APPENDIX C AIR QUALITY DATA

Emissions were estimated by use of the URBEMIS 2002 software package, version 8.7. The emission factors and calculation methodologies contained in the URBEMIS 2002 program have been approved for use by the California Air Resources Board. URBEMIS is a calculation tool designed to estimate air emissions from land use development projects based on development type and size. The model contains data that are specific for each California air basin.

In order to account for limitations in the URBEMIS program, modifications and extra calculations were made to obtain representative emissions for the Fort Rosecrans Cemetery Annex EIS. These modifications included the following:

- 1. URBEMIS does not have construction emission factors beyond 2020. Therefore, all construction emissions calculated for years after 2020 use 2020 emission factors.
- 2. URBEMIS does not calculate landscape maintenance emissions based on acreage, but on the quantity of land use elements. Therefore, a separate set of URBEMIS runs were made for landscape maintenance emissions. It was assumed that maintenance of one acre of cemetery was the same as maintaining 3 single family homes of 1/3 acre in size. The landscape maintenance default was changed to assume maintenance would occur 360 days per year. Landscape maintenance beyond 2020 was calculated using 2020 emission factors because the program does not allow a later date for landscape maintenance emissions.
- 3. Although the Proposed Action is planned in four 25 percent increments, it was assumed that more than 25 percent of the common areas would be developed in Phase 1. Therefore, the areas for landscape maintenance for Phases 1, 2, and 3 were conservatively overestimated.
- 4. URBEMIS does not calculate architectural coatings for land uses that are manually entered. Therefore, the models include a 20,000 square foot day care center to account for architectural coatings for construction and maintenance of the admin/maintenance building, committal service shelters, public relations building, and other facilities that may be painted. However, because The VA selects a majority of outside building surfaces would not require a periodic recoating, the ROG values for maintenance were reduced.
- 5. Trip generation was assumed to increase uniformly from the opening through 2030. Trip generation volumes for 2010 and 2030 were taken from the project traffic analysis.

6. Vehicle operations emission factors are provided in the model at 5 year intervals after 2010. Therefore, as noted in Table 4.12-3 of the EIS, emissions for years not ending in 0 or 5 were interpolated.

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URBEMIS 2002 For Windows 8.7.0

File Name: C:\Program Files\URBEMIS 2002 Version 8.7\Projects2k2\FRNCA Const Ph I 2008 082206.urb
Project Name: FtRoseCemAnx Const Ph 1
Project Location: San Diego County

On-Road Motor Vehicle Emissions Based on EMFAC2002 version 2.2

SUMMARY REPORT (Tons/Year)

CONSTRUCTION EMISSION ESTIMATES

*** 2008 ***	ROG	NOx	CO	SO2	PM10 TOTAL	PM10 EXHAUST	PM10 DUST
TOTALS (tpy, unmitigated)	1.39	8.76	11.69	0.00	5.60	0.32	5.28
TOTALS (tpy, mitigated)	1.39	8.76	11.69	0.00	2.17	0.32	1.85
					PM10	PM10	PM10
*** 2009 ***	ROG	NOx	CO	SO2	TOTAL	EXHAUST	DUST
TOTALS (tpy, unmitigated)	1.58	7.28	10.22	0.00	2.00	0.24	1.76
TOTALS (tpy, mitigated)	1.58	7.28	10.22	0.00	0.86	0.24	0.62

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URBEMIS 2002 For Windows 8.7.0

File Name: Project Name: C:\Program Files\URBEMIS 2002 Version 8.7\Projects2k2\FRNCA Const Ph I 2008 082206.urb

Project Location: C:\Program Files\URBEMIS

San Diego County

On-Road Motor Vehicle Emissions Based on EMFAC2002 version 2.2

DETAIL REPORT (Tons/Year)

Construction Start Month and Year: January, 2008 Construction Duration: 24

Total Land Use Area to be Developed: 214 acres Maximum Acreage Disturbed Per Day: 4 acres Single Family Units: 0 Multi-Family Units: 0

Retail/Office/Institutional/Industrial Square Footage: 20000

CONSTRUCTION EMISSION ESTIMATES UNMITIGATED (tons/year)

CONSTRUCTION EMISSION ESTIMAT	ES UNMITIG	SATED (tons	s/year)				
Source *** 2008***	ROG	NOx	CO	SO2	PM10 TOTAL	PM10 EXHAUST	PM10 DUST
Phase 1 - Demolition Emission	s						
Fugitive Dust	_	_	-	_	0.00	_	0.00
Off-Road Diesel	0.00	0.00	0.00	_	0.00	0.00	0.00
On-Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Worker Trips	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total tons/year	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Phase 2 - Site Grading Emissi	ons						
Phase 2 - Site Grading Emissi Fugitive Dust Off-Road Diesel On-Road Diesel Worker Trips	_	_	-	_	5.28		5.28
Off-Road Diesel	1.36	8.57	11.33	_	0.32	0.32	0.00
On-Road Diesel	0.01	0.16	0.03	0.00	0.00	0.00	0.00
	0.02	0.03	0.33	0.00	0.00	0.00	0.00
Total tons/year	1.39	8.76	11.69	0.00	5.60	0.32	5.28
Phase 3 - Building Constructi		0.00	0.00		0.00	0.00	0.00
9	0.00	0.00	0.00	-	0.00	0.00	0.00
Bldg Const Worker Trips	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Arch Coatings Off-Gas	0.00	-	-	-	-	-	-
Arch Coatings Worker Trips	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Asphalt Off-Gas	0.00	-	-	_	-	-	-
-	0.00	0.00	0.00	-	0.00	0.00	0.00
Asphalt On-Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Asphalt Worker Trips	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total tons/year	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total all phases tons/yr	1.39	8.76	11.69	0.00	5.60	0.32	5.28
*** 2009***							
Phase 1 - Demolition Emission	s						
		_	-	_	0.00	_	0.00
Fugitive Dust Off-Road Diesel On-Road Diesel Worker Trips	0.00	0.00	0.00	_	0.00	0.00	0.00
On-Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Worker Trips	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total tons/year		0.00	0.00	0.00	0.00	0.00	0.00
Phase 2 - Site Grading Emissi	ons						
Fugitive Dust	-	_	_	_	1.76	-	1.76
Off-Road Diesel	0.45	2.79	3.80	-	0.10	0.10	0.00
On-Road Diesel	0.00	0.05	0.01	0.00	0.00	0.00	0.00
Worker Trips	0.01	0.01	0.11	0.00	0.00	0.00	0.00
Total tons/year	0.46	2.85	3.92	0.00	1.86	0.10	1.76
Phase 3 - Building Constructi							
Bldg Const Off-Road Diesel	0.70	4.14	5.89	_	0.13	0.13	0.00
Bldg Const Worker Trips	0.00	0.00	0.03	0.00	0.00	0.00	0.00
Arch Coatings Off-Gas	0.37	_	_	_	_	_	_
Arch Coatings Worker Trips	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Asphalt Off-Gas	0.01	_	_	_	_	_	_
Asphalt Off-Road Diesel	0.04	0.26	0.37	_	0.01	0.01	0.00
Asphalt On-Road Diesel	0.00	0.03	0.01	0.00	0.00	0.00	0.00
Asphalt Worker Trips	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total tons/year	1.12	4.43	6.30	0.00	0.14	0.14	0.00
Total all phases tons/yr	1.58	7.28	10.22	0.00	2.00	0.24	1.76

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Phase 1 - Demolition Assumptions: Phase Turned OFF

Phase 2 - Site Grading Assumptions Start Month/Year for Phase 2: Jan '08

Phase 2 Duration: 16 months

On-Road Truck Travel (VMT): 56

Off-Road Equipment

No.	Type	Horsepower	Load Factor	Hours/Day
1	Crawler Tractors	143	0.575	8.0
1	Graders	174	0.575	8.0
1	Off Highway Trucks	417	0.490	4.0
1	Scrapers	313	0.660	8.0
1	Tractor/Loaders/Backhoes	79	0.465	8.0
1	Trenchers	82	0.695	8.0

Phase 3 - Building Construction Assumptions

Start Month/Year for Phase 3: May '09

Phase 3 Duration: 8 months

Start Month/Year for SubPhase Building: May '09 SubPhase Building Duration: 8 months

Off-Road Equipment

٥.	Type	Horsepower	Load Factor	Hours/Day
2	Cranes	190	0.430	8.0
1	Off Highway Trucks	417	0.490	8.0
1	Rough Terrain Forklifts	94	0.475	8.0
1	Tractor/Loaders/Backhoes	79	0.465	8.0

Start Month/Year for SubPhase Architectural Coatings: Oct '09 SubPhase Architectural Coatings Duration: 0.5 months

Start Month/Year for SubPhase Asphalt: Nov '09

SubPhase Asphalt Duration: 1 months

Acres to be Paved: 6

Off-Road Equipment

OLI-RO	bad Equipment			
No.	Type	Horsepower	Load Factor	Hours/Day
1	Graders	174	0.575	8.0
1	Pavers	132	0.590	8.0
1	Rollers	114	0.430	8.0

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Changes made to the default values for Land Use Trip Percentages

Changes made to the default values for Construction

The user has overridden the Default Phase Lengths
Phase 2 mitigation measure Soil Disturbance: Apply soil stabilizers to inactive areas
has been changed from off to on.

Phase 2 mitigation measure Soil Disturbance: Water exposed surfaces - 3x daily has been changed from off to on.

