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September 14, 2023

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RE: Chino Valley Fire Station 68 Construction Energy Usage Assessment – City of Chino Hills CA

This analysis evaluates the energy efficiency of the construction activities expected during the construction of the Chino Valley Fire Station 68 project in the City of Chino Hills. This analysis focuses on estimated non-renewable fuel uses (Diesel and Gasoline) expected during both Construction and Operations. This effort was prepared according to requirements established within Public Resource Code (PRC) Section 21100(b)(3) and California Environmental Quality Act (CEQA) Guidelines Section 15126.4. The intent is to adequately address the following CEQA question as it relates to construction:

Would the project:

- 1. Result in a potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation?*
- 2. Conflict with or obstruct a state or local plan for renewable energy or energy efficiency?*

Project Description

The Chino Valley Fire District (CVFD) identified a significant need to build a fire station in the Soquel Canyon area of Chino Hills through a Standards of Cover Assessment and Master Plan update conducted in 2018. To support this requirement, The CVFD is proposing to construct a new fire station and emergency resource facility (ERF) which is expected to consist of approximately 18,745 square-foot in total on a 3.74 acre project site.

Site improvements proposed include approximately 56,115-square-feet of hardscape including visitor and secured parking areas, 88,600 square-feet of landscaping, security fencing, concrete masonry site walls, hose tower, an emergency generator, an above ground fuel dispensing tank, and carports with PV arrays. The Project is expected to commence in early 2024 and be completed in early 2025. The project would require 14,307 Cubic Yards (CY) of export during the grading operations.

Construction

Energy usage for construction equipment is best estimated using total horsepower hours and an assumed thermal efficiency of 30%. The most common measure of the energy efficiency of a tractor is referred to here as "specific volumetric fuel consumption" (SVFC), which is given in units of gallons per horsepower-hour (gal/hp-h). SVFC for diesel engines typically ranges from 0.0476 to 0.1110 gal/hp-h. Inverting these numbers yields a range of between 12-21 hp-h/gal. Over the last 30 years, fuel efficiency at maximum power has increased from roughly 14.5 to 16.5 hp-h/gal (VirginiaTech, 2010).

Project construction dates were estimated using CalEEMod and follow assumptions identified in both the Project Air Quality and Greenhouse Gas (GHG) analysis and the CalEEMod output is provided as ***Attachment A*** to this report. Construction operations would be expected to start in early 2024 and be completed roughly one year later in early 2025. Earthwork activities would require 14,307 CY of export. The model outputs for the expected equipment, quantity, work time and Horsepower (HP) as modeled would require 1,516,190 hp-h over the total duration of the Project as shown in Table 1.

Based on this, the project would consume roughly 91,890 gallons for diesel during construction. It should be noted that fuel consumption would go up if diesel construction equipment is poorly maintained. Based on this, the project shall properly maintain all equipment per manufacture recommendations. The model is provided as ***Attachment A*** to this report.

Construction energy from workers, vendors and haulage are based on the estimated vehicle miles traveled (VMT) for the total construction duration which is 372,452 miles for the Project. In California, the average fuel intensity for on-road vehicles is 0.0615 gal/mile (University of California, Irvine, 2005). Based on this, the vehicular trips would consume roughly 22,906 gallons during construction. On-road vehicles are regulated by state and federal regulations and vehicular fleet efficiencies are getting better each year so worker trips would not be considered wasteful.

