Appendix B:
Air Quality and Greenhouse Gas Emissions Analysis Supporting Information

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

JOB: 5 Crow Canyon Road and I-680 NB Ramps
RUN: Hour 1 (WORST CASE ANGLE)
POLLUTANT: Carbon Monoxide

I. SITE VARIABLES

U=	1.0 M/S	Z0=	100. CM	ALT=	142. (M)
BRG=	WORST CASE	VD=	.0 CM/S		
CLAS=	7 (G)	VS=	.0 CM/S		
MIXH=	1000. M	AMB=	.0 PPM		
SIGTH=	5. DEGREES	TEMP=	8.4 DEGREE (C)		

II. LINK VARIABLES

	LINK DESCRIPTION	*	LINK COORDINATES (M) X1	Y1	X2	Y2	* TYPE	VPH	EF (G/MI)	H (M)	W (M)
A.	NB External	*	7	0	7	600	* AG	2458	2.8	.0	10.0
B.	NB Approach	*	7	600	7	757	* AG	1505	4.5	.0	10.0
C.	NB Depart	*	7	757	7	913	* AG	1072	4.5	.0	10.0
D.	NB External	*	7	913	7	1513	* AG	1072	2.8	.0	10.0
E.	NB Left	*	7	600	4	757	* AG	953	4.5	.0	10.0
F.	SB Left	*	0	913	4	757	* AG	0	4.5	.0	10.0
G.	SB External	*	0	1513	0	913	* AG	0	2.8	.0	10.0
H.	SB Approach	*	0	913	0	757	* AG	0	4.5	.0	10.0
I.	SB Depart	*	0	757	0	600	* AG	463	4.5	.0	10.0
J.	SB External	*	0	600	0	0	* AG	463	2.8	.0	10.0
K.	EB External	*	-750	750	-150	750	* AG	2740	2.8	.0	16.1
L.	EB Approach	*	-150	750	4	750	* AG	2740	4.5	.0	16.1
M.	EB Depart	*	4	750	157	750	* AG	3782	4.5	.0	16.1
N.	EB External	*	157	750	757	750	* AG	3782	2.8	.0	16.1
O.	WB External	*	757	763	157	763	* AG	2973	2.8	.0	16.1
P.	WB Approach	*	157	763	4	763	* AG	2973	4.5	.0	16.1
Q.	WB Depart	*	4	763	-150	763	* AG	2854	4.5	.0	16.1
R.	WB External	*	-150	763	-750	763	* AG	2854	2.8	.0	16.1
S.	EB Left	*	-150	750	4	757	* AG	0	4.5	.0	16.1
T.	WB Left	*	157	763	4	757	* AG	0	4.5	.0	16.1

CALINE4: CALIFORNIA LINE SOURCE DISPERSION MODEL
JUNE 1989 VERSION
PAGE 2

C4$.OUT
JOB: 5 Crow Canyon Road and I-680 NB Ramps
RUN: Hour 1 (WORST CASE ANGLE)
POLLUTANT: Carbon Monoxide

III. RECEPTOR LOCATIONS

RECEPTOR	COORDINATES (M) X	Y	Z
1. Receptor	-7	740	2.0
2. Receptor	14	740	2.0
3. Receptor	14	773	2.0
4. Receptor	-7	773	2.0

IV. MODEL RESULTS (WORST CASE WIND ANGLE)

RECEPTOR	BRG (DEG)	PRED CONC (PPM)	CONC/LINK (PPM) A	B	C	D	E	F	G	H
1. Receptor	82.	1.9	.0	.2	.0	.0	.1	.0	.0	.0
2. Receptor	278.	1.7	.0	.2	.0	.0	.1	.0	.0	.0
3. Receptor	186.	1.8	.0	.5	.0	.0	.3	.0	.0	.0
4. Receptor	99.	1.6	.0	.0	.1	.0	.0	.0	.0	.0

RECEPTOR	CONC/LINK (PPM) I	J	K	L	M	N	O	P	Q	R	S	T
1. Receptor	.0	.0	.0	.0	1.1	.0	.1	.2	.0	.0	.0	.0
2. Receptor	.0	.0	.0	.9	.0	.0	.0	.0	.2	.1	.0	.0
3. Receptor	.0	.0	.0	.0	.3	.0	.0	.4	.0	.0	.0	.0
4. Receptor	.0	.0	.0	.0	.3	.1	.0	.9	.0	.0	.0	.0

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

JOB: 6 Crow Canyon Road and Crow Canyon Place
RUN: Hour 1 (WORST CASE ANGLE)
POLLUTANT: Carbon Monoxide

