011
Last EDR Contact: 07/05/2007
Next Scheduled EDR Contact: 09/17/2007
Data Release Frequency: Varies

ODI: Open Dump Inventory

An open dump is defined as a disposal facility that does not comply with one or more of the Part 257 or Part 258 Subtitle D Criteria.

Date of Government Version: 06/30/1985
Date Data Arrived at EDR: 08/09/2004
Date Made Active in Reports: 09/17/2004
Number of Days to Update: 39

Source: Environmental Protection Agency
Telephone: 800-424-9346
Last EDR Contact: 06/09/2004
Next Scheduled EDR Contact: N/A
Data Release Frequency: No Update Planned

TRIS: Toxic Chemical Release Inventory System

Toxic Release Inventory System. TRIS identifies facilities which release toxic chemicals to the air, water and land in reportable quantities under SARA Title III Section 313.

Date of Government Version: 12/31/2005
Date Data Arrived at EDR: 04/27/2007
Date Made Active in Reports: 07/05/2007
Number of Days to Update: 69

Source: EPA
Telephone: 202-566-0250
Last EDR Contact: 06/19/2007
Next Scheduled EDR Contact: 09/17/2007
Data Release Frequency: Annually

TSCA: Toxic Substances Control Act

Toxic Substances Control Act. TSCA identifies manufacturers and importers of chemical substances included on the TSCA Chemical Substance Inventory list. It includes data on the production volume of these substances by plant site.

Date of Government Version: 12/31/2002
Date Data Arrived at EDR: 04/14/2006
Date Made Active in Reports: 05/30/2006
Number of Days to Update: 46

Source: EPA
Telephone: 202-260-5521
Last EDR Contact: 07/30/2007
Next Scheduled EDR Contact: 10/15/2007
Data Release Frequency: Every 4 Years

FTTS: FIFRA/ TSCA Tracking System - FIFRA (Federal Insecticide, Fungicide, & Rodenticide Act)/TSCA (Toxic Substances Control Act)

FTTS tracks administrative cases and pesticide enforcement actions and compliance activities related to FIFRA, TSCA and EPCRA (Emergency Planning and Community Right-to-Know Act). To maintain currency, EDR contacts the Agency on a quarterly basis.

Date of Government Version: 04/13/2007
Date Data Arrived at EDR: 04/25/2007
Date Made Active in Reports: 07/05/2007
Number of Days to Update: 71

Source: EPA/Office of Prevention, Pesticides and Toxic Substances
Telephone: 202-566-1667
Last EDR Contact: 06/15/2007
Next Scheduled EDR Contact: 09/17/2007
Data Release Frequency: Quarterly

FTTS INSP: FIFRA/ TSCA Tracking System - FIFRA (Federal Insecticide, Fungicide, & Rodenticide Act)/TSCA (Toxic Substances Control Act)

A listing of FIFRA/TSCA Tracking System (FTTS) inspections and enforcements.

Date of Government Version: 04/13/2007
Date Data Arrived at EDR: 04/25/2007
Date Made Active in Reports: 07/05/2007
Number of Days to Update: 71

Source: EPA
Telephone: 202-566-1667
Last EDR Contact: 06/15/2007
Next Scheduled EDR Contact: 09/17/2007
Data Release Frequency: Quarterly

SSTS: Section 7 Tracking Systems

Section 7 of the Federal Insecticide, Fungicide and Rodenticide Act, as amended (92 Stat. 829) requires all registered pesticide-producing establishments to submit a report to the Environmental Protection Agency by March 1st each year. Each establishment must report the types and amounts of pesticides, active ingredients and devices being produced, and those having been produced and sold or distributed in the past year.

Date of Government Version: 12/31/2005
Date Data Arrived at EDR: 03/13/2007
Date Made Active in Reports: 04/27/2007
Number of Days to Update: 45

Source: EPA
Telephone: 202-564-4203
Last EDR Contact: 07/16/2007
Next Scheduled EDR Contact: 10/15/2007
Data Release Frequency: Annually

LIENS 2: CERCLA Lien Information

A Federal CERCLA ('Superfund') lien can exist by operation of law at any site or property at which EPA has spent Superfund monies. These monies are spent to investigate and address releases and threatened releases of contamination. CERCLIS provides information as to the identity of these sites and properties.

Date of Government Version: 03/08/2007
Date Data Arrived at EDR: 04/12/2007
Date Made Active in Reports: 05/14/2007
Number of Days to Update: 32

Source: Environmental Protection Agency
Telephone: 202-564-6023
Last EDR Contact: 05/21/2007
Next Scheduled EDR Contact: 08/20/2007
Data Release Frequency: Varies

RADINFO: Radiation Information Database

The Radiation Information Database (RADINFO) contains information about facilities that are regulated by U.S. Environmental Protection Agency (EPA) regulations for radiation and radioactivity.

Date of Government Version: 05/01/2007
Date Data Arrived at EDR: 05/03/2007
Date Made Active in Reports: 05/25/2007
Number of Days to Update: 22

Source: Environmental Protection Agency
Telephone: 202-343-9775
Last EDR Contact: 08/01/2007
Next Scheduled EDR Contact: 10/29/2007
Data Release Frequency: Quarterly

CDL: Clandestine Drug Labs

A listing of clandestine drug lab locations. The U.S. Department of Justice ("the Department") provides this web site as a public service. It contains addresses of some locations where law enforcement agencies reported they found chemicals or other items that indicated the presence of either clandestine drug laboratories or dumpsites. In most cases, the source of the entries is not the Department, and the Department has not verified the entry and does not guarantee its accuracy. Members of the public must verify the accuracy of all entries by, for example, contacting local law enforcement and local health departments.

Date of Government Version: 12/01/2006
Date Data Arrived at EDR: 01/08/2007
Date Made Active in Reports: 01/11/2007
Number of Days to Update: 3

Source: Drug Enforcement Administration
Telephone: 202-307-1000
Last EDR Contact: 06/29/2007
Next Scheduled EDR Contact: 09/24/2007
Data Release Frequency: Quarterly

HIST FTTS: FIFRA/TSCA Tracking System Administrative Case Listing

A complete administrative case listing from the FIFRA/TSCA Tracking System (FTTS) for all ten EPA regions. The information was obtained from the National Compliance Database (NCDB). NCDB supports the implementation of FIFRA (Federal Insecticide, Fungicide, and Rodenticide Act) and TSCA (Toxic Substances Control Act). Some EPA regions are now closing out records. Because of that, and the fact that some EPA regions are not providing EPA Headquarters with updated records, it was decided to create a HIST FTTS database. It included records that may not be included in the newer FTTS database updates. This database is no longer updated.

Date of Government Version: 10/19/2006
Date Data Arrived at EDR: 03/01/2007
Date Made Active in Reports: 04/10/2007
Number of Days to Update: 40

Source: Environmental Protection Agency
Telephone: 202-564-2501
Last EDR Contact: 06/15/2007
Next Scheduled EDR Contact: 09/17/2007
Data Release Frequency: No Update Planned

ICIS: Integrated Compliance Information System

The Integrated Compliance Information System (ICIS) supports the information needs of the national enforcement and compliance program as well as the unique needs of the National Pollutant Discharge Elimination System (NPDES) program.

Date of Government Version: 02/21/2007
Date Data Arrived at EDR: 04/03/2007
Date Made Active in Reports: 05/14/2007
Number of Days to Update: 41

Source: Environmental Protection Agency
Telephone: 202-564-5088
Last EDR Contact: 06/22/2007
Next Scheduled EDR Contact: 07/16/2007
Data Release Frequency: Quarterly

LUCIS: Land Use Control Information System

LUCIS contains records of land use control information pertaining to the former Navy Base Realignment and Closure properties.

Date of Government Version: 12/09/2005
Date Data Arrived at EDR: 12/11/2006
Date Made Active in Reports: 01/11/2007
Number of Days to Update: 31

Source: Department of the Navy
Telephone: 843-820-7326
Last EDR Contact: 06/11/2007
Next Scheduled EDR Contact: 09/10/2007
Data Release Frequency: Varies

DOT OPS: Incident and Accident Data

Department of Transporation, Office of Pipeline Safety Incident and Accident data.

Date of Government Version: 05/14/2007
Date Data Arrived at EDR: 05/30/2007
Date Made Active in Reports: 07/05/2007
Number of Days to Update: 36

Source: Department of Transporation, Office of Pipeline Safety
Telephone: 202-366-4595
Last EDR Contact: 05/30/2007
Next Scheduled EDR Contact: 08/27/2007
Data Release Frequency: Varies

PADS: PCB Activity Database System

PCB Activity Database. PADS Identifies generators, transporters, commercial storers and/or brokers and disposers of PCB's who are required to notify the EPA of such activities.

Date of Government Version: 10/17/2006
Date Data Arrived at EDR: 11/29/2006
Date Made Active in Reports: 01/11/2007
Number of Days to Update: 43

Source: EPA
Telephone: 202-566-0500
Last EDR Contact: 08/09/2007
Next Scheduled EDR Contact: 11/05/2007
Data Release Frequency: Annually

MLTS: Material Licensing Tracking System

MLTS is maintained by the Nuclear Regulatory Commission and contains a list of approximately 8,100 sites which possess or use radioactive materials and which are subject to NRC licensing requirements. To maintain currency, EDR contacts the Agency on a quarterly basis.

Date of Government Version: 04/05/2007
Date Data Arrived at EDR: 04/25/2007
Date Made Active in Reports: 05/25/2007
Number of Days to Update: 30

Source: Nuclear Regulatory Commission
Telephone: 301-415-7169
Last EDR Contact: 07/02/2007
Next Scheduled EDR Contact: 10/01/2007
Data Release Frequency: Quarterly

MINES: Mines Master Index File

Contains all mine identification numbers issued for mines active or opened since 1971. The data also includes violation information.

Date of Government Version: 02/06/2007
Date Data Arrived at EDR: 03/28/2007
Date Made Active in Reports: 05/14/2007
Number of Days to Update: 47

Source: Department of Labor, Mine Safety and Health Administration
Telephone: 303-231-5959
Last EDR Contact: 06/28/2007
Next Scheduled EDR Contact: 09/24/2007
Data Release Frequency: Semi-Annually

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

FINDS: Facility Index System/Facility Registry System

Facility Index System. FINDS contains both facility information and 'pointers' to other sources that contain more detail. EDR includes the following FINDS databases in this report: PCS (Permit Compliance System), AIRS (Aerometric Information Retrieval System), DOCKET (Enforcement Docket used to manage and track information on civil judicial enforcement cases for all environmental statutes), FURS (Federal Underground Injection Control), C-DOCKET (Criminal Docket System used to track criminal enforcement actions for all environmental statutes), FFIS (Federal Facilities Information System), STATE (State Environmental Laws and Statutes), and PADS (PCB Activity Data System).

Date of Government Version: 04/12/2007
Date Data Arrived at EDR: 05/17/2007
Date Made Active in Reports: 07/05/2007
Number of Days to Update: 49

Source: EPA
Telephone: (415) 947-8000
Last EDR Contact: 07/02/2007
Next Scheduled EDR Contact: 10/01/2007
Data Release Frequency: Quarterly

RAATS: RCRA Administrative Action Tracking System

RCRA Administration Action Tracking System. RAATS contains records based on enforcement actions issued under RCRA pertaining to major violators and includes administrative and civil actions brought by the EPA. For administration actions after September 30, 1995, data entry in the RAATS database was discontinued. EPA will retain a copy of the database for historical records. It was necessary to terminate RAATS because a decrease in agency resources made it impossible to continue to update the information contained in the database.

Date of Government Version: 04/17/1995
Date Data Arrived at EDR: 07/03/1995
Date Made Active in Reports: 08/07/1995
Number of Days to Update: 35

Source: EPA
Telephone: 202-564-4104
Last EDR Contact: 06/04/2007
Next Scheduled EDR Contact: 09/03/2007
Data Release Frequency: No Update Planned

BRS: Biennial Reporting System

The Biennial Reporting System is a national system administered by the EPA that collects data on the generation and management of hazardous waste. BRS captures detailed data from two groups: Large Quantity Generators (LQG) and Treatment, Storage, and Disposal Facilities.

Date of Government Version: 12/31/2005
Date Data Arrived at EDR: 03/06/2007
Date Made Active in Reports: 04/13/2007
Number of Days to Update: 38

Source: EPA/NTIS
Telephone: 800-424-9346
Last EDR Contact: 06/12/2007
Next Scheduled EDR Contact: 09/10/2007
Data Release Frequency: Biennially

USGS WATER WELLS: National Water Information System (NWIS)

This database consists of well records in the United States. Available site descriptive information includes well location information (latitude and longitude, well depth, site use, water use, and aquifer).

Date of Government Version: 03/25/2005
Date Data Arrived at EDR: 03/25/2005
Date Made Active in Reports: N/A
Number of Days to Update: 0

Source: USGS
Telephone: N/A
Last EDR Contact: 03/25/2005
Next Scheduled EDR Contact: N/A
Data Release Frequency: N/A

PWS: Public Water System Data

This Safe Drinking Water Information System (SDWIS) file contains public water systems name and address, population served and the primary source of water

Date of Government Version: 02/24/2000
Date Data Arrived at EDR: 04/27/2005
Date Made Active in Reports: N/A
Number of Days to Update: 0

Source: EPA
Telephone: N/A
Last EDR Contact: 05/21/2007
Next Scheduled EDR Contact: 08/20/2007
Data Release Frequency: N/A

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

STATE AND LOCAL RECORDS

HIST CAL-SITES: Calsites Database

The Calsites database contains potential or confirmed hazardous substance release properties. In 1996, California EPA reevaluated and significantly reduced the number of sites in the Calsites database. No longer updated by the state agency. It has been replaced by ENVIROSTOR.

Date of Government Version: 08/08/2005
Date Data Arrived at EDR: 08/03/2006
Date Made Active in Reports: 08/24/2006
Number of Days to Update: 21

Source: Department of Toxic Substance Control
Telephone: 916-323-3400
Last EDR Contact: 05/25/2007
Next Scheduled EDR Contact: 08/27/2007
Data Release Frequency: No Update Planned

CA BOND EXP. PLAN: Bond Expenditure Plan

Department of Health Services developed a site-specific expenditure plan as the basis for an appropriation of Hazardous Substance Cleanup Bond Act funds. It is not updated.

Date of Government Version: 01/01/1989
Date Data Arrived at EDR: 07/27/1994
Date Made Active in Reports: 08/02/1994
Number of Days to Update: 6

Source: Department of Health Services
Telephone: 916-255-2118
Last EDR Contact: 05/31/1994
Next Scheduled EDR Contact: N/A
Data Release Frequency: No Update Planned

SCH: School Property Evaluation Program

This category contains proposed and existing school sites that are being evaluated by DTSC for possible hazardous materials contamination. In some cases, these properties may be listed in the CalSites category depending on the level of threat to public health and safety or the environment they pose.

Date of Government Version: 05/29/2007
Date Data Arrived at EDR: 05/30/2007
Date Made Active in Reports: 06/29/2007
Number of Days to Update: 30

Source: Department of Toxic Substances Control
Telephone: 916-323-3400
Last EDR Contact: 05/30/2007
Next Scheduled EDR Contact: 08/27/2007
Data Release Frequency: Quarterly

TOXIC PITS: Toxic Pits Cleanup Act Sites

Toxic PITS Cleanup Act Sites. TOXIC PITS identifies sites suspected of containing hazardous substances where cleanup has not yet been completed.

Date of Government Version: 07/01/1995
Date Data Arrived at EDR: 08/30/1995
Date Made Active in Reports: 09/26/1995
Number of Days to Update: 27

Source: State Water Resources Control Board
Telephone: 916-227-4364
Last EDR Contact: 07/30/2007
Next Scheduled EDR Contact: 10/29/2007
Data Release Frequency: No Update Planned

SWF/LF (SWIS): Solid Waste Information System

Active, Closed and Inactive Landfills. SWF/LF records typically contain an inve ntory of solid waste disposal facilities or landfills. These may be active or i nactive facilities or open dumps that failed to meet RCRA Section 4004 criteria for solid waste landfills or disposal sites.

Date of Government Version: 06/11/2007
Date Data Arrived at EDR: 06/13/2007
Date Made Active in Reports: 06/29/2007
Number of Days to Update: 16

Source: Integrated Waste Management Board
Telephone: 916-341-6320
Last EDR Contact: 06/13/2007
Next Scheduled EDR Contact: 09/10/2007
Data Release Frequency: Quarterly

CA WDS: Waste Discharge System

Sites which have been issued waste discharge requirements.

Date of Government Version: 06/19/2007
Date Data Arrived at EDR: 06/20/2007
Date Made Active in Reports: 06/29/2007
Number of Days to Update: 9

Source: State Water Resources Control Board
Telephone: 916-341-5227
Last EDR Contact: 06/20/2007
Next Scheduled EDR Contact: 09/17/2007
Data Release Frequency: Quarterly

WMUDS/SWAT: Waste Management Unit Database

Waste Management Unit Database System. WMUDS is used by the State Water Resources Control Board staff and the Regional Water Quality Control Boards for program tracking and inventory of waste management units. WMUDS is composed of the following databases: Facility Information, Scheduled Inspections Information, Waste Management Unit Information, SWAT Program Information, SWAT Report Summary Information, SWAT Report Summary Data, Chapter 15 (formerly Subchapter 15) Information, Chapter 15 Monitoring Parameters, TPCA Program Information, RCRA Program Information, Closure Information, and Interested Parties Information.

Date of Government Version: 04/01/2000
Date Data Arrived at EDR: 04/10/2000
Date Made Active in Reports: 05/10/2000
Number of Days to Update: 30

Source: State Water Resources Control Board
Telephone: 916-227-4448
Last EDR Contact: 06/04/2007
Next Scheduled EDR Contact: 09/03/2007
Data Release Frequency: Quarterly

CORTESE: "Cortese" Hazardous Waste & Substances Sites List

The sites for the list are designated by the State Water Resource Control Board (LUST), the Integrated Waste Board (SWF/LS), and the Department of Toxic Substances Control (Cal-Sites). This listing is no longer updated by the state agency.

Date of Government Version: 04/01/2001
Date Data Arrived at EDR: 05/29/2001
Date Made Active in Reports: 07/26/2001
Number of Days to Update: 58

Source: CAL EPA/Office of Emergency Information
Telephone: 916-323-3400
Last EDR Contact: 07/23/2007
Next Scheduled EDR Contact: 10/22/2007
Data Release Frequency: No Update Planned

SWRCY: Recycler Database

A listing of recycling facilities in California.

Date of Government Version: 07/09/2007
Date Data Arrived at EDR: 07/11/2007
Date Made Active in Reports: 08/09/2007
Number of Days to Update: 29

Source: Department of Conservation
Telephone: 916-323-3836
Last EDR Contact: 07/11/2007
Next Scheduled EDR Contact: 10/08/2007
Data Release Frequency: Quarterly

LUST REG 1: Active Toxic Site Investigation

Del Norte, Humboldt, Lake, Mendocino, Modoc, Siskiyou, Sonoma, Trinity counties. For more current information, please refer to the State Water Resources Control Board's LUST database.

Date of Government Version: 02/01/2001
Date Data Arrived at EDR: 02/28/2001
Date Made Active in Reports: 03/29/2001
Number of Days to Update: 29

Source: California Regional Water Quality Control Board North Coast (1)
Telephone: 707-570-3769
Last EDR Contact: 05/21/2007
Next Scheduled EDR Contact: 08/20/2007
Data Release Frequency: No Update Planned

LUST REG 9: Leaking Underground Storage Tank Report

Orange, Riverside, San Diego counties. For more current information, please refer to the State Water Resources Control Board's LUST database.

Date of Government Version: 03/01/2001
Date Data Arrived at EDR: 04/23/2001
Date Made Active in Reports: 05/21/2001
Number of Days to Update: 28

Source: California Regional Water Quality Control Board San Diego Region (9)
Telephone: 858-637-5595
Last EDR Contact: 07/16/2007
Next Scheduled EDR Contact: 10/15/2007
Data Release Frequency: No Update Planned

LUST REG 8: Leaking Underground Storage Tanks

California Regional Water Quality Control Board Santa Ana Region (8). For more current information, please refer to the State Water Resources Control Board's LUST database.

Date of Government Version: 02/14/2005
Date Data Arrived at EDR: 02/15/2005
Date Made Active in Reports: 03/28/2005
Number of Days to Update: 41

Source: California Regional Water Quality Control Board Santa Ana Region (8)
Telephone: 909-782-4496
Last EDR Contact: 08/06/2007
Next Scheduled EDR Contact: 11/05/2007
Data Release Frequency: Varies

LUST REG 7: Leaking Underground Storage Tank Case Listing
Leaking Underground Storage Tank locations. Imperial, Riverside, San Diego, Santa Barbara counties.

Date of Government Version: 02/26/2004
Date Data Arrived at EDR: 02/26/2004
Date Made Active in Reports: 03/24/2004
Number of Days to Update: 27

Source: California Regional Water Quality Control Board Colorado River Basin Region (7)
Telephone: 760-776-8943
Last EDR Contact: 05/21/2007
Next Scheduled EDR Contact: 08/20/2007
Data Release Frequency: No Update Planned

LUST REG 6V: Leaking Underground Storage Tank Case Listing
Leaking Underground Storage Tank locations. Inyo, Kern, Los Angeles, Mono, San Bernardino counties.

Date of Government Version: 06/07/2005
Date Data Arrived at EDR: 06/07/2005
Date Made Active in Reports: 06/29/2005
Number of Days to Update: 22

Source: California Regional Water Quality Control Board Victorville Branch Office (6)
Telephone: 760-241-7365
Last EDR Contact: 07/02/2007
Next Scheduled EDR Contact: 10/01/2007
Data Release Frequency: No Update Planned

LUST REG 6L: Leaking Underground Storage Tank Case Listing
For more current information, please refer to the State Water Resources Control Board's LUST database.

Date of Government Version: 09/09/2003
Date Data Arrived at EDR: 09/10/2003
Date Made Active in Reports: 10/07/2003
Number of Days to Update: 27

Source: California Regional Water Quality Control Board Lahontan Region (6)
Telephone: 530-542-5572
Last EDR Contact: 06/04/2007
Next Scheduled EDR Contact: 09/03/2007
Data Release Frequency: No Update Planned

LUST REG 5: Leaking Underground Storage Tank Database
Leaking Underground Storage Tank locations. Alameda, Alpine, Amador, Butte, Colusa, Contra Costa, Calveras, El Dorado, Fresno, Glenn, Kern, Kings, Lake, Lassen, Madera, Mariposa, Merced, Modoc, Napa, Nevada, Placer, Plumas, Sacramento, San Joaquin, Shasta, Solano, Stanislaus, Sutter, Tehama, Tulare, Tuolumne, Yolo, Yuba counties.

Date of Government Version: 07/01/2007
Date Data Arrived at EDR: 08/01/2007
Date Made Active in Reports: 08/09/2007
Number of Days to Update: 8

Source: California Regional Water Quality Control Board Central Valley Region (5)
Telephone: 916-464-4834
Last EDR Contact: 08/01/2007
Next Scheduled EDR Contact: 10/01/2007
Data Release Frequency: Quarterly

LUST REG 4: Underground Storage Tank Leak List
Los Angeles, Ventura counties. For more current information, please refer to the State Water Resources Control Board's LUST database.

Date of Government Version: 09/07/2004
Date Data Arrived at EDR: 09/07/2004
Date Made Active in Reports: 10/12/2004
Number of Days to Update: 35

Source: California Regional Water Quality Control Board Los Angeles Region (4)
Telephone: 213-576-6710
Last EDR Contact: 06/25/2007
Next Scheduled EDR Contact: 09/24/2007
Data Release Frequency: No Update Planned

LUST REG 3: Leaking Underground Storage Tank Database
Leaking Underground Storage Tank locations. Monterey, San Benito, San Luis Obispo, Santa Barbara, Santa Cruz counties.

Date of Government Version: 05/19/2003
Date Data Arrived at EDR: 05/19/2003
Date Made Active in Reports: 06/02/2003
Number of Days to Update: 14

Source: California Regional Water Quality Control Board Central Coast Region (3)
Telephone: 805-542-4786
Last EDR Contact: 08/13/2007
Next Scheduled EDR Contact: 11/12/2007
Data Release Frequency: No Update Planned

LUST REG 2: Fuel Leak List
Leaking Underground Storage Tank locations. Alameda, Contra Costa, Marin, Napa, San Francisco, San Mateo, Santa Clara, Solano, Sonoma counties.

Date of Government Version: 09/30/2004
Date Data Arrived at EDR: 10/20/2004
Date Made Active in Reports: 11/19/2004
Number of Days to Update: 30

Source: California Regional Water Quality Control Board San Francisco Bay Region (2)
Telephone: 510-622-2433
Last EDR Contact: 07/09/2007
Next Scheduled EDR Contact: 10/08/2007
Data Release Frequency: Quarterly

LUST: Geotracker's Leaking Underground Fuel Tank Report

Leaking Underground Storage Tank Incident Reports. LUST records contain an inventory of reported leaking underground storage tank incidents. Not all states maintain these records, and the information stored varies by state. For more information on a particular leaking underground storage tank sites, please contact the appropriate regulatory agency.

Date of Government Version: 07/10/2007
Date Data Arrived at EDR: 07/11/2007
Date Made Active in Reports: 08/09/2007
Number of Days to Update: 29

Source: State Water Resources Control Board
Telephone: see region list
Last EDR Contact: 07/11/2007
Next Scheduled EDR Contact: 10/08/2007
Data Release Frequency: Quarterly

CA FID UST: Facility Inventory Database

The Facility Inventory Database (FID) contains a historical listing of active and inactive underground storage tank locations from the State Water Resource Control Board. Refer to local/county source for current data.

Date of Government Version: 10/31/1994
Date Data Arrived at EDR: 09/05/1995
Date Made Active in Reports: 09/29/1995
Number of Days to Update: 24

Source: California Environmental Protection Agency
Telephone: 916-341-5851
Last EDR Contact: 12/28/1998
Next Scheduled EDR Contact: N/A
Data Release Frequency: No Update Planned

SLIC: Statewide SLIC Cases

The SLIC (Spills, Leaks, Investigations and Cleanup) program is designed to protect and restore water quality from spills, leaks, and similar discharges.

Date of Government Version: 08/03/2007
Date Data Arrived at EDR: 08/03/2007
Date Made Active in Reports: 08/09/2007
Number of Days to Update: 6

Source: State Water Resources Control Board
Telephone: 866-480-1028
Last EDR Contact: 08/03/2007
Next Scheduled EDR Contact: 10/08/2007
Data Release Frequency: Varies

SLIC REG 1: Active Toxic Site Investigations

The SLIC (Spills, Leaks, Investigations and Cleanup) program is designed to protect and restore water quality from spills, leaks, and similar discharges.

Date of Government Version: 04/03/2003
Date Data Arrived at EDR: 04/07/2003
Date Made Active in Reports: 04/25/2003
Number of Days to Update: 18

Source: California Regional Water Quality Control Board, North Coast Region (1)
Telephone: 707-576-2220
Last EDR Contact: 05/21/2007
Next Scheduled EDR Contact: 08/20/2007
Data Release Frequency: No Update Planned

SLIC REG 2: Spills, Leaks, Investigation & Cleanup Cost Recovery Listing

The SLIC (Spills, Leaks, Investigations and Cleanup) program is designed to protect and restore water quality from spills, leaks, and similar discharges.

Date of Government Version: 09/30/2004
Date Data Arrived at EDR: 10/20/2004
Date Made Active in Reports: 11/19/2004
Number of Days to Update: 30

Source: Regional Water Quality Control Board San Francisco Bay Region (2)
Telephone: 510-286-0457
Last EDR Contact: 07/09/2007
Next Scheduled EDR Contact: 10/08/2007
Data Release Frequency: Quarterly

SLIC REG 3: Spills, Leaks, Investigation & Cleanup Cost Recovery Listing

The SLIC (Spills, Leaks, Investigations and Cleanup) program is designed to protect and restore water quality from spills, leaks, and similar discharges.

Date of Government Version: 05/18/2006
Date Data Arrived at EDR: 05/18/2006
Date Made Active in Reports: 06/15/2006
Number of Days to Update: 28

Source: California Regional Water Quality Control Board Central Coast Region (3)
Telephone: 805-549-3147
Last EDR Contact: 08/13/2007
Next Scheduled EDR Contact: 11/12/2007
Data Release Frequency: Semi-Annually

SLIC REG 4: Spills, Leaks, Investigation & Cleanup Cost Recovery Listing
The SLIC (Spills, Leaks, Investigations and Cleanup) program is designed to protect and restore water quality from spills, leaks, and similar discharges.

Date of Government Version: 11/17/2004
Date Data Arrived at EDR: 11/18/2004
Date Made Active in Reports: 01/04/2005
Number of Days to Update: 47

Source: Region Water Quality Control Board Los Angeles Region (4)
Telephone: 213-576-6600
Last EDR Contact: 07/23/2007
Next Scheduled EDR Contact: 10/22/2007
Data Release Frequency: Varies

SLIC REG 5: Spills, Leaks, Investigation & Cleanup Cost Recovery Listing
The SLIC (Spills, Leaks, Investigations and Cleanup) program is designed to protect and restore water quality from spills, leaks, and similar discharges.

Date of Government Version: 04/01/2005
Date Data Arrived at EDR: 04/05/2005
Date Made Active in Reports: 04/21/2005
Number of Days to Update: 16

Source: Regional Water Quality Control Board Central Valley Region (5)
Telephone: 916-464-3291
Last EDR Contact: 07/02/2007
Next Scheduled EDR Contact: 10/01/2007
Data Release Frequency: Semi-Annually

SLIC REG 6V: Spills, Leaks, Investigation & Cleanup Cost Recovery Listing
The SLIC (Spills, Leaks, Investigations and Cleanup) program is designed to protect and restore water quality from spills, leaks, and similar discharges.

Date of Government Version: 05/24/2005
Date Data Arrived at EDR: 05/25/2005
Date Made Active in Reports: 06/16/2005
Number of Days to Update: 22

Source: Regional Water Quality Control Board, Victorville Branch
Telephone: 619-241-6583
Last EDR Contact: 07/02/2007
Next Scheduled EDR Contact: 10/01/2007
Data Release Frequency: Semi-Annually

SLIC REG 6L: SLIC Sites
The SLIC (Spills, Leaks, Investigations and Cleanup) program is designed to protect and restore water quality from spills, leaks, and similar discharges.

Date of Government Version: 09/07/2004
Date Data Arrived at EDR: 09/07/2004
Date Made Active in Reports: 10/12/2004
Number of Days to Update: 35

Source: California Regional Water Quality Control Board, Lahontan Region
Telephone: 530-542-5574
Last EDR Contact: 06/04/2007
Next Scheduled EDR Contact: 09/03/2007
Data Release Frequency: No Update Planned

SLIC REG 7: SLIC List
The SLIC (Spills, Leaks, Investigations and Cleanup) program is designed to protect and restore water quality from spills, leaks, and similar discharges.

Date of Government Version: 11/24/2004
Date Data Arrived at EDR: 11/29/2004
Date Made Active in Reports: 01/04/2005
Number of Days to Update: 36

Source: California Regional Quality Control Board, Colorado River Basin Region
Telephone: 760-346-7491
Last EDR Contact: 05/21/2007
Next Scheduled EDR Contact: 08/20/2007
Data Release Frequency: No Update Planned

SLIC REG 8: Spills, Leaks, Investigation & Cleanup Cost Recovery Listing
The SLIC (Spills, Leaks, Investigations and Cleanup) program is designed to protect and restore water quality from spills, leaks, and similar discharges.

Date of Government Version: 07/17/2007
Date Data Arrived at EDR: 07/18/2007
Date Made Active in Reports: 08/09/2007
Number of Days to Update: 22

Source: California Region Water Quality Control Board Santa Ana Region (8)
Telephone: 951-782-3298
Last EDR Contact: 07/17/2007
Next Scheduled EDR Contact: 10/01/2007
Data Release Frequency: Semi-Annually

SLIC REG 9: Spills, Leaks, Investigation & Cleanup Cost Recovery Listing
The SLIC (Spills, Leaks, Investigations and Cleanup) program is designed to protect and restore water quality from spills, leaks, and similar discharges.

Date of Government Version: 03/13/2007
Date Data Arrived at EDR: 03/14/2007
Date Made Active in Reports: 04/06/2007
Number of Days to Update: 23

Source: California Regional Water Quality Control Board San Diego Region (9)
Telephone: 858-467-2980
Last EDR Contact: 06/29/2007
Next Scheduled EDR Contact: 08/27/2007
Data Release Frequency: Annually

UST: Active UST Facilities
Active UST facilities gathered from the local regulatory agencies

Date of Government Version: 07/10/2007
Date Data Arrived at EDR: 07/11/2007
Date Made Active in Reports: 07/25/2007
Number of Days to Update: 14

Source: SWRCB
Telephone: 916-480-1028
Last EDR Contact: 07/11/2007
Next Scheduled EDR Contact: 10/08/2007
Data Release Frequency: Semi-Annually

UST MENDOCINO: Mendocino County UST Database
A listing of underground storage tank locations in Mendocino County.

Date of Government Version: 06/25/2007
Date Data Arrived at EDR: 06/26/2007
Date Made Active in Reports: 07/25/2007
Number of Days to Update: 29

Source: Department of Public Health
Telephone: 707-463-4466
Last EDR Contact: 06/25/2007
Next Scheduled EDR Contact: 09/24/2007
Data Release Frequency: Varies

HIST UST: Hazardous Substance Storage Container Database
The Hazardous Substance Storage Container Database is a historical listing of UST sites. Refer to local/county source for current data.

Date of Government Version: 10/15/1990
Date Data Arrived at EDR: 01/25/1991
Date Made Active in Reports: 02/12/1991
Number of Days to Update: 18

Source: State Water Resources Control Board
Telephone: 916-341-5851
Last EDR Contact: 07/26/2001
Next Scheduled EDR Contact: N/A
Data Release Frequency: No Update Planned

LIENS: Environmental Liens Listing
A listing of property locations with environmental liens for California where DTSC is a lien holder.

Date of Government Version: 05/07/2007
Date Data Arrived at EDR: 05/08/2007
Date Made Active in Reports: 05/25/2007
Number of Days to Update: 17

Source: Department of Toxic Substances Control
Telephone: 916-323-3400
Last EDR Contact: 08/06/2007
Next Scheduled EDR Contact: 11/05/2007
Data Release Frequency: Varies

AST: Aboveground Petroleum Storage Tank Facilities
Registered Aboveground Storage Tanks.

Date of Government Version: 05/01/2007
Date Data Arrived at EDR: 05/01/2007
Date Made Active in Reports: 05/25/2007
Number of Days to Update: 24

Source: State Water Resources Control Board
Telephone: 916-341-5712
Last EDR Contact: 07/30/2007
Next Scheduled EDR Contact: 10/29/2007
Data Release Frequency: Quarterly

SWEEPS UST: SWEEPS UST Listing

Statewide Environmental Evaluation and Planning System. This underground storage tank listing was updated and maintained by a company contacted by the SWRCB in the early 1980's. The listing is no longer updated or maintained. The local agency is the contact for more information on a site on the SWEEPS list.

Date of Government Version: 06/01/1994
Date Data Arrived at EDR: 07/07/2005
Date Made Active in Reports: 08/11/2005
Number of Days to Update: 35

Source: State Water Resources Control Board
Telephone: N/A
Last EDR Contact: 06/03/2005
Next Scheduled EDR Contact: N/A
Data Release Frequency: No Update Planned

CHMIRS: California Hazardous Material Incident Report System

California Hazardous Material Incident Reporting System. CHMIRS contains information on reported hazardous material incidents (accidental releases or spills).

Date of Government Version: 12/31/2005
Date Data Arrived at EDR: 02/23/2007
Date Made Active in Reports: 04/06/2007
Number of Days to Update: 42

Source: Office of Emergency Services
Telephone: 916-845-8400
Last EDR Contact: 05/21/2007
Next Scheduled EDR Contact: 08/20/2007
Data Release Frequency: Varies

NOTIFY 65: Proposition 65 Records

Proposition 65 Notification Records. NOTIFY 65 contains facility notifications about any release which could impact drinking water and thereby expose the public to a potential health risk.

Date of Government Version: 10/21/1993
Date Data Arrived at EDR: 11/01/1993
Date Made Active in Reports: 11/19/1993
Number of Days to Update: 18

Source: State Water Resources Control Board
Telephone: 916-445-3846
Last EDR Contact: 07/16/2007
Next Scheduled EDR Contact: 10/15/2007
Data Release Frequency: No Update Planned

DEED: Deed Restriction Listing

Site Mitigation and Brownfields Reuse Program Facility Sites with Deed Restrictions & Hazardous Waste Management Program Facility Sites with Deed / Land Use Restriction. The DTSC Site Mitigation and Brownfields Reuse Program (SMBRP) list includes sites cleaned up under the program's oversight and generally does not include current or former hazardous waste facilities that required a hazardous waste facility permit. The list represents deed restrictions that are active. Some sites have multiple deed restrictions. The DTSC Hazardous Waste Management Program (HWMP) has developed a list of current or former hazardous waste facilities that have a recorded land use restriction at the local county recorder's office. The land use restrictions on this list were required by the DTSC HWMP as a result of the presence of hazardous substances that remain on site after the facility (or part of the facility) has been closed or cleaned up. The types of land use restriction include deed notice, deed restriction, or a land use restriction that binds current and future owners.

Date of Government Version: 07/02/2007
Date Data Arrived at EDR: 07/03/2007
Date Made Active in Reports: 08/09/2007
Number of Days to Update: 37

Source: Department of Toxic Substances Control
Telephone: 916-323-3400
Last EDR Contact: 07/03/2007
Next Scheduled EDR Contact: 10/01/2007
Data Release Frequency: Semi-Annually

VCP: Voluntary Cleanup Program Properties

Contains low threat level properties with either confirmed or unconfirmed releases and the project proponents have request that DTSC oversee investigation and/or cleanup activities and have agreed to provide coverage for DTSC's costs.

Date of Government Version: 05/29/2007
Date Data Arrived at EDR: 05/30/2007
Date Made Active in Reports: 06/29/2007
Number of Days to Update: 30

Source: Department of Toxic Substances Control
Telephone: 916-323-3400
Last EDR Contact: 05/30/2007
Next Scheduled EDR Contact: 08/27/2007
Data Release Frequency: Quarterly

DRYCLEANERS: Cleaner Facilities

A list of drycleaner related facilities that have EPA ID numbers. These are facilities with certain SIC codes: power laundries, family and commercial; garment pressing and cleaner's agents; linen supply; coin-operated laundries and cleaning; drycleaning plants, except rugs; carpet and upholster cleaning; industrial launderers; laundry and garment services.

Date of Government Version: 07/31/2007
Date Data Arrived at EDR: 07/31/2007
Date Made Active in Reports: 08/09/2007
Number of Days to Update: 9

Source: Department of Toxic Substance Control
Telephone: 916-327-4498
Last EDR Contact: 07/30/2007
Next Scheduled EDR Contact: 10/01/2007
Data Release Frequency: Annually

WIP: Well Investigation Program Case List

Well Investigation Program case in the San Gabriel and San Fernando Valley area.

Date of Government Version: 03/01/2007
Date Data Arrived at EDR: 03/13/2007
Date Made Active in Reports: 04/06/2007
Number of Days to Update: 24

Source: Los Angeles Water Quality Control Board
Telephone: 213-576-6726
Last EDR Contact: 07/27/2007
Next Scheduled EDR Contact: 10/22/2007
Data Release Frequency: Varies

CDL: Clandestine Drug Labs

A listing of drug lab locations. Listing of a location in this database does not indicate that any illegal drug lab materials were or were not present there, and does not constitute a determination that the location either requires or does not require additional cleanup work.

Date of Government Version: 12/31/2006
Date Data Arrived at EDR: 03/07/2007
Date Made Active in Reports: 04/06/2007
Number of Days to Update: 30

Source: Department of Toxic Substances Control
Telephone: 916-255-6504
Last EDR Contact: 07/23/2007
Next Scheduled EDR Contact: 10/22/2007
Data Release Frequency: Varies

RESPONSE: State Response Sites

Identifies confirmed release sites where DTSC is involved in remediation, either in a lead or oversight capacity. These confirmed release sites are generally high-priority and high potential risk.

Date of Government Version: 05/29/2007
Date Data Arrived at EDR: 05/30/2007
Date Made Active in Reports: 06/29/2007
Number of Days to Update: 30

Source: Department of Toxic Substances Control
Telephone: 916-323-3400
Last EDR Contact: 05/30/2007
Next Scheduled EDR Contact: 08/27/2007
Data Release Frequency: Quarterly

HAZNET: Facility and Manifest Data

Facility and Manifest Data. The data is extracted from the copies of hazardous waste manifests received each year by the DTSC. The annual volume of manifests is typically 700,000 - 1,000,000 annually, representing approximately 350,000 - 500,000 shipments. Data are from the manifests submitted without correction, and therefore many contain some invalid values for data elements such as generator ID, TSD ID, waste category, and disposal method.

Date of Government Version: 12/31/2005
Date Data Arrived at EDR: 11/20/2006
Date Made Active in Reports: 01/03/2007
Number of Days to Update: 44

Source: California Environmental Protection Agency
Telephone: 916-255-1136
Last EDR Contact: 08/09/2007
Next Scheduled EDR Contact: 11/05/2007
Data Release Frequency: Annually

EMI: Emissions Inventory Data

Toxics and criteria pollutant emissions data collected by the ARB and local air pollution agencies.

Date of Government Version: 12/31/2005
Date Data Arrived at EDR: 04/17/2007
Date Made Active in Reports: 05/10/2007
Number of Days to Update: 23

Source: California Air Resources Board
Telephone: 916-322-2990
Last EDR Contact: 07/20/2007
Next Scheduled EDR Contact: 10/15/2007
Data Release Frequency: Varies

HAULERS: Registered Waste Tire Haulers Listing
A listing of registered waste tire haulers.

Date of Government Version: 06/07/2007
Date Data Arrived at EDR: 06/08/2007
Date Made Active in Reports: 06/29/2007
Number of Days to Update: 21

Source: Integrated Waste Management Board
Telephone: 916-341-6422
Last EDR Contact: 05/11/2007
Next Scheduled EDR Contact: N/A
Data Release Frequency: Varies

ENVIROSTOR: EnviroStor Database
The Department of Toxic Substances Control's (DTSC's) Site Mitigation and Brownfields Reuse Program's (SMBRP's) EnviroStor database identifes sites that have known contamination or sites for which there may be reasons to investigate further. The database includes the following site types: Federal Superfund sites (National Priorities List (NPL)); State Response, including Military Facilities and State Superfund; Voluntary Cleanup; and School sites. EnviroStor provides similar information to the information that was available in CalSites, and provides additional site information, including, but not limited to, identification of formerly-contaminated properties that have been released for reuse, properties where environmental deed restrictions have been recorded to prevent inappropriate land uses, and risk characterization information that is used to assess potential impacts to public health and the environment at contaminated sites.

Date of Government Version: 05/29/2007
Date Data Arrived at EDR: 05/30/2007
Date Made Active in Reports: 06/29/2007
Number of Days to Update: 30

Source: Department of Toxic Substances Control
Telephone: 916-323-3400
Last EDR Contact: 05/30/2007
Next Scheduled EDR Contact: 08/27/2007
Data Release Frequency: Quarterly

TRIBAL RECORDS

INDIAN RESERV: Indian Reservations
This map layer portrays Indian administered lands of the United States that have any area equal to or greater than 640 acres.

Date of Government Version: 12/31/2005
Date Data Arrived at EDR: 12/08/2006
Date Made Active in Reports: 01/11/2007
Number of Days to Update: 34

Source: USGS
Telephone: 202-208-3710
Last EDR Contact: 08/09/2007
Next Scheduled EDR Contact: 11/05/2007
Data Release Frequency: Semi-Annually

INDIAN LUST R1: Leaking Underground Storage Tanks on Indian Land
A listing of leaking underground storage tank locations on Indian Land.

Date of Government Version: 12/01/2006
Date Data Arrived at EDR: 12/01/2006
Date Made Active in Reports: 01/29/2007
Number of Days to Update: 59

Source: EPA Region 1
Telephone: 617-918-1313
Last EDR Contact: 05/21/2007
Next Scheduled EDR Contact: 08/20/2007
Data Release Frequency: Varies

INDIAN LUST R7: Leaking Underground Storage Tanks on Indian Land
LUSTs on Indian land in Iowa, Kansas, and Nebraska

Date of Government Version: 06/01/2007
Date Data Arrived at EDR: 06/14/2007
Date Made Active in Reports: 07/05/2007
Number of Days to Update: 21

Source: EPA Region 7
Telephone: 913-551-7003
Last EDR Contact: 05/21/2007
Next Scheduled EDR Contact: 08/20/2007
Data Release Frequency: Varies

INDIAN LUST R6: Leaking Underground Storage Tanks on Indian Land
LUSTs on Indian land in New Mexico and Oklahoma.

Date of Government Version: 01/04/2005
Date Data Arrived at EDR: 01/21/2005
Date Made Active in Reports: 02/28/2005
Number of Days to Update: 38

Source: EPA Region 6
Telephone: 214-665-6597
Last EDR Contact: 05/21/2007
Next Scheduled EDR Contact: 08/20/2007
Data Release Frequency: Varies

INDIAN LUST R4: Leaking Underground Storage Tanks on Indian Land
LUSTs on Indian land in Florida, Mississippi and North Carolina.

Date of Government Version: 03/20/2007
Date Data Arrived at EDR: 04/16/2007
Date Made Active in Reports: 05/14/2007
Number of Days to Update: 28

Source: EPA Region 4
Telephone: 404-562-8677
Last EDR Contact: 05/21/2007
Next Scheduled EDR Contact: 08/20/2007
Data Release Frequency: Semi-Annually

INDIAN LUST R8: Leaking Underground Storage Tanks on Indian Land
LUSTs on Indian land in Colorado, Montana, North Dakota, South Dakota, Utah and Wyoming.

Date of Government Version: 05/30/2007
Date Data Arrived at EDR: 05/31/2007
Date Made Active in Reports: 07/05/2007
Number of Days to Update: 35

Source: EPA Region 8
Telephone: 303-312-6271
Last EDR Contact: 05/21/2007
Next Scheduled EDR Contact: 08/20/2007
Data Release Frequency: Quarterly

INDIAN LUST R10: Leaking Underground Storage Tanks on Indian Land
LUSTs on Indian land in Alaska, Idaho, Oregon and Washington.

Date of Government Version: 05/23/2007
Date Data Arrived at EDR: 05/24/2007
Date Made Active in Reports: 07/05/2007
Number of Days to Update: 42

Source: EPA Region 10
Telephone: 206-553-2857
Last EDR Contact: 05/21/2007
Next Scheduled EDR Contact: 08/20/2007
Data Release Frequency: Quarterly

INDIAN LUST R9: Leaking Underground Storage Tanks on Indian Land
LUSTs on Indian land in Arizona, California, New Mexico and Nevada

Date of Government Version: 06/18/2007
Date Data Arrived at EDR: 06/18/2007
Date Made Active in Reports: 07/05/2007
Number of Days to Update: 17

Source: Environmental Protection Agency
Telephone: 415-972-3372
Last EDR Contact: 05/21/2007
Next Scheduled EDR Contact: 08/20/2007
Data Release Frequency: Quarterly

INDIAN UST R6: Underground Storage Tanks on Indian Land

Date of Government Version: 06/06/2007
Date Data Arrived at EDR: 06/07/2007
Date Made Active in Reports: 07/05/2007
Number of Days to Update: 28

Source: EPA Region 6
Telephone: 214-665-7591
Last EDR Contact: 05/21/2007
Next Scheduled EDR Contact: 08/20/2007
Data Release Frequency: Semi-Annually

INDIAN UST R7: Underground Storage Tanks on Indian Land

Date of Government Version: 06/01/2007
Date Data Arrived at EDR: 06/14/2007
Date Made Active in Reports: 07/05/2007
Number of Days to Update: 21

Source: EPA Region 7
Telephone: 913-551-7003
Last EDR Contact: 05/21/2007
Next Scheduled EDR Contact: 08/20/2007
Data Release Frequency: Varies

INDIAN UST R4: Underground Storage Tanks on Indian Land

Date of Government Version: 03/20/2007
Date Data Arrived at EDR: 04/16/2007
Date Made Active in Reports: 05/14/2007
Number of Days to Update: 28

Source: EPA Region 4
Telephone: 404-562-9424
Last EDR Contact: 05/21/2007
Next Scheduled EDR Contact: 08/20/2007
Data Release Frequency: Semi-Annually

INDIAN UST R9: Underground Storage Tanks on Indian Land

Date of Government Version: 06/18/2007
Date Data Arrived at EDR: 06/18/2007
Date Made Active in Reports: 07/05/2007
Number of Days to Update: 17

Source: EPA Region 9
Telephone: 415-972-3368
Last EDR Contact: 05/21/2007
Next Scheduled EDR Contact: 08/20/2007
Data Release Frequency: Quarterly

INDIAN UST R1: Underground Storage Tanks on Indian Land
A listing of underground storage tank locations on Indian Land.

Date of Government Version: 12/01/2006
Date Data Arrived at EDR: 12/01/2006
Date Made Active in Reports: 01/29/2007
Number of Days to Update: 59

Source: EPA, Region 1
Telephone: 617-918-1313
Last EDR Contact: 05/21/2007
Next Scheduled EDR Contact: 08/20/2007
Data Release Frequency: Varies

INDIAN UST R5: Underground Storage Tanks on Indian Land

Date of Government Version: 12/02/2004
Date Data Arrived at EDR: 12/29/2004
Date Made Active in Reports: 02/04/2005
Number of Days to Update: 37

Source: EPA Region 5
Telephone: 312-886-6136
Last EDR Contact: 05/21/2007
Next Scheduled EDR Contact: 08/20/2007
Data Release Frequency: Varies

INDIAN UST R8: Underground Storage Tanks on Indian Land

Date of Government Version: 05/30/2007
Date Data Arrived at EDR: 05/31/2007
Date Made Active in Reports: 07/05/2007
Number of Days to Update: 35

Source: EPA Region 8
Telephone: 303-312-6137
Last EDR Contact: 05/21/2007
Next Scheduled EDR Contact: 08/20/2007
Data Release Frequency: Quarterly

INDIAN UST R10: Underground Storage Tanks on Indian Land

Date of Government Version: 05/23/2007
Date Data Arrived at EDR: 05/24/2007
Date Made Active in Reports: 07/05/2007
Number of Days to Update: 42

Source: EPA Region 10
Telephone: 206-553-2857
Last EDR Contact: 05/21/2007
Next Scheduled EDR Contact: 08/20/2007
Data Release Frequency: Quarterly

EDR PROPRIETARY RECORDS

Manufactured Gas Plants: EDR Proprietary Manufactured Gas Plants
The EDR Proprietary Manufactured Gas Plant Database includes records of coal gas plants (manufactured gas plants) compiled by EDR's researchers. Manufactured gas sites were used in the United States from the 1800's to 1950's to produce a gas that could be distributed and used as fuel. These plants used whale oil, rosin, coal, or a mixture of coal, oil, and water that also produced a significant amount of waste. Many of the byproducts of the gas production, such as coal tar (oily waste containing volatile and non-volatile chemicals), sludges, oils and other compounds are potentially hazardous to human health and the environment. The byproduct from this process was frequently disposed of directly at the plant site and can remain or spread slowly, serving as a continuous source of soil and groundwater contamination.

Date of Government Version: N/A
Date Data Arrived at EDR: N/A
Date Made Active in Reports: N/A
Number of Days to Update: N/A

Source: EDR, Inc.
Telephone: N/A
Last EDR Contact: N/A
Next Scheduled EDR Contact: N/A
Data Release Frequency: No Update Planned

EDR Historical Auto Stations: EDR Proprietary Historic Gas Stations
EDR has searched selected national collections of business directories and has collected listings of potential gas station/filling station/service station sites that were available to EDR researchers. EDR's review was limited to those categories of sources that might, in EDR's opinion, include gas station/filling station/service station establishments. The categories reviewed included, but were not limited to gas, gas station, gasoline station, filling station, auto, automobile repair, auto service station, service station, etc.

Date of Government Version: N/A
Date Data Arrived at EDR: N/A
Date Made Active in Reports: N/A
Number of Days to Update: N/A

Source: EDR, Inc.
Telephone: N/A
Last EDR Contact: N/A
Next Scheduled EDR Contact: N/A
Data Release Frequency: Varies

EDR Historical Cleaners: EDR Proprietary Historic Dry Cleaners

EDR has searched selected national collections of business directories and has collected listings of potential dry cleaner sites that were available to EDR researchers. EDR's review was limited to those categories of sources that might, in EDR's opinion, include dry cleaning establishments. The categories reviewed included, but were not limited to dry cleaners, cleaners, laundry, laundromat, cleaning/laundry, wash & dry etc.

Date of Government Version: N/A
Date Data Arrived at EDR: N/A
Date Made Active in Reports: N/A
Number of Days to Update: N/A

Source: EDR, Inc.
Telephone: N/A
Last EDR Contact: N/A
Next Scheduled EDR Contact: N/A
Data Release Frequency: Varies

COUNTY RECORDS

ALAMEDA COUNTY:

Contaminated Sites

A listing of contaminated sites overseen by the Toxic Release Program (oil and groundwater contamination from chemical releases and spills) and the Leaking Underground Storage Tank Program (soil and ground water contamination from leaking petroleum USTs).

Date of Government Version: 04/24/2007
Date Data Arrived at EDR: 04/26/2007
Date Made Active in Reports: 05/10/2007
Number of Days to Update: 14

Source: Alameda County Environmental Health Services
Telephone: 510-567-6700
Last EDR Contact: 07/23/2007
Next Scheduled EDR Contact: 10/22/2007
Data Release Frequency: Semi-Annually

Underground Tanks

Underground storage tank sites located in Alameda county.

Date of Government Version: 04/24/2007
Date Data Arrived at EDR: 04/26/2007
Date Made Active in Reports: 05/07/2007
Number of Days to Update: 11

Source: Alameda County Environmental Health Services
Telephone: 510-567-6700
Last EDR Contact: 07/23/2007
Next Scheduled EDR Contact: 10/22/2007
Data Release Frequency: Semi-Annually

CONTRA COSTA COUNTY:

Site List

List includes sites from the underground tank, hazardous waste generator and business plan/2185 programs.

Date of Government Version: 05/29/2007
Date Data Arrived at EDR: 05/31/2007
Date Made Active in Reports: 06/29/2007
Number of Days to Update: 29

Source: Contra Costa Health Services Department
Telephone: 925-646-2286
Last EDR Contact: 05/29/2007
Next Scheduled EDR Contact: 08/27/2007
Data Release Frequency: Semi-Annually

FRESNO COUNTY:

CUPA Resources List

Certified Unified Program Agency. CUPA's are responsible for implementing a unified hazardous materials and hazardous waste management regulatory program. The agency provides oversight of businesses that deal with hazardous materials, operate underground storage tanks or aboveground storage tanks.

Date of Government Version: 07/16/2007
Date Data Arrived at EDR: 07/17/2007
Date Made Active in Reports: 08/09/2007
Number of Days to Update: 23

Source: Dept. of Community Health
Telephone: 559-445-3271
Last EDR Contact: 08/06/2007
Next Scheduled EDR Contact: 11/05/2007
Data Release Frequency: Semi-Annually

KERN COUNTY:

Underground Storage Tank Sites & Tank Listing

Kern County Sites and Tanks Listing.

Date of Government Version: 06/20/2007
Date Data Arrived at EDR: 06/21/2007
Date Made Active in Reports: 07/25/2007
Number of Days to Update: 34

Source: Kern County Environment Health Services Department
Telephone: 661-862-8700
Last EDR Contact: 06/18/2007
Next Scheduled EDR Contact: 09/03/2007
Data Release Frequency: Quarterly

LOS ANGELES COUNTY:

San Gabriel Valley Areas of Concern

San Gabriel Valley areas where VOC contamination is at or above the MCL as designated by region 9 EPA office.

Date of Government Version: 12/31/1998
Date Data Arrived at EDR: 07/07/1999
Date Made Active in Reports: N/A
Number of Days to Update: 0

Source: EPA Region 9
Telephone: 415-972-3178
Last EDR Contact: 07/16/2007
Next Scheduled EDR Contact: 10/15/2007
Data Release Frequency: No Update Planned

HMS: Street Number List

Industrial Waste and Underground Storage Tank Sites.

Date of Government Version: 01/31/2007
Date Data Arrived at EDR: 04/12/2007
Date Made Active in Reports: 04/27/2007
Number of Days to Update: 15

Source: Department of Public Works
Telephone: 626-458-3517
Last EDR Contact: 08/13/2007
Next Scheduled EDR Contact: 11/12/2007
Data Release Frequency: Semi-Annually

List of Solid Waste Facilities

Solid Waste Facilities in Los Angeles County.

Date of Government Version: 05/15/2007
Date Data Arrived at EDR: 06/08/2007
Date Made Active in Reports: 06/29/2007
Number of Days to Update: 21

Source: La County Department of Public Works
Telephone: 818-458-5185
Last EDR Contact: 05/16/2007
Next Scheduled EDR Contact: 08/13/2007
Data Release Frequency: Varies

City of Los Angeles Landfills

Landfills owned and maintained by the City of Los Angeles.

Date of Government Version: 03/01/2007
Date Data Arrived at EDR: 03/27/2007
Date Made Active in Reports: 04/27/2007
Number of Days to Update: 31

Source: Engineering & Construction Division
Telephone: 213-473-7869
Last EDR Contact: 06/11/2007
Next Scheduled EDR Contact: 09/10/2007
Data Release Frequency: Varies

Site Mitigation List

Industrial sites that have had some sort of spill or complaint.

Date of Government Version: 05/30/2007
Date Data Arrived at EDR: 07/11/2007
Date Made Active in Reports: 08/09/2007
Number of Days to Update: 29

Source: Community Health Services
Telephone: 323-890-7806
Last EDR Contact: 08/13/2007
Next Scheduled EDR Contact: 11/12/2007
Data Release Frequency: Annually

City of El Segundo Underground Storage Tank

Underground storage tank sites located in El Segundo city.

Date of Government Version: 05/14/2007
Date Data Arrived at EDR: 05/15/2007
Date Made Active in Reports: 06/25/2007
Number of Days to Update: 41

Source: City of El Segundo Fire Department
Telephone: 310-524-2236
Last EDR Contact: 08/13/2007
Next Scheduled EDR Contact: 11/12/2007
Data Release Frequency: Semi-Annually

City of Long Beach Underground Storage Tank

Underground storage tank sites located in the city of Long Beach.

Date of Government Version: 03/28/2003
Date Data Arrived at EDR: 10/23/2003
Date Made Active in Reports: 11/26/2003
Number of Days to Update: 34

Source: City of Long Beach Fire Department
Telephone: 562-570-2563
Last EDR Contact: 05/30/2007
Next Scheduled EDR Contact: 08/20/2007
Data Release Frequency: Annually

City of Torrance Underground Storage Tank

Underground storage tank sites located in the city of Torrance.

Date of Government Version: 05/29/2007
Date Data Arrived at EDR: 05/29/2007
Date Made Active in Reports: 06/25/2007
Number of Days to Update: 27

Source: City of Torrance Fire Department
Telephone: 310-618-2973
Last EDR Contact: 08/13/2007
Next Scheduled EDR Contact: 11/12/2007
Data Release Frequency: Semi-Annually

MARIN COUNTY:

Underground Storage Tank Sites

Currently permitted USTs in Marin County.

Date of Government Version: 05/08/2007
Date Data Arrived at EDR: 06/08/2007
Date Made Active in Reports: 07/25/2007
Number of Days to Update: 47

Source: Public Works Department Waste Management
Telephone: 415-499-6647
Last EDR Contact: 07/30/2007
Next Scheduled EDR Contact: 10/29/2007
Data Release Frequency: Semi-Annually

NAPA COUNTY:

Sites With Reported Contamination

A listing of leaking underground storage tank sites located in Napa county.

Date of Government Version: 07/24/2007
Date Data Arrived at EDR: 07/27/2007
Date Made Active in Reports: 08/09/2007
Number of Days to Update: 13

Source: Napa County Department of Environmental Management
Telephone: 707-253-4269
Last EDR Contact: 07/24/2007
Next Scheduled EDR Contact: 09/24/2007
Data Release Frequency: Semi-Annually

Closed and Operating Underground Storage Tank Sites

Underground storage tank sites located in Napa county.

Date of Government Version: 04/09/2007
Date Data Arrived at EDR: 04/10/2007
Date Made Active in Reports: 04/24/2007
Number of Days to Update: 14

Source: Napa County Department of Environmental Management
Telephone: 707-253-4269
Last EDR Contact: 07/24/2007
Next Scheduled EDR Contact: 09/24/2007
Data Release Frequency: Annually

ORANGE COUNTY:

List of Industrial Site Cleanups

Petroleum and non-petroleum spills.

Date of Government Version: 06/01/2007
Date Data Arrived at EDR: 06/19/2007
Date Made Active in Reports: 06/29/2007
Number of Days to Update: 10

Source: Health Care Agency
Telephone: 714-834-3446
Last EDR Contact: 06/06/2007
Next Scheduled EDR Contact: 09/03/2007
Data Release Frequency: Annually

List of Underground Storage Tank Cleanups

Orange County Underground Storage Tank Cleanups (LUST).

Date of Government Version: 06/01/2007
Date Data Arrived at EDR: 06/19/2007
Date Made Active in Reports: 06/29/2007
Number of Days to Update: 10

Source: Health Care Agency
Telephone: 714-834-3446
Last EDR Contact: 06/06/2007
Next Scheduled EDR Contact: 09/03/2007
Data Release Frequency: Quarterly

List of Underground Storage Tank Facilities

Orange County Underground Storage Tank Facilities (UST).

Date of Government Version: 06/01/2007
Date Data Arrived at EDR: 06/19/2007
Date Made Active in Reports: 07/25/2007
Number of Days to Update: 36

Source: Health Care Agency
Telephone: 714-834-3446
Last EDR Contact: 06/06/2007
Next Scheduled EDR Contact: 09/03/2007
Data Release Frequency: Quarterly

PLACER COUNTY:

Master List of Facilities

List includes aboveground tanks, underground tanks and cleanup sites.

Date of Government Version: 07/23/2007
Date Data Arrived at EDR: 07/23/2007
Date Made Active in Reports: 08/09/2007
Number of Days to Update: 17

Source: Placer County Health and Human Services
Telephone: 530-889-7312
Last EDR Contact: 06/18/2007
Next Scheduled EDR Contact: 09/17/2007
Data Release Frequency: Semi-Annually

RIVERSIDE COUNTY:

Listing of Underground Tank Cleanup Sites

Riverside County Underground Storage Tank Cleanup Sites (LUST).

Date of Government Version: 05/21/2007
Date Data Arrived at EDR: 05/22/2007
Date Made Active in Reports: 06/29/2007
Number of Days to Update: 38

Source: Department of Public Health
Telephone: 951-358-5055
Last EDR Contact: 07/16/2007
Next Scheduled EDR Contact: 10/15/2007
Data Release Frequency: Quarterly

Underground Storage Tank Tank List

Underground storage tank sites located in Riverside county.

Date of Government Version: 05/21/2007
Date Data Arrived at EDR: 05/22/2007
Date Made Active in Reports: 06/25/2007
Number of Days to Update: 34

Source: Health Services Agency
Telephone: 951-358-5055
Last EDR Contact: 07/16/2007
Next Scheduled EDR Contact: 10/15/2007
Data Release Frequency: Quarterly

SACRAMENTO COUNTY:

Contaminated Sites

List of sites where unauthorized releases of potentially hazardous materials have occurred.

Date of Government Version: 05/04/2007
Date Data Arrived at EDR: 05/23/2007
Date Made Active in Reports: 06/29/2007
Number of Days to Update: 37

Source: Sacramento County Environmental Management
Telephone: 916-875-8406
Last EDR Contact: 07/31/2007
Next Scheduled EDR Contact: 10/29/2007
Data Release Frequency: Quarterly

ML - Regulatory Compliance Master List

Any business that has hazardous materials on site - hazardous material storage sites, underground storage tanks, waste generators.

Date of Government Version: 05/04/2007
Date Data Arrived at EDR: 05/24/2007
Date Made Active in Reports: 06/29/2007
Number of Days to Update: 36

Source: Sacramento County Environmental Management
Telephone: 916-875-8406
Last EDR Contact: 07/31/2007
Next Scheduled EDR Contact: 10/29/2007
Data Release Frequency: Quarterly

SAN BERNARDINO COUNTY:

Hazardous Material Permits

This listing includes underground storage tanks, medical waste handlers/generators, hazardous materials handlers, hazardous waste generators, and waste oil generators/handlers.

Date of Government Version: 06/27/2007
Date Data Arrived at EDR: 06/29/2007
Date Made Active in Reports: 08/09/2007
Number of Days to Update: 41

Source: San Bernardino County Fire Department Hazardous Materials Division
Telephone: 909-387-3041
Last EDR Contact: 06/04/2007
Next Scheduled EDR Contact: 09/03/2007
Data Release Frequency: Quarterly

SAN DIEGO COUNTY:

Hazardous Materials Management Division Database

The database includes: HE58 - This report contains the business name, site address, business phone number, establishment 'H' permit number, type of permit, and the business status. HE17 - In addition to providing the same information provided in the HE58 listing, HE17 provides inspection dates, violations received by the establishment, hazardous waste generated, the quantity, method of storage, treatment/disposal of waste and the hauler, and information on underground storage tanks. Unauthorized Release List - Includes a summary of environmental contamination cases in San Diego County (underground tank cases, non-tank cases, groundwater contamination, and soil contamination are included.)