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URBEMIS 2002 For Windows 8.7.0

C:\Program Files\URBEMIS 2002 Version 8.7\Projects2k2\FtRoseCemAnx Landscape 2008.urb FtRscrnsCemAnx Landscape Phase I - 2008

File Name: Project Name: Project Name:

Project Location:

On-Road Mar

San Diego County

On-Road Motor Vehicle Emissions Based on EMFAC2002 version 2.2

SUMMARY REPORT (Tons/Year)

AREA SOURCE EMISSION ESTIMATES

ROG NOX CO SO2 PM10
TOTALS (tpy, unmitigated) 0.17 0.01 1.26 0.01 0.00

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URBEMIS 2002 For Windows 8.7.0

File Name: C:\Program Files\URBEMIS 2002 Version 8.7\Projects2k2\FtRoseCemAnx Landscape 2008.urb
Project Name: FtRscrnsCemAnx Landscape Phase I - 2008
Project Location: San Diego County

On-Road Motor Vehicle Emissions Based on EMFAC2002 version 2.2

DETAIL REPORT (Tons/Year)

AREA SOURCE EMISSION ESTIMATES	(Tons per	Year,	Unmitigated)		
Source	ROG	NOx	CO	SO2	PM10
Natural Gas	0.00	0.00	0.00	0.00	0.00
Hearth	0.00	0.00	0.00	0.00	0.00
Landscaping	0.17	0.01	1.26	0.01	0.00
Consumer Prdcts	0.00	-	=	_	_
Architectural Coatings	0.00	-	_	_	-
TOTALS (tpy, unmitigated)	0.17	0.01	1.26	0.01	0.00

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Changes made to the default values for Land Use Trip Percentages

Changes made to the default values for Area

The natural gas option switch changed from on to off.

The hearth option switch changed from on to off.
The consumer products option switch changed from on to off.

The arch. coatings option switch changed from on to off.
The landscape length of the summer period (in days) changed from 180 to 360.
The landscape year changed from 2005 to 2008.

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URBEMIS 2002 For Windows 8.7.0

File Name: C:\Program Files\URBEMIS 2002 Version 8.7\Projects2k2\FRNCA Ops 2008 082206.urb
Project Name: FtRcrnsCemAnx Ops Phase 1 - 2008
Project Location: San Diego County

On-Road Motor Vehicle Emissions Based on EMFAC2002 version 2.2

SUMMARY REPORT (Tons/Year)

AREA SOURCE EMISSION ESTIMATES					
TOTALS (tpy, unmitigated)	ROG 0.04	NOx 0.04	0.03	SO2 0.00	PM10 0.00
OPERATIONAL (VEHICLE) EMISSION	ESTIMA	ATES			
TOTAL ()	ROG	NOx	CO	SO2	PM10
TOTALS (tpy, unmitigated)	0.53	0.58	4.91	0.00	0.52
SUM OF AREA AND OPERATIONAL EM	ISSION	ESTIMATES			
	ROG	NOx	CO	SO2	PM10
TOTALS (tpy, unmitigated)	0.57	0.62	4.94	0.00	0.52

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URBEMIS 2002 For Windows 8.7.0

File Name: C:\Program Files\URBEMIS 2002 Version 8.7\Projects2k2\FRNCA Ops 2008 082206.urb
Project Name: FtRcrnsCemAnx Ops Phase 1 - 2008
Project Location: San Diego County
On-Road Motor Vehicle Emissions Based on EMFAC2002 version 2.2

DETAIL REPORT (Tons/Year)

AREA SOURCE EMISSION ESTIMATES	(Tons per	Year,	Unmitigated)		
Source	ROG	NOx	CO	SO2	PM10
Natural Gas	0.00	0.04	0.03	0.00	0.00
Hearth	0.00	0.00	0.00	0.00	0.00
Landscaping	0.00	0.00	0.00	0.00	0.00
Consumer Prdcts	0.00	-	=	-	_
Architectural Coatings	0.04	-	=	-	_
TOTALS (tpy, unmitigated)	0.04	0.04	0.03	0.00	0.00

UNMITIGATED OPERATIONAL EMISSIONS

Day-care center City park	ROG 0.03 0.50	NOx 0.00 0.58	CO 0.00 4.91	SO2 0.00 0.00	PM10 0.00 0.52
TOTAL EMISSIONS (tons/yr)	0.53	0.58	4.91	0.00	0.52

Does not include correction for passby trips.

Does not include double counting adjustment for internal trips.

OPERATIONAL (Vehicle) EMISSION ESTIMATES

Analysis Year: 2008 Season: Annual

EMFAC Version: EMFAC2002 (9/2002)

Summary of Land Uses:

Unit Type	Acreage	Trip Rate	No. Units	Trips
Day-care center City park		0.00 trips/1000 sq. ft. 2.81 trips/acres	20.00	0.00 252.90

Sum of Total Trips 252.90 Total Vehicle Miles Traveled 1,890.43

Vehicle Assumptions:

Fleet Mix:

Vehicle Type	2	Percent Type	Non-Catalyst	Catalyst	Diesel
Light Auto		55.00	1.60	98.00	0.40
Light Truck	< 3,750 lbs	s 15.00	2.70	95.30	2.00
Light Truck	3,751- 5,750	16.20	1.20	97.50	1.30
Med Truck	5,751- 8,500	7.20	1.40	95.80	2.80
Lite-Heavy	8,501-10,000	1.10	0.00	81.80	18.20
Lite-Heavy	10,001-14,000	0.40	0.00	50.00	50.00
Med-Heavy	14,001-33,000	1.00	0.00	20.00	80.00
Heavy-Heavy	33,001-60,000	0.90	0.00	11.10	88.90
Line Haul >	60,000 lbs	0.00	0.00	0.00	100.00
Urban Bus		0.20	0.00	50.00	50.00
Motorcycle		1.70	76.50	23.50	0.00
School Bus		0.10	0.00	0.00	100.00
Motor Home		1.20	8.30	83.30	8.40

Travel Conditions

Residential			Commercial		
Home-	Home-	Home-			
Work	Shop	Other	Commute	Non-Work	Customer
10.8	7.3	7.5	10.8	7.3	7.3
15.0	10.0	10.0	15.0	10.0	10.0
35.0	35.0	35.0	35.0	35.0	35.0
27.3	21.2	51.5			
	Work 10.8 15.0	Home- Home- Work Shop 10.8 7.3 15.0 10.0 35.0 35.0	Home- Home- Home- Work Shop Other 10.8 7.3 7.5 15.0 10.0 10.0 35.0 35.0 35.0	Home- Home- Home- Work Shop Other Commute 10.8 7.3 7.5 10.8 15.0 10.0 10.0 15.0 35.0 35.0 35.0 35.0	Home- Home- Home- Work Shop Other Commute Non-Work 10.8 7.3 7.5 10.8 7.3 15.0 10.0 15.0 10.0 35.0 35.0 35.0 35.0

% of Trips - Commercial (by land use)

Day-care center City park

 5.0
 2.5
 92.5

 5.0
 2.5
 92.5

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Changes made to the default values for Land Use Trip Percentages

Changes made to the default values for Area

The hearth option switch changed from on to off.
The landscape option switch changed from on to off.
The consumer products option switch changed from on to off.

Changes made to the default values for Operations

The operational emission year changed from 2005 to 2008.

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URBEMIS 2002 For Windows 8.7.0

C:\Program Files\URBEMIS 2002 Version 8.7\Projects2k2\FtRoseCemAnx Landscape 2009.urb FtRscrnsCemAnx Landscape Phase I - 2009

File Name: Project Name: Project Name:

Project Location:

On-Road Mar

San Diego County

On-Road Motor Vehicle Emissions Based on EMFAC2002 version 2.2

SUMMARY REPORT (Tons/Year)

AREA SOURCE EMISSION ESTIMATES

ROG NOX CO SO2 PM10
TOTALS (tpy, unmitigated) 0.16 0.00 1.21 0.01 0.00

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URBEMIS 2002 For Windows 8.7.0

File Name: C:\Program Files\URBEMIS 2002 Version 8.7\Projects2k2\FtRoseCemAnx Landscape 2009.urb
Project Name: FtRscrnsCemAnx Landscape Phase I - 2009
Project Location: San Diego County

On-Road Motor Vehicle Emissions Based on EMFAC2002 version 2.2

DETAIL REPORT (Tons/Year)

AREA SOURCE EMISSION ESTIMATES	(Tons per	Year,	Unmitigated)		
Source	ROG	NOx	CO	SO2	PM10
Natural Gas	0.00	0.00	0.00	0.00	0.00
Hearth	0.00	0.00	0.00	0.00	0.00
Landscaping	0.16	0.00	1.21	0.01	0.00
Consumer Prdcts	0.00	-	-	-	-
Architectural Coatings	0.00	-	-	-	-
TOTALS (tpy, unmitigated)	0.16	0.00	1.21	0.01	0.00

Page: 3 08/11/2006 12:34 AM

Changes made to the default values for Land Use Trip Percentages

Changes made to the default values for Area

The natural gas option switch changed from on to off. The hearth option switch changed from on to off.
The consumer products option switch changed from on to off.

The arch. coatings option switch changed from on to off.
The landscape length of the summer period (in days) changed from 180 to 360.
The landscape year changed from 2005 to 2009.