I. SITE VARIABLES

U= 1.0 M/S Z0= 100. CM ALT= 142. (M)
BRG= WORST CASE VD= .0 CM/S
CLAS= 7 (G) VS= .0 CM/S
MIXH= 1000. M AMB= .0 PPM
SIGTH= 5. DEGREES TEMP= 8.4 DEGREE (C)

II. LINK VARIABLES

	LINK DESCRIPTION	*	LINK COORDINATES (M) X1	Y1	X2	Y2	*	TYPE	VPH	EF (G/MI)	H (M)	W (M)
A.	NB External	*	11	0	11	600	*	AG	1196	2.8	.0	14.1
B.	NB Approach	*	11	600	11	761	*	AG	413	4.5	.0	14.1
C.	NB Depart	*	11	761	11	921	*	AG	1003	4.5	.0	14.1
D.	NB External	*	11	921	11	1521	*	AG	1003	2.8	.0	14.1
E.	NB Left	*	11	600	6	761	*	AG	783	4.5	.0	14.1
F.	SB Left	*	0	921	6	761	*	AG	214	4.5	.0	14.1
G.	SB External	*	0	1521	0	921	*	AG	880	2.8	.0	14.1
H.	SB Approach	*	0	921	0	761	*	AG	666	4.5	.0	14.1
I.	SB Depart	*	0	761	0	600	*	AG	1220	4.5	.0	14.1
J.	SB External	*	0	600	0	0	*	AG	1220	2.8	.0	14.1
K.	EB External	*	-750	750	-150	750	*	AG	4022	2.8	.0	24.4
L.	EB Approach	*	-150	750	6	750	*	AG	3326	4.5	.0	24.4
M.	EB Depart	*	6	750	161	750	*	AG	2837	4.5	.0	24.4
N.	EB External	*	161	750	761	750	*	AG	2837	2.8	.0	24.4
O.	WB External	*	761	771	161	771	*	AG	2623	2.8	.0	24.4
P.	WB Approach	*	161	771	6	771	*	AG	2497	4.5	.0	24.4
Q.	WB Depart	*	6	771	-150	771	*	AG	3661	4.5	.0	24.4
R.	WB External	*	-150	771	-750	771	*	AG	3661	2.8	.0	24.4
S.	EB Left	*	-150	750	6	761	*	AG	696	4.5	.0	24.4
T.	WB Left	*	161	771	6	761	*	AG	126	4.5	.0	24.4

CALINE4: CALIFORNIA LINE SOURCE DISPERSION MODEL
JUNE 1989 VERSION
PAGE 2

C4$.OUT
JOB: 6 Crow Canyon Road and Crow Canyon Place
RUN: Hour 1 (WORST CASE ANGLE)
POLLUTANT: Carbon Monoxide

III. RECEPTOR LOCATIONS

RECEPTOR	COORDINATES (M) X	Y	Z
1. Receptor	-9	736	2.0
2. Receptor	20	736	2.0
3. Receptor	20	785	2.0
4. Receptor	-9	785	2.0

IV. MODEL RESULTS (WORST CASE WIND ANGLE)

RECEPTOR	BRG (DEG)	PRED CONC (PPM)	CONC/LINK (PPM) A	B	C	D	E	F	G	H
1. Receptor	82.	1.5	.0	.0	.0	.0	.0	.0	.0	.0
2. Receptor	278.	1.8	.0	.0	.0	.0	.1	.0	.0	.0
3. Receptor	260.	1.7	.0	.0	.2	.0	.0	.0	.0	.0
4. Receptor	173.	1.6	.0	.0	.0	.0	.2	.0	.0	.0

RECEPTOR	CONC/LINK (PPM) I	J	K	L	M	N	O	P	Q	R	S	T
1. Receptor	.2	.0	.0	.0	.8	.0	.2	.0	.0	.0	.0	.0
2. Receptor	.1	.0	.0	.9	.0	.0	.0	.0	.0	.2	.1	.0
3. Receptor	.0	.0	.2	.2	.0	.0	.0	.0	1.0	.0	.0	.0
4. Receptor	.4	.0	.0	.3	.0	.0	.0	.0	.5	.0	.0	.0

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

JOB: 16 Bollinger Canyon Road at I-680 NB Ram
RUN: Hour 1 (WORST CASE ANGLE)
POLLUTANT: Carbon Monoxide

I. SITE VARIABLES

U=	1.0 M/S	Z0=	100. CM	ALT=	142. (M)
BRG=	WORST CASE	VD=	.0 CM/S		
CLAS=	7 (G)	VS=	.0 CM/S		
MIXH=	1000. M	AMB=	.0 PPM		
SIGTH=	5. DEGREES	TEMP=	8.4 DEGREE (C)		