Date of Government Version: 05/16/2005
Date Data Arrived at EDR: 05/18/2005
Date Made Active in Reports: 06/16/2005
Number of Days to Update: 29

Source: Hazardous Materials Management Division
Telephone: 619-338-2268
Last EDR Contact: 07/05/2007
Next Scheduled EDR Contact: 10/01/2007
Data Release Frequency: Quarterly

Solid Waste Facilities

San Diego County Solid Waste Facilities.

Date of Government Version: 11/01/2006
Date Data Arrived at EDR: 01/03/2007
Date Made Active in Reports: 01/24/2007
Number of Days to Update: 21

Source: Department of Health Services
Telephone: 619-338-2209
Last EDR Contact: 06/04/2007
Next Scheduled EDR Contact: 08/20/2007
Data Release Frequency: Varies

Environmental Case Listing

The listing contains all underground tank release cases and projects pertaining to properties contaminated with hazardous substances that are actively under review by the Site Assessment and Mitigation Program.

Date of Government Version: 06/27/2007
Date Data Arrived at EDR: 07/20/2007
Date Made Active in Reports: 08/09/2007
Number of Days to Update: 20

Source: San Diego County Department of Environmental Health
Telephone: 619-338-2371
Last EDR Contact: 07/03/2007
Next Scheduled EDR Contact: 10/01/2007
Data Release Frequency: Varies

SAN FRANCISCO COUNTY:

Local Oversite Facilities

A listing of leaking underground storage tank sites located in San Francisco county.

Date of Government Version: 06/08/2007
Date Data Arrived at EDR: 06/12/2007
Date Made Active in Reports: 06/29/2007
Number of Days to Update: 17

Source: Department Of Public Health San Francisco County
Telephone: 415-252-3920
Last EDR Contact: 06/04/2007
Next Scheduled EDR Contact: 09/03/2007
Data Release Frequency: Quarterly

Underground Storage Tank Information

Underground storage tank sites located in San Francisco county.

Date of Government Version: 06/08/2007
Date Data Arrived at EDR: 06/12/2007
Date Made Active in Reports: 07/25/2007
Number of Days to Update: 43

Source: Department of Public Health
Telephone: 415-252-3920
Last EDR Contact: 06/04/2007
Next Scheduled EDR Contact: 09/03/2007
Data Release Frequency: Quarterly

SAN JOAQUIN COUNTY:

San Joaquin Co. UST

A listing of underground storage tank locations in San Joaquin county.

Date of Government Version: 04/06/2007
Date Data Arrived at EDR: 04/10/2007
Date Made Active in Reports: 04/24/2007
Number of Days to Update: 14

Source: Environmental Health Department
Telephone: N/A
Last EDR Contact: 07/30/2007
Next Scheduled EDR Contact: 10/15/2007
Data Release Frequency: Semi-Annually

SAN MATEO COUNTY:

Business Inventory

List includes Hazardous Materials Business Plan, hazardous waste generators, and underground storage tanks.

Date of Government Version: 07/30/2007
Date Data Arrived at EDR: 07/30/2007
Date Made Active in Reports: 08/09/2007
Number of Days to Update: 10

Source: San Mateo County Environmental Health Services Division
Telephone: 650-363-1921
Last EDR Contact: 07/09/2007
Next Scheduled EDR Contact: 10/08/2007
Data Release Frequency: Annually

Fuel Leak List

A listing of leaking underground storage tank sites located in San Mateo county.

Date of Government Version: 07/09/2007
Date Data Arrived at EDR: 07/10/2007
Date Made Active in Reports: 08/09/2007
Number of Days to Update: 30

Source: San Mateo County Environmental Health Services Division
Telephone: 650-363-1921
Last EDR Contact: 07/09/2007
Next Scheduled EDR Contact: 10/08/2007
Data Release Frequency: Semi-Annually

SANTA CLARA COUNTY:

HIST LUST - Fuel Leak Site Activity Report

A listing of open and closed leaking underground storage tanks. This listing is no longer updated by the county. Leaking underground storage tanks are now handled by the Department of Environmental Health.

Date of Government Version: 03/29/2005
Date Data Arrived at EDR: 03/30/2005
Date Made Active in Reports: 04/21/2005
Number of Days to Update: 22

Source: Santa Clara Valley Water District
Telephone: 408-265-2600
Last EDR Contact: 06/25/2007
Next Scheduled EDR Contact: 09/24/2007
Data Release Frequency: No Update Planned

LOP Listing

A listing of leaking underground storage tanks located in Santa Clara county.

Date of Government Version: 03/26/2007
Date Data Arrived at EDR: 03/27/2007
Date Made Active in Reports: 04/27/2007
Number of Days to Update: 31

Source: Department of Environmental Health
Telephone: 408-918-3417
Last EDR Contact: 06/25/2007
Next Scheduled EDR Contact: 09/24/2007
Data Release Frequency: Varies

Hazardous Material Facilities

Hazardous material facilities, including underground storage tank sites.

Date of Government Version: 06/11/2007
Date Data Arrived at EDR: 06/12/2007
Date Made Active in Reports: 06/29/2007
Number of Days to Update: 17

Source: City of San Jose Fire Department
Telephone: 408-277-4659
Last EDR Contact: 06/04/2007
Next Scheduled EDR Contact: 09/03/2007
Data Release Frequency: Annually

SOLANO COUNTY:

Leaking Underground Storage Tanks

A listing of leaking underground storage tank sites located in Solano county.

Date of Government Version: 07/09/2007
Date Data Arrived at EDR: 08/03/2007
Date Made Active in Reports: 08/09/2007
Number of Days to Update: 6

Source: Solano County Department of Environmental Management
Telephone: 707-784-6770
Last EDR Contact: 07/09/2007
Next Scheduled EDR Contact: 09/24/2007
Data Release Frequency: Quarterly

Underground Storage Tanks

Underground storage tank sites located in Solano county.

Date of Government Version: 03/26/2007
Date Data Arrived at EDR: 04/18/2007
Date Made Active in Reports: 05/07/2007
Number of Days to Update: 19

Source: Solano County Department of Environmental Management
Telephone: 707-784-6770
Last EDR Contact: 07/09/2007
Next Scheduled EDR Contact: 09/24/2007
Data Release Frequency: Quarterly

SONOMA COUNTY:

Leaking Underground Storage Tank Sites

A listing of leaking underground storage tank sites located in Sonoma county.

Date of Government Version: 07/09/2007
Date Data Arrived at EDR: 07/09/2007
Date Made Active in Reports: 08/09/2007
Number of Days to Update: 31

Source: Department of Health Services
Telephone: 707-565-6565
Last EDR Contact: 07/09/2007
Next Scheduled EDR Contact: 10/22/2007
Data Release Frequency: Quarterly

SUTTER COUNTY:

Underground Storage Tanks

Underground storage tank sites located in Sutter county.

Date of Government Version: 05/04/2007
Date Data Arrived at EDR: 05/04/2007
Date Made Active in Reports: 05/24/2007
Number of Days to Update: 20

Source: Sutter County Department of Agriculture
Telephone: 530-822-7500
Last EDR Contact: 07/02/2007
Next Scheduled EDR Contact: 10/01/2007
Data Release Frequency: Semi-Annually

VENTURA COUNTY:

Business Plan, Hazardous Waste Producers, and Operating Underground Tanks

The BWT list indicates by site address whether the Environmental Health Division has Business Plan (B), Waste Producer (W), and/or Underground Tank (T) information.

Date of Government Version: 05/30/2007
Date Data Arrived at EDR: 06/22/2007
Date Made Active in Reports: 06/29/2007
Number of Days to Update: 7

Source: Ventura County Environmental Health Division
Telephone: 805-654-2813
Last EDR Contact: 06/12/2007
Next Scheduled EDR Contact: 09/10/2007
Data Release Frequency: Quarterly

Inventory of Illegal Abandoned and Inactive Sites

Ventura County Inventory of Closed, Illegal Abandoned, and Inactive Sites.

Date of Government Version: 08/01/2006
Date Data Arrived at EDR: 09/05/2006
Date Made Active in Reports: 10/05/2006
Number of Days to Update: 30

Source: Environmental Health Division
Telephone: 805-654-2813
Last EDR Contact: 05/21/2007
Next Scheduled EDR Contact: 08/20/2007
Data Release Frequency: Annually

Listing of Underground Tank Cleanup Sites

Ventura County Underground Storage Tank Cleanup Sites (LUST).

Date of Government Version: 06/05/2007
Date Data Arrived at EDR: 06/21/2007
Date Made Active in Reports: 06/29/2007
Number of Days to Update: 8

Source: Environmental Health Division
Telephone: 805-654-2813
Last EDR Contact: 06/12/2007
Next Scheduled EDR Contact: 09/10/2007
Data Release Frequency: Quarterly

Underground Tank Closed Sites List

Ventura County Operating Underground Storage Tank Sites (UST)/Underground Tank Closed Sites List.

Date of Government Version: 03/28/2007
Date Data Arrived at EDR: 04/24/2007
Date Made Active in Reports: 05/07/2007
Number of Days to Update: 13

Source: Environmental Health Division
Telephone: 805-654-2813
Last EDR Contact: 07/11/2007
Next Scheduled EDR Contact: 10/08/2007
Data Release Frequency: Quarterly

YOLO COUNTY:

Underground Storage Tank Comprehensive Facility Report
Underground storage tank sites located in Yolo county.

Date of Government Version: 04/30/2007
Date Data Arrived at EDR: 05/15/2007
Date Made Active in Reports: 06/25/2007
Number of Days to Update: 41

Source: Yolo County Department of Health
Telephone: 530-666-8646
Last EDR Contact: 07/30/2007
Next Scheduled EDR Contact: 10/15/2007
Data Release Frequency: Annually

OTHER DATABASE(S)

Depending on the geographic area covered by this report, the data provided in these specialty databases may or may not be complete. For example, the existence of wetlands information data in a specific report does not mean that all wetlands in the area covered by the report are included. Moreover, the absence of any reported wetlands information does not necessarily mean that wetlands do not exist in the area covered by the report.

CT MANIFEST: Hazardous Waste Manifest Data
Facility and manifest data. Manifest is a document that lists and tracks hazardous waste from the generator through transporters to a tsd facility.

Date of Government Version: 12/31/2004
Date Data Arrived at EDR: 02/17/2006
Date Made Active in Reports: 04/07/2006
Number of Days to Update: 49

Source: Department of Environmental Protection
Telephone: 860-424-3375
Last EDR Contact: 06/13/2007
Next Scheduled EDR Contact: 09/10/2007
Data Release Frequency: Annually

NJ MANIFEST: Manifest Information
Hazardous waste manifest information.

Date of Government Version: 04/01/2007
Date Data Arrived at EDR: 04/05/2007
Date Made Active in Reports: 05/08/2007
Number of Days to Update: 33

Source: Department of Environmental Protection
Telephone: N/A
Last EDR Contact: 07/03/2007
Next Scheduled EDR Contact: 10/01/2007
Data Release Frequency: Annually

NY MANIFEST: Facility and Manifest Data
Manifest is a document that lists and tracks hazardous waste from the generator through transporters to a TSD facility.

Date of Government Version: 10/26/2006
Date Data Arrived at EDR: 11/29/2006
Date Made Active in Reports: 01/05/2007
Number of Days to Update: 37

Source: Department of Environmental Conservation
Telephone: 518-402-8651
Last EDR Contact: 06/01/2007
Next Scheduled EDR Contact: 08/27/2007
Data Release Frequency: Annually

PA MANIFEST: Manifest Information
Hazardous waste manifest information.

Date of Government Version: 12/31/2005
Date Data Arrived at EDR: 03/17/2006
Date Made Active in Reports: 06/06/2006
Number of Days to Update: 81

Source: Department of Environmental Protection
Telephone: N/A
Last EDR Contact: 06/11/2007
Next Scheduled EDR Contact: 09/10/2007
Data Release Frequency: Annually

RI MANIFEST: Manifest information
Hazardous waste manifest information

Date of Government Version: 04/09/2007
Date Data Arrived at EDR: 04/12/2007
Date Made Active in Reports: 04/27/2007
Number of Days to Update: 15

Source: Department of Environmental Management
Telephone: 401-222-2797
Last EDR Contact: 06/18/2007
Next Scheduled EDR Contact: 09/17/2007
Data Release Frequency: Annually

WI MANIFEST: Manifest Information
Hazardous waste manifest information.

Date of Government Version: 12/31/2006
Date Data Arrived at EDR: 04/27/2007
Date Made Active in Reports: 06/08/2007
Number of Days to Update: 42

Source: Department of Natural Resources
Telephone: N/A
Last EDR Contact: 07/09/2007
Next Scheduled EDR Contact: 10/08/2007
Data Release Frequency: Annually

Oil/Gas Pipelines: This data was obtained by EDR from the USGS in 1994. It is referred to by USGS as GeoData Digital Line Graphs from 1:100,000-Scale Maps. It was extracted from the transportation category including some oil, but primarily gas pipelines.

Electric Power Transmission Line Data
Source: PennWell Corporation
Telephone: (800) 823-6277
This map includes information copyrighted by PennWell Corporation. This information is provided on a best effort basis and PennWell Corporation does not guarantee its accuracy nor warrant its fitness for any particular purpose. Such information has been reprinted with the permission of PennWell.

Sensitive Receptors: There are individuals deemed sensitive receptors due to their fragile immune systems and special sensitivity to environmental discharges. These sensitive receptors typically include the elderly, the sick, and children. While the location of all sensitive receptors cannot be determined, EDR indicates those buildings and facilities - schools, daycares, hospitals, medical centers, and nursing homes - where individuals who are sensitive receptors are likely to be located.

AHA Hospitals:
Source: American Hospital Association, Inc.
Telephone: 312-280-5991
The database includes a listing of hospitals based on the American Hospital Association's annual survey of hospitals.

Medical Centers: Provider of Services Listing
Source: Centers for Medicare & Medicaid Services
Telephone: 410-786-3000
A listing of hospitals with Medicare provider number, produced by Centers of Medicare & Medicaid Services, a federal agency within the U.S. Department of Health and Human Services.

Nursing Homes
Source: National Institutes of Health
Telephone: 301-594-6248
Information on Medicare and Medicaid certified nursing homes in the United States.

Public Schools
Source: National Center for Education Statistics
Telephone: 202-502-7300
The National Center for Education Statistics' primary database on elementary and secondary public education in the United States. It is a comprehensive, annual, national statistical database of all public elementary and secondary schools and school districts, which contains data that are comparable across all states.

Private Schools
Source: National Center for Education Statistics
Telephone: 202-502-7300
The National Center for Education Statistics' primary database on private school locations in the United States.

Daycare Centers: Licensed Facilities
Source: Department of Social Services
Telephone: 916-657-4041

Flood Zone Data: This data, available in select counties across the country, was obtained by EDR in 1999 from the Federal Emergency Management Agency (FEMA). Data depicts 100-year and 500-year flood zones as defined by FEMA.

NWI: National Wetlands Inventory. This data, available in select counties across the country, was obtained by EDR in 2002 and 2005 from the U.S. Fish and Wildlife Service.

Scanned Digital USGS 7.5' Topographic Map (DRG)

Source: United States Geologic Survey

A digital raster graphic (DRG) is a scanned image of a U.S. Geological Survey topographic map. The map images are made by scanning published paper maps on high-resolution scanners. The raster image is georeferenced and fit to the Universal Transverse Mercator (UTM) projection.

STREET AND ADDRESS INFORMATION

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GEOCHECK ®- PHYSICAL SETTING SOURCE ADDENDUM

TARGET PROPERTY ADDRESS

BREA CANYON CUTOFF
1920 BREA CANYONE CUTOFF RD.
ROWLAND HEIGHTS, CA 91789

TARGET PROPERTY COORDINATES

Latitude (North):	33.98380 - 33˚ 59' 1.7''
Longitude (West):	117.8674 - 117˚ 52' 2.6''
Universal Tranverse Mercator:	Zone 11
UTM X (Meters):	419879.3
UTM Y (Meters):	3760504.2
Elevation:	629 ft. above sea level

USGS TOPOGRAPHIC MAP

Target Property Map:	33117-H7 YORBA LINDA, CA
Most Recent Revision:	1981
West Map:	33117-H8 LA HABRA, CA
Most Recent Revision:	1981

EDR's GeoCheck Physical Setting Source Addendum is provided to assist the environmental professional in forming an opinion about the impact of potential contaminant migration.

Assessment of the impact of contaminant migration generally has two principle investigative components:

1. Groundwater flow direction, and
2. Groundwater flow velocity.

Groundwater flow direction may be impacted by surface topography, hydrology, hydrogeology, characteristics of the soil, and nearby wells. Groundwater flow velocity is generally impacted by the nature of the geologic strata.

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

GROUNDWATER FLOW DIRECTION INFORMATION

Groundwater flow direction for a particular site is best determined by a qualified environmental professional using site-specific well data. If such data is not reasonably ascertainable, it may be necessary to rely on other sources of information, such as surface topographic information, hydrologic information, hydrogeologic data collected on nearby properties, and regional groundwater flow information (from deep aquifers).

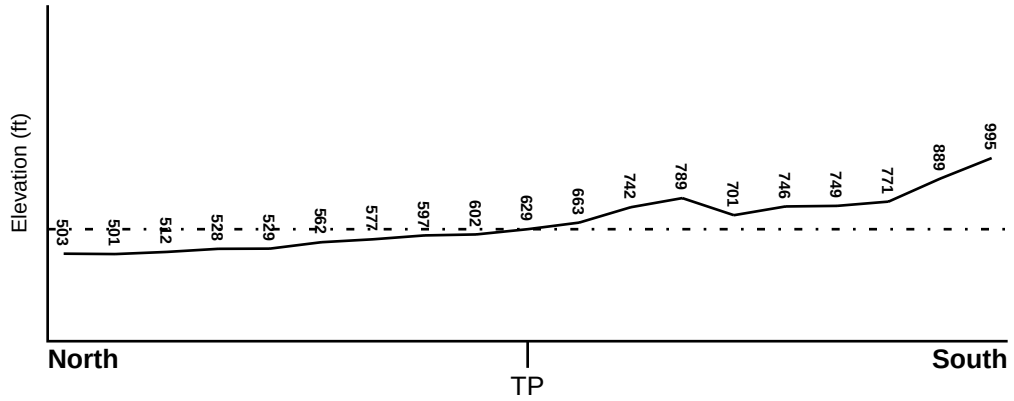
TOPOGRAPHIC INFORMATION

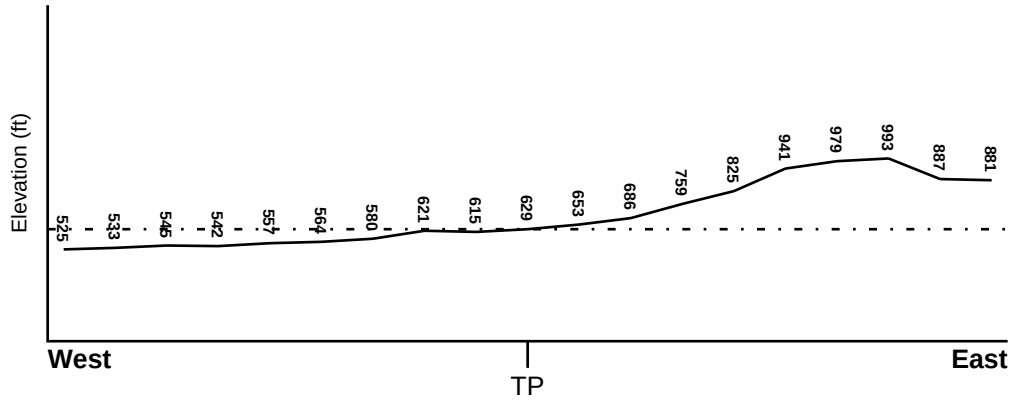
Surface topography may be indicative of the direction of surficial groundwater flow. This information can be used to assist the environmental professional in forming an opinion about the impact of nearby contaminated properties or, should contamination exist on the target property, what downgradient sites might be impacted.

TARGET PROPERTY TOPOGRAPHY

General Topographic Gradient: General NNW

SURROUNDING TOPOGRAPHY: ELEVATION PROFILES





Target Property Elevation: 629 ft.

0 1/2 1 Miles

Source: Topography has been determined from the USGS 7.5' Digital Elevation Model and should be evaluated on a relative (not an absolute) basis. Relative elevation information between sites of close proximity should be field verified.

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

HYDROLOGIC INFORMATION

Surface water can act as a hydrologic barrier to groundwater flow. Such hydrologic information can be used to assist the environmental professional in forming an opinion about the impact of nearby contaminated properties or, should contamination exist on the target property, what downgradient sites might be impacted.

Refer to the Physical Setting Source Map following this summary for hydrologic information (major waterways and bodies of water).

FEMA FLOOD ZONE

Target Property County	FEMA Flood Electronic Data
LOS ANGELES, CA	YES - refer to the Overview Map and Detail Map

Flood Plain Panel at Target Property:	0650430960B
Additional Panels in search area:	0607410000A 0650350000A 0650430980B

NATIONAL WETLAND INVENTORY

NWI Quad at Target Property	NWI Electronic Data Coverage
YORBA LINDA	Not Available

HYDROGEOLOGIC INFORMATION

Hydrogeologic information obtained by installation of wells on a specific site can often be an indicator of groundwater flow direction in the immediate area. Such hydrogeologic information can be used to assist the environmental professional in forming an opinion about the impact of nearby contaminated properties or, should contamination exist on the target property, what downgradient sites might be impacted.

Site-Specific Hydrogeological Data*:

Search Radius:	1.25 miles
Status:	Not found

AQUIFLOW®

Search Radius: 1.000 Mile.

EDR has developed the AQUIFLOW Information System to provide data on the general direction of groundwater flow at specific points. EDR has reviewed reports submitted by environmental professionals to regulatory authorities at select sites and has extracted the date of the report, groundwater flow direction as determined hydrogeologically, and the depth to water table.

MAP ID	LOCATION FROM TP	GENERAL DIRECTION GROUNDWATER FLOW
Not Reported		

* ©1996 Site−specific hydrogeological data gathered by CERCLIS Alerts, Inc., Bainbridge Island, WA. All rights reserved. All of the information and opinions presented are those of the cited EPA report(s), which were completed under a Comprehensive Environmental Response Compensation and Liability Information System (CERCLIS) investigation.

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

GROUNDWATER FLOW VELOCITY INFORMATION

Groundwater flow velocity information for a particular site is best determined by a qualified environmental professional using site specific geologic and soil strata data. If such data are not reasonably ascertainable, it may be necessary to rely on other sources of information, including geologic age identification, rock stratigraphic unit and soil characteristics data collected on nearby properties and regional soil information. In general, contaminant plumes move more quickly through sandy-gravelly types of soils than silty-clayey types of soils.

GEOLOGIC INFORMATION IN GENERAL AREA OF TARGET PROPERTY

Geologic information can be used by the environmental professional in forming an opinion about the relative speed at which contaminant migration may be occurring.

ROCK STRATIGRAPHIC UNIT

Era:	Cenozoic
System:	Tertiary
Series:	Miocene
Code:	Tm *(decoded above as Era, System & Series)*

GEOLOGIC AGE IDENTIFICATION

Category: Stratified Sequence

Geologic Age and Rock Stratigraphic Unit Source: P.G. Schruben, R.E. Arndt and W.J. Bawiec, Geology of the Conterminous U.S. at 1:2,500,000 Scale - a digital representation of the 1974 P.B. King and H.M. Beikman Map, USGS Digital Data Series DDS - 11 (1994).

DOMINANT SOIL COMPOSITION IN GENERAL AREA OF TARGET PROPERTY

The U.S. Department of Agriculture's (USDA) Soil Conservation Service (SCS) leads the National Cooperative Soil Survey (NCSS) and is responsible for collecting, storing, maintaining and distributing soil survey information for privately owned lands in the United States. A soil map in a soil survey is a representation of soil patterns in a landscape. Soil maps for STATSGO are compiled by generalizing more detailed (SSURGO) soil survey maps. The following information is based on Soil Conservation Service STATSGO data.

Soil Component Name:	CALLEGUAS
Soil Surface Texture:	clay loam
Hydrologic Group:	Class D - Very slow infiltration rates. Soils are clayey, have a high water table, or are shallow to an impervious layer.
Soil Drainage Class:	Well drained. Soils have intermediate water holding capacity. Depth to water table is more than 6 feet.

Hydric Status: Soil does not meet the requirements for a hydric soil.

Corrosion Potential - Uncoated Steel:	HIGH
Depth to Bedrock Min:	> 8 inches
Depth to Bedrock Max:	> 20 inches

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

Soil Layer Information							
	Boundary			Classification			
Layer	Upper	Lower	Soil Texture Class	AASHTO Group	Unified Soil	Permeability Rate (in/hr)	Soil Reaction (pH)
1	0 inches	16 inches	clay loam	Silt-Clay Materials (more than 35 pct. passing No. 200), Clayey Soils.	FINE-GRAINED SOILS, Silts and Clays (liquid limit less than 50%), Lean Clay	Max: 2.00 Min: 0.60	Max: 8.40 Min: 7.90
2	16 inches	20 inches	weathered bedrock	Not reported	Not reported	Max: 0.00 Min: 0.00	Max: 0.00 Min: 0.00

OTHER SOIL TYPES IN AREA

Based on Soil Conservation Service STATSGO data, the following additional subordinant soil types may appear within the general area of target property.

Soil Surface Textures: gravelly - loam
clay
sandy loam
loam
cobbly - loam
unweathered bedrock

Surficial Soil Types: gravelly - loam
clay
sandy loam
loam
cobbly - loam
unweathered bedrock

Shallow Soil Types: clay loam
silty clay loam
fine sandy loam
gravelly - loam

Deeper Soil Types: loam
unweathered bedrock
stratified
gravelly - sandy loam

LOCAL / REGIONAL WATER AGENCY RECORDS

EDR Local/Regional Water Agency records provide water well information to assist the environmental professional in assessing sources that may impact ground water flow direction, and in forming an opinion about the impact of contaminant migration on nearby drinking water wells.

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

WELL SEARCH DISTANCE INFORMATION

DATABASE	SEARCH DISTANCE (miles)
Federal USGS	1.000
Federal FRDS PWS	Nearest PWS within 1 mile
State Database	1.000

FEDERAL USGS WELL INFORMATION

MAP ID	WELL ID	LOCATION FROM TP
No Wells Found		

FEDERAL FRDS PUBLIC WATER SUPPLY SYSTEM INFORMATION

MAP ID	WELL ID	LOCATION FROM TP
No PWS System Found		

Note: PWS System location is not always the same as well location.

STATE DATABASE WELL INFORMATION

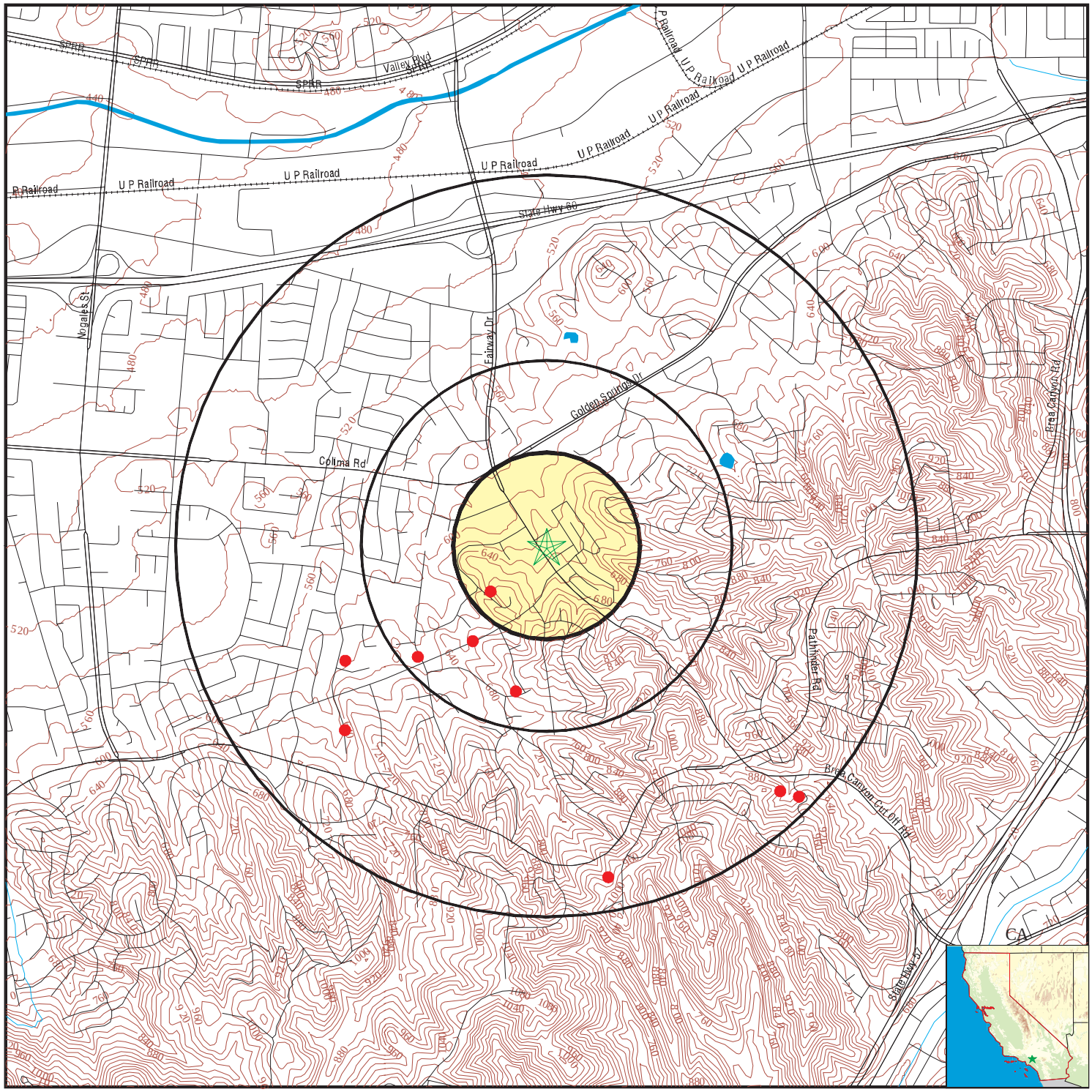
MAP ID	WELL ID	LOCATION FROM TP
No Wells Found		

OTHER STATE DATABASE INFORMATION

STATE OIL/GAS WELL INFORMATION

DISTANCE FROM TP (Miles)	DISTANCE FROM TP (Miles)
1/8 - 1/4 Mile SW	1/4 - 1/2 Mile SW
1/4 - 1/2 Mile SW	1/2 - 1 Mile WSW
1/4 - 1/2 Mile SSW	1/2 - 1 Mile SW
1/2 - 1 Mile SE	1/2 - 1 Mile SE
1/2 - 1 Mile South	

PHYSICAL SETTING SOURCE MAP - 02004336.2r



County Boundary
Major Roads
Contour Lines
Earthquake Fault Lines
Earthquake epicenter, Richter 5 or greater
Water Wells
Public Water Supply Wells
Cluster of Multiple Icons

0 1/4 1/2 1 Miles

Groundwater Flow Direction
GI Indeterminate Groundwater Flow at Location
GV Groundwater Flow Varies at Location
HD Closest Hydrogeological Data
Oil, gas or related wells

N

SITE NAME: Brea Canyon Cutoff	CLIENT: LFR Inc
ADDRESS: 1920 Brea Canyone Cutoff Rd. ROWLAND HEIGHTS CA 91789	CONTACT: Ryan Terwilliger
LAT/LONG: 33.9838 / 117.8674	INQUIRY #: 02004336.2r
	DATE: August 14, 2007 9:35 am

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Direction Distance	Database	EDR ID Number

SW
1/8 - 1/4 Mile **OIL_GAS** **CA10024965**

Apinumber:	Not Reported	Operator:	Not Reported
Lease:	Wilson Ranch Didier	Well no:	1
Field:	LOS ANGELES COUNTY	Cagaso m3 area:	Not Reported
Map:	W1-5	Status cod:	006
Source:	Not Reported		
Latitude:	33.982002		
Longitude:	-117.869141		
Td:	0	Sec:	19
Twn:	2S	Rge:	9W
Bm:	SB	X coord:	0
Y coord:	0	Zone:	Not Reported
Spuddate:	Not Reported	Abanddate:	Not Reported
Comments:	Not Reported	District:	1

SW
1/4 - 1/2 Mile **OIL_GAS** **CA10024943**

Apinumber:	03706326	Operator:	W. J. Frick
Lease:	W. J. Frick Core Hole	Well no:	1
Field:	LOS ANGELES COUNTY	Cagaso m3 area:	Not Reported
Map:	W1-5	Status cod:	006
Source:	hud		
Latitude:	33.980061		
Longitude:	-117.869973		
Td:	1049	Sec:	19
Twn:	2S	Rge:	9W
Bm:	SB	X coord:	0
Y coord:	0	Zone:	Not Reported
Spuddate:	Not Reported	Abanddate:	Not Reported
Comments:	Not Reported	District:	1

SW
1/4 - 1/2 Mile **OIL_GAS** **CA10024940**

Apinumber:	03705783	Operator:	Puente Development Associates
Lease:	Wilson	Well no:	1
Field:	LOS ANGELES COUNTY	Cagaso m3 area:	Not Reported
Map:	W1-5	Status cod:	006
Source:	hud		
Latitude:	33.979445		
Longitude:	-117.872555		
Td:	4049	Sec:	24
Twn:	2S	Rge:	10W
Bm:	SB	X coord:	0
Y coord:	0	Zone:	Not Reported
Spuddate:	Not Reported	Abanddate:	Not Reported
Comments:	Not Reported	District:	1

Direction Distance	Database	EDR ID Number

WSW
1/2 - 1 Mile **OIL_GAS** **CA10024937**

Apinumber:	03705462	Operator:	Melvin Hansen
Lease:	Not Reported	Well no:	1
Field:	LOS ANGELES COUNTY	Cagaso m3 area:	Not Reported
Map:	W1-5	Status cod:	006
Source:	hud		
Latitude:	33.979296		
Longitude:	-117.875961		
Td:	3227	Sec:	24
Twn:	2S	Rge:	10W
Bm:	SB	X coord:	0
Y coord:	0	Zone:	Not Reported
Spuddate:	Not Reported	Abanddate:	Not Reported
Comments:	Not Reported	District:	1

SSW
1/4 - 1/2 Mile **OIL_GAS** **CA10024922**

Apinumber:	03705463	Operator:	Melvin Hansen
Lease:	Hansen	Well no:	3
Field:	LOS ANGELES COUNTY	Cagaso m3 area:	Not Reported
Map:	W1-5	Status cod:	006
Source:	hud		
Latitude:	33.978096		
Longitude:	-117.867953		
Td:	1900	Sec:	19
Twn:	2S	Rge:	9W
Bm:	SB	X coord:	0
Y coord:	0	Zone:	Not Reported
Spuddate:	Not Reported	Abanddate:	Not Reported
Comments:	Not Reported	District:	1

SW
1/2 - 1 Mile **OIL_GAS** **CA10024862**

Apinumber:	Not Reported	Operator:	Not Reported
Lease:	Core Hole Hansen	Well no:	2
Field:	LOS ANGELES COUNTY	Cagaso m3 area:	Not Reported
Map:	W1-5	Status cod:	006
Source:	Not Reported		
Latitude:	33.976579		
Longitude:	-117.875977		
Td:	1104	Sec:	24
Twn:	2S	Rge:	10W
Bm:	SB	X coord:	0
Y coord:	0	Zone:	Not Reported
Spuddate:	Not Reported	Abanddate:	Not Reported
Comments:	Not Reported	District:	1

Direction Distance	Database	EDR ID Number

SE
1/2 - 1 Mile **OIL_GAS** **CA10024799**

Apinumber:	03705110	Operator:	Louis Benjamin Altchuler
Lease:	Larry	Well no:	1
Field:	LOS ANGELES COUNTY	Cagaso m3 area:	Not Reported
Map:	W1-5	Status cod:	006
Source:	hud		
Latitude:	33.974189		
Longitude:	-117.855538		
Td:	1255	Sec:	30
Twn:	2S	Rge:	9W
Bm:	SB	X coord:	0
Y coord:	0	Zone:	Not Reported
Spuddate:	Not Reported	Abanddate:	Not Reported
Comments:	Not Reported	District:	1

SE
1/2 - 1 Mile **OIL_GAS** **CA10024795**

Apinumber:	03705777	Operator:	Carl Pressel, Frank Perry & Gilbert T
Lease:	Thornhill	Well no:	1
Field:	LOS ANGELES COUNTY	Cagaso m3 area:	Not Reported
Map:	W1-5	Status cod:	006
Source:	hud		
Latitude:	33.973976		
Longitude:	-117.854655		
Td:	4535	Sec:	30
Twn:	2S	Rge:	9W
Bm:	SB	X coord:	0
Y coord:	0	Zone:	Not Reported
Spuddate:	Not Reported	Abanddate:	Not Reported
Comments:	Not Reported	District:	1

South
1/2 - 1 Mile **OIL_GAS** **CA10024708**

Apinumber:	03705350	Operator:	Dielectric Laboratories, Inc.
Lease:	Radin	Well no:	2
Field:	LOS ANGELES COUNTY	Cagaso m3 area:	Not Reported
Map:	W1-5	Status cod:	006
Source:	hud		
Latitude:	33.970825		
Longitude:	-117.863614		
Td:	1116	Sec:	30
Twn:	2S	Rge:	9W
Bm:	SB	X coord:	0
Y coord:	0	Zone:	Not Reported
Spuddate:	Not Reported	Abanddate:	Not Reported
Comments:	Not Reported	District:	1

GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS
RADON

AREA RADON INFORMATION

State Database: CA Radon

Radon Test Results

Zip	Total Sites	> 4 Pci/L	Pct. > 4 Pci/L
91789	12	0	0.00

Federal EPA Radon Zone for LOS ANGELES County: 2

Note: Zone 1 indoor average level > 4 pCi/L.
: Zone 2 indoor average level >= 2 pCi/L and <= 4 pCi/L.
: Zone 3 indoor average level < 2 pCi/L.

Federal Area Radon Information for LOS ANGELES COUNTY, CA

Number of sites tested: 63

Area	Average Activity	% <4 pCi/L	% 4-20 pCi/L	% >20 pCi/L
Living Area - 1st Floor	0.711 pCi/L	98%	2%	0%
Living Area - 2nd Floor	Not Reported	Not Reported	Not Reported	Not Reported
Basement	0.933 pCi/L	100%	0%	0%

PHYSICAL SETTING SOURCE RECORDS SEARCHED

TOPOGRAPHIC INFORMATION

USGS 7.5' Digital Elevation Model (DEM)
Source: United States Geologic Survey
EDR acquired the USGS 7.5' Digital Elevation Model in 2002 and updated it in 2006. The 7.5 minute DEM corresponds to the USGS 1:24,000- and 1:25,000-scale topographic quadrangle maps. The DEM provides elevation data with consistent elevation units and projection.

Scanned Digital USGS 7.5' Topographic Map (DRG)
Source: United States Geologic Survey
A digital raster graphic (DRG) is a scanned image of a U.S. Geological Survey topographic map. The map images are made by scanning published paper maps on high-resolution scanners. The raster image is georeferenced and fit to the Universal Transverse Mercator (UTM) projection.

HYDROLOGIC INFORMATION

Flood Zone Data: This data, available in select counties across the country, was obtained by EDR in 1999 from the Federal Emergency Management Agency (FEMA). Data depicts 100-year and 500-year flood zones as defined by FEMA.

NWI: National Wetlands Inventory. This data, available in select counties across the country, was obtained by EDR in 2002 and 2005 from the U.S. Fish and Wildlife Service.

HYDROGEOLOGIC INFORMATION

AQUIFLOW[R] Information System
Source: EDR proprietary database of groundwater flow information
EDR has developed the AQUIFLOW Information System (AIS) to provide data on the general direction of groundwater flow at specific points. EDR has reviewed reports submitted to regulatory authorities at select sites and has extracted the date of the report, hydrogeologically determined groundwater flow direction and depth to water table information.

GEOLOGIC INFORMATION

Geologic Age and Rock Stratigraphic Unit
Source: P.G. Schruben, R.E. Arndt and W.J. Bawiec, Geology of the Conterminous U.S. at 1:2,500,000 Scale - A digital representation of the 1974 P.B. King and H.M. Beikman Map, USGS Digital Data Series DDS - 11 (1994).

STATSGO: State Soil Geographic Database
Source: Department of Agriculture, Natural Resources Conservation Services
The U.S. Department of Agriculture's (USDA) Natural Resources Conservation Service (NRCS) leads the national Conservation Soil Survey (NCSS) and is responsible for collecting, storing, maintaining and distributing soil survey information for privately owned lands in the United States. A soil map in a soil survey is a representation of soil patterns in a landscape. Soil maps for STATSGO are compiled by generalizing more detailed (SSURGO) soil survey maps.

SSURGO: Soil Survey Geographic Database
Source: Department of Agriculture, Natural Resources Conservation Services (NRCS)
Telephone: 800-672-5559
SSURGO is the most detailed level of mapping done by the Natural Resources Conservation Services, mapping scales generally range from 1:12,000 to 1:63,360. Field mapping methods using national standards are used to construct the soil maps in the Soil Survey Geographic (SSURGO) database. SSURGO digitizing duplicates the original soil survey maps. This level of mapping is designed for use by landowners, townships and county natural resource planning and management.

PHYSICAL SETTING SOURCE RECORDS SEARCHED

LOCAL / REGIONAL WATER AGENCY RECORDS

FEDERAL WATER WELLS

PWS: Public Water Systems
Source: EPA/Office of Drinking Water
Telephone: 202-564-3750
Public Water System data from the Federal Reporting Data System. A PWS is any water system which provides water to at least 25 people for at least 60 days annually. PWSs provide water from wells, rivers and other sources.

PWS ENF: Public Water Systems Violation and Enforcement Data
Source: EPA/Office of Drinking Water
Telephone: 202-564-3750
Violation and Enforcement data for Public Water Systems from the Safe Drinking Water Information System (SDWIS) after August 1995. Prior to August 1995, the data came from the Federal Reporting Data System (FRDS).

USGS Water Wells: USGS National Water Inventory System (NWIS)
This database contains descriptive information on sites where the USGS collects or has collected data on surface water and/or groundwater. The groundwater data includes information on wells, springs, and other sources of groundwater.

STATE RECORDS

Water Well Database
Source: Department of Water Resources
Telephone: 916-651-9648

California Drinking Water Quality Database
Source: Department of Health Services
Telephone: 916-324-2319
The database includes all drinking water compliance and special studies monitoring for the state of California since 1984. It consists of over 3,200,000 individual analyses along with well and water system information.

OTHER STATE DATABASE INFORMATION

California Oil and Gas Well Locations
Source: Department of Conservation
Telephone: 916-323-1779

RADON

State Database: CA Radon
Source: Department of Health Services
Telephone: 916-324-2208
Radon Database for California

Area Radon Information
Source: USGS
Telephone: 703-356-4020
The National Radon Database has been developed by the U.S. Environmental Protection Agency (USEPA) and is a compilation of the EPA/State Residential Radon Survey and the National Residential Radon Survey. The study covers the years 1986 - 1992. Where necessary data has been supplemented by information collected at private sources such as universities and research institutions.

EPA Radon Zones
Source: EPA
Telephone: 703-356-4020
Sections 307 & 309 of IRAA directed EPA to list and identify areas of U.S. with the potential for elevated indoor radon levels.

PHYSICAL SETTING SOURCE RECORDS SEARCHED

OTHER

Airport Landing Facilities: Private and public use landing facilities
Source: Federal Aviation Administration, 800-457-6656

Epicenters: World earthquake epicenters, Richter 5 or greater
Source: Department of Commerce, National Oceanic and Atmospheric Administration

California Earthquake Fault Lines: The fault lines displayed on EDR's Topographic map are digitized quaternary fault lines, prepared in 1975 by the United State Geological Survey. Additional information (also from 1975) regarding activity at specific fault lines comes from California's Preliminary Fault Activity Map prepared by the California Division of Mines and Geology.

STREET AND ADDRESS INFORMATION

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APPENDIX D

Supporting Documentation

LFR ENVIRONMENTAL MANAGEMENT & CONSULTING ENGINEERING

Phase I Environmental Site Assessment Questionnaire

(User Provided Information Questionnaire)

Date: 8-20-07

Site Name: The Canyon Your Name: JEFF GANJE

Site Location: 1920 Brea Canyon Cutoff Road Walnut, CA Your Title: VP, Land Acquisitions

Relationship to Site: ☐ Owner ☐ Occupant ☒ Purchaser ☐ Other

Length of Time Associated with Site: 6 Months

Please review and complete this questionnaire which will assist LFR in completing our site assessment. If sufficient space in not provided, please compete your response on a separate sheet of paper and attach it to this questionnaire.

1. Do you have a title document prepared for the Site? ☒ Yes ☐ No

   If yes, please provide a copy to LFR.

2. Are you aware of any environmental cleanup liens against the Site that are filed or recorded under federal, tribal, state or local law?

   ☐ Yes ☒ No ☐ Unknown ☐ N/A

   If Yes, please explain: _____

3. Are you aware of any activity or land use limitations, such as engineering controls (for contaminant control), land use restrictions or institutional controls, that are in place at the Site and/or have been filed or recorded in a registry under federal, tribal, state or local law?

   ☐ Yes ☒ No ☐ Unknown ☐ N/A

   If Yes, please explain: _____

4190 Douglas Boulevard, Suite 200
Granite Bay, California 95746-5964
Offices Nationwide

916.786.0320 m
916.786.0366 f
www.lfr.com

LFR

4. Do you have any specialized knowledge or experience related to the Site or nearby properties? For example, are you involved in the same line of business as the current or former occupants of the Site or an adjoining property so that you would have specialized knowledge of the chemicals and processes used by this type of business?

☐ Yes ☒ No ☐ Unknown ☐ N/A

If Yes, please explain:_____

5. Are you aware of commonly known or reasonably ascertainable information about the Site that would help the environmental professional to identify conditions indicative of releases or threatened releases? For example, as user,

a) Do you know the past uses of the Site?

☐ Yes ☒ No ☐ Unknown ☐ N/A

If Yes, please explain:_____

b) Do you know of specific chemicals that are present or once were present at the Site?

☐ Yes ☒ No ☐ Unknown ☐ N/A

If Yes, please explain:_____

c) Do you know of chemical spills that have taken place at the Site?

☐ Yes ☒ No ☐ Unknown ☐ N/A

If Yes, please explain:_____

d) Do you know of any environmental cleanups that have taken place at the Site?

☐ Yes ☒ No ☐ Unknown ☐ N/A

If Yes, please explain:_____

LFR

e) Do you know if any fill material has been imported to the Site?

☐ Yes ☒ No ☐ Unknown ☐ N/A

If Yes, please explain: _____

_____

6. Do you know of any pending, threatened, or past litigation relevant to hazardous substances or petroleum products in, on, or from the Site?

☐ Yes ☒ No ☐ Unknown ☐ N/A

If Yes, please explain: _____

_____

7. Do you know of any pending, threatened, or past administrative proceedings relevant to hazardous substances or petroleum products in, on or from the Site?

☐ Yes ☒ No ☐ Unknown ☐ N/A

If Yes, please explain: _____

_____

8. Do you know of any notices from any governmental entity regarding any possible violation of environmental laws or possible liability relating to hazardous substances or petroleum products at the Site?

☐ Yes ☒ No ☐ Unknown ☐ N/A

If Yes, please explain: _____

_____

9. Based on your knowledge and experience related to the Site are there any obvious indicators that point to the presence or likely presence of contamination at the Site?

☐ Yes ☒ No ☐ Unknown ☐ N/A

If Yes, please explain: _____

_____

LFR

10. Does the Site's purcha se price reasonably reflect the fair market value of the property?

☒ Yes ☐ No ☐ Unknown ☐ N/A

If No, do you know the reason for lower purchase price? Is it possible that the lower purchase price is because of contamination known or believed to be present at the Site?

☐ Yes ☐ No ☐ Unknown ☐ N/A

If Yes, please explain:_____

11. Have any of the following documents been prepared for the Site and, if so, can copies be provided to LFR:

- Environmental site assessment reports ☐ Yes ☒ No ☐ Copies available
- Environmental compliance audit reports ☐ Yes ☒ No ☐ Copies available
- Environmental permits (for example, solid waste disposal permits, hazardous waste disposal permits, wastewater permits, National Pollutant Discharge Elimination System permits, underground injection permits) ☐ Yes ☒ No ☐ Copies available
- Registrations for underground storage tanks (USTs) and/or above ground storage tanks (ASTs) ☐ Yes ☒ No ☐ Copies available
- Registrations for underground injection systems ☐ Yes ☒ No ☐ Copies available
- Material safety data sheets ☐ Yes ☒ No ☐ Copies available
- Community right-to-know plan ☐ Yes ☒ No ☐ Copies available
- Safety plans; preparedness and prevention plans; spill prevention, countermeasure, and control plans; etc. ☐ Yes ☒ No ☐ Copies available
- Reports regarding hydrogeologic conditions on the Site or in the surrounding area

  ☐ Yes ☒ No ☐ Copies available
- Notices or other correspondence from any government agency relating to past or current violations of environmental laws with respect to the Site or relating to environmental liens encumbering the Site ☐ Yes ☒ No ☐ Copies available
- Hazardous waste generator notices or reports ☐ Yes ☒ No ☐ Copies available
- Risk assessments ☐ Yes ☒ No ☐ Copies available
- Recorded Activity and Use Limitations (e.g. deed restriction, asphalt cap)

  ☐ Yes ☒ No ☐ Copies available

LFR appreciates your assistance on this project.

The EDR Environmental LienSearch™ Report

BREA CANYON CUTOFF
LOS ANGELES COUNTY
ROWLAND HEIGHTS, CA 91789

Project Number 02004336.7

August 15, 2007

EDR® Environmental Data Resources Inc

NCO℠

The Standard in Environmental Risk Information

440 Wheelers Farm Road
Milford, Connecticut 06461

Nationwide Customer Service

Telephone: 1-800-352-0050
Fax: 1-800-231-6802
Internet: www.edrnet.com

EDR Environmental LienSearch™ Report

The EDR Environmental LienSearch Report includes results from a search of available current land title records for environmental cleanup liens and other activity and use limitations, such as engineering controls and institutional controls.

A network of professional, trained researchers follows established procedures to:

- search for parcel information, legal description, and ownership based on client supplied address information;
- research indexes and title repositories;
- obtain a copy of the deed;
- search for environmental encumbering instrument(s) associated with the deed;
- provide a copy of any environmental encumbrance(s) based upon a review of key words in the instrument (title, parties involved, and description); and
- provide a copy of the deed.

Thank you for your business.
Please contact EDR at 1-800-352-0050
with any questions or comments.

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EDR Environmental LienSearch™ Report

TARGET PROPERTY INFORMATION

ADDRESS

BREA CANYON CUTOFF
1920 BREA CANYONE CUTOFF ROAD
ROWLAND HEIGHTS, CA 91789

RESEARCH SOURCE

Sources: Los Angeles County

DEED INFORMATION

Type of Deed: WD ☐ QCD ☒ Other ☐ DEED

Title is vested in: Southlands Church International

Title received from: Southlands Church International who acquired title as Christian Chapel of Walnut, a Non-profit Corporation as to parcel 1 and First Christian Church of Walnut Valley, Incorporated, a California Corporation, as to Parcel 2

Deed Dated: December 16, 2003
Deed Recorded: December 17, 2003
Document No.: 03-3796980

LEGAL DESCRIPTION

Description: Legal attached as Exhibit "A"

Assessor's Parcel Number: 8764-001-132; 8764-001-131

EXAMINER'S NOTE 1: Agreement recorded June 26, 1985 at Document No. 85-736216. Copy attached as Exhibit "B."
EXAMINER'S NOTE 2: Agreement recorded June 26, 1985 at Document No. 85-736217. Copy attached as Exhibit "C."

ENVIRONMENTAL LIEN

Environmental Lien: Found ☐ Not Found ☒

If yes:

1st Party:

2nd Party:

Dated:
Recorded:
Book:
Page:
Comments:

OTHER ACTIVITY AND USE LIMITATIONS (AULs)

Other AUL's: Found ☐ Not Found ☒

EDR Environmental LienSearch™ Report

EXHIBIT A

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This page is part of your document - DO NOT DISCARD

03 3796980

RECORDED/FILED IN OFFICIAL RECORDS
RECORDER'S OFFICE
LOS ANGELES COUNTY
CALIFORNIA
DEC 17 2003
AT 8 A.M.

TITLE(S) : Deed

LEAD SHEET

FEE

FEE $10 SS
2

D.T.T

NOTIFICATION SENT

CODE
20

CODE
19

CODE
9____

Assessor's Identification Number (AIN)
To be completed by Examiner OR Title Company in black ink.

Number of AIN's Shown

8764 - 001 - 131

002

THIS FORM NOT TO BE DUPLICATED

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12/17/03

RECORDING REQUESTED BY

FIRST AMERICAN TITLE INSURANCE COMPANY

AND WHEN RECORDED MAIL TO
Name Evangelical Christian Credit Union
Street 955 West Imperial Highway
City Brea, California 92822

03 3796980

SPACE ABOVE THIS LINE FOR RECORDER'S USE

TD 3-2 1-94

QUITCLAIM DEED

Order No. Escrow No.

THE UNDERSIGNED GRANTOR(S) DECLARE(S)
DOCUMENTARY TRANSFER TAX is $ NONE – This conveyance confirms a change of name, and the Grantor and Grantee are the same party. R&T11911
Signature _____
___ computed on full value of property conveyed, or
___ computed on full value less value of liens or encumbrances remaining at time of sale.
___ unincorporated area ___ city of _____, AND

FOR A VALUABLE CONSIDERATION, receipt of which is hereby acknowledged,

Southlands Church International who acquired title as Christian Chapel of Walnut, a Nonprofit Corporation , as to Parcel 1 and First Christian Church of Walnut Valley, Incorporated, a California Corporation, as to Parcel 2

hereby remise, release and forever QUITCLAIM to

Southlands Church International

the following described real property in County of Los Angeles, State of California: See attached Exhibit "A"

Dated December 16, 2003

Southlands Church International who acquired title as Christian Chapel of Walnut, a Nonprofit Corporation, as to Parcel 1 and First Christian Church of Walnut Valley, Incorporated, a California Corporation, as to Parcel 2

BY: Kirk Randolph
NAME: Kirk Randolph
ITS: Treasurer

STATE OF CALIFORNIA
COUNTY OF Orange
On 12-16-03 before me, Diane Viaes Notary Public, personally appeared Kirk Randolph

personally known to me (or proved to me on the basis of satisfactory evidence) to be the person(~~s~~) whose name(~~s~~) is/~~are~~ subscribed to the within instrument and acknowledged to me that he/~~she/they~~ executed the same in his/~~her/their~~ authorized capacity(~~ies~~), and that by his/~~her/their~~ signature(~~s~~) on the instrument the person(~~s~~), or the entity upon behalf of which the person(~~s~~) acted, executed the instrument.

DIANE VIAES
Commission # 1277336
Notary Public - California
Orange County
My Comm. Expires Sep 17, 2004

WITNESS my hand and official seal.
Signature Diane Viaes

(This area for official notarial seal)

MAIL TAX STATEMENT TO: SAME AS ABOVE

48678-22

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12/17/03

EXHIBIT A

3

The land referred to in this Commitment is situated in the State of California, County of Los Angeles , and described as follows:

Real property in the County of Los Angeles, State of California, described as follows:

PARCEL 1:

Those portions of Lot 1 and Lot 2 of Tract No. 2888, as per map recorded in Book 30 Page 1 of Maps, in the office of the county recorder of said county, described as follows:

Commencing at the intersection of the center lines of Fifth Avenue and Brea Canyon Cutoff Road, as said intersection is shown on map of Tract No. 24550, as per map recorded in Book 641 Pages 79 and 80 of Maps, in the office of said recorder; thence Southeasterly along the center line of said Brea Canyon Cutoff Road, which center line is also the Southwesterly line of said of Tract No. 2888, a distance of 250.30 feet to the true point of beginning; thence continuing Southeasterly along said last mentioned center line and said Southwesterly line 676.29 feet to the center line of Reedview Drive as said center line is shown on said Map of Tract No. 24550; thence Northeasterly at right angles to said Southwesterly line 714 feet; more or less, to the Northeasterly line of said Tract No. 2888; thence Northwesterly along said Northeasterly line 676.3 feet, more or less, to a line which is at right angles to said Southwesterly line and which passes through the true point of beginning; thence Southwesterly along said last described line 714 feet, more or less, to the true point of beginning.

EXCEPT therefrom that portion lying within Brea Canyon Cutoff Road.

PARCEL 2:

That portion of Lots 1 and 2 of Tract No. 2888, as per map recorded in Book 30 Page 1 of Maps, in the office of the county recorder of said county, bounded Northwesterly by the Southeasterly line, and its Northeasterly prolongation of the land designated as Parcel 1. In final order of condemnation entered in Los Angeles County Superior Court Case No. 819126, a certified copy of which was recorded on October 16, 1964, as Instrument No. 6203, in Book D-2667 Page 280 Official Records, in the office of the county recorder of said county, bounded Northeasterly by a line parallel with, and 421.36 feet Northeasterly measured at right angles from that certain course in the center line of Brea Canyon Cutoff Road (40 feet wide) shown as having a bearing of North 33 degrees 09' 55" West on the map of Tract No. 24550, recorded in Book 641 Pages 79 and 80 of Maps, in the office of the county recorder of said county, bounded Southwesterly by the Northeasterly line of Brea Canyon Cutoff Road, 40.00 feet wide, as described in the deed to the county of Los Angeles, recorded on September 6, 1927 as Instrument No. 586, in Book 6772 Page 223 of said Official Records, and bounded Southeasterly by the following described line:

Beginning at a point in the hereinbefore described center line of Brea Canyon Cutoff Road as shown on the map of Tract No. 24550, with its intersection with a line that bears South 56 degrees 50' 05" West 345.34 feet from the most Easterly corner of said Lot 2; thence along said line, and its Northeasterly prolongation North 56 degrees 50' 05" East 421.36 feet to its intersection with the aforesaid parallel line.

EXCEPT therefrom all oil, gas and mineral rights under said land below a depth of 500 feet from the surface and without right of surface entry, as reserved by Mary Esther Valla, Individually, and Mary Esther Valla, as executrix of the Will of Honorine Pelanconi Valla, also known as Honorina Pelanconi Valla, deceased, and Stella Anne Valla Hamilton, individually, recorded on December 27, 1961 in Book D-1460 Page 675 Official Records.

03 3796980

APN: 8764-001-131, 132

EXHIBIT B

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85 736216

Recording requested by:
CALIFORNIA RETIREMENT VILLAS, INC.

When recorded Return to:
JOHN A. BOOTY, President
CALIFORNIA RETIREMENT VILLAS, INC.
245 Fischer Ave. Suite D-1
Costa Mesa, Ca. 92626

RECORDED IN OFFICIAL RECORDS OF LOS ANGELES COUNTY, CA
JUN 26 1985 AT 8 A.M.
Recorder's Office

ACCOMMODATION ONLY 116524

FEE $ 23.00 J

10

AGREEMENT

THIS AGREEMENT entered into this 21st day of June, 1985, by and between CHRISTIAN CHAPEL OF WALNUT VALLEY, INC., a California Corporation ("CHAPEL") and CALIFORNIA RETIREMENT VILLAS, INC., a California Corporation ("VILLAS") is made with reference to the following facts:

A. Concurrently with the execution of this Agreement, CHAPEL has sold to VILLAS real property ("LAND") consisting of approximately 1.67 acres located approximately at the Southeast corner of Colima Road and Brea Canyon Cutoff Road, County of Los Angeles, State of California. The property is more particularly described in Exhibit "B" attached hereto and incorporated herein by reference. The purchase was processed in escrow at Heritage Escrow, 14751 Plaza Drive "H", Tustin, California.

B. CHAPEL currently owns a 10 acre parcel of real property described in Exhibit "A" attached hereto and by this reference made a part hereof, which is contiguous to the property described in Exhibit "B". The 10 acre parcel lies directly South.

RECORDER'S MEMO:
POOR RECORD IS DUE TO
QUALITY OF ORIGINAL DOCUMENT

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C. CHAPEL has improved part of the 10 acres and left the remainder of the parcel undeveloped.

D. As part of the consideration paid by VILLAS to purchase the LAND, CHAPEL has agreed to grant to VILLAS the first right of refusal to purchase the currently undeveloped remainder of the 10 acre parcel. Both parties agree that this first right of refusal is an essential part of the consideration for VILLAS purchasing the LAND. A new legal description of the undeveloped portion of the 10 acre parcel shall be prepared by VILLAS and attached hereto and incorporated by reference herein as part of this Agreement when complete. It shall more particularly describe the property this Agreement pertains to. It shall be referenced as Exhibit "C".

WHEREFORE, the parties agree as follows:

1.0 GRANT OF FIRST RIGHT OF REFUSAL

CHAPEL hereby grants to VILLAS the first right of refusal on any sale, exchange or lease in excess of one year of the currently undeveloped portion of the 10 acre parcel of real property currently owned by CHAPEL which is contiguous to and South of the LAND purchased by VILLAS from CHAPEL The legal description of the 10 acre parcel is attached hereto and incorporated by reference herein as Exhibit "A". The portion which this Agreement relates to is marked in red border on page 4 of Exhibit "A".

85 736216

Description: Los Angeles,CA Document-Year.DocID 1985.736216 Page: 2 of 10
Order: 15930 Comment:

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1.1 In the event CHAPEL receives or makes an offer to sell, exchange or lease in excess of one year the subject property, CHAPEL must deliver notice of same in writing, to VILLAS specifying the proposed transferee, price, terms and condition of same.

1.2 Delivery of the offer notice shall constitute an offer by CHAPEL to sell, exchange or lease the subject property to VILLAS on those same terms and conditions.

1.3 The offer may be accepted by VILLAS within 20 days following date of delivery of the notice of offer to VILLAS.

1.4 If VILLAS does not accept the offer within 20 days of receipt of notice of offer then CHAPEL shall be free to sell, exchange or lease the subject property to the proposed transferee on the same terms and conditions of the offer.

1.5 In the event CHAPEL does not sell, exchange or lease the subject property to the proposed transferee on the same terms and conditions contained in the offer but receives counter offers or other offers. CHAPEL must present same to VILLAS in the same manner as described in Sections 1.1 through 1.4 above. Failure to do so shall constitute a material breach of this agreement.

2.0 <u>ASSIGNABILITY</u>

The rights created by this Agreement are personal in nature and do not inure to the benefit of the real property. No assignment may be made of any rights created hereunder unless the written consent of the CHAPEL is first obtained.

85 736216

Description: Los Angeles,CA Document-Year.DocID 1985.736216 Page: 3 of 10
Order: 15930 Comment:

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3.0 NOTICE

For purposes of notice the following addresses will be deemed sufficient when notice is mailed, in the U. S. Mail, certified, with return receipt:

3.1 CHRISTIAN CHAPEL OF WALNUT VALLEY, INC.
a California Corporation
1920 South Brea Canyon Cutoff Road
Walnut, California 91789

3.2 CALIFORNIA RETIREMENT VILLAS, INC.
a California Corporation
245 Fischer Avenue Suite D-1
Costa Mesa, California 92626

4.0 ATTORNEY FEES

In the event of any controversy, claim or dispute relating to this instrument or the breach thereof, the prevailing party shall be entitled to recover from the losing party reasonable expenses, attorney's fees and costs.

IN WITNESS WHEREOF the parties hereto have executed this Agreement on the day and year first above written.

CHRISTIAN CHAPEL OF WALNUT VALLEY, INC.
a California Corporation

By Jesse L. Mason
JESSE MASON, President

By Steven Barr
STEVEN BARR, Secretary

CALIFORNIA RETIREMENT VILLAS, INC.
a California Corporation

By
JOHN A. BOOTY, President

BY Tony Rota
TONY ROTA, Vice President

85 736216

Description: Los Angeles,CA Document-Year.DocID 1985.736216 Page: 4 of 10
Order: 15930 Comment:

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STATE OF CALIFORNIA)
) ss.
COUNTY OF ORANGE)

OFFICIAL SEAL
DIANE BOYD
NOTARY PUBLIC CALIFORNIA
PRINCIPAL OFFICE IN
LOS ANGELES COUNTY
My Commission Expires Nov 12, 1986

On June 20, 1985, before me, the undersigned Notary Public in and for said State, personally appeared JESSE MASON and STEVEN BARR, personally known to me or proved to me on the basis of satisfactory evidence, to be the persons who executed the within instrument as President and Secretary on behalf of CHRISTIAN CHAPEL OF WALNUT VALLEY, INC., the corporation therein named, and acknowledged to me that such corporation executed the within instrument pursuant to its by-laws or a resolution of its board of directors.

WITNESS my hand and official seal.