Table 1: Proposed Construction Phase and Duration

Equipment Identification	Const. Days	Hours per day	HP	Load Factor	Quantity	Horsepower Hours
Site Preparation	20					
Rubber Tired Dozers		8	8	247	2	632,320.00
Tractors/Loaders/Backhoes		8	8	97	2	248,320.00
Grading	25					
Excavators		8	158	0.38	1	12,008.00
Graders		8	187	0.41	1	15,334.00
Rubber Tired Dozers		8	247	0.4	1	19,760.00
Tractors/Loaders/Backhoes		8	97	0.37	3	21,534.00
Building Construction	230					
Cranes		7	231	0.29	1	107,853.90
Forklifts		8	89	0.2	3	98,256.00
Generator Sets		8	84	0.74	1	114,374.40
Tractors/Loaders/Backhoes		7	97	0.37	3	173,348.70
Welders		8	46	0.45	1	38,088.00
Paving	18					
Cement and Mortar Mixers		6	9	0.56	2	1,088.64
Pavers		8	130	0.42	1	7,862.40
Paving Equipment		6	132	0.36	2	10,264.32
Rollers		6	80	0.38	2	6,566.40
Tractors/Loaders/Backhoes		8	97	0.37	1	5,168.16
Architectural Coating	18					
Air Compressors		6	78	0.48	1	4,043.52
Total Horsepower Hours						1,516,190
Total Diesel Fuel (Gal) @ 16.5 hp-h/gal						91,890
This equipment list is based upon equipment inventory and estimates within CalEEMod 2020.4.0.						

Operations

Energy – Utility Demand

The State of California has implemented a number of energy reducing policies largely geared to reducing Greenhouse gasses (GHGs). The most notable is Assembly Bill (AB) 32, Senate Bill (SB) 32, and Executive Order (EO) S-3-05. In addition, the state has implemented the latest 2022 scoping plan update which are geared to reduce GHG emissions by reducing energy consumption, increasing energy efficiency and increasing the usage of renewable sources. The state’s plan is designed with forward emphasis on developing a sector-by-sector roadmap for California to achieve carbon neutrality by 2045. This planning would include institutional

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developments such as the proposed Project. The state has also taken a strong step to increasing building efficiencies under Title 24, par 6 of California's Code of Regulations.

The Project would be required, at a minimum, to comply with the latest version of Title 24 standards at the time the Project seeks building permits. At the time this report was written, the 2022 standards were applicable and went into effect on January 1, 2023. The 2022 standards continue to improve upon the 2019 standards for residential and nonresidential buildings. It should be noted that the State updates these regulations every three years. Thus, based on the year the Project is constructed, buildings will need to comply with the most recently adopted standards.

In addition to the CEC's efforts, in 2008, the California Building Standards Commission adopted the nation's first green building standards. The California Green Building Standards Code (Part 11 of Title 24) is commonly referred to as CALGreen and establishes minimum mandatory standards as well as voluntary standards pertaining to the planning and design of sustainable site development, energy efficiency (in excess of the California Energy Code requirements), water conservation, material conservation, and interior air quality.

The CALGreen standards were last updated in 2022 which includes modifications to current codes and will be a requirement to the Project. Mandatory requirements include many updated Electric Vehicle Charging requirements which would be a requirement for this Project (California Title 24, Part 11, 2022). These measures will help reduce demand for energy in the future.

Based on the air quality modeling of the Project, the project would on average consume 191,955 kBtu of natural Gas and 64,312.5 kWh of electricity each year. Under this analysis, reductions from T24 (2019) were accounted for which would improve the efficiency of the project in terms of energy consumption. It is expected that the requirement for Title 24 (2022) would further reduce requirements on energy usage from the proposed buildings. Based on this, energy use associated with project operation would not result in wasteful, inefficient, or an unnecessary use of energy. As noted earlier in this analysis the CalEEMod Air Quality estimation tool output is provided as ***Attachment A*** to this letter.

Energy – Vehicular Usage

Based on the projected traffic volumes by the Project Traffic Study, the proposed project would generate as much as 87 average daily traffic (ADT) (LL&G, 2023). 87 trips are exceptionally low considering what could be allowed under the Institutional/Public Facility. A portion of the Project (roughly 1.5 acres) is zoned Institutional/Public Facility and would allow a Floor Area Ratio (FAR)

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of 0.5 to 1 or ½ square foot per square foot (City of Chino Hills, 2015). Given this, the project site could construct as much as a 32,670 SF building.