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URBEMIS 2002 For Windows 8.7.0

File Name: C:\Program Files\URBEMIS 2002 Version 8.7\Projects2k2\FRNCA Ops 2009 082206.urb
Project Name: FtRcrnsCemAnx Ops Phase 1 - 2009
Project Location: San Diego County

On-Road Motor Vehicle Emissions Based on EMFAC2002 version 2.2

SUMMARY REPORT (Tons/Year)

AREA SOURCE EMISSION ESTIMATES	5				
	ROG	NOx	CO	SO2	PM10
TOTALS (tpy, unmitigated)	0.04	0.04	0.03	0.00	0.00
OPERATIONAL (VEHICLE) EMISSION	I ESTIMAT	ES			
	ROG	NOx	CO	SO2	PM10
TOTALS (tpy, unmitigated)	0.49	0.53	4.54	0.00	0.52
SUM OF AREA AND OPERATIONAL EN	MISSION E	STIMATES			
SUM OF AREA AND OPERATIONAL EN				200	D141.0
	ROG	NOx	CO	SO2	PM10
TOTALS (tpy, unmitigated)	0.53	0.57	4.57	0.00	0.52

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URBEMIS 2002 For Windows 8.7.0

C:\Program Files\URBEMIS 2002 Version 8.7\Projects2k2\FRNCA Ops 2009 082206.urb

File Name: Project Name: FtRcrnsCemAnx Ops Phase 1 - 2009

San Diego County

On-Road Motor Vehicle Emissions Based on EMFAC2002 version 2.2

DETAIL REPORT (Tons/Year)

AREA SOURCE EMISSION ESTIMATES (Tons per Year, Unmitigated)

UNMITIGATED OPERATIONAL EMISSIONS

	ROG	NOx	CO	SO2	PM10
Day-care center	0.03	0.00	0.00	0.00	0.00
City park	0.47	0.53	4.54	0.00	0.52
TOTAL EMISSIONS (tons/yr)	0.49	0.53	4.54	0.00	0.52

Does not include correction for passby trips.

Does not include double counting adjustment for internal trips.

OPERATIONAL (Vehicle) EMISSION ESTIMATES

Analysis Year: 2009 Season: Annual

EMFAC Version: EMFAC2002 (9/2002)

Summary of Land Uses:

Unit Type	Acreage	Trip Rate	No. Units	Total Trips
Day-care center City park		0.00 trips/1000 sq. ft. 2.81 trips/acres	20.00	0.00 252.90
			_	

Sum of Total Trips 252.90 Total Vehicle Miles Traveled 1,890.43

Vehicle Assumptions:

Fleet Mix:

Vehicle Type	Percent Type	Non-Catalyst	Catalyst	Diesel
Light Auto	54.90	1.30	98.40	0.30
Light Truck < 3,750 lbs	3 15.10	2.60	95.40	2.00
Light Truck 3,751- 5,750	16.10	1.20	98.10	0.70
Med Truck 5,751-8,500	7.30	1.40	95.90	2.70
Lite-Heavy 8,501-10,000	1.10	0.00	81.80	18.20
Lite-Heavy 10,001-14,000	0.30	0.00	66.70	33.30
Med-Heavy 14,001-33,000	1.00	0.00	20.00	80.00
Heavy-Heavy 33,001-60,000	0.90	0.00	11.10	88.90
Line Haul $> 60,000$ lbs	0.00	0.00	0.00	100.00
Urban Bus	0.20	0.00	50.00	50.00
Motorcycle	1.60	75.00	25.00	0.00
School Bus	0.10	0.00	0.00	100.00
Motor Home	1.40	7.10	85.70	7.20

Travel Conditions

Residential			Commercial		
Home-	Home-	Home-			
Work	Shop	Other	Commute	Non-Work	Customer
10.8	7.3	7.5	10.8	7.3	7.3
15.0	10.0	10.0	15.0	10.0	10.0
35.0	35.0	35.0	35.0	35.0	35.0
27.3	21.2	51.5			
	Work 10.8 15.0 35.0	Home- Home- Work Shop 10.8 7.3 15.0 10.0 35.0 35.0	Home- Home- Home- Work Shop Other 10.8 7.3 7.5 15.0 10.0 10.0 35.0 35.0 35.0	Home- Home- Home- Work Shop Other Commute 10.8 7.3 7.5 10.8 15.0 10.0 10.0 15.0 35.0 35.0 35.0 35.0	Home- Home- Home- Work Shop Other Commute Non-Work 10.8 7.3 7.5 10.8 7.3 15.0 10.0 15.0 10.0 35.0 35.0 35.0 35.0

% of Trips - Commercial (by land use)

Day-care center City park

 5.0
 2.5
 92.5

 5.0
 2.5
 92.5

 Page: 4 08/22/2006 6:39 PM

Changes made to the default values for Land Use Trip Percentages

Changes made to the default values for Area

The hearth option switch changed from on to off.
The landscape option switch changed from on to off.
The consumer products option switch changed from on to off.

Changes made to the default values for Operations

The operational emission year changed from 2005 to 2009.

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URBEMIS 2002 For Windows 8.7.0

C:\Program Files\URBEMIS 2002 Version 8.7\Projects2k2\FtRoseCemAnx Landscape 2010.urb FtRscrnsCemAnx Landscape Phase I - 2010

File Name: Project Name: Project Name:

Project Location:

On-Road Mar

San Diego County

On-Road Motor Vehicle Emissions Based on EMFAC2002 version 2.2

SUMMARY REPORT (Tons/Year)

AREA SOURCE EMISSION ESTIMATES

ROG NOX CO SO2 PM10
TOTALS (tpy, unmitigated) 0.18 0.02 1.48 0.01 0.00

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URBEMIS 2002 For Windows 8.7.0

File Name: Project Name: C:\Program Files\URBEMIS 2002 Version 8.7\Projects2k2\FtRoseCemAnx Landscape 2010.urb

FtRscrnsCemAnx Landscape Phase I - 2010 ______ Name:
Project Location:

San Diego County

On-Road Motor Vehicle Emissions Based on EMFAC2002 version 2.2

DETAIL REPORT (Tons/Year)

AREA SOURCE EMISSION ESTIMATES (Tons per Year, Unmitigated) Page: 3 08/11/2006 12:36 AM

Changes made to the default values for Land Use Trip Percentages

Changes made to the default values for Area

The natural gas option switch changed from on to off. The hearth option switch changed from on to off.
The consumer products option switch changed from on to off.

The arch. coatings option switch changed from on to off.
The landscape length of the summer period (in days) changed from 180 to 360.
The landscape year changed from 2005 to 2010.

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URBEMIS 2002 For Windows 8.7.0

C:\Program Files\URBEMIS 2002 Version 8.7\Projects2k2\FRNCA Ops 2010 082206.urb

File Name: Project Name: FtRcrnsCemAnx Ops Phase 1 - 2010 Project Location:

San Diego County

On-Road Motor Vehicle Emissions Based on EMFAC2002 version 2.2

SUMMARY REPORT (Tons/Year)

AREA SOURCE EMISSION ESTIMATES

ROG NOX CO SO2 PM10 0.04 0.04 0.03 0.00 0.00 0.04 TOTALS (tpy, unmitigated)

OPERATIONAL (VEHICLE) EMISSION ESTIMATES NOx CO SO2 0.49 4.16 0.00 PM10 TOTALS (tpy, unmitigated) 0.52

SUM OF AREA AND OPERATIONAL EMISSION ESTIMATES ROG NOX CO SO2
0.50 0.52 4.19 0.00 PM10 TOTALS (tpy, unmitigated) 0.52

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URBEMIS 2002 For Windows 8.7.0

C:\Program Files\URBEMIS 2002 Version 8.7\Projects2k2\FRNCA Ops 2010 082206.urb

File Name: Project Name: ______ name:
Project Location: FtRcrnsCemAnx Ops Phase 1 - 2010

San Diego County

On-Road Motor Vehicle Emissions Based on EMFAC2002 version 2.2

DETAIL REPORT (Tons/Year)

AREA SOURCE EMISSION ESTIMATES (Tons per Year, Unmitigated)

UNMITIGATED OPERATIONAL EMISSIONS

Day-care center City park	ROG 0.03 0.43	NOx 0.00 0.49	CO 0.00 4.16	SO2 0.00 0.00	PM10 0.00 0.52
TOTAL EMISSIONS (tons/yr)	0.46	0.49	4.16	0.00	0.52

Does not include correction for passby trips.

Does not include double counting adjustment for internal trips.

OPERATIONAL (Vehicle) EMISSION ESTIMATES

Analysis Year: 2010 Season: Annual

EMFAC Version: EMFAC2002 (9/2002)

Summary of Land Uses:

Unit Type	Acreage	Trip Rate	No. Units	Total Trips
Day-care center City park		0.00 trips/1000 sq. ft. 2.81 trips/acres	20.00 90.00	0.00 252.90
		Cum of Total T	Crina	252 00

Sum of Total Trips 252.90 Total Vehicle Miles Traveled 1,890.43

Vehicle Assumptions:

Fleet Mix:

Vehicle Type	Percent Type	Non-Catalyst	Catalyst	Diesel
Light Auto	54.70	1.10	98.70	0.20
Light Truck < 3,750 lb	s 15.20	2.00	96.00	2.00
Light Truck 3,751- 5,75	0 16.20	1.20	98.10	0.70
Med Truck 5,751-8,50	0 7.30	1.40	95.90	2.70
Lite-Heavy 8,501-10,00	0 1.10	0.00	81.80	18.20
Lite-Heavy 10,001-14,00	0 0.30	0.00	66.70	33.30
Med-Heavy 14,001-33,00	0 1.00	0.00	20.00	80.00
Heavy-Heavy 33,001-60,00	0 0.90	0.00	11.10	88.90
Line Haul > 60,000 lb	s 0.00	0.00	0.00	100.00
Urban Bus	0.20	0.00	50.00	50.00
Motorcycle	1.60	68.80	31.20	0.00
School Bus	0.10	0.00	0.00	100.00
Motor Home	1.40	7.10	85.70	7.20

Travel Conditions

Residential			Commercial		
Home-	Home-	Home-			
Work	Shop	Other	Commute	Non-Work	Customer
10.8	7.3	7.5	10.8	7.3	7.3
15.0	10.0	10.0	15.0	10.0	10.0
35.0	35.0	35.0	35.0	35.0	35.0
27.3	21.2	51.5			
	Work 10.8 15.0 35.0	Home- Home- Work Shop 10.8 7.3 15.0 10.0 35.0 35.0	Home- Home- Home- Work Shop Other 10.8 7.3 7.5 15.0 10.0 10.0 35.0 35.0 35.0	Home- Home- Home- Work Shop Other Commute 10.8 7.3 7.5 10.8 15.0 10.0 10.0 15.0 35.0 35.0 35.0 35.0	Home- Home- Home- Work Shop Other Commute Non-Work 10.8 7.3 7.5 10.8 7.3 15.0 10.0 15.0 10.0 35.0 35.0 35.0 35.0

% of Trips - Commercial (by land use)

Day-care center City park

 5.0
 2.5
 92.5

 5.0
 2.5
 92.5

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Changes made to the default values for Land Use Trip Percentages

Changes made to the default values for Area

The hearth option switch changed from on to off.
The landscape option switch changed from on to off.
The consumer products option switch changed from on to off.