NOTARY PUBLIC

STATE OF CALIFORNIA)
) ss.
COUNTY OF ORANGE)

85 736216

On June 21st, 1985, before me, the undersigned Notary Public in and for said State, personally appeared JOHN A. BOOTY AND TONY ROTA, personally known to me or proved on the basis of satisfactory evidence, to be the persons who executed the within instrument as President and Vice President on behalf of CALIFORNIA RETIREMENT VILLAS, INC., A California Corporation, the corporation named therein named, and acknowledged to me that such corporation executed the within instrument pursuant to its by-laws or a resolution of its board of directors.

WITNESS MY HAND AND OFFICIAL SEAL.

Christine D. Lund, Notary Public

OFFICIAL SEAL
CHRISTINE D LUND
NOTARY PUBLIC - CALIFORNIA
ORANGE COUNTY
My comm expires MAY 19, 1989

85 736216

Description: Los Angeles,CA Document-Year.DocID 1985.736216 Page: 5 of 10
Order: 15930 Comment:

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EXHIBIT "A"

The land referred to in this policy is situated in the County of Los Angeles, State of California, and is described as follows:

Parcel 1:

That portion of Lot 2 of Tract No. 2888, in the County of Los Angeles, State of California, as per Map recorded in Book 30 page 1 of Maps, in the Office of the County Recorder of said County bounded Northwesterly by the Southeasterly line of the land designated as Parcel 1 in final order of condemnation entered in Los Angeles County Superior Court Case No. 819126 a certified copy of which was recorded on October 16, 1964 as Instrument No. 6203 in Book D-2667 page 280 of Official Records, in the Office of the County recorder of said County; bounded Northeasterly by the general Northeasterly line of said Lot 2 and bounded Southwesterly by the Northeasterly line of Brea Canyon Cutoff Road, 40.00 feet wide, as described in the deed to the County of Los Angeles, recorded on September 6, 1927 as Instrument No. 586 in Book 6772 page 223 of said official records.

Except that portion of said Lot 2 lying Northeasterly of Brea Canyon Cutoff Road (40 feet wide) as shown on County Surveyors Map No. 8902 on file in the Office County Engineer of said County, and lying Southeasterly of the following described line:

Beginning at a point in that certain course in the centerline of Brea Canyon Cutoff Road (40 feet wide) shown as having a bearing of North 33 degress 09 minutes 55 seconds west on Map of Tract No. 24550, recorded in Book 641, page 80 of Maps in the Office of the County recorder of said County, with its intersection with a line that bears south 56 degrees 50 minutes 05 seconds West 345.34 feet from the most Easterly corner of said Lot 2, said most Easterly corner being Northeasterly along the Easterly line of said Lot 2, 575.46 feet from the most Southerly corner thereof; thence along said line north 56 degrees 50 minutes 05 seconds East 345.34 feet to said angle point.

Except therefrom that portion within Brea Canyon Cutoff Road (40 feet wide) as shown on said County Surveyors Map No. 8902.

Except that portion of said Lot 2 lying Northeasterly of Brea Canyon Cutoff Road (40 feet wide) as shown on County Surveyors Map No. 8902 on file in the Office County Engineer of said County, and lying Southeasterly of the following described line:

Beginning at a point in that certain course in the centerline of Brea Canyon Cutoff Road (40 feet wide shown as having a bearing of North 33 degrees 09 minutes 55 seconds West on Map of Tract No. 24550, recorded in Book 641, page 80 of Maps in the Office of the County Recorder of said County, with its intersection with a line that bears south 56 degrees 50 minutes 05 seconds west 345.34 feet from the most Easterly corner of said Lot 2, said most Easterly corner being Northeasterly along the Easterly line of said Lot 2, 575.46 feet from the most Southerly corner thereof; thence along said line

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North 56 degrees 50 minutes 05 seconds east 345.34 feet to said angle point.

Except therefrom that portion within Brea Canyon Cutoff Road (40 feet wide) as shown on said County Surveyors Map No. 8902.

Parcel 2:

That portion of Lot 1 of Tract 2888, in the County of Los Angeles, State of California, as per map recorded in Book 30 page 1 of Maps, in the Office of the County Recorder of said County, described as follows:

Beginning at an intersection of the northeasterly prolongation of that certain course in the center line of Reedview Drive, (60 feet wide) shown as having a bearing and length of south 56 degrees 43 minutes 40 seconds west 360.00 feet on the map of tract no. 24550, recorded in Book 641 page 80 of Maps, in the Office of the County Recorder of said County, with a line parallel with and 421.36 feet northeasterly, measured at right angles from that certain course in the center line of Brea Canyon Cutoff Road (40 feet wide) shown as having a bearing of north 33 degrees 09 minutes 55 seconds west on the map of said tract no. 24550; thence along said parallel line south 33 degrees 09 minutes 55 seconds east 584.47 feet to a line that bears north 56 degrees 50 minutes 05 seconds east 76.02 feet from that certain angle point in the Westerly line of said Lot 1, distant northerly thereon (575.46 feet) from the southwesterly corner thereof, said angle point also being the most easterly corner of lot 2 of said tract 2888; thence south 56 degrees 50 minutes 05 seconds west along last described line, 76.02 feet to said angle point; thence along the southwesterly line of said lot 1 through its various courses as follows; north 75 degrees 16 minutes 48 seconds west 88.52 feet; north 32 degrees 30 minutes 48 seconds west 58.26 feet; north 12 degrees 16 minutes 48 seconds west 72.40 feet; north 26 degrees 42 minutes 48 seconds west 59.00 feet; north 5 degrees 36 minutes 18 seconds west 78.34 feet; north 17 degrees 29 minutes 18 seconds west 54.10 feet; thence continuing along said southwesterly line north 26 degrees 40 minutes 48 seconds west 214.20 feet to its intersection with the hereinbefore described northeasterly prolongation; thence along said prolongation north 56 degrees 43 minutes 40 seconds east 27.22 feet to the point of beginning.

Excepting and reserving therefrom all oil, gas and mineral rights under said land below a depth of 500 feet from the surface and without right of surface entry, as reserved by Mary Esther Valla, individually, and Mary Esther Valla, as executrix of the Will of Honorina Pelanconi Valla, also known as Honorina Palanconi Valla, deceased, and Stella Anne Valla Hamilton, individually, recorded on December 27, 1961 in Book D-1460 page 675 of Official Records.

Parcel 3:

Those portions of Lot 1 and Lot 2 of Tract No. 2888, in the County of Los Angeles, State of California, as per map recorded in Book 30 page 1 of Maps in the Office of the County Recorder of said County, described as follows:

Commencing at the intersection of the center lines of Fifth Avenue and Brea Canyon Cutoff Road, as said intersection is shown on map of tract no. 24550, as per map recorded in Book 641 pages 79 and 80 of maps, in the Office of said Recorder; thence southeasterly along the center line of said Brea Canyon Cutoff Road, which center line is also the southwesterly line of said tract no. 2888, a distance of 250.30 feet to the true point of beginning; thence continuing southeasterly along said last mentioned center line and

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said southwesterly line 675.29 feet to the center line of Reedview Drive as said right angles to said southwesterly line 714 feet, more or less, to the northeasterly line of said tract no. 2888; thence northwesterly along said northeasterly line 676.3 feet; more or less, to a line which is at right angles to said southwesterly line and which passes through the true point of beginning; thence southwesterly along said last described line 714 feet, more or less, to the true point of beginning.

Except therefrom that portion lying within Brea Canyon Cutoff Road.

Parcel 4:

That portion of Lot 1 of Tract 2888, in the County of Los Angeles, State of California, as per map recorded in Book 30 page 1 of Maps, in the Office of the County Recorder of said County, described as follows:

Beginning at a point in the Northeasterly line of said Lot 1 being the intersection of said Northeasterly line with the centerline of Colima Road (formerly Fifth Avenue) 100 feet wide as shown on County Surveyors Map No. 8-191, sheet 4 of 11 sheets, on file in the Office of the Surveyor of said County; thence along said Northeasterly line South 33 degrees 15 minutes 20 seconds east 229.06 feet to the northeasterly corner of that land described in Deed recorded as Document No. 1056 on September 16, 1963 in Book D-2182, page 580, of Official Records of said County; thence along the Northwesterly line of last said land South 56 degrees 45 minutes 50 seconds west 360.62 feet to the Southwesterly line of said Lot 1; thence along said southwesterly line, North 33 degrees 15 minutes 35 seconds west 245.40 feet to a point in the herein described centerline; thence along said centerline North 59 degrees 21 minutes 45 seconds east 361.01 feet to the point of beginning.

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Order: 15930 Comment:

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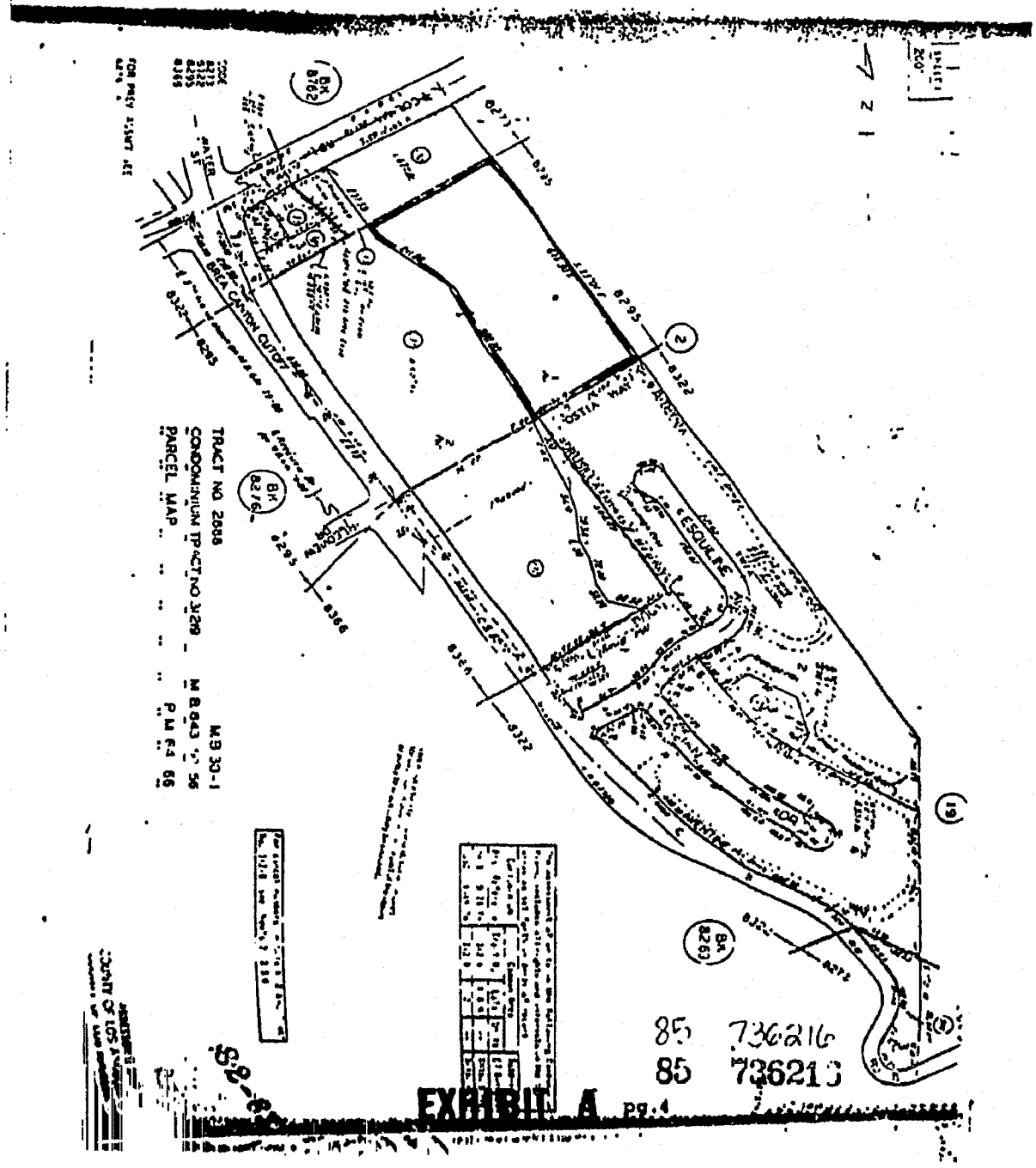

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DESCRIPTION:

THAT PORTION OF LOT 1 OF TRACT 2888, IN THE COUNTY OF LOS ANGELES, STATE OF CALIFORNIA, AS PER MAP RECORDED IN BOOK 30 PAGE 1 OF MAPS, IN THE OFFICE OF THE COUNTY RECORDER OF SAID COUNTY, DESCRIBED AS FOLLOWS:

BEGINNING AT A POINT IN THE NORTHEASTERLY LINE OF SAID LOT 1 BEING THE INTERSECTION OF SAID NORTHEASTERLY LINE WITH THE CENTERLINE OF COLIMA ROAD (FORMERLY FIFTH AVENUE) 100 FEET WIDE AS SHOWN ON COUNTY SURVEYORS MAP NO. B-191, SHEET 4 OF 11 SHEETS, ON FILE IN THE OFFICE OF THE SURVEYOR OF SAID COUNTY; THENCE ALONG SAID NORTHEASTERLY LINE SOUTH 33 DEGREES 15 MINUTES 20 SECONDS EAST 229.06 FEET TO THE NORTHEASTERLY CORNER OF THAT LAND DESCRIBED IN DEED RECORDED AS DOCUMENT NO. 1056 ON SEPTEMBER 16, 1963 IN BOOK D-2182, PAGE 580, OFFICIAL RECORDS OF SAID COUNTY; THENCE ALONG THE NORTHEASTERLY LINE OF LAST SAID LAND SOUTH 56 DEGREES 45 MINUTES 50 SECONDS WEST 360.62 FEET TO THE SOUTHWESTERLY LINE OF SAID LOT 1; THENCE ALONG SAID SOUTHWESTERLY LINE, NORTH 33 DEGREES 15 MINUTES 35 SECONDS WEST 245.40 FEET TO A POINT IN THE HEREIN DESCRIBED CENTERLINE; THENCE ALONG SAID CENTERLINE NORTH 59 DEGREES 21 MINUTES 45 SECONDS EAST 361.01 FEET TO THE POINT OF BEGINNING.

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EXHIBIT B

EXHIBIT C

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Recording requested by:
CALIFORNIA RETIREMENT VILLAS, INC.

When recorded Return to:
JOHN A. BOOTY, President
CALIFORNIA RETIREMENT VILLAS, INC.
245 Fischer Ave. Suite D-1
Costa Mesa, Ca. 92626

RECORDED IN OFFICIAL RECORDS
OF LOS ANGELES COUNTY, CA
JUN 26 1985 AT 8 A.M.
Recorder's Office

ACCOMMODATION ONLY 8110524

FEE $ 23.00 1
10

AGREEMENT

THIS AGREEMENT entered into this 21st day of June, 1985, by and between CHRISTIAN CHAPEL OF WALNUT VALLEY, INC., a California Corporation ("CHAPEL") and CALIFORNIA RETIREMENT VILLAS, INC., a California Corporation ("VILLAS") is made with reference to the following facts:

A. Concurrently with the execution of this Agreement, CHAPEL has sold to VILLAS real property ("LAND") consisting of approximately 1.67 acres located approximately at the Southeast corner of Colima Road and Brea Canyon Cutoff Road, County of Los Angeles, State of California. The property is more particularly described in Exhibit "B" attached hereto and incorporated herein by reference. The purchase was processed in escrow at Heritage Escrow, 14751 Plaza Drive "H", Tustin, California.

B. CHAPEL currently owns a 10 acre parcel of real property described in Exhibit "A" attached hereto and by this reference made a part hereof, which is contiguous to the property described in Exhibit "B". The 10 acre parcel lies directly South.

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C. VILLAS has plans to build a senior citizen retirement villa ("IMPROVEMENTS") on the LAND purchased from CHAPEL. VILLAS plans to retain and operate the retirement villa.

D. As part of the consideration paid by VILLAS to purchase the LAND, VILLAS has agreed to grant to CHAPEL the first right of refusal to purchase the IMPROVEMENTS to be built by VILLAS on the LAND. Both parties agree that this first right of refusal is an essential part of the consideration for CHAPEL selling the LAND to VILLAS.

WHEREFORE, the parties agree as follows:

1.0 GRANT OF FIRST RIGHT OF REFUSAL

VILLAS hereby grants to CHAPEL the first right of refusal on any sale, exchange or lease in excess of one year on the IMPROVEMENTS built upon the LAND by VILLAS. This right is applicable to any improvements built upon the LAND by VILLAS.

1.1 In the event VILLAS receives or makes an offer to sell, exchange or lease in excess of one year the IMPROVEMENTS, VILLAS must deliver notice of same in writing to CHAPEL specifying the proposed transferee, price, terms and condition of same.

1.2 Delivery of the offer notice shall constitute an offer by VILLAS to sell, exchange or lease the IMPROVEMENTS to VILLAS on those same terms and conditions.

1.3 The offer may be accepted by CHAPEL within 20 days following date of delivery of the notice of offer to CHAPEL.

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1.4 If CHAPEL does not accept the offer within 20 days of receipt of notice of offer then VILLAS shall be free to sell, exchange or lease the IMPROVEMENTS to the proposed transferee on the same terms and conditions of the offer.

1.5 In the event VILLAS does not sell, exchange or lease the IMPROVEMENTS to the proposed transferee on the same terms and conditions contained in the offer but receives counter offers or other offers, VILLAS must present same to CHAPEL in the same manner as described in Sections 1.1 through 1.4 above. Failure to do so shall constitute a material breach of this agreement.

2.0 ASSIGNABILITY

The rights created by this Agreement are personal in nature and do not inure to the benefit of the real property. No assignment may be made of any rights created hereunder unless the written consent of the VILLAS is first obtained.

3.0 NOTICE

For purposes of notice the following addresses will be deemed sufficient when notice is mailed, in the U. S. Mail, certified, with return receipt:

3.1 CHRISTIAN CHAPEL OF WALNUT VALLEY, INC.
a California Corporation
1920 South Brea Canyon Cutoff Road
Walnut, California 91789

3.2 CALIFORNIA RETIREMENT VILLAS, INC.
a California Corporation
245 Fischer Avenue Suite D-1
Costa Mesa, California 92626

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4.0 ATTORNEY FEES

In the event of any controversy, claim or dispute relating to this instrument or the breach thereof, the prevailing party shall be entitled to recover from the losing party reasonable expenses, attorney's fees and costs.

IN WITNESS WHEREOF the parties hereto have executed this Agreement on the day and year first above written.

CHRISTIAN CHAPEL OF WALNUT VALLEY, INC.
a California Corporation

By Jesse F. Mason
JESSE MASON, President

By Steven Barr
STEVEN BARR, Secretary

CALIFORNIA RETIREMENT VILLAS, INC.
a California Corporation

By
JOHN A. BOOTY, President

BY Tony Rota
TONY ROTA, Vice President

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Order: 15930 Comment:

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STATE OF CALIFORNIA)
) ss.
COUNTY OF ORANGE)

OFFICIAL SEAL
DIANE BOYD
NOTARY PUBLIC CALIFORNIA
PRINCIPAL OFFICE IN
LOS ANGELES COUNTY
My Commission Expires Nov 12, 1988

On June 10, 1985, before me, the undersigned Notary Public in and for said State, personally appeared JESSE MASON and STEVEN BARR, personally known to me or proved to me on the basis of satisfactory evidence, to be the persons who executed the within instrument as President and Secretary on behalf of CHRISTIAN CHAPEL OF WALNUT VALLEY, INC., the corporation therein named, and acknowledged to me that such corporation executed the within instrument pursuant to its by-laws or a resolution of its board of directors.

WITNESS my hand and official seal.

NOTARY PUBLIC

STATE OF CALIFORNIA)
) ss.
COUNTY OF ORANGE)

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On June 21st, 1985, before me, the undersigned Notary Public in and for said State, personally appeared JOHN A. BOOTY AND TONY ROTA, personally known to me or proved on the basis of satisfactory evidence, to be the persons who executed the within instrument as President and Vice President on behalf of CALIFORNIA RETIREMENT VILLAS, INC., A California Corporation, the corporation named therein named, and acknowledged to me that such corporation executed the within instrument pursuant to its by-laws or a resolution of its board of directors.

WITNESS MY HAND AND OFFICIAL SEAL.

Christine D. Lund, Notary Public

OFFICIAL SEAL
CHRISTINE D LUND
NOTARY PUBLIC - CALIFORNIA
ORANGE COUNTY
My comm expires MAY 19, 1989

Description: Los Angeles,CA Document-Year.DocID 1985.736217 Page: 5 of 10
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EXHIBIT "A"

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The land referred to in this policy is situated in the County of Los Angeles, State of California, and is described as follows:

Parcel 1:

That portion of Lot 2 of Tract No. 2888, in the County of Los Angeles, State of California, as per Map recorded in Book 30 page 1 of Maps, in the Office of the County Recorder of said County bounded Northwesterly by the Southeasterly line of the land designated as Parcel 1 in final order of condemnation entered in Los Angeles County Superior Court Case No. 819126 a certified copy of which was recorded on October 16, 1964 as Instrument No. 6203 in Book D-2667 page 280 of Official Records, in the Office of the County recorder of said County; bounded Northeasterly by the general Northeasterly line of said Lot 2 and bounded Southwesterly by the Northeasterly line of Brea Canyon Cutoff Road, 40.00 feet wide, as described in the deed to the County of Los Angeles, recorded on September 6, 1927 as Instrument No. 586 in Book 6772 page 223 of said official records.

Except that portion of said Lot 2 lying Northeasterly of Brea Canyon Cutoff Road (40 feet wide) as shown on County Surveyors Map No. 8902 on file in the Office County Engineer of said County, and lying Southeasterly of the following described line:

Beginning at a point in that certain course in the centerline of Brea Canyon Cutoff Road (40 feet wide) shown as having a bearing of North 33 degress 09 minutes 55 seconds west on Map of Tract No. 24550, recorded in Book 641, page 80 of Maps in the Office of the County recorder of said County, with its intersection with a line that bears south 56 degrees 50 minutes 05 seconds West 345.34 feet from the most Easterly corner of said Lot 2, said most Easterly corner being Northeasterly along the Easterly line of said Lot 2, 575.46 feet from the most Southerly corner thereof; thence along said line north 56 degrees 50 minutes 05 seconds East 345.34 feet to said angle point.

Except therefrom that portion within Brea Canyon Cutoff Road (40 feet wide) as shown on said County Surveyors Map No. 8902.

Except that portion of said Lot 2 lying Northeasterly of Brea Canyon Cutoff Road (40 feet wide) as shown on County Surveyors Map No. 8902 on file in the Office County Engineer of said County, and lying Southeasterly of the following described line:

Beginning at a point in that certain course in the centerline of Brea Canyon Cutoff Road (40 feet wide shown as having a bearing of North 33 degrees 09 minutes 55 seconds West on Map of Tract No. 24550, recorded in Book 641, page 80 of Maps in the Office of the County Recorder of said County, with its intersection with a line that bears south 56 degrees 50 minutes 05 seconds west 345.34 feet from the most Easterly corner of said Lot 2, said most Easterly corner being Northeasterly along the Easterly line of said Lot 2, 575.46 feet from the most Southerly corner thereof; thence along said line

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Order: 15930 Comment:

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North 56 degrees 50 minutes 05 seconds east 345.34 feet to said angle point.

Except therefrom that portion within Brea Canyon Cutoff Road (40 feet wide) as shown on said County Surveyors Map No. 8902.

Parcel 2:

That portion of Lot 1 of Tract 2888, in the County of Los Angeles, State of California, as per map recorded in Book 30 page 1 of Maps, in the Office of the County Recorder of said County, described as follows:

Beginning at an intersection of the northeasterly prolongation of that certain course in the center line of Reedview Drive, (60 feet wide) shown as having a bearing and length of south 56 degrees 43 minutes 40 seconds west 360.00 feet on the map of tract no. 24550, recorded in Book 641 page 80 of Maps, in the Office of the County Recorder of said County, with a line parallel with and 421.36 feet northeasterly, measured at right angles from that certain course in the center line of Brea Canyon Cutoff Road (40 feet wide) shown as having a bearing of north 33 degrees 09 minutes 55 seconds west on the map of said tract no. 24550; thence along said parallel line south 33 degrees 09 minutes 55 seconds east 584.47 feet to a line that bears north 56 degrees 50 minutes 05 seconds east 76.02 feet from that certain angle point in the Westerly line of said Lot 1, distant northerly thereon (575.46 feet) from the southwesterly corner thereof, said angle point also being the most easterly corner of lot 2 of said tract 2888; thence south 56 degrees 50 minutes 05 seconds west along last described line, 76.02 feet to said angle point; thence along the southwesterly line of said lot 1 through its various courses as follows; north 75 degrees 16 minutes 48 seconds west 88.52 feet; north 32 degrees 30 minutes 48 seconds west 58.26 feet; north 12 degrees 16 minutes 48 seconds west 72.40 feet; north 26 degrees 42 minutes 48 seconds west 59.00 feet; north 5 degrees 36 minutes 18 seconds west 78.34 feet; north 17 degrees 29 minutes 18 seconds west 54.10 feet; thence continuing along said southwesterly line north 26 degrees 40 minutes 48 seconds west 214 20 feet to its intersection with the hereinbefore described northeasterly prolongation; thence along said prolongation north 56 degrees 43 minutes 40 seconds east 27.22 feet to the point of beginning.

Excepting and reserving therefrom all oil, gas and mineral rights under said land below a depth of 500 feet from the surface and without right of surface entry, as reserved by Mary Esther Valla, individually, and Mary Esther Valla, as executrix of the Will of Honorine Pelanconi Valla, also known as Honorina Palanconi Valla, deceased, and Stella Anne Valla Hamilton, individually, recorded on December 27, 1961 in Book D-1460 page 675 of Official Records.

Parcel 3:

Those portions of Lot 1 and Lot 2 of Tract No. 2888, in the County of Los Angeles, State of California, as per map recorded in Book 30 page 1 of Maps in the Office of the County Recorder of said County, described as follows:

Commencing at the intersection of the center lines of Fifth Avenue and Brea Canyon Cutoff Road, as said intersection is shown on map of tract no. 24550, as per map recorded in Book 641 pages 79 and 80 of maps, in the Office of said Recorder; thence southeasterly along the center line of said Brea Canyon Cutoff Road, which center line is also the southwesterly line of said tract no. 2888, a distance of 250.30 feet to the true point of beginning; thence continuing southeasterly along said last mentioned center line and

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said southwesterly line 675.29 feet to the center line of Reedview Drive as said right angles to said southwesterly line 714 feet, more or less, to the northeasterly line of said tract no. 2888; thence northwesterly along said northeasterly line 676.3 feet; more or less, to a line which is at right angles to said southwesterly line and which passes through the true point of beginning; thence southwesterly along said last described line 714 feet, more or less, to the true point of beginning.

Except therefrom that portion lying within Brea Canyon Cutoff Road.

Parcel 4:

That portion of Lot 1 of Tract 2888, in the County of Los Angeles, State of California, as per map recorded in Book 30 page 1 of Maps, in the Office of the County Recorder of said County, described as follows:

Beginning at a point in the Northeasterly line of said Lot 1 being the intersection of said Northeasterly line with the centerline of Colima Road (formerly Fifth Avenue) 100 feet wide as shown on County Surveyors Map No. 8-191, sheet 4 of 11 sheets, on file in the Office of the Surveyor of said County; thence along said Northeasterly line South 33 degrees 15 minutes 20 seconds east 229.06 feet to the northeasterly corner of that land described in Deed recorded as Document No. 1056 on September 16, 1963 in Book D-2182, page 580, of Official Records of said County; thence along the Northwesterly line of last said land South 56 degrees 45 minutes 50 seconds west 360.62 feet to the Southwesterly line of said Lot 1; thence along said southwesterly line, North 33 degrees 15 minutes 35 seconds west 245.40 feet to a point in the herein described centerline; thence along said centerline North 59 degrees 21 minutes 45 seconds east 361.01 feet to the point of beginning.

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Order: 15930 Comment:

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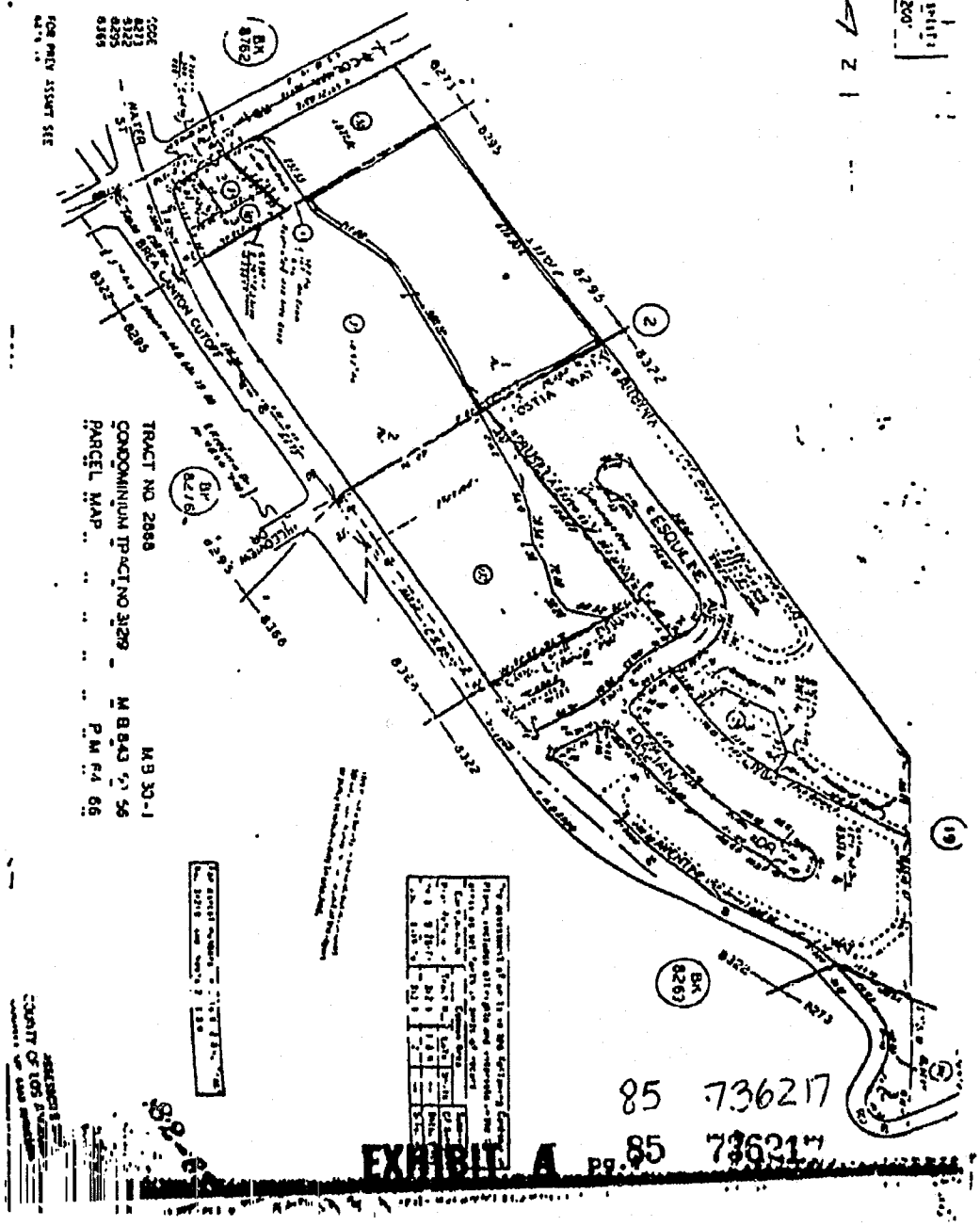

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EXHIBIT A PG. 85 736217

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DESCRIPT.ON:

THAT PORTION OF LOT 1 OF TRACT 2888, IN THE COUNTY OF LOS ANGELES, STATE OF CALIFORNIA, AS PER MAP RECORDED IN BOOK 30 PAGE 1 OF MAPS, IN THE OFFICE OF THE COUNTY RECORDER OF SAID COUNTY, DESCRIBED AS FOLLOWS:

BEGINNING AT A POINT IN THE NORTHEASTERLY LINE OF SAID LOT 1 BEING THE INTERSECTION OF SAID NORTHEASTERLY LINE WITH THE CENTERLINE OF COLIMA ROAD (FORMERLY FIFTH AVENUE) 100 FEET WIDE AS SHOWN ON COUNTY SURVEYORS MAP NO. B-191, SHEET 4 OF 11 SHEETS, ON FILE IN THE OFFICE OF THE SURVEYOR OF SAID COUNTY; THENCE ALONG SAID NORTHEASTERLY LINE SOUTH 33 DEGREES 15 MINUTES 20 SECONDS EAST 229.06 FEET TO THE NORTHEASTERLY CORNER OF THAT LAND DESCRIBED IN DEED RECORDED AS DOCUMENT NO. 1056 ON SEPTEMBER 16, 1963 IN BOOK D-2182, PAGE 580, OFFICIAL RECORDS OF SAID COUNTY; THENCE ALONG THE NORTHEASTERLY LINE OF LAST SAID LAND SOUTH 56 DEGREES 45 MINUTES 50 SECONDS WEST 360.62 FEET TO THE SOUTHWESTERLY LINE OF SAID LOT 1; THENCE ALONG SAID SOUTHWESTERLY LINE, NORTH 33 DEGREES 15 MINUTES 35 SECONDS WEST 245.40 FEET TO A POINT IN THE HEREIN DESCRIBED CENTERLINE; THENCE ALONG SAID CENTERLINE NORTH 59 DEGREES 21 MINUTES 45 SECONDS EAST 361.01 FEET TO THE POINT OF BEGINNING.

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EXHIBIT B

COUNTY OF LOS ANGELES
Public Health

JONATHAN E. FIELDING, M.D., M.P.H.
Director and Health Officer

JOHN F. SCHUNHOFF, Ph.D.
Chief Deputy

Public Health Investigation
BOB MOSBY, Chief
5555 Ferguson Drive, Suite 120-04
Commerce, California 90022
TEL (323) 890-7801 • FAX (323) 728-0217

www.lapublichealth.org

BOARD OF SUPERVISORS

Gloria Molina
First District

Yvonne B. Burke
Second District

Zev Yaroslavsky
Third District

Don Knabe
Fourth District

Michael D. Antonovich
Fifth District

August 27, 2007

LFR
3150 BRISTOL STREET SUITE 250
COSTA MESA, CA 92626

Attention: RYAN TERWILLIGER

RE: 1920 BREA CANYON CUTOFF RD, ROWLAND HEIGHTS CA 91789

I, the undersigned, being the Custodian or the Keeper of Records certify that a thorough search for the records you requested was carried out under my direction and control.

This search revealed no records.

It should be understood that this does not mean that the records you requested do not exist. It is possible that such records may be misfiled; exist under another spelling, name, or classification; or were not located. However, with the information furnished to our office, and to the best of our knowledge, no records were located.

If you have any questions regarding your request, please contact our office at (323) 890-7801.

Sincerely yours,

MICHAEL MINA, Deputy Health Officer
Public Health Investigation

yc
H-2976.07

APPENDIX E

Qualifications of Environmental Professionals

ANDREW SHIMIZU, R.E.A.

Project Scientist

environmental due diligence
microbial investigations
soil and groundwater investigations

Mr. Shimizu has over 12 years experience serving both public sector and private clients throughout Southern California on a wide variety of environmental projects. He has conducted Phase I Environmental Site Assessments (ESAs), soil and groundwater investigations, including evaluation of potential property contamination from historical or present site operations, local off-site operations, and reported regional releases involving contaminant migration. He has conducted and reported on over 300 ESA's throughout California, Nevada, New Mexico, and Arizona.

Mr. Shimizu is proficient at researching government records, reviewing environmental databases, and interpreting historical aerial photographs with a high level of attention to detail and thoroughness.

EDUCATION

B. A. Environmental Studies/Law & Society, University of California, Santa Barbara, 1990

REPRESENTATIVE EXPERIENCE

Environmental

- **ESA's with Various Clients in the Western U.S.** Performed Phase I ESA to be utilized for due diligence activities associated with property transactions. Experience in interpreting geologic maps, historical aerial photographs, topographic maps, and hydrologic maps.
- **Regulatory Reviews with Various Clients in Southern California.** Performed reviews of regulatory records for legislation regarding hazardous and solid waste, as well as local agency research regarding environmental compliance.
- **Site Investigations with Various Industrial Clients in Southern California.** Has performed and provided oversight for subsurface investigations throughout Southern California. Services include soil and groundwater sampling, data interpretation and monitoring well installation and maintenance programs.
- **Compliance Audits with Industrial and Manufacturing Facilities in Southern California.** Regulatory compliance audits of bio-technology, mid-sized aerospace, computer manufacturing firms, and various industrial and manufacturing facilities. Tasks included facility surveys, regulatory review, waste-stream audit, chemical storage and disposal, permitting, and semi-annual updates.
- **National Environmental Protection Act (NEPA) Compliance for a Telecommunications Client in Southern California.** Performing FCC-required NEPA checklists and compliance

studies for potential telecommunications locations. Services involve wildlife endangerment, floodplain identification, and wetland issues. Work also includes oversight of biological and archeological surveys. These studies are being conducted as part of a comprehensive Environmental Site Assessment program for this telecommunications client at all proposed monopole sites. To-date have completed over 400 studies throughout Southern California.

- **Groundwater Monitoring and Sampling for Various Clients in Southern California.** Conducted groundwater monitoring and sampling including groundwater elevation monitoring, well purging, and sample collection, logging, and handling.
- **HazMat Management for Various Clients in Southern California.** Has performed bulk sample collection for asbestos surveys, collection of bulk samples for lead analysis in all media, and radon gas surveys
- **Tenant Audits & Transaction Screens for Various Clients in Southern California.** Have performed numerous tenant exit audits and transaction screen inspections for commercial and industrial properties. Projects are conducted to provide property owners/managers with information regarding potential on-site hazardous substances/situations. Clients have included Trammell Crow, ABN AMRO and Union Bank of California.

Geotechnical

- **Resistivity Testing for Sprint PCS in Southern California.** Perform soils resistivity testing at sites throughout Southern California, including several remote locations. These services are in support of an ongoing client program and are conducted prior to placement of telecommunications antenna equipment.

Building Sciences

- **Indoor Air Quality Sampling for Various Clients in Southern California.** Technician for indoor air quality investigations of microbial contaminants associated with water intrusion. Performed sampling survey for bioaerosols, microbial contaminants, and air quality.

CERTIFICATIONS

California Registered Environmental Assessor No. 07753

AHERA Asbestos Certification

American Indoor Air Quality Council Member

PROFESSIONAL HISTORY

LFR Inc., Project Scientist, November, 2003 to present

VERTEX Engineering Services, Inc., Staff Scientist, 2003 (part-time)

ATEC/ATC Associates Inc., Project Manager, 1994 to 2003

Orange County Marine Institute, Floating Laboratory Technician/Instructor, 1990 to 1994

JANET HOLTZ, R.E.A.

Due Diligence Group Manager

environmental due diligence
asbestos, lead and microbial surveys
regulatory compliance auditing
soil and groundwater assessment
project management

Ms. Holtz has over 15 years experience serving both public sector and private clients throughout Southern California and the United States with the due diligence process. Her areas of expertise include Phase I and II environmental site assessments; environmental sampling (asbestos, lead, radon, mold); regulatory compliance evaluation; permitting; and tenant auditing.

Ms. Holtz is familiar with the industrial processes that generate environmental wastes, the fate and transport of chemicals in the environment, the potential adverse effects of these substances on human and ecological receptors, compliance challenges faced by business operators, the performance of remedial technologies, and how these issues play into successful site development and real estate transfers.

Ms. Holtz currently manages the Due Diligence Group in the Costa Mesa office and provides project management on projects that cover the spectrum of development-related environmental issues that include Phase I ESAs; sensitive environmental receptor surveys; lead, asbestos and microbial surveys; facility audits and regulatory compliance auditing; phase II soil and groundwater investigations; and risk evaluations.

EDUCATION

M.S., California State University - Fullerton, Environmental Science; Policy and Planning

B.S., University of Wisconsin – Madison, Biology

REPRESENTATIVE EXPERIENCE

- **Confidential Clients, Various Locations, Northern and Southern CA.** Conducted dozens of Phase 1 environmental assessments (ESAs) for industrial facilities including aerospace; furniture and paper manufacturing factories; utility companies; and vehicle and equipment maintenance facilities. The objective of the ESAs was to determine potential environmental concerns from past and present operations. ESAs consisted of property

inspection; aerial photograph review; and facility, regulatory agency, and hydrogeological records review.

- **Confidential Clients, CA.** Conducted site audits and prepared Hazardous Materials Emergency Business Plans for salt mining operations in the Mojave Desert. Conducted in-depth audits and reviewed regulatory requirements for concrete manufacturing facilities.
- **Confidential Client, CA.** Managed the Tenant Audit Program for a national property management company in order to minimize environmental liability and insurance requirements. Audits conducted on a quarterly basis for over seven years.
- **Confidential Client, CA.** Managed multi-building asbestos and lead-based paint surveys for a large financial institution. Data compiled in Internet database accessible to all bank branches.
- **Confidential Client, CA and NV.** Conducted site audits for a large cable manufacturer in order to bring the facilities into regulatory compliance.
- **Confidential REIT Client, throughout U.S.** Oversaw the conduct of Phase I and II site assessments for acquisition of a large hardware manufacturer. Employed methods to bring the facilities into compliance and overturn notices of violation.
- **Confidential Telecommunications Client, CA.** Coordinated the completion of over 500 surveys of tower sites that included Phase I ESAs; sensitive environmental receptor surveys including wetlands, biological, archaeological, tribal, and historical significance surveys; Phase II ESAs where required; asbestos and lead surveys; and soil resistivity investigations.
- **Confidential Client, CA.** Oversaw completion of Phase I and II ESAs and geotechnical investigations for a major developer of city redevelopment zones. Served as liaison between various government agencies and private interests.

REGISTRATION

California Registered Environmental Assessor, No. 04488

EPA Asbestos AHERA Certification

Mold Awareness Certificate

PROFESSIONAL HISTORY

LFR Levine-Fricke, Due Diligence Group Manager, 2003 - present

ATC Associates, Inc., Branch Manager, 2000 – 2003

ATC Associates, Inc. (formerly ATEC), Senior Project Manager, 1990 – 2000

McLaren Hart, Environmental Analyst, 1988-1990

THOMAS S. CHANDLER

Principal Engineer
Manager of Technical Services

site characterization
remediation
project management

Mr. Chandler has over 34 years of experience in the environmental industry in Southern California, including extensive experience managing large-scale projects with complex hydrology and hydrogeology issues. He has served as project manager for more than 100 projects that involved site characterization, regulatory interaction, permitting, contaminant fate and transport, and remediation. His projects have comprised multidisciplinary teams with budgets ranging from $3,000 to $21,000,000.

Mr. Chandler routinely directs projects involving hazardous waste site investigations, remedial investigations/feasibility studies (RI/FS), Resource Conservation and Recovery Act (RCRA) site investigations, site remediation, construction management, underground storage tank (UST) investigations, reclamation studies, solid waste planning studies, solid waste engineering design, and environmental audits. These projects typically involve a variety of materials including chlorinated solvents, petroleum products, explosives, chemical agents, mining wastes, and municipal wastes.

EDUCATION

B.S. Agricultural Engineering, California Polytechnic State University, San Luis Obispo, 1967

REPRESENTATIVE EXPERIENCE

- Project Manager for a $12,000,000 site characterization and remediation program at a former electronics manufacturing facility in Irvine, California. Designed and implemented a program to define and remediate the full extent of volatile organic compound (VOC) contamination in soil and groundwater. Developed a soil remedial action plan (RAP) that was approved by the Orange County Health Care Agency (OCHCA). The RAP included a toxicology/risk assessment, and called for in-situ and aboveground treatment of VOC-impacted soils using soil-vapor extraction (SVE). Aboveground treatment of more than 24,000 cubic yards of excavated soils has been completed and a site closure letter for soil has been issued by OCHCA and the California Regional Water Quality Control Board (RWQCB), Santa Ana Region. Remedial activities were also permitted by the South Coast Air Quality Management District.

  A RAP for the reduction of VOCs in a perched groundwater zone was approved by the RWQCB. Implementation of this RAP reduced the concentration of VOCs in the perched

groundwater zone to levels acceptable to the RWQCB, which subsequently issued a "no-further-action" letter for perched zone groundwater at the site.

Characterization of the vertical and horizontal extent of VOCs in groundwater in a 25-acre area of a lower aquifer zone was conducted concurrent with the implementation of an interim remediation/containment program. A RAP for the lower aquifer that included the design, construction, and operation of a five-well groundwater extraction network and a 700-gallon-per-minute carbon absorption unit was approved by the RWQCB. Remediation reduced the VOCs in this drinking water source to levels that have allowed the RWQCB to accept natural attenuation of the residual contamination. Remediation was stopped in late 1999, and post-remediation monitoring is currently being conducted. As part of a multi-million dollar litigation, Mr. Chandler also provided expert testimony concerning the project.

- Project Manager for the characterization and remediation of tetrachloroethene (PCE)-impacted soil and groundwater at an adhesives and coatings manufacturing facility in Placentia, California. Program included preparing soil and groundwater characterization workplans; conducting remediation feasibility studies; preparing RAPs; designing a soil-vapor remediation program including equipment design, installation, and operation of a 600 cubic feet per minute (cfm) capacity regenerative carbon absorption unit; designing a groundwater remediation program including equipment design, installation, and operation of two 700 gallons per minute (gpm) capacity carbon absorption units; regulatory agency interaction; and permitting. More than 800 gallons of pure PCE has been recovered from the subsurface by SVE, and on-site groundwater has been remediated.

- Technical Consultant for the characterization and remediation of trichloroethene (TCE)-impacted soil and groundwater at a 5-acre former printed circuit board manufacturing facility in Anaheim, California. Soil remediation was conducted using SVE and a refrigeration unit for vapor treatment. Performed groundwater characterization and designed a containment system. Characterization and remediation work was regulated by the Santa Ana RWQCB.

- Project Director for the characterization and remediation of PCE-impacted soil and groundwater at a 50-acre former manufacturing facility in the San Fernando Valley, California. All characterization and remediation work was regulated by the Los Angeles RWQCB.

- Project Director for a remedial investigation at an active manufacturing facility that utilized chlorinated hydrocarbons in Irvine, California. Site investigations at neighboring properties suggested that PCE-impacted groundwater was migrating from an area of vapor degreaser operations. The remedial investigation was conducted to determine if the activities at the subject site were the source of the off-site impacts. An interim RAP was developed and implemented. Activities were regulated by the Santa Ana RWQCB.

- Lead design consultant for the development and implementation of RAPs for more than 200 former and active retail gasoline stations and distribution sites in Orange and Los

Angeles Counties, California. RAPs were reviewed and approved by the OCHCA and both the Los Angeles and Santa Ana RWQCBs. Obtained closures for multiple sites.

- Project Director overseeing detailed engineering design of the foundation layer for the final cover of the closed Lenwood-Hinkley Landfill near Barstow, California. Project included an investigation to define the thickness of the existing cover; developing a grading plan for the foundation layer; developing a drainage plan, fencing plan, and structure removal plan; designing a landfill gas monitoring program; and developing engineering cost estimates and bid specifications.

- Technical consultant for the development of a South Coast Air Quality Management District (SCAQMD) Rule 1150.2 Compliance Plan for the closed Villa Park Landfill in Orange County, California. Developed a strategy for the development of the compliance plan, presentation to and negotiation with the SCAQMD, and plan preparation.

- Program Director for environmental/hazardous waste engineering projects for U.S. Navy Southwest Division locations in California, New Mexico, Arizona, and Nevada. This $5,000,000 indefinite quantity contract involved preparation of permits, hazardous substance management and planning documentation (including hazardous waste management plans; waste analysis plans, closure plans, and oil and hazardous substance spill plans), asbestos and lead surveys, and human health and ecological health assessments. Work also included studies and reports for non-hazardous solid waste management including solid waste management plans, recycling and source reduction plans, landfill operation and closure documentation, and infectious waste management plans. Delivery orders included development of Pollution Prevention Plans at NAF El Centro, NWS Seal Beach, NAWS Point Mugu, and MCAGCC 29 Palms; asbestos inspections and reporting of 177 buildings at NAS Tustin; preparation of workplans for remedial investigations at burn pit and disposal sites at the Chocolate Mountain Aerial Gunnery Range; preparation of Part B Permit application at NWS Seal Beach; solid waste management planning at MCAGCC 29 Palms; UST site investigations at MCAS Yuma; hazardous materials sampling at MCLB Barstow; and polychlorinated biphenyl (PCB) sampling at MCAS YUMA and NAWS Point Mugu.

- Program Director for the development of Source Reduction and Recycling Elements (SRREs), Non-Disposal Facility Elements (NDFE), and Household Hazardous Waste Elements (HHWE) at 19 naval facilities in Southern California. This integrated solid waste management program included the evaluation of solid and household hazardous wastes disposed in landfills owned by the Navy and others, and the development of planning documents to divert portions of the waste in accordance with local area planning or planning specific to the facility. SRREs, NDFEs, and HHWEs were prepared in accordance with State of California regulation AB939 and Navy regulation OPNAVINST 5090.1B.

- Project Director for Phase I and Phase II environmental site assessments for 82 miles along the Santa Fe Railroad right-of-way in San Diego County, California. Work included performing site inspections, reviewing historic aerial photographs and records, performing

historical searches, contacting regulatory agencies, performing soil borings, groundwater monitoring, and data evaluation.

- Project Manager for a $21,000,000 comprehensive monitoring program at the Rocky Mountain Arsenal, a former chemical warfare manufacturing and testing facility in Colorado. Work included monitoring and contamination evaluation of four environmental elements: groundwater, surface water, air, and biota. Responsible for the development and implementation of a technical plan for each element including establishment of monitoring locations, data collection, laboratory analysis, data management, quality assurance/quality control, health and safety plans, contamination assessment, and annual reports. Performed as Technical Manager for the surface-water element of the program. Responsible for the hydrologic characterization and flood flow analysis for streams flowing onto and off of the Rocky Mountain Arsenal. The program included the design, installation, operation, data evaluation, and interpretation of a 15-station surface-water monitoring network. The purpose of the overall program was to define the existing environmental and contamination conditions, monitor changes with time, and monitor the impacts of remedial activities. All work performed was litigation sensitive and performed within the regulatory environment. Responsible for the development of contracts, negotiation of subcontract scope and costs, and subcontractor management for the five subcontractors who were a part of the program.

- Project Manager for site evaluation/verification confirmation studies at 15 hazardous waste sites at the Naval Weapons Center, China Lake, California. Responsible for the design, location, construction, and collection of samples from groundwater monitoring wells and soil borings at various study sites including burn areas, ordnance disposal pits, fire-fighting practice areas, insecticide disposal pits, research laboratory wastewater lagoons and ditches, industrial waste landfills, and municipal waste landfills. Supervised the evaluation of analytical results used to assess soil and groundwater contamination. Responsible for the geologic and hydrogeologic evaluation, contamination assessment, and evaluation of contamination migration pathways, as well as recommendations for the next step of the Confirmation Studies. Responsible for negotiating program costs with the Navy and subcontractors, and managing budgets and schedules.

- Project Manager for a UST program at various sites in Southern California. Work included locating tanks and piping, tank integrity testing, tank and pipe repair, characterization of soil and groundwater contamination, monitoring system design, remedial action design, and post remediation monitoring.

- Expert consultant for hydrologic characterization and analysis of a stream affected by the remediation of TCE-contaminated groundwater at a RCRA chlorinated hydrocarbon site in Scotts Valley, California. The study included an evaluation of the effects on stream-water quantity and quality caused by groundwater withdrawals from the contaminated aquifer. It also included an evaluation of the effects on stream flow, water quality, sediment transport, and fish habitat of discharging treated groundwater into the stream.

- Project Manager for a baseline hydrologic study and alluvial valley floor study program required for a mining permit application for a coal mine in Douglas, Wyoming. Work

included data collection, defining baseline groundwater and surface-water conditions, evaluating impacts to the hydrologic regime caused by the strip mining operation, designing measures to mitigate the impacts of strip mining on the hydrologic regime, and designing restoration procedures to reestablish the basic hydrologic functions of the disturbed stream courses after strip mining had been completed.

CERTIFICATIONS

OSHA and EPA 40-hour safety training

OSHA 8-hour supervisory training

PUBLICATIONS

An Optical Current Meter for the Measurement of High-Velocity Debris-Laden Flow. In Journal of the American Institute of Physics, June 1973.

Water Resources Inventory, Spring 1966 to Spring 1971, Antelope Valley-East Kern Water Agency Area, California. USGS Open File Report, 1972.

Optical current meter use in southern California. In Proceedings, ASCE Hydraulics Division Annual Meeting, Tucson, Arizona, March 1971.

PROFESSIONAL HISTORY

LFR Inc., Principal Engineer, 2002–present

Harding ESE, Inc., Senior Principal Engineer, 1991–2002

Mesa Verde Environmental, Principal Engineer, 1989–1991

R.L. Stollar & Associates, Inc., Senior Hydrologist, 1984–1989

The Earth Technology Corporation, Senior Hydrologist, 1978–1984

U.S. Geological Survey, Supervisory Hydrologist, 1967–1978

APPENDIX F

Interview Documentation

INTERVIEW DOCUMENTATION

- Mr. Nick Saltas
  Southlands Church International

- Mr. Chris Morales
  Maintenance Supervisor
  Southlands Church Christian School

- Mr. Sergio Garcia
  Campus Security
  Southlands Church Christian School

- Personnel
  Regional Water Quality Control Board, Los Angeles Region

- Personnel
  Los Angeles County Department of Building & Safety

Limited Phase II Environmental Site Assessment
Southlands Church International
1920 Brea Canyon Cutoff Road
Walnut, California

November 15, 2007
002-11124-02

Prepared For
Trammel Crow Residential
949 South Coast Drive, Suite 400
Costa Mesa, California 92626

Prepared By
LFR Inc.
3150 Bristol Street, Suite 250
Costa Mesa, California 92626

LFR ENVIRONMENTAL MANAGEMENT & CONSULTING ENGINEERING

November 15, 2007 002-11124-02

Ms. Kimberley Paperin
Trammel Crow Residential
949 South Coast Drive, Suite 400
Costa Mesa, California 92626

Subject: Limited Phase II Environmental Site Assessment, Southlands Church International, 1920 Brea Canyon Cutoff Road, Walnut, California

Dear Ms. Paperin:

LFR Inc. (LFR) is pleased to submit the attached report presenting the results of our Limited Phase II Environmental Site Assessment of the above-mentioned property. The objective and scope of work for this assessment, which were reviewed and approved by Prudential Real Estate Investors environmental group, were outlined in LFR's proposal dated October 31, 2007.

LFR appreciates this opportunity to provide consulting services to Trammel Crow Residential, Inc. If you have any questions concerning this project, or would like to discuss other environmental concerns, please contact Tom Chandler at (714) 444-0111.

Sincerely,

Thomas S. Chandler
Principal Engineer

Tony Marino, P.G.
Senior Associate Geologist

Attachment

cc: Harris Sanders, PREI

714.444.0111 m
714.444.0117 f
www.lfr.com
3150 Bristol Street, Suite 250
Costa Mesa, California 92626-7324
Offices Nationwide

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B Laboratory Reports and Chain-of-Custody Documentation

EXECUTIVE SUMMARY

On November 1, 2007, LFR Inc. (LFR) performed a Limited Phase II Environmental Site Assessment (ESA) for the Southlands Church International property located at 1920 Brea Cutoff Road in Walnut, California ("the Site"; Figure 1). The Phase II ESA activities were based on potential environmental issues presented in LFR's Phase I Environmental Site Assessment (ESA) report for the Site dated September 6, 2007.

The Site is located near the southeast corner of the intersection of Brea Canyon Cutoff and Colima Road and consists of approximately 15.5 acres of land that is improved with a church, a school, and several small structures. The earliest on-site structures were constructed in approximately 1970.

A subsurface soil gas and groundwater investigation was conducted to assess the potential subsurface impacts at the Site of volatile organic compounds (VOCs) from a nearby dry cleaning facility.

LFR advanced two borings at the Site using direct push methods. The borings were advanced to depths of 32 and 40 feet below ground surface (bgs). Groundwater was sampled from the borings at depths of approximately 15 and 20 feet bgs. The two soil gas samples were collected at a depth of 5 feet bgs.

Toluene and meta- and para xylenes (m,p-xylenes), at very low concentrations, were the only VOCs detected above the laboratory detection limits in the soil gas and groundwater collected from boring B1. Toluene was the only VOC detected above the laboratory detection limits in the soil gas and groundwater collected from boring B4.

The relatively low-level concentrations of toluene and m,p- xylenes detected in the groundwater and soil vapor beneath the Site are likely from automotive parking and not from the nearby dry cleaning facility. Based on the results of our limited Phase II investigation, additional subsurface investigation of the Site does not appear to be warranted.

1.0 INTRODUCTION

On November 1, 2007, LFR performed a Limited Phase II Environmental Site Assessment (ESA) for the Southlands Church International property located at 1920 Brea Canyon Cutoff Road in Walnut, California ("the Site"; Figure 1). The Phase II ESA was based on information presented in LFR's Phase I ESA report for the Site dated September 6, 2007. This Limited Phase II ESA was conducted on behalf of Trammel Crow Residential (TCR) and Prudential Real Estate Investors (PREI) or the purpose of due diligence activities.

The Site is located near the southeast corner of the intersection of Brea Canyon Cutoff and Colima Roads and consists of approximately 15.5 acres of land that is improved with a church, a school, and several small structures. The earliest on-site structures were constructed in approximately 1970.

A subsurface soil gas and groundwater investigation was conducted to assess the potential subsurface impacts of volatile organic compounds (VOCs) beneath the Site.

LFR conducted a limited groundwater and soil gas sampling program that was reviewed and approved by PREI.

1.1 Objective

The primary objective of the Phase II ESA was to assess for potential subsurface impacts to the Site of VOCs from a dry cleaning facility located in the retail center at the southeast corner of Colima and Brea Canyon Cutoff Roads. Fieldwork was conducted on November 1, 2007 (Figure 2).

1.2 Scope of Work

The scope of work for the Phase II ESA at the Site included the following activities:

- Soil gas investigation, including the collection of two soil gas samples in Tedlar® bags at 5 feet below ground surface (bgs) at two boring locations along the northern property boundary.
- Groundwater investigation, including collection of a groundwater sample at approximately 15 to 20 feet bgs at the two boring locations.
- Laboratory analysis of the two soil gas samples.
- Laboratory analysis of the two groundwater samples.
- Groundwater and soil gas samples were submitted under strict chain-of-custody procedures to Environmental Support Technologies, Inc. (EST). EST is a state-certified laboratory located in Irvine, California.

- Data evaluation and report preparation.

Site-specific activities performed by LFR and information collected regarding these activities are summarized in the following sections.

1.3 Limitations

This document was prepared for the sole use of TCR and PREI, and their successors and assignees and may be relied upon by such parties. No other party should rely on the information contained herein without the prior written consent of LFR, TCR and PREI.

The opinions and recommendations presented in this report are based upon the scope of services, information obtained through the performance of the services, and the schedule as agreed upon by LFR and the party for whom this report was originally prepared. This report is an instrument of professional service and was prepared in accordance with the generally accepted standards and level of skill and care under similar conditions and circumstances established by the environmental consulting industry. No representation, warranty, or guarantee, express or implied, is intended or given. To the extent that LFR relied upon any information prepared by other parties not under contract to LFR, LFR makes no representation as to the accuracy or completeness of such information. This report is expressly for the sole and exclusive use of the party for whom this report was originally prepared for a particular purpose. Only the party for whom this report was originally prepared and/or other specifically named parties have the right to make use of and rely upon this report. Reuse of this report or any portion thereof for other than its intended purpose, or if modified, or if used by third parties, shall be at the user's sole risk.

Results of any investigations or testing and any findings presented in this report apply solely to conditions existing at the time when LFR's investigative work was performed. It must be recognized that any such investigative or testing activities are inherently limited and do not represent a conclusive or complete characterization. Conditions in other parts of the project site may vary from those at the locations where data were collected. LFR's ability to interpret investigation results is related to the availability of the data and the extent of the investigation activities. As such, 100% confidence in environmental investigation conclusions cannot reasonably be achieved.

LFR, therefore, does not provide any guarantees, certifications, or warranties regarding any conclusions regarding environmental contamination of any such property. Furthermore, nothing contained in this document shall relieve any other party of its responsibility to abide by contract documents and applicable laws, codes, regulations or standards.

2.0 FIELD ACTIVITIES

Fieldwork for this phase of the investigation was performed at the Site on November 1, 2007. This work included collection of groundwater and soil gas samples. Sampling procedures and protocols are described in Appendix A.

2.1 Preparation of Sampling Locations

Before sampling began, LFR coordinated scheduling and access with TCR and school office personnel.

2.2 Groundwater and Soil Gas Sampling

LFR advanced a total of two borings at the Site (Figure 2). A direct push drilling rig with a 1.5-inch diameter drill core was operated by EST. Boring location B1 was drilled in the asphalt paved parking area of the Site adjacent to the dry cleaning facility located in the retail center at the southeast corner of Colima and Brea Canyon Cutoff Roads. Boring B1 was drilled to a depth of approximately 32 feet bgs when the drilling rig met with refusal. Groundwater entered the borehole and a groundwater sample was collected at a depth of approximately 15 feet bgs. Boring B4 was drilled in the athletic field to a depth of approximately 40 feet bgs. Groundwater entered the borehole and a groundwater sample was collected at a depth of approximately 20 feet bgs.

Soil gas samples were collected from both borings at a depth of approximately 5 feet bgs in Tedlar® bags for laboratory analyses.

Soil gas and groundwater samples collected at the Site were submitted to EST of Irvine, California, under strict chain-of-custody protocol. A discussion of analytical methods and results is presented in Section 3.0. Soil gas and groundwater sampling procedures and protocols are described in Appendix A.

3.0 ANALYTICAL METHODS AND RESULTS

The soil gas and groundwater samples were submitted to EST and analyzed for VOCs using EPA method 8260B. Toluene and meta- and para-xylenes (m,p-xylenes) were detected in the samples collected from the B1 sampling location. Toluene was detected in soil gas at a concentration of 2.7 micrograms per liter (µg/L). Toluene and m,p-xylenes were detected in the groundwater at 1.6 µg/L and 1.5 µg/L, respectively. No other VOC analytes were detected above the laboratory detection limits.

At the B4 location, toluene was the only VOC detected above the laboratory detection limits in both the soil gas and groundwater samples at 3.2 µg/L and 1.3 µg/L, respectively.

Toluene and m,p-xylenes were detected in the groundwater sample collected from the boring drilled closest to the dry cleaning facility, B1. Toluene was detected at 2.7 µg/L in soil gas at the B1 location. Toluene was detected at 2.3 µg/L in soil gas and 1.3 µg/L in the groundwater at the B4 location.

The toluene and m,p-xylenes concentrations are not considered an environmental concern to the Site. The toluene and m,p-xylenes detected in groundwater are below the California Department of Health Services maximum contaminant levels of 0.15 milligrams per liter (mg/L) and 1.75 mg/L, respectively.

Toluene and xylenes are components of gasoline and not typically associated with dry cleaning operations. No contaminants typically associated with a dry cleaning operation were detected and thus no impacts to the Site from the dry cleaning operation were detected. The components detected are likely associated with automotive parking.

The analytical results for the soil gas and groundwater samples are shown on Figure 2. Copies of the laboratory data sheets and chain-of-custody documentation for the groundwater and soil gas analytical results are included in Appendix B.

4.0 SUMMARY AND CONCLUSIONS

On November 1, 2007, LFR collected groundwater and soil gas samples for laboratory analysis for VOCs from two borings to assess if the Site has been adversely impacted by the nearby dry cleaning facility. A total of two soil gas samples and two groundwater samples were analyzed for VOCs. Laboratory analytical results for the two soil gas and groundwater samples indicated that VOCs were not present above the laboratory detection limit, with the exception of very low concentrations of toluene and m, p-xylenes.

Toluene and m,p-xylenes were detected in the groundwater sample collected from the boring drilled closest to the dry cleaning facility, B1. Toluene was detected at 2.7 µg/L in soil gas at the B1 location. Toluene was detected at 2.3 µg/L in soil gas and 1.3 µg/L in the groundwater at the B4 location. M,p-xylenes were detected at 1.5 µg/L in the groundwater sample.

The toluene and m,p-xylenes concentrations are not considered an environmental concern to the Site. The toluene and m,p-xylenes detected in groundwater are below the California Department of Health Services maximum contaminant levels of 150 µg/L and 1,750 µg/L, respectively. The toluene and m,p-xylenes detected in the soil gas at the Site are below the California Human Health Screening Level for residential use at 135 µg/L and 315 µg/L, respectively.

The relatively low-level concentrations of toluene and m,p-xylenes detected beneath the Site are likely from automotive parking. Based on the results of our limited Phase II

investigation, additional subsurface investigation of the Site does not appear to be warranted.