II. LINK VARIABLES

LINK DESCRIPTION	LINK COORDINATES (M) X1	Y1	X2	Y2	TYPE	VPH	EF (G/MI)	H (M)	W (M)
A. NB External	5	0	5	600	AG	2418	2.8	.0	10.0
B. NB Approach	5	600	5	758	AG	2085	4.5	.0	10.0
C. NB Depart	5	758	5	915	AG	847	4.5	.0	10.0
D. NB External	5	915	5	1515	AG	847	2.8	.0	10.0
E. NB Left	5	600	2	758	AG	333	4.5	.0	10.0
F. SB Left	0	915	2	758	AG	0	4.5	.0	10.0
G. SB External	0	1515	0	915	AG	0	2.8	.0	10.0
H. SB Approach	0	915	0	758	AG	0	4.5	.0	10.0
I. SB Depart	0	758	0	600	AG	839	4.5	.0	10.0
J. SB External	0	600	0	0	AG	839	2.8	.0	10.0
K. EB External	-750	750	-150	750	AG	2155	2.8	.0	18.3
L. EB Approach	-150	750	2	750	AG	2155	4.5	.0	18.3
M. EB Depart	2	750	155	750	AG	3401	4.5	.0	18.3
N. EB External	155	750	755	750	AG	3401	2.8	.0	18.3
O. WB External	755	765	155	765	AG	2135	2.8	.0	18.3
P. WB Approach	155	765	2	765	AG	2135	4.5	.0	18.3
Q. WB Depart	2	765	-150	765	AG	1621	4.5	.0	18.3
R. WB External	-150	765	-750	765	AG	1621	2.8	.0	18.3
S. EB Left	-150	750	2	758	AG	0	4.5	.0	18.3
T. WB Left	155	765	2	758	AG	0	4.5	.0	18.3

CALINE4: CALIFORNIA LINE SOURCE DISPERSION MODEL
JUNE 1989 VERSION
PAGE 2

C4$.OUT
JOB: 16 Bollinger Canyon Road at I-680 NB Ram
RUN: Hour 1 (WORST CASE ANGLE)
POLLUTANT: Carbon Monoxide

III. RECEPTOR LOCATIONS

RECEPTOR	COORDINATES (M) X	Y	Z
1. Receptor	-5	739	2.0
2. Receptor	10	739	2.0
3. Receptor	10	776	2.0
4. Receptor	-5	776	2.0

IV. MODEL RESULTS (WORST CASE WIND ANGLE)

RECEPTOR	BRG (DEG)	PRED CONC (PPM)	CONC/LINK (PPM) A	B	C	D	E	F	G	H
1. Receptor	83.	1.8	.0	.3	.0	.0	.0	.0	.0	.0
2. Receptor	277.	1.5	.0	.3	.0	.0	.0	.0	.0	.0
3. Receptor	184.	2.0	.0	.7	.2	.0	.1	.0	.0	.0
4. Receptor	175.	1.5	.0	.4	.0	.0	.1	.0	.0	.0

RECEPTOR	CONC/LINK (PPM) I	J	K	L	M	N	O	P	Q	R	S	T
1. Receptor	.1	.0	.0	.0	1.0	.0	.2	.1	.0	.0	.0	.0
2. Receptor	.1	.0	.0	.7	.0	.0	.0	.0	.0	.1	.0	.0
3. Receptor	.2	.0	.0	.0	.3	.0	.0	.3	.0	.0	.0	.0
4. Receptor	.4	.0	.0	.2	.0	.0	.0	.0	.2	.0	.0	.0

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Urbemis 2007 Version 9.2.4

Combined Annual Emissions Reports (Tons/Year)

File Name: C:\Documents and Settings\mba\Desktop\NCRSP\NCRSP Proposed VMT.urb924

Project Name: NCRSP Proposed VMT

Project Location: Contra Costa County

On-Road Vehicle Emissions Based on: Version : Emfac2007 V2.3 Nov 1 2006

Off-Road Vehicle Emissions Based on: OFFROAD2007

Operational Unmitigated Detail Report:

OPERATIONAL EMISSION ESTIMATES Annual Tons Per Year, Unmitigated

Source
Condo/townhouse general
Strip mall
General office building
Medical office building
TOTALS (tons/year, unmitigated)

Operational Settings:

Does not include correction for passby trips

Does not include double counting adjustment for internal trips

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Analysis Year: 2020 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
Condo/townhouse general	93.75	4.32	dwelling units	1,500.00	6,480.00	55,402.06
Strip mall		33.95	1000 sq ft	1,813.00	61,551.35	455,049.14
General office building		9.09	1000 sq ft	3,130.00	28,451.70	230,529.90
Medical office building		26.80	1000 sq ft	127.00	3,403.60	25,528.70
					99,886.65	766,509.80