Energy efficiency for vehicles is mandated by State specific policies geared to reduce GHG emissions using zero-emission vehicles. These policies are:

Executive Order (EO) B-16-12

In March 2012 EO B-16-12 directs state entities under the Governor’s direction and control to support and facilitate development and distribution of ZEVs. This EO also sets a long-term target of reaching 1.5 million zero-emission vehicles on California’s roadways by 2025. On a statewide basis, EO B-16-12 also establishes a GHG emissions reduction target from the transportation sector equaling 80 percent less than 1990 levels by 2050. In furtherance of this EO, the Governor convened an Interagency Working Group on Zero-Emission Vehicles that has published multiple reports regarding the progress made on the penetration of ZEVs in the statewide vehicle fleet.

California Senate Bill 350

In 2015, SB 350 – the Clean Energy and Pollution Reduction Act – was enacted into law. As one of its elements, SB 350 establishes a statewide policy for widespread electrification of the transportation sector, recognizing that such electrification is required for achievement of the state’s 2030 and 2050 reduction targets (see Public Utilities Code Section 740.12). This effort would shift the demand from gasoline sources to electrical sources which would largely be electrical with the bulk of that energy coming from renewable sources.

In 2011 under SP 1078, the State established that utility providers need to offer electricity generated from of a certain percentage from completely renewable sources and was denoted as the renewable portfolio standard (RPS). Under SB 100 utility providers in California are required to achieve a 50 percent RPS by December 31, 2026 and a 60 percent RPS by December 31, 2030. SB 100 also established a new statewide policy goal that calls for eligible renewable energy resources and zero-carbon resources to supply 100 percent of electricity retail sales and 100 percent of electricity procured to serve all state agencies by December 31, 2045.

As RPS increases and as electric vehicle operations become more standardized, energy consumption from non-renewable sources will decrease. Given this, a less than significant impact under CEQA with respect to Energy Waste is expected and the project would not result

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in a wasteful or inefficient use of energy. Furthermore, the project would not conflict with or obstruct the State's or Local plans for renewable energy or energy efficiency.

Conclusion

Based on this analysis, the long-term energy demand during operations of the project would not result in a wasteful or inefficient use of energy. As RPS increases and as electric vehicle operations become more standardized, energy consumption will decrease, and energy efficiency will increase. Given this, a less than significant impact under CEQA with respect to Energy Waste is expected and the project would not result in a wasteful or inefficient use of energy. Furthermore, the project would not conflict with or obstruct the State's or Local plans for renewable energy or energy efficiency.

Sincerely,
Ldn Consulting, Inc.



Jeremy Loudon, Principal

Attachment A: CalEEMod Results

References:

California Title 24, Part 11. (2022). Retrieved from <https://www.dgs.ca.gov/BSC/Resources/2022-Title-24-California-Code-Changes>

City of Chino Hills. (2015). *General Plan*. Retrieved from <https://www.chinohills.org/DocumentCenter/View/11275/General-Plan---Final-approved-by-CC-2-14-15-4-21?bidId=>

LL&G. (2023). *Focused Traffic Impact Assessment for the Proposed Chino Valley Fire Station 68 Project*.

University of California, Irvine. (2005). *Fuel Efficiency and Motor Vehicle Travel*. Retrieved from <http://citeseerx.ist.psu.edu/viewdoc/download?doi=10.1.1.367.2859&rep=rep1&type=pdf>

VirginiaTech. (2010). *Predicting Tractor Diesel Fuel Consumption*. Retrieved from <https://pdfs.semanticscholar.org/2631/d1ae4f63bcf1b067e69804f904968f318571.pdf>

Chino Fire Department - San Bernardino-South Coast County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

**Chino Fire Department
San Bernardino-South Coast County, Annual**

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Government (Civic Center)	18.75	1000sqft	2.45	18,750.00	0
Parking Lot	56.12	1000sqft	1.29	56,120.00	0

1.2 Other Project Characteristics

Urbanization	Urban	Wind Speed (m/s)	2.2	Precipitation Freq (Days)	32
Climate Zone	10			Operational Year	2025
Utility Company	Southern California Edison				
CO2 Intensity (lb/MWhr)	390.98	CH4 Intensity (lb/MWhr)	0.033	N2O Intensity (lb/MWhr)	0.004