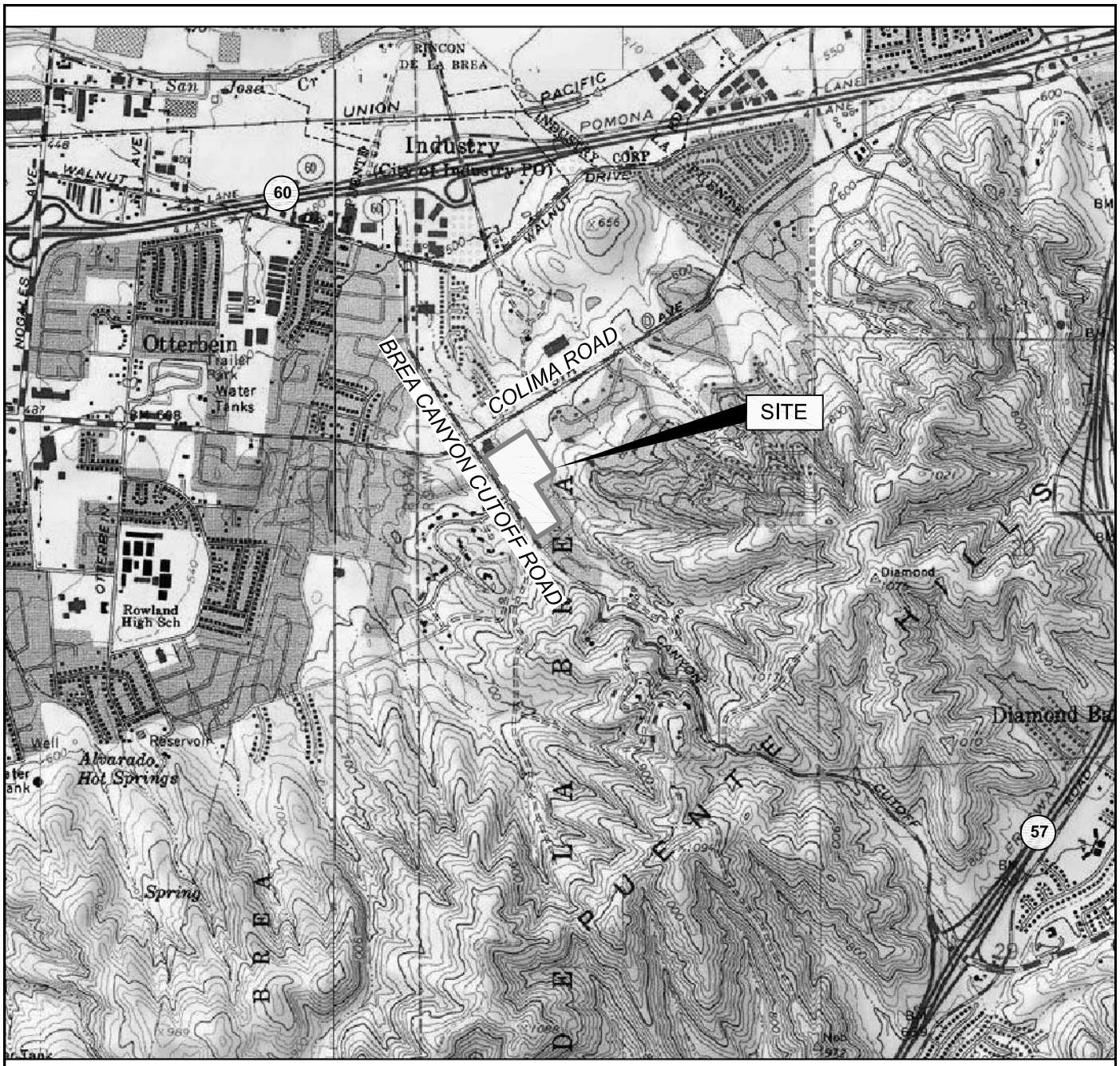
5.0 REFERENCES

LFR Inc. (LFR). 2007. Phase I Environmental Site Assessment, Southlands Church International, 1920 Brea Cutoff Road, Rowland Heights, California. September 6.

California Department of Health Services, 2007, Title 22 California Code of Regulations, Table 6444-A, Maximum Contaminant Levels, Organic Chemicals, October.

California Environmental Protection Agency (Cal-EPA), 2004, California Human Health Screening Levels (CHHSLs) published by OEHHA; Table 7.

FIGURES



MAP SOURCE: National Geographic Holdings, TOPO! 2001, Yorba Linda, CA, 1981.

N

0 1,000 2,000 4,000 feet

Vicinity Map

Southlands Church, 1920 Brea Canyon Cutoff Road
Walnut, CA. - 002-11124-02

LFR

Figure 1

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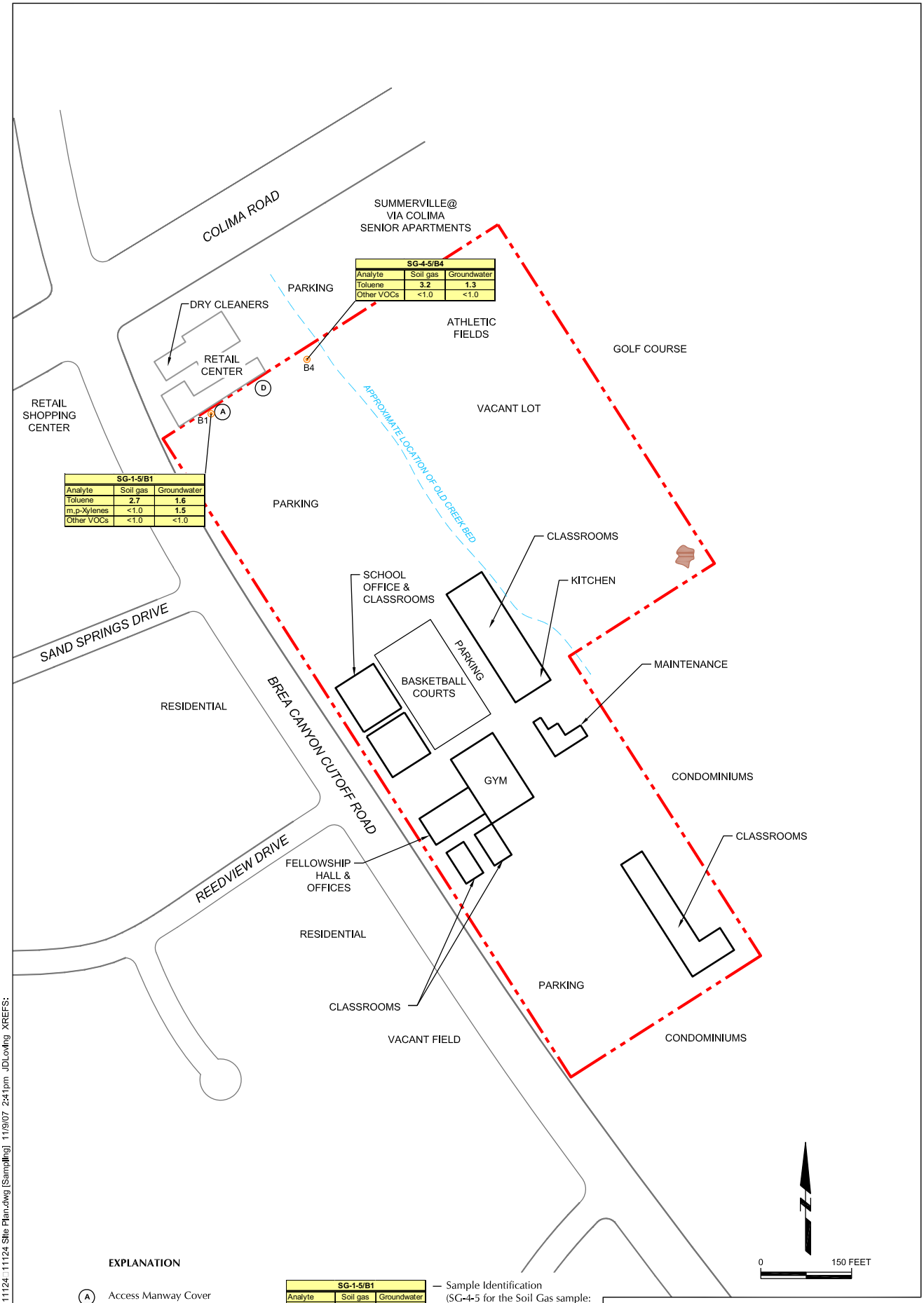

SG-4-5/B4		
Analyte	Soil gas	Groundwater
Toluene	3.2	1.3
Other VOCs	<1.0	<1.0

SG-1-5/B1		
Analyte	Soil gas	Groundwater
Toluene	2.7	1.6
m,p-Xylenes	<1.0	1.5
Other VOCs	<1.0	<1.0

EXPLANATION

- (A) Access Manway Cover
- (D) Trash Dumpsters
- Soil Piles
- B1 Sampling Location
- Site Boundary

SG-1-5/B1		
Analyte	Soil gas	Groundwater
Toluene	2.7	1.6
m,p-Xylenes	<1.0	1.5
Other VOCs	<1.0	<1.0

- Sample Identification (SG-4-5 for the Soil Gas sample: B4 for the Groundwater sample)
- Groundwater Result
- SoilGas Result
- Analyte

All results are in micrograms per liter (µg/L)

Site Plan Showing Sampling Soil Gas and Groundwater Sampling Locations with VOC Analytical Results

Southlands Church, 1920 Brea Canyon Cutoff Road
Walnut, CA. - 002-11124-02

LFR

Figure 2

CM:K:\Data\Graphics\11000\11124\11124 Site Plan.dwg [Sampling] 11/9/07 2:41pm JDLoving XREFS:

APPENDIX A

Field Procedures

FIELD PROCEDURES

Groundwater Sampling

Borings were advanced using a direct-push drilling rig bored through the asphalt parking lot and grassy athletic field with a 2-inch diameter core. The groundwater samples were collected through a tube using a peristaltic pump into 40-milliliter VOA vials.

Soil Gas Sampling

A ¼-inch diameter tube was placed in the soil at a depth of approximately 5-foot bgs and sealed using hydrated bentonite. The soil gas sample was pumped through the tube into new Tedlar® bags.

Sample Intervals

Groundwater samples were collected at depths of approximately 15 and 20 feet bgs. Soil gas samples were collected at a depth of approximately 5 feet bgs.

Sample Identification

All groundwater and soil gas samples were identified and labeled at the time of collection. Sample identification followed a specific format to ensure that all sample numbers were unique.

Sampling Equipment

In each boring, three glass vials and one Tedlar® bag from each sampling interval was retained for chemical analysis. The samples were labeled and stored in a chilled cooler pending delivery to the analytical laboratory. Strict chain-of-custody protocol was followed throughout all phases of the sample handling process.

Equipment Cleaning

To reduce the potential for cross contamination, all equipment and tools were cleaned before use at each borehole. Tools were scrubbed with a laboratory-grade detergent and double-rinsed with distilled water between sampling points.

APPENDIX B

Laboratory Reports and Chain-of-Custody Documentation

November 09, 2007

Tony Marino
LFR Levine Fricke, Inc.
3150 Bristol Street, Suite 250
Costa Mesa, California 92626-7234

RE: 1920 Brea Canyon Cutoff Road, Rowland Heights

Enclosed are the results of analyses for samples received by the laboratory on 11/01/07 13:00. The samples were received by Environmental Support Technologies, Inc. laboratory with a chain of custody record. The analyses were performed according to the prescribed method as outlined by EPA. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Ragi W. Abraham

Ragi W. Abraham
Laboratory Director

Environmental Support Technologies, Inc. laboratories are certified by the California Department of Health Services (CDHS), Environmental Laboratory Accreditation Program (ELAP) No's. 1996, 2511, and 2631.

360 Goddard, Irvine, California 92618
Telephone: (949) 679-9500 Fax: (949) 679-9501

LFR Levine Fricke, Inc.	Project:	1920 Brea Canyon Cutoff Road, Rowland Heights	
3150 Bristol Street, Suite 250	Project Number:	EST2692	**Reported:**
Costa Mesa, California 92626-7234	Project Manager:	Tony Marino	09-Nov-07 13:37

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
SG-4-5	2K70101-01	Air	01-Nov-07 11:33	01-Nov-07 13:00
SG-1-5	2K70101-02	Air	01-Nov-07 11:10	01-Nov-07 13:00
B1	2K70101-03	Water	01-Nov-07 07:45	01-Nov-07 13:00
B4	2K70101-04	Water	01-Nov-07 10:15	01-Nov-07 13:00

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

360 Goddard, Irvine, California 92618
Telephone: (949) 679-9500 Fax: (949) 679-9501

LFR Levine Fricke, Inc.	Project: 1920 Brea Canyon Cutoff Road, Rowland Heights	
3150 Bristol Street, Suite 250	Project Number: EST2692	**Reported:**
Costa Mesa, California 92626-7234	Project Manager: Tony Marino	09-Nov-07 13:37

Volatile Organic Compounds

Environmental Support Technologies, Inc.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
SG-4-5 (2K70101-01) Air Sampled: 11/01/07 11:33 Received: 11/01/07 13:00									
1,1,1,2-Tetrachloroethane	ND	1.0	ug/l	1	27K0101	11/01/07	11/01/07	EPA 8260B	
1,1,1-Trichloroethane	ND	1.0	"	"	"	"	"	"	
1,1,2,2-Tetrachloroethane	ND	1.0	"	"	"	"	"	"	
1,1,2-Trichloroethane	ND	1.0	"	"	"	"	"	"	
1,1,2-Trichloro-trifluoroethane	ND	1.0	"	"	"	"	"	"	
1,1-Dichloroethane	ND	1.0	"	"	"	"	"	"	
1,1-Dichloroethene	ND	1.0	"	"	"	"	"	"	
1,1-Dichloropropene	ND	1.0	"	"	"	"	"	"	
1,2,3-Trichlorobenzene	ND	1.0	"	"	"	"	"	"	
1,2,3-Trichloropropane	ND	1.0	"	"	"	"	"	"	
1,2,4-Trichlorobenzene	ND	1.0	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	1.0	"	"	"	"	"	"	
1,2-Dibromo-3-chloropropane	ND	1.0	"	"	"	"	"	"	
1,2-Dibromoethane	ND	1.0	"	"	"	"	"	"	
1,2-Dichlorobenzene	ND	1.0	"	"	"	"	"	"	
1,2-Dichloroethane	ND	1.0	"	"	"	"	"	"	
1,2-Dichloropropane	ND	1.0	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	1.0	"	"	"	"	"	"	
1,3-Dichlorobenzene	ND	1.0	"	"	"	"	"	"	
1,3-Dichloropropane	ND	1.0	"	"	"	"	"	"	
1,4-Dichlorobenzene	ND	1.0	"	"	"	"	"	"	
2,2-Dichloropropane	ND	1.0	"	"	"	"	"	"	
2-Chlorotoluene	ND	1.0	"	"	"	"	"	"	
4-Chlorotoluene	ND	1.0	"	"	"	"	"	"	
Benzene	ND	1.0	"	"	"	"	"	"	
Bromobenzene	ND	1.0	"	"	"	"	"	"	
Bromochloromethane	ND	1.0	"	"	"	"	"	"	
Bromodichloromethane	ND	1.0	"	"	"	"	"	"	
Bromoform	ND	1.0	"	"	"	"	"	"	
Bromomethane	ND	1.0	"	"	"	"	"	"	
Carbon disulfide	ND	1.0	"	"	"	"	"	"	
Carbon tetrachloride	ND	1.0	"	"	"	"	"	"	
Chlorobenzene	ND	1.0	"	"	"	"	"	"	
Chloroethane	ND	1.0	"	"	"	"	"	"	
Chloroform	ND	1.0	"	"	"	"	"	"	
Chloromethane	ND	1.0	"	"	"	"	"	"	
cis-1,2-Dichloroethene	ND	1.0	"	"	"	"	"	"	
cis-1,3-Dichloropropene	ND	1.0	"	"	"	"	"	"	

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

LFR Levine Fricke, Inc.	Project: 1920 Brea Canyon Cutoff Road, Rowland Heights	
3150 Bristol Street, Suite 250	Project Number: EST2692	**Reported:**
Costa Mesa, California 92626-7234	Project Manager: Tony Marino	09-Nov-07 13:37

Volatile Organic Compounds

Environmental Support Technologies, Inc.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
SG-4-5 (2K70101-01) Air Sampled: 11/01/07 11:33 Received: 11/01/07 13:00									
Dibromochloromethane	ND	1.0	ug/l	1	27K0101	11/01/07	11/01/07	EPA 8260B	
Dibromomethane	ND	1.0	"	"	"	"	"	"	
Dichlorodifluoromethane	ND	1.0	"	"	"	"	"	"	
Ethylbenzene	ND	1.0	"	"	"	"	"	"	
Hexachlorobutadiene	ND	1.0	"	"	"	"	"	"	
Isopropylbenzene	ND	1.0	"	"	"	"	"	"	
meta- and para-Xylenes	ND	1.0	"	"	"	"	"	"	
Methylene Chloride	ND	1.0	"	"	"	"	"	"	
Naphthalene	ND	1.0	"	"	"	"	"	"	
n-Butylbenzene	ND	1.0	"	"	"	"	"	"	
n-Propylbenzene	ND	1.0	"	"	"	"	"	"	
ortho-Xylene	ND	1.0	"	"	"	"	"	"	
p-Isopropyltoluene	ND	1.0	"	"	"	"	"	"	
sec-Butylbenzene	ND	1.0	"	"	"	"	"	"	
Styrene	ND	1.0	"	"	"	"	"	"	
tert-Butylbenzene	ND	1.0	"	"	"	"	"	"	
Tetrachloroethene	ND	1.0	"	"	"	"	"	"	
Toluene	**3.2**	1.0	"	"	"	"	"	"	
trans-1,2-Dichloroethene	ND	1.0	"	"	"	"	"	"	
trans-1,3-Dichloropropene	ND	1.0	"	"	"	"	"	"	
Trichloroethene	ND	1.0	"	"	"	"	"	"	
Trichlorofluoromethane	ND	1.0	"	"	"	"	"	"	
Vinyl Chloride	ND	1.0	"	"	"	"	"	"	
Surrogate: Dibromofluoromethane		*94.9 %*	*77-130*		"	"	"	"	
Surrogate: Toluene-d8		*110 %*	*84-119*		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		*104 %*	*81-117*		"	"	"	"	

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

LFR Levine Fricke, Inc.	Project: 1920 Brea Canyon Cutoff Road, Rowland Heights	
3150 Bristol Street, Suite 250	Project Number: EST2692	**Reported:**
Costa Mesa, California 92626-7234	Project Manager: Tony Marino	09-Nov-07 13:37

Volatile Organic Compounds

Environmental Support Technologies, Inc.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
SG-1-5 (2K70101-02) Air Sampled: 11/01/07 11:10 Received: 11/01/07 13:00									
1,1,1,2-Tetrachloroethane	ND	1.0	ug/l	1	27K0101	11/01/07	11/01/07	EPA 8260B	
1,1,1-Trichloroethane	ND	1.0	"	"	"	"	"	"	
1,1,2,2-Tetrachloroethane	ND	1.0	"	"	"	"	"	"	
1,1,2-Trichloroethane	ND	1.0	"	"	"	"	"	"	
1,1,2-Trichloro-trifluoroethane	ND	1.0	"	"	"	"	"	"	
1,1-Dichloroethane	ND	1.0	"	"	"	"	"	"	
1,1-Dichloroethene	ND	1.0	"	"	"	"	"	"	
1,1-Dichloropropene	ND	1.0	"	"	"	"	"	"	
1,2,3-Trichlorobenzene	ND	1.0	"	"	"	"	"	"	
1,2,3-Trichloropropane	ND	1.0	"	"	"	"	"	"	
1,2,4-Trichlorobenzene	ND	1.0	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	1.0	"	"	"	"	"	"	
1,2-Dibromo-3-chloropropane	ND	1.0	"	"	"	"	"	"	
1,2-Dibromoethane	ND	1.0	"	"	"	"	"	"	
1,2-Dichlorobenzene	ND	1.0	"	"	"	"	"	"	
1,2-Dichloroethane	ND	1.0	"	"	"	"	"	"	
1,2-Dichloropropane	ND	1.0	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	1.0	"	"	"	"	"	"	
1,3-Dichlorobenzene	ND	1.0	"	"	"	"	"	"	
1,3-Dichloropropane	ND	1.0	"	"	"	"	"	"	
1,4-Dichlorobenzene	ND	1.0	"	"	"	"	"	"	
2,2-Dichloropropane	ND	1.0	"	"	"	"	"	"	
2-Chlorotoluene	ND	1.0	"	"	"	"	"	"	
4-Chlorotoluene	ND	1.0	"	"	"	"	"	"	
Benzene	ND	1.0	"	"	"	"	"	"	
Bromobenzene	ND	1.0	"	"	"	"	"	"	
Bromochloromethane	ND	1.0	"	"	"	"	"	"	
Bromodichloromethane	ND	1.0	"	"	"	"	"	"	
Bromoform	ND	1.0	"	"	"	"	"	"	
Bromomethane	ND	1.0	"	"	"	"	"	"	
Carbon disulfide	ND	1.0	"	"	"	"	"	"	
Carbon tetrachloride	ND	1.0	"	"	"	"	"	"	
Chlorobenzene	ND	1.0	"	"	"	"	"	"	
Chloroethane	ND	1.0	"	"	"	"	"	"	
Chloroform	ND	1.0	"	"	"	"	"	"	
Chloromethane	ND	1.0	"	"	"	"	"	"	
cis-1,2-Dichloroethene	ND	1.0	"	"	"	"	"	"	
cis-1,3-Dichloropropene	ND	1.0	"	"	"	"	"	"	
Dibromochloromethane	ND	1.0	"	"	"	"	"	"	

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LFR Levine Fricke, Inc.	Project: 1920 Brea Canyon Cutoff Road, Rowland Heights	
3150 Bristol Street, Suite 250	Project Number: EST2692	**Reported:**
Costa Mesa, California 92626-7234	Project Manager: Tony Marino	09-Nov-07 13:37

Volatile Organic Compounds

Environmental Support Technologies, Inc.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
SG-1-5 (2K70101-02) Air Sampled: 11/01/07 11:10 Received: 11/01/07 13:00									
Dibromomethane	ND	1.0	ug/l	1	27K0101	11/01/07	11/01/07	EPA 8260B	
Dichlorodifluoromethane	ND	1.0	"	"	"	"	"	"	
Ethylbenzene	ND	1.0	"	"	"	"	"	"	
Hexachlorobutadiene	ND	1.0	"	"	"	"	"	"	
Isopropylbenzene	ND	1.0	"	"	"	"	"	"	
meta- and para-Xylenes	ND	1.0	"	"	"	"	"	"	
Methylene Chloride	ND	1.0	"	"	"	"	"	"	
Naphthalene	ND	1.0	"	"	"	"	"	"	
n-Butylbenzene	ND	1.0	"	"	"	"	"	"	
n-Propylbenzene	ND	1.0	"	"	"	"	"	"	
ortho-Xylene	ND	1.0	"	"	"	"	"	"	
p-Isopropyltoluene	ND	1.0	"	"	"	"	"	"	
sec-Butylbenzene	ND	1.0	"	"	"	"	"	"	
Styrene	ND	1.0	"	"	"	"	"	"	
tert-Butylbenzene	ND	1.0	"	"	"	"	"	"	
Tetrachloroethene	ND	1.0	"	"	"	"	"	"	
Toluene	**2.7**	1.0	"	"	"	"	"	"	
trans-1,2-Dichloroethene	ND	1.0	"	"	"	"	"	"	
trans-1,3-Dichloropropene	ND	1.0	"	"	"	"	"	"	
Trichloroethene	ND	1.0	"	"	"	"	"	"	
Trichlorofluoromethane	ND	1.0	"	"	"	"	"	"	
Vinyl Chloride	ND	1.0	"	"	"	"	"	"	
Surrogate: Dibromofluoromethane		*106 %*	*77-130*		"	"	"	"	
Surrogate: Toluene-d8		*99.5 %*	*84-119*		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		*101 %*	*81-117*		"	"	"	"	

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

LFR Levine Fricke, Inc.	Project: 1920 Brea Canyon Cutoff Road, Rowland Heights	
3150 Bristol Street, Suite 250	Project Number: EST2692	**Reported:**
Costa Mesa, California 92626-7234	Project Manager: Tony Marino	09-Nov-07 13:37

Volatile Organic Compounds

Environmental Support Technologies, Inc.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
B1 (2K70101-03) Water Sampled: 11/01/07 07:45 Received: 11/01/07 13:00									
1,1,1,2-Tetrachloroethane	ND	1.0	ug/l	1	27K0102	11/01/07	11/01/07	EPA 8260B	
1,1,1-Trichloroethane	ND	1.0	"	"	"	"	"	"	
1,1,2,2-Tetrachloroethane	ND	1.0	"	"	"	"	"	"	
1,1,2-Trichloroethane	ND	1.0	"	"	"	"	"	"	
1,1,2-Trichloro-trifluoroethane	ND	1.0	"	"	"	"	"	"	
1,1-Dichloroethane	ND	1.0	"	"	"	"	"	"	
1,1-Dichloroethene	ND	1.0	"	"	"	"	"	"	
1,1-Dichloropropene	ND	1.0	"	"	"	"	"	"	
1,2,3-Trichlorobenzene	ND	1.0	"	"	"	"	"	"	
1,2,3-Trichloropropane	ND	1.0	"	"	"	"	"	"	
1,2,4-Trichlorobenzene	ND	1.0	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	1.0	"	"	"	"	"	"	
1,2-Dibromo-3-chloropropane	ND	1.0	"	"	"	"	"	"	
1,2-Dibromoethane	ND	1.0	"	"	"	"	"	"	
1,2-Dichlorobenzene	ND	1.0	"	"	"	"	"	"	
1,2-Dichloroethane	ND	1.0	"	"	"	"	"	"	
1,2-Dichloropropane	ND	1.0	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	1.0	"	"	"	"	"	"	
1,3-Dichlorobenzene	ND	1.0	"	"	"	"	"	"	
1,3-Dichloropropane	ND	1.0	"	"	"	"	"	"	
1,4-Dichlorobenzene	ND	1.0	"	"	"	"	"	"	
2,2-Dichloropropane	ND	1.0	"	"	"	"	"	"	
2-Chlorotoluene	ND	1.0	"	"	"	"	"	"	
4-Chlorotoluene	ND	1.0	"	"	"	"	"	"	
Benzene	ND	1.0	"	"	"	"	"	"	
Bromobenzene	ND	1.0	"	"	"	"	"	"	
Bromochloromethane	ND	1.0	"	"	"	"	"	"	
Bromodichloromethane	ND	1.0	"	"	"	"	"	"	
Bromoform	ND	1.0	"	"	"	"	"	"	
Bromomethane	ND	1.0	"	"	"	"	"	"	
Carbon disulfide	ND	1.0	"	"	"	"	"	"	
Carbon tetrachloride	ND	1.0	"	"	"	"	"	"	
Chlorobenzene	ND	1.0	"	"	"	"	"	"	
Chloroethane	ND	1.0	"	"	"	"	"	"	
Chloroform	ND	1.0	"	"	"	"	"	"	
Chloromethane	ND	1.0	"	"	"	"	"	"	
cis-1,2-Dichloroethene	ND	1.0	"	"	"	"	"	"	
cis-1,3-Dichloropropene	ND	1.0	"	"	"	"	"	"	
Dibromochloromethane	ND	1.0	"	"	"	"	"	"	

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

LFR Levine Fricke, Inc.	Project: 1920 Brea Canyon Cutoff Road, Rowland Heights	
3150 Bristol Street, Suite 250	Project Number: EST2692	**Reported:**
Costa Mesa, California 92626-7234	Project Manager: Tony Marino	09-Nov-07 13:37

Volatile Organic Compounds

Environmental Support Technologies, Inc.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
B1 (2K70101-03) Water Sampled: 11/01/07 07:45 Received: 11/01/07 13:00									
Dibromomethane	ND	1.0	ug/l	1	27K0102	11/01/07	11/01/07	EPA 8260B	
Dichlorodifluoromethane	ND	1.0	"	"	"	"	"	"	
Ethylbenzene	ND	1.0	"	"	"	"	"	"	
Hexachlorobutadiene	ND	1.0	"	"	"	"	"	"	
Isopropylbenzene	ND	1.0	"	"	"	"	"	"	
meta- and para-Xylenes	**1.5**	1.0	"	"	"	"	"	"	
Methylene Chloride	ND	1.0	"	"	"	"	"	"	
Naphthalene	ND	1.0	"	"	"	"	"	"	
n-Butylbenzene	ND	1.0	"	"	"	"	"	"	
n-Propylbenzene	ND	1.0	"	"	"	"	"	"	
ortho-Xylene	ND	1.0	"	"	"	"	"	"	
p-Isopropyltoluene	ND	1.0	"	"	"	"	"	"	
sec-Butylbenzene	ND	1.0	"	"	"	"	"	"	
Styrene	ND	1.0	"	"	"	"	"	"	
tert-Butylbenzene	ND	1.0	"	"	"	"	"	"	
Tetrachloroethene	ND	1.0	"	"	"	"	"	"	
Toluene	**1.6**	1.0	"	"	"	"	"	"	A-01
trans-1,2-Dichloroethene	ND	1.0	"	"	"	"	"	"	
trans-1,3-Dichloropropene	ND	1.0	"	"	"	"	"	"	
Trichloroethene	ND	1.0	"	"	"	"	"	"	
Trichlorofluoromethane	ND	1.0	"	"	"	"	"	"	
Vinyl Chloride	ND	1.0	"	"	"	"	"	"	
Surrogate: Dibromofluoromethane		*109 %*	*77-130*		"	"	"	"	
Surrogate: Toluene-d8		*105 %*	*80-120*		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		*104 %*	*80-120*		"	"	"	"	

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LFR Levine Fricke, Inc.	Project: 1920 Brea Canyon Cutoff Road, Rowland Heights	
3150 Bristol Street, Suite 250	Project Number: EST2692	**Reported:**
Costa Mesa, California 92626-7234	Project Manager: Tony Marino	09-Nov-07 13:37

Volatile Organic Compounds

Environmental Support Technologies, Inc.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
B4 (2K70101-04) Water Sampled: 11/01/07 10:15 Received: 11/01/07 13:00									
1,1,1,2-Tetrachloroethane	ND	1.0	ug/l	1	27K0102	11/01/07	11/01/07	EPA 8260B	
1,1,1-Trichloroethane	ND	1.0	"	"	"	"	"	"	
1,1,2,2-Tetrachloroethane	ND	1.0	"	"	"	"	"	"	
1,1,2-Trichloroethane	ND	1.0	"	"	"	"	"	"	
1,1,2-Trichloro-trifluoroethane	ND	1.0	"	"	"	"	"	"	
1,1-Dichloroethane	ND	1.0	"	"	"	"	"	"	
1,1-Dichloroethene	ND	1.0	"	"	"	"	"	"	
1,1-Dichloropropene	ND	1.0	"	"	"	"	"	"	
1,2,3-Trichlorobenzene	ND	1.0	"	"	"	"	"	"	
1,2,3-Trichloropropane	ND	1.0	"	"	"	"	"	"	
1,2,4-Trichlorobenzene	ND	1.0	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	1.0	"	"	"	"	"	"	
1,2-Dibromo-3-chloropropane	ND	1.0	"	"	"	"	"	"	
1,2-Dibromoethane	ND	1.0	"	"	"	"	"	"	
1,2-Dichlorobenzene	ND	1.0	"	"	"	"	"	"	
1,2-Dichloroethane	ND	1.0	"	"	"	"	"	"	
1,2-Dichloropropane	ND	1.0	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	1.0	"	"	"	"	"	"	
1,3-Dichlorobenzene	ND	1.0	"	"	"	"	"	"	
1,3-Dichloropropane	ND	1.0	"	"	"	"	"	"	
1,4-Dichlorobenzene	ND	1.0	"	"	"	"	"	"	
2,2-Dichloropropane	ND	1.0	"	"	"	"	"	"	
2-Chlorotoluene	ND	1.0	"	"	"	"	"	"	
4-Chlorotoluene	ND	1.0	"	"	"	"	"	"	
Benzene	ND	1.0	"	"	"	"	"	"	
Bromobenzene	ND	1.0	"	"	"	"	"	"	
Bromochloromethane	ND	1.0	"	"	"	"	"	"	
Bromodichloromethane	ND	1.0	"	"	"	"	"	"	
Bromoform	ND	1.0	"	"	"	"	"	"	
Bromomethane	ND	1.0	"	"	"	"	"	"	
Carbon disulfide	ND	1.0	"	"	"	"	"	"	
Carbon tetrachloride	ND	1.0	"	"	"	"	"	"	
Chlorobenzene	ND	1.0	"	"	"	"	"	"	
Chloroethane	ND	1.0	"	"	"	"	"	"	
Chloroform	ND	1.0	"	"	"	"	"	"	
Chloromethane	ND	1.0	"	"	"	"	"	"	
cis-1,2-Dichloroethene	ND	1.0	"	"	"	"	"	"	
cis-1,3-Dichloropropene	ND	1.0	"	"	"	"	"	"	
Dibromochloromethane	ND	1.0	"	"	"	"	"	"	

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LFR Levine Fricke, Inc.	Project: 1920 Brea Canyon Cutoff Road, Rowland Heights	
3150 Bristol Street, Suite 250	Project Number: EST2692	**Reported:**
Costa Mesa, California 92626-7234	Project Manager: Tony Marino	09-Nov-07 13:37

Volatile Organic Compounds

Environmental Support Technologies, Inc.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
B4 (2K70101-04) Water Sampled: 11/01/07 10:15 Received: 11/01/07 13:00									
Dibromomethane	ND	1.0	ug/l	1	27K0102	11/01/07	11/01/07	EPA 8260B	
Dichlorodifluoromethane	ND	1.0	"	"	"	"	"	"	
Ethylbenzene	ND	1.0	"	"	"	"	"	"	
Hexachlorobutadiene	ND	1.0	"	"	"	"	"	"	
Isopropylbenzene	ND	1.0	"	"	"	"	"	"	
meta- and para-Xylenes	ND	1.0	"	"	"	"	"	"	
Methylene Chloride	ND	1.0	"	"	"	"	"	"	
Naphthalene	ND	1.0	"	"	"	"	"	"	
n-Butylbenzene	ND	1.0	"	"	"	"	"	"	
n-Propylbenzene	ND	1.0	"	"	"	"	"	"	
ortho-Xylene	ND	1.0	"	"	"	"	"	"	
p-Isopropyltoluene	ND	1.0	"	"	"	"	"	"	
sec-Butylbenzene	ND	1.0	"	"	"	"	"	"	
Styrene	ND	1.0	"	"	"	"	"	"	
tert-Butylbenzene	ND	1.0	"	"	"	"	"	"	
Tetrachloroethene	ND	1.0	"	"	"	"	"	"	
Toluene	**1.3**	1.0	"	"	"	"	"	"	A-01
trans-1,2-Dichloroethene	ND	1.0	"	"	"	"	"	"	
trans-1,3-Dichloropropene	ND	1.0	"	"	"	"	"	"	
Trichloroethene	ND	1.0	"	"	"	"	"	"	
Trichlorofluoromethane	ND	1.0	"	"	"	"	"	"	
Vinyl Chloride	ND	1.0	"	"	"	"	"	"	
Surrogate: Dibromofluoromethane		*103 %*	*77-130*		"	"	"	"	
Surrogate: Toluene-d8		*104 %*	*80-120*		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		*103 %*	*80-120*		"	"	"	"	

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LFR Levine Fricke, Inc.	Project: 1920 Brea Canyon Cutoff Road, Rowland Heights	
3150 Bristol Street, Suite 250	Project Number: EST2692	**Reported:**
Costa Mesa, California 92626-7234	Project Manager: Tony Marino	09-Nov-07 13:37

Volatile Organic Compounds - Quality Control

Environmental Support Technologies, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 27K0101 - Volatiles										
Blank (27K0101-BLK1)				Prepared & Analyzed: 11/01/07						
1,1,1,2-Tetrachloroethane	ND	1.0	ug/l							
1,1,1-Trichloroethane	ND	1.0	"							
1,1,2,2-Tetrachloroethane	ND	1.0	"							
1,1,2-Trichloroethane	ND	1.0	"							
1,1,2-Trichloro-trifluoroethane	ND	1.0	"							
1,1-Dichloroethane	ND	1.0	"							
1,1-Dichloroethene	ND	1.0	"							
1,1-Dichloropropene	ND	1.0	"							
1,2,3-Trichlorobenzene	ND	1.0	"							
1,2,3-Trichloropropane	ND	1.0	"							
1,2,4-Trichlorobenzene	ND	1.0	"							
1,2,4-Trimethylbenzene	ND	1.0	"							
1,2-Dibromo-3-chloropropane	ND	1.0	"							
1,2-Dibromoethane	ND	1.0	"							
1,2-Dichlorobenzene	ND	1.0	"							
1,2-Dichloroethane	ND	1.0	"							
1,2-Dichloropropane	ND	1.0	"							
1,3,5-Trimethylbenzene	ND	1.0	"							
1,3-Dichlorobenzene	ND	1.0	"							
1,3-Dichloropropane	ND	1.0	"							
1,4-Dichlorobenzene	ND	1.0	"							
2,2-Dichloropropane	ND	1.0	"							
2-Chlorotoluene	ND	1.0	"							
4-Chlorotoluene	ND	1.0	"							
Benzene	ND	1.0	"							
Bromobenzene	ND	1.0	"							
Bromochloromethane	ND	1.0	"							
Bromodichloromethane	ND	1.0	"							
Bromoform	ND	1.0	"							
Bromomethane	ND	1.0	"							
Carbon disulfide	ND	1.0	"							
Carbon tetrachloride	ND	1.0	"							
Chlorobenzene	ND	1.0	"							
Chloroethane	ND	1.0	"							

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LFR Levine Fricke, Inc.	Project: 1920 Brea Canyon Cutoff Road, Rowland Heights	
3150 Bristol Street, Suite 250	Project Number: EST2692	**Reported:**
Costa Mesa, California 92626-7234	Project Manager: Tony Marino	09-Nov-07 13:37

Volatile Organic Compounds - Quality Control

Environmental Support Technologies, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 27K0101 - Volatiles										
Blank (27K0101-BLK1)				Prepared & Analyzed: 11/01/07						
Chloroform	ND	1.0	ug/l							
Chloromethane	ND	1.0	"							
cis-1,2-Dichloroethene	ND	1.0	"							
cis-1,3-Dichloropropene	ND	1.0	"							
Dibromochloromethane	ND	1.0	"							
Dibromomethane	ND	1.0	"							
Dichlorodifluoromethane	ND	1.0	"							
Ethylbenzene	ND	1.0	"							
Hexachlorobutadiene	ND	1.0	"							
Isopropylbenzene	ND	1.0	"							
meta- and para-Xylenes	ND	1.0	"							
Methylene Chloride	ND	1.0	"							
Naphthalene	ND	1.0	"							
n-Butylbenzene	ND	1.0	"							
n-Propylbenzene	ND	1.0	"							
ortho-Xylene	ND	1.0	"							
p-Isopropyltoluene	ND	1.0	"							
sec-Butylbenzene	ND	1.0	"							
Styrene	ND	1.0	"							
tert-Butylbenzene	ND	1.0	"							
Tetrachloroethene	ND	1.0	"							
Toluene	ND	1.0	"							
trans-1,2-Dichloroethene	ND	1.0	"							
trans-1,3-Dichloropropene	ND	1.0	"							
Trichloroethene	ND	1.0	"							
Trichlorofluoromethane	ND	1.0	"							
Vinyl Chloride	ND	1.0	"							
Surrogate: Dibromofluoromethane	*26.7*		*"*	*25.0*		*107*	*77-130*			
Surrogate: Toluene-d8	*25.2*		*"*	*25.0*		*101*	*84-119*			
Surrogate: 4-Bromofluorobenzene	*23.6*		*"*	*25.0*		*94.4*	*81-117*			

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LFR Levine Fricke, Inc.	Project: 1920 Brea Canyon Cutoff Road, Rowland Heights	
3150 Bristol Street, Suite 250	Project Number: EST2692	**Reported:**
Costa Mesa, California 92626-7234	Project Manager: Tony Marino	09-Nov-07 13:37

Volatile Organic Compounds - Quality Control

Environmental Support Technologies, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 27K0101 - Volatiles										
LCS (27K0101-BS1)				Prepared & Analyzed: 11/01/07						
1,1,1,2-Tetrachloroethane	25.6	1.0	ug/l	25.0		103	68-139			
1,1,1-Trichloroethane	26.1	1.0	"	25.0		104	68-132			
1,1,2,2-Tetrachloroethane	26.8	1.0	"	25.0		107	70-129			
1,1,2-Trichloroethane	27.8	1.0	"	25.0		111	70-130			
1,1,2-Trichloro-trifluoroethane	23.8	1.0	"	25.0		95.4	63-148			
1,1-Dichloroethane	26.6	1.0	"	25.0		107	65-135			
1,1-Dichloroethene	24.1	1.0	"	25.0		96.4	57-153			
1,1-Dichloropropene	25.3	1.0	"	25.0		101	71-127			
1,2,3-Trichlorobenzene	26.9	1.0	"	25.0		108	43-146			
1,2,3-Trichloropropane	28.5	1.0	"	25.0		114	63-140			
1,2,4-Trichlorobenzene	25.6	1.0	"	25.0		102	32-149			
1,2,4-Trimethylbenzene	25.3	1.0	"	25.0		101	65-119			
1,2-Dibromo-3-chloropropane	25.8	1.0	"	25.0		103	36-165			
1,2-Dibromoethane	26.9	1.0	"	25.0		108	76-129			
1,2-Dichlorobenzene	24.5	1.0	"	25.0		98.1	69-129			
1,2-Dichloroethane	24.8	1.0	"	25.0		99.3	62-124			
1,2-Dichloropropane	26.1	1.0	"	25.0		104	68-130			
1,3,5-Trimethylbenzene	26.2	1.0	"	25.0		105	52-135			
1,3-Dichlorobenzene	23.5	1.0	"	25.0		93.8	67-132			
1,3-Dichloropropane	28.4	1.0	"	25.0		113	79-122			
1,4-Dichlorobenzene	25.0	1.0	"	25.0		100	59-133			
2,2-Dichloropropane	27.2	1.0	"	25.0		109	24-200			
2-Chlorotoluene	26.1	1.0	"	25.0		104	47-143			
4-Chlorotoluene	24.9	1.0	"	25.0		99.6	57-136			
Benzene	24.9	1.0	"	25.0		99.5	61-123			
Bromobenzene	24.8	1.0	"	25.0		99.2	56-135			
Bromochloromethane	25.5	1.0	"	25.0		102	76-126			
Bromodichloromethane	25.1	1.0	"	25.0		100	77-118			
Bromoform	26.0	1.0	"	25.0		104	81-125			
Bromomethane	23.9	1.0	"	25.0		95.6	10-172			
Carbon disulfide	24.0	1.0	"	25.0		96.2	51-145			
Carbon tetrachloride	25.4	1.0	"	25.0		101	67-136			
Chlorobenzene	27.5	1.0	"	25.0		110	61-140			
Chloroethane	25.0	1.0	"	25.0		99.9	55-153			

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LFR Levine Fricke, Inc.	Project: 1920 Brea Canyon Cutoff Road, Rowland Heights	
3150 Bristol Street, Suite 250	Project Number: EST2692	**Reported:**
Costa Mesa, California 92626-7234	Project Manager: Tony Marino	09-Nov-07 13:37

Volatile Organic Compounds - Quality Control

Environmental Support Technologies, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 27K0101 - Volatiles										
LCS (27K0101-BS1)				Prepared & Analyzed: 11/01/07						
Chloroform	26.0	1.0	ug/l	25.0		104	65-126			
Chloromethane	30.3	1.0	"	25.0		121	37-131			
cis-1,2-Dichloroethene	24.6	1.0	"	25.0		98.5	68-133			
cis-1,3-Dichloropropene	25.2	1.0	"	25.0		101	81-123			
Dibromochloromethane	25.6	1.0	"	25.0		103	78-122			
Dibromomethane	25.9	1.0	"	25.0		104	81-123			
Dichlorodifluoromethane	19.2	1.0	"	25.0		76.8	26-155			
Ethylbenzene	26.9	1.0	"	25.0		107	60-133			
Hexachlorobutadiene	25.5	1.0	"	25.0		102	44-158			
Isopropylbenzene	27.4	1.0	"	25.0		110	66-136			
meta- and para-Xylenes	48.2	1.0	"	50.0		96.3	62-125			
Methylene Chloride	25.5	1.0	"	25.0		102	61-134			
Naphthalene	23.2	1.0	"	25.0		92.9	25-159			
n-Butylbenzene	28.9	1.0	"	25.0		116	61-133			
n-Propylbenzene	25.0	1.0	"	25.0		99.9	51-141			
ortho-Xylene	25.3	1.0	"	25.0		101	61-128			
p-Isopropyltoluene	26.5	1.0	"	25.0		106	68-132			
sec-Butylbenzene	25.9	1.0	"	25.0		103	60-137			
Styrene	23.9	1.0	"	25.0		95.5	70-128			
tert-Butylbenzene	24.8	1.0	"	25.0		99.4	56-139			
Tetrachloroethene	26.3	1.0	"	25.0		105	62-139			
Toluene	27.7	1.0	"	25.0		111	69-122			
trans-1,2-Dichloroethene	23.8	1.0	"	25.0		95.2	55-133			
trans-1,3-Dichloropropene	27.8	1.0	"	25.0		111	79-129			
Trichloroethene	23.1	1.0	"	25.0		92.4	77-128			
Trichlorofluoromethane	31.2	1.0	"	25.0		125	57-146			
Vinyl Chloride	27.9	1.0	"	25.0		111	65-128			
Surrogate: Dibromofluoromethane	*24.5*		*"*	*25.0*		*98.2*	*77-130*			
Surrogate: Toluene-d8	*27.1*		*"*	*25.0*		*109*	*84-119*			
Surrogate: 4-Bromofluorobenzene	*26.4*		*"*	*25.0*		*106*	*81-117*			

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LFR Levine Fricke, Inc.	Project: 1920 Brea Canyon Cutoff Road, Rowland Heights	
3150 Bristol Street, Suite 250	Project Number: EST2692	**Reported:**
Costa Mesa, California 92626-7234	Project Manager: Tony Marino	09-Nov-07 13:37

Volatile Organic Compounds - Quality Control

Environmental Support Technologies, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 27K0101 - Volatiles										
Duplicate (27K0101-DUP1)		**Source: 2K70101-01**		Prepared & Analyzed: 11/01/07						
1,1,1,2-Tetrachloroethane	ND	1.0	ug/l		ND				20	
1,1,1-Trichloroethane	ND	1.0	"		ND				20	
1,1,2,2-Tetrachloroethane	ND	1.0	"		ND				20	
1,1,2-Trichloroethane	ND	1.0	"		ND				20	
1,1,2-Trichloro-trifluoroethane	ND	1.0	"		ND				20	
1,1-Dichloroethane	ND	1.0	"		ND				20	
1,1-Dichloroethene	ND	1.0	"		ND				20	
1,1-Dichloropropene	ND	1.0	"		ND				20	
1,2,3-Trichlorobenzene	ND	1.0	"		ND				20	
1,2,3-Trichloropropane	ND	1.0	"		ND				20	
1,2,4-Trichlorobenzene	ND	1.0	"		ND				20	
1,2,4-Trimethylbenzene	0.260	1.0	"		0.350			29.5	20	
1,2-Dibromo-3-chloropropane	ND	1.0	"		ND				20	
1,2-Dibromoethane	ND	1.0	"		ND				20	
1,2-Dichlorobenzene	ND	1.0	"		ND				20	
1,2-Dichloroethane	ND	1.0	"		ND				20	
1,2-Dichloropropane	ND	1.0	"		ND				20	
1,3,5-Trimethylbenzene	ND	1.0	"		0.100				20	
1,3-Dichlorobenzene	ND	1.0	"		ND				20	
1,3-Dichloropropane	ND	1.0	"		ND				20	
1,4-Dichlorobenzene	ND	1.0	"		ND				20	
2,2-Dichloropropane	ND	1.0	"		ND				20	
2-Chlorotoluene	ND	1.0	"		ND				20	
4-Chlorotoluene	ND	1.0	"		ND				20	
Benzene	0.170	1.0	"		0.210			21.1	20	
Bromobenzene	ND	1.0	"		ND				20	
Bromochloromethane	ND	1.0	"		ND				20	
Bromodichloromethane	ND	1.0	"		ND				20	
Bromoform	ND	1.0	"		ND				20	
Bromomethane	ND	1.0	"		ND				20	
Carbon disulfide	ND	1.0	"		ND				20	
Carbon tetrachloride	ND	1.0	"		ND				20	
Chlorobenzene	ND	1.0	"		ND				20	
Chloroethane	ND	1.0	"		ND				20	

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LFR Levine Fricke, Inc.	Project: 1920 Brea Canyon Cutoff Road, Rowland Heights	
3150 Bristol Street, Suite 250	Project Number: EST2692	**Reported:**
Costa Mesa, California 92626-7234	Project Manager: Tony Marino	09-Nov-07 13:37

Volatile Organic Compounds - Quality Control

Environmental Support Technologies, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 27K0101 - Volatiles										
Duplicate (27K0101-DUP1)		**Source: 2K70101-01**		Prepared & Analyzed: 11/01/07						
Chloroform	ND	1.0	ug/l		ND				20	
Chloromethane	ND	1.0	"		ND				20	
cis-1,2-Dichloroethene	ND	1.0	"		ND				20	
cis-1,3-Dichloropropene	ND	1.0	"		ND				20	
Dibromochloromethane	ND	1.0	"		ND				20	
Dibromomethane	ND	1.0	"		ND				20	
Dichlorodifluoromethane	ND	1.0	"		ND				20	
Ethylbenzene	ND	1.0	"		0.270				20	
Hexachlorobutadiene	ND	1.0	"		ND				20	
Isopropylbenzene	ND	1.0	"		ND				20	
meta- and para-Xylenes	0.710	1.0	"		0.940			27.9	20	
Methylene Chloride	0.760	1.0	"		0.760			0.00	20	
Naphthalene	ND	1.0	"		ND				20	
n-Butylbenzene	ND	1.0	"		ND				20	
n-Propylbenzene	ND	1.0	"		ND				20	
ortho-Xylene	0.230	1.0	"		0.340			38.6	20	
p-Isopropyltoluene	ND	1.0	"		ND				20	
sec-Butylbenzene	ND	1.0	"		ND				20	
Styrene	ND	1.0	"		ND				20	
tert-Butylbenzene	ND	1.0	"		ND				20	
Tetrachloroethene	ND	1.0	"		0.110				20	
Toluene	2.69	1.0	"		3.23			18.2	20	
trans-1,2-Dichloroethene	ND	1.0	"		ND				20	
trans-1,3-Dichloropropene	ND	1.0	"		ND				20	
Trichloroethene	ND	1.0	"		ND				20	
Trichlorofluoromethane	ND	1.0	"		ND				20	
Vinyl Chloride	ND	1.0	"		ND				20	
Surrogate: Dibromofluoromethane	*26.4*		*"*	*25.0*		*106*	*77-130*			
Surrogate: Toluene-d8	*25.5*		*"*	*25.0*		*102*	*84-119*			
Surrogate: 4-Bromofluorobenzene	*26.2*		*"*	*25.0*		*105*	*81-117*			

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LFR Levine Fricke, Inc.	Project: 1920 Brea Canyon Cutoff Road, Rowland Heights	
3150 Bristol Street, Suite 250	Project Number: EST2692	**Reported:**
Costa Mesa, California 92626-7234	Project Manager: Tony Marino	09-Nov-07 13:37

Volatile Organic Compounds - Quality Control

Environmental Support Technologies, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 27K0102 - Volatiles										
Blank (27K0102-BLK1)				Prepared & Analyzed: 11/01/07						
1,1,1,2-Tetrachloroethane	ND	1.0	ug/l							
1,1,1-Trichloroethane	ND	1.0	"							
1,1,2,2-Tetrachloroethane	ND	1.0	"							
1,1,2-Trichloroethane	ND	1.0	"							
1,1,2-Trichloro-trifluoroethane	ND	1.0	"							
1,1-Dichloroethane	ND	1.0	"							
1,1-Dichloroethene	ND	1.0	"							
1,1-Dichloropropene	ND	1.0	"							
1,2,3-Trichlorobenzene	ND	1.0	"							
1,2,3-Trichloropropane	ND	1.0	"							
1,2,4-Trichlorobenzene	ND	1.0	"							
1,2,4-Trimethylbenzene	ND	1.0	"							
1,2-Dibromo-3-chloropropane	ND	1.0	"							
1,2-Dibromoethane	ND	1.0	"							
1,2-Dichlorobenzene	ND	1.0	"							
1,2-Dichloroethane	ND	1.0	"							
1,2-Dichloropropane	ND	1.0	"							
1,3,5-Trimethylbenzene	ND	1.0	"							
1,3-Dichlorobenzene	ND	1.0	"							
1,3-Dichloropropane	ND	1.0	"							
1,4-Dichlorobenzene	ND	1.0	"							
2,2-Dichloropropane	ND	1.0	"							
2-Chlorotoluene	ND	1.0	"							
4-Chlorotoluene	ND	1.0	"							
Benzene	ND	1.0	"							
Bromobenzene	ND	1.0	"							
Bromochloromethane	ND	1.0	"							
Bromodichloromethane	ND	1.0	"							
Bromoform	ND	1.0	"							
Bromomethane	ND	1.0	"							
Carbon disulfide	ND	1.0	"							
Carbon tetrachloride	ND	1.0	"							
Chlorobenzene	ND	1.0	"							
Chloroethane	ND	1.0	"							

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LFR Levine Fricke, Inc.	Project: 1920 Brea Canyon Cutoff Road, Rowland Heights	
3150 Bristol Street, Suite 250	Project Number: EST2692	**Reported:**
Costa Mesa, California 92626-7234	Project Manager: Tony Marino	09-Nov-07 13:37

Volatile Organic Compounds - Quality Control

Environmental Support Technologies, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 27K0102 - Volatiles										
Blank (27K0102-BLK1)				Prepared & Analyzed: 11/01/07						
Chloroform	ND	1.0	ug/l							
Chloromethane	ND	1.0	"							
cis-1,2-Dichloroethene	ND	1.0	"							
cis-1,3-Dichloropropene	ND	1.0	"							
Dibromochloromethane	ND	1.0	"							
Dibromomethane	ND	1.0	"							
Dichlorodifluoromethane	ND	1.0	"							
Ethylbenzene	ND	1.0	"							
Hexachlorobutadiene	ND	1.0	"							
Isopropylbenzene	ND	1.0	"							
meta- and para-Xylenes	ND	1.0	"							
Methylene Chloride	ND	1.0	"							
Naphthalene	ND	1.0	"							
n-Butylbenzene	ND	1.0	"							
n-Propylbenzene	ND	1.0	"							
ortho-Xylene	ND	1.0	"							
p-Isopropyltoluene	ND	1.0	"							
sec-Butylbenzene	ND	1.0	"							
Styrene	ND	1.0	"							
tert-Butylbenzene	ND	1.0	"							
Tetrachloroethene	ND	1.0	"							
Toluene	ND	1.0	"							
trans-1,2-Dichloroethene	ND	1.0	"							
trans-1,3-Dichloropropene	ND	1.0	"							
Trichloroethene	ND	1.0	"							
Trichlorofluoromethane	ND	1.0	"							
Vinyl Chloride	ND	1.0	"							
Surrogate: Dibromofluoromethane	*26.7*		*"*	*25.0*		*107*	*77-130*			
Surrogate: Toluene-d8	*25.2*		*"*	*25.0*		*101*	*80-120*			
Surrogate: 4-Bromofluorobenzene	*23.6*		*"*	*25.0*		*94.4*	*80-120*			

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LFR Levine Fricke, Inc.	Project: 1920 Brea Canyon Cutoff Road, Rowland Heights	
3150 Bristol Street, Suite 250	Project Number: EST2692	**Reported:**
Costa Mesa, California 92626-7234	Project Manager: Tony Marino	09-Nov-07 13:37

Volatile Organic Compounds - Quality Control

Environmental Support Technologies, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 27K0102 - Volatiles										
LCS (27K0102-BS1)				Prepared & Analyzed: 11/01/07						
1,1,1,2-Tetrachloroethane	29.6	1.0	ug/l	25.0		118	68-139			
1,1,1-Trichloroethane	31.1	1.0	"	25.0		125	68-132			
1,1,2,2-Tetrachloroethane	37.9	1.0	"	25.0		152	57-151			QL-H
1,1,2-Trichloroethane	35.0	1.0	"	25.0		140	70-130			QL-H
1,1,2-Trichloro-trifluoroethane	28.6	1.0	"	25.0		114	63-148			
1,1-Dichloroethane	32.5	1.0	"	25.0		130	65-135			
1,1-Dichloroethene	30.6	1.0	"	25.0		122	57-153			
1,1-Dichloropropene	28.4	1.0	"	25.0		113	70-130			
1,2,3-Trichlorobenzene	35.0	1.0	"	25.0		140	43-146			
1,2,3-Trichloropropane	36.4	1.0	"	25.0		146	63-140			QL-H
1,2,4-Trichlorobenzene	33.1	1.0	"	25.0		132	32-149			
1,2,4-Trimethylbenzene	31.0	1.0	"	25.0		124	52-139			
1,2-Dibromo-3-chloropropane	40.6	1.0	"	25.0		162	36-165			
1,2-Dibromoethane	34.4	1.0	"	25.0		138	61-157			
1,2-Dichlorobenzene	32.3	1.0	"	25.0		129	69-129			QL-H
1,2-Dichloroethane	32.9	1.0	"	25.0		132	60-126			QL-H
1,2-Dichloropropane	31.8	1.0	"	25.0		127	68-130			
1,3,5-Trimethylbenzene	30.0	1.0	"	25.0		120	52-135			
1,3-Dichlorobenzene	29.5	1.0	"	25.0		118	67-132			
1,3-Dichloropropane	34.2	1.0	"	25.0		137	70-139			
1,4-Dichlorobenzene	30.0	1.0	"	25.0		120	59-133			
2,2-Dichloropropane	29.4	1.0	"	25.0		118	24-200			
2-Chlorotoluene	30.4	1.0	"	25.0		121	47-143			
4-Chlorotoluene	31.7	1.0	"	25.0		127	57-136			
Benzene	31.5	1.0	"	25.0		126	61-123			QL-H
Bromobenzene	31.2	1.0	"	25.0		125	56-135			
Bromochloromethane	33.3	1.0	"	25.0		133	61-156			
Bromodichloromethane	31.6	1.0	"	25.0		126	70-130			
Bromoform	32.1	1.0	"	25.0		128	70-140			
Bromomethane	25.8	1.0	"	25.0		103	10-172			
Carbon disulfide	24.6	1.0	"	25.0		98.4	51-145			
Carbon tetrachloride	29.3	1.0	"	25.0		117	67-136			
Chlorobenzene	30.7	1.0	"	25.0		123	61-140			
Chloroethane	38.4	1.0	"	25.0		154	55-153			QL-H

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LFR Levine Fricke, Inc.	Project: 1920 Brea Canyon Cutoff Road, Rowland Heights	
3150 Bristol Street, Suite 250	Project Number: EST2692	**Reported:**
Costa Mesa, California 92626-7234	Project Manager: Tony Marino	09-Nov-07 13:37

Volatile Organic Compounds - Quality Control

Environmental Support Technologies, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 27K0102 - Volatiles										
LCS (27K0102-BS1)				Prepared & Analyzed: 11/01/07						
Chloroform	31.5	1.0	ug/l	25.0		126	65-126			
Chloromethane	30.0	1.0	"	25.0		120	37-131			
cis-1,2-Dichloroethene	31.7	1.0	"	25.0		127	68-133			
cis-1,3-Dichloropropene	31.2	1.0	"	25.0		125	70-130			
Dibromochloromethane	32.9	1.0	"	25.0		132	70-130			QL-H
Dibromomethane	33.4	1.0	"	25.0		134	65-147			
Dichlorodifluoromethane	22.6	1.0	"	25.0		90.4	26-155			
Ethylbenzene	30.1	1.0	"	25.0		120	60-133			
Hexachlorobutadiene	30.2	1.0	"	25.0		121	44-158			
Isopropylbenzene	32.4	1.0	"	25.0		130	66-136			
meta- and para-Xylenes	56.5	1.0	"	50.0		113	62-125			
Methylene Chloride	31.5	1.0	"	25.0		126	61-134			
Naphthalene	36.9	1.0	"	25.0		148	25-159			
n-Butylbenzene	34.5	1.0	"	25.0		138	61-133			QL-H
n-Propylbenzene	30.2	1.0	"	25.0		121	51-141			
ortho-Xylene	30.0	1.0	"	25.0		120	61-128			
p-Isopropyltoluene	32.2	1.0	"	25.0		129	68-132			
sec-Butylbenzene	31.5	1.0	"	25.0		126	60-137			
Styrene	28.3	1.0	"	25.0		113	70-128			
tert-Butylbenzene	29.8	1.0	"	25.0		119	56-139			
Tetrachloroethene	28.8	1.0	"	25.0		115	62-139			
Toluene	33.8	1.0	"	25.0		135	69-122			QL-H
trans-1,2-Dichloroethene	29.4	1.0	"	25.0		118	55-133			
trans-1,3-Dichloropropene	32.9	1.0	"	25.0		132	79-129			QL-H
Trichloroethene	29.8	1.0	"	25.0		119	77-128			
Trichlorofluoromethane	37.1	1.0	"	25.0		148	57-146			QL-H
Vinyl Chloride	34.3	1.0	"	25.0		137	65-128			QL-H
Surrogate: Dibromofluoromethane	*24.9*		*"*	*25.0*		*99.4*	*77-130*			
Surrogate: Toluene-d8	*24.8*		*"*	*25.0*		*99.2*	*80-120*			
Surrogate: 4-Bromofluorobenzene	*26.0*		*"*	*25.0*		*104*	*80-120*			

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LFR Levine Fricke, Inc.	Project: 1920 Brea Canyon Cutoff Road, Rowland Heights	
3150 Bristol Street, Suite 250	Project Number: EST2692	**Reported:**
Costa Mesa, California 92626-7234	Project Manager: Tony Marino	09-Nov-07 13:37

Volatile Organic Compounds - Quality Control

Environmental Support Technologies, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 27K0102 - Volatiles										
Matrix Spike (27K0102-MS1)		**Source: 2K70101-03**		Prepared & Analyzed: 11/01/07						
1,1,1,2-Tetrachloroethane	25.4	1.0	ug/l	25.0	ND	102	60-140			
1,1,1-Trichloroethane	26.3	1.0	"	25.0	ND	105	60-140			
1,1,2,2-Tetrachloroethane	29.2	1.0	"	25.0	ND	117	42-133			
1,1,2-Trichloroethane	28.6	1.0	"	25.0	ND	114	60-140			
1,1,2-Trichloro-trifluoroethane	24.9	1.0	"	25.0	ND	99.7	60-140			
1,1-Dichloroethane	26.3	1.0	"	25.0	ND	105	60-140			
1,1-Dichloroethene	25.3	1.0	"	25.0	ND	101	60-140			
1,1-Dichloropropene	25.3	1.0	"	25.0	ND	101	56-129			
1,2,3-Trichlorobenzene	27.1	1.0	"	25.0	ND	108	60-133			
1,2,3-Trichloropropane	29.7	1.0	"	25.0	ND	119	38-152			
1,2,4-Trichlorobenzene	27.0	1.0	"	25.0	ND	108	48-144			
1,2,4-Trimethylbenzene	26.6	1.0	"	25.0	0.210	106	60-140			
1,2-Dibromo-3-chloropropane	32.3	1.0	"	25.0	ND	129	32-175			
1,2-Dibromoethane	27.2	1.0	"	25.0	ND	109	60-140			
1,2-Dichlorobenzene	25.9	1.0	"	25.0	ND	104	60-140			
1,2-Dichloroethane	26.4	1.0	"	25.0	ND	106	60-140			
1,2-Dichloropropane	27.8	1.0	"	25.0	ND	111	60-140			
1,3,5-Trimethylbenzene	24.8	1.0	"	25.0	ND	99.2	39-136			
1,3-Dichlorobenzene	24.6	1.0	"	25.0	ND	98.5	58-136			
1,3-Dichloropropane	28.8	1.0	"	25.0	ND	115	60-140			
1,4-Dichlorobenzene	24.4	1.0	"	25.0	ND	97.6	58-134			
2,2-Dichloropropane	23.6	1.0	"	25.0	ND	94.6	10-200			
2-Chlorotoluene	25.6	1.0	"	25.0	ND	102	44-140			
4-Chlorotoluene	24.8	1.0	"	25.0	ND	99.4	50-131			
Benzene	24.9	1.0	"	25.0	0.320	98.4	46-133			
Bromobenzene	26.1	1.0	"	25.0	ND	104	49-137			
Bromochloromethane	27.3	1.0	"	25.0	ND	109	68-130			
Bromodichloromethane	25.5	1.0	"	25.0	ND	102	60-140			
Bromoform	26.6	1.0	"	25.0	ND	106	60-133			
Bromomethane	25.1	1.0	"	25.0	ND	100	28-136			
Carbon disulfide	24.2	1.0	"	25.0	ND	97.0	36-144			
Carbon tetrachloride	24.5	1.0	"	25.0	ND	98.0	67-138			
Chlorobenzene	25.1	1.0	"	25.0	ND	100	45-150			
Chloroethane	30.6	1.0	"	25.0	ND	122	60-140			

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LFR Levine Fricke, Inc.	Project: 1920 Brea Canyon Cutoff Road, Rowland Heights	
3150 Bristol Street, Suite 250	Project Number: EST2692	**Reported:**
Costa Mesa, California 92626-7234	Project Manager: Tony Marino	09-Nov-07 13:37