Changes made to the default values for Operations

The operational emission year changed from 2005 to 2010.

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URBEMIS 2002 For Windows 8.7.0

File Name: C:\Program Files\URBEMIS 2002 Version 8.7\Projects2k2\FRNCA Ops 2015 082206.urb
Project Name: FtRcrnsCemAnx Ops Phase 1 - 2015
Project Location: San Diego County

On-Road Motor Vehicle Emissions Based on EMFAC2002 version 2.2

SUMMARY REPORT (Tons/Year)

AREA SOURCE EMISSION ESTIMATES					
TOTALS (tpy, unmitigated)	ROG 0.04	NOx 0.04	0.03	SO2 0.00	PM10 0.00
OPERATIONAL (VEHICLE) EMISSION			40	200	D1/10
TOTALS (tpy, unmitigated)	ROG 0.45	NOx 0.52	CO 4.46	SO2 0.01	PM10 0.91
SUM OF AREA AND OPERATIONAL EMI		ESTIMATES			
TOTALS (tpy, unmitigated)	ROG 0.49	NOx 0.55	CO 4.49	SO2 0.01	PM10 0.91

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URBEMIS 2002 For Windows 8.7.0

File Name: C:\Program Files\URBEMIS 2002 Version 8.7\Projects2k2\FRNCA Ops 2015 082206.urb
Project Name: FtRcrnsCemAnx Ops Phase 1 - 2015
Project Location: San Diego County
On-Road Motor Vehicle Emissions Based on EMFAC2002 version 2.2

DETAIL REPORT (Tons/Year)

AREA SOURCE EMISSION ESTIMATES	(Tons per	Year,	Unmitigated)		
Source	ROG	NOx	CO	SO2	PM10
Natural Gas	0.00	0.04	0.03	0.00	0.00
Hearth	0.00	0.00	0.00	0.00	0.00
Landscaping	0.00	0.00	0.00	0.00	0.00
Consumer Prdcts	0.00	-	=	-	_
Architectural Coatings	0.04	-	=	-	_
TOTALS (tpy, unmitigated)	0.04	0.04	0.03	0.00	0.00

UNMITIGATED OPERATIONAL EMISSIONS

Day-care center City park	ROG 0.02 0.43	NOx 0.00 0.52	CO 0.00 4.46	SO2 0.00 0.01	PM10 0.00 0.91
TOTAL EMISSIONS (tons/yr)	0.45	0.52	4.46	0.01	0.91

Does not include correction for passby trips.

Does not include double counting adjustment for internal trips.

OPERATIONAL (Vehicle) EMISSION ESTIMATES

Analysis Year: 2015 Season: Annual

EMFAC Version: EMFAC2002 (9/2002)

Summary of Land Uses:

Unit Type	Acreage	Trip Rate	No. Units	Total Trips
Day-care center City park		0.00 trips/1000 sq. ft. 4.92 trips/acres	20.00	0.00 442.80
		Sum of Total T	rips	442.80

Total Vehicle Miles Traveled 3,309.93

Vehicle Assumptions:

Fleet Mix:

Vehicle Type	P	ercent Type	Non-Catalyst	Catalyst	Diesel
Light Auto		54.40	0.40	99.40	0.20
Light Truck < 3,750	lbs	15.30	0.70	98.00	1.30
Light Truck 3,751-	5,750	16.40	0.60	98.80	0.60
Med Truck 5,751-	8,500	7.30	0.00	98.60	1.40
Lite-Heavy 8,501-1	0,000	1.10	0.00	81.80	18.20
Lite-Heavy 10,001-1	4,000	0.30	0.00	66.70	33.30
Med-Heavy 14,001-3	3,000	1.00	0.00	20.00	80.00
Heavy-Heavy 33,001-6	0,000	0.80	0.00	0.00	100.00
Line Haul > 60,000	lbs	0.00	0.00	0.00	100.00
Urban Bus		0.20	0.00	50.00	50.00
Motorcycle		1.60	50.00	50.00	0.00
School Bus		0.10	0.00	0.00	100.00
Motor Home		1.50	0.00	93.30	6.70

Travel Conditions

Residential			Commercial		
Home-	Home-	Home-			
Work	Shop	Other	Commute	Non-Work	Customer
10.8	7.3	7.5	10.8	7.3	7.3
15.0	10.0	10.0	15.0	10.0	10.0
35.0	35.0	35.0	35.0	35.0	35.0
27.3	21.2	51.5			
	Home- Work 10.8 15.0 35.0	Home- Home- Shop 10.8 7.3 15.0 10.0 35.0 35.0	Home- Home- Home- Work Shop Other 10.8 7.3 7.5 15.0 10.0 10.0 35.0 35.0 35.0	Home- Home- Home- Work Shop Other Commute 10.8 7.3 7.5 10.8 15.0 10.0 10.0 15.0 35.0 35.0 35.0 35.0	Home- Home- Home- Work Shop Other Commute Non-Work 10.8 7.3 7.5 10.8 7.3 15.0 10.0 10.0 15.0 10.0 35.0 35.0 35.0 35.0 35.0

% of Trips - Commercial (by land use)

Day-care center City park

 5.0
 2.5
 92.5

 5.0
 2.5
 92.5

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Changes made to the default values for Land Use Trip Percentages

Changes made to the default values for Area

The hearth option switch changed from on to off.
The landscape option switch changed from on to off.
The consumer products option switch changed from on to off.

Changes made to the default values for Operations

The operational emission year changed from 2005 to 2015.

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URBEMIS 2002 For Windows 8.7.0

File Name: C:\Program Files\URBEMIS 2002 Version 8.7\Projects2k2\FtRoseCemAnx Const 2 - 040506.urb
Project Name: FtRoseCemAnx Const Ph 2
Project Location: San Diego County

On-Road Motor Vehicle Emissions Based on EMFAC2002 version 2.2

SUMMARY REPORT (Tons/Year)

CONSTRUCTION EMISSION ESTIMATES

10						
				PM10	PM10	PM10
ROG	NOx	CO	SO2	TOTAL	EXHAUST	DUST
1.37	8.26	11.68	0.00	4.22	0.26	3.96
1.37	8.26	11.68	0.00	1.65	0.26	1.39
				PM10	PM10	PM10
ROG	NOx	CO	SO2	TOTAL	EXHAUST	DUST
1.54	6.96	10.01	0.00	1.53	0.21	1.32
1.54	6.96	10.01	0.00	0.67	0.21	0.46
	ROG 1.37 1.37 ROG 1.54	ROG NOX 1.37 8.26 1.37 8.26 ROG NOX 1.54 6.96	ROG NOX CO 1.37 8.26 11.68 1.37 8.26 11.68 ROG NOX CO 1.54 6.96 10.01	ROG NOX CO SO2 1.37 8.26 11.68 0.00 1.37 8.26 11.68 0.00 ROG NOX CO SO2 1.54 6.96 10.01 0.00	ROG NOX CO SO2 TOTAL 1.37 8.26 11.68 0.00 4.22 1.37 8.26 11.68 0.00 1.65 ROG NOX CO SO2 TOTAL 1.54 6.96 10.01 0.00 1.53	ROG NOX CO SO2 TOTAL EXHAUST 1.37 8.26 11.68 0.00 4.22 0.26 1.37 8.26 11.68 0.00 1.65 0.26 PM10 PM10 ROG NOX CO SO2 TOTAL EXHAUST 1.54 6.96 10.01 0.00 1.53 0.21

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URBEMIS 2002 For Windows 8.7.0

File Name: Project Name: C:\Program Files\URBEMIS 2002 Version 8.7\Projects2k2\FtRoseCemAnx Const 2 - 040506.urb

PM10 PM10 PM10

______Project Location: FtRoseCemAnx Const Ph 2

San Diego County

On-Road Motor Vehicle Emissions Based on EMFAC2002 version 2.2

DETAIL REPORT (Tons/Year)

Construction Start Month and Year: January, 2018
Construction Duration: 24

Total Land Use Area to be Developed: 40 acres Maximum Acreage Disturbed Per Day: 3 acres Single Family Units: 0 Multi-Family Units: 0

Retail/Office/Institutional/Industrial Square Footage: 20000

CONSTRUCTION EMISSION ESTIMATES UNMITIGATED (tons/year)

ROG	NOx	CO	SO2	TOTAL	EXHAUST	DUST
na						
	_	=	_	0 00	=	0.00
						0.00
						0.00
						0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00
ons						
-	_	_	_	3.96	_	3.96
1.36			_			0.00
			0.00			0.00
						0.00
1.37	8.26	11.68	0.00	4.22	0.26	3.96
lon						
0.00	0.00	0.00	_	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	-	=	=	_	-	-
0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	_	_	-	_	_	-
0.00	0.00	0.00	-	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00		0.00
						0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00
1.37	8.26	11.68	0.00	4.22	0.26	3.96
ns						
	_	_	_	0.00	_	0.00
0.00		0.00	-		0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00
lons						
-	_	_	-	1.32	-	1.32
0.45	2.72	3.83	_	0.09	0.09	0.00
0.00	0.02	0.01	0.00	0.00	0.00	0.00
0.00	0.01	0.06	0.00	0.00	0.00	0.00
0.45	2.75	3.90	0.00	1.41	0.09	1.32
lon						
0.70	4.08	5.90	-	0.12	0.12	0.00
0.00	0.00	0.02	0.00	0.00		0.00
0.37	-	-	-	-	.	-
			0.00			0.00
0.00	_	_	_	_	_	
	0.13	0.19				0.00
						0.00
						0.00
1.09	4.21	6.11	0.00	0.12	0.12	0.00
1.54	6.96	10.01	0.00	1.53	0.21	1.32
	0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.0	0.00	0.00	0.00	ROG NOX CO SO2 TOTAL ASS 0.00 0.00 0.00 0.00 0.00 - 0.00 0.00 0.00	ROG NOX CO SO2 TOTAL EXHAUST ISS 0.000