1.3 User Entered Comments & Non-Default Data

- Project Characteristics -
- Land Use - 3.74 acre site... updated to add 600 sf per email
- Construction Phase - cs
- Off-road Equipment - cs
- Off-road Equipment - cs
- Off-road Equipment - cs
- Off-road Equipment - cs
- Off-road Equipment - cs
- Off-road Equipment - cs
- Trips and VMT - Updated to reflect Project Export
- Grading -
- Vehicle Trips - Updated to reflect TS

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Consumer Products -

Area Coating -

Landscape Equipment -

Energy Use -

Water And Wastewater -

Solid Waste -

Construction Off-road Equipment Mitigation - Tier 4 equipment PDF

Architectural Coating -

Table Name	Column Name	Default Value	New Value
tblAreaCoating	ReapplicationRatePercent	10	0
tblConstEquipMitigation	DPF	No Change	Level 3
tblConstEquipMitigation	DPF	No Change	Level 3
tblConstEquipMitigation	DPF	No Change	Level 3
tblConstEquipMitigation	DPF	No Change	Level 3
tblConstEquipMitigation	DPF	No Change	Level 3
tblConstEquipMitigation	DPF	No Change	Level 3
tblConstEquipMitigation	DPF	No Change	Level 3
tblConstEquipMitigation	DPF	No Change	Level 3
tblConstEquipMitigation	DPF	No Change	Level 3
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tblConstEquipMitigation	DPF	No Change	Level 3
tblConstEquipMitigation	DPF	No Change	Level 3
tblConstEquipMitigation	DPF	No Change	Level 3
tblConstEquipMitigation	DPF	No Change	Level 3
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	3.00

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tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	3.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	9.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
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tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstructionPhase	NumDays	5.00	20.00
tblConstructionPhase	NumDays	8.00	25.00
tblGrading	MaterialExported	0.00	7,948.00
tblGrading	MaterialExported	0.00	6,359.00
tblLandUse	LotAcreage	0.43	2.45
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	4.00	2.00
tblVehicleTrips	ST_TR	0.00	4.79

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

tblVehicleTrips	SU_TR	0.00	4.79
tblVehicleTrips	WD_TR	33.98	4.79

2.0 Emissions Summary

Chino Fire Department - San Bernardino-South Coast County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

2.1 Overall Construction

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2024	0.2418	2.0280	2.2398	4.6300e-003	0.2836	0.0861	0.3696	0.1274	0.0806	0.2080	0.0000	410.8085	410.8085	0.0813	0.0118	416.3657
2025	0.0861	0.1411	0.2069	3.6000e-004	4.4800e-003	6.0900e-003	0.0106	1.2000e-003	5.7200e-003	6.9200e-003	0.0000	31.6709	31.6709	7.0800e-003	2.7000e-004	31.9275
Maximum	0.2418	2.0280	2.2398	4.6300e-003	0.2836	0.0861	0.3696	0.1274	0.0806	0.2080	0.0000	410.8085	410.8085	0.0813	0.0118	416.3657

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2024	0.0856	0.4384	2.4371	4.6300e-003	0.1491	2.3800e-003	0.1515	0.0601	2.3000e-003	0.0624	0.0000	410.8081	410.8081	0.0813	0.0118	416.3653
2025	0.0746	0.0252	0.2248	3.6000e-004	4.4800e-003	1.1000e-004	4.5900e-003	1.2000e-003	1.1000e-004	1.3100e-003	0.0000	31.6709	31.6709	7.0800e-003	2.7000e-004	31.9274
Maximum	0.0856	0.4384	2.4371	4.6300e-003	0.1491	2.3800e-003	0.1515	0.0601	2.3000e-003	0.0624	0.0000	410.8081	410.8081	0.0813	0.0118	416.3653

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction	51.18	78.63	-8.79	0.00	46.67	97.30	58.94	52.31	97.21	70.35	0.00	0.00	0.00	0.00	0.00	0.00

Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)
1	1-1-2024	3-31-2024	0.6794	0.1768
2	4-1-2024	6-30-2024	0.5046	0.1031
3	7-1-2024	9-30-2024	0.5101	0.1042
4	10-1-2024	12-31-2024	0.5644	0.1355
5	1-1-2025	3-31-2025	0.2123	0.0932
		Highest	0.6794	0.1768

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.0715	1.0000e-005	9.5000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	1.8600e-003	1.8600e-003	0.0000	0.0000	1.9800e-003
Energy	3.5000e-004	3.1500e-003	2.6500e-003	2.0000e-005		2.4000e-004	2.4000e-004		2.4000e-004	2.4000e-004	0.0000	37.4742	37.4742	2.9400e-003	4.1000e-004	37.6703
Mobile	0.0425	0.0653	0.4316	9.7000e-004	0.1046	7.8000e-004	0.1054	0.0279	7.3000e-004	0.0287	0.0000	91.7782	91.7782	5.2000e-003	4.5700e-003	93.2712
Waste						0.0000	0.0000		0.0000	0.0000	21.6957	0.0000	21.6957	1.2822	0.0000	53.7501
Water						0.0000	0.0000		0.0000	0.0000	1.1817	13.0997	14.2814	0.1225	3.0000e-003	18.2374
Total	0.1143	0.0684	0.4352	9.9000e-004	0.1046	1.0200e-003	0.1056	0.0279	9.7000e-004	0.0289	22.8774	142.3540	165.2314	1.4128	7.9800e-003	202.9309

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2.2 Overall Operational

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.0715	1.0000e-005	9.5000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	1.8600e-003	1.8600e-003	0.0000	0.0000	1.9800e-003
Energy	3.5000e-004	3.1500e-003	2.6500e-003	2.0000e-005		2.4000e-004	2.4000e-004		2.4000e-004	2.4000e-004	0.0000	37.4742	37.4742	2.9400e-003	4.1000e-004	37.6703
Mobile	0.0425	0.0653	0.4316	9.7000e-004	0.1046	7.8000e-004	0.1054	0.0279	7.3000e-004	0.0287	0.0000	91.7782	91.7782	5.2000e-003	4.5700e-003	93.2712
Waste						0.0000	0.0000		0.0000	0.0000	21.6957	0.0000	21.6957	1.2822	0.0000	53.7501
Water						0.0000	0.0000		0.0000	0.0000	1.1817	13.0997	14.2814	0.1225	3.0000e-003	18.2374
Total	0.1143	0.0684	0.4352	9.9000e-004	0.1046	1.0200e-003	0.1056	0.0279	9.7000e-004	0.0289	22.8774	142.3540	165.2314	1.4128	7.9800e-003	202.9309

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction	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

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Site Preparation	Site Preparation	1/1/2024	1/26/2024	5	20	
2	Grading	Grading	1/27/2024	3/1/2024	5	25	
3	Building Construction	Building Construction	3/2/2024	1/17/2025	5	230	

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4	Paving	Paving	12/25/2024	1/17/2025	5	18
5	Architectural Coating	Architectural Coating	12/25/2024	1/17/2025	5	18

Acres of Grading (Site Preparation Phase): 20

Acres of Grading (Grading Phase): 25

Acres of Paving: 1.29

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 28,125; Non-Residential Outdoor: 9,375; Striped Parking Area: 3,367 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Site Preparation	Rubber Tired Dozers	2	8.00	247	0.40
Site Preparation	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Grading	Excavators	1	8.00	158	0.38
Grading	Graders	1	8.00	187	0.41
Grading	Rubber Tired Dozers	1	8.00	247	0.40
Grading	Tractors/Loaders/Backhoes	3	8.00	97	0.37
Building Construction	Cranes	1	7.00	231	0.29
Building Construction	Forklifts	3	8.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes	3	7.00	97	0.37
Building Construction	Welders	1	8.00	46	0.45
Paving	Cement and Mortar Mixers	2	6.00	9	0.56
Paving	Pavers	1	8.00	130	0.42
Paving	Paving Equipment	2	6.00	132	0.36
Paving	Rollers	2	6.00	80	0.38
Paving	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Architectural Coating	Air Compressors	1	6.00	78	0.48