Volatile Organic Compounds - Quality Control

Environmental Support Technologies, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 27K0102 - Volatiles										
Matrix Spike (27K0102-MS1)		**Source: 2K70101-03**		Prepared & Analyzed: 11/01/07						
Chloroform	26.3	1.0	ug/l	25.0	ND	105	60-140			
Chloromethane	27.3	1.0	"	25.0	ND	109	60-140			
cis-1,2-Dichloroethene	25.9	1.0	"	25.0	ND	103	59-139			
cis-1,3-Dichloropropene	24.0	1.0	"	25.0	ND	96.1	60-140			
Dibromochloromethane	25.8	1.0	"	25.0	ND	103	60-140			
Dibromomethane	27.8	1.0	"	25.0	ND	111	60-137			
Dichlorodifluoromethane	18.9	1.0	"	25.0	ND	75.6	23-138			
Ethylbenzene	25.8	1.0	"	25.0	0.440	101	45-136			
Hexachlorobutadiene	22.5	1.0	"	25.0	ND	89.9	40-140			
Isopropylbenzene	26.2	1.0	"	25.0	ND	105	40-150			
meta- and para-Xylenes	45.4	1.0	"	50.0	1.52	87.8	36-134			
Methylene Chloride	26.7	1.0	"	25.0	ND	107	60-140			
Naphthalene	30.3	1.0	"	25.0	ND	121	51-135			
n-Butylbenzene	28.5	1.0	"	25.0	ND	114	47-137			
n-Propylbenzene	24.2	1.0	"	25.0	ND	96.8	29-151			
ortho-Xylene	25.0	1.0	"	25.0	0.670	97.5	34-141			
p-Isopropyltoluene	25.0	1.0	"	25.0	ND	100	44-138			
sec-Butylbenzene	23.8	1.0	"	25.0	ND	95.0	33-150			
Styrene	23.6	1.0	"	25.0	ND	94.5	56-129			
tert-Butylbenzene	25.5	1.0	"	25.0	ND	102	55-136			
Tetrachloroethene	23.8	1.0	"	25.0	0.130	94.6	30-191			
Toluene	27.4	1.0	"	25.0	1.61	103	45-131			
trans-1,2-Dichloroethene	23.8	1.0	"	25.0	ND	95.2	75-123			
trans-1,3-Dichloropropene	27.4	1.0	"	25.0	ND	110	67-125			
Trichloroethene	24.4	1.0	"	25.0	ND	97.7	80-127			
Trichlorofluoromethane	30.5	1.0	"	25.0	ND	122	67-134			
Vinyl Chloride	28.8	1.0	"	25.0	ND	115	57-125			
Surrogate: Dibromofluoromethane	*25.8*		*"*	*25.0*		*103*	*77-130*			
Surrogate: Toluene-d8	*25.7*		*"*	*25.0*		*103*	*80-120*			
Surrogate: 4-Bromofluorobenzene	*26.2*		*"*	*25.0*		*105*	*80-120*			

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LFR Levine Fricke, Inc.	Project: 1920 Brea Canyon Cutoff Road, Rowland Heights	
3150 Bristol Street, Suite 250	Project Number: EST2692	**Reported:**
Costa Mesa, California 92626-7234	Project Manager: Tony Marino	09-Nov-07 13:37

Volatile Organic Compounds - Quality Control

Environmental Support Technologies, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 27K0102 - Volatiles										
Matrix Spike Dup (27K0102-MSD1)		**Source: 2K70101-03**		Prepared: 11/01/07 Analyzed: 11/02/07						
1,1,1,2-Tetrachloroethane	26.2	1.0	ug/l	25.0	ND	105	60-140	3.10	27	
1,1,1-Trichloroethane	26.1	1.0	"	25.0	ND	104	60-140	0.802	21	
1,1,2,2-Tetrachloroethane	30.7	1.0	"	25.0	ND	123	42-133	4.84	26	
1,1,2-Trichloroethane	30.2	1.0	"	25.0	ND	121	60-140	5.42	27	
1,1,2-Trichloro-trifluoroethane	23.9	1.0	"	25.0	ND	95.6	60-140	4.22	20	
1,1-Dichloroethane	26.1	1.0	"	25.0	ND	104	60-140	1.03	20	
1,1-Dichloroethene	24.8	1.0	"	25.0	ND	99.0	60-140	2.36	20	
1,1-Dichloropropene	23.2	1.0	"	25.0	ND	92.8	56-129	8.70	20	
1,2,3-Trichlorobenzene	27.4	1.0	"	25.0	ND	110	60-133	1.21	45	
1,2,3-Trichloropropane	31.0	1.0	"	25.0	ND	124	38-152	4.05	27	
1,2,4-Trichlorobenzene	25.4	1.0	"	25.0	ND	102	48-144	5.73	41	
1,2,4-Trimethylbenzene	25.3	1.0	"	25.0	0.210	100	60-140	5.05	26	
1,2-Dibromo-3-chloropropane	33.0	1.0	"	25.0	ND	132	32-175	2.11	61	
1,2-Dibromoethane	29.0	1.0	"	25.0	ND	116	60-140	6.22	40	
1,2-Dichlorobenzene	27.4	1.0	"	25.0	ND	110	60-140	5.85	31	
1,2-Dichloroethane	26.6	1.0	"	25.0	ND	106	60-140	0.528	22	
1,2-Dichloropropane	26.6	1.0	"	25.0	ND	107	60-140	4.04	23	
1,3,5-Trimethylbenzene	25.8	1.0	"	25.0	ND	103	39-136	4.11	30	
1,3-Dichlorobenzene	23.6	1.0	"	25.0	ND	94.2	58-136	4.40	25	
1,3-Dichloropropane	30.2	1.0	"	25.0	ND	121	60-140	4.75	31	
1,4-Dichlorobenzene	24.9	1.0	"	25.0	ND	99.8	58-134	2.15	20	
2,2-Dichloropropane	22.8	1.0	"	25.0	ND	91.3	10-200	3.53	20	
2-Chlorotoluene	25.1	1.0	"	25.0	ND	101	44-140	1.70	25	
4-Chlorotoluene	25.2	1.0	"	25.0	ND	101	50-131	1.24	32	
Benzene	24.8	1.0	"	25.0	0.320	97.9	46-133	0.483	34	
Bromobenzene	25.7	1.0	"	25.0	ND	103	49-137	1.50	25	
Bromochloromethane	26.4	1.0	"	25.0	ND	106	68-130	3.31	29	
Bromodichloromethane	26.7	1.0	"	25.0	ND	107	60-140	4.33	25	
Bromoform	28.2	1.0	"	25.0	ND	113	60-133	6.09	20	
Bromomethane	26.0	1.0	"	25.0	ND	104	28-136	3.33	43	
Carbon disulfide	24.2	1.0	"	25.0	ND	97.0	36-144	0.00	31	
Carbon tetrachloride	24.5	1.0	"	25.0	ND	97.9	67-138	0.0817	20	
Chlorobenzene	26.2	1.0	"	25.0	ND	105	45-150	4.29	32	
Chloroethane	29.8	1.0	"	25.0	ND	119	60-140	2.48	40	

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

LFR Levine Fricke, Inc.	Project: 1920 Brea Canyon Cutoff Road, Rowland Heights	
3150 Bristol Street, Suite 250	Project Number: EST2692	**Reported:**
Costa Mesa, California 92626-7234	Project Manager: Tony Marino	09-Nov-07 13:37

Volatile Organic Compounds - Quality Control

Environmental Support Technologies, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 27K0102 - Volatiles										
Matrix Spike Dup (27K0102-MSD1)	**Source: 2K70101-03**		Prepared: 11/01/07 Analyzed: 11/02/07							
Chloroform	26.8	1.0	ug/l	25.0	ND	107	60-140	1.92	24	
Chloromethane	26.5	1.0	"	25.0	ND	106	60-140	3.01	59	
cis-1,2-Dichloroethene	25.5	1.0	"	25.0	ND	102	59-139	1.25	28	
cis-1,3-Dichloropropene	26.1	1.0	"	25.0	ND	104	60-140	8.11	20	
Dibromochloromethane	28.0	1.0	"	25.0	ND	112	60-140	8.03	25	
Dibromomethane	28.4	1.0	"	25.0	ND	114	60-137	1.99	50	
Dichlorodifluoromethane	18.2	1.0	"	25.0	ND	72.7	23-138	3.83	36	
Ethylbenzene	27.4	1.0	"	25.0	0.440	108	45-136	6.09	33	
Hexachlorobutadiene	23.8	1.0	"	25.0	ND	95.2	40-140	5.75	22	
Isopropylbenzene	24.7	1.0	"	25.0	ND	98.9	40-150	5.81	34	
meta- and para-Xylenes	48.7	1.0	"	50.0	1.52	94.3	36-134	6.89	37	
Methylene Chloride	27.6	1.0	"	25.0	ND	111	60-140	3.42	20	
Naphthalene	30.3	1.0	"	25.0	ND	121	51-135	0.198	45	
n-Butylbenzene	28.4	1.0	"	25.0	ND	114	47-137	0.386	26	
n-Propylbenzene	23.6	1.0	"	25.0	ND	94.3	29-151	2.55	33	
ortho-Xylene	24.8	1.0	"	25.0	0.670	96.5	34-141	1.00	37	
p-Isopropyltoluene	24.0	1.0	"	25.0	ND	96.0	44-138	4.08	28	
sec-Butylbenzene	25.6	1.0	"	25.0	ND	102	33-150	7.26	31	
Styrene	23.1	1.0	"	25.0	ND	92.5	56-129	2.14	29	
tert-Butylbenzene	24.7	1.0	"	25.0	ND	98.9	55-136	3.14	20	
Tetrachloroethene	24.2	1.0	"	25.0	0.130	96.2	30-191	1.75	30	
Toluene	26.9	1.0	"	25.0	1.61	101	45-131	1.66	31	
trans-1,2-Dichloroethene	24.5	1.0	"	25.0	ND	98.1	75-123	3.02	29	
trans-1,3-Dichloropropene	28.0	1.0	"	25.0	ND	112	67-125	1.95	26	
Trichloroethene	24.4	1.0	"	25.0	ND	97.8	80-127	0.0409	21	
Trichlorofluoromethane	30.9	1.0	"	25.0	ND	124	67-134	1.20	24	
Vinyl Chloride	28.3	1.0	"	25.0	ND	113	57-125	1.85	63	
Surrogate: Dibromofluoromethane	*25.4*		*"*	*25.0*		*102*	*77-130*			
Surrogate: Toluene-d8	*26.0*		*"*	*25.0*		*104*	*80-120*			
Surrogate: 4-Bromofluorobenzene	*26.7*		*"*	*25.0*		*107*	*80-120*			

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Notes and Definitions

QL-H	The spike recovery was out high for the LCS and/or the LCSD; however the analyte was not detected in any of the analyzed samples.
A-01	The spike recovery was out high for the LCS and/or the LCSD; however the analyte was detected.
DET	Analyte DETECTED
ND	Analyte NOT DETECTED at or above the reporting limit
NR	Not Reported
dry	Sample results reported on a dry weight basis
RPD	Relative Percent Difference

Environmental Support Technologies, Inc.
360 Goddard
Irvine, California 92618
(949) 679-9500
(949) 679-9501 fax

CHAIN OF CUSTODY/REQUEST FOR ANALYSIS

Client Name/Address: LFR, 3150 Bristol Street, Suite 250, Costa Mesa, CA 92626

Project: 002-11124-00

Project Manager: Darren Burgett

Sampler:

ANALYSIS REQUIRED: 8260B VOCs; Special Instructions

Sample Description	Sample matrix	Container type	# of Containers	Sampling Date/Time	Preservative Type	8260B VOCs					Special Instructions
B1	water	VOA	3	11/1/07 ~~DPB 09:50 0945~~	HCl	✓					
B4	water	VOA	3	11/1/07 ~~DPB 10:20 1015~~	HCl	✓					
SG-1-5	soil gas	Tedlar	1	11/1/07 ~~DPB 09:35~~ 11:10		✓					
SG-4-5	soil gas	Tedlar	1	11/1/07 ~~10:50~~ 11:33		✓					

Relinquished By:	Date/Time:	Received By:	Date/Time:
[signature]	11/1/07 1130 DPB	Morgan Hugh	11-1-07 1:00
Morgan Hugh	11-1-07 1:00	[signature]	11-1-07 1300
Relinquished By:	Date/Time:	Received By:	Date/Time:

Turnaround Time: (check)
same day ____ 48 hours ____ normal ____
24 hours ✓ 72 hours ____

Sample Integrity: (check)
intact ____ cooled ____ warm ____

Asbestos Survey Report

Asbestos Survey Report
Southlands Church International
1920 Brea Canyon Cutoff Road
Brea, California

September 20, 2007
LFR Project 002-11124-01

Prepared For:
Trammell Crow Residential
949 South Coast Drive, Suite 400
Costa Mesa, CA 92626

Prepared By:
LFR Inc.
3150 Bristol Street Suite 250
Costa Mesa, California 92626

LFR ENVIRONMENTAL MANAGEMENT & CONSULTING ENGINEERING

September 20, 2007 002-11124-01

Ms. Kimberly Paperin
Trammell Crow Residential
949 South Coast Drive, Suite 400
Costa Mesa, CA 92626

Subject: Asbestos Survey at 1920 Brea Canyon Cutoff Road, Brea, California

Dear Ms. Paperin:

LFR Inc. (LFR) is pleased to present the attached asbestos survey report for the Southlands Church International, Brea, California ("the Site").

LFR appreciates this opportunity to provide consulting services to Trammell Crow Residential. If you have any questions concerning this project, or would like to discuss other environmental matters, please feel free to contact either of the undersigned at (714) 444-0111.

Sincerely,

Douglas W. Coburn, REA, CAC
Senior Associate

T. Michael Toomey
Vice President - Principal

Attachment

714.444.0111 m
714.444.0117 f
www.lfr.com
3150 Bristol Street, Suite 250
Costa Mesa, California 92626-7324
Offices Nationwide

CERTIFICATION

The asbestos survey described herein was conducted by Mr. Douglas Coburn, a California Certified Asbestos Consultant of LFR Inc. (LFR). LFR's investigation consisted solely of the activities described in the Introduction of this report and is subject to the Limitations and Service Constraints provided in Appendix A.

Written by:

Kirk Hopka, CAC Date
Project Manager
California Certified Asbestos Consultant #96-2078

Approved by:

Douglas W. Coburn, REA Date
Senior Associate
California Certified Asbestos Consultant #92-0223

Reviewed and Approved By:

T. Michael Toomey Date
Vice President - Principal

EXECUTIVE SUMMARY

Trammell Crow Residential retained LFR Inc. (LFR) to conduct an asbestos survey of the Southlands Church International located in the City of Brea, Unincorporated County of Los Angeles, California ("the Site"). Mr. Doug Coburn, a California Certified Asbestos Consultant of LFR, performed the survey on August 31 and September 4, 2007. The objective of this survey was to identify and assess the condition of suspect asbestos-containing materials (ACMs) and/or asbestos-containing construction materials (ACCMs) at the subject property. The survey was subject to the Limitations and Service Constraints found in Appendix A.

The Site is located near the southeast corner of the intersection of Brea Canyon Cutoff and Colima Road. The Site consists of approximately 15.5 acres of land that is improved with a church, a school, and several small structures. The nine stand-alone and interconnected structures that house a chapel, a gymnasium, a maintenance building, and classrooms for Southlands Church and Southlands Christian School, a pre-school through high school campus cover approximately 43,864 square feet. The earliest on-site structures were constructed in approximately 1970. Site Drawings can be viewed in (Appendix E).

General construction of the buildings includes wood and stucco walls with glass windows in metal framing, wood framing construction, and flat built-up roofing systems. Interior finishes included drywall, wood, various vinyl sheet floor coverings, vinyl floor tiles, carpeting, wood flooring, popcorn ceiling and suspended ceiling panel systems.

During site reconnaissance activities, LFR was provided access throughout the majority of the Site. LFR's survey approach included a visual assessment to locate, as far as practicable, suspect ACMs. LFR sampled materials identified as suspect for asbestos from accessible areas for laboratory analysis.

LFR sampled a total of 36 homogenous applications at the Site, there were a total of 500 bulk samples submitted to the laboratory and a total of 61 analyses results were reported by the laboratory. The following materials were found to contain asbestos:

- **Exterior Stucco, Buildings E, H7, H8, Fellowship Hall, Preschool, Athletics and Maintenance**
- **Drywall Joint Compound, Buildings A, E, H1-H4, H7, H8, Fellowship Hall, Gym, Church Office, Preschool, Athletics and Maintenance**
- **Adhesive Under Hardwood Floors, Gym/Church Office Building**

The remaining bulk samples collected by LFR were reported by the laboratory as "none detected" for asbestos content.

The following areas/materials of the Site were inaccessible or deemed impractical for sampling, and therefore asbestos was assumed to exist in these areas:

- concrete foundations
- waterproofing mastics associated with foundations0
- mechanical pipe/duct chases, if any
- interior portions of mechanical and electrical equipment other than those identified as being sampled
- roofing

This asbestos survey was cursory in nature for the purposes of screening the property as part of an environmental due diligence investigation. As such, this survey should not be considered comprehensive and is, therefore, not sufficient as a basis for planning renovation or demolition projects at the site. LFR recommends a comprehensive asbestos survey be performed prior to any renovation or demolition at the Site.

LFR recommends that any ACMs and ACCMs identified at the Site, which may be disturbed during renovation/demolition activities, be removed by a licensed asbestos abatement contractor utilizing state-of-the-art work procedures and in accordance with all state, federal, and local regulations.

Based on the work described herein, LFR prepared a preliminary cost estimate to remove the asbestos and regulated materials described above. In summary, LFR estimates the cost to remove the identified ACMs and ACCMs to be approximately $179,815.50. A breakdown of estimated abatement costs is provided in Table 3.

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1.0 INTRODUCTION

Trammell Crow Residential retained LFR Inc. (LFR) to conduct an asbestos survey of the Southlands Church International located in the City of Brea, Unincorporated County of Los Angeles, California ("the Site"). Mr. Doug Coburn, a California Certified Asbestos Consultant of LFR, performed the survey on August 31 and September 4, 2007. The objective of this survey was to identify and assess the condition of suspect asbestos-containing materials (ACMs) and/or asbestos-containing construction materials (ACCMs) at the subject property. The survey was subject to the Limitations and Service Constraints found in Appendix A.

2.0 SITE DESCRIPTION

The Site is located near the southeast corner of the intersection of Brea Canyon Cutoff and Colima Road. The Site consists of approximately 15.5 acres of land that is improved with a church, a school, and several small structures. The nine stand-alone and interconnected structures that house a chapel, a gymnasium, a maintenance building, and classrooms for Southlands Church and Southlands Christian School, a pre-school through high school campus cover approximately 43,864 square feet. The earliest on-site structures were constructed in approximately 1970. Site Drawings can be viewed in (Appendix E).

General construction of the buildings includes wood and stucco walls with glass windows in metal framing, wood framing construction, and either wood or flat built-up roofing systems. Interior finishes included drywall, wood, various vinyl sheet floor coverings, vinyl floor tiles, carpeting, wood flooring, popcorn ceiling and suspended ceiling panel systems. Photographs taken during the asbestos survey can be found in Appendix B.

3.0 METHODOLOGY

LFR's survey approach included a visual assessment of the site building structures to locate, as far as practicable, suspect ACMs. Suspect materials were divided into "homogeneous applications," i.e., building materials that were determined by the inspector to be homogeneous based on their color, texture, and age. A homogeneous area consists of a suspect ACM that is uniform in texture and appearance, is believed to have been installed at one time, and is not likely to consist of more than one type or formulation of material. Because of the cursory nature of this survey, the Site building materials, or homogenous applications, were grouped collectively among the various buildings. These homogeneous applications are labeled under three categories: surfacing, TSI, and miscellaneous. *Surfacing* materials are any materials that are applied to the substrate with a trowel or through a method of spray application. *TSI* is any material utilized to minimize heat transfer. A *miscellaneous* material is any

material that cannot be categorized as either a surfacing material or TSI material. Building materials or components that are considered as non-suspect asbestos include but are not limited to, any masonry brick, metal, glass, fiberglass, plastic, and rubber.

A representative number of samples were collected for each homogeneous application in each homogenous area observed at the Site. A complete listing of homogeneous areas, applications, including quantities and locations, is provided in Table 1.

Bulk material samples were collected in 4-mil plastic bags, labeled, and sealed for transport to the laboratory. Samples were collected, analyzed, and stored in accordance with strict chain-of-custody protocol.

4.0 ANALYTICAL METHODS

ACM identification was performed using Polarized Light Microscopy with Dispersion Staining (PLM/DS) in accordance with U.S. Environmental Protection Agency (EPA) Method 600/M4-82-020 per 40 Code of Federal Regulations (CFR) 763, Subpart F, App. A. Percentage estimates of each material's components are based on the analyst's best judgment following PLM/DS analysis and examination with a stereoscope. PLM/DS analysis was performed by LA Testing of Los Alamitos, California, which is accredited by the National Voluntary Laboratory Accreditation Program (NVLAP).

Samples containing low levels of asbestos (less than 1 percent) are not reliably detected by PLM analysis. Samples analyzed by PLM that are determined to be lower than 1 percent asbestos are referred to as containing "trace" amounts of asbestos. Federal regulations state that building materials containing greater than 1 percent asbestos are classified as regulated ACM. However, the California Occupational Safety and Health Administration (CAL/OSHA) considers building materials with greater than one-tenth of 1 percent (0.1%) to be asbestos-containing construction materials (ACCM). This regulation would include materials with laboratory results of 1 percent or less as "trace." To determine if a "trace" material contains greater than 0.1 percent asbestos, analysis with a greater sensitivity, such as point counting, would be required.

5.0 FINDINGS

LFR sampled a total of 36 homogenous applications at the Site, there were a total of 80 bulk samples taken and a total of 61 analyses results were reported by the laboratory. The following materials were found to contain asbestos:

- **Exterior Stucco, Buildings E, H7, H8, Fellowship Hall, Preschool, Athletics and Maintenance**
- **Drywall Joint Compound, Buildings A, E, H1-H4, H7, H8, Fellowship Hall, Gym, Church Office, Preschool, Athletics and Maintenance**

- **Adhesive Under Hardwood Floors, Gym/Church Office Building**

The remaining bulk samples collected by LFR were reported by the laboratory as "none detected" for asbestos content.

Analytical results are summarized in Table 1. Laboratory reports and chain-of-custody forms are provided as Appendix C.

The following areas/materials of the Site were inaccessible or deemed impractical for sampling, and therefore asbestos was assumed to exist in these areas:

- concrete foundations
- waterproofing mastics associated with foundations
- mechanical pipe/duct chases
- interior portions of mechanical and electrical equipment other than those identified as being sampled
- roofing

6.0 COST ESTIMATE FOR REMOVAL OF ASBESTOS

Based on the work described above, LFR prepared a preliminary cost estimate to remove the ACMs/Assumed ACMs as described in Table 3. In summary, LFR estimates the cost for the removal of the confirmed ACMs to be approximately $179,815.50. A breakdown of the estimated costs is provided in Table 3.

These preliminary costs are for planning purposes only. Actual removal costs provided by asbestos abatement contractors may vary depending upon many factors such as project size, market conditions, availability of resources, to name a few. The unit costs shown in Table 3 are based on comparable pricing offered in recent bids received by LFR for similar removal operations.

It should be noted that LFR's cost estimate does not include costs for asbestos management and air monitoring services. Asbestos management costs are estimated to be approximately 25 percent of the abatement costs based on a project of this size. These costs vary with the size of the project, contractor scheduling, manpower required for the project, and the number of active abatement areas being performed at any one time. Personnel other than an asbestos abatement contractor may perform demolition work, so long as care is taken not to disturb any ACMs. This cost estimate includes the material itemized in Section 5.0. It does not include any other materials listed under the inaccessible materials/locations.

7.0 RECOMMENDATIONS

This asbestos survey was cursory in nature for the purposes of screening the property as part of an environmental due diligence investigation. As such, this survey should not be considered comprehensive and is, therefore, not sufficient as a basis for planning renovation or demolition projects at the site. LFR recommends a comprehensive asbestos survey be performed prior to any renovation or demolition at the Site.

The ACMs identified in this report were generally in good condition. These materials do not require removal, so long as they remain in good condition. LFR recommends these ACMs be managed by a written operations and maintenance (O&M) program designed by a licensed asbestos consultant professional.

LFR recommends that any ACMs and ACCMs identified at the Site that may be impacted during renovation/demolition activities be removed by a licensed asbestos abatement contractor utilizing state-of-the-art work procedures and in accordance with all state, federal, and local regulations. A licensed asbestos project monitor should monitor the work.

This report is intended for planning purposes only, and should not be used as the sole document for asbestos abatement activities. A licensed asbestos abatement project designer should prepare an asbestos abatement technical specification, which will detail site-specific work procedures.

TABLES

Table 1
Homogeneus Applications
Southland Christain School
LFR-Project 002-11124-01

Homogeneus Application	Asbestos Category	Location	Material	Quantity	Condition	Analytical Result
A	M	Buildings A, J, H1-H4, PreSchool	2 X 4 White Fissured Celing Panels	15,040 Sq. Ft.	NF/G	None Detected
AA	M	Gym and Church Office	Gray Vinyl Covebase & Adhesive	30 L. Ft.	NF/G	None Detected
B	M	Building A	12 X 12 White Floor Tile w/ Gray Specks, Yellow Glue	280 Sq. Ft.	NF/G	None Detected
BB	M	PreSchool	12 x 12 White Floor Tile w/ Dark Bluish Gray Streaks & Glue	1,400 Sq. Ft.	NF/G	None Detected
C	M	Building A. B1 & B2	2 X 4 White Ceiling Panel Pocks/Pinholes	2,080 Sq. Ft.	NF/G	None Detected
CC	M	PreSchool	Beige/Gray/Cream Pebble Pattern VSF	450 Sq. Ft.	NF/G	None Detected
D	M	Building A, E, H1-H4, H7, H8, Fellowship Hall, Gym, Church Office, Preschool, Athletics and Maintanence	Drywall	56,580 Sq. Ft.	NF/G	None Detected
DD	M	PreSchool	White Square W DK Blue Diamond VSF	65 Sq. Ft.	NF/G	None Detected
E	**M**	**Building A, E, H1-H4, H7, H8, Fellowship Hall, Gym, Church Office, Preschool, Athletics and Maintanence**	**Drywall Joint Compound**	**56,580 Sq. Ft.**	**NF/G**	**Chrysotile < 1%**
EE	M	PreSchool	12 X 12 White Floor Tile w/ Gray Specks	300 Sq. Ft.	NF/G	None Detected
F	M	Building A, J, E, H1-H4, H7, H8, PreSchool, Athletics and Maintanence	Dark Blue Vinyl Covebase & Adhesive	3,015 L. Ft.	NF/G	None Detected
FF	M	PreSchool	Cream w/ Gray Small Dots VSF	80 Sq. Ft.	NF/G	None Detected
G	M	Building A, J, E, H7, H8, PreSchool, and Fellowship Hall	Carpet Glue	20,990 Sq. Ft.	NF/G	None Detected
GG	M	PreSchool	Gray & Pinkish Brown Dotted VSF	110 Sq. Ft.	NF/G	None Detected
H	M	Building A	Lt. Beige Linoleum (Rectangle Pattern)	10 Sq. Ft.	NF/G	None Detected
HH	M	Gym and Church Office	2 X 2 White Ceiling Panel Square Pattern	100 Sq. Ft.	NF/G	None Detected
I	M	Building J	12 X 12 Lt. Blue Speckled Floor Tile	900 Sq. Ft.	NF/G	None Detected
II	M	Gym and Church Office	2 X 4 White Ceiling Panels, Pocks, & Round Holes	1,350 Sq. Ft.	NF/G	None Detected

Homogeneus Application	Asbestos Category	Location	Material	Quantity	Condition	Analytical Result
J	M	Building J	12 X 12 Beige & Brown Speckled Floor Tile	900 Sq. Ft.	NF/G	None Detected
JJ	M	Buildings B1 & B2	Brown Vinyl Covebase & Adhesive	210 L. Ft.	NF/G	None Detected
K	M	Building J	2x4 White Vinyl Fiberglass Ceiling Panels	3,240 Sq. Ft.	NF/G	Not Sampled
KK	M	Buildings H7 and H8	Plaster Wall	6,300 Sq. Ft.	NF/G	None Detected
L	M	Building J and Fellowship Hall	Lt. Gray Vinyl Covebase & Adhesive	320 L. Ft.	NF/G	None Detected
M	M	Building E	12 X 12 Mauve Floor Tile w/ Speckles & Yellow Glue	80 Sq. Ft.	NF/G	None Detected
N	M	Building E	White Vinyl Covebase & Adhesive	35 L. Ft.	NF/G	None Detected
O	M	Buildings H1-H4	12 X 12 White Floor Tile w/ Blue Specks	120 Sq. Ft	NF/G	None Detected
P	S	Buildings H7 & H8, Fellowship Hall, Gym, Church Office, Athletics and Maintanence	Spray Applied Acoustical Ceiling	13,500 Sq. Ft.	NF/G	None Detected
Q	**M**	**Building E, H7, H8, Fellowship Hall, PreSchool, Athletics and Maintanence**	**Exterior Stucco Plaster**	**30,750 Sq. Ft.**	**NF/G**	**Chrysotile < 1%**
R	M	Buildings H7 & H8	Plaster Wall Backing Paper	4,200 Sq. Ft.	NF/G	None Detected
S	M	Buildings H7 & H8	2 X 2 White Fissured Ceiling Panel	1,620 Sq. Ft.	NF/G	None Detected
T	M	Buildings H7 & H8	Plaster Wall	6,300 Sq. Ft.	NF/G	None Detected
U	M	Fellowship Hall	Interior Stucco Plaster Wall	280 Sq. Ft.	NF/G	None Detected
V	M	Fellowship Hall	Gypboard Channel Wall	1,600 Sq. Ft.	NF/G	None Detected
W	M	Fellowship Hall	12 X 12 White Floor Tile w/ Gray Specks	140 Sq. Ft.	NF/G	None Detected
X	M	Gym and Church Office	2 X 2 Off White, Rough Textured Ceiling Panel	1,080 Sq. Ft.	NF/G	None Detected
Y	M	Gym and Church Office	White Vinyl Covebase & Adhesive	80 L. Ft.	NF/G	None Detected
Z	**M**	**Gym and Church Office**	**Adhesive Under Hardwood Floor**	**8,100 Sq. Ft.**	**NF/G**	**Not Sampled, However Assume ACM**

Table 2
Summary of Sample Locations
Southland Christain School
LFR-Project 002-11124-01

Sample ID	Homogeneus Application	Asbestos Category	Location	Material	Quantity	Condition	Analytical Result
SCS-01	A	M	Building A	2 X 4 White Fissured Celing Panels	1,360	NF/G	Not Analyzed
SCS-02	B	M	Building A	12 X 12 White Floor Tile w/ Gray Specks, Yellow Glue	280 Sq. Ft.	NF/G	None Detected
SCS-03	C	M	Building A	2 X 4 White Ceiling Panel Pocks/Pinholes	1,360	NF/G	None Detected
SCS-04	D	M	Building A	Drywall	6,530	NF/G	Not Analyzed
SCS-05	E	M	Building A	Drywall Jt. Compound	-	NF/G	None Detected
SCS-06	E	M	Building A	Drywall Jt. Compound	-	NF/G	None Detected
SCS-07	F	M	Building A	Dark Blue Vinyl Covebase & Adhesive	210 (office Sq. Ft.) 400 (LF)	NF/G	None Detected
SCS-08	G	M	Building A	Carpet Glue	4,850	NF/G	None Detected
SCS-09	H	M	Building A	Lt. Beige Linoleum (Rectangle Pattern)	10 Sq. Ft.	NF/G	None Detected
SCS-10	A	M	Building J	2 X 4 White Fissured Celing Panels 10%	360 Sq. Ft.	NF/G	Not Analyzed
SCS-11	F	M	Building J	Dark Blue Vinyl Covebase & Adhesive	360 LF	NF/G	None Detected
SCS-12	I	M	Building J	12 X 12 Lt. Blue Speckled Floor Tile	900 Sq. Ft.	NF/G	None Detected
SCS-13	J	M	Building J	12 X 12 Beige & Brown Speckled Floor Tile	900 Sq. Ft.	NF/G	None Detected
SCS-14	L	M	Building J	Lt. Gray Vinyl Covebase & Adhesive	120 LF	NF/G	Not Analyzed
SCS-15	G	M	Building J	Carpet Glue	1,800 Sq. Ft.	NF/G	Not Analyzed
SCS-16	A	M	Building E	2 X 4 White Fissured Ceiling Panels	5,120 Sq. Ft.	NF/G	None Detected
SCS-17	F	M	Building E	Dark Blue Vinyl Covebase & Adhesive	640 LF	NF/G	None Detected
SCS-18	D	M	Building E	Drywall	5450 Sq. Ft.	NF/G	Not Analyzed
SCS-19	E	M	Building E	Drywall Jt. Compound	-	NF/G	Not Analyzed
SCS-20	M	M	Building E	12 X 12 Mauve Floor Tile w/ Speckles & Yellow Glue	80 Sq. Ft.	NF/G	None Detected
SCS-21	N	M	Building E	White Vinyl Covebase & Adhesive	35 LF	NF/G	None Detected
SCS-22	E	M	Building E	Drywall Jt. Compound	-	NF/G	None Detected
SCS-23	G	M	Building E	Carpet Glue	5120 Sq. Ft.	NF/G	None Detected
SCS-24	A	M	Buildings H1-H4	2 X 4 White Fissured Ceiling Panels	2,800 Sq. Ft.	NF/G	Not Analyzed
SCS-25	F	M	Buildings H1-H4	Dark Blue Vinyl Covebase & Adhesive	410 LF	NF/G	Not Analyzed
SCS-26	D	M	Buildings H1-H4	Drywall	4,000	NF/G	Not Analyzed
SCS-27	E	M	Buildings H1-H4	Drywall Joint Coumpound	-	NF/G	None Detected
SCS-28	G	M	Buildings H7 & H8	Carpet Glue	2,100	NF/G	None Detected
SCS-29	O	M	Buildings H1-H4	12 X 12 White Floor Tile w/ Blue Specks	120 Sq. Ft	NF/G	None Detected
SCS-30	P	S	Buildings H7 & H8	Spray Applied Acoustical Ceiling	2,100	F/G	Not Analyzed
SCS-31	P	S	Buildings H7 & H8	Spray Applied Acoustical Ceiling	-	F/G	None Detected
SCS-32	P	S	Buildings H7 & H8	Spray Applied Acoustical Ceiling	-	F/G	Not Analyzed
SCS-33	T	M	Buildings H7 & H8	Plaster Wall	6,300	NF/G	None Detected
SCS-34	F	M	Buildings H7 & H8	Dark Blue Vinyl Covebase & Adhesive	200 LF	NF/G	Not Analyzed
SCS-35	**Q**	**M**	**Buildings H7 & H8**	**Exterior Stucco Plaster**	**4,200**	**NF/G**	**Chrysotile < 1%**
SCS-36	R	M	Buildings H7 & H8	Plaster Wall Backing Paper	4,200	NF/G	None Detected
SCS-37	S	M	Buildings H7 & H8	2 X 2 White Fissured Ceiling Panel	1,620	NF/G	None Detected
SCS-38	D	M	Buildings H7 & H8	Drywall	2,400	NF/G	None Detected
SCS-39	**E**	**M**	**Buildings H7 & H8**	**Drywall Joint Compound**	**-**	**NF/G**	**Chrysotile < 1%**
SCS-40	F	M	Buildings H7 & H8	Dark Blue Vinyl Covebase & Adhesive	180 LF	NF/G	None Detected
SCS-41	T	M	Buildings H7 & H8	2 X 2 White Small Fissured Ceiling Panel	288 Sq. Ft.	NF/G	None Detected
SCS-42	G	M	Buildings H7 & H8	Carpet Glue	1,620	NF/G	Not Analyzed

Sample ID	Homogeneus Application	Asbestos Category	Location	Material	Quantity	Condition	Analytical Result
SCS-43	Q	M	Buildings H7 & H8	Ext. Stucco	1,450 Sq. Ft.	NF/G	Not Analyzed
SCS-44	P	S	Fellowship Hall	Spray Applied Acoustical Ceiling	1,200	F/G	None Detected
SCS-45	D	M	Fellowship Hall	Drywall	3,500	NF/G	Not Analyzed
SCS-46	E	M	Fellowship Hall	Drywall Joint Coumpound	-	NF/G	None Detected
SCS-47	U	M	Fellowship Hall	Interior Stucco Plaster Wall	280	NF/G	None Detected
SCS-48	L	M	Fellowship Hall	Lt. Gray Vinyl Covebase & Adhesive	200 LF	NF/G	None Detected
SCS-49	G	M	Fellowship Hall	Carpet Glue	3,500	NF/G	Not Analyzed
SCS-50	V	M	Fellowship Hall	Gypboard Channel Wall	1,600	NF/G	Not Analyzed
SCS-51	W	M	Fellowship Hall	12 X 12 White Floor Tile w/ Gray Specks	140 Sq. Ft.	NF/G	None Detected
SCS-52	**Q**	**M**	**Fellowship Hall**	**Ext. Stucco**	**2,600**	**NF/G**	**Chrysotile < 1%**
SCS-53	P	S	Gym and Church Office	Spray Applied Acoustical Ceiling	10,000 Sq. Ft.	F/G	None Detected
SCS-54	D	M	Gym and Church Office	Drywall	20,000	NF/G	Not Analyzed
SCS-55	AA	M	Gym and Church Office	Gray Vinyl Covebase & Adhesive	30 LF	NF/G	None Detected
SCS-56	X	M	Gym and Church Office	2 X 2 Off White, Rough Textured Ceiling Panel	1,080 Sq. Ft.	NF/G	None Detected
SCS-57	Y	M	Gym and Church Office	White Vinyl Covebase & Adhesive	80 LF	NF/G	Not Analyzed
SCS-58	E	M	Gym and Church Office	Drywall Joint Coumpound	-	NF/G	None Detected
SCS-59	BB	M	PreSchool	12 x 12 White Floor Tile w/ Dark Bluish Gray Streaks & Glue	1,400 Sq. Ft.	NF/G	None Detected
SCS-60	A	M	PreSchool	2 X 4 White Fissured Ceiling Panels	5,400	NF/G	None Detected
SCS-61	CC	M	PreSchool	Beige/Gray/Cream Pebble Pattern VSF	450 Sq. Ft.	NF/G	None Detected
SCS-62	DD	M	PreSchool	White Square W DK Blue Diamond VSF	65 Sq. Ft.	NF/G	None Detected
SCS-63	D	M	PreSchool	Drywall	8,100	NF/G	Not Analyzed
SCS-64	E	M	PreSchool	Drywall Joint Coumpound	-	NF/G	Not Analyzed
SCS-65	F	M	PreSchool	Dark Blue Vinyl Covebase & Adhesive	760 LF	NF/G	Not Analyzed
SCS-66	EE	M	PreSchool	12 X 12 White Floor Tile w/ Gray Specks	300 Sq. Ft.	NF/G	None Detected
SCS-67	G	M	PreSchool	Carpet Glue	2,000 Sq. Ft.	NF/G	Not Analyzed
SCS-68	FF	M	PreSchool	Cream w/ Gray Small Dots VSF	80	NF/G	Not Analyzed
SCS-69	GG	M	PreSchool	Gray & Pinkish Brown Dotted VSF	110	NF/G	None Detected
SCS-70	Q	M	PreSchool	Ext. Stucco	7,500 Sq. Ft.	NF/G	None Detected
SCS-71	HH	M	Gym and Church Office	2 X 2 White Ceiling Panel Square Pattern	100	NF/G	None Detected
SCS-72	II	M	Gym and Church Office	2 X 4 White Ceiling Panels, Pocks, & Round Holes	1,350	NF/G	Not Analyzed
SCS-73	P	S	Athletics And Maintanence	Spray Applied Acoustical Ceiling	200	F/G	None Detected
SCS-74	D	M	Athletics And Maintanence	Drywall	6,600	NF/G	None Detected
SCS-75	E	M	Athletics And Maintanence	Drywall Jt. Compound	-	NF/G	None Detected
SCS-76	F	M	Athletics And Maintanence	Dark Blue Vinyl Covebase & Adhesive	65 LF	NF/G	Not Analyzed
SCS-77	Q	M	Athletics And Maintanence	Ext. Stucco	5,000 Sq. Ft.	NF/G	None Detected
SCS-78	C	M	Buildings B1 & B2	2 X 4 White Ceiling Panels, Pocks, & Pin Holes	720	NF/G	Not Analyzed
SCS-79	JJ	M	Buildings B1 & B2	Brown Vinyl Covebase & Adhesive	210 LF	NF/G	None Detected
SCS-80	Q	M	Building E	Exterior Stucco Plaster	10,000 Sq. Ft.	NF/G	None Detected
	Z	**M**	**Gym and Church Office**	**Adhesive Under Hardwood Floor**	**8,100 Sq, Ft.**	**NF/G**	**Not Sampled, However Assume ACM**

Table 3
Asbestos Abatement Cost Estimate
Southland Christain School
LFR-Project 002-11124-01

Homogeneus Application	Asbestos Category	Location	Material	Estimate Quantity (square feet)	Unit Cost/Sq. Ft.	Total Cost
E	M	Building A, E, H1-H4, H7, H8, Fellowship Hall, Gym, Church Office, Preschool, Athletics and Maintanence	Drywall Joint Compound	56,580	$1.60	$90,528.00
Q	M	Building E, H7, H8, Fellowship Hall, PreSchool, Athletics and Maintanence	Exterior Stucco Plaster	30,750	$1.85	$56,887.50
Z	M	Building Gym and Church Office	Adhesive Under Hardwood Floor	8,100	$4.00	$32,400.00
Total Abatement Cost						**$179,815.50**

APPENDIX A

Limitations and Service Constraints

LIMITATIONS AND SERVICE CONSTRAINTS

The opinions and recommendations presented in this report are based upon the scope of services, information obtained through the performance of the services, and the schedule as agreed upon by LFR Inc. (LFR) and the party for whom this report was originally prepared. This report is an instrument of professional service and was prepared in accordance with the generally accepted standards and level of skill and care under similar conditions and circumstances established by the environmental consulting industry. No representation, warranty or guarantee, express or implied, is intended or given. To the extent that LFR relied upon any information prepared by other parties not under contract to LFR, LFR makes no representation as to the accuracy or completeness of such information. This report is expressly for the sole and exclusive use of the party for whom this report was originally prepared for a particular purpose. Only the party for whom this report was originally prepared and/or other specifically named parties have the right to make use of and rely upon this report. Reuse of this report or any portion thereof for other than its intended purpose, or if modified, or if used by third parties, shall be at the user's sole risk.

Results of any investigations or testing and any findings presented in this report apply solely to conditions existing at the time when LFR's investigative work was performed. It must be recognized that any such investigative or testing activities are inherently limited and do not represent a conclusive or complete characterization. Conditions in other parts of the project site may vary from those at the locations where data were collected. LFR's ability to interpret investigation results is related to the availability of the data and the extent of the investigation activities. As such, 100 percent confidence in environmental investigation conclusions cannot reasonably be achieved.

LFR, therefore, does not provide any guarantees, certifications or warranties regarding any conclusions regarding environmental contamination of any such property. Furthermore, nothing contained in this document shall relieve any other party of its responsibility to abide by contract documents and applicable laws, codes, regulations or standards.

APPENDIX B

Photographs

1. Southlands Christian School, View of Office Building.

2, HA-A, 2x4 White Fissured Ceiling Panels.

Site Photographs

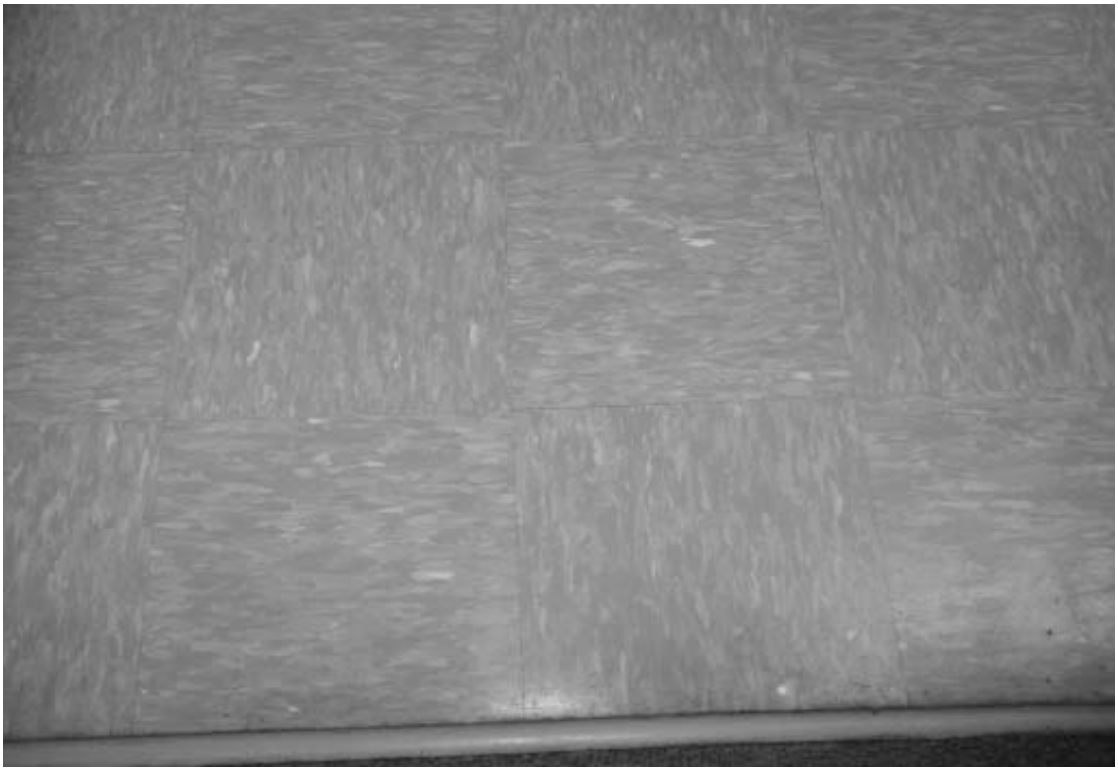
3. HA-B, 12x12 White Floor Tile with Gray Specks.

Photo 4 View of chapel looking south.

5. HA-D, Typical Drywall and HA-E, Drywall Joint Compound.

6. HA-F, Dark Blue Covebase & Adhesive; HA-G Carpet Glue.

5. HA-D, Typical Drywall and HA-E, Drywall Joint Compound.



8. HA-M, 12x12 Mauve Floor Tile.

9. HA-O, 12x12 White Floor Tile with Blue Specks.

10. HA-P, Spray Applied Acoustical Ceiling Texture.

11. HA-I, 12x12 Light Blue Specked Floor Tile; and HA-L, Light Gray Vinyl Cove Base.

12. HA-J, 12x12 Light Beige Specked Floor Tile.

13. HA-S, 2x2 White Fissured Ceiling Panels.

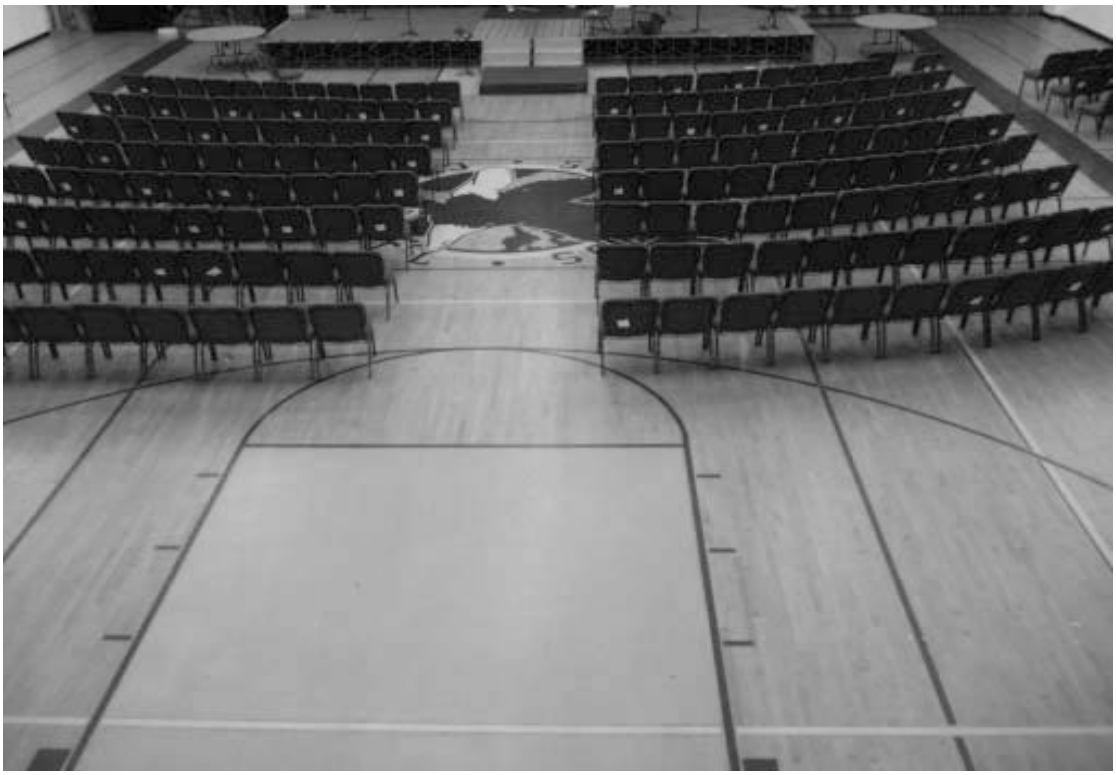
14. HA-T, 2x2 White Small Fissure Ceiling Panel.

15. HA-KK, Plaster Wall.

16. HA-U, Interior Stucco Plaster Wall.

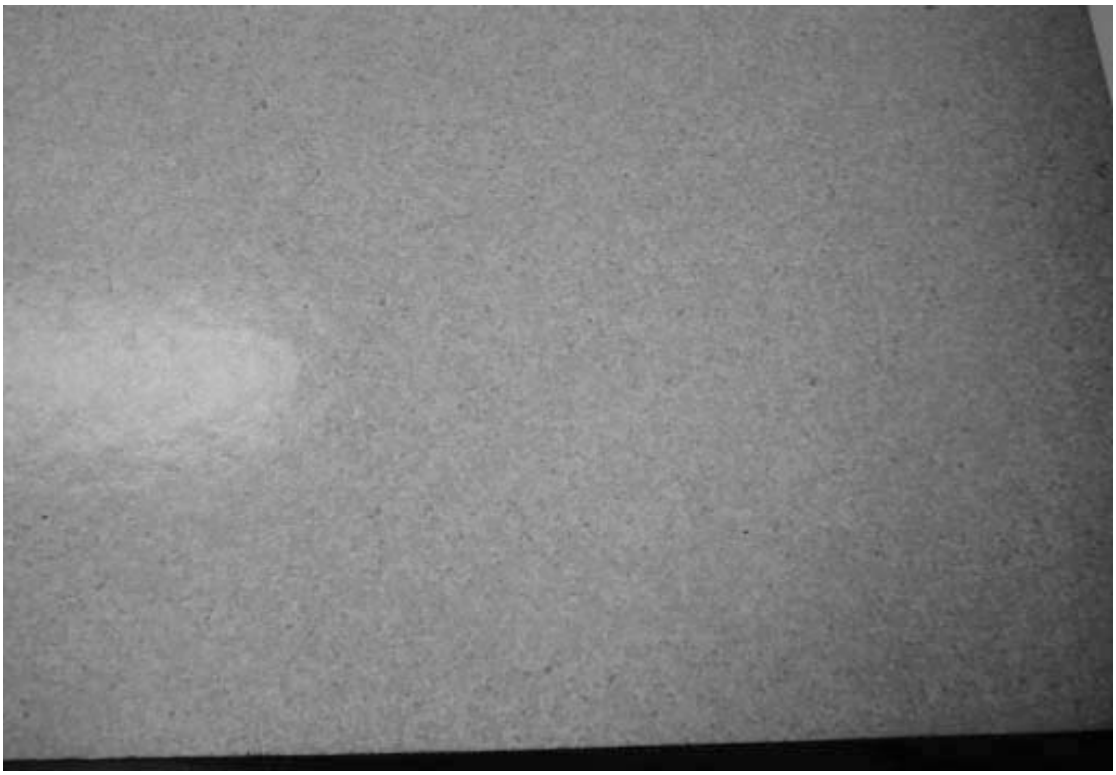
17. HA-V, Gypboard Panel Wall.

18. HA-AA, Gray Vinyl Covebase & Adhesive.



19. HA-Z, Adhesive under Hardwood Floor.

20. HA-BB, 12x12 White Floor Tile with Dark Bluish Gray Streaks.



21. HA-CC, Beige-Gray-Cream Pebble Pattern Vinyl Sheet Flooring.

22. HA-DD, White Vinyl Sheet Flooring with Square Pattern and Blue Diamonds.

23. HA-EE, 12x12 White Floor Tile with Gray Specks.

24. HA-FF, Cream with Gray Small Dots Vinyl Sheet Flooring.

25. HA-GG, Gray & Pinkish Brown Dotted Vinyl Sheet Flooring.

26. HA-X, 2x2 Off White, Rough Textured Ceiling Panels.

27. HA-Y, White Vinyl Covebase & Adhesive.

28. HA-JJ, Brown Vinyl Covebase & Adhesive.

APPENDIX C

Laboratory Report (NVLAP)
Bulk Sample Summary

REPORT NO:	**115929**	**CLIENT:**	**LFR, INC.** **3150 BRISTOL STREET STE. 250**
DATE:	**Sep 14, 2007**		**COSTA MESA, CA 92626**
DATE RECEIVED:	**Sep 7, 2007**	**ATTENTION:**	**DOUG COBURN**
DATE ANALYZED:	**Sep 14, 2007**	**REFERENCE:**	**SOUTHLAND CHRISTIAN SCHOOL**

DATE / TIME COLLECTED: **8/31/07 AND 9/4/07 BY DOUG COBURN**

SUBJECT: **Polarized Light Microscopy Analysis for Asbestos; 61 Samples**

METHODOLOGY: **"Method for Determination of Asbestos in Bulk Building Materials."**
EPA 600/R-93/116

ACCREDITED: **National Institute of Standards and Technology (NVLAP) #101218**

CERTIFIED: **California Department of Health Services Environmental Testing Laboratory ELAP 1119,**
County Sanitation Districts of Los Angeles County, Laboratory Identification No. 10120

QUALITY CONTROL SAMPLE (SRM 1866 GLASS FIBERS AS THE BLANK): NONE DETECTED

SAMPLE ID NUMBER	SAMPLE LOCATION & DESCRIPTION	VISUAL DESCRIPTION	ASBESTIFORM MINERALS	OTHER FIBROUS MATERIALS	NON-FIBROUS MATERIALS
SCS-02 FT	NON-FRIABLE	WHITE GRANULAR	**NONE DETECTED	NONE DETECTED	GRANULAR MINERALS OPAQUES RESIN
SCS-02 M	NON-FRIABLE	YELLOW STICKY	NONE DETECTED	NONE DETECTED	GRANULAR MINERALS OPAQUES ORGANICS
SCS-03	NON-FRIABLE	WHITE PAINT GRAY FIBROUS	NONE DETECTED	CELLULOSE 25% GLASSWOOL 40%	GRANULAR MINERALS OPAQUES RESIN
SCS-05	NON-FRIABLE	WHITE GRANULAR	NONE DETECTED	NONE DETECTED	GRANULAR MINERALS OPAQUES
SCS-07	NON-FRIABLE	TAN STICKY	NONE DETECTED	NONE DETECTED	GRANULAR MINERALS OPAQUES ORGANICS
SCS-08	NON-FRIABLE	TAN SOLID	NONE DETECTED	CELLULOSE- LESS THAN 1%	GRANULAR MINERALS OPAQUES ORGANICS
SCS-09	NON-FRIABLE	BEIGE RUBBERY GRAY FIBROUS	NONE DETECTED	CELLULOSE 25% CLEAVAGE FRAGMT- LESS THAN 1%	GRANULAR MINERALS OPAQUES
SCS-09 M	NON-FRIABLE	TAN STICKY	NONE DETECTED	NONE DETECTED	GRANULAR MINERALS OPAQUES ORGANICS

Optical Microscopist **B.M. Kolk, Laboratory Director**

BMK/vm

The EPA method is a semi quantitative procedure. The detection limit is between 1/10 to 1 percent by area and is dependent upon the size of the asbestos fibers, the means of sampling and the matrix of the sampled material.

The test results reported are for the sample or samples delivered to us and may not represent the entire material from which the sample was taken. The EPA recommends three samples or more be taken of a "homogeneous sampling area" before friable material is considered non-asbestos-containing.

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NOTE: This report shall not be reproduced, except in full, without the written approval of EMS Laboratories, Inc.

** Negative floor tile samples may contain significant amounts (>1%) of very thin asbestos fibers which cannot by detected by PLM. Confirmation by X-Ray diffraction or TEM is recommended by EPA (Federal Register Vol. 59, No. 146).

SAMPLE ID NUMBER	SAMPLE LOCATION & DESCRIPTION	VISUAL DESCRIPTION	ASBESTIFORM MINERALS	OTHER FIBROUS MATERIALS	NON-FIBROUS MATERIALS
SCS-11	NON-FRIABLE	TAN SOLID	NONE DETECTED	NONE DETECTED	GRANULAR MINERALS OPAQUES ORGANICS
SCS-12 FT	NON-FRIABLE	BLUE GRANULAR	**NONE DETECTED	NONE DETECTED	GRANULAR MINERALS OPAQUES RESIN
SCS-12 M	NON-FRIABLE	TAN STICKY	NONE DETECTED	NONE DETECTED	GRANULAR MINERALS OPAQUES ORGANICS
SCS-13	NON-FRIABLE	BEIGE GRANULAR	NONE DETECTED	NONE DETECTED	GRANULAR MINERALS OPAQUES RESIN
SCS-13 M	NON-FRIABLE	TAN STICKY	NONE DETECTED	NONE DETECTED	GRANULAR MINERALS OPAQUES ORGANICS
SCS-16	NON-FRIABLE	WHITE PAINT GRAY FIBROUS	NONE DETECTED	CELLULOSE 25% GLASSWOOL 40%	GRANULAR MINERALS OPAQUES PERLITE
SCS-17	NON-FRIABLE	WHITE SOLID	NONE DETECTED	NONE DETECTED	GRANULAR MINERALS OPAQUES ORGANICS
SCS-20 FT	NON-FRIABLE	GREEN GRANULAR	**NONE DETECTED	NONE DETECTED	GRANULAR MINERALS OPAQUES RESIN

Optical Microscopist

B.M. Kolk, Laboratory Director

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SAMPLE ID NUMBER	SAMPLE LOCATION & DESCRIPTION	VISUAL DESCRIPTION	ASBESTIFORM MINERALS	OTHER FIBROUS MATERIALS	NON-FIBROUS MATERIALS
SCS-20 M	NON-FRIABLE	TAN STICKY	NONE DETECTED	NONE DETECTED	GRANULAR MINERALS OPAQUES ORGANICS
SCS-21	NON-FRIABLE	TAN SOLID	NONE DETECTED	NONE DETECTED	GRANULAR MINERALS OPAQUES ORGANICS
SCS-22	NON-FRIABLE	WHITE GRANULAR	NONE DETECTED	NONE DETECTED	GRANULAR MINERALS OPAQUES
SCS-23	NON-FRIABLE	TAN STICKY	NONE DETECTED	NONE DETECTED	GRANULAR MINERALS OPAQUES ORGANICS
SCS-27	NON-FRIABLE	WHITE GRANULAR	NONE DETECTED	NONE DETECTED	GRANULAR MINERALS OPAQUES
SCS-28	NON-FRIABLE	TAN SOLID	NONE DETECTED	NONE DETECTED	GRANULAR MINERALS OPAQUES ORGANICS
SCS-29 FT	NON-FRIABLE	WHITE GRANULAR	**NONE DETECTED	NONE DETECTED	GRANULAR MINERALS OPAQUES RESIN
SCS-29 M	NON-FRIABLE	TAN STICKY	NONE DETECTED	NONE DETECTED	GRANULAR MINERALS OPAQUES ORGANICS

Optical Microscopist

B.M. Kolk, Laboratory Director

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SAMPLE ID NUMBER	SAMPLE LOCATION & DESCRIPTION	VISUAL DESCRIPTION	ASBESTIFORM MINERALS	OTHER FIBROUS MATERIALS	NON-FIBROUS MATERIALS
SCS-31	FRIABLE	WHITE GRANULAR	NONE DETECTED	CELLULOSE - LESS THAN 1%	GRANULAR MINERALS OPAQUES
SCS-33	NON-FRIABLE	WHITE GRANULAR	NONE DETECTED	NONE DETECTED	GRANULAR MINERALS OPAQUES
SCS-35	NON-FRIABLE	WHITE GRANULAR	CHRYSOTILE LESS THAN 1%	NONE DETECTED	GRANULAR MINERALS OPAQUES
SCS-36	NON-FRIABLE	BROWN FIBROUS	NONE DETECTED	CELLULOSE 98%	GRANULAR MINERALS OPAQUES ORGANICS
SCS-37	NON-FRIABLE	WHITE FIBROUS GRAY PAINT	NONE DETECTED	CELLULOSE 30% GLASSWOOL 45%	GRANULAR MINERALS OPAQUES PERLITE
SCS-38 DW	NON-FRIABLE	WHITE GRANULAR	NONE DETECTED	CELLULOSE- LESS THAN 1%	GRANULAR MINERALS OPAQUES
SCS-39	NON-FRIABLE	WHITE GRANULAR	CHRYSOTILE LESS THAN 1%	NONE DETECTED	GRANULAR MINERALS OPAQUES
SCS-40	NON-FRIABLE	TAN SOLID	NONE DETECTED	NONE DETECTED	GRANULAR MINERALS OPAQUES

Optical Microscopist

B.M. Kolk, Laboratory Director

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SAMPLE ID NUMBER	SAMPLE LOCATION & DESCRIPTION	VISUAL DESCRIPTION	ASBESTIFORM MINERALS	OTHER FIBROUS MATERIALS	NON-FIBROUS MATERIALS
SCS-41	NON-FRIABLE	WHITE PAINT GRAY FIBROUS	NONE DETECTED	CELLULOSE 35% GLASSWOOL 40%	GRANULAR MINERALS OPAQUES PERLITE
SCS-44	NON-FRIABLE	WHITE GRANULAR	NONE DETECTED	NONE DETECTED	GRANULAR MINERALS OPAQUES
SCS-46	NON-FRIABLE	WHITE GRANULAR	NONE DETECTED	CELLULOSE - LESS THAN 1% FIBERGLASS - LESS THAN 1%	GRANULAR MINERALS OPAQUES
SCS-47	NON-FRIABLE	BEIGE GRANULAR	NONE DETECTED	NONE DETECTED	GRANULAR MINERALS OPAQUES
SCS-48	NON-FRIABLE	TAN STICKY	NONE DETECTED	NONE DETECTED	GRANULAR MINERALS OPAQUES ORGANICS
SCS-51 FT	NON-FRIABLE	WHITE GRANULAR	**NONE DETECTED	NONE DETECTED	GRANULAR MINERALS OPAQUES RESIN
SCS-51 M	NON-FRIABLE	YELLOW STICKY	NONE DETECTED	NONE DETECTED	GRANULAR MINERALS OPAQUES ORGANICS
SCS-52	NON-FRIABLE	BEIGE GRANULAR	CHRYSOTILE LESS THAN 1%	NONE DETECTED	GRANULAR MINERALS OPAQUES

Optical Microscopist

B.M. Kolk, Laboratory Director

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SAMPLE ID NUMBER	SAMPLE LOCATION & DESCRIPTION	VISUAL DESCRIPTION	ASBESTIFORM MINERALS	OTHER FIBROUS MATERIALS	NON-FIBROUS MATERIALS
SCS-53	NON-FRIABLE	WHITE GRANULAR	NONE DETECTED	NONE DETECTED	GRANULAR MINERALS OPAQUES
SCS-55 BB	NON-FRIABLE	GRAY RUBBERY	NONE DETECTED	NONE DETECTED	GRANULAR MINERALS OPAQUES
SCS-55 M	NON-FRIABLE	BROWN SOLID	NONE DETECTED	NONE DETECTED	GRANULAR MINERALS OPAQUES ORGANICS
SCS-56	NON-FRIABLE	WHITE GRANULAR	NONE DETECTED	CELLULOSE - LESS THAN 1% GLASSWOOL 65%	GRANULAR MINERALS OPAQUES PERLITE
SCS-58	NON-FRIABLE	WHITE GRANULAR	NONE DETECTED	NONE DETECTED	GRANULAR MINERALS OPAQUES
SCS-59 FT	NON-FRIABLE	WHITE GRANULAR	**NONE DETECTED	NONE DETECTED	GRANULAR MINERALS OPAQUES
SCS-59 M	NON-FRIABLE	TAN STICKY	NONE DETECTED	NONE DETECTED	GRANULAR MINERALS OPAQUES
SCS-60	NON-FRIABLE	WHITE PAINT GRAY FIBROUS	NONE DETECTED	CELLULOSE 35% GLASSWOOL 40%	GRANULAR MINERALS OPAQUES PERLITE

Optical Microscopist

B.M. Kolk, Laboratory Director

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** Negative floor tile samples may contain significant amounts (>1%) of very thin asbestos fibers which cannot by detected by PLM. Confirmation by X-Ray diffraction or TEM is recommended by EPA (Federal Register Vol. 59, No. 146).