Vehicle Fleet Mix

Vehicle Type	Percent Type	Non-Catalyst	Catalyst	Diesel
Light Auto	50.9	0.0	100.0	0.0
Light Truck < 3750 lbs	13.0	0.0	98.5	1.5
Light Truck 3751-5750 lbs	20.5	0.0	100.0	0.0
Med Truck 5751-8500 lbs	7.8	0.0	100.0	0.0
Lite-Heavy Truck 8501-10,000 lbs	1.1	0.0	81.8	18.2
Lite-Heavy Truck 10,001-14,000 lbs	0.6	0.0	50.0	50.0
Med-Heavy Truck 14,001-33,000 lbs	0.7	0.0	14.3	85.7
Heavy-Heavy Truck 33,001-60,000 lbs	0.3	0.0	0.0	100.0
Other Bus	0.0	0.0	0.0	0.0
Urban Bus	0.1	0.0	0.0	100.0
Motorcycle	3.8	39.5	60.5	0.0
School Bus	0.4	0.0	0.0	100.0

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Vehicle Fleet Mix

Vehicle Type	Percent Type	Non-Catalyst	Catalyst	Diesel
Motor Home	0.8	0.0	87.5	12.5

Travel Conditions

	Residential			Commercial		
	Home-Work	Home-Shop	Home-Other	Commute	Non-Work	Customer
Urban Trip Length (miles)	10.8	7.3	7.5	9.5	7.4	7.4
Rural Trip Length (miles)	16.8	7.1	7.9	14.7	6.6	6.6
Trip speeds (mph)	35.0	35.0	35.0	35.0	35.0	35.0
% of Trips - Residential	32.9	18.0	49.1			
% of Trips - Commercial (by land use)						
Strip mall				2.0	1.0	97.0
General office building				35.0	17.5	47.5
Medical office building				7.0	3.5	89.5

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Urbemis 2007 Version 9.2.4

Combined Annual Emissions Reports (Tons/Year)

File Name: C:\Documents and Settings\mba\Desktop\NCRSP\NCRSP Existing VMT.urb924

Project Name: NCRSP Existing VMT

Project Location: Contra Costa County

On-Road Vehicle Emissions Based on: Version : Emfac2007 V2.3 Nov 1 2006

Off-Road Vehicle Emissions Based on: OFFROAD2007

Operational Unmitigated Detail Report:

OPERATIONAL EMISSION ESTIMATES Annual Tons Per Year, Unmitigated

Source
Strip mall
General office building
Medical office building
TOTALS (tons/year, unmitigated)

Operational Settings:

Does not include correction for passby trips

Does not include double counting adjustment for internal trips

Analysis Year: 2020 Season: Annual

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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
Strip mall		35.23	1000 sq ft	482.00	16,980.86	125,539.49
General office building		10.25	1000 sq ft	2,750.00	28,187.50	228,389.22
Medical office building		33.44	1000 sq ft	163.00	5,450.72	40,883.12
					50,619.08	394,811.83

Vehicle Fleet Mix

Vehicle Type	Percent Type	Non-Catalyst	Catalyst	Diesel
Light Auto	50.9	0.0	100.0	0.0
Light Truck < 3750 lbs	13.0	0.0	98.5	1.5
Light Truck 3751-5750 lbs	20.5	0.0	100.0	0.0
Med Truck 5751-8500 lbs	7.8	0.0	100.0	0.0
Lite-Heavy Truck 8501-10,000 lbs	1.1	0.0	81.8	18.2
Lite-Heavy Truck 10,001-14,000 lbs	0.6	0.0	50.0	50.0
Med-Heavy Truck 14,001-33,000 lbs	0.7	0.0	14.3	85.7
Heavy-Heavy Truck 33,001-60,000 lbs	0.3	0.0	0.0	100.0
Other Bus	0.0	0.0	0.0	0.0
Urban Bus	0.1	0.0	0.0	100.0
Motorcycle	3.8	39.5	60.5	0.0
School Bus	0.4	0.0	0.0	100.0
Motor Home	0.8	0.0	87.5	12.5

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Travel Conditions

	Residential			Commercial		
	Home-Work	Home-Shop	Home-Other	Commute	Non-Work	Customer
Urban Trip Length (miles)	10.8	7.3	7.5	9.5	7.4	7.4
Rural Trip Length (miles)	16.8	7.1	7.9	14.7	6.6	6.6
Trip speeds (mph)	35.0	35.0	35.0	35.0	35.0	35.0
% of Trips - Residential	32.9	18.0	49.1			
% of Trips - Commercial (by land use)						
Strip mall				2.0	1.0	97.0
General office building				35.0	17.5	47.5
Medical office building				7.0	3.5	89.5