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Phase 1 - Demolition Assumptions: Phase Turned OFF

Phase 2 - Site Grading Assumptions Start Month/Year for Phase 2: Jan '18 Phase 2 Duration: 16 months

On-Road Truck Travel (VMT): 56

Off-Road Equipment No

No.	Type	Horsepower	Load Factor	Hours/Day
1	Crawler Tractors	143	0.575	8.0
1	Graders	174	0.575	8.0
1	Off Highway Trucks	417	0.490	4.0
1	Scrapers	313	0.660	8.0
1	Tractor/Loaders/Backhoes	79	0.465	8.0
1	Trenchers	82	0.695	8.0

Phase 3 - Building Construction Assumptions

Start Month/Year for Phase 3: May '19

Phase 3 Duration: 8 months

Start Month/Year for SubPhase Building: May '19 SubPhase Building Duration: 8 months

Off-Road Equipment

No.	Type	Horsepower	Load Factor	Hours/Day
2	Cranes	190	0.430	8.0
1	Off Highway Trucks	417	0.490	8.0
1	Rough Terrain Forklifts	94	0.475	8.0
1	Tractor/Loaders/Backhoes	79	0 465	8 0

Start Month/Year for SubPhase Architectural Coatings: Oct '19 SubPhase Architectural Coatings Duration: 0.5 months

Start Month/Year for SubPhase Asphalt: Nov '19

SubPhase Asphalt Duration: .5 months

Acres to be Paved: 2

Off-Road Equipment
No. Type

OII KOU	a Equipment			
No.	Type	Horsepower	Load Factor	Hours/Day
1	Graders	174	0.575	8.0
1	Pavers	132	0.590	8.0
1	Rollers	114	0.430	8.0

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URBEMIS 2002 For Windows 8.7.0

C:\Program Files\URBEMIS 2002 Version 8.7\Projects2k2\FtRoseCemAnx Landscape Full 2020.urb FtRscrnsCemAnx Landscape 2020

File Name: Project Name: Project Location:

San Diego County

On-Road Motor Vehicle Emissions Based on EMFAC2002 version 2.2

SUMMARY REPORT (Tons/Year)

AREA SOURCE EMISSION ESTIMATES

ROG NOX CO SO2 PM10
TOTALS (tpy, unmitigated) 0.27 0.04 2.14 0.01 0.01

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URBEMIS 2002 For Windows 8.7.0

File Name: C:\Program Files\URBEMIS 2002 Version 8.7\Projects2k2\FRNCA Ops 2020 082206.urb
Project Name: FtRcrnsCemAnx Ops Phase 2 - 2020
Project Location: San Diego County

On-Road Motor Vehicle Emissions Based on EMFAC2002 version 2.2

SUMMARY REPORT (Tons/Year)

AREA SOURCE EMISSION ESTIMATES

	ROG	NOx	CO	SO2	PM10
TOTALS (tpy, unmitigated)	0.04	0.04	0.03	0.00	0.00

OPERATIONAL (VEHICLE) EMISSI	ON ESTIMA	ATES			
	ROG	NOx	CO	S02	PM10
TOTALS (tpy, unmitigated)	0.48	0.51	4.66	0.01	1.31
SUM OF AREA AND OPERATIONAL	EMISSION	ESTIMATES			
	ROG	NOx	CO	SO2	PM10
TOTALS (tpy, unmitigated)	0.52	0.54	4.69	0.01	1.31

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URBEMIS 2002 For Windows 8.7.0

C:\Program Files\URBEMIS 2002 Version 8.7\Projects2k2\FRNCA Ops 2020 082206.urb

File Name: Project Name: ______ name:
Project Location: FtRcrnsCemAnx Ops Phase 2 - 2020

San Diego County

On-Road Motor Vehicle Emissions Based on EMFAC2002 version 2.2

DETAIL REPORT (Tons/Year)

AREA SOURCE EMISSION ESTIMATES (Tons per Year, Unmitigated)

UNMITIGATED OPERATIONAL EMISSIONS

Day-care center City park	ROG 0.02 0.46	NOx 0.00 0.51	CO 0.00 4.66	SO2 0.00 0.01	PM10 0.00 1.31
TOTAL EMISSIONS (tons/yr)	0.48	0.51	4.66	0.01	1.31

Does not include correction for passby trips.

Does not include double counting adjustment for internal trips.

OPERATIONAL (Vehicle) EMISSION ESTIMATES

Analysis Year: 2020 Season: Annual

EMFAC Version: EMFAC2002 (9/2002)

Summary of Land Uses:

Unit Type	Acreage	Trip Rate	No. Units	Total Trips
Day-care center City park		0.00 trips/1000 sq. ft. 4.87 trips/acres	20.00 130.00	0.00 633.10
		Sum of Total	Tring	622 10

Sum of Total Trips 633.10
Total Vehicle Miles Traveled 4,732.42

Vehicle Assumptions:

Fleet Mix:

Vehicle Type	Percent Type	Non-Catalyst	Catalyst	Diesel
Light Auto	54.40	0.40	99.40	0.20
Light Truck $< 3,750$ 1	bs 15.30	0.70	98.00	1.30
Light Truck 3,751- 5,7	50 16.40	0.60	98.80	0.60
Med Truck 5,751-8,5	00 7.30	0.00	98.60	1.40
Lite-Heavy 8,501-10,0	00 1.10	0.00	81.80	18.20
Lite-Heavy 10,001-14,0	00 0.30	0.00	66.70	33.30
Med-Heavy 14,001-33,0	00 1.00	0.00	20.00	80.00
Heavy-Heavy 33,001-60,0	00.00	0.00	0.00	100.00
Line Haul > 60,000 l	bs 0.00	0.00	0.00	100.00
Urban Bus	0.20	0.00	50.00	50.00
Motorcycle	1.60	50.00	50.00	0.00
School Bus	0.10	0.00	0.00	100.00
Motor Home	1.50	0.00	93.30	6.70

Travel Conditions

	Residential			Commercial		
	Home-	Home-	Home-			
	Work	Shop	Other	Commute	Non-Work	Customer
Urban Trip Length (miles)	10.8	7.3	7.5	10.8	7.3	7.3
Rural Trip Length (miles)	15.0	10.0	10.0	15.0	10.0	10.0
Trip Speeds (mph)	35.0	35.0	35.0	35.0	35.0	35.0
% of Trips - Residential	27.3	21.2	51.5			

% of Trips - Commercial (by land use)

Day-care center City park

 5.0
 2.5
 92.5

 5.0
 2.5
 92.5

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Changes made to the default values for Land Use Trip Percentages

Changes made to the default values for Area

The hearth option switch changed from on to off.
The landscape option switch changed from on to off.
The consumer products option switch changed from on to off.

Changes made to the default values for Operations

The operational emission year changed from 2005 to 2020.

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URBEMIS 2002 For Windows 8.7.0

File Name: C:\Program Files\URBEMIS
Project Name: FtRcrnsCemAnx Ops - 2025
Project Location: San Diego County C:\Program Files\URBEMIS 2002 Version 8.7\Projects2k2\FRNCA Ops 2025 082206.urb

On-Road Motor Vehicle Emissions Based on EMFAC2002 version 2.2

SUMMARY REPORT (Tons/Year)

AREA SOURCE EMISSION ESTIMATES					
TOTALS (tpy, unmitigated)	ROG 0.04	NOx 0.04	CO 0.03	SO2 0.00	PM10 0.00
OPERATIONAL (VEHICLE) EMISSION	ESTIMA	TES			
	ROG	NOx	CO	SO2	PM10
TOTALS (tpy, unmitigated)	0.42	0.44	4.09	0.01	1.70
SUM OF AREA AND OPERATIONAL EM	ISSION	ESTIMATES			
	ROG	NOx	CO	S02	PM10
TOTALS (tpy, unmitigated)	0.46	0.48	4.12	0.01	1.70

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URBEMIS 2002 For Windows 8.7.0

C:\Program Files\URBEMIS 2002 Version 8.7\Projects2k2\FRNCA Ops 2025 082206.urb

File Name: Project Name: FtRcrnsCemAnx Ops - 2025

San Diego County

On-Road Motor Vehicle Emissions Based on EMFAC2002 version 2.2

DETAIL REPORT (Tons/Year)

AREA SOURCE EMISSION ESTIMATES (Tons per Year, Unmitigated)

UNMITIGATED OPERATIONAL EMISSIONS

Day-care center City park	ROG 0.01 0.41	NOx 0.00 0.44	CO 0.00 4.09	SO2 0.00 0.01	PM10 0.00 1.70
TOTAL EMISSIONS (tons/yr)	0.42	0.44	4.09	0.01	1.70

Does not include correction for passby trips.

Does not include double counting adjustment for internal trips.