SAMPLE ID NUMBER	SAMPLE LOCATION & DESCRIPTION	VISUAL DESCRIPTION	ASBESTIFORM MINERALS	OTHER FIBROUS MATERIALS	NON-FIBROUS MATERIALS
SCS-61	NON-FRIABLE	BEIGE RUBBERY GRAY FIBROUS	NONE DETECTED	CELLULOSE 25% SYNTHETICS 10% CLEAVAGE FRAGMT- LESS THAN 1%	GRANULAR MINERALS OPAQUES PERLITE
SCS-62	NON-FRIABLE	WHITE RUBBERY GRAY FIBROUS	NONE DETECTED	CELLULOSE 25%	GRANULAR MINERALS OPAQUES
SCS-66 FT	NON-FRIABLE	WHITE GRANULAR	**NONE DETECTED	NONE DETECTED	GRANULAR MINERALS OPAQUES RESIN
SCS-66 M	NON-FRIABLE	TAN STICKY	NONE DETECTED	NONE DETECTED	GRANULAR MINERALS OPAQUES ORGANICS
SCS-69	NON-FRIABLE	GRAY RUBBERY GRAY FIBROUS	NONE DETECTED	CELLULOSE 20% SYNTHETICS 5%	GRANULAR MINERALS OPAQUES
SCS-69 M	NON-FRIABLE	TAN STICKY	NONE DETECTED	NONE DETECTED	GRANULAR MINERALS OPAQUES ORGANICS
SCS-70	NON-FRIABLE	BEIGE GRANULAR	NONE DETECTED	NONE DETECTED	GRANULAR MINERALS OPAQUES
SCS-71	NON-FRIABLE	GRAY FIBROUS WHITE PAINT	NONE DETECTED	CELLULOSE 35% GLASSWOOL 40%	GRANULAR MINERALS OPAQUES PERLITE

Optical Microscopist

B.M. Kolk, Laboratory Director

The EPA method is a semi quantitative procedure. The detection limit is between 1/10 to 1 percent by area and is dependent upon the size of the asbestos fibers, the means of sampling and the matrix of the sampled material.

The test results reported are for the sample or samples delivered to us and may not represent the entire material from which the sample was taken. The EPA recommends three samples or more be taken of a "homogeneous sampling area" before friable material is considered non-asbestos-containing.

This report, from a NIST accredited laboratory through NVLAP, must not be used by the client to claim product endorsement by NVLAP or any agency of the U.S. Government.

NOTE: This report shall not be reproduced, except in full, without the written approval of EMS Laboratories, Inc.

** Negative floor tile samples may contain significant amounts (>1%) of very thin asbestos fibers which cannot by detected by PLM. Confirmation by X-Ray diffraction or TEM is recommended by EPA (Federal Register Vol. 59, No. 146).

SAMPLE ID NUMBER	SAMPLE LOCATION & DESCRIPTION	VISUAL DESCRIPTION	ASBESTIFORM MINERALS	OTHER FIBROUS MATERIALS	NON-FIBROUS MATERIALS
SCS-73	FRIABLE	WHITE GRANULAR	NONE DETECTED	NONE DETECTED	GRANULAR MINERALS OPAQUES
SCS-74	NON-FRIABLE	WHITE GRANULAR	NONE DETECTED	CELLULOSE - LESS THAN 1%	GRANULAR MINERALS OPAQUES
SCS-75	NON-FRIABLE	WHITE GRANULAR	NONE DETECTED	NONE DETECTED	GRANULAR MINERALS OPAQUES
SCS-77	NON-FRIABLE	WHITE GRANULAR GRAY GRANULAR	NONE DETECTED	NONE DETECTED	GRANULAR MINERALS OPAQUES
SCS-79	NON-FRIABLE	TAN SOLID	NONE DETECTED	NONE DETECTED	GRANULAR MINERALS OPAQUES ORGANICS

Optical Microscopist

B.M. Kolk, Laboratory Director

The EPA method is a semi quantitative procedure. The detection limit is between 1/10 to 1 percent by area and is dependent upon the size of the asbestos fibers, the means of sampling and the matrix of the sampled material.

The test results reported are for the sample or samples delivered to us and may not represent the entire material from which the sample was taken. The EPA recommends three samples or more be taken of a "homogeneous sampling area" before friable material is considered non-asbestos-containing.

This report, from a NIST accredited laboratory through NVLAP, must not be used by the client to claim product endorsement by NVLAP or any agency of the U.S. Government.

NOTE: This report shall not be reproduced, except in full, without the written approval of EMS Laboratories, Inc.

** Negative floor tile samples may contain significant amounts (>1%) of very thin asbestos fibers which cannot by detected by PLM. Confirmation by X-Ray diffraction or TEM is recommended by EPA (Federal Register Vol. 59, No. 146).

LFR, Inc. Bulk Sampling Form

Project Name:	Southland Christian School	Project No.:	
Date Collected:	8-31-07 BLDG (A)	Technician:	Doug Coburn

Sample Number	Sample Description	Sample Location	Condition	Approx. Square Footage	Homogeneous Application	Photos ~~PLM Results~~ (1) View
SCS-01 Archive	2x4 White Fiberboard Ceiling Panels	School office Reception area	G D SD	1,360	A	2
SCS-02	12x12 White Floor Tile W/ Gray Specks, yellow Glue	Front office Closet	G D SD	380 ft	B	3
SCS-03	2x4 White Ceiling Panel Backs/Finishes	Nurse office NW Corner	G D SD	1,360	C	4
SCS-04 Archive	Drywall	Faculty Lounge E. wall @ SE Corner	G D SD	6,530	D	5
SCS-05	Drywall Jt. Compound	Faculty Lounge N. wall @ Door Entry	G D SD	—	E	5
SCS-06 Archive	Drywall Jt Compound	Room A-1, N. wall @ Elec. Switch	G D SD	—	E	
SCS-07	Dark Blue ~~Rubber~~ Vinyl Cove base + Adhesive	Front office Reception NW Corner	G D SD	210 sf 400 LF	F	5
SCS-08	Carpet Glue,	N. Center of Faculty Lounge	G D SD	~~2450 sf~~ 4,850	G	6
SCS-09	Lt. Beige Linoleum (Rectangle Pattern)	Front office Closet	G D SD	10 ft	H	7
			G D SD			

Notes: _____

LFR, Inc. Bulk Sampling Form

Project Name:	Southlands Christian School	Project No.:	
Date Collected:	8-31-07 BLDG J	Technician:	Doug Coburn

Sample Number	Sample Description	Sample Location	Condition	Approx. Square Footage	Homogeneous Application	PLM Results
SCS-10 Archive	2x4 White Fissured Ceiling Panels 10%	Room J-1 N. Center	G D SD	360 ☐	A	
SCS-11	Dark Blue Vinyl Cove base + Adhesive	Room J-2 W. ~~center~~ wall S. end	G D SD	360 ~~450~~ LF	F	
SCS-12	12x12 Lt. Blue Speckled Floor Tile	Room J-1 N. Center	G D SD	900 ☐	I J-1	11
SCS-13	12x12 Beige + Brown Speckled Floor Tile	Room J-2 SW Corner	G D SD	900 ☐	J J-2	12
NA Not Sampled	2x4 White Vinyl Fiberglass Ceiling Panels	90%	G D SD	3,240	K	—
SCS-14 Archive	Lt. Gray Vinyl Cove base + Adhesive	Rm J-3, E. wall near SE Corner	G D SD	120 LF	L	11
SCS-15 Archive	Carpet Glue	Rooms J-4 at Doorway to J-3	G D SD	1,800 ☐	G J-3 J-4	
			G D SD			
			G D SD			
			G D SD			

Notes: Wood Paneling Interior Walls, Fiberglass Batt Insul, Foil Tape on HVAC

LFR, Inc. Bulk Sampling Form

Project Name:	Southlands Christian School	Project No.:	
Date Collected:	8-31-07 BLDG (E)	Technician:	D. Coburn

Sample Number	Sample Description	Sample Location	Condition	Approx. Square Footage	Homogeneous Application	PLM Results
SCS-16	2x4 White Fissured Ceiling Panels	Room E-2 near SE Corner	G D SD	5,120 ft	A	
SCS-17	Dark Blue Vinyl Cove base + Adhesive	Room E-1, E. wall Center	G D SD	640 LF	F	
SCS-23	Carpet Glue	Room E-3, E. Wall @ South Door	G D SD	5,120 SF	G	
SCS-18 Archive	Drywall	Room E-2, N. wall near W. Door	G D SD	5,450 SF	D	
SCS-19 Archive	Drywall Jt. Compound	Room E-2, W Wall, Center	G D SD	—	E	
SCS-20	12x12 Mauve Floor Tile w/ Speckles + yellow Glue	Student Services SW Corner	G D SD	80 SF	M	8
SCS-21	White Vinyl Cove base + Adhesive	Student Services NW Corner	G D SD	35 LF	N	
SCS-22	Drywall Jt Comp	Bldg E Lounge outer RR wall	G D SD	—	E	
SCS-~~23~~ Archive 80	Exterior Stucco Plaster	Bldg E. Ext. N. Wall or Rm E-3	G D SD	10,000 SF	Q	~~8~~
~~SCS-23~~			G D SD			

Notes: _____

LFR, Inc. Bulk Sampling Form

Project Name:	Southlands Christian School	Project No.:	
Date Collected:	8-31-07 Lower level - Bldg H1-H4	Technician:	D. Coburn

Sample Number	Sample Description	Sample Location	Condition	Approx. Square Footage	Homogeneous Application	PLM Results
SCS-24 Archive	2x4 White Fissured Ceiling Panels	Rm H1, Ctr of Rm near Column	G D SD	2,800 SF	A	
SCS-25 Archive	Dark Blue Vinyl Covebase + Adhesive	Rm H-2, E-wall, Center	G D SD	410 LF	F	
~~SCS-28~~ VOID	~~Carpet Glue~~	~~Room H-3 Closet~~	G D SD		~~G~~	
SCS-26 Archive	Drywall	Rm H-1, NW Corner	G D SD	4,000	D	
SCS-27	Drywall Joint Compound	Rm H-1, W. wall Center	G D SD	—	E	
SCS-29	12x12 White Floor Tile w/ Blue Specks	Rm H-4, SW Corner	G D SD	120 30	O church office	9
Not Sampled	Carpet Glue		G D SD	2,700	G	
			G D SD			
			G D SD			
			G D SD			

Notes: _____

LFR, Inc. Bulk Sampling Form

Project Name:	Southbends Christian School	Project No.:	
Date Collected:	8-31-07 H7 & H8	Technician:	Doug Coburn

Sample Number	Sample Description	Sample Location	Condition	Approx. Square Footage	Homogeneous Application	PLM Results
Archive SCS - 30	Spray Applied Acoustical Ceiling	Rm H-7, ~~W~~ E W. Wall, Ceiling, Ctr	G D SD	2,100	P	10
31	↓	Rm H7 Ceiling @ S. wall, Ctr	G D SD	—	P	
Archive 32	↓	Rm H-8, Ceiling W. wall, Ctr	G D SD	—	P	
33	~~Drywall~~ Plaster Wall	RM H-8, W. wall near SW Corner	G D SD	6,300	~~E~~ T	
	~~Drywall Joint Comp~~		G D SD		E	
Archive 34	Dark Blue Vinyl Covebase + Adhesive	Rm H-8, W. wall Center	G D SD	200 LF	F	
SCS-28	Carpet Glue	~~H-8~~ Rm H-7 @ NW door	G D SD	2,100	G	
SCS - 35	Ext Stucco	SW Ext. Corner of Bldg H-7/H-8	G D SD	4,200	Q	
SCS-36	Plaster Wall Backing Paper	↓	G D SD	4,200	R	
			G D SD			

Notes: _____

LFR, Inc. Bulk Sampling Form

Project Name:	Southlands Christian School	Project No.:	
Date Collected:	9-4-07 H-7/H-8 Music Bldg	Technician:	Doug Coburn

Sample Number	Material ~~Sample~~ Description	Sample Location	Condition	Approx. Square Footage	Homogeneous Application	PLM Results
SCS-37	2x2 White Fissured Ceiling Panel	Rm H-6, W. Side, Ctr	G D SD	1,620	S	11
SCS-38	Drywall	Hallway, E. Wall near SE Corner	G D SD	2,400	D	13
SCS-39	Drywall Joint Compound	Kitchen near Service window	G D SD	—	E	13
SCS-40	Dark Blue Vinyl Covebase + Adhesive	Rm H-6 Door to Hallway	G D SD	180 LF	F	
~~No Sample~~ SCS-42 Archive	Carpet Glue	Rm. H-6 @ Door to Hallway	G D SD	1,620	G	
SCS-41	2x2 White Small Fissure Ceiling Panel	Hallway, @ E. Wall near Kitchen	G D SD	288 ~~SF~~	T	12
SCS-43 Archive	Ext. Stucco	W. Ext. Wall, @ SW Corner	(G) D SD	1,450 SF	Q	
			G D SD			
			G D SD			
			G D SD			

Notes:

LFR, Inc. Bulk Sampling Form

Project Name:	Southlands Christian School	Project No.:	
Date Collected:	9-4-07 Fellowship Hall	Technician:	Doug Coburn

Sample Number	Sample Description	Sample Location	Condition	Approx. Square Footage	Homogeneous Application	PLM Results
SCS-44	Spray Applied Acoustical Ceiling	Nursery Reception Counter	G D SD	120	P	
SCS-45 Archive	Drywall	East Lobby, N. Wall	G D SD	3,500	D	
SCS-46	Drywall Joint Compound	Nursery Reception Counter, N. Wall	G D SD	-	E	
SCS-47	Interior Stucco Plaster Wall	W. Side Wall in Toddler Class	G D SD	280	U	14
SCS-48	Lt-Gray Vinyl Cove base Adhesive	Nursery Reception Counter	G D SD	200 LF	L	
SCS-49 Archive	Carpet Glue	↓	G D SD	3,500	G	
SCS-50 Archive	Gypboard Channel Wall	Main Hall, E. Sectional Divider Wall	G D SD	1,600	V	15
SCS-51	12x12 White Floor Tile w/ Gray Specks	Shultz Room NW Corner	G D SD	140 ft	W	
SCS-52	Ext. Stucco	S. Wall, @ SW Corner	G D SD	2,600	Q	
			G D SD			

Notes: _____

LFR, Inc. Bulk Sampling Form

Project Name:	Southlands Christian School	Project No.:	
Date Collected:	9-4-07 Gym/Church office	Technician:	Doug Coburn

Sample Number	~~Sample~~ Material Description	Sample Location	Condition	Approx. Square Footage	Homogeneous Application	PLM Results
SCS - 53	Spray Applied Acoustical Ceiling	Mezzanine Sound Room	G D SD	10,000 SF	P	
56	2x2 off white, Rough Textured Ceiling Panel	Entry area, Lobby to Gym, S. end	G D SD	1,080 SF	X	24
Archive 57	White Vinyl Cove base + Adhesive	Lobby to Gym, E. wall, N. End	G D SD	80 LF	Y	25
Archive SCS - 54	Drywall	Mezz. Sound Room, S. Wall	G D SD	20,000	D	
SCS - 58	Drywall Joint Compound	Lobby to Gym W. wall, Center	G D SD	–	E	
No Sample	Adhesive under Hard wood Floor		G D SD	8,100	Z	17 Assume ACM
SCS - 55	Gray Vinyl Cove base + Adhesive	Mezz, Sound Rm, NW Corner	G D SD	30 LF	AA	16
No Sample	Carpet Glue	Mezzanine / 1st Floor Gym Entry	G D SD	~~7,500~~ 3,850	G	
SCS 71	2x2 White Ceiling Panel Square Pattern	Church office Lobby	G D SD	100	HH	26
SCS - 72	2x4 White Ceiling Panels, Pocks + Round holes	Church office, SE Storage Rm	G D SD	1,350	II	27

Notes: _____

LFR, Inc. Bulk Sampling Form

Project Name:	Southlands Christian School	Project No.:	
Date Collected:	9-4-07 Preschool	Technician:	Doug Coburn

Sample Number	Sample Description	Sample Location	Condition	Approx. Square Footage	Homogeneous Application	PLM Results
SCS - 59	12x12 White Floor Tile w/ Dark Bluish Gray Streaks	Bldg Preschool Rm 5 @ RR Carpet Glue	G D SD	1,400 SF	BB	18
SCS - 60	2x4 White Fissured Ceiling Panels	Rm 5 @ S. Sink area	G D SD	5,400	A	
SCS - 61	Beige/Gray/Cream Pebble Pattern VSF	RM5, NE sink area	G D SD	450 SF	~~B~~ CC 1 Rm 4,5,3,2	19
SCS - 62	White Square W DK Blue Diamond VSF	Rm 5, SE sink area	G D SD	~~1~~ 65 SF	DD	20
Archive 63	Drywall	Rm5, W. wall Center	G D SD	8,100	D	
Archive 64	Drywall Joint Compound	Rm 5, NW outer Corner of RR wall	G D SD	—	E	
Archive 65	Dark Blue Vinyl Cove base + Adhesive	Rm5. S. outer wall of RR	G D SD	760 LF	F	
SCS - 66	12x12 White Floor Tile w Gray Specks	Rm5, S. Entry @ W. Side of Rm	G D SD	300 SF	EE	21
Archive SCS - 67	Carpet Glue	Rm 5, S. Section @ W. wall	G D SD	2,000 SF	G	
No Sample	12x12 White Floor Tile w/ Gray Specks	Rm 6 sink areas	G D SD	60 SF	B	

Notes: _____

LFR, Inc. Bulk Sampling Form

Project Name:	Southlands Christian School Preschool	Project No.:	
Date Collected:	9-4-07	Technician:	Doug Coburn

Sample Number	Sample Description	Sample Location	Condition	Approx. Square Footage	Homogeneous Application	PLM Results
SCS-68	Cream w/ Gray Small Dots VSF	Nurse Station (office)	G D SD	30	FF	22
SCS-69	Gray + Pinkish Brown Dotted VSF	Kitchen next to RR (office)	G D SD	110	GG	22
SCS-70	Ext. Stucco	W. wall of Rm 6 @ NW Corner	G D SD	7,500 SF	Q	
			G D SD			
			G D SD			
			G D SD			
			G D SD			
			G D SD			
			G D SD			
			G D SD			

Notes:

LFR, Inc. Bulk Sampling Form

Project Name:	Southlands Christian School	Project No.:	
Date Collected:	9-4-07 Athletics/Maintenance Bldg	Technician:	D. Coburn

Sample Number	Sample Description	Sample Location	Condition	Approx. Square Footage	Homogeneous Application	PLM Results
SCS-73	Spray Applied Acoustic Ceiling	Athletic office NW Corner	G D SD	200	P	
74	Drywall	~~Ath~~	G D SD	6,600 ~~[illegible]~~	D	
75	Drywall Jt. Compound		G D SD	—	E	
Archive 76	Dark Blue Vinyl Cove base & Adhesive	Athletic office S. Wall, Center	G D SD	65 LF	F	
No Sample	Carpet Glue	offices	(G) D SD	550 SF	G	
SCS-77	Ext. Stucco	Outer SE Corner of Bldg	(G) D SD	5,000 SF	Q	
			G D SD			
			G D SD			
			G D SD			
			G D SD			

Notes: _____

LFR, Inc. Bulk Sampling Form

Project Name:	Southlands Christian School	Project No.:	
Date Collected:	9-4-07 Bldg B-1/B-2	Technician:	Doug Coburn

Sample Number	Sample Description	Sample Location	Condition	Approx. Square Footage	Homogeneous Application	PLM Results
No Sample	2x4 white Fissured Ceiling Panels		G D SD	720	A	
SCS Archive 78	2x4 White Ceiling Panel, Pocks + Pinholes	B-1	G D SD	720	C	
SCS - 79	Brown Vinyl Cove base + Adhesive		G D SD	210 LF	JJ	28
No Sample	Carpet Glue	Throughout Bungalows	G D SD	1440	G	
			G D SD			
			G D SD			
			G D SD			
			G D SD			
			G D SD			
			G D SD			

Notes: Wood Panel Walls (interior)
Wood Ext. walls

APPENDIX D

Certifications

STATE OF CALIFORNIA

Arnold Schwarzenegger, *Governor*

DEPARTMENT OF INDUSTRIAL RELATIONS

DIVISION OF OCCUPATIONAL SAFETY AND HEALTH

ASBESTOS CONSULTANT and TRAINER APPROVAL UNIT

2211 Park Towne Circle, Suite 1
Sacramento, CA 95825
Tel: (916) 574-2993 Fax: (916) 483-0572

207010223C 13

June 27, 2007

LFR Inc
Douglas W Coburn
3150 Bristol St, 250
Costa Mesa , CA 92626

Dear Certified Asbestos Consultant or Technician:

Enclosed is your certification card. **To maintain your certification, please abide by the rules printed on the back of the certification card.**

Your certification is valid for a period of one year. If you wish to renew your certification, you must apply for renewal at least 60 days before the expiration date shown on your card. [8 CCR 341.15(h)(1)].

Please hold and do not send copies of your required AHERA refresher renewal certificates to our office until you apply for renewal of your certification. Certificates must be kept current if you are actively working as a CAC or CSST. The grace period is only for those who are not actively working as a CAC or CSST.

Please inform our office at the above address, fax number or actu@dir.ca.gov of any changes in your contact/mailing information within 15 days of the change.

Sincerely,

Jeff Ferrell
Senior Industrial Hygienist

JF/ms

Attachment: Certification Card
cc: File

(Renewal – Card Attached Revised 8/29/06)

State of California
Division of Occupational Safety and Health

Certified Asbestos Consultant

Douglas W Coburn
Name

Certification No. **92–0223**

Expires on **07/10/08**

This certification was issued by the Division of Occupational Safety and Health as authorized by Sections 7180 et seq. of the Business and Professions Code

APPENDIX E

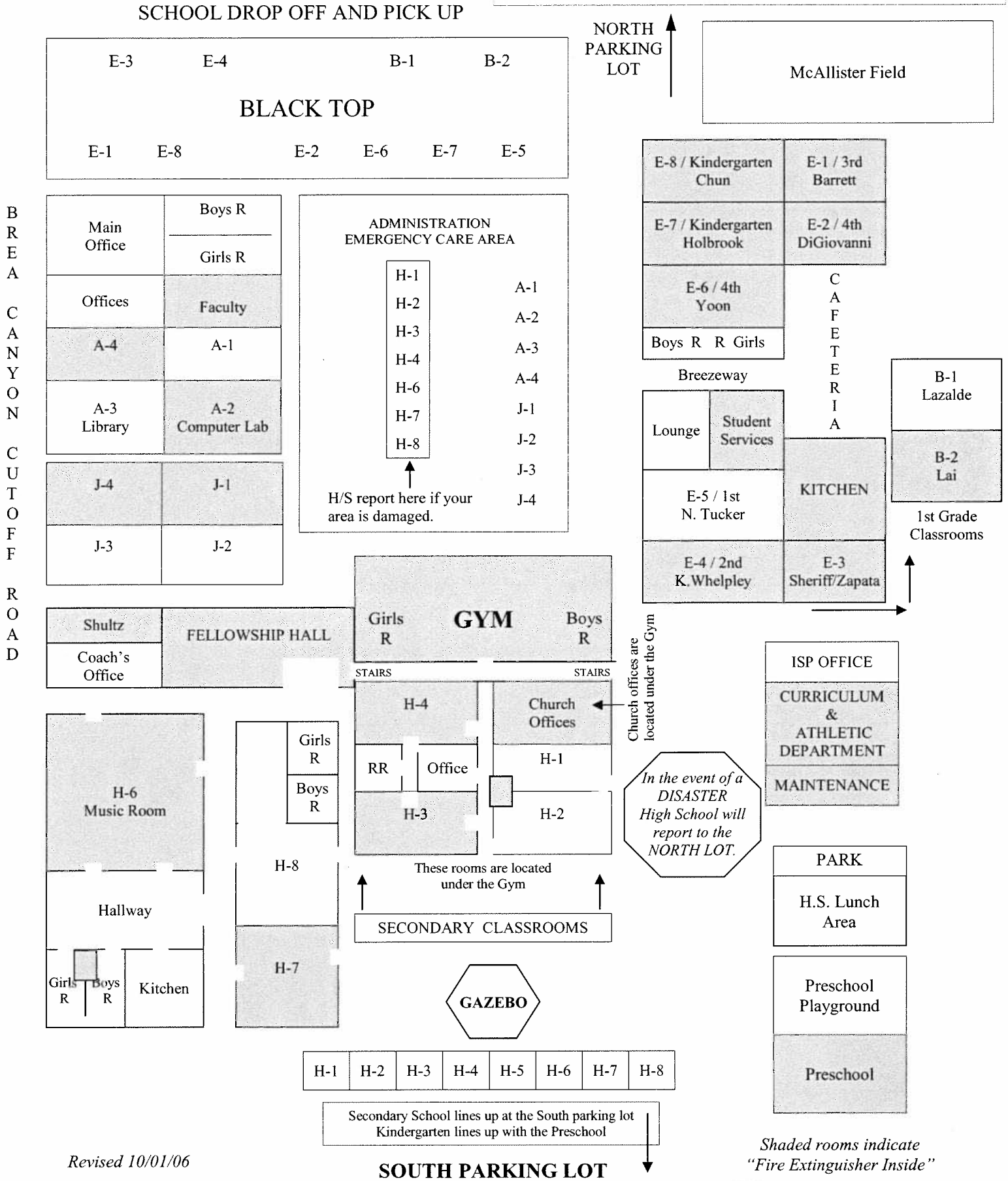
Site Drawings

SOUTHLANDS CHRISTIAN SCHOOLS

Earthquake / Fire Evacuation Map

2007 - 2008

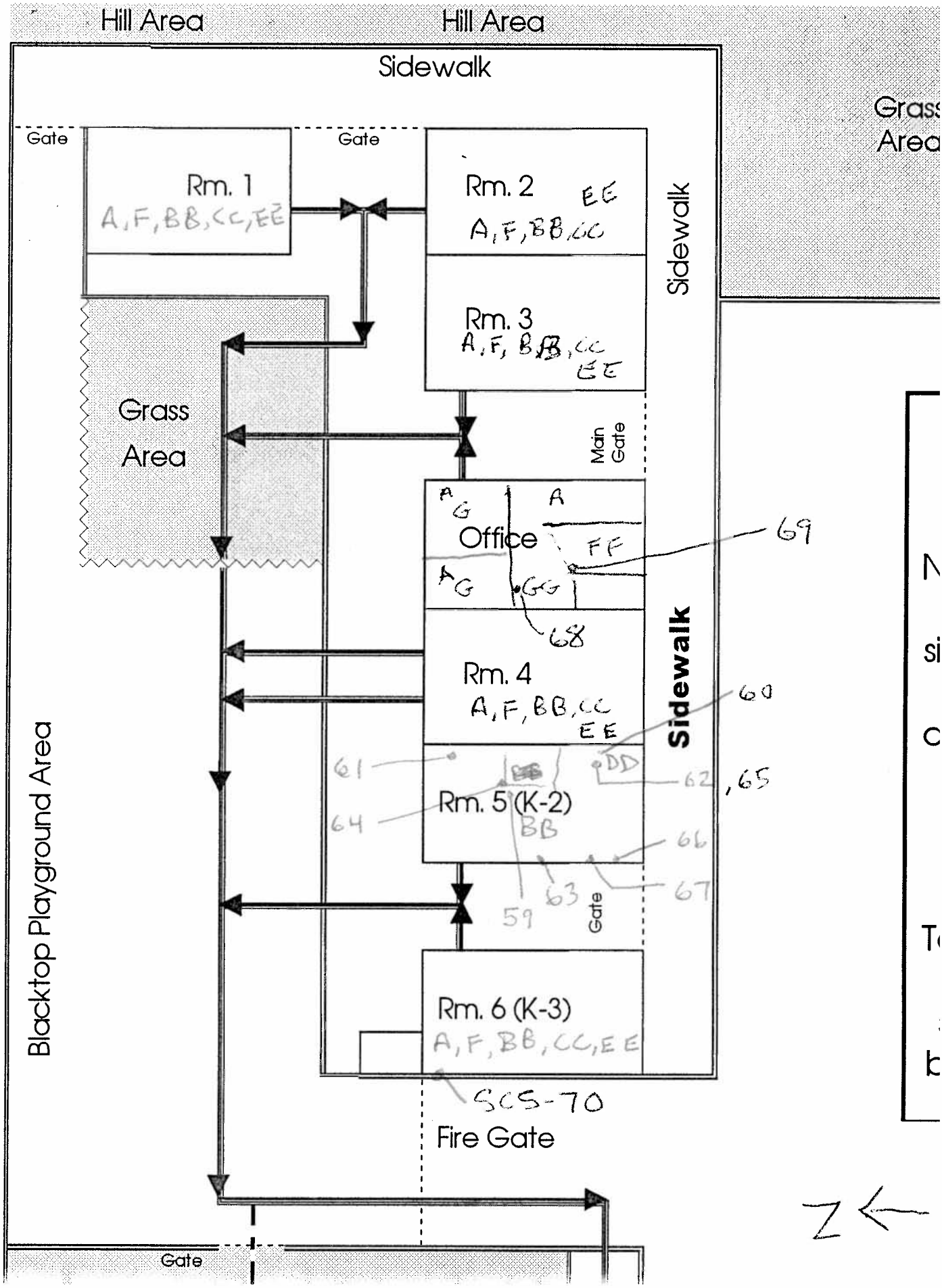
A - Alice	B - Marty	Hilton - H-6, H-7 & H-8
E - Ellie	J - Louis	Bonnie - Fellowship Hall / (including offices)
Sergio - H-1, H-2, H-3 & H-4 / Gym / Church Offices		

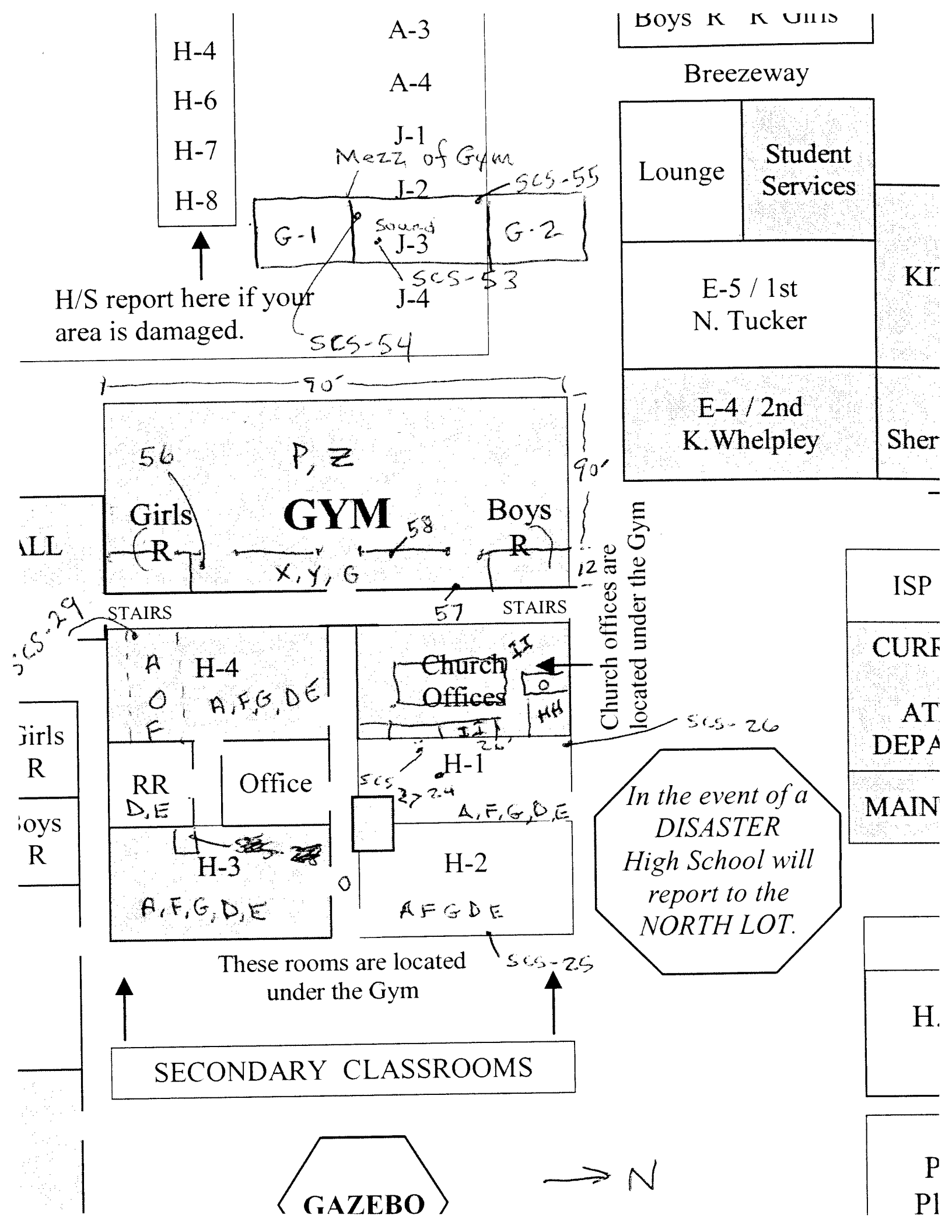


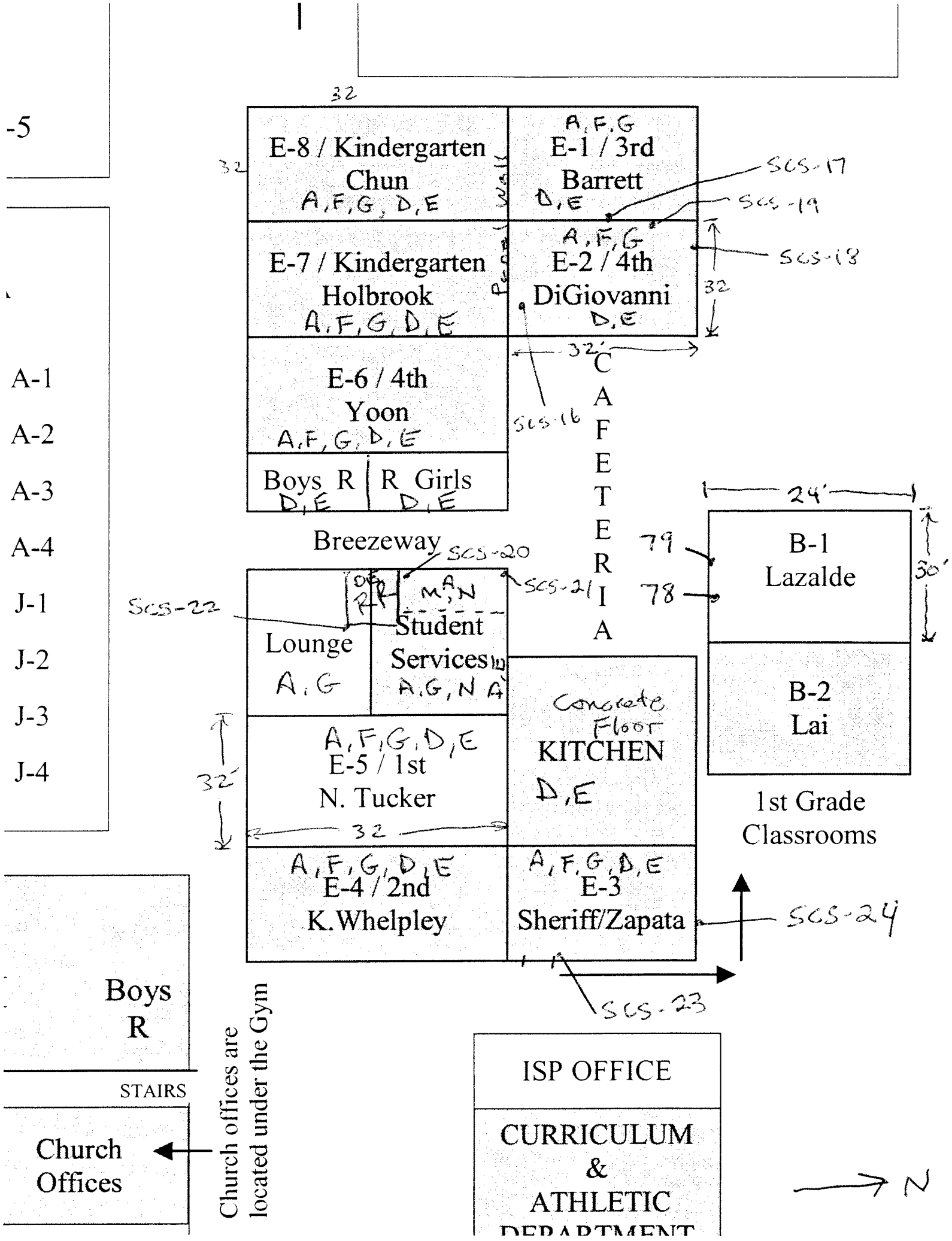
Revised 10/01/06

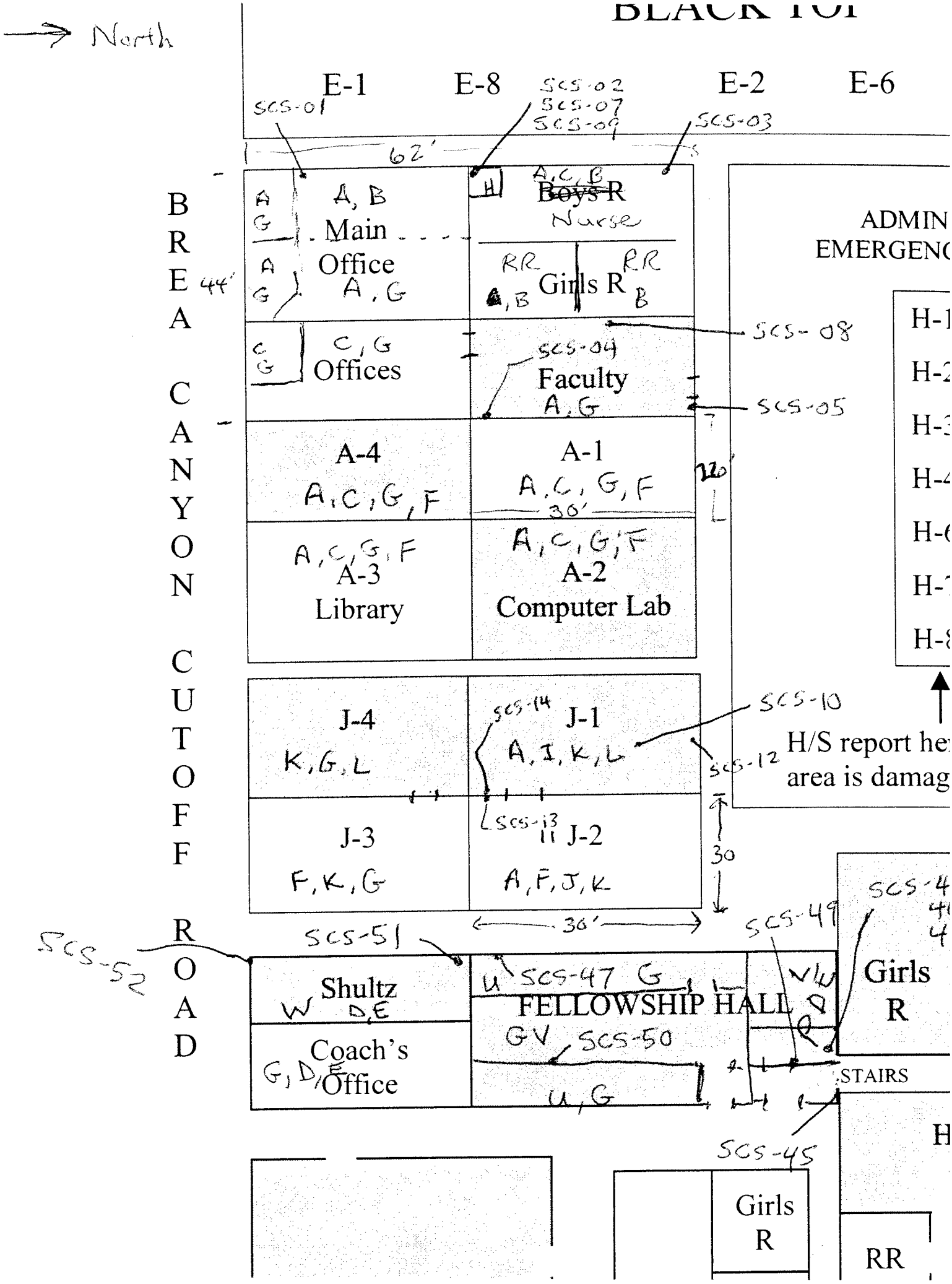
Shaded rooms indicate "Fire Extinguisher Inside"

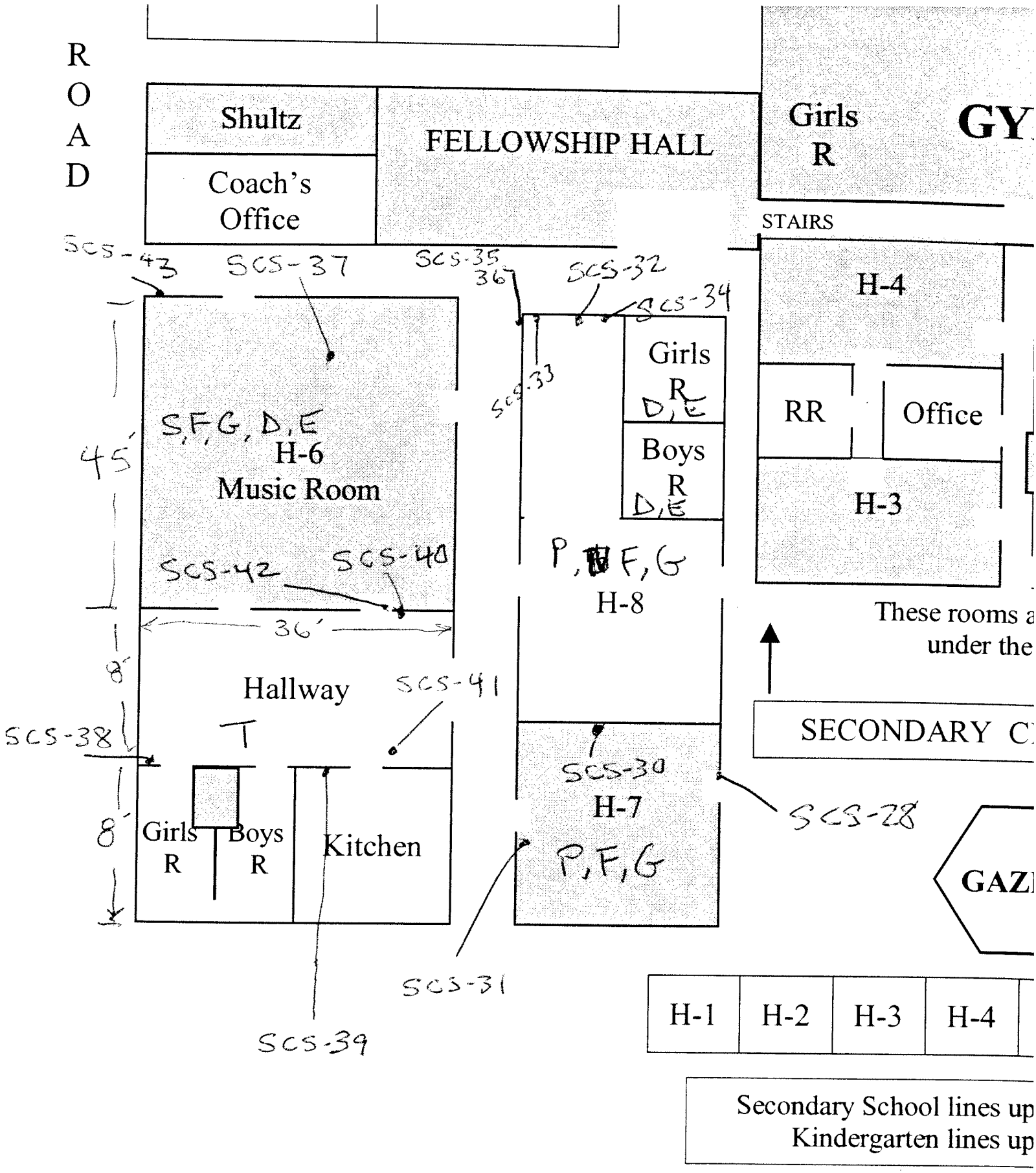
Preschool


Hill Area
Hill Area
Sidewalk
Grass Area
Gate
Gate
Rm. 1
A, F, BB, CC, EE
Rm. 2
EE
A, F, BB, CC
Sidewalk
Rm. 3
A, F, BB, CC
EE
Grass Area
Main Gate
A
G
A
Office
FF
69
A
G
GG
68
Rm. 4
A, F, BB, CC
EE
60
Sidewalk
61
DD
62, 65
Rm. 5 (K-2)
64
BB
66
63
67
59
Gate
Blacktop Playground Area
Rm. 6 (K-3)
A, F, BB, CC, EE
SCS-70
Fire Gate
Gate


Boys R R Girls
Breezeway
Lounge
Student Services
E-5 / 1st
N. Tucker
E-4 / 2nd
K.Whelpley
H-4
H-6
H-7
H-8
A-3
A-4
J-1
Mezz of Gym
J-2
SCS-55
G-1
Sound
J-3
G-2
SCS-53
J-4
SCS-54
H/S report here if your area is damaged.
90'
56
P, Z
GYM
Girls R
Boys R
58
X, Y, G
12
57
STAIRS
STAIRS
SCS-29
A O F
H-4
A,F,G,D,E
Church Offices
II
O
HH
Church offices are located under the Gym
SCS-26
RR
D,E
Office
H-1
SCS 27 24
A,F,G,D,E
H-3
A,F,G,D,E
H-2
AFGDE
SCS-25
In the event of a DISASTER High School will report to the NORTH LOT.
These rooms are located under the Gym
SECONDARY CLASSROOMS
GAZEBO
N
ISP
CURR
AT DEPA
MAIN
Girls R
Boys R
H.
P
Pl


-5
A-1
A-2
A-3
A-4
J-1
J-2
J-3
J-4
32
E-8 / Kindergarten
Chun
A,F,G, D,E
A,F,G
E-1 / 3rd
Barrett
D,E
SCS-17
SCS-19
E-7 / Kindergarten
Holbrook
A,F,G,D,E
A,F,G
E-2 / 4th
DiGiovanni
D,E
SCS-18
32
E-6 / 4th
Yoon
A,F,G,D,E
32'
SCS-16
CAFETERIA
Boys R
D,E
R Girls
D,E
Breezeway
SCS-20
SCS-21
SCS-22
Lounge
A,G
Student
Services
A,G,N
24'
79
78
B-1
Lazalde
30'
B-2
Lai
1st Grade
Classrooms
Concrete
Floor
KITCHEN
D,E
A,F,G,D,E
E-5 / 1st
N. Tucker
32'
32
A,F,G,D,E
E-4 / 2nd
K.Whelpley
A,F,G,D,E
E-3
Sheriff/Zapata
SCS-24
SCS-23
Boys
R
STAIRS
Church
Offices
Church offices are
located under the Gym
ISP OFFICE
CURRICULUM
&
ATHLETIC
DEPARTMENT
N


North
BLACK TOP
E-1
E-8
E-2
E-6
SCS-01
SCS-02
SCS-07
SCS-09
SCS-03
62'
BREA CANYON CUTOFF ROAD
44'
A, B
Main Office
A, G
A
G
A
G
H
A, C, B
~~Boys R~~
Nurse
RR
A, B
Girls R
RR
B
C, G
Offices
C
G
SCS-04
Faculty
A, G
SCS-08
SCS-05
A-4
A, C, G, F
A-1
A, C, G, F
30'
20'
A, C, G, F
A-3
Library
A, C, G, F
A-2
Computer Lab
ADMIN
EMERGENC
H-1
H-2
H-3
H-4
H-6
H-7
H-8
H/S report he
area is damag
J-4
K, G, L
SCS-14
J-1
A, I, K, L
SCS-10
SCS-12
J-3
F, K, G
SCS-13
J-2
A, F, J, K
30
30'
SCS-51
SCS-52
SCS-49
SCS-4
Shultz
W
D, E
SCS-47
G
FELLOWSHIP HALL
V
Q
Girls
R
Coach's
Office
G, D, E
GV
SCS-50
U, G
STAIRS
SCS-45
H
Girls
R
RR

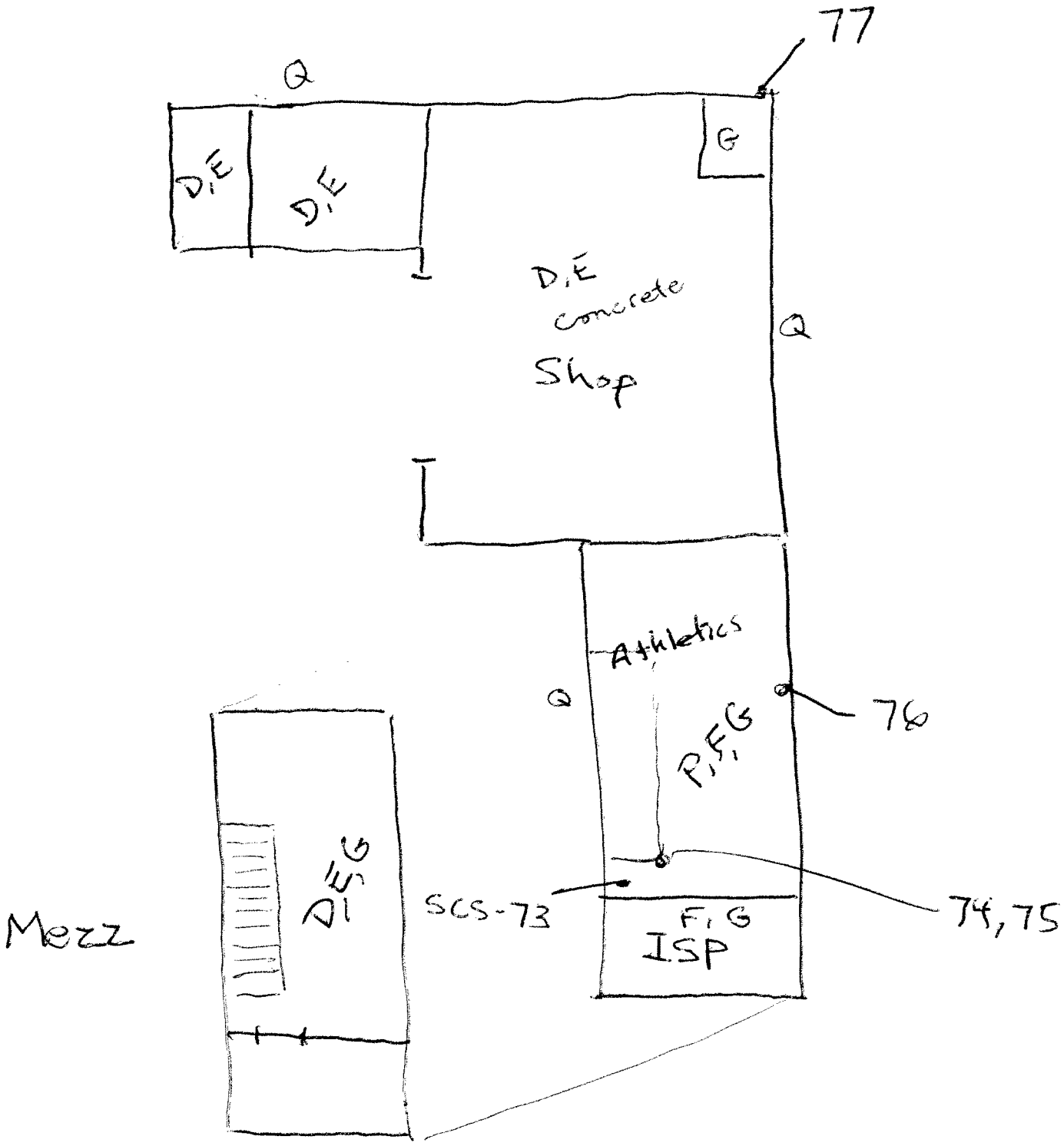


Revised 10/01/06

SOUTH PAR

Athletics/Maintenance Bldg

North ←



APPENDIX 6.0

Alternatives

Emissions Calculations

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Urbemis 2007 Version 9.2.4

Combined Summer Emissions Reports (Pounds/Day)

File Name: Z:\Alan Sako\291.06 The Canyon Residences\Alternatives\Alt 1\Urbemis Canyon Residences - Alt 1 Operational.urb924
Project Name: The Canyon Residences - Alternative 1 Operational
Project Location: South Coast AQMD
On-Road Vehicle Emissions Based on: Version : Emfac2007 V2.3 Nov 1 2006
Off-Road Vehicle Emissions Based on: OFFROAD2007

Summary Report:

AREA SOURCE EMISSION ESTIMATES

	ROG	NOx	CO	SO2	PM10	PM2.5
TOTALS (lbs/day, unmitigated)	1.22	1.32	5.70	0.00	0.02	0.02

OPERATIONAL (VEHICLE) EMISSION ESTIMATES

	ROG	NOx	CO	SO2	PM10	PM2.5
TOTALS (lbs/day, unmitigated)	15.35	11.94	107.59	0.12	20.32	3.96

SUM OF AREA SOURCE AND OPERATIONAL EMISSION ESTIMATES

	ROG	NOx	CO	SO2	PM10	PM2.5
TOTALS (lbs/day, unmitigated)	16.57	13.26	113.29	0.12	20.34	3.98

Area Source Unmitigated Detail Report:

AREA SOURCE EMISSION ESTIMATES Summer Pounds Per Day, Unmitigated

Source	ROG	NOx	CO	SO2	PM10	PM2.5
Natural Gas	0.09	1.26	1.06	0.00	0.00	0.00
Hearth - No Summer Emissions						
Landscape	0.37	0.06	4.64	0.00	0.02	0.02
Consumer Products	0.00					
Architectural Coatings	0.76					
TOTALS (lbs/day, unmitigated)	1.22	1.32	5.70	0.00	0.02	0.02

Area Source Changes to Defaults

Operational Unmitigated Detail Report:

OPERATIONAL EMISSION ESTIMATES Summer Pounds Per Day, Unmitigated

Source	ROG	NOX	CO	SO2	PM10	PM25
Elementary school	8.99	5.80	52.64	0.06	9.84	1.92
Junior high school	3.14	2.36	21.36	0.02	4.04	0.79
Place of worship	3.22	3.78	33.59	0.04	6.44	1.25
TOTALS (lbs/day, unmitigated)	15.35	11.94	107.59	0.12	20.32	3.96

Operational Settings:

Includes correction for passby trips

Does not include double counting adjustment for internal trips

Analysis Year: 2012 Temperature (F): 80 Season: Summer

Emfac: Version : Emfac2007 V2.3 Nov 1 2006

Summary of Land Uses

Land Use Type	Acreage	Trip Rate	Unit Type	No. Units	Total Trips	Total VMT
Elementary school		1.29	students	690.00	890.10	5,691.58
Junior high school		1.62	students	210.00	340.20	2,337.52
Place of worship		9.11	1000 sq ft	63.64	579.76	3,726.86
					1,810.06	11,755.96

Vehicle Fleet Mix

Vehicle Type	Percent Type	Non-Catalyst	Catalyst	Diesel
Light Auto	51.5	0.6	99.2	0.2
Light Truck < 3750 lbs	7.3	1.4	95.9	2.7
Light Truck 3751-5750 lbs	23.0	0.4	99.6	0.0
Med Truck 5751-8500 lbs	10.7	0.9	99.1	0.0
Lite-Heavy Truck 8501-10,000 lbs	1.6	0.0	81.2	18.8
Lite-Heavy Truck 10,001-14,000 lbs	0.5	0.0	60.0	40.0
Med-Heavy Truck 14,001-33,000 lbs	0.9	0.0	22.2	77.8
Heavy-Heavy Truck 33,001-60,000 lbs	0.5	0.0	0.0	100.0
Other Bus	0.1	0.0	0.0	100.0
Urban Bus	0.1	0.0	0.0	100.0
Motorcycle	2.8	60.7	39.3	0.0
School Bus	0.1	0.0	0.0	100.0
Motor Home	0.9	0.0	88.9	11.1

Travel Conditions

	Residential			Commercial		
	Home-Work	Home-Shop	Home-Other	Commute	Non-Work	Customer
Urban Trip Length (miles)	12.7	7.0	9.5	13.3	7.4	8.9
Rural Trip Length (miles)	17.6	12.1	14.9	15.4	9.6	12.6
Trip speeds (mph)	30.0	30.0	30.0	30.0	30.0	30.0
% of Trips - Residential	32.9	18.0	49.1			
% of Trips - Commercial (by land use)						
Elementary school				20.0	10.0	70.0
Junior high school				20.0	10.0	70.0
Place of worship				3.0	1.5	95.5

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Urbemis 2007 Version 9.2.4

Combined Winter Emissions Reports (Pounds/Day)

File Name: Z:\Alan Sako\291.06 The Canyon Residences\Alternatives\Alt 1\Urbemis Canyon Residences - Alt 1 Operational.urb924
Project Name: The Canyon Residences - Alternative 1 Operational
Project Location: South Coast AQMD
On-Road Vehicle Emissions Based on: Version : Emfac2007 V2.3 Nov 1 2006
Off-Road Vehicle Emissions Based on: OFFROAD2007

Summary Report:

AREA SOURCE EMISSION ESTIMATES

	ROG	NOx	CO	SO2	PM10	PM2.5
TOTALS (lbs/day, unmitigated)	0.85	1.26	1.06	0.00	0.00	0.00

OPERATIONAL (VEHICLE) EMISSION ESTIMATES

	ROG	NOx	CO	SO2	PM10	PM2.5
TOTALS (lbs/day, unmitigated)	13.51	14.34	104.94	0.10	20.32	3.96

SUM OF AREA SOURCE AND OPERATIONAL EMISSION ESTIMATES

	ROG	NOx	CO	SO2	PM10	PM2.5
TOTALS (lbs/day, unmitigated)	14.36	15.60	106.00	0.10	20.32	3.96

Area Source Unmitigated Detail Report:

AREA SOURCE EMISSION ESTIMATES Winter Pounds Per Day, Unmitigated

Source	ROG	NOx	CO	SO2	PM10	PM2.5
Natural Gas	0.09	1.26	1.06	0.00	0.00	0.00
Hearth	0.00	0.00	0.00	0.00	0.00	0.00
Landscaping - No Winter Emissions						
Consumer Products	0.00					
Architectural Coatings	0.76					
TOTALS (lbs/day, unmitigated)	0.85	1.26	1.06	0.00	0.00	0.00

Area Source Changes to Defaults

Operational Unmitigated Detail Report:

OPERATIONAL EMISSION ESTIMATES Winter Pounds Per Day, Unmitigated

Source	ROG	NOX	CO	SO2	PM10	PM25
Elementary school	7.33	6.97	51.33	0.05	9.84	1.92
Junior high school	2.70	2.83	20.75	0.02	4.04	0.79
Place of worship	3.48	4.54	32.86	0.03	6.44	1.25
TOTALS (lbs/day, unmitigated)	13.51	14.34	104.94	0.10	20.32	3.96

Operational Settings:

Includes correction for passby trips

Does not include double counting adjustment for internal trips

Analysis Year: 2012 Temperature (F): 60 Season: Winter

Emfac: Version : Emfac2007 V2.3 Nov 1 2006

Summary of Land Uses

Land Use Type	Acreage	Trip Rate	Unit Type	No. Units	Total Trips	Total VMT
Elementary school		1.29	students	690.00	890.10	5,691.58
Junior high school		1.62	students	210.00	340.20	2,337.52
Place of worship		9.11	1000 sq ft	63.64	579.76	3,726.86
					1,810.06	11,755.96

Vehicle Fleet Mix

Vehicle Type	Percent Type	Non-Catalyst	Catalyst	Diesel
Light Auto	51.5	0.6	99.2	0.2
Light Truck < 3750 lbs	7.3	1.4	95.9	2.7
Light Truck 3751-5750 lbs	23.0	0.4	99.6	0.0
Med Truck 5751-8500 lbs	10.7	0.9	99.1	0.0
Lite-Heavy Truck 8501-10,000 lbs	1.6	0.0	81.2	18.8
Lite-Heavy Truck 10,001-14,000 lbs	0.5	0.0	60.0	40.0
Med-Heavy Truck 14,001-33,000 lbs	0.9	0.0	22.2	77.8
Heavy-Heavy Truck 33,001-60,000 lbs	0.5	0.0	0.0	100.0
Other Bus	0.1	0.0	0.0	100.0
Urban Bus	0.1	0.0	0.0	100.0
Motorcycle	2.8	60.7	39.3	0.0
School Bus	0.1	0.0	0.0	100.0
Motor Home	0.9	0.0	88.9	11.1

Travel Conditions

	Residential			Commercial		
	Home-Work	Home-Shop	Home-Other	Commute	Non-Work	Customer
Urban Trip Length (miles)	12.7	7.0	9.5	13.3	7.4	8.9
Rural Trip Length (miles)	17.6	12.1	14.9	15.4	9.6	12.6
Trip speeds (mph)	30.0	30.0	30.0	30.0	30.0	30.0
% of Trips - Residential	32.9	18.0	49.1			
% of Trips - Commercial (by land use)						
Elementary school				20.0	10.0	70.0
Junior high school				20.0	10.0	70.0
Place of worship				3.0	1.5	95.5

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Urbemis 2007 Version 9.2.4

Combined Summer Emissions Reports (Pounds/Day)

File Name: Z:\Alan Sako\291.06 The Canyon Residences\Alternatives\Alt 2\Urbemis Canyon Residences - Alt 2 Operational.urb924
Project Name: The Canyon Residences - Alternative 2 Operational
Project Location: South Coast AQMD
On-Road Vehicle Emissions Based on: Version : Emfac2007 V2.3 Nov 1 2006
Off-Road Vehicle Emissions Based on: OFFROAD2007

Summary Report:

AREA SOURCE EMISSION ESTIMATES

	ROG	NOx	CO	SO2	PM10	PM2.5
TOTALS (lbs/day, unmitigated)	3.02	1.07	2.67	0.00	0.01	0.01
TOTALS (lbs/day, mitigated)	3.02	1.07	2.67	0.00	0.01	0.01
Percent Reduction	0.00	0.00	0.00	0.00	0.00	0.00

OPERATIONAL (VEHICLE) EMISSION ESTIMATES

	ROG	NOx	CO	SO2	PM10	PM2.5
TOTALS (lbs/day, unmitigated)	3.28	4.16	38.90	0.05	7.31	1.43
TOTALS (lbs/day, mitigated)	3.22	4.08	38.12	0.04	7.17	1.40
Percent Reduction	1.83	1.92	2.01	20.00	1.92	2.10

SUM OF AREA SOURCE AND OPERATIONAL EMISSION ESTIMATES

	ROG	NOx	CO	SO2	PM10	PM2.5
TOTALS (lbs/day, unmitigated)	6.30	5.23	41.57	0.05	7.32	1.44
TOTALS (lbs/day, mitigated)	6.24	5.15	40.79	0.04	7.18	1.41
Percent Reduction	0.95	1.53	1.88	20.00	1.91	2.08

Area Source Unmitigated Detail Report:

AREA SOURCE EMISSION ESTIMATES Summer Pounds Per Day, Unmitigated

Source	ROG	NOx	CO	SO2	PM10	PM2.5
Natural Gas	0.08	1.04	0.44	0.00	0.00	0.00
Hearth - No Summer Emissions						
Landscape	0.40	0.03	2.23	0.00	0.01	0.01
Consumer Products	2.36					
Architectural Coatings	0.18					
TOTALS (lbs/day, unmitigated)	3.02	1.07	2.67	0.00	0.01	0.01

Area Source Mitigated Detail Report:

AREA SOURCE EMISSION ESTIMATES Summer Pounds Per Day, Mitigated

Source	ROG	NOx	CO	SO2	PM10	PM2.5
Natural Gas	0.08	1.04	0.44	0.00	0.00	0.00
Hearth - No Summer Emissions						
Landscape	0.40	0.03	2.23	0.00	0.01	0.01
Consumer Products	2.36					
Architectural Coatings	0.18					
TOTALS (lbs/day, mitigated)	3.02	1.07	2.67	0.00	0.01	0.01

Area Source Changes to Defaults

Percent residential using natural gas changed from 78% to 100%

Percentage of residences with wood stoves changed from 10% to 0%

Percentage of residences with wood fireplaces changed from 5% to 0%

Percentage of residences with natural gas fireplaces changed from 85% to 100%

The number of persons per household for consumer product use changed from 3 persons to 2.76 persons

Operational Unmitigated Detail Report:

OPERATIONAL EMISSION ESTIMATES Summer Pounds Per Day, Unmitigated

Source	ROG	NOX	CO	SO2	PM10	PM25
Single family housing	3.28	4.16	38.90	0.05	7.31	1.43
TOTALS (lbs/day, unmitigated)	3.28	4.16	38.90	0.05	7.31	1.43

Operational Mitigated Detail Report:

OPERATIONAL EMISSION ESTIMATES Summer Pounds Per Day, Mitigated

Source	ROG	NOX	CO	SO2	PM10	PM25
Single family housing	3.22	4.08	38.12	0.04	7.17	1.40
TOTALS (lbs/day, mitigated)	3.22	4.08	38.12	0.04	7.17	1.40

Operational Settings:

Includes correction for passby trips

Does not include double counting adjustment for internal trips

Analysis Year: 2012 Temperature (F): 80 Season: Summer

Emfac: Version : Emfac2007 V2.3 Nov 1 2006

Summary of Land Uses

Land Use Type	Acreage	Trip Rate	Unit Type	No. Units	Total Trips	Total VMT
Single family housing	16.67	9.57	dwelling units	50.00	478.50	4,232.33
					478.50	4,232.33

Vehicle Fleet Mix

Vehicle Type	Percent Type	Non-Catalyst	Catalyst	Diesel
Light Auto	51.5	0.6	99.2	0.2
Light Truck < 3750 lbs	7.3	1.4	95.9	2.7
Light Truck 3751-5750 lbs	23.0	0.4	99.6	0.0
Med Truck 5751-8500 lbs	10.7	0.9	99.1	0.0
Lite-Heavy Truck 8501-10,000 lbs	1.6	0.0	81.2	18.8
Lite-Heavy Truck 10,001-14,000 lbs	0.5	0.0	60.0	40.0
Med-Heavy Truck 14,001-33,000 lbs	0.9	0.0	22.2	77.8
Heavy-Heavy Truck 33,001-60,000 lbs	0.5	0.0	0.0	100.0
Other Bus	0.1	0.0	0.0	100.0
Urban Bus	0.1	0.0	0.0	100.0
Motorcycle	2.8	60.7	39.3	0.0
School Bus	0.1	0.0	0.0	100.0
Motor Home	0.9	0.0	88.9	11.1

Travel Conditions

	Residential			Commercial		
	Home-Work	Home-Shop	Home-Other	Commute	Non-Work	Customer
Urban Trip Length (miles)	12.7	7.0	9.5	13.3	7.4	8.9
Rural Trip Length (miles)	17.6	12.1	14.9	15.4	9.6	12.6
Trip speeds (mph)	30.0	30.0	30.0	30.0	30.0	30.0
% of Trips - Residential	32.9	18.0	49.1			

% of Trips - Commercial (by land use)

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Urbemis 2007 Version 9.2.4

Combined Winter Emissions Reports (Pounds/Day)

File Name: Z:\Alan Sako\291.06 The Canyon Residences\Alternatives\Alt 2\Urbemis Canyon Residences - Alt 2 Operational.urb924
Project Name: The Canyon Residences - Alternative 2 Operational
Project Location: South Coast AQMD
On-Road Vehicle Emissions Based on: Version : Emfac2007 V2.3 Nov 1 2006
Off-Road Vehicle Emissions Based on: OFFROAD2007

Summary Report:

AREA SOURCE EMISSION ESTIMATES

	ROG	NOx	CO	SO2	PM10	PM2.5
TOTALS (lbs/day, unmitigated)	2.64	1.45	0.62	0.00	0.03	0.03
TOTALS (lbs/day, mitigated)	2.64	1.45	0.62	0.00	0.03	0.03
Percent Reduction	0.00	0.00	0.00	0.00	0.00	0.00

OPERATIONAL (VEHICLE) EMISSION ESTIMATES

	ROG	NOx	CO	SO2	PM10	PM2.5
TOTALS (lbs/day, unmitigated)	3.55	5.01	37.28	0.04	7.31	1.43
TOTALS (lbs/day, mitigated)	3.49	4.91	36.54	0.04	7.17	1.40
Percent Reduction	1.69	2.00	1.98	0.00	1.92	2.10

SUM OF AREA SOURCE AND OPERATIONAL EMISSION ESTIMATES

	ROG	NOx	CO	SO2	PM10	PM2.5
TOTALS (lbs/day, unmitigated)	6.19	6.46	37.90	0.04	7.34	1.46
TOTALS (lbs/day, mitigated)	6.13	6.36	37.16	0.04	7.20	1.43
Percent Reduction	0.97	1.55	1.95	0.00	1.91	2.05

Area Source Unmitigated Detail Report:

AREA SOURCE EMISSION ESTIMATES Winter Pounds Per Day, Unmitigated

Source	ROG	NOx	CO	SO2	PM10	PM2.5
Natural Gas	0.08	1.04	0.44	0.00	0.00	0.00
Hearth	0.02	0.41	0.18	0.00	0.03	0.03
Landscaping - No Winter Emissions						
Consumer Products	2.36					
Architectural Coatings	0.18					
TOTALS (lbs/day, unmitigated)	2.64	1.45	0.62	0.00	0.03	0.03

Area Source Mitigated Detail Report:

AREA SOURCE EMISSION ESTIMATES Winter Pounds Per Day, Mitigated

Source	ROG	NOx	CO	SO2	PM10	PM2.5
Natural Gas	0.08	1.04	0.44	0.00	0.00	0.00
Hearth	0.02	0.41	0.18	0.00	0.03	0.03
Landscaping - No Winter Emissions						
Consumer Products	2.36					
Architectural Coatings	0.18					
TOTALS (lbs/day, mitigated)	2.64	1.45	0.62	0.00	0.03	0.03

Area Source Changes to Defaults

Percent residential using natural gas changed from 78% to 100%

Percentage of residences with wood stoves changed from 10% to 0%

Percentage of residences with wood fireplaces changed from 5% to 0%

Percentage of residences with natural gas fireplaces changed from 85% to 100%

The number of persons per household for consumer product use changed from 3 persons to 2.76 persons

Operational Unmitigated Detail Report:

OPERATIONAL EMISSION ESTIMATES Winter Pounds Per Day, Unmitigated

Source	ROG	NOX	CO	SO2	PM10	PM25
Single family housing	3.55	5.01	37.28	0.04	7.31	1.43
TOTALS (lbs/day, unmitigated)	3.55	5.01	37.28	0.04	7.31	1.43

Operational Mitigated Detail Report:

OPERATIONAL EMISSION ESTIMATES Winter Pounds Per Day, Mitigated

Source	ROG	NOX	CO	SO2	PM10	PM25
Single family housing	3.49	4.91	36.54	0.04	7.17	1.40
TOTALS (lbs/day, mitigated)	3.49	4.91	36.54	0.04	7.17	1.40

Operational Settings:

Includes correction for passby trips

Does not include double counting adjustment for internal trips

Analysis Year: 2012 Temperature (F): 60 Season: Winter

Emfac: Version : Emfac2007 V2.3 Nov 1 2006

Summary of Land Uses

Land Use Type	Acreage	Trip Rate	Unit Type	No. Units	Total Trips	Total VMT
Single family housing	16.67	9.57	dwelling units	50.00	478.50	4,232.33
					478.50	4,232.33

Vehicle Fleet Mix

Vehicle Type	Percent Type	Non-Catalyst	Catalyst	Diesel
Light Auto	51.5	0.6	99.2	0.2
Light Truck < 3750 lbs	7.3	1.4	95.9	2.7
Light Truck 3751-5750 lbs	23.0	0.4	99.6	0.0
Med Truck 5751-8500 lbs	10.7	0.9	99.1	0.0
Lite-Heavy Truck 8501-10,000 lbs	1.6	0.0	81.2	18.8
Lite-Heavy Truck 10,001-14,000 lbs	0.5	0.0	60.0	40.0
Med-Heavy Truck 14,001-33,000 lbs	0.9	0.0	22.2	77.8
Heavy-Heavy Truck 33,001-60,000 lbs	0.5	0.0	0.0	100.0
Other Bus	0.1	0.0	0.0	100.0
Urban Bus	0.1	0.0	0.0	100.0
Motorcycle	2.8	60.7	39.3	0.0
School Bus	0.1	0.0	0.0	100.0
Motor Home	0.9	0.0	88.9	11.1

Travel Conditions

	Residential			Commercial		
	Home-Work	Home-Shop	Home-Other	Commute	Non-Work	Customer
Urban Trip Length (miles)	12.7	7.0	9.5	13.3	7.4	8.9
Rural Trip Length (miles)	17.6	12.1	14.9	15.4	9.6	12.6
Trip speeds (mph)	30.0	30.0	30.0	30.0	30.0	30.0
% of Trips - Residential	32.9	18.0	49.1			

% of Trips - Commercial (by land use)

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Urbemis 2007 Version 9.2.4

Combined Summer Emissions Reports (Pounds/Day)

File Name: Z:\Alan Sako\291.06 The Canyon Residences\Alternatives\Alt 3\Urbemis Canyon Residences - Alt 3 Operation.urb924
Project Name: The Canyon Residences - Alternative 3 Operation
Project Location: South Coast AQMD
On-Road Vehicle Emissions Based on: Version : Emfac2007 V2.3 Nov 1 2006
Off-Road Vehicle Emissions Based on: OFFROAD2007

Summary Report:

AREA SOURCE EMISSION ESTIMATES

	ROG	NOx	CO	SO2	PM10	PM2.5
TOTALS (lbs/day, unmitigated)	26.90	6.77	4.42	0.00	0.02	0.02
TOTALS (lbs/day, mitigated)	26.90	6.77	4.42	0.00	0.02	0.02
Percent Reduction	0.00	0.00	0.00	0.00	0.00	0.00

OPERATIONAL (VEHICLE) EMISSION ESTIMATES

	ROG	NOx	CO	SO2	PM10	PM2.5
TOTALS (lbs/day, unmitigated)	25.79	31.38	293.38	0.34	55.16	10.75
TOTALS (lbs/day, mitigated)	25.16	30.48	285.03	0.33	53.59	10.44
Percent Reduction	2.44	2.87	2.85	2.94	2.85	2.88

SUM OF AREA SOURCE AND OPERATIONAL EMISSION ESTIMATES

	ROG	NOx	CO	SO2	PM10	PM2.5
TOTALS (lbs/day, unmitigated)	52.69	38.15	297.80	0.34	55.18	10.77
TOTALS (lbs/day, mitigated)	52.06	37.25	289.45	0.33	53.61	10.46
Percent Reduction	1.20	2.36	2.80	2.94	2.85	2.88

Area Source Unmitigated Detail Report:

AREA SOURCE EMISSION ESTIMATES Summer Pounds Per Day, Unmitigated

Source	ROG	NOx	CO	SO2	PM10	PM2.5
Natural Gas	0.52	6.75	2.87	0.00	0.01	0.01
Hearth - No Summer Emissions						
Landscape	0.12	0.02	1.55	0.00	0.01	0.01
Consumer Products	25.34					
Architectural Coatings	0.92					
TOTALS (lbs/day, unmitigated)	26.90	6.77	4.42	0.00	0.02	0.02

Area Source Mitigated Detail Report:

AREA SOURCE EMISSION ESTIMATES Summer Pounds Per Day, Mitigated

Source	ROG	NOx	CO	SO2	PM10	PM2.5
Natural Gas	0.52	6.75	2.87	0.00	0.01	0.01
Hearth - No Summer Emissions						
Landscape	0.12	0.02	1.55	0.00	0.01	0.01
Consumer Products	25.34					
Architectural Coatings	0.92					
TOTALS (lbs/day, mitigated)	26.90	6.77	4.42	0.00	0.02	0.02

Area Source Changes to Defaults

Percent residential using natural gas changed from 78% to 100%

Percentage of residences with wood stoves changed from 10% to 0%

Percentage of residences with wood fireplaces changed from 5% to 0%

Percentage of residences with natural gas fireplaces changed from 85% to 0%

The number of persons per household for consumer product use changed from 3 persons to 2.76 persons

Operational Unmitigated Detail Report:

OPERATIONAL EMISSION ESTIMATES Summer Pounds Per Day, Unmitigated

Source	ROG	NOX	CO	SO2	PM10	PM25
Apartments mid rise	25.79	31.38	293.38	0.34	55.16	10.75
TOTALS (lbs/day, unmitigated)	25.79	31.38	293.38	0.34	55.16	10.75

Operational Mitigated Detail Report:

OPERATIONAL EMISSION ESTIMATES Summer Pounds Per Day, Mitigated

Source	ROG	NOX	CO	SO2	PM10	PM25
Apartments mid rise	25.16	30.48	285.03	0.33	53.59	10.44
TOTALS (lbs/day, mitigated)	25.16	30.48	285.03	0.33	53.59	10.44

Operational Settings:

Includes correction for passby trips

Does not include double counting adjustment for internal trips

Analysis Year: 2012 Temperature (F): 80 Season: Summer

Emfac: Version : Emfac2007 V2.3 Nov 1 2006

Summary of Land Uses

Land Use Type	Acreage	Trip Rate	Unit Type	No. Units	Total Trips	Total VMT
Apartments mid rise	14.13	6.72	dwelling units	537.00	3,608.64	31,918.42
					3,608.64	31,918.42

Vehicle Fleet Mix

Vehicle Type	Percent Type	Non-Catalyst	Catalyst	Diesel
Light Auto	51.5	0.6	99.2	0.2
Light Truck < 3750 lbs	7.3	1.4	95.9	2.7
Light Truck 3751-5750 lbs	23.0	0.4	99.6	0.0
Med Truck 5751-8500 lbs	10.7	0.9	99.1	0.0
Lite-Heavy Truck 8501-10,000 lbs	1.6	0.0	81.2	18.8
Lite-Heavy Truck 10,001-14,000 lbs	0.5	0.0	60.0	40.0
Med-Heavy Truck 14,001-33,000 lbs	0.9	0.0	22.2	77.8
Heavy-Heavy Truck 33,001-60,000 lbs	0.5	0.0	0.0	100.0
Other Bus	0.1	0.0	0.0	100.0
Urban Bus	0.1	0.0	0.0	100.0
Motorcycle	2.8	60.7	39.3	0.0
School Bus	0.1	0.0	0.0	100.0
Motor Home	0.9	0.0	88.9	11.1

Travel Conditions

	Residential			Commercial		
	Home-Work	Home-Shop	Home-Other	Commute	Non-Work	Customer
Urban Trip Length (miles)	12.7	7.0	9.5	13.3	7.4	8.9
Rural Trip Length (miles)	17.6	12.1	14.9	15.4	9.6	12.6
Trip speeds (mph)	30.0	30.0	30.0	30.0	30.0	30.0
% of Trips - Residential	32.9	18.0	49.1			

% of Trips - Commercial (by land use)

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Urbemis 2007 Version 9.2.4

Combined Winter Emissions Reports (Pounds/Day)

File Name: Z:\Alan Sako\291.06 The Canyon Residences\Alternatives\Alt 3\Urbemis Canyon Residences - Alt 3 Operation.urb924
Project Name: The Canyon Residences - Alternative 3 Operation
Project Location: South Coast AQMD
On-Road Vehicle Emissions Based on: Version : Emfac2007 V2.3 Nov 1 2006
Off-Road Vehicle Emissions Based on: OFFROAD2007

Summary Report:

AREA SOURCE EMISSION ESTIMATES

	ROG	NOx	CO	SO2	PM10	PM2.5
TOTALS (lbs/day, unmitigated)	26.78	6.75	2.87	0.00	0.01	0.01
TOTALS (lbs/day, mitigated)	26.78	6.75	2.87	0.00	0.01	0.01
Percent Reduction	0.00	0.00	0.00	0.00	0.00	0.00

OPERATIONAL (VEHICLE) EMISSION ESTIMATES

	ROG	NOx	CO	SO2	PM10	PM2.5
TOTALS (lbs/day, unmitigated)	27.28	37.78	281.18	0.28	55.16	10.75
TOTALS (lbs/day, mitigated)	26.55	36.70	273.18	0.28	53.59	10.44
Percent Reduction	2.68	2.86	2.85	0.00	2.85	2.88

SUM OF AREA SOURCE AND OPERATIONAL EMISSION ESTIMATES

	ROG	NOx	CO	SO2	PM10	PM2.5
TOTALS (lbs/day, unmitigated)	54.06	44.53	284.05	0.28	55.17	10.76
TOTALS (lbs/day, mitigated)	53.33	43.45	276.05	0.28	53.60	10.45
Percent Reduction	1.35	2.43	2.82	0.00	2.85	2.88

Area Source Unmitigated Detail Report:

AREA SOURCE EMISSION ESTIMATES Winter Pounds Per Day, Unmitigated

Source	ROG	NOx	CO	SO2	PM10	PM2.5
Natural Gas	0.52	6.75	2.87	0.00	0.01	0.01
Hearth	0.00	0.00	0.00	0.00	0.00	0.00
Landscaping - No Winter Emissions						
Consumer Products	25.34					
Architectural Coatings	0.92					
TOTALS (lbs/day, unmitigated)	26.78	6.75	2.87	0.00	0.01	0.01

Area Source Mitigated Detail Report:

AREA SOURCE EMISSION ESTIMATES Winter Pounds Per Day, Mitigated

Source	ROG	NOx	CO	SO2	PM10	PM2.5
Natural Gas	0.52	6.75	2.87	0.00	0.01	0.01
Hearth	0.00	0.00	0.00	0.00	0.00	0.00
Landscaping - No Winter Emissions						
Consumer Products	25.34					
Architectural Coatings	0.92					
TOTALS (lbs/day, mitigated)	26.78	6.75	2.87	0.00	0.01	0.01

Area Source Changes to Defaults

Percent residential using natural gas changed from 78% to 100%

Percentage of residences with wood stoves changed from 10% to 0%

Percentage of residences with wood fireplaces changed from 5% to 0%

Percentage of residences with natural gas fireplaces changed from 85% to 0%

The number of persons per household for consumer product use changed from 3 persons to 2.76 persons

Operational Unmitigated Detail Report:

OPERATIONAL EMISSION ESTIMATES Winter Pounds Per Day, Unmitigated

Source	ROG	NOX	CO	SO2	PM10	PM25
Apartments mid rise	27.28	37.78	281.18	0.28	55.16	10.75
TOTALS (lbs/day, unmitigated)	27.28	37.78	281.18	0.28	55.16	10.75

Operational Mitigated Detail Report:

OPERATIONAL EMISSION ESTIMATES Winter Pounds Per Day, Mitigated

Source	ROG	NOX	CO	SO2	PM10	PM25
Apartments mid rise	26.55	36.70	273.18	0.28	53.59	10.44
TOTALS (lbs/day, mitigated)	26.55	36.70	273.18	0.28	53.59	10.44

Operational Settings:

Includes correction for passby trips

Does not include double counting adjustment for internal trips

Analysis Year: 2012 Temperature (F): 60 Season: Winter

Emfac: Version : Emfac2007 V2.3 Nov 1 2006

Summary of Land Uses

Land Use Type	Acreage	Trip Rate	Unit Type	No. Units	Total Trips	Total VMT
Apartments mid rise	14.13	6.72	dwelling units	537.00	3,608.64	31,918.42
					3,608.64	31,918.42

Vehicle Fleet Mix

Vehicle Type	Percent Type	Non-Catalyst	Catalyst	Diesel
Light Auto	51.5	0.6	99.2	0.2
Light Truck < 3750 lbs	7.3	1.4	95.9	2.7
Light Truck 3751-5750 lbs	23.0	0.4	99.6	0.0
Med Truck 5751-8500 lbs	10.7	0.9	99.1	0.0
Lite-Heavy Truck 8501-10,000 lbs	1.6	0.0	81.2	18.8
Lite-Heavy Truck 10,001-14,000 lbs	0.5	0.0	60.0	40.0
Med-Heavy Truck 14,001-33,000 lbs	0.9	0.0	22.2	77.8
Heavy-Heavy Truck 33,001-60,000 lbs	0.5	0.0	0.0	100.0
Other Bus	0.1	0.0	0.0	100.0
Urban Bus	0.1	0.0	0.0	100.0
Motorcycle	2.8	60.7	39.3	0.0
School Bus	0.1	0.0	0.0	100.0
Motor Home	0.9	0.0	88.9	11.1

Travel Conditions

	Residential			Commercial		
	Home-Work	Home-Shop	Home-Other	Commute	Non-Work	Customer
Urban Trip Length (miles)	12.7	7.0	9.5	13.3	7.4	8.9
Rural Trip Length (miles)	17.6	12.1	14.9	15.4	9.6	12.6
Trip speeds (mph)	30.0	30.0	30.0	30.0	30.0	30.0
% of Trips - Residential	32.9	18.0	49.1			

% of Trips - Commercial (by land use)

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Urbemis 2007 Version 9.2.4

Combined Summer Emissions Reports (Pounds/Day)

File Name: Z:\Alan Sako\291.06 The Canyon Residences\Alternatives\Alt 4\Urbemis Canyon Residences - Alt 4 Operation.urb924
Project Name: The Canyon Residences - Alternative 4 Operation
Project Location: South Coast AQMD
On-Road Vehicle Emissions Based on: Version : Emfac2007 V2.3 Nov 1 2006
Off-Road Vehicle Emissions Based on: OFFROAD2007

Summary Report:

AREA SOURCE EMISSION ESTIMATES

	ROG	NOx	CO	SO2	PM10	PM2.5
TOTALS (lbs/day, unmitigated)	17.37	5.48	5.97	0.00	0.02	0.02
TOTALS (lbs/day, mitigated)	17.37	5.48	5.97	0.00	0.02	0.02
Percent Reduction	0.00	0.00	0.00	0.00	0.00	0.00

OPERATIONAL (VEHICLE) EMISSION ESTIMATES

	ROG	NOx	CO	SO2	PM10	PM2.5
TOTALS (lbs/day, unmitigated)	42.51	50.44	457.10	0.53	84.80	16.54
TOTALS (lbs/day, mitigated)	41.61	49.27	446.45	0.51	82.82	16.15
Percent Reduction	2.12	2.32	2.33	3.77	2.33	2.36

SUM OF AREA SOURCE AND OPERATIONAL EMISSION ESTIMATES

	ROG	NOx	CO	SO2	PM10	PM2.5
TOTALS (lbs/day, unmitigated)	59.88	55.92	463.07	0.53	84.82	16.56
TOTALS (lbs/day, mitigated)	58.98	54.75	452.42	0.51	82.84	16.17
Percent Reduction	1.50	2.09	2.30	3.77	2.33	2.36

Area Source Unmitigated Detail Report:

AREA SOURCE EMISSION ESTIMATES Summer Pounds Per Day, Unmitigated

Source	ROG	NOx	CO	SO2	PM10	PM2.5
Natural Gas	0.41	5.44	2.88	0.00	0.01	0.01
Hearth - No Summer Emissions						
Landscape	0.25	0.04	3.09	0.00	0.01	0.01
Consumer Products	15.34					
Architectural Coatings	1.37					
TOTALS (lbs/day, unmitigated)	17.37	5.48	5.97	0.00	0.02	0.02

Area Source Mitigated Detail Report:

AREA SOURCE EMISSION ESTIMATES Summer Pounds Per Day, Mitigated

Source	ROG	NOx	CO	SO2	PM10	PM2.5
Natural Gas	0.41	5.44	2.88	0.00	0.01	0.01
Hearth - No Summer Emissions						
Landscape	0.25	0.04	3.09	0.00	0.01	0.01
Consumer Products	15.34					
Architectural Coatings	1.37					
TOTALS (lbs/day, mitigated)	17.37	5.48	5.97	0.00	0.02	0.02

Area Source Changes to Defaults

Percent residential using natural gas changed from 78% to 100%

Percentage of residences with wood stoves changed from 10% to 0%

Percentage of residences with wood fireplaces changed from 5% to 0%

Percentage of residences with natural gas fireplaces changed from 85% to 0%

The number of persons per household for consumer product use changed from 3 persons to 2.76 persons

Operational Unmitigated Detail Report:

OPERATIONAL EMISSION ESTIMATES Summer Pounds Per Day, Unmitigated

Source	ROG	NOX	CO	SO2	PM10	PM25
Apartments mid rise	15.61	18.99	177.56	0.21	33.38	6.51
Strip mall	26.90	31.45	279.54	0.32	51.42	10.03
TOTALS (lbs/day, unmitigated)	42.51	50.44	457.10	0.53	84.80	16.54

Operational Mitigated Detail Report:

OPERATIONAL EMISSION ESTIMATES Summer Pounds Per Day, Mitigated

Source	ROG	NOX	CO	SO2	PM10	PM25
Apartments mid rise	15.23	18.45	172.50	0.20	32.43	6.32
Strip mall	26.38	30.82	273.95	0.31	50.39	9.83
TOTALS (lbs/day, mitigated)	41.61	49.27	446.45	0.51	82.82	16.15

Operational Settings:

Includes correction for passby trips

Does not include double counting adjustment for internal trips

Analysis Year: 2012 Temperature (F): 80 Season: Summer

Emfac: Version : Emfac2007 V2.3 Nov 1 2006

Summary of Land Uses

Land Use Type	Acreage	Trip Rate	Unit Type	No. Units	Total Trips	Total VMT
Apartments mid rise	8.55	6.72	dwelling units	325.00	2,184.00	19,317.48
Strip mall		42.94	1000 sq ft	140.00	6,011.60	29,749.06
					8,195.60	49,066.54

Vehicle Fleet Mix

Vehicle Type	Percent Type	Non-Catalyst	Catalyst	Diesel
Light Auto	51.5	0.6	99.2	0.2
Light Truck < 3750 lbs	7.3	1.4	95.9	2.7
Light Truck 3751-5750 lbs	23.0	0.4	99.6	0.0
Med Truck 5751-8500 lbs	10.7	0.9	99.1	0.0
Lite-Heavy Truck 8501-10,000 lbs	1.6	0.0	81.2	18.8
Lite-Heavy Truck 10,001-14,000 lbs	0.5	0.0	60.0	40.0
Med-Heavy Truck 14,001-33,000 lbs	0.9	0.0	22.2	77.8
Heavy-Heavy Truck 33,001-60,000 lbs	0.5	0.0	0.0	100.0
Other Bus	0.1	0.0	0.0	100.0
Urban Bus	0.1	0.0	0.0	100.0
Motorcycle	2.8	60.7	39.3	0.0
School Bus	0.1	0.0	0.0	100.0
Motor Home	0.9	0.0	88.9	11.1

Travel Conditions

	Residential			Commercial		
	Home-Work	Home-Shop	Home-Other	Commute	Non-Work	Customer
Urban Trip Length (miles)	12.7	7.0	9.5	13.3	7.4	8.9
Rural Trip Length (miles)	17.6	12.1	14.9	15.4	9.6	12.6
Trip speeds (mph)	30.0	30.0	30.0	30.0	30.0	30.0
% of Trips - Residential	32.9	18.0	49.1			
% of Trips - Commercial (by land use)						
Strip mall				2.0	1.0	97.0

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Urbemis 2007 Version 9.2.4

Combined Winter Emissions Reports (Pounds/Day)

File Name: Z:\Alan Sako\291.06 The Canyon Residences\Alternatives\Alt 4\Urbemis Canyon Residences - Alt 4 Operation.urb924
Project Name: The Canyon Residences - Alternative 4 Operation
Project Location: South Coast AQMD
On-Road Vehicle Emissions Based on: Version : Emfac2007 V2.3 Nov 1 2006
Off-Road Vehicle Emissions Based on: OFFROAD2007

Summary Report:

AREA SOURCE EMISSION ESTIMATES

	ROG	NOx	CO	SO2	PM10	PM2.5
TOTALS (lbs/day, unmitigated)	17.12	5.44	2.88	0.00	0.01	0.01
TOTALS (lbs/day, mitigated)	17.12	5.44	2.88	0.00	0.01	0.01
Percent Reduction	0.00	0.00	0.00	0.00	0.00	0.00

OPERATIONAL (VEHICLE) EMISSION ESTIMATES

	ROG	NOx	CO	SO2	PM10	PM2.5
TOTALS (lbs/day, unmitigated)	47.85	60.57	448.43	0.43	84.80	16.54
TOTALS (lbs/day, mitigated)	46.80	59.17	438.01	0.43	82.82	16.15
Percent Reduction	2.19	2.31	2.32	0.00	2.33	2.36

SUM OF AREA SOURCE AND OPERATIONAL EMISSION ESTIMATES

	ROG	NOx	CO	SO2	PM10	PM2.5
TOTALS (lbs/day, unmitigated)	64.97	66.01	451.31	0.43	84.81	16.55
TOTALS (lbs/day, mitigated)	63.92	64.61	440.89	0.43	82.83	16.16
Percent Reduction	1.62	2.12	2.31	0.00	2.33	2.36

Area Source Unmitigated Detail Report:

AREA SOURCE EMISSION ESTIMATES Winter Pounds Per Day, Unmitigated

Source	ROG	NOx	CO	SO2	PM10	PM2.5
Natural Gas	0.41	5.44	2.88	0.00	0.01	0.01
Hearth	0.00	0.00	0.00	0.00	0.00	0.00
Landscaping - No Winter Emissions						
Consumer Products	15.34					
Architectural Coatings	1.37					
TOTALS (lbs/day, unmitigated)	17.12	5.44	2.88	0.00	0.01	0.01

Area Source Mitigated Detail Report:

AREA SOURCE EMISSION ESTIMATES Winter Pounds Per Day, Mitigated

Source	ROG	NOx	CO	SO2	PM10	PM2.5
Natural Gas	0.41	5.44	2.88	0.00	0.01	0.01
Hearth	0.00	0.00	0.00	0.00	0.00	0.00
Landscaping - No Winter Emissions						
Consumer Products	15.34					
Architectural Coatings	1.37					
TOTALS (lbs/day, mitigated)	17.12	5.44	2.88	0.00	0.01	0.01

Area Source Changes to Defaults

Percent residential using natural gas changed from 78% to 100%

Percentage of residences with wood stoves changed from 10% to 0%

Percentage of residences with wood fireplaces changed from 5% to 0%

Percentage of residences with natural gas fireplaces changed from 85% to 0%

The number of persons per household for consumer product use changed from 3 persons to 2.76 persons

Operational Unmitigated Detail Report:

OPERATIONAL EMISSION ESTIMATES Winter Pounds Per Day, Unmitigated

Source	ROG	NOX	CO	SO2	PM10	PM25
Apartments mid rise	16.51	22.86	170.18	0.17	33.38	6.51
Strip mall	31.34	37.71	278.25	0.26	51.42	10.03
TOTALS (lbs/day, unmitigated)	47.85	60.57	448.43	0.43	84.80	16.54

Operational Mitigated Detail Report:

OPERATIONAL EMISSION ESTIMATES Winter Pounds Per Day, Mitigated

Source	ROG	NOX	CO	SO2	PM10	PM25
Apartments mid rise	16.07	22.21	165.33	0.17	32.43	6.32
Strip mall	30.73	36.96	272.68	0.26	50.39	9.83
TOTALS (lbs/day, mitigated)	46.80	59.17	438.01	0.43	82.82	16.15

Operational Settings:

Includes correction for passby trips

Does not include double counting adjustment for internal trips

Analysis Year: 2012 Temperature (F): 60 Season: Winter

Emfac: Version : Emfac2007 V2.3 Nov 1 2006

Summary of Land Uses

Land Use Type	Acreage	Trip Rate	Unit Type	No. Units	Total Trips	Total VMT
Apartments mid rise	8.55	6.72	dwelling units	325.00	2,184.00	19,317.48
Strip mall		42.94	1000 sq ft	140.00	6,011.60	29,749.06
					8,195.60	49,066.54

Vehicle Fleet Mix

Vehicle Type	Percent Type	Non-Catalyst	Catalyst	Diesel
Light Auto	51.5	0.6	99.2	0.2
Light Truck < 3750 lbs	7.3	1.4	95.9	2.7
Light Truck 3751-5750 lbs	23.0	0.4	99.6	0.0
Med Truck 5751-8500 lbs	10.7	0.9	99.1	0.0
Lite-Heavy Truck 8501-10,000 lbs	1.6	0.0	81.2	18.8
Lite-Heavy Truck 10,001-14,000 lbs	0.5	0.0	60.0	40.0
Med-Heavy Truck 14,001-33,000 lbs	0.9	0.0	22.2	77.8
Heavy-Heavy Truck 33,001-60,000 lbs	0.5	0.0	0.0	100.0
Other Bus	0.1	0.0	0.0	100.0
Urban Bus	0.1	0.0	0.0	100.0
Motorcycle	2.8	60.7	39.3	0.0
School Bus	0.1	0.0	0.0	100.0
Motor Home	0.9	0.0	88.9	11.1

Travel Conditions

	Residential			Commercial		
	Home-Work	Home-Shop	Home-Other	Commute	Non-Work	Customer
Urban Trip Length (miles)	12.7	7.0	9.5	13.3	7.4	8.9
Rural Trip Length (miles)	17.6	12.1	14.9	15.4	9.6	12.6
Trip speeds (mph)	30.0	30.0	30.0	30.0	30.0	30.0
% of Trips - Residential	32.9	18.0	49.1			
% of Trips - Commercial (by land use)						
Strip mall				2.0	1.0	97.0

The Canyon Residences Project
Evaluation of Global Climate Change Impacts

Table GHG-ALT1-1
Summary of Annual GHG Emissions

	Construction Emissions		Operational Direct Emissions		Operational Indirect Emissions				Total***
Land Use	**Total* Construction** (MT CO_2e)	**Annualized** Construction** (MT CO_2e)	**Motor Vehicles** (MT CO_2e/yr)	**Area Sources** (MT CO_2e/yr)	**Electricity** (MT CO_2e/yr)	**Solid Waste** (MT CO_2e/yr)	**Water** (MT CO_2e/yr)	**Wastewater** (MT CO_2e/yr)	(MT CO_2e/yr)
No Project	4,439.33	147.98	2,056.62	252.68	638.49	4.55	69.34	8.10	3,177.77
Existing Land Use	-	-	696.17	66.09	201.69	8.20	13.87	2.56	988.58
Net Total	4,439.33	147.98	1,360.44	186.60	436.80	(3.65)	55.47	5.54	2,189.19

* Based on the proposed Project. Construction emissions were not calculated sperately for the alternative, which is assumed to result in fewer construction-related emissions.
** Annualized over the "project lifetime" (30 years). Included in the total emissions.
*** Totals may not add up exactly due to rounding.

The Canyon Residences Project
Evaluation of Global Climate Change Impacts

Table GHG-ALT1-2
Operational Motor Vehicle GHG Emissions

Land Use	Equipment Type	Annual CO_2 Emissions[1] (Tons CO_2/yr)	CO_2 to CO_2e Ratio[2]	Annual CO_2e Emissions (MT CO_2e/yr)
No Project	Motor Vehicles	2,153.68	0.950	2,056.62
Existing Land Use	Motor Vehicles	729.03	0.950	696.17
Net Total		**1,424.65**		**1,360.44**

Sources:

1. Estimated CO_2 emission from URBEMIS2007.
2. US Environmental Protection Agency, Office of Transportation and Air Quality, *Emission Facts - Greenhouse Gas Emissions from a Typical Passenger Vehicle* EPA420-F-05-004, (2005) 4. Passenger vehicle CO_2 emissions are assumed to be 95% of GHG emissions on a CO_2 equivalent basis.

Where:

CO_2	Carbon dioxide
CO_2e	Carbon dioxide equivalent
MT	Metric ton
yr	Year

The Canyon Residences Project
Evaluation of Global Climate Change Impacts

Table GHG-ALT1-3
Area Source GHG Emissions

Land Use	CO_2 Emission Factor[1] GWP = 1 (kg/MMBtu)	CH_4 Emission Factor[2] GWP = 21 (kg/MMBtu)	N_2O Emission Factor[2] GWP = 310 (kg/MMBtu)	Annual CO_2 Emissions[3] (Tons CO_2/yr)	Annual CO_2e Emissions (MT CO_2e/yr)
No Project					
Natural Gas	56.06	0.0059	0.0001	276.23	251.28
Landscape Maintenance	56.06	0.0059	0.0001	1.54	1.40
Total				277.77	252.68
Existing Land Uses					
Natural Gas	56.06	0.0059	0.0001	72.15	65.63
Landscape Maintenance	56.06	0.0059	0.0001	0.50	0.45
Total				72.65	66.09
Net Total				**205.12**	**186.60**

Sources:
1. URBEMIS2007 uses a CO_2 emission factor of 120,000 pounds per million cubic feet. This was converted to kg/MMBtu.
2. California Climate Action Registry, *General Reporting Protocol: Reporting Entity-Wide Greenhouse Gas Emissions Version 3.0*, (2008) 97-99.
3. Estimated CO_2 emissions from URBEMIS2007. URBEMIS2007 assumes 4,011.5 cubic feet/unit/month of natural gas for multi-family units.
4. All emission factors for wood burning are provided in the California Climate Action Registry, *General Reporting Protocol: Reporting Entity-Wide Greenhouse Gas Emissions Version 3.0*, (2008).

Where:

CH_4	Methane	MMBtu	Million British thermal units
CO_2	Carbon dioxide	MT	Metric ton
CO_2e	Carbon dioxide equivalent	N_2O	Nitrous oxide
GWP	Global warming potential	yr	Year
kg	Kilogram		

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Urbemis 2007 Version 9.2.4

Combined Annual Emissions Reports (Tons/Year)

File Name: Z:\Alan Sako\291.06 The Canyon Residences\Alternatives\Alt 1\Urbemis Canyon Residences - Alt 1 Operational.urb924
Project Name: The Canyon Residences - Alternative 1 Operational
Project Location: South Coast AQMD
On-Road Vehicle Emissions Based on: Version : Emfac2007 V2.3 Nov 1 2006
Off-Road Vehicle Emissions Based on: OFFROAD2007

Summary Report:

AREA SOURCE EMISSION ESTIMATES

	CO2
TOTALS (tons/year, unmitigated)	277.77

OPERATIONAL (VEHICLE) EMISSION ESTIMATES

	CO2
TOTALS (tons/year, unmitigated)	2,153.68

SUM OF AREA SOURCE AND OPERATIONAL EMISSION ESTIMATES

	CO2
TOTALS (tons/year, unmitigated)	2,431.45

Area Source Unmitigated Detail Report:

AREA SOURCE EMISSION ESTIMATES Annual Tons Per Year, Unmitigated

Source	CO2
Natural Gas	276.23
Hearth	0.00
Landscape	1.54
Consumer Products	
Architectural Coatings	
TOTALS (tons/year, unmitigated)	277.77

Area Source Changes to Defaults

Operational Unmitigated Detail Report:

OPERATIONAL EMISSION ESTIMATES Annual Tons Per Year, Unmitigated

Source	CO2
Elementary school	1,044.77
Junior high school	428.29
Place of worship	680.62
TOTALS (tons/year, unmitigated)	2,153.68

Operational Settings:

Includes correction for passby trips

Does not include double counting adjustment for internal trips

Analysis Year: 2012 Season: Annual

Emfac: Version : Emfac2007 V2.3 Nov 1 2006

Summary of Land Uses

Land Use Type	Acreage	Trip Rate	Unit Type	No. Units	Total Trips	Total VMT
Elementary school		1.29	students	690.00	890.10	5,691.58
Junior high school		1.62	students	210.00	340.20	2,337.52
Place of worship		9.11	1000 sq ft	63.64	579.76	3,726.86
					1,810.06	11,755.96

Vehicle Fleet Mix

Vehicle Type	Percent Type	Non-Catalyst	Catalyst	Diesel
Light Auto	51.5	0.6	99.2	0.2
Light Truck < 3750 lbs	7.3	1.4	95.9	2.7
Light Truck 3751-5750 lbs	23.0	0.4	99.6	0.0
Med Truck 5751-8500 lbs	10.7	0.9	99.1	0.0
Lite-Heavy Truck 8501-10,000 lbs	1.6	0.0	81.2	18.8
Lite-Heavy Truck 10,001-14,000 lbs	0.5	0.0	60.0	40.0
Med-Heavy Truck 14,001-33,000 lbs	0.9	0.0	22.2	77.8
Heavy-Heavy Truck 33,001-60,000 lbs	0.5	0.0	0.0	100.0
Other Bus	0.1	0.0	0.0	100.0
Urban Bus	0.1	0.0	0.0	100.0
Motorcycle	2.8	60.7	39.3	0.0
School Bus	0.1	0.0	0.0	100.0
Motor Home	0.9	0.0	88.9	11.1

Travel Conditions

	Residential			Commercial		
	Home-Work	Home-Shop	Home-Other	Commute	Non-Work	Customer
Urban Trip Length (miles)	12.7	7.0	9.5	13.3	7.4	8.9
Rural Trip Length (miles)	17.6	12.1	14.9	15.4	9.6	12.6
Trip speeds (mph)	30.0	30.0	30.0	30.0	30.0	30.0
% of Trips - Residential	32.9	18.0	49.1			
% of Trips - Commercial (by land use)						
Elementary school				20.0	10.0	70.0
Junior high school				20.0	10.0	70.0
Place of worship				3.0	1.5	95.5

The Canyon Residences Project
Evaluation of Global Climate Change Impacts

Table GHG-ALT1-4
Electrical Demand GHG Emissions (General and Student/General)

Land Use	Units	Electrical Demand Factor[1] (kW-hr/unit/yr)	Annual Demand Factor (10^6 kW-hr/yr)	CO_2e Emission Factor[2] (MT $CO_2e/10^6$ kW-hr)	Annual CO_2e Emissions (MT CO_2e/yr)
No Project	200,155 sf	11.00	2.2017	290	638.49
Existing Land Uses	63,226 sf	11.00	0.6955	290	201.69
Net Total					**436.80**

Sources:
1. Section 6.0, Project Alternatives.
2. California Climate Action Registry, "Reporting Online Tool, Public Annual Entity Emissions," *Southern California Edison, PUP Report* , (2006), http://www.climateregistry.org/CARROT/public/Reports.aspx.

Where:

CO_2e	Carbon dioxide equivalent
DU	Dwelling unit
GWP	Global warming potential
kW-hr	Kilowatt-hour
lbs	Pounds
MT	Metric ton
sf	Square feet
yr	Year

The Canyon Residences Project
Evaluation of Global Climate Change Impacts

Table GHG-ALT1-5
Solid Waste GHG Emissions

Land Use	Solid Waste Generation[1] (Tons/yr)	CO_2e Emission Factor[2] (MT CO_2E/MT waste)	Annual CO_2e Emissions (MT CO_2E/yr)
No Project	45.63	0.11	4.55
Existing Land Uses	82.19	0.11	8.20
Net Total	(36.57)		(3.65)

Sources:
1. Section 6.0, Project Alternatives.

2. US Environmental Protection Agency, Office of Solid Waste and Emergency Response, *Greenhouse Gas Emission Factors for Management of Selected Materials in Municipal Solid Waste (EPA-530-R-98-013)* , (1998). The factor is based on mixed municipal solid waste as disposed in landfills without landfill gas recovery.

Where:

CO_2e	Carbon dioxide equivalent
MT	Metric ton
yr	Year

The Canyon Residences Project
Evaluation of Global Climate Change Impacts

Table GHG-ALT1-6
Potable Water Supply, Conveyance, Treatment, and Distribution GHG Emissions

Land Use	Action	Net Potable Water Needs Estimate[1] (MG/yr)	Electrical Demand Factor[2,3,4] (kW-hr/MG)	Annual Electrical Demand (10^6 kW-hr/year)	CO_2e Emission Factor[5] (MT $CO_2e/10^6$ kW-hr)	Annual CO_2e Emissions (MT CO_2e/yr)
No Project	Supply & Conveyance	21.52	9,727	0.209	290	60.71
No Project	Treatment	21.52	111	0.002	290	0.69
No Project	Distribution	21.52	1,272	0.027	290	7.94
No Project	Recycled Water	-	875	-	290	-
Existing Land Use	Supply & Conveyance	4.30	9,727	0.042	290	12.14
Existing Land Use	Treatment	4.30	111	0.000	290	0.14
Existing Land Use	Distribution	4.30	1,272	0.005	290	1.59
Net Total						**55.47**

Sources:

1. Section 6.0, Project Alternatives.
2. California Energy Commission, *California's Water-Energy Relationship, Final Staff Report (CEC-700-2005-011-SF)*, (2005) 26.
3. California Energy Commission, *Refining Estimates of Water-Related Energy Use in California, PIER Final Project Report (CEC-500-2006-118)*, (2006) 22. Prepared by Navigant Consulting, Inc.
4. R. C. Wilkinson, et. al, California Department of Water Resources, Water Sources "Powering" Southern California, n.d. Recycled water was estimated to use 285 kW-hr per acre-foot.
5. California Climate Action Registry, "Reporting Online Tool, Public Annual Entity Emissions," *Southern California Edison, PUP Report*, (2006), http://www.climateregistry.org/CARROT/public/Reports.aspx.

Where:

CO_2e	Carbon dioxide equivalent
GWP	Global warming potential
kW-hr	Kilowatt-hour
lbs	Pounds
MG	Million gallons
MT	Metric ton
N_2O	Nitrous oxide
yr	Year

The Canyon Residences Project
Evaluation of Global Climate Change Impacts

Table GHG-ALT1-7
Wasterwater Treatment Electrical Demand GHG Emissions

Land Use	Net Wastewater Generation Rate[1] (MG/yr)	Electrical Demand Factor[2] (kW-hr/MG)	Annual Demand Factor (10^6 kW-hr/yr)	CO_2e Emision Factor[3] (MT $CO_2e/10^6$ kW-hr)	Annual CO_2e Emissions (MT CO_2e/yr)
No Project	14.61	1,911	0.03	290	8.10
Existing Land Use	4.62	1,911	0.01	290	2.56

Sources:
1. Section 6.0, Project Alternatives.
2. California Energy Commission, *Refining Estimates of Water-Related Energy Use in California, PIER Final Project Report (CEC-500-2006-118).* Prepared by Navigant Consulting, Inc., (2006) 22.
3. California Climate Action Registry, "Reporting Online Tool, Public Annual Entity Emissions,"*Southern California Edison, PUP Report*, (2006), http://www.climateregistry.org/CARROT/public/Reports.aspx.

Table GHG-ALT1-8
Wastewater Treatment Process GHG Emissions[1]

Project	Maximum Population	Pounds BOD5 per Capita per Day[2] (lbs BOD5/capita/day)	Pounds CH_4 per Pound BOD5[3] (lbs CH_4/BOD5)	Fraction Anaerobically Digested[4]	Annual CO_2e Emissions (MT CO_2e/yr)
No Project[5]	-	0.13	0.22	0.15	-
Existing Land Use[5]	-	0.13	0.22	0.15	-

Sources:
1. US Environmental Protection Agency, *Compilation of Air Pollutant Emission Factors, AP-42, Fifth Edition, Volume I, Chapter 4.3.5*, (1998). Data is not available to determine CO_2 and N_2O emissions from this process. The dominant GHG is CH_4.
2. The US EPA recommends a default value of 0.13 lb BOD5/capita/day.
3. The US EPA recommends a default value of 0.22 lb CH_4/BOD5.
4. The US EPA recommends a default value of 15% for the fraction anaerobically digested for domestic wastewater.
5. Data not available.

Where:

BOD5	Biological oxygen demand using a standard 5 day test
CH_4	Methane
CO_2	Carbon dioxide
CO_2e	Carbon dioxide equivalent
GWP	Global warming potential
kW-hr	Kilowatt-hour
lbs	Pounds
MG	Million gallons
MT	Metric ton
N_2O	Nitrous oxide
yr	Year

The Canyon Residences Project
Evaluation of Global Climate Change Impacts

Table GHG-ALT2-1
Summary of Annual GHG Emissions

	Construction Emissions		Operational Direct Emissions		Operational Indirect Emissions				Total***
Land Use	**Total* Construction** (MT CO_2e)	**Annualized** Construction** (MT CO_2e)	**Motor Vehicles** (MT CO_2e/yr)	**Area Sources** (MT CO_2e/yr)	**Electricity** (MT CO_2e/yr)	**Solid Waste** (MT CO_2e/yr)	**Water** (MT CO_2e/yr)	**Wastewater** (MT CO_2e/yr)	(MT CO_2e/yr)
Single-Family Residential	4,439.33	147.98	727.89	187.15	69.89	4.55	36.66	4.69	1,178.80
With 15% Less Energy Consumption	4,439.33	147.98	727.89	159.16	59.41	4.55	36.66	4.69	1,140.33
Existing Land Use	-	-	696.17	66.09	215.43	8.20	13.87	2.56	1,002.32
Net Total	4,439.33	147.98	31.71	121.06	(145.54)	(3.65)	22.79	2.13	176.47
Net Total with 15% Less Energy Consumption	4,439.33	147.98	31.71	93.08	(156.03)	(3.65)	22.79	2.13	138.01

* Based on the proposed Project. Construction emissions were not calculated sperately for the alternative, which is assumed to result in fewer construction-related emissions.
** Annualized over the "project lifetime" (30 years). Included in the total emissions.
*** Totals may not add up exactly due to rounding.

The Canyon Residences Project
Evaluation of Global Climate Change Impacts

Table GHG-ALT2-2
Operational Motor Vehicle GHG Emissions

Land Use	Equipment Type	Annual CO_2 Emissions[1] (Tons CO_2/yr)	CO_2 to CO_2e Ratio[2]	Annual CO_2e Emissions (MT CO_2e/yr)
Single-Family Residential	Motor Vehicles	762.24	0.950	727.89
Existing Land Use	Motor Vehicles	729.03	0.950	696.17
Net Total		**33.21**		**31.71**

Sources:
1. Estimated CO_2 emission from URBEMIS2007.
2. US Environmental Protection Agency, Office of Transportation and Air Quality, *Emission Facts - Greenhouse Gas Emissions from a Typical Passenger Vehicle* EPA420-F-05-004, (2005) 4. Passenger vehicle CO_2 emissions are assumed to be 95% of GHG emissions on a CO_2 equivalent basis.

Where:

CO_2	Carbon dioxide
CO_2e	Carbon dioxide equivalent
MT	Metric ton
yr	Year

The Canyons Residences Project
Evaluation of Global Climate Change Impacts

Table GHG-ALT2-3
Area Source GHG Emissions

Land Use	CO_2 Emission Factor[1] GWP = 1 (kg/MMBtu)	CH_4 Emission Factor[2] GWP = 21 (kg/MMBtu)	N_2O Emission Factor[2] GWP = 310 (kg/MMBtu)	Annual CO_2 Emissions[3] (Tons CO_2/yr)	Annual CO_2e Emissions (MT CO_2e/yr)
Single-Family Residential					
Natural Gas (with Title 24 [2005] adjustment)[4]	56.06	0.0059	0.0001	205.08	186.56
Landscape Maintenance	56.06	0.0059	0.0001	0.65	0.59
Total				205.73	187.15
With 15% Less Energy Consumption				174.97	159.16
Existing Land Uses					
Natural Gas	56.06	0.0059	0.0001	72.15	65.63
Landscape Maintenance	56.06	0.0059	0.0001	0.50	0.45
Total				72.65	66.09
Net Total				**133.08**	**121.06**
With 15% Less Energy Consumption				**102.32**	**93.08**

Sources:
1. URBEMIS2007 uses a CO_2 emission factor of 120,000 pounds per million cubic feet. This was converted to kg/MMBtu.
2. California Climate Action Registry, *General Reporting Protocol: Reporting Entity-Wide Greenhouse Gas Emissions Version 3.0*, (2008) 97-99.
3. Estimated CO_2 emissions from URBEMIS2007. URBEMIS2007 assumes 4,011.5 cubic feet/unit/month of natural gas for multi-family units. A 15.7 percent reduction was taken into account due to compliance with the Title 24 (2005) Building Code standards.
4. California Energy Commission, Impact Analysis: 2008 Update to the California Energy Energy Efficiency Standards, (2007). Based on this study, natural gas consumption is reduced by 15.7 percent compared to the previous 2001 standard.

Where:

CH_4	Methane	MMBtu	Million British thermal units
CO_2	Carbon dioxide	MT	Metric ton
CO_2e	Carbon dioxide equivalent	N_2O	Nitrous oxide
GWP	Global warming potential	yr	Year
kg	Kilogram		

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Urbemis 2007 Version 9.2.4

Combined Annual Emissions Reports (Tons/Year)

File Name: Z:\Alan Sako\291.06 The Canyon Residences\Alternatives\Alt 2\Urbemis Canyon Residences - Alt 2 Operational.urb924
Project Name: The Canyon Residences - Alternative 2 Operational
Project Location: South Coast AQMD
On-Road Vehicle Emissions Based on: Version : Emfac2007 V2.3 Nov 1 2006
Off-Road Vehicle Emissions Based on: OFFROAD2007

Summary Report:

AREA SOURCE EMISSION ESTIMATES

	CO2
TOTALS (tons/year, unmitigated)	244.18
TOTALS (tons/year, mitigated)	244.18
Percent Reduction	0.00

OPERATIONAL (VEHICLE) EMISSION ESTIMATES

	CO2
TOTALS (tons/year, unmitigated)	777.80
TOTALS (tons/year, mitigated)	762.24
Percent Reduction	2.00

SUM OF AREA SOURCE AND OPERATIONAL EMISSION ESTIMATES

	CO2
TOTALS (tons/year, unmitigated)	1,021.98
TOTALS (tons/year, mitigated)	1,006.42
Percent Reduction	1.52

Area Source Unmitigated Detail Report:

AREA SOURCE EMISSION ESTIMATES Annual Tons Per Year, Unmitigated

Source	CO2
Natural Gas	243.27
Hearth	0.26
Landscape	0.65
Consumer Products	
Architectural Coatings	
TOTALS (tons/year, unmitigated)	244.18

Area Source Mitigated Detail Report:

AREA SOURCE EMISSION ESTIMATES Annual Tons Per Year, Mitigated

Source	CO2
Natural Gas	243.27
Hearth	0.26
Landscape	0.65
Consumer Products	
Architectural Coatings	
TOTALS (tons/year, mitigated)	244.18

Area Source Changes to Defaults

Percent residential using natural gas changed from 78% to 100%

Percentage of residences with wood stoves changed from 10% to 0%

Percentage of residences with wood fireplaces changed from 5% to 0%

Percentage of residences with natural gas fireplaces changed from 85% to 100%

The number of persons per household for consumer product use changed from 3 persons to 2.76 persons

Operational Unmitigated Detail Report:

OPERATIONAL EMISSION ESTIMATES Annual Tons Per Year, Unmitigated

Source	CO2
Single family housing	777.80
TOTALS (tons/year, unmitigated)	777.80

Operational Mitigated Detail Report:

OPERATIONAL EMISSION ESTIMATES Annual Tons Per Year, Mitigated

Source	CO2
Single family housing	762.24
TOTALS (tons/year, mitigated)	762.24

Operational Settings:

Includes correction for passby trips

Does not include double counting adjustment for internal trips

Analysis Year: 2012 Season: Annual

Emfac: Version : Emfac2007 V2.3 Nov 1 2006

Summary of Land Uses

Land Use Type	Acreage	Trip Rate	Unit Type	No. Units	Total Trips	Total VMT
Single family housing	16.67	9.57	dwelling units	50.00	478.50	4,232.33
					478.50	4,232.33

Vehicle Fleet Mix

Vehicle Type	Percent Type	Non-Catalyst	Catalyst	Diesel
Light Auto	51.5	0.6	99.2	0.2
Light Truck < 3750 lbs	7.3	1.4	95.9	2.7
Light Truck 3751-5750 lbs	23.0	0.4	99.6	0.0
Med Truck 5751-8500 lbs	10.7	0.9	99.1	0.0
Lite-Heavy Truck 8501-10,000 lbs	1.6	0.0	81.2	18.8
Lite-Heavy Truck 10,001-14,000 lbs	0.5	0.0	60.0	40.0
Med-Heavy Truck 14,001-33,000 lbs	0.9	0.0	22.2	77.8
Heavy-Heavy Truck 33,001-60,000 lbs	0.5	0.0	0.0	100.0
Other Bus	0.1	0.0	0.0	100.0
Urban Bus	0.1	0.0	0.0	100.0
Motorcycle	2.8	60.7	39.3	0.0
School Bus	0.1	0.0	0.0	100.0
Motor Home	0.9	0.0	88.9	11.1

Travel Conditions

	Residential			Commercial		
	Home-Work	Home-Shop	Home-Other	Commute	Non-Work	Customer
Urban Trip Length (miles)	12.7	7.0	9.5	13.3	7.4	8.9
Rural Trip Length (miles)	17.6	12.1	14.9	15.4	9.6	12.6
Trip speeds (mph)	30.0	30.0	30.0	30.0	30.0	30.0
% of Trips - Residential	32.9	18.0	49.1			

% of Trips - Commercial (by land use)

The Canyon Residences Project
Evaluation of Global Climate Change Impacts

Table GHG-ALT2-4
Electrical Consumption GHG Emissions

Land Use	Units	Efficiency[1]	Electrical Consumption Factor[2] (kW-hr/unit/yr)	Annual Consumption Factor (MW-hr/yr)	CO_2 Emission Factor[3] GWP = 1 (lbs/MW-hr)	CH_4 Emission Factor[3] GWP = 21 (lbs/MW-hr)	N_2O Emission Factor[3] GWP = 310 (lbs/MW-hr)	Annual CO_2e Emissions (MT CO_2e/yr)
Single-Family Residential								
With Title 24 (2005) adjustment	50 DU	19.8%	4,512.45	225.62	678.88	0.029	0.011	69.89
With 15% Less Energy Consumption	50 DU	15.0%	3,835.59	191.78	678.88	0.029	0.011	59.41
Existing Land Uses								
Commercial	63,226 gsf	0.0%	11	695.49	678.88	0.029	0.011	215.43
Net Total								**(145.54)**
With 15% Less Energy Consumption								**(156.03)**

Sources:

1. California Energy Commission, *Impact Analysis: 2008 Update to the California Energy Energy Efficiency Standards*, (2007).
   The efficiency percentages are reductions from baseline energy use due to revisions in the California Title 24 Building Code Standards. The efficiency percentages were based on the cumulative 'Percent Reduction from Baseline' values in Table 2 of the 2005 Impact Analysis reports listed above (19.8% for single-family residential). The project is proposing to increase energy efficiency by 15% beyond Title 24 (2005), as a project design feature.
2. South Coast Air Quality Management District, *CEQA Air Quality Handbook*, (1993 and subsequent updates) pp. A9-114.
   It is assumed that because the factors were developed in 1993, they do not represent current energy consumption factors. Therefore, increases in the 2005 version of the Title 24 Building code Standards were taken into account using data from the California Energy Commission, as cited above.
3. California Air Resources Board, *Local Government Operations Protocol for the Quantification and Reporting of Greenhouse Gas Emissions Inventories*, Version 1.0, (2008) 174.
   The CO_2 factor is for Southern California Edison.

Where:

CH_4	Methane	lbs	Pounds
CO_2	Carbon dioxide	MW-hr	Megawatt-hour
CO_2e	Carbon dioxide equivalent	MT	Metric ton
gsf	Gross square feet	n/a	Not applicable
GWP	Global warming potential	N_2O	Nitrous oxide
kW-hr	Kilowatt-hour	yr	Year

The Canyon Residences Project
Evaluation of Global Climate Change Impacts

Table GHG-ALT2-5
Solid Waste GHG Emissions

Land Use	Solid Waste Generation[1] (Tons/yr)	CO_2e Emission Factor[2] (MT CO_2E/MT waste)	Annual CO_2e Emissions (MT CO_2E/yr)
Single-Family Residential	45.63	0.11	4.55
Existing Land Uses	82.19	0.11	8.20
Net Total	(36.57)		(3.65)

Sources:
1. Section 6.0, Project Alternatives.

2. US Environmental Protection Agency, Office of Solid Waste and Emergency Response, *Greenhouse Gas Emission Factors for Management of Selected Materials in Municipal Solid Waste (EPA-530-R-98-013)*, (1998). The factor is based on mixed municipal solid waste as disposed in landfills without landfill gas recovery.

Where:

CO_2e	Carbon dioxide equivalent
MT	Metric ton
yr	Year

The Canyon Residences Project
Evaluation of Global Climate Change Impacts

Table GHG-ALT2-6
Potable Water Supply, Conveyance, Treatment, and Distribution GHG Emissions

Land Use	Action	Net Potable Water Needs Estimate[1] (MG/yr)	Electrical Demand Factor[2,3,4] (kW-hr/MG)	Annual Electrical Demand (10^6 kW-hr/year)	CO_2e Emission Factor[5] (MT $CO_2e/10^6$ kW-hr)	Annual CO_2e Emissions (MT CO_2e/yr)
Single-Family Residential	Supply & Conveyance	11.08	9,727	0.108	290	31.25
Single-Family Residential	Treatment	11.08	111	0.001	290	0.36
Single-Family Residential	Distribution	11.08	1,272	0.014	290	4.09
Single-Family Residential	Recycled Water	3.78	875	0.003	290	0.96
Existing Land Use	Supply & Conveyance	4.30	9,727	0.042	290	12.14
Existing Land Use	Treatment	4.30	111	0.000	290	0.14
Existing Land Use	Distribution	4.30	1,272	0.005	290	1.59
Net Total						**22.79**

Sources:

1. Section 6.0, Project Alternatives.
2. California Energy Commission, *California's Water-Energy Relationship, Final Staff Report (CEC-700-2005-011-SF)*, (2005) 26.
3. California Energy Commission, *Refining Estimates of Water-Related Energy Use in California, PIER Final Project Report (CEC-500-2006-118)*, (2006) 22. Prepared by Navigant Consulting, Inc.
4. R. C. Wilkinson, et. al, California Department of Water Resources, Water Sources "Powering" Southern California, n.d. Recycled water was estimated to use 285 kW-hr per acre-foot.
5. California Climate Action Registry, "Reporting Online Tool, Public Annual Entity Emissions," *Southern California Edison, PUP Report*, (2006), http://www.climateregistry.org/CARROT/public/Reports.aspx.

Where:

CO_2e	Carbon dioxide equivalent
GWP	Global warming potential
kW-hr	Kilowatt-hour
lbs	Pounds
MG	Million gallons
MT	Metric ton
N_2O	Nitrous oxide
yr	Year

The Canyon Residences Project
Evaluation of Global Climate Change Impacts

Table GHG-ALT2-7
Wasterwater Treatment Electrical Demand GHG Emissions

Land Use	Net Wastewater Generation Rate[1] (MG/yr)	Electrical Demand Factor[2] (kW-hr/MG)	Annual Demand Factor (10^6 kW-hr/yr)	CO_2e Emision Factor[3] (MT $CO_2e/10^6$ kW-hr)	Annual CO_2e Emissions (MT CO_2e/yr)
Single-Family Residential	4.75	1,911	0.01	290	2.63
Existing Land Use	4.62	1,911	0.01	290	2.56

Sources:
1. Section 6.0, Project Alternatives.
2. California Energy Commission, *Refining Estimates of Water-Related Energy Use in California, PIER Final Project Report (CEC-500-2006-118)*. Prepared by Navigant Consulting, Inc., (2006) 22.
3. California Climate Action Registry, "Reporting Online Tool, Public Annual Entity Emissions," *Southern California Edison, PUP Report*, (2006), http://www.climateregistry.org/CARROT/public/Reports.aspx.

Table GHG-ALT2-8
Wastewater Treatment Process GHG Emissions[1]

Project	Maximum Population	Pounds BOD5 per Capita per Day[2] (lbs BOD5/capita/day)	Pounds CH_4 per Pound BOD5[3] (lbs CH_4/BOD5)	Fraction Anaerobically Digested[4]	Annual CO_2e Emissions (MT CO_2e/yr)
Single-Family Residential	138	0.13	0.22	0.15	2.06
Existing Land Use[5]	-	0.13	0.22	0.15	-

Sources:
1. US Environmental Protection Agency, *Compilation of Air Pollutant Emission Factors, AP-42, Fifth Edition, Volume I, Chapter 4.3.5*, (1998). Data is not available to determine CO_2 and N_2O emissions from this process. The dominant GHG is CH_4.
2. The US EPA recommends a default value of 0.13 lb BOD5/capita/day.
3. The US EPA recommends a default value of 0.22 lb CH_4/BOD5.
4. The US EPA recommends a default value of 15% for the fraction anaerobically digested for domestic wastewater.
5. Data not available.

Where:

BOD5	Biological oxygen demand using a standard 5 day test
CH_4	Methane
CO_2	Carbon dioxide
CO_2e	Carbon dioxide equivalent
GWP	Global warming potential
kW-hr	Kilowatt-hour
lbs	Pounds
MG	Million gallons
MT	Metric ton
N_2O	Nitrous oxide
yr	Year

The Canyon Residences Project
Evaluation of Global Climate Change Impacts

Table GHG-ALT3-1
Summary of Annual GHG Emissions

	Construction Emissions		Operational Direct Emissions		Operational Indirect Emissions				Total***
Land Use	**Total* Construction** (MT CO_2e)	**Annualized** Construction** (MT CO_2e)	**Motor Vehicles** (MT CO_2e/yr)	**Area Sources** (MT CO_2e/yr)	**Electricity** (MT CO_2e/yr)	**Solid Waste** (MT CO_2e/yr)	**Water** (MT CO_2e/yr)	**Wastewater** (MT CO_2e/yr)	(MT CO_2e/yr)
Reduced Density Multi-Family	4,439.33	147.98	5,441.91	1,206.41	708.49	16.72	130.63	39.05	7,691.17
With 15% Less Energy Consumption	4,439.33	147.98	5,441.91	1,025.51	602.21	16.72	130.63	39.05	7,404.01
Existing Land Use	-	-	696.17	66.09	201.69	8.20	13.87	2.56	988.58
Net Total	4,439.33	147.98	4,745.73	1,140.32	506.79	8.52	116.76	36.49	6,702.59
Net Total with 15% Less Energy Consumption	4,439.33	147.98	4,745.73	959.42	400.52	8.52	116.76	36.49	6,415.43

* Based on the proposed Project. Construction emissions were not calculated sperately for the alternative, which is assumed to result in fewer construction-related emissions.
** Annualized over the "project lifetime" (30 years). Included in the total emissions.
*** Totals may not add up exactly due to rounding.