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Urbemis 2007 Version 9.2.4

Combined Annual Emissions Reports (Tons/Year)

File Name: C:\Documents and Settings\mba\Desktop\NCRSP\NCRSP Existing GHG 2008.urb924

Project Name: NCRSP Existing GHG 2008

Project Location: Contra Costa County

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)	5,274.13

OPERATIONAL (VEHICLE) EMISSION ESTIMATES

	CO2
TOTALS (tons/year, unmitigated)	67,141.53

SUM OF AREA SOURCE AND OPERATIONAL EMISSION ESTIMATES

	CO2
TOTALS (tons/year, unmitigated)	72,415.66

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Area Source Unmitigated Detail Report:

AREA SOURCE EMISSION ESTIMATES Annual Tons Per Year, Unmitigated

Source	CO2
Natural Gas	5,273.37
Hearth	0.00
Landscape	0.76
Consumer Products	
Architectural Coatings	
TOTALS (tons/year, unmitigated)	5,274.13

Area Source Changes to Defaults

Operational Unmitigated Detail Report:

OPERATIONAL EMISSION ESTIMATES Annual Tons Per Year, Unmitigated

Source	CO2
Strip mall	21,269.01
General office building	38,938.89
Medical office building	6,933.63
TOTALS (tons/year, unmitigated)	67,141.53

Operational Settings:

Does not include correction for passby trips

Does not include double counting adjustment for internal trips

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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
Strip mall		35.23	1000 sq ft	482.00	16,980.86	125,539.49
General office building		10.25	1000 sq ft	2,750.00	28,187.50	228,389.22
Medical office building		33.44	1000 sq ft	163.00	5,450.72	40,883.12
					50,619.08	394,811.83

Vehicle Fleet Mix

Vehicle Type	Percent Type	Non-Catalyst	Catalyst	Diesel
Light Auto	50.9	2.2	97.4	0.4
Light Truck < 3750 lbs	13.3	3.0	93.2	3.8
Light Truck 3751-5750 lbs	20.3	1.0	98.5	0.5
Med Truck 5751-8500 lbs	7.7	0.0	100.0	0.0
Lite-Heavy Truck 8501-10,000 lbs	1.1	0.0	72.7	27.3
Lite-Heavy Truck 10,001-14,000 lbs	0.6	0.0	50.0	50.0
Med-Heavy Truck 14,001-33,000 lbs	0.7	0.0	14.3	85.7
Heavy-Heavy Truck 33,001-60,000 lbs	0.4	0.0	0.0	100.0
Other Bus	0.0	0.0	0.0	0.0
Urban Bus	0.1	0.0	0.0	100.0
Motorcycle	3.7	78.4	21.6	0.0
School Bus	0.4	0.0	0.0	100.0
Motor Home	0.8	0.0	87.5	12.5

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Travel Conditions

	Residential			Commercial		
	Home-Work	Home-Shop	Home-Other	Commute	Non-Work	Customer
Urban Trip Length (miles)	10.8	7.3	7.5	9.5	7.4	7.4
Rural Trip Length (miles)	16.8	7.1	7.9	14.7	6.6	6.6
Trip speeds (mph)	35.0	35.0	35.0	35.0	35.0	35.0
% of Trips - Residential	32.9	18.0	49.1			
% of Trips - Commercial (by land use)						
Strip mall				2.0	1.0	97.0
General office building				35.0	17.5	47.5
Medical office building				7.0	3.5	89.5

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Urbemis 2007 Version 9.2.4

Combined Annual Emissions Reports (Tons/Year)

File Name: C:\Documents and Settings\mba\Desktop\NCRSP\NCRSP Existing GHG 2020.urb924

Project Name: NCRSP Existing GHG 2020

Project Location: Contra Costa County

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)	5,274.13

OPERATIONAL (VEHICLE) EMISSION ESTIMATES

	CO2
TOTALS (tons/year, unmitigated)	66,690.54

SUM OF AREA SOURCE AND OPERATIONAL EMISSION ESTIMATES

	CO2
TOTALS (tons/year, unmitigated)	71,964.67

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Area Source Unmitigated Detail Report:

AREA SOURCE EMISSION ESTIMATES Annual Tons Per Year, Unmitigated

Source	CO2
Natural Gas	5,273.37
Hearth	0.00
Landscape	0.76
Consumer Products	
Architectural Coatings	
TOTALS (tons/year, unmitigated)	5,274.13

Area Source Changes to Defaults

Operational Unmitigated Detail Report:

OPERATIONAL EMISSION ESTIMATES Annual Tons Per Year, Unmitigated

Source	CO2
Strip mall	21,125.12
General office building	38,678.60
Medical office building	6,886.82
TOTALS (tons/year, unmitigated)	66,690.54

Operational Settings:

Does not include correction for passby trips

Does not include double counting adjustment for internal trips

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Analysis Year: 2020 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
Strip mall		35.23	1000 sq ft	482.00	16,980.86	125,539.49
General office building		10.25	1000 sq ft	2,750.00	28,187.50	228,389.22
Medical office building		33.44	1000 sq ft	163.00	5,450.72	40,883.12
					50,619.08	394,811.83

Vehicle Fleet Mix

Vehicle Type	Percent Type	Non-Catalyst	Catalyst	Diesel
Light Auto	50.9	0.0	100.0	0.0
Light Truck < 3750 lbs	13.0	0.0	98.5	1.5
Light Truck 3751-5750 lbs	20.5	0.0	100.0	0.0
Med Truck 5751-8500 lbs	7.8	0.0	100.0	0.0
Lite-Heavy Truck 8501-10,000 lbs	1.1	0.0	81.8	18.2
Lite-Heavy Truck 10,001-14,000 lbs	0.6	0.0	50.0	50.0
Med-Heavy Truck 14,001-33,000 lbs	0.7	0.0	14.3	85.7
Heavy-Heavy Truck 33,001-60,000 lbs	0.3	0.0	0.0	100.0
Other Bus	0.0	0.0	0.0	0.0
Urban Bus	0.1	0.0	0.0	100.0
Motorcycle	3.8	39.5	60.5	0.0
School Bus	0.4	0.0	0.0	100.0
Motor Home	0.8	0.0	87.5	12.5

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Travel Conditions

	Residential			Commercial		
	Home-Work	Home-Shop	Home-Other	Commute	Non-Work	Customer
Urban Trip Length (miles)	10.8	7.3	7.5	9.5	7.4	7.4
Rural Trip Length (miles)	16.8	7.1	7.9	14.7	6.6	6.6
Trip speeds (mph)	35.0	35.0	35.0	35.0	35.0	35.0
% of Trips - Residential	32.9	18.0	49.1			
% of Trips - Commercial (by land use)						
Strip mall				2.0	1.0	97.0
General office building				35.0	17.5	47.5
Medical office building				7.0	3.5	89.5

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Urbemis 2007 Version 9.2.4

Combined Annual Emissions Reports (Tons/Year)

File Name: C:\Documents and Settings\mba\Desktop\NCRSP\NCRSP Proposed GHG.urb924

Project Name: NCRSP Proposed GHG

Project Location: Contra Costa County

On-Road Vehicle Emissions Based on: Version : Emfac2007 V2.3 Nov 1 2006

Off-Road Vehicle Emissions Based on: OFFROAD2007

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Summary Report:

AREA SOURCE EMISSION ESTIMATES

	CO2
TOTALS (tons/year, unmitigated)	12,022.58
TOTALS (tons/year, mitigated)	10,338.24
Percent Reduction	14.01

OPERATIONAL (VEHICLE) EMISSION ESTIMATES

	CO2
TOTALS (tons/year, unmitigated)	129,339.65
TOTALS (tons/year, mitigated)	129,339.65
Percent Reduction	0.00

SUM OF AREA SOURCE AND OPERATIONAL EMISSION ESTIMATES

	CO2
TOTALS (tons/year, unmitigated)	141,362.23
TOTALS (tons/year, mitigated)	139,677.89
Percent Reduction	1.19

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Area Source Unmitigated Detail Report:

AREA SOURCE EMISSION ESTIMATES Annual Tons Per Year, Unmitigated

Source	CO2
Natural Gas	11,228.90
Hearth	792.67
Landscape	1.01
Consumer Products	
Architectural Coatings	
TOTALS (tons/year, unmitigated)	12,022.58

Area Source Mitigated Detail Report:

AREA SOURCE EMISSION ESTIMATES Annual Tons Per Year, Mitigated

Source	CO2
Natural Gas	9,544.56
Hearth	792.67
Landscape	1.01
Consumer Products	
Architectural Coatings	
TOTALS (tons/year, mitigated)	10,338.24

Area Source Changes to Defaults

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Operational Unmitigated Detail Report:

OPERATIONAL EMISSION ESTIMATES Annual Tons Per Year, Unmitigated

Source	CO2
Condo/townhouse general	9,424.92
Strip mall	76,573.26
General office building	39,041.13
Medical office building	4,300.34
TOTALS (tons/year, unmitigated)	129,339.65

Operational Mitigated Detail Report:

OPERATIONAL EMISSION ESTIMATES Annual Tons Per Year, Mitigated

Source	CO2
Condo/townhouse general	9,424.92
Strip mall	76,573.26
General office building	39,041.13
Medical office building	4,300.34
TOTALS (tons/year, mitigated)	129,339.65

Operational Settings:

Does not include correction for passby trips

Does not include double counting adjustment for internal trips

Analysis Year: 2020 Season: Annual

Emfac: Version : Emfac2007 V2.3 Nov 1 2006

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Summary of Land Uses

Land Use Type	Acreage	Trip Rate	Unit Type	No. Units	Total Trips	Total VMT
Condo/townhouse general	93.75	4.32	dwelling units	1,500.00	6,480.00	55,402.06
Strip mall		33.95	1000 sq ft	1,813.00	61,551.35	455,049.14
General office building		9.09	1000 sq ft	3,130.00	28,451.70	230,529.90
Medical office building		26.80	1000 sq ft	127.00	3,403.60	25,528.70
					99,886.65	766,509.80

Vehicle Fleet Mix

Vehicle Type	Percent Type	Non-Catalyst	Catalyst	Diesel
Light Auto	50.9	0.0	100.0	0.0
Light Truck < 3750 lbs	13.0	0.0	98.5	1.5
Light Truck 3751-5750 lbs	20.5	0.0	100.0	0.0
Med Truck 5751-8500 lbs	7.8	0.0	100.0	0.0
Lite-Heavy Truck 8501-10,000 lbs	1.1	0.0	81.8	18.2
Lite-Heavy Truck 10,001-14,000 lbs	0.6	0.0	50.0	50.0
Med-Heavy Truck 14,001-33,000 lbs	0.7	0.0	14.3	85.7
Heavy-Heavy Truck 33,001-60,000 lbs	0.3	0.0	0.0	100.0
Other Bus	0.0	0.0	0.0	0.0
Urban Bus	0.1	0.0	0.0	100.0
Motorcycle	3.8	39.5	60.5	0.0
School Bus	0.4	0.0	0.0	100.0
Motor Home	0.8	0.0	87.5	12.5

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Travel Conditions

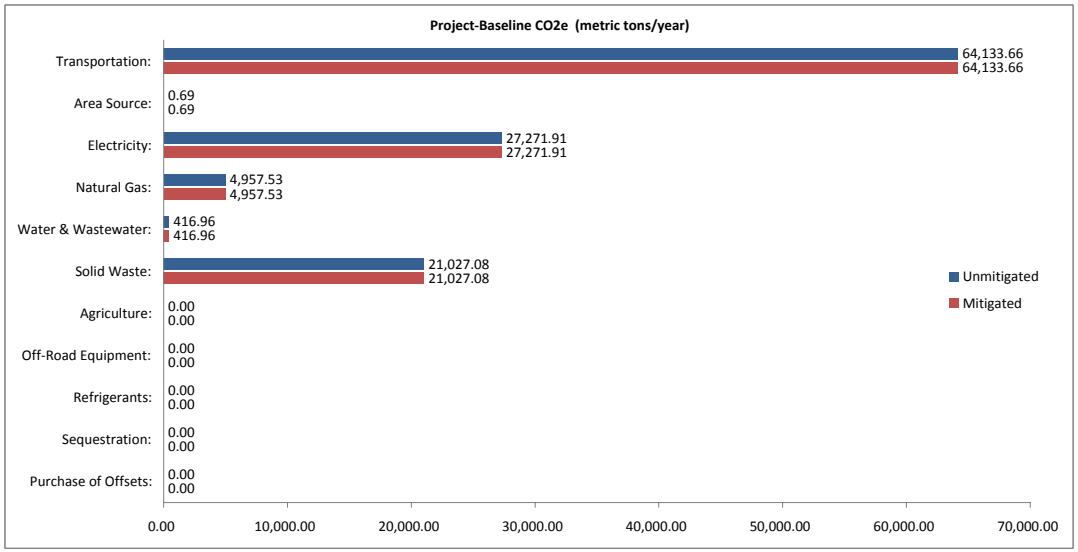
	Residential			Commercial		
	Home-Work	Home-Shop	Home-Other	Commute	Non-Work	Customer
Urban Trip Length (miles)	10.8	7.3	7.5	9.5	7.4	7.4
Rural Trip Length (miles)	16.8	7.1	7.9	14.7	6.6	6.6
Trip speeds (mph)	35.0	35.0	35.0	35.0	35.0	35.0
% of Trips - Residential	32.9	18.0	49.1			
% of Trips - Commercial (by land use)						
Strip mall				2.0	1.0	97.0
General office building				35.0	17.5	47.5
Medical office building				7.0	3.5	89.5