OPERATIONAL (Vehicle) EMISSION ESTIMATES

Analysis Year: 2025 Season: Annual

EMFAC Version: EMFAC2002 (9/2002)

Summary of Land Uses:

Unit Type	Acreage	Trip Rate	No. Units	Total Trips
Day-care center City park		0.00 trips/1000 sq. ft. 6.33 trips/acres	20.00 130.00	0.00 822.90
		Cum of Total	Taina	022 00

Sum of Total Trips 822.90 Total Vehicle Miles Traveled 6,151.18

Vehicle Assumptions:

Fleet Mix:

Vehicle Type		Percent Type	Non-Catalyst	Catalyst	Diesel
Light Auto		53.50	0.00	100.00	0.00
Light Truck	< 3,750 lbs	15.70	0.00	99.40	0.60
Light Truck	3,751- 5,750	16.50	0.00	100.00	0.00
Med Truck	5,751- 8,500	7.50	0.00	98.70	1.30
Lite-Heavy	8,501-10,000	1.00	0.00	80.00	20.00
Lite-Heavy	10,001-14,000	0.30	0.00	66.70	33.30
Med-Heavy	14,001-33,000	0.90	0.00	22.20	77.80
Heavy-Heavy	33,001-60,000	0.80	0.00	0.00	100.00
Line Haul >	60,000 lbs	0.00	0.00	0.00	100.00
Urban Bus		0.20	0.00	50.00	50.00
Motorcycle		1.50	40.00	60.00	0.00
School Bus		0.10	0.00	0.00	100.00
Motor Home		2.00	0.00	90.00	10.00

Travel Conditions

Residential			Commercial		
Home-	Home-	Home-			
Work	Shop	Other	Commute	Non-Work	Customer
10.8	7.3	7.5	10.8	7.3	7.3
15.0	10.0	10.0	15.0	10.0	10.0
35.0	35.0	35.0	35.0	35.0	35.0
27.3	21.2	51.5			
	Home- Work 10.8 15.0 35.0	Home- Home- Shop 10.8 7.3 15.0 10.0 35.0 35.0	Home- Home- Home- Work Shop Other 10.8 7.3 7.5 15.0 10.0 10.0 35.0 35.0 35.0	Home- Home- Home- Work Shop Other Commute 10.8 7.3 7.5 10.8 15.0 10.0 10.0 15.0 35.0 35.0 35.0 35.0	Home- Home- Home- Work Shop Other Commute Non-Work 10.8 7.3 7.5 10.8 7.3 15.0 10.0 10.0 15.0 10.0 35.0 35.0 35.0 35.0 35.0

% of Trips - Commercial (by land use)

Day-care center City park

 5.0
 2.5
 92.5

 5.0
 2.5
 92.5

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Changes made to the default values for Land Use Trip Percentages

Changes made to the default values for Area

The hearth option switch changed from on to off.
The landscape option switch changed from on to off.
The consumer products option switch changed from on to off.

Changes made to the default values for Operations

The operational emission year changed from 2005 to 2025.

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URBEMIS 2002 For Windows 8.7.0

File Name: C:\Program Files\URBEMIS 2002 Version 8.7\Projects2k2\FtRoseCemAnx Const 3-4 - 040506.urb
Project Name: FtRoseCemAnx Const Ph 3
Project Location: San Diego County

On-Road Motor Vehicle Emissions Based on EMFAC2002 version 2.2

SUMMARY REPORT (Tons/Year)

CONSTRUCTION EMISSION ESTIMATES

10						
				PM10	PM10	PM10
ROG	NOx	CO	SO2	TOTAL	EXHAUST	DUST
1.36	8.22	11.62	0.00	4.22	0.26	3.96
1.36	8.22	11.62	0.00	1.65	0.26	1.39
				PM10	PM10	PM10
ROG	NOx	CO	SO2	TOTAL	EXHAUST	DUST
1.54	6.94	9.98	0.00	1.53	0.21	1.32
1.54	6.94	9.98	0.00	0.67	0.21	0.46
	ROG 1.36 1.36 ROG 1.54	ROG NOX 1.36 8.22 1.36 8.22 ROG NOX 1.54 6.94	ROG NOX CO 1.36 8.22 11.62 1.36 8.22 11.62 ROG NOX CO 1.54 6.94 9.98	ROG NOX CO SO2 1.36 8.22 11.62 0.00 1.36 8.22 11.62 0.00 ROG NOX CO SO2 1.54 6.94 9.98 0.00	ROG NOX CO SO2 TOTAL 1.36 8.22 11.62 0.00 4.22 1.36 8.22 11.62 0.00 1.65 ROG NOX CO SO2 TOTAL 1.54 6.94 9.98 0.00 1.53	ROG NOX CO SO2 TOTAL EXHAUST 1.36 8.22 11.62 0.00 4.22 0.26 1.36 8.22 11.62 0.00 1.65 0.26 PM10 PM10 ROG NOX CO SO2 TOTAL EXHAUST 1.54 6.94 9.98 0.00 1.53 0.21

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URBEMIS 2002 For Windows 8.7.0

File Name: C:\Program Files\URBEMIS 2002 Version 8.7\Projects2k2\FtRoseCemAnx Const 3-4 - 040506.urb
Project Name: FtRoseCemAnx Const Ph 3
Project Location: San Diego County

On-Road Motor Vehicle Emissions Based on EMFAC2002 version 2.2

DETAIL REPORT (Tons/Year)

Construction Start Month and Year: January, 2020 Construction Duration: 24

Total Land Use Area to be Developed: 40 acres Maximum Acreage Disturbed Per Day: 3 acres Single Family Units: 0 Multi-Family Units: 0

Retail/Office/Institutional/Industrial Square Footage: 20000

CONSTRUCTION EMISSION	ESTIMATES	UNMITIGATED	(tons/year))
-----------------------	-----------	-------------	-------------	---

CONSTRUCTION EMISSION ESTIMAT	ES UNMITIG	SATED (tons	s/year)				
Source *** 2020***	ROG	NOx	CO	SO2	PM10 TOTAL	PM10 EXHAUST	PM10 DUST
Phase 1 - Demolition Emission	S						
Fugitive Dust	_	_	_	_	0.00	_	0.00
Off-Road Diesel	0.00	0.00	0.00	_	0.00	0.00	0.00
On-Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Worker Tring	0 00	0.00	0.00	0.00	0.00	0.00	0.00
Total tons/year	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Phase 2 - Site Grading Emissi	ons						
Find the Control of t	_	-	_	_	3.96	-	3.96
Off-Road Diesel	1.36	8.17	11.48	_	0.26	0.26	0.00
On-Road Diesel	0.00	0.04	0.02	0.00	0.00	0.00	0.00
Worker Trips	0.00	0.01	0.12	0.00	0.00	0.00	0.00
Total tons/year	1.36	8.22	11.62	0.00	4.22	0.26	3.96
Phase 3 - Building Constructi							
Bldg Const Off-Road Diesel	0.00	0.00	0.00	_	0.00	0.00	0.00
Bldg Const Worker Trips	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Arch Coatings Off-Gas	0.00	_	_	_	_	_	_
	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Asphalt Off-Gas	0.00	-	-	_		-	
Asphalt Off-Road Diesel	0.00	0.00	0.00	_	0.00	0.00	0.00
Asphalt On-Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Asphalt Worker Trips	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total tons/year	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total all phases tons/yr	1.36	8.22	11.62	0.00	4.22	0.26	3.96
*** 2021***							
Phase 1 - Demolition Emission	.s						
Fugitive Dust	_	_	_	_	0.00	_	0.00
Off-Road Diesel On-Road Diesel	0.00	0.00	0.00	_	0.00	0.00	0.00
On-Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Worker Trips	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total tons/year	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Phase 2 - Site Grading Emissi	ons						
Fugitive Dust	_	_	_	_	1.32	_	1.32
Off-Road Diesel	0.45	2.72	3.83	-	0.09	0.09	0.00
On-Road Diesel	0.00	0.01	0.01	0.00	0.00	0.00	0.00
Worker Trips	0.00	0.00	0.04	0.00	0.00	0.00	0.00
Total tons/year	0.45	2.73	3.88	0.00	1.41	0.09	1.32
Phase 3 - Building Constructi		4 00			0.10	0.10	
Bldg Const Off-Road Diesel	0.70	4.08	5.90		0.12	0.12	0.00
Bldg Const Worker Trips	0.00	0.00	0.01	0.00	0.00	0.00	0.00
Arch Coatings Off-Gas	0.37	_		_	_		_
Arch Coatings Worker Trips	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Asphalt Off-Gas	0.00	_	_	-	_	_	
Asphalt Off-Road Diesel	0.02	0.13	0.19		0.00	0.00	0.00
Asphalt On-Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Asphalt Worker Trips	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total tons/year	1.09	4.21	6.10	0.00	0.12	0.12	0.00
Total all phases tons/yr	1.54	6.94	9.98	0.00	1.53	0.21	1.32

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Phase 1 - Demolition Assumptions: Phase Turned OFF

Phase 2 - Site Grading Assumptions Start Month/Year for Phase 2: Jan '20

Phase 2 Duration: 16 months On-Road Truck Travel (VMT): 56

Off-Road Equipment No

No.	Type	Horsepower	Load Factor	Hours/Day
1	Crawler Tractors	143	0.575	8.0
1	Graders	174	0.575	8.0
1	Off Highway Trucks	417	0.490	4.0
1	Scrapers	313	0.660	8.0
1	Tractor/Loaders/Backhoes	79	0.465	8.0
1	Trenchers	82	0.695	8.0

Phase 3 - Building Construction Assumptions

Start Month/Year for Phase 3: May '21

Phase 3 Duration: 8 months

Start Month/Year for SubPhase Building: May '21 SubPhase Building Duration: 8 months

Off-Road Equipment

No.	Type	Horsepower	Load Factor	Hours/Day
2	Cranes	190	0.430	8.0
1	Off Highway Trucks	417	0.490	8.0
1	Rough Terrain Forklifts	94	0.475	8.0
1	Tractor/Loaders/Backhoes	79	0.465	8.0