The Canyon Residences Project
Evaluation of Global Climate Change Impacts

Table GHG-ALT3-2
Operational Motor Vehicle GHG Emissions

Land Use	Equipment Type	Annual CO_2 Emissions[1] (Tons CO_2/yr)	CO_2 to CO_2e Ratio[2]	Annual CO_2e Emissions (MT CO_2E/yr)
Reduced Density Multi-Family	Motor Vehicles	5,698.74	0.950	5,441.91
Existing Land Use	Motor Vehicles	729.03	0.950	696.17
Net Total		**4,969.71**		**4,745.73**

Sources:

1. Estimated CO_2 emission from URBEMIS2007.
2. US Environmental Protection Agency, Office of Transportation and Air Quality, *Emission Facts - Greenhouse Gas Emissions from a Typical Passenger Vehicle* EPA420-F-05-004, (2005) 4. Passenger vehicle CO_2 emissions are assumed to be 95% of GHG emissions on a CO_2 equivalent basis.

Where:

CO_2	Carbon dioxide
CO_2e	Carbon dioxide equivalent
MT	Metric ton
yr	Year

The Canyons Residences Project
Evaluation of Global Climate Change Impacts

Table GHG-ALT3-3
Area Source GHG Emissions

Land Use	CO_2 Emission Factor[1] GWP = 1 (kg/MMBtu)	CH_4 Emission Factor[2] GWP = 21 (kg/MMBtu)	N_2O Emission Factor[2] GWP = 310 (kg/MMBtu)	Annual CO_2 Emissions[3] (Tons CO_2/yr)	Annual CO_2e Emissions (MT CO_2e/yr)
Reduced Density Multi-Family					
Natural Gas (with Title 24 [2005] adjustment)[4]	56.06	0.0059	0.0001	1,325.66	1,205.94
Landscape Maintenance	56.06	0.0059	0.0001	0.51	0.46
Total				1,326.17	1,206.41
With 15% Less Energy Consumption				1,127.32	1,025.51
Existing Land Uses					
Natural Gas	56.06	0.0059	0.0001	72.15	65.63
Landscape Maintenance	56.06	0.0059	0.0001	0.50	0.45
Total				72.65	66.09
Net Total				**1,253.52**	**1,140.32**
With 15% Less Energy Consumption				**1,054.67**	**959.42**

Sources:
1. URBEMIS2007 uses a CO_2 emission factor of 120,000 pounds per million cubic feet. This was converted to kg/MMBtu.
2. California Climate Action Registry, *General Reporting Protocol: Reporting Entity-Wide Greenhouse Gas Emissions Version 3.0*, (2008) 97-99.
3. Estimated CO_2 emissions from URBEMIS2007. URBEMIS2007 assumes 4,011.5 cubic feet/unit/month of natural gas for multi-family units. A 15.7 percent reduction was taken into account due to compliance with the Title 24 (2005) Building Code standards.
4. California Energy Commission, Impact Analysis: 2008 Update to the California Energy Energy Efficiency Standards, (2007). Based on this study, natural gas consumption is reduced by 15.7 percent compared to the previous 2001 standard.

Where:

CH_4	Methane	MMBtu	Million British thermal units
CO_2	Carbon dioxide	MT	Metric ton
CO_2e	Carbon dioxide equivalent	N_2O	Nitrous oxide
GWP	Global warming potential	yr	Year
kg	Kilogram		

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Urbemis 2007 Version 9.2.4

Combined Annual Emissions Reports (Tons/Year)

File Name: Z:\Alan Sako\291.06 The Canyon Residences\Alternatives\Alt 3\Urbemis Canyon Residences - Alt 3 Operation.urb924
Project Name: The Canyon Residences - Alternative 3 Operation
Project Location: South Coast AQMD
On-Road Vehicle Emissions Based on: Version : Emfac2007 V2.3 Nov 1 2006
Off-Road Vehicle Emissions Based on: OFFROAD2007

Summary Report:

AREA SOURCE EMISSION ESTIMATES

	CO2
TOTALS (tons/year, unmitigated)	1,573.06
TOTALS (tons/year, mitigated)	1,573.06
Percent Reduction	0.00

OPERATIONAL (VEHICLE) EMISSION ESTIMATES

	CO2
TOTALS (tons/year, unmitigated)	5,865.81
TOTALS (tons/year, mitigated)	5,698.74
Percent Reduction	2.85

SUM OF AREA SOURCE AND OPERATIONAL EMISSION ESTIMATES

	CO2
TOTALS (tons/year, unmitigated)	7,438.87
TOTALS (tons/year, mitigated)	7,271.80
Percent Reduction	2.25

Area Source Unmitigated Detail Report:

AREA SOURCE EMISSION ESTIMATES Annual Tons Per Year, Unmitigated

Source	CO2
Natural Gas	1,572.55
Hearth	0.00
Landscape	0.51
Consumer Products	
Architectural Coatings	
TOTALS (tons/year, unmitigated)	1,573.06

Area Source Mitigated Detail Report:

AREA SOURCE EMISSION ESTIMATES Annual Tons Per Year, Mitigated

Source	CO2
Natural Gas	1,572.55
Hearth	0.00
Landscape	0.51
Consumer Products	
Architectural Coatings	
TOTALS (tons/year, mitigated)	1,573.06

Area Source Changes to Defaults

Percent residential using natural gas changed from 78% to 100%

Percentage of residences with wood stoves changed from 10% to 0%

Percentage of residences with wood fireplaces changed from 5% to 0%

Percentage of residences with natural gas fireplaces changed from 85% to 0%

The number of persons per household for consumer product use changed from 3 persons to 2.76 persons

Operational Unmitigated Detail Report:

OPERATIONAL EMISSION ESTIMATES Annual Tons Per Year, Unmitigated

Source	CO2
Apartments mid rise	5,865.81
TOTALS (tons/year, unmitigated)	5,865.81

Operational Mitigated Detail Report:

OPERATIONAL EMISSION ESTIMATES Annual Tons Per Year, Mitigated

Source	CO2
Apartments mid rise	5,698.74
TOTALS (tons/year, mitigated)	5,698.74

Operational Settings:

Includes correction for passby trips

Does not include double counting adjustment for internal trips

Analysis Year: 2012 Season: Annual

Emfac: Version : Emfac2007 V2.3 Nov 1 2006

Summary of Land Uses

Land Use Type	Acreage	Trip Rate	Unit Type	No. Units	Total Trips	Total VMT
Apartments mid rise	14.13	6.72	dwelling units	537.00	3,608.64	31,918.42
					3,608.64	31,918.42

Vehicle Fleet Mix

Vehicle Type	Percent Type	Non-Catalyst	Catalyst	Diesel
Light Auto	51.5	0.6	99.2	0.2
Light Truck < 3750 lbs	7.3	1.4	95.9	2.7
Light Truck 3751-5750 lbs	23.0	0.4	99.6	0.0
Med Truck 5751-8500 lbs	10.7	0.9	99.1	0.0
Lite-Heavy Truck 8501-10,000 lbs	1.6	0.0	81.2	18.8
Lite-Heavy Truck 10,001-14,000 lbs	0.5	0.0	60.0	40.0
Med-Heavy Truck 14,001-33,000 lbs	0.9	0.0	22.2	77.8
Heavy-Heavy Truck 33,001-60,000 lbs	0.5	0.0	0.0	100.0
Other Bus	0.1	0.0	0.0	100.0
Urban Bus	0.1	0.0	0.0	100.0
Motorcycle	2.8	60.7	39.3	0.0
School Bus	0.1	0.0	0.0	100.0
Motor Home	0.9	0.0	88.9	11.1

Travel Conditions

	Residential			Commercial		
	Home-Work	Home-Shop	Home-Other	Commute	Non-Work	Customer
Urban Trip Length (miles)	12.7	7.0	9.5	13.3	7.4	8.9
Rural Trip Length (miles)	17.6	12.1	14.9	15.4	9.6	12.6
Trip speeds (mph)	30.0	30.0	30.0	30.0	30.0	30.0
% of Trips - Residential	32.9	18.0	49.1			

% of Trips - Commercial (by land use)

The Canyon Residences Project
Evaluation of Global Climate Change Impacts

Table GHG-ALT3-4
Electrical Consumption GHG Emissions

Land Use	Units	Efficiency[1]	Electrical Consumption Factor[2] (kW-hr/unit/yr)	Annual Consumption Factor (MW-hr/yr)	CO_2 Emission Factor[3] GWP = 1 (lbs/MW-hr)	CH_4 Emission Factor[3] GWP = 21 (lbs/MW-hr)	N_2O Emission Factor[3] GWP = 310 (lbs/MW-hr)	Annual CO_2e Emissions (MT CO_2e/yr)
Reduced Density Multi-Family								
With Title 24 (2005) adjustment	537 DU	24.3%	4,259.26	2,287.22	678.88	0.029	0.011	708.49
With 15% Less Energy Consumption	537 DU	15.0%	3,620.37	1,944.14	678.88	0.029	0.011	602.21
Existing Land Uses								
Commercial	63,226 gsf	0.0%	11	695.49	678.88	0.029	0.011	215.43
Net Total								**493.05**
With 15% Less Energy Consumption								**386.78**

Sources:

1. California Energy Commission, *Impact Analysis: 2008 Update to the California Energy Energy Efficiency Standards*, (2007).
   The efficiency percentages are reductions from baseline energy use due to revisions in the California Title 24 Building Code Standards. The efficiency percentages were based on the cumulative 'Percent Reduction from Baseline' values in Table 2 of the 2005 Impact Analysis reports listed above (24.3% for multi-family residential). The project is proposing to increase energy efficiency by 15% beyond Title 24 (2005), as a project design feature.
2. South Coast Air Quality Management District, *CEQA Air Quality Handbook*, (1993 and subsequent updates) pp. A9-114.
   It is assumed that because the factors were developed in 1993, they do not represent current energy consumption factors. Therefore, increases in the 2005 version of the Title 24 Building code Standards were taken into account using data from the California Energy Commission, as cited above.
3. California Air Resources Board, *Local Government Operations Protocol for the Quantification and Reporting of Greenhouse Gas Emissions Inventories*, Version 1.0, (2008) 174.
   The CO_2 factor is for Southern California Edison.

Where:

CH_4	Methane	lbs	Pounds
CO_2	Carbon dioxide	MW-hr	Megawatt-hour
CO_2e	Carbon dioxide equivalent	MT	Metric ton
gsf	Gross square feet	n/a	Not applicable
GWP	Global warming potential	N_2O	Nitrous oxide
kW-hr	Kilowatt-hour	yr	Year

The Canyon Residences Project
Evaluation of Global Climate Change Impacts

Table GHG-ALT3-5
Solid Waste GHG Emissions

Land Use	Solid Waste Generation[1] (Tons/yr)	CO_2e Emission Factor[2] (MT CO_2E/MT waste)	Annual CO_2e Emissions (MT CO_2E/yr)
Reduced Density Multi-Family	167.53	0.11	16.72
Existing Land Uses	82.19	0.11	8.20
Net Total	85.34		8.52

Sources:
1. Section 6.0, Project Alternatives.

2. US Environmental Protection Agency, Office of Solid Waste and Emergency Response, *Greenhouse Gas Emission Factors for Management of Selected Materials in Municipal Solid Waste (EPA-530-R-98-013)*, (1998). The factor is based on mixed municipal solid waste as disposed in landfills without landfill gas recovery.

Where:

CO_2e	Carbon dioxide equivalent
MT	Metric ton
yr	Year

The Canyon Residences Project
Evaluation of Global Climate Change Impacts

Table GHG-ALT3-6
Potable Water Supply, Conveyance, Treatment, and Distribution GHG Emissions

Land Use	Action	Net Potable Water Needs Estimate[1] (MG/yr)	Electrical Demand Factor[2,3,4] (kW-hr/MG)	Annual Electrical Demand (10^6 kW-hr/year)	CO_2e Emission Factor[5] (MT $CO_2e/10^6$ kW-hr)	Annual CO_2e Emissions (MT CO_2e/yr)
Reduced Density Multi-Family	Supply & Conveyance	40.25	9,727	0.391	290	113.53
Reduced Density Multi-Family	Treatment	40.25	111	0.004	290	1.30
Reduced Density Multi-Family	Distribution	40.25	1,272	0.051	290	14.85
Reduced Density Multi-Family	Recycled Water	3.78	875	0.003	290	0.96
Existing Land Use	Supply & Conveyance	4.30	9,727	0.042	290	12.14
Existing Land Use	Treatment	4.30	111	0.000	290	0.14
Existing Land Use	Distribution	4.30	1,272	0.005	290	1.59
Net Total						**116.76**

Sources:

1. Section 6.0, Project Alternatives.
2. California Energy Commission, *California's Water-Energy Relationship, Final Staff Report (CEC-700-2005-011-SF)*, (2005) 26.
3. California Energy Commission, *Refining Estimates of Water-Related Energy Use in California, PIER Final Project Report (CEC-500-2006-118)*, (2006) 22. Prepared by Navigant Consulting, Inc.
4. R. C. Wilkinson, et. al, California Department of Water Resources, Water Sources "Powering" Southern California, n.d. Recycled water was estimated to use 285 kW-hr per acre-foot.
5. California Climate Action Registry, "Reporting Online Tool, Public Annual Entity Emissions," *Southern California Edison, PUP Report*, (2006), http://www.climateregistry.org/CARROT/public/Reports.aspx.

Where:

CO_2e	Carbon dioxide equivalent
GWP	Global warming potential
kW-hr	Kilowatt-hour
lbs	Pounds
MG	Million gallons
MT	Metric ton
N_2O	Nitrous oxide
yr	Year

The Canyon Residences Project
Evaluation of Global Climate Change Impacts

Table GHG-ALT3-7
Wasterwater Treatment Electrical Demand GHG Emissions

Land Use	Net Wastewater Generation Rate[1] (MG/yr)	Electrical Demand Factor[2] (kW-hr/MG)	Annual Demand Factor (10^6 kW-hr/yr)	CO_2e Emision Factor[3] (MT $CO_2e/10^6$ kW-hr)	Annual CO_2e Emissions (MT CO_2e/yr)
Reduced Density Multi-Family	30.58	1,911	0.06	290	16.95
Existing Land Use	4.62	1,911	0.01	290	2.56

Sources:
1. Section 6.0, Project Alternatives.
2. California Energy Commission, *Refining Estimates of Water-Related Energy Use in California, PIER Final Project Report (CEC-500-2006-118)*. Prepared by Navigant Consulting, Inc., (2006) 22.
3. California Climate Action Registry, "Reporting Online Tool, Public Annual Entity Emissions," *Southern California Edison, PUP Report*, (2006), http://www.climateregistry.org/CARROT/public/Reports.aspx.

Table GHG-ALT3-8
Wastewater Treatment Process GHG Emissions[1]

Project	Maximum Population	Pounds BOD5 per Capita per Day[2] (lbs BOD5/capita/day)	Pounds CH_4 per Pound BOD5[3] (lbs CH_4/BOD5)	Fraction Anaerobically Digested[4]	Annual CO_2e Emissions (MT CO_2e/yr)
Reduced Density Multi-Family	1,482	0.13	0.22	0.15	22.11
Existing Land Use[5]	-	0.13	0.22	0.15	-

Sources:
1. US Environmental Protection Agency, *Compilation of Air Pollutant Emission Factors, AP-42, Fifth Edition, Volume I, Chapter 4.3.5*, (1998). Data is not available to determine CO_2 and N_2O emissions from this process. The dominant GHG is CH_4.
2. The US EPA recommends a default value of 0.13 lb BOD5/capita/day.
3. The US EPA recommends a default value of 0.22 lb CH_4/BOD5.
4. The US EPA recommends a default value of 15% for the fraction anaerobically digested for domestic wastewater.
5. Data not available.

Where:

BOD5	Biological oxygen demand using a standard 5 day test
CH_4	Methane
CO_2	Carbon dioxide
CO_2e	Carbon dioxide equivalent
GWP	Global warming potential
kW-hr	Kilowatt-hour
lbs	Pounds
MG	Million gallons
MT	Metric ton
N_2O	Nitrous oxide
yr	Year

The Canyon Residences Project
Evaluation of Global Climate Change Impacts

Table GHG-ALT4-1
Summary of Annual GHG Emissions

	Construction Emissions		Operational Direct Emissions		Operational Indirect Emissions				Total***
Land Use	**Total* Construction** (MT CO_2e)	**Annualized** Construction** (MT CO_2e)	**Motor Vehicles** (MT CO_2e/yr)	**Area Sources** (MT CO_2e/yr)	**Electricity** (MT CO_2e/yr)	**Solid Waste** (MT CO_2e/yr)	**Water** (MT CO_2e/yr)	**Wastewater** (MT CO_2e/yr)	(MT CO_2e/yr)
Mixed Use	4,439.33	147.98	8,409.07	958.07	971.15	16.72	83.45	32.84	10,619.28
With 15% Less Energy Consumption	4,439.33	147.98	8,409.07	814.50	825.48	16.72	83.45	32.84	10,330.03
Existing Land Use	-	-	696.17	66.09	201.69	8.20	13.87	2.56	988.58
Net Total	4,439.33	147.98	7,712.90	891.99	769.46	8.52	69.58	30.28	9,630.69
Net Total with 15% Less Energy Consumption	4,439.33	147.98	7,712.90	748.42	623.79	8.52	69.58	30.28	9,341.45

* Based on the proposed Project. Construction emissions were not calculated sperately for the alternative, which is assumed to be similar to the proposed Project.
** Annualized over the "project lifetime" (30 years). Included in the total emissions.
*** Totals may not add up exactly due to rounding.

The Canyon Residences Project
Evaluation of Global Climate Change Impacts

Table GHG-ALT4-2
Operational Motor Vehicle GHG Emissions

Land Use	Equipment Type	Annual CO_2 Emissions[1] (Tons CO_2/yr)	CO_2 to CO_2e Ratio[2]	Annual CO_2e Emissions (MT CO_2e/yr)
Mixed Use	Motor Vehicles	8,805.94	0.950	8,409.07
Existing Land Use	Motor Vehicles	729.03	0.950	696.17
Net Total		**8,076.91**		**7,712.90**

Sources:

1. Estimated CO_2 emission from URBEMIS2007.
2. US Environmental Protection Agency, Office of Transportation and Air Quality, *Emission Facts - Greenhouse Gas Emissions from a Typical Passenger Vehicle* EPA420-F-05-004, (2005) 4. Passenger vehicle CO_2 emissions are assumed to be 95% of GHG emissions on a CO_2 equivalent basis.

Where:

CO_2	Carbon dioxide
CO_2e	Carbon dioxide equivalent
MT	Metric ton
yr	Year

The Canyons Residences Project
Evaluation of Global Climate Change Impacts

Table GHG-ALT4-3
Area Source GHG Emissions

Land Use	CO_2 Emission Factor[1] GWP = 1 (kg/MMBtu)	CH_4 Emission Factor[2] GWP = 21 (kg/MMBtu)	N_2O Emission Factor[2] GWP = 310 (kg/MMBtu)	Annual CO_2 Emissions[3] (Tons CO_2/yr)	Annual CO_2e Emissions (MT CO_2e/yr)
Mixed Use					
Natural Gas (with Title 24 [2005] adjustment)[4]	56.06	0.0059	0.0001	1,052.16	957.14
Landscape Maintenance	56.06	0.0059	0.0001	1.03	0.94
Total				1,053.19	958.07
With 15% Less Energy Consumption				895.36	814.50
Existing Land Uses					
Natural Gas	56.06	0.0059	0.0001	72.15	65.63
Landscape Maintenance	56.06	0.0059	0.0001	0.50	0.45
Total				72.65	66.09
Net Total				**980.54**	**891.99**
With 15% Less Energy Consumption				**822.71**	**748.42**

Sources:
1. URBEMIS2007 uses a CO_2 emission factor of 120,000 pounds per million cubic feet. This was converted to kg/MMBtu.
2. California Climate Action Registry, *General Reporting Protocol: Reporting Entity-Wide Greenhouse Gas Emissions Version 3.0*, (2008) 97-99.
3. Estimated CO_2 emissions from URBEMIS2007. URBEMIS2007 assumes 4,011.5 cubic feet/unit/month of natural gas for multi-family units. A 15.7 percent reduction was taken into account due to compliance with the Title 24 (2005) Building Code standards.
4. California Energy Commission, Impact Analysis: 2008 Update to the California Energy Energy Efficiency Standards, (2007). Based on this study, natural gas consumption is reduced by 15.7 percent compared to the previous 2001 standard.

Where:

CH_4	Methane	MMBtu	Million British thermal units
CO_2	Carbon dioxide	MT	Metric ton
CO_2e	Carbon dioxide equivalent	N_2O	Nitrous oxide
GWP	Global warming potential	yr	Year
kg	Kilogram		

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Urbemis 2007 Version 9.2.4

Combined Annual Emissions Reports (Tons/Year)

File Name: Z:\Alan Sako\291.06 The Canyon Residences\Alternatives\Alt 4\Urbemis Canyon Residences - Alt 4 Operation.urb924
Project Name: The Canyon Residences - Alternative 4 Operation
Project Location: South Coast AQMD
On-Road Vehicle Emissions Based on: Version : Emfac2007 V2.3 Nov 1 2006
Off-Road Vehicle Emissions Based on: OFFROAD2007

Summary Report:

AREA SOURCE EMISSION ESTIMATES

	CO2
TOTALS (tons/year, unmitigated)	1,249.14
TOTALS (tons/year, mitigated)	1,249.14
Percent Reduction	0.00

OPERATIONAL (VEHICLE) EMISSION ESTIMATES

	CO2
TOTALS (tons/year, unmitigated)	9,016.38
TOTALS (tons/year, mitigated)	8,805.94
Percent Reduction	2.33

SUM OF AREA SOURCE AND OPERATIONAL EMISSION ESTIMATES

	CO2
TOTALS (tons/year, unmitigated)	10,265.52
TOTALS (tons/year, mitigated)	10,055.08
Percent Reduction	2.05

Area Source Unmitigated Detail Report:

AREA SOURCE EMISSION ESTIMATES Annual Tons Per Year, Unmitigated

Source	CO2
Natural Gas	1,248.11
Hearth	0.00
Landscape	1.03
Consumer Products	
Architectural Coatings	
TOTALS (tons/year, unmitigated)	1,249.14

Area Source Mitigated Detail Report:

AREA SOURCE EMISSION ESTIMATES Annual Tons Per Year, Mitigated

Source	CO2
Natural Gas	1,248.11
Hearth	0.00
Landscape	1.03
Consumer Products	
Architectural Coatings	
TOTALS (tons/year, mitigated)	1,249.14

Area Source Changes to Defaults

Percent residential using natural gas changed from 78% to 100%

Percentage of residences with wood stoves changed from 10% to 0%

Percentage of residences with wood fireplaces changed from 5% to 0%

Percentage of residences with natural gas fireplaces changed from 85% to 0%

The number of persons per household for consumer product use changed from 3 persons to 2.76 persons

Operational Unmitigated Detail Report:

OPERATIONAL EMISSION ESTIMATES Annual Tons Per Year, Unmitigated

Source	CO2
Apartments mid rise	3,550.07
Strip mall	5,466.31
TOTALS (tons/year, unmitigated)	9,016.38

Operational Mitigated Detail Report:

OPERATIONAL EMISSION ESTIMATES Annual Tons Per Year, Mitigated

Source	CO2
Apartments mid rise	3,448.96
Strip mall	5,356.98
TOTALS (tons/year, mitigated)	8,805.94

Operational Settings:

Includes correction for passby trips

Does not include double counting adjustment for internal trips

Analysis Year: 2012 Season: Annual

Emfac: Version : Emfac2007 V2.3 Nov 1 2006

Summary of Land Uses

Land Use Type	Acreage	Trip Rate	Unit Type	No. Units	Total Trips	Total VMT
Apartments mid rise	8.55	6.72	dwelling units	325.00	2,184.00	19,317.48
Strip mall		42.94	1000 sq ft	140.00	6,011.60	29,749.06
					8,195.60	49,066.54

Vehicle Fleet Mix

Vehicle Type	Percent Type	Non-Catalyst	Catalyst	Diesel
Light Auto	51.5	0.6	99.2	0.2
Light Truck < 3750 lbs	7.3	1.4	95.9	2.7
Light Truck 3751-5750 lbs	23.0	0.4	99.6	0.0
Med Truck 5751-8500 lbs	10.7	0.9	99.1	0.0
Lite-Heavy Truck 8501-10,000 lbs	1.6	0.0	81.2	18.8
Lite-Heavy Truck 10,001-14,000 lbs	0.5	0.0	60.0	40.0
Med-Heavy Truck 14,001-33,000 lbs	0.9	0.0	22.2	77.8
Heavy-Heavy Truck 33,001-60,000 lbs	0.5	0.0	0.0	100.0
Other Bus	0.1	0.0	0.0	100.0
Urban Bus	0.1	0.0	0.0	100.0
Motorcycle	2.8	60.7	39.3	0.0
School Bus	0.1	0.0	0.0	100.0
Motor Home	0.9	0.0	88.9	11.1

Travel Conditions

	Residential			Commercial		
	Home-Work	Home-Shop	Home-Other	Commute	Non-Work	Customer
Urban Trip Length (miles)	12.7	7.0	9.5	13.3	7.4	8.9
Rural Trip Length (miles)	17.6	12.1	14.9	15.4	9.6	12.6
Trip speeds (mph)	30.0	30.0	30.0	30.0	30.0	30.0
% of Trips - Residential	32.9	18.0	49.1			
% of Trips - Commercial (by land use)						
Strip mall				2.0	1.0	97.0

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Table GHG-ALT4-4
Electrical Consumption GHG Emissions

Land Use	Units	Efficiency[1]	Electrical Consumption Factor[2] (kW-hr/unit/yr)	Annual Consumption Factor (MW-hr/yr)	CO_2 Emission Factor[3] GWP = 1 (lbs/MW-hr)	CH_4 Emission Factor[3] GWP = 21 (lbs/MW-hr)	N_2O Emission Factor[3] GWP = 310 (lbs/MW-hr)	Annual CO_2e Emissions (MT CO_2e/yr)
Mixed Use								
Multi-Family Residential								
With Title 24 (2005) adjustment	325 DU	24.3%	4,259.26	1,384.26	678.88	0.029	0.011	428.79
With 15% Less Energy Consumption	325 DU	15.0%	3,620.37	1,176.62	678.88	0.029	0.011	364.47
Commercial								
With Title 24 (2005) adjustment	140,000 sf	7.7%	12.51	1,750.93	678.88	0.029	0.011	542.36
With 15% Less Energy Consumption	140,000 sf	15.0%	10.63	1,488.29	678.88	0.029	0.011	461.01
Existing Land Uses								
Commercial	63,226 gsf	0.0%	11	695.49	678.88	0.029	0.011	215.43
Net Total								**755.72**
With 15% Less Energy Consumption								**610.05**

Sources:

1. California Energy Commission, *Impact Analysis: 2008 Update to the California Energy Energy Efficiency Standards*, (2007).
   The efficiency percentages are reductions from baseline energy use due to revisions in the California Title 24 Building Code Standards. The efficiency percentages were based on the cumulative 'Percent Reduction from Baseline' values in Table 2 of the 2005 Impact Analysis reports listed above (24.3% for multi-family residential; 7.7% for commercial). The project is proposing to increase energy efficiency by 15% beyond Title 24 (2005), as a project design feature.
2. South Coast Air Quality Management District, *CEQA Air Quality Handbook*, (1993 and subsequent updates) pp. A9-114.
   It is assumed that because the factors were developed in 1993, they do not represent current energy consumption factors. Therefore, increases in the 2005 version of the Title 24 Building code Standards were taken into account using data from the California Energy Commission, as cited above.
3. California Air Resources Board, *Local Government Operations Protocol for the Quantification and Reporting of Greenhouse Gas Emissions Inventories*, Version 1.0, (2008) 174.
   The CO_2 factor is for Southern California Edison.

Where:

CH_4	Methane	lbs	Pounds
CO_2	Carbon dioxide	MW-hr	Megawatt-hour
CO_2e	Carbon dioxide equivalent	MT	Metric ton
gsf	Gross square feet	n/a	Not applicable
GWP	Global warming potential	N_2O	Nitrous oxide
kW-hr	Kilowatt-hour	yr	Year

The Canyon Residences Project
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Table GHG-ALT4-5
Solid Waste GHG Emissions

Land Use	Solid Waste Generation[1] (Tons/yr)	CO_2e Emission Factor[2] (MT CO_2e/MT waste)	Annual CO_2e Emissions (MT CO_2e/yr)
Mixed Use	167.53	0.11	16.72
Existing Land Uses	82.19	0.11	8.20
Net Total	85.34		8.52

Sources:
1. Section 5.13, Solid Waste. Values are scaled down and inclusive of 50 percent diversion.

2. US Environmental Protection Agency, Office of Solid Waste and Emergency Response, *Greenhouse Gas Emission Factors for Management of Selected Materials in Municipal Solid Waste (EPA-530-R-98-013)*, (1998). The factor is based on mixed municipal solid waste as disposed in landfills without landfill gas recovery.

Where:

CO_2e	Carbon dioxide equivalent
MT	Metric ton
yr	Year

The Canyon Residences Project
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Table GHG-ALT4-6
Potable Water Supply, Conveyance, Treatment, and Distribution GHG Emissions

Land Use	Action	Net Potable Water Needs Estimate[1] (MG/yr)	Electrical Demand Factor[2,3,4] (kW-hr/MG)	Annual Electrical Demand (10^6 kW-hr/year)	CO_2e Emission Factor[5] (MT $CO_2e/10^6$ kW-hr)	Annual CO_2e Emissions (MT CO_2e/yr)
Mixed Use	Supply & Conveyance	25.60	9,727	0.249	290	72.22
Mixed Use	Treatment	25.60	111	0.003	290	0.82
Mixed Use	Distribution	25.60	1,272	0.033	290	9.44
Mixed Use	Recycled Water	3.78	875	0.003	290	0.96
Existing Land Use	Supply & Conveyance	4.30	9,727	0.042	290	12.14
Existing Land Use	Treatment	4.30	111	0.000	290	0.14
Existing Land Use	Distribution	4.30	1,272	0.005	290	1.59
Net Total						**69.58**

Sources:

1. Section 5.11, Water. Values are scaled down and converted to million gallons per year.
2. California Energy Commission, *California's Water-Energy Relationship, Final Staff Report (CEC-700-2005-011-SF)*, (2005) 26.
3. California Energy Commission, *Refining Estimates of Water-Related Energy Use in California, PIER Final Project Report (CEC-500-2006-118)*, (2006) 22. Prepared by Navigant Consulting, Inc.
4. R. C. Wilkinson, et. al, California Department of Water Resources, Water Sources "Powering" Southern California, n.d. Recycled water was estimated to use 285 kW-hr per acre-foot.
5. California Climate Action Registry, "Reporting Online Tool, Public Annual Entity Emissions," *Southern California Edison, PUP Report*, (2006), http://www.climateregistry.org/CARROT/public/Reports.aspx.

Where:

CO_2e	Carbon dioxide equivalent
GWP	Global warming potential
kW-hr	Kilowatt-hour
lbs	Pounds
MG	Million gallons
MT	Metric ton
N_2O	Nitrous oxide
yr	Year

The Canyon Residences Project
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Table GHG-ALT4-7
Wasterwater Treatment Electrical Demand GHG Emissions

Land Use	Net Wastewater Generation Rate[1] (MG/yr)	Electrical Demand Factor[2] (kW-hr/MG)	Annual Demand Factor (10^6 kW-hr/yr)	CO_2e Emision Factor[3] (MT $CO_2e/10^6$ kW-hr)	Annual CO_2e Emissions (MT CO_2e/yr)
Mixed Use	35.11	1,911	0.07	290	19.46
Existing Land Use	4.62	1,911	0.01	290	2.56

Sources:
1. Section 5.8, Sewage Disposal. Values are scaled down and converted to million gallons per year.
2. California Energy Commission, *Refining Estimates of Water-Related Energy Use in California, PIER Final Project Report (CEC-500-2006-118)*. Prepared by Navigant Consulting, Inc., (2006) 22.
3. California Climate Action Registry, "Reporting Online Tool, Public Annual Entity Emissions," *Southern California Edison, PUP Report*, (2006), http://www.climateregistry.org/CARROT/public/Reports.aspx.

Table GHG-ALT4-8
Wastewater Treatment Process GHG Emissions[1]

Project	Maximum Population	Pounds BOD5 per Capita per Day[2] (lbs BOD5/capita/day)	Pounds CH_4 per Pound BOD5[3] (lbs CH_4/BOD5)	Fraction Anaerobically Digested[4]	Annual CO_2e Emissions (MT CO_2e/yr)
Mixed Use	897	0.13	0.22	0.15	13.38
Existing Land Use[5]	-	0.13	0.22	0.15	-

Sources:
1. US Environmental Protection Agency, *Compilation of Air Pollutant Emission Factors, AP-42, Fifth Edition, Volume I, Chapter 4.3.5*, (1998). Data is not available to determine CO_2 and N_2O emissions from this process. The dominant GHG is CH_4.
2. The US EPA recommends a default value of 0.13 lb BOD5/capita/day.
3. The US EPA recommends a default value of 0.22 lb CH_4/BOD5.
4. The US EPA recommends a default value of 15% for the fraction anaerobically digested for domestic wastewater.
5. Data not available.

Where:

BOD5	Biological oxygen demand using a standard 5 day test
CH_4	Methane
CO_2	Carbon dioxide
CO_2e	Carbon dioxide equivalent
GWP	Global warming potential
kW-hr	Kilowatt-hour
lbs	Pounds
MG	Million gallons
MT	Metric ton
N_2O	Nitrous oxide
yr	Year

Supplemental Traffic Impact Analysis

CANYON RESIDENCES
ALTERNATIVE PROJECT
SUPPLEMENTAL TRAFFIC IMPACT ANALYSIS
AUGUST 7, 2009

Alternative Project Description

This supplemental report examines a lower density 537-unit *Alternative Project* for the Canyon Residences. The 537-unit *Alternative Project* features the same existing and future traffic characteristics of the 775-unit *Project*, except for the number of trips generated during the weekday, and during the weekday A.M. and P.M. peak hours.

Trip Generation Comparison

The trip generation characteristics for the *Alternative Project* are established by the ITE *Trip Generation* manual. Table I provides a comparison of trip generation between the existing school use and the *Alternative Project*, including the net change in trip ends generated during the A.M. and P.M. weekday peak hours.

TABLE I - TRIP GENERATION COMPARISON

WEEKDAY A.M. PEAK HOUR

Land Use	Size	Trip Rate	Inbound/ Outbound	Inbound Trip Ends	Outbound Trip Ends	Total Trip Ends
Canyon Residences	537 DU	0.51/DU	20%/80%	55	219	274
Private School	480 SDT			79	217	296
Net A.M. Peak Hour Trips Generated on a Weekday				**-24**	**2**	**-22**

WEEKDAY P.M. PEAK HOUR

Land Use	Size	Trip Rate	Inbound/ Outbound	Inbound Trip Ends	Outbound Trip Ends	Total Trip Ends
Canyon Residences	537 DU	0.62/DU	65%/35%	216	117	333
Private School	480 SDT			56	64	120
Net P.M. Peak Hour Trips Generated on a Weekday				**160**	**53**	**213**

Notes: DU = Dwelling Units; SDT = Students Enrolled

Apartment Trip Generation Data from *Trip Generation Manual*, 7th Ed., Institute of Transportation Engineers.
Private School Trip Generation Data from KHR Associates' Supplemental Study results.
Assumed All Dwelling Units Fully Occupied; All Trips Rounded to Nearest Unit

As shown in Table I, the *Alternative Project* will generate 22 less overall trip ends during the weekday A.M. peak hour (24 less inbound and 2 more outbound) than the existing school use. During the weekday P.M. peak hour, the *Alternative Project* will generate 213 more overall trip ends (160 more inbound and 53 more outbound) than the existing school use.

Trip Distribution/Trip Assignment

Trip distribution and trip assignments for the *Alternative Project* were assumed to be the same as with the 775-unit *Project*. The resulting A.M. and P.M. peak hour trip assignment for each of the study intersections are depicted in Figures 1 and 2, respectively.

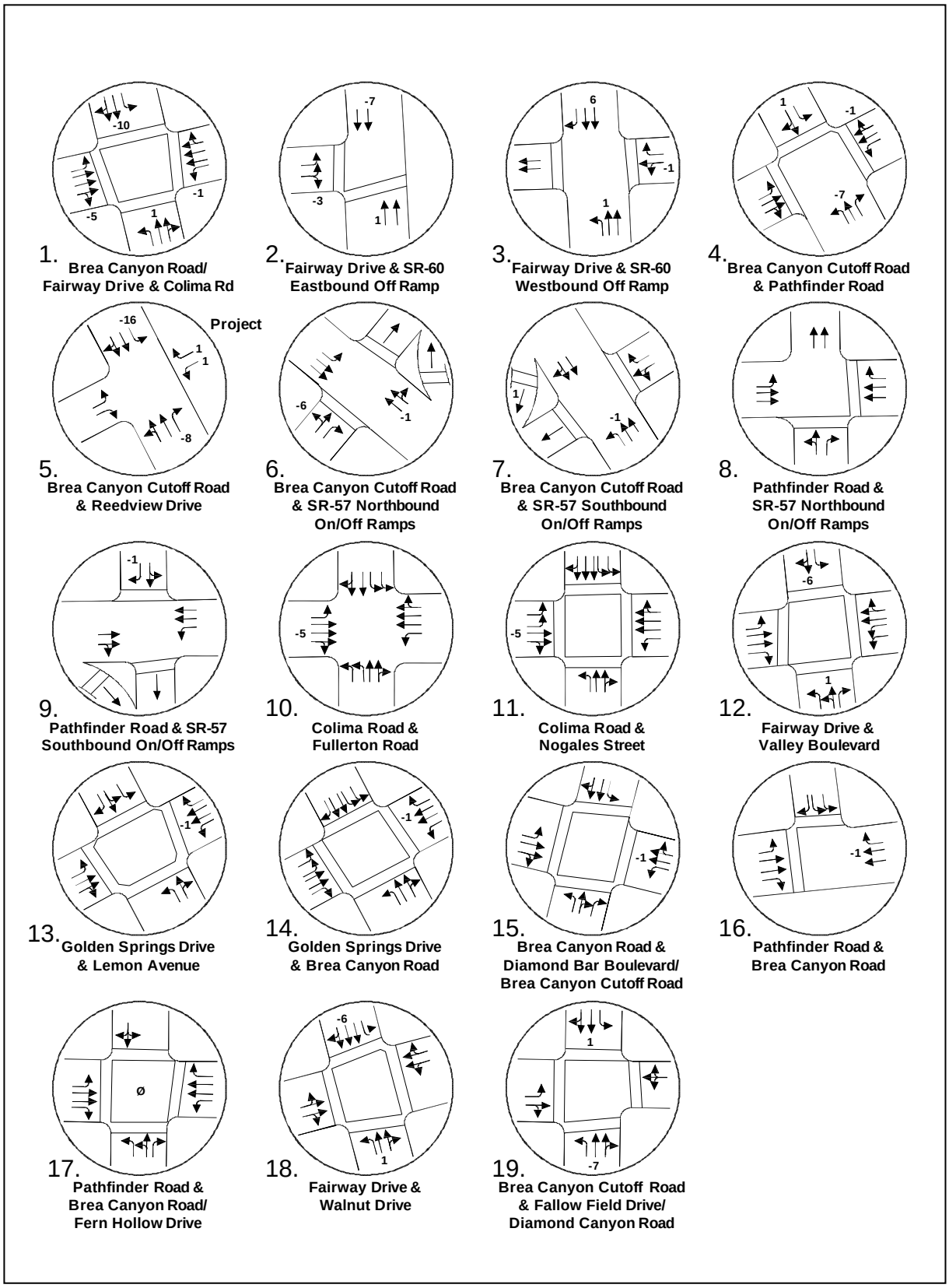

Figure 1 – A.M. Peak Hour Trip Assignments

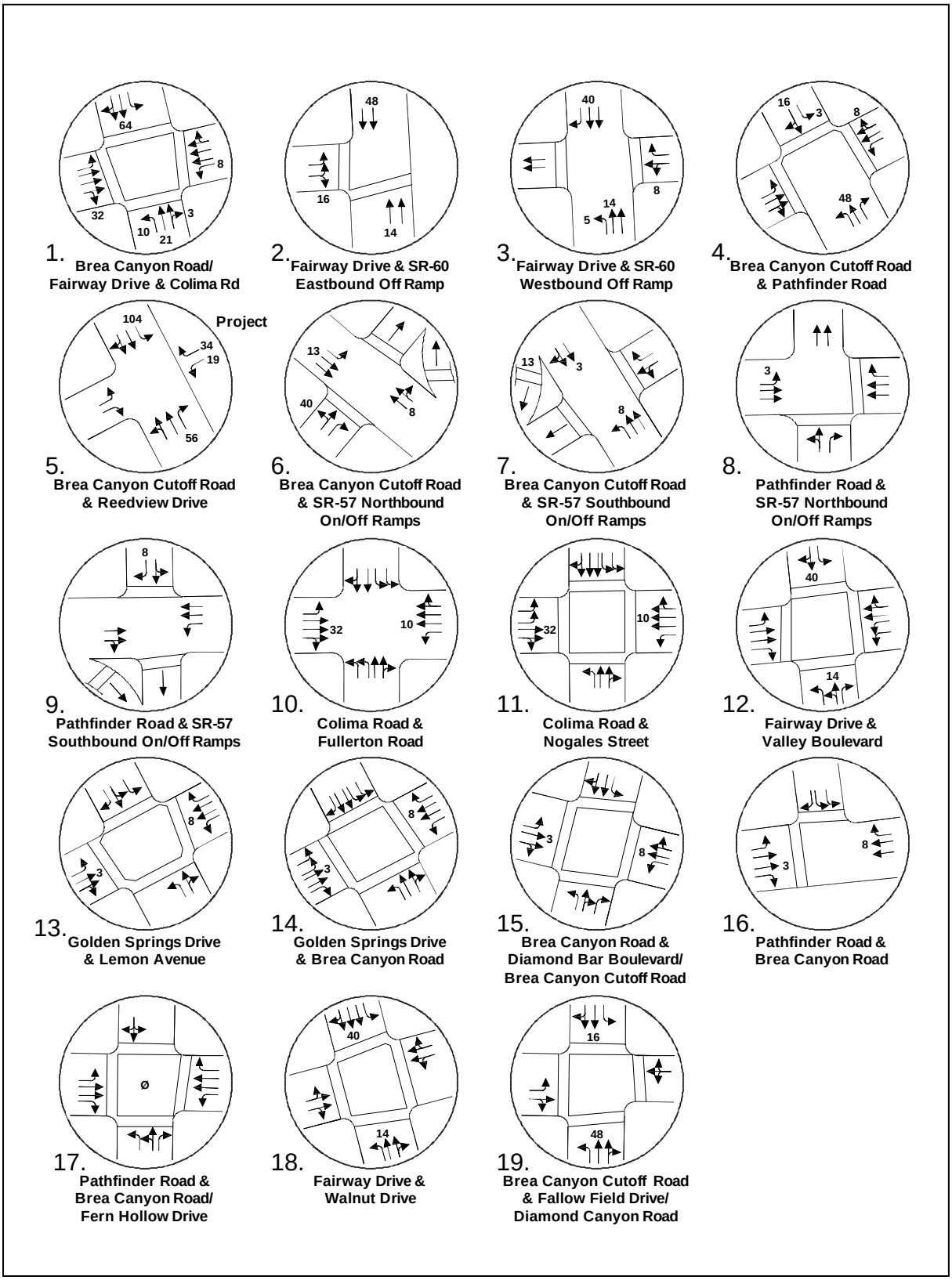

Figure 2 – P.M. Peak Hour Trip Assignments

Existing + Ambient With & Without Alternative Project

Table II summarizes a comparison between the ICU-based intersection LOS for the existing plus ambient scenario and the existing plus ambient plus *Alternative Project* traffic scenario, during the weekday A.M. and P.M. peak hours (see Appendix A for calculation sheets). Table III summarizes the HCM-based intersection LOS for the same scenarios (see Appendix B for calculation sheets).

TABLE II – EX.+AMBIENT & EX.+AMBIENT+ALTERNATIVE PROJECT ICU-BASED INTERSECTION LOS

	EX.+AMBIENT				EX.+AMBIENT +ALT. PROJECT			
	A.M. Peak		P.M. Peak		A.M. Peak		P.M. Peak	
Intersection	**ICU**	**LOS**	**ICU**	**LOS**	**ICU**	**LOS**	**ICU**	**LOS**
1. Brea Canyon Cutoff Rd./Colima Rd.	**0.944**	**E**	0.870	D	**0.941**	**E**	0.896	D
2. Fairway Dr./SR-60 E/B Ramps	0.524	A	0.690	B	0.523	A	0.700	C
3. Fairway Dr./SR-60 W/B Ramps	0.554	A	0.753	C	0.555	A	0.773	C
4. Brea Canyon Cutoff Rd./Pathfinder Rd.	0.703	C	0.875	C	0.704	C	0.885	D
5. Brea Canyon Cutoff Rd./Reedview Dr.	0.344	A	0.347	A	0.345	A	0.451	A
6. Brea Canyon Cutoff Rd./SR-57 N/B Ramps	0.472	A	0.515	A	0.468	A	0.543	A
7. Brea Canyon Cutoff Rd./SR-57 S/B Ramps	0.464	A	0.526	A	0.470	A	0.527	A
8. Pathfinder Rd./SR-57 N/B Ramps	0.638	B	0.596	A	0.638	B	0.598	A
9. Pathfinder Rd./SR-57 S/B Ramps	0.689	B	0.590	A	0.689	B	0.595	A
10. Colima Rd./Fullerton Rd.	**0.988**	**E**	0.901	D	**0.988**	**E**	**0.907**	**E**
11. Colima Rd./Nogales St.	**1.152**	**F**	**1.012**	**F**	**1.150**	**F**	**1.022**	**F**
12. Fairway Dr./Valley Blvd.	0.645	B	0.854	D	0.644	B	0.864	D
13. Golden Springs Dr./Lemon Ave.	0.730	B	0.708	B	0.730	B	0.711	B
14. Brea Canyon Rd./Golden Springs Dr.	0.542	A	**0.964**	**E**	0.542	A	**0.965**	**E**
15. Brea Canyon Rd./Diamond Bar Blvd.	0.622	B	0.671	B	0.622	B	0.671	B
16. Pathfinder Rd./Brea Canyon Rd.	0.508	A	0.642	B	0.508	A	0.644	B
17. Pathfinder Rd./Fern Hollow Dr.	0.874	D	0.626	B	0.874	D	0.626	B
18. Walnut Drive North/Fairway Dr.	0.525	A	0.597	A	0.525	A	0.606	B
19. Brea Canyon Cutoff Rd./Fallow Field Dr.	0.359	A	0.513	A	0.357	A	0.528	A

Denotes Intersection Not Required to be Analyzed by County's Memorandum of Understanding
Boldface Denotes Unacceptable LOS "E" or "F"

TABLE III - EX.+AMBIENT & EX.+AMBIENT+ALTERNATIVE PROJECT HCM-BASED INTERSECTION LOS

	EX.+AMBIENT				EX.+AMBIENT +ALT. PROJECT			
	A.M. Peak Hour		P.M. Peak Hour		A.M. Peak Hour		P.M. Peak Hour	
Intersection	**Delay[1]**	**LOS**	**Delay[1]**	**LOS**	**Delay[1]**	**LOS**	**Delay[1]**	**LOS**
1. Fairway Dr./SR-60 E/B Ramps	11.6	B	11.1	B	11.6	B	14.2	B
2. Fairway Dr./SR-60 W/B Ramps	19.8	B	23.4	C	20.1	C	29.3	C
3. Brea Canyon Cutoff Rd./Reedview Dr.	12.8	B	14.6	C	13.9	B	15.6	C
4. Brea Canyon Cutoff Rd./SR-57 N/B Ramps	12.3	B	12.9	B	12.2	B	14.5	B
5. Brea Canyon Cutoff Rd./SR-57 S/B Ramps	11.5	B	12.3	B	11.6	B	12.3	B
6. Pathfinder Rd./SR-57 N/B Ramps	19.5	B	23.3	C	19.4	B	23.6	C
7. Pathfinder Rd./SR-57 S/B Ramps	19.3	B	15.3	B	19.4	B	15.5	B

[1] Worst Case Direction Average Intersection Delay Per Vehicle (In Seconds)

Table IV summarizes the V/C differences and LOS changes between the existing plus ambient traffic scenario and the existing plus ambient plus *Alternative Project* traffic scenario for weekday A.M. and P.M. peak hour LOS under the ICU method. Table V provides the same comparisons for those intersections analyzed under the HCM method.

TABLE IV – ICU-BASED V/C CHANGE BETWEEN EX.+AMBIENT VS. EX.+AMBIENT+ALTERNATIVE PROJECT

	A.M. PEAK HOUR		P.M. PEAK HOUR	
Intersection	**V/C Change**	**LOS**	**V/C Change**	**LOS**
1. Brea Canyon Cutoff Rd./Colima Rd.	-0.003	E	**0.026**	**D**
2. Fairway Dr./SR-60 E/B Ramps	-0.001	A	0.010	B to C
3. Fairway Dr./SR-60 W/B Ramps	0.001	A	0.020	C
4. Brea Canyon Cutoff Rd./Pathfinder Rd.	0.001	C	0.010	C to D
5. Brea Canyon Cutoff Rd./Reedview Dr.	0.001	A	0.104	A
6. Brea Canyon Cutoff Rd./SR-57 N/B Ramps	-0.004	A	0.028	A
7. Brea Canyon Cutoff Rd./SR-57 S/B Ramps	0.006	A	0.001	A
8. Pathfinder Rd./SR-57 N/B Ramps	0.000	B	0.002	A
9. Pathfinder Rd./SR-57 S/B Ramps	0.000	B	0.005	A
10. Colima Rd./Fullerton Rd.	0.000	E	0.006	E
11. Colima Rd./Nogales St.	-0.002	F	**0.010**	**F**
12. Fairway Dr./Valley Blvd.	-0.001	B	0.010	D
13. Golden Springs Dr./Lemon Ave.*	-0.001	B	0.003	B
14. Golden Springs Dr./Brea Canyon Rd.*	0.000	A	0.001	E
15. Brea Canyon Rd./Diamond Bar Blvd.*	0.000	D	0.000	D
16. Pathfinder Rd./Brea Canyon Rd.*	0.000	A	0.002	B
17. Pathfinder Rd./Fern Hollow Dr.*	0.000	D	0.000	B
18. Fairway Dr./Walnut Dr.*	0.000	A	0.009	B to A
19. Brea Canyon Cutoff Rd./Fallow Field Dr.*	-0.002	A	0.015	A

Note: Negative Number indicates reduced traffic generation by Alternative Project compared to Existing Use.
Denotes Intersection Not Required to be Analyzed by County's Memorandum of Understanding
Boldface Denotes V/C Exceeds "Significant Impact" Threshold for Given LOS

TABLE V – HCM-BASED DELAY CHANGE BETWEEN EX.+AMBIENT VS. EX.+AMBIENT+ALTERNATIVE PROJECT

	A.M. PEAK HOUR		P.M. PEAK HOUR	
Intersection	**Change in Delay (Sec.)**	**Resulting LOS**	**Change in Delay (Sec.)**	**Resulting LOS**
1. Fairway Dr./SR-60 E/B Ramps	0.0	B	3.1	B
2. Fairway Dr./SR-60 W/B Ramps	0.3	B	5.9	C
3. Brea Canyon Cutoff Rd./Reedview Dr.	1.1	B	1.0	B to C
4. Brea Canyon Cutoff Rd./SR-57 N/B Ramps	-0.1	B	1.6	B
5. Brea Canyon Cutoff Rd./SR-57 S/B Ramps	0.1	B	0.0	B
6. Pathfinder Rd./SR-57 N/B Ramps	-0.1	B	0.3	C
7. Pathfinder Rd./SR-57 S/B Ramps	0.1	B	0.2	B

As noted in Table IV, the intersections of Brea Canyon Cutoff Road and Colima Road; and Colima Road and Nogales Street will experience increases in volume to capacity ratios during the P.M. peak hour that exceed the County of Los Angeles' threshold limit for "significant impact" at an intersection.

Existing + Ambient + Related Projects With & Without Alternative Project

Table VI summarizes a comparison between the ICU-based intersection LOS for the existing plus ambient plus Related Projects scenario and the existing plus ambient plus Related Projects plus *Alternative Project* traffic scenario, during the weekday A.M. and P.M. peak hours (see Appendix C for calculation sheets). Table VII summarizes the HCM-based intersection LOS for the same scenarios (see Appendix D for calculation sheets).

TABLE VI – EX.+AMBIENT+ RELATED PROJECTS WITH & WITHOUT ALTERNATIVE PROJECT ICU-BASED INTERSECTION LOS

	EX.+AMBIENT +RELATED PROJECTS				EX.+AMBIENT+RELATED PROJECTS+ALT. PROJECT			
	A.M. Peak		P.M. Peak		A.M. Peak		P.M. Peak	
Intersection	**ICU**	**LOS**	**ICU**	**LOS**	**ICU**	**LOS**	**ICU**	**LOS**
1. Brea Canyon Cutoff Rd./Colima Rd.	**0.985**	**E**	**0.901**	**E**	**0.982**	**E**	**0.928**	**E**
2. Fairway Dr./SR-60 E/B Ramps	0.544	A	0.720	C	0.543	A	0.730	C
3. Fairway Dr./SR-60 W/B Ramps	0.557	A	0.781	C	0.558	A	0.802	D
4. Brea Canyon Cutoff Rd./Pathfinder Rd.	0.703	C	0.839	D	0.704	C	0.849	D
5. Brea Canyon Cutoff Rd./Reedview Dr.	0.344	A	0.347	A	0.345	A	0.451	A
6. Brea Canyon Cutoff Rd./SR-57 N/B Ramps	0.460	A	0.517	A	0.456	A	0.545	A
7. Brea Canyon Cutoff Rd./SR-57 S/B Ramps	0.472	A	0.528	A	0.472	A	0.528	A
8. Pathfinder Rd./SR-57 N/B Ramps	0.634	B	0.599	A	0.634	B	0.601	B
9. Pathfinder Rd./SR-57 S/B Ramps	0.692	B	0.597	A	0.692	B	0.597	A
10. Colima Rd./Fullerton Rd.	**0.991**	**E**	**0.914**	**E**	**0.991**	**E**	**0.921**	**E**
11. Colima Rd./Nogales St.	**1.168**	**F**	**1.032**	**F**	**1.166**	**F**	**1.042**	**F**
12. Fairway Dr./Valley Blvd.	0.649	B	0.874	D	0.646	B	**0.904**	**E**
13. Golden Springs Dr./Lemon Ave.	0.736	C	0.747	C	0.736	C	0.750	C
14. Brea Canyon Rd./Golden Springs Dr.	0.565	A	**0.984**	**E**	0.565	A	**0.985**	**E**
15. Brea Canyon Rd./Diamond Bar Blvd.	0.626	B	0.690	B	0.626	B	0.691	B
16. Pathfinder Rd./Brea Canyon Rd.	0.517	A	0.649	B	0.516	A	0.651	B
17. Pathfinder Rd./Fern Hollow Dr.	0.875	D	0.632	B	0.875	D	0.632	B
18. Walnut Drive North/Fairway Dr.	0.538	A	0.610	B	0.538	A	0.618	B
19. Brea Canyon Cutoff Rd./Fallow Field Dr.	0.359	A	0.514	A	0.357	A	0.529	A

Denotes Intersection Not Required to be Analyzed by County's Memorandum of Understanding
Boldface Denotes Unacceptable LOS "E" or "F"

TABLE VII - EX.+AMBIENT+ RELATED PROJECTS WITH & WITHOUT ALTERNATIVE PROJECT HCM-BASED INTERSECTION LOS

	EX.+AMBIENT +RELATED PROJECTS				EX.+AMBIENT+ALT. PROJECT +RELATED PROJECTS			
	A.M. Peak Hour		P.M. Peak Hour		A.M. Peak Hour		P.M. Peak Hour	
Intersection	**Delay[1]**	**LOS**	**Delay[1]**	**LOS**	**Delay[1]**	**LOS**	**Delay[1]**	**LOS**
1. Fairway Dr./SR-60 E/B Ramps	11.7	B	13.2	B	11.6	B	14.2	B
2. Fairway Dr./SR-60 W/B Ramps	20.0	B	26.4	C	20.1	C	29.3	C
3. Brea Canyon Cutoff Rd./Reedview Dr.	12.8	B	14.6	C	13.9	B	15.6	C
4. Brea Canyon Cutoff Rd./SR-57 N/B Ramps	12.3	B	12.9	B	12.2	B	14.5	B
5. Brea Canyon Cutoff Rd./SR-57 S/B Ramps	11.6	B	12.3	B	11.6	B	12.3	B
6. Pathfinder Rd./SR-57 N/B Ramps	19.5	B	23.6	C	19.4	B	23.6	C
7. Pathfinder Rd./SR-57 S/B Ramps	19.4	B	15.4	B	19.4	B	15.5	B

[1] Worst Case Direction Average Intersection Delay Per Vehicle (In Seconds)

Table VIII summarizes the V/C differences and LOS changes under the existing plus ambient plus related projects traffic scenario and the existing plus ambient plus related projects plus *Alternative Project* traffic scenario for weekday A.M. and P.M. peak hour LOS under the ICU method. Table IX provides the same comparisons for those intersections analyzed under the HCM method.

TABLE VIII - ICU-BASED V/C CHANGE BETWEEN EX.+AMBIENT+ RELATED PROJECTS WITH & WITHOUT ALTERNATIVE PROJECT

	A.M. PEAK HOUR		P.M. PEAK HOUR	
Intersection	**V/C Change**	**LOS**	**V/C Change**	**LOS**
1. Brea Canyon Cutoff Rd./Colima Rd.	-0.003	E	**0.027**	**E**
2. Fairway Dr./SR-60 E/B Ramps	-0.001	A	0.010	C
3. Fairway Dr./SR-60 W/B Ramps	0.001	A	0.021	C to D
4. Brea Canyon Cutoff Rd./Pathfinder Rd.	0.001	C	0.010	D
5. Brea Canyon Cutoff Rd./Reedview Dr.	0.001	A	0.104	A
6. Brea Canyon Cutoff Rd./SR-57 N/B Ramps	-0.004	A	0.028	A
7. Brea Canyon Cutoff Rd./SR-57 S/B Ramps	0.000	A	0.000	A
8. Pathfinder Rd./SR-57 N/B Ramps	0.000	B	0.002	B
9. Pathfinder Rd./SR-57 S/B Ramps	0.000	B	0.000	A
10. Colima Rd./Fullerton Rd.	0.000	E	0.007	E
11. Colima Rd./Nogales St.	-0.002	F	**0.010**	**F**
12. Fairway Dr./Valley Blvd.	-0.003	B	**0.030**	**D to E**
13. Golden Springs Dr./Lemon Ave.*	0.000	C	0.003	C
14. Golden Springs Dr./Brea Canyon Rd.*	0.000	A	0.001	E
15. Brea Canyon Rd./Diamond Bar Blvd.*	0.000	B	0.001	B
16. Pathfinder Rd./Brea Canyon Rd.*	-0.001	A	0.002	B
17. Pathfinder Rd./Fern Hollow Dr.*	0.000	D	0.000	B
18. Fairway Dr./Walnut Dr.*	0.000	A	0.008	B
19. Brea Canyon Cutoff Rd./Fallow Field Dr.*	-0.002	A	0.015	A

Note: Negative Number indicates reduced traffic generation by Alternative Project compared to Existing Use.
Denotes Intersection Not Required to be Analyzed by County's Memorandum of Understanding
Boldface Denotes V/C Exceeds "Significant Impact" Threshold for Given LOS

TABLE IX - COMPARISON OF EX.+AMBIENT+RELATED PROJECTS & EX.+AMBIENT+RELATED PROJECTS+ ALTERNATIVE PROJECT HCM-BASED V/C RATIO & LOS

	A.M. PEAK HOUR		P.M. PEAK HOUR	
Intersection	**Delay (Sec.)**	**LOS**	**Delay (Sec.)**	**LOS**
1. Fairway Dr./SR-60 E/B Ramps	-0.1	B	1.0	B
2. Fairway Dr./SR-60 W/B Ramps	0.1	B	2.9	C
3. Brea Canyon Cutoff Rd./Reedview Dr.	1.1	B	1.0	C
4. Brea Canyon Cutoff Rd./SR-57 N/B Ramps	-0.1	B	1.6	B
5. Brea Canyon Cutoff Rd./SR-57 S/B Ramps	0.0	B	0.0	B
6. Pathfinder Rd./SR-57 N/B Ramps	-0.1	B	0.0	C
7. Pathfinder Rd./SR-57 S/B Ramps	0.0	B	0.1	B

As noted in Table VIII, the intersections of Brea Canyon Cutoff Road and Colima Road; Colima Road and Nogales Street; and Fairway Avenue and Valley Boulevard will experience increases in volume to capacity ratios during the P.M. peak hour that exceed the County of Los Angeles' threshold limit for "significant impact" at an intersection.

Mitigation Measures for Existing+Ambient+Alternative Project

Under the existing plus ambient plus *Alternative Project* scenario, mitigation measures for the two intersections significantly impacted by increased traffic generated by the *Alternative Project* include the following improvements:

1) At the intersection of Brea Canyon Cutoff Road and Colima Road, an additional southbound through lane will not only reduce the V/C down to a level of less than significant, but improve the LOS from "D" to "C." This improvement can be accomplished by striping changes and minor median modifications.
2) At the intersection of Colima Road and Nogales Street, a new separate northbound right turn lane will reduce the V/C to a level of less than significant. This improvement can be accomplished by striping changes and minor roadway widening within the existing rights of way.

The mitigated incremental changes in V/C ratios and LOS are summarized in Table X (see Appendix E for calculation sheets).

TABLE X – COMPARISON OF EX.+AMBIENT+ALTERNATIVE PROJECT & MITIGATED EX.+AMBIENT+ALTERNATIVE PROJECT ICU-BASED V/C RATIO & LOS

	A.M. PEAK HOUR		P.M. PEAK HOUR	
Intersection	**V/C Change**	**LOS**	**V/C Change**	**LOS**
Brea Canyon Cutoff Rd./Colima Rd.	-0.078	E to D	-0.095	D
Colima Rd./Nogales St.	0.000	F	-0.044	F to E

Mitigation Measures for Ex.+Ambient+Related Projects+Alternative Project

Under the existing plus ambient plus Related Projects plus *Alternative Project* scenario, mitigation measures for the three intersections significantly impacted by increased traffic generated by the *Alternative Project* include the following improvements:

1) Previously identified, at the intersection of Brea Canyon Cutoff Road and Colima Road, an additional southbound through lane will not only reduce the V/C down to a level of less than significant, but improve the LOS from "D" to "C." This improvement can be accomplished by striping changes and minor median modifications.
2) \Previously identified, at the intersection of Colima Road and Nogales Street, a new separate northbound right turn lane will reduce the V/C down to a level of less than significant. This improvement can be accomplished by striping changes and minor roadway widening within the existing rights of way.

3) At the intersection of Fairway Drive and Valley Boulevard, a separate southbound through lane will reduce the V/C down to a level of less than significant. This improvement can be accomplished by striping changes to the north leg.

The mitigated incremental changes in V/C ratios and LOS are summarized in Table XI. (see Appendix E for calculation sheets).

TABLE XI – COMPARISON OF EX.+AMBIENT+RELATED PROJECTS+ALTERNATIVE PROJECT & MITIGATED EX.+AMBIENT+RELATED PROJECTS+ALTERNATIVE PROJECT ICU-BASED V/C RATIO & LOS

	A.M. PEAK HOUR		P.M. PEAK HOUR	
Intersection	**V/C Change**	**LOS**	**V/C Change**	**LOS**
Brea Canyon Cutoff Rd./Colima Rd.	-0.082	E	-0.019	E
Colima Rd./Nogales St.	0.000	F	-0.043	F to E
Fairway Dr./Valley Blvd.	-0.060	B to A	-0.044	E to D

Site Access, Internal Circulation, & Parking

Proposed site access, internal circulation, and parking for the 537-unit *Alternative Project* are essentially the same as with the 775-unit *Project*, with the exception that the total number of on-site parking provided will be reduced to 1,074 spaces.

Traffic Signal Warrants

Based solely on the Caltrans Estimated Average Daily Traffic (EADT) Warrants and traffic volumes forecasted for the year 2012 at the intersection of Brea Canyon Cutoff Road and the main entrance driveway, it was determined that only one of the three EADT Warrants (i.e, Warrant 2 where the highest one-way traffic on the minor leg exceeds 1,600 vehicles per day) will be satisfied. Therefore, the intersection of Brea Canyon Cutoff Road and the main entrance driveway should not require traffic signalization prior to *Alternative Project* build-out.