Summary Results

Project Name: NCRSP Existing GHG 2008
Project and Baseline Years: 2008 N/A

Results	Unmitigated Project-Baseline CO2e (metric tons/year)	Mitigated Project-Baseline CO2e (metric tons/year)
Transportation:	64,133.66	64,133.66
Area Source:	0.69	0.69
Electricity:	27,271.91	27,271.91
Natural Gas:	4,957.53	4,957.53
Water & Wastewater:	416.96	416.96
Solid Waste:	21,027.08	21,027.08
Agriculture:	0.00	0.00
Off-Road Equipment:	0.00	0.00
Refrigerants:	0.00	0.00
Sequestration:	N/A	0.00
Purchase of Offsets:	N/A	0.00
Total:	117,807.83	117,807.83

Baseline is currently: **OFF**
Baseline Project Name:
Go to Settings Tab to Turn On Baseline

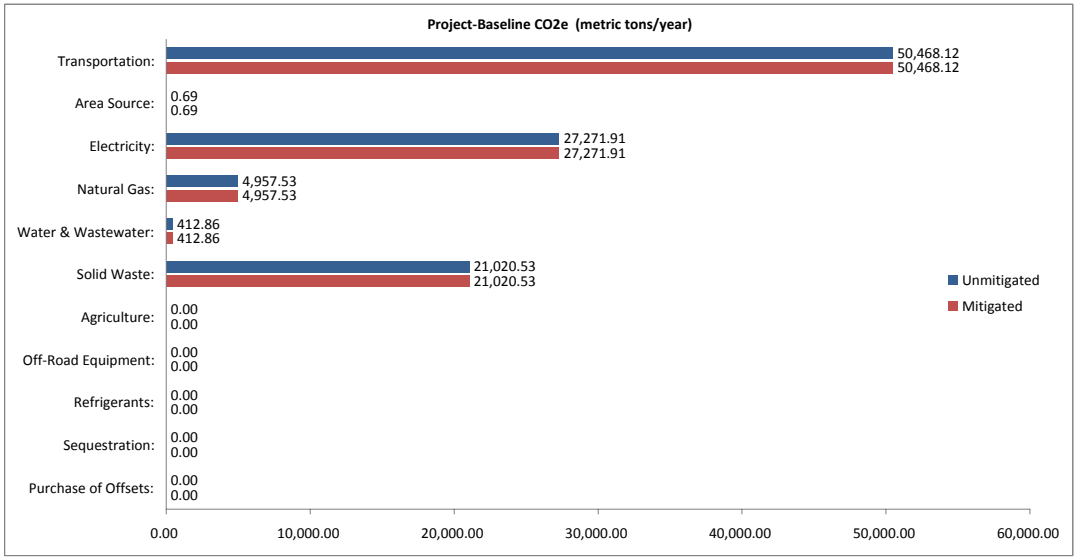


Summary Results

Project Name: NCRSP Existing GHG 2020
Project and Baseline Years: 2020 N/A

Results	Unmitigated Project-Baseline CO2e (metric tons/year)	Mitigated Project-Baseline CO2e (metric tons/year)
Transportation:	50,468.12	50,468.12
Area Source:	0.69	0.69
Electricity:	27,271.91	27,271.91
Natural Gas:	4,957.53	4,957.53
Water & Wastewater:	412.86	412.86
Solid Waste:	21,020.53	21,020.53
Agriculture:	0.00	0.00
Off-Road Equipment:	0.00	0.00
Refrigerants:	0.00	0.00
Sequestration:	N/A	0.00
Purchase of Offsets:	N/A	0.00
Total:	104,131.64	104,131.64

Baseline is currently: **OFF**
Baseline Project Name:
Go to Settings Tab to Turn On Baseline



Summary Results

Project Name: NCRSP Proposed GHG
Project and Baseline Years: 2020 N/A

Results	Unmitigated Project-Baseline CO2e (metric tons/year)	Mitigated Project-Baseline CO2e (metric tons/year)
Transportation:	97,877.88	97,877.88
Area Source:	778.14	778.14
Electricity:	38,904.29	33,068.64
Natural Gas:	7,267.60	6,177.46
Water & Wastewater:	712.02	691.83
Solid Waste:	26,604.53	23,944.08
Agriculture:	0.00	0.00
Off-Road Equipment:	0.00	0.00
Refrigerants:	0.00	0.00
Sequestration:	N/A	0.00
Purchase of Offsets:	N/A	0.00
Total:	172,144.47	162,538.04

Baseline is currently: **OFF**
Baseline Project Name:
Go to Settings Tab to Turn On Baseline