Start Month/Year for SubPhase Architectural Coatings: Oct '21 SubPhase Architectural Coatings Duration: 0.5 months

Start Month/Year for SubPhase Asphalt: Nov '21

SubPhase Asphalt Duration: .5 months

Acres to be Paved: 2

Off-Road Equipment

NO.	Type	Horsepower	Load Factor	Hours/Day
1	Graders	174	0.575	8.0
1	Pavers	132	0.590	8.0
1	Rollers	114	0.430	8.0

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URBEMIS 2002 For Windows 8.7.0

C:\Program Files\URBEMIS 2002 Version 8.7\Projects2k2\FtRoseCemAnx Landscape 2030.urb FtRscrnsCemAnx Landscape 2030

File Name: Project Name: Project Name:
Project Location:
On-Road Mate

San Diego County

On-Road Motor Vehicle Emissions Based on EMFAC2002 version 2.2

SUMMARY REPORT (Tons/Year)

AREA SOURCE EMISSION ESTIMATES

ROG NOX CO SO2 PM10
TOTALS (tpy, unmitigated) 0.35 0.05 2.80 0.02 0.01

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URBEMIS 2002 For Windows 8.7.0

File Name: C:\Program Files\URBEMIS 2002 Version 8.7\Projects2k2\FtRoseCemAnx Landscape 2030.urb
Project Name: FtRscrnsCemAnx Landscape 2030
Project Location: San Diego County
On-Road Motor Vehicle Emissions Based on EMFAC2002 version 2.2

DETAIL REPORT (Tons/Year)

AREA SOURCE EMISSION ESTIMATES	(Tons per	Year,	Unmitigated)		
Source	ROG	NOx	CO	SO2	PM10
Natural Gas	0.00	0.00	0.00	0.00	0.00
Hearth	0.00	0.00	0.00	0.00	0.00
Landscaping	0.35	0.05	2.80	0.02	0.01
Consumer Prdcts	0.00	-	=	_	-
Architectural Coatings	0.00	-	=	_	-
TOTALS (tpy, unmitigated)	0.35	0.05	2.80	0.02	0.01

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Changes made to the default values for Land Use Trip Percentages

Changes made to the default values for Area

The natural gas option switch changed from on to off.

The hearth option switch changed from on to off.
The consumer products option switch changed from on to off.

The arch. coatings option switch changed from on to off.
The landscape length of the summer period (in days) changed from 180 to 360.
The landscape year changed from 2005 to 2020.

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URBEMIS 2002 For Windows 8.7.0

C:\Program Files\URBEMIS 2002 Version 8.7\Projects2k2\FRNCA Ops 2030 082206.urb

File Name: Project Name: FtRcrnsCemAnx Ops Phase 3 - 2030 Project Location:

San Diego County

On-Road Motor Vehicle Emissions Based on EMFAC2002 version 2.2

SUMMARY REPORT (Tons/Year)

AREA SOURCE EMISSION ESTIMATES

ROG NOX CO SO2 PM10 0.04 0.04 0.03 0.00 0.00 0.04 TOTALS (tpy, unmitigated)

OPERATIONAL (VEHICLE) EMISSION ESTIMATES

NOx CO SO2 0.42 4.09 0.01 PM10 2.09

TOTALS (tpy, unmitigated) 0.44

SUM OF AREA AND OPERATIONAL EMISSION ESTIMATES ROG NOX CO SO2 PM10 0.48 0.45 4.12 0.01 2.09 TOTALS (tpy, unmitigated)

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URBEMIS 2002 For Windows 8.7.0

C:\Program Files\URBEMIS 2002 Version 8.7\Projects2k2\FRNCA Ops 2030 082206.urb

File Name: Project Name: ______ name:
Project Location: FtRcrnsCemAnx Ops Phase 3 - 2030

San Diego County

On-Road Motor Vehicle Emissions Based on EMFAC2002 version 2.2

DETAIL REPORT (Tons/Year)

AREA SOURCE EMISSION ESTIMATES (Tons per Year, Unmitigated)

UNMITIGATED OPERATIONAL EMISSIONS

Day-care center City park	ROG 0.01 0.43	NOx 0.00 0.42	CO 0.00 4.09	SO2 0.00 0.01	PM10 0.00 2.09
TOTAL EMISSIONS (tons/yr)	0.44	0.42	4.09	0.01	2.09

Does not include correction for passby trips.

Does not include double counting adjustment for internal trips.

OPERATIONAL (Vehicle) EMISSION ESTIMATES

Analysis Year: 2030 Season: Annual

EMFAC Version: EMFAC2002 (9/2002)

Summary of Land Uses:

Unit Type	Acreage	Trip Rate	No. Units	Total Trips
Day-care center City park		0.00 trips/1000 sq. ft. 4.73 trips/acres	20.00 214.00 1	0.00

Sum of Total Trips 1,012.22 Total Vehicle Miles Traveled 7,566.34

Vehicle Assumptions:

Fleet Mix:

Vehicle Type	Percent Type	Non-Catalyst	Catalyst	Diesel
Light Auto	52.50	0.00	100.00	0.00
Light Truck < 3,750 lb	s 15.90	0.00	100.00	0.00
Light Truck 3,751- 5,75	0 16.70	0.00	100.00	0.00
Med Truck 5,751-8,50	0 7.60	0.00	100.00	0.00
Lite-Heavy 8,501-10,00	0 1.00	0.00	80.00	20.00
Lite-Heavy 10,001-14,00	0 0.30	0.00	66.70	33.30
Med-Heavy 14,001-33,00	0 0.90	0.00	22.20	77.80
Heavy-Heavy 33,001-60,00	0 0.70	0.00	0.00	100.00
Line Haul > 60,000 lb	s 0.00	0.00	0.00	100.00
Urban Bus	0.20	0.00	50.00	50.00
Motorcycle	1.50	33.30	66.70	0.00
School Bus	0.10	0.00	0.00	100.00
Motor Home	2.60	0.00	92.30	7.70

Travel Conditions

Residential			Commercial		
Home-	Home-	Home-			
Work	Shop	Other	Commute	Non-Work	Customer
10.8	7.3	7.5	10.8	7.3	7.3
15.0	10.0	10.0	15.0	10.0	10.0
35.0	35.0	35.0	35.0	35.0	35.0
27.3	21.2	51.5			
	Work 10.8 15.0 35.0	Home- Home- Work Shop 10.8 7.3 15.0 10.0 35.0 35.0	Home- Home- Home- Work Shop Other 10.8 7.3 7.5 15.0 10.0 10.0 35.0 35.0 35.0	Home- Home- Home- Work Shop Other Commute 10.8 7.3 7.5 10.8 15.0 10.0 10.0 15.0 35.0 35.0 35.0 35.0	Home- Home- Home- Work Shop Other Commute Non-Work 10.8 7.3 7.5 10.8 7.3 15.0 10.0 15.0 10.0 35.0 35.0 35.0 35.0

% of Trips - Commercial (by land use)

Day-care center City park

 5.0
 2.5
 92.5

 5.0
 2.5
 92.5

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Changes made to the default values for Land Use Trip Percentages

Changes made to the default values for Area

The hearth option switch changed from on to off.
The landscape option switch changed from on to off.
The consumer products option switch changed from on to off.

Changes made to the default values for Operations

The operational emission year changed from 2005 to 2030.

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URBEMIS 2002 For Windows 8.7.0

File Name: C:\Program Files\URBEMIS 2002 Version 8.7\Projects2k2\FRNCA Ops 2035 082206.urb
Project Name: FtRcrnsCemAnx Ops Phase 3 - 2035
Project Location: San Diego County

On-Road Motor Vehicle Emissions Based on EMFAC2002 version 2.2

SUMMARY REPORT (Tons/Year)

I ESTIMATES				
ROG gated) 0.04	NOx 0.04	CO 0.03	SO2 0.00	PM10 0.00
I) EMIGGION EGETMAND	a			
,	-			
ROG	NOx	CO	SO2	PM10
.gated) 0.39	0.35	3.74	0.01	2.08
ATIONAL EMISSION ES	TIMATES			
ROG	NOx	CO	SO2	PM10
	0.38	3.77	0.01	2.08
i	ROG Lgated) 0.04 E) EMISSION ESTIMATE ROG Lgated) 0.39 RATIONAL EMISSION ES ROG	ROG NOX (1904) 0.04 0.04 0.04 0.04 0.04 0.04 0.04 0	ROG NOX CO 1 (gated) 0.04 0.04 0.03 E) EMISSION ESTIMATES ROG NOX CO 1 (gated) 0.39 0.35 3.74 RATIONAL EMISSION ESTIMATES ROG NOX CO	ROG NOX CO SO2 Lgated) 0.04 0.04 0.03 0.00 E) EMISSION ESTIMATES ROG NOX CO SO2 Lgated) 0.39 0.35 3.74 0.01 RATIONAL EMISSION ESTIMATES ROG NOX CO SO2

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URBEMIS 2002 For Windows 8.7.0

C:\Program Files\URBEMIS 2002 Version 8.7\Projects2k2\FRNCA Ops 2035 082206.urb

File Name: Project Name: ______ name:
Project Location: FtRcrnsCemAnx Ops Phase 3 - 2035

San Diego County

On-Road Motor Vehicle Emissions Based on EMFAC2002 version 2.2

DETAIL REPORT (Tons/Year)

AREA SOURCE EMISSION ESTIMATES (Tons per Year, Unmitigated)

UNMITIGATED OPERATIONAL EMISSIONS

Day-care center City park	ROG 0.01 0.38	NOx 0.00 0.35	CO 0.00 3.74	SO2 0.00 0.01	PM10 0.00 2.08
TOTAL EMISSIONS (tons/yr)	0.39	0.35	3.74	0.01	2.08

Does not include correction for passby trips.

Does not include double counting adjustment for internal trips.

OPERATIONAL (Vehicle) EMISSION ESTIMATES

Analysis Year: 2035 Season: Annual

EMFAC Version: EMFAC2002 (9/2002)

Summary of Land Uses:

Unit Type	Acreage	Trip Rate	No. Units	Total Trips
Day-care center		0.00 trips/1000 sq. ft.	20.00	0.00
City park		4.73 trips/acres	214.00 1	,012.22

Sum of Total Trips 1,012.22
Total Vehicle Miles Traveled 7,566.34

Vehicle Assumptions:

Fleet Mix:

Vehicle Type	2	Percent Type	Non-Catalyst	Catalyst	Diesel
Light Auto		51.20	0.00	100.00	0.00
Light Truck	< 3,750 lbs	s 16.20	0.00	100.00	0.00
Light Truck	3,751- 5,750	17.00	0.00	100.00	0.00
Med Truck	5,751- 8,500	7.70	0.00	100.00	0.00
Lite-Heavy	8,501-10,000	0.90	0.00	77.80	22.20
Lite-Heavy	10,001-14,000	0.30	0.00	66.70	33.30
Med-Heavy	14,001-33,000	0.90	0.00	22.20	77.80
Heavy-Heavy	33,001-60,000	0.70	0.00	0.00	100.00
Line Haul >	60,000 lbs	o.00	0.00	0.00	100.00
Urban Bus		0.20	0.00	50.00	50.00
Motorcycle		1.70	35.30	64.70	0.00
School Bus		0.10	0.00	0.00	100.00
Motor Home		3.10	0.00	90.30	9.70

Travel Conditions

Residential				Commercial	L
Home-	Home-	Home-			
Work	Shop	Other	Commute	Non-Work	Customer
10.8	7.3	7.5	10.8	7.3	7.3
15.0	10.0	10.0	15.0	10.0	10.0
35.0	35.0	35.0	35.0	35.0	35.0
27.3	21.2	51.5			
	Work 10.8 15.0	Home- Home- Work Shop 10.8 7.3 15.0 10.0 35.0 35.0	Home- Home- Home- Work Shop Other 10.8 7.3 7.5 15.0 10.0 10.0 35.0 35.0 35.0	Home- Home- Home- Work Shop Other Commute 10.8 7.3 7.5 10.8 15.0 10.0 10.0 15.0 35.0 35.0 35.0 35.0	Home- Home- Home- Work Shop Other Commute Non-Work 10.8 7.3 7.5 10.8 7.3 15.0 10.0 15.0 10.0 35.0 35.0 35.0 35.0

% of Trips - Commercial (by land use)

Day-care center City park

 5.0
 2.5
 92.5

 5.0
 2.5
 92.5

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Changes made to the default values for Land Use Trip Percentages

Changes made to the default values for Area

The hearth option switch changed from on to off.
The landscape option switch changed from on to off.
The consumer products option switch changed from on to off.

Changes made to the default values for Operations

The operational emission year changed from 2005 to 2035.

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URBEMIS 2002 For Windows 8.7.0

File Name: Project Name: C:\Program Files\URBEMIS 2002 Version 8.7\Projects2k2\FtRoseCemAnx Landscape 2040 082206.urb FtRscrnsCemAnx Landscape 2040

Project Location:

San Diego County

On-Road Motor Vehicle Emissions Based on EMFAC2002 version 2.2

SUMMARY REPORT (Tons/Year)

AREA SOURCE EMISSION ESTIMATES

ROG NOX CO SO2 PM10
TOTALS (tpy, unmitigated) 0.44 0.06 3.52 0.02 0.01

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URBEMIS 2002 For Windows 8.7.0

File Name: C:\Program Files\URBEMIS 2002 Version 8.7\Projects2k2\FtRoseCemAnx Landscape 2040 082206.urb
Project Name: FtRscrnsCemAnx Landscape 2040
Project Location: San Diego County
On-Road Motor Vehicle Emissions Based on EMFAC2002 version 2.2

DETAIL REPORT (Tons/Year)

AREA SOURCE EMISSION ESTIMATES	(Tons per	Year,	Unmitigated)		
Source	ROG	NOx	CO	SO2	PM10
Natural Gas	0.00	0.00	0.00	0.00	0.00
Hearth	0.00	0.00	0.00	0.00	0.00
Landscaping	0.44	0.06	3.52	0.02	0.01
Consumer Prdcts	0.00	-	=	_	-
Architectural Coatings	0.00	-	=	_	-
TOTALS (tpy, unmitigated)	0.44	0.06	3.52	0.02	0.01

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Changes made to the default values for Land Use Trip Percentages

Changes made to the default values for Area

The natural gas option switch changed from on to off. The hearth option switch changed from on to off.
The consumer products option switch changed from on to off.

The arch. coatings option switch changed from on to off.
The landscape length of the summer period (in days) changed from 180 to 360.
The landscape year changed from 2005 to 2020.

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URBEMIS 2002 For Windows 8.7.0

File Name: C:\Program Files\URBEMIS 2002 Version 8.7\Projects2k2\FRNCA Ops 2040 082206.urb
Project Name: FtRcrnsCemAnx Ops Phase 4
Project Location: San Diego County

On-Road Motor Vehicle Emissions Based on EMFAC2002 version 2.2

SUMMARY REPORT (Tons/Year)

AREA	SOURCE	EMISSION	ESTIMATES	
l				

AREA SOURCE EMISSION EST	IMATES				
	ROG	NOx	CO	SO2	PM10
TOTALS (tpy, unmitigate	ed) 0.04	0.04	0.03	0.00	0.00

OPERATIONAL (VEHICLE) EMISSI	ON ESTIMA	ATES			
	ROG	NOx	CO	S02	PM10
TOTALS (tpy, unmitigated)	0.38	0.31	3.67	0.01	2.08
SUM OF AREA AND OPERATIONAL	EMISSION	ESTIMATES			
	ROG	NOx	CO	SO2	PM10
TOTALS (tpy, unmitigated)	0.42	0.35	3.70	0.01	2.08

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URBEMIS 2002 For Windows 8.7.0

File Name: C:\Program Files\URBEMIS 2002 Version 8.7\Projects2k2\FRNCA Ops 2040 082206.urb
Project Name: FtRcrnsCemAnx Ops Phase 4
Project Location: San Diego County
On-Road Motor Vehicle Emissions Based on EMFAC2002 version 2.2

DETAIL REPORT (Tons/Year)

AREA SOURCE EMISSION ESTIMATES	(Tons per	Year,	Unmitigated)		
Source	ROG	NOx	CO	SO2	PM10
Natural Gas	0.00	0.04	0.03	0.00	0.00
Hearth	0.00	0.00	0.00	0.00	0.00
Landscaping	0.00	0.00	0.00	0.00	0.00
Consumer Prdcts	0.00	-	=	-	_
Architectural Coatings	0.04	-	=	-	_
TOTALS (tpy, unmitigated)	0.04	0.04	0.03	0.00	0.00

UNMITIGATED OPERATIONAL EMISSIONS

Day-care center City park	ROG 0.01 0.37	NOx 0.00 0.31	CO 0.00 3.67	SO2 0.00 0.01	PM10 0.00 2.08
TOTAL EMISSIONS (tons/yr)	0.38	0.31	3.67	0.01	2.08

Does not include correction for passby trips.

Does not include double counting adjustment for internal trips.

OPERATIONAL (Vehicle) EMISSION ESTIMATES

Analysis Year: 2040 Season: Annual

EMFAC Version: EMFAC2002 (9/2002)

Summary of Land Uses:

Unit Type	Acreage	Trip Rate	No. Units	Total Trips
Day-care center City park		0.00 trips/1000 sq. ft 4.73 trips/acres		0.00

Sum of Total Trips 1,012.22
Total Vehicle Miles Traveled 7,566.34

Vehicle Assumptions:

Fleet Mix:

Vehicle Type		Percent Type	Non-Catalyst	Catalyst	Diesel
Light Auto		49.90	0.00	100.00	0.00
Light Truck <	< 3,750 lbs	16.40	0.00	100.00	0.00
Light Truck	3,751- 5,750	17.20	0.00	100.00	0.00
Med Truck	5,751- 8,500	7.80	0.00	100.00	0.00
Lite-Heavy	8,501-10,000	0.90	0.00	77.80	22.20
Lite-Heavy 1	10,001-14,000	0.30	0.00	66.70	33.30
Med-Heavy 1	14,001-33,000	0.80	0.00	25.00	75.00
Heavy-Heavy 3	33,001-60,000	0.70	0.00	0.00	100.00
Line Haul > 6	50,000 lbs	0.00	0.00	0.00	100.00
Urban Bus		0.20	0.00	50.00	50.00
Motorcycle		2.00	35.00	65.00	0.00
School Bus		0.10	0.00	0.00	100.00
Motor Home		3.70	0.00	91.90	8.10

Travel Conditions

TIAVEL CONGLETONS						
	Residential			Commercial		
	Home-	Home-	Home-			
	Work	Shop	Other	Commute	Non-Work	Customer
Urban Trip Length (miles)	10.8	7.3	7.5	10.8	7.3	7.3
Rural Trip Length (miles)	15.0	10.0	10.0	15.0	10.0	10.0
Trip Speeds (mph)	35.0	35.0	35.0	35.0	35.0	35.0
% of Trips - Residential	27.3	21.2	51.5			
0 - 5	7 7					

% of Trips - Commercial (by land use)

Day-care center City park

 5.0
 2.5
 92.5

 5.0
 2.5
 92.5

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Changes made to the default values for Land Use Trip Percentages

Changes made to the default values for Area

The hearth option switch changed from on to off.
The landscape option switch changed from on to off.
The consumer products option switch changed from on to off.

Changes made to the default values for Operations

The operational emission year changed from 2005 to 2040.