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Site Preparation	4	10.00	0.00	795.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Grading	6	15.00	0.00	994.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	9	30.00	12.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Paving	8	20.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	6.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Use Cleaner Engines for Construction Equipment

Use DPF for Construction Equipment

Water Exposed Area

3.2 Site Preparation - 2024

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.1314	0.0000	0.1314	0.0674	0.0000	0.0674	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0168	0.1715	0.1073	2.3000e-004		7.7500e-003	7.7500e-003		7.1300e-003	7.1300e-003	0.0000	20.4797	20.4797	6.6200e-003	0.0000	20.6452
Total	0.0168	0.1715	0.1073	2.3000e-004	0.1314	7.7500e-003	0.1392	0.0674	7.1300e-003	0.0745	0.0000	20.4797	20.4797	6.6200e-003	0.0000	20.6452

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3.2 Site Preparation - 2024

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	9.2000e-004	0.0464	0.0135	2.2000e-004	6.8500e-003	4.5000e-004	7.3000e-003	1.8800e-003	4.3000e-004	2.3100e-003	0.0000	21.7057	21.7057	9.1000e-004	3.4400e-003	22.7538
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	3.2000e-004	2.3000e-004	3.0300e-003	1.0000e-005	1.1000e-003	1.0000e-005	1.1000e-003	2.9000e-004	0.0000	3.0000e-004	0.0000	0.8381	0.8381	2.0000e-005	2.0000e-005	0.8451
Total	1.2400e-003	0.0466	0.0165	2.3000e-004	7.9500e-003	4.6000e-004	8.4000e-003	2.1700e-003	4.3000e-004	2.6100e-003	0.0000	22.5438	22.5438	9.3000e-004	3.4600e-003	23.5988

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0513	0.0000	0.0513	0.0263	0.0000	0.0263	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	2.8500e-003	0.0124	0.1235	2.3000e-004		6.0000e-005	6.0000e-005		6.0000e-005	6.0000e-005	0.0000	20.4796	20.4796	6.6200e-003	0.0000	20.6452
Total	2.8500e-003	0.0124	0.1235	2.3000e-004	0.0513	6.0000e-005	0.0513	0.0263	6.0000e-005	0.0264	0.0000	20.4796	20.4796	6.6200e-003	0.0000	20.6452

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3.2 Site Preparation - 2024

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	9.2000e-004	0.0464	0.0135	2.2000e-004	6.8500e-003	4.5000e-004	7.3000e-003	1.8800e-003	4.3000e-004	2.3100e-003	0.0000	21.7057	21.7057	9.1000e-004	3.4400e-003	22.7538
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	3.2000e-004	2.3000e-004	3.0300e-003	1.0000e-005	1.1000e-003	1.0000e-005	1.1000e-003	2.9000e-004	0.0000	3.0000e-004	0.0000	0.8381	0.8381	2.0000e-005	2.0000e-005	0.8451
Total	1.2400e-003	0.0466	0.0165	2.3000e-004	7.9500e-003	4.6000e-004	8.4000e-003	2.1700e-003	4.3000e-004	2.6100e-003	0.0000	22.5438	22.5438	9.3000e-004	3.4600e-003	23.5988

3.3 Grading - 2024

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0890	0.0000	0.0890	0.0429	0.0000	0.0429	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0208	0.2129	0.1845	3.7000e-004		9.0600e-003	9.0600e-003		8.3300e-003	8.3300e-003	0.0000	32.5799	32.5799	0.0105	0.0000	32.8433
Total	0.0208	0.2129	0.1845	3.7000e-004	0.0890	9.0600e-003	0.0980	0.0429	8.3300e-003	0.0512	0.0000	32.5799	32.5799	0.0105	0.0000	32.8433

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3.3 Grading - 2024

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	1.1500e-003	0.0580	0.0168	2.7000e-004	8.5600e-003	5.7000e-004	9.1300e-003	2.3500e-003	5.4000e-004	2.8900e-003	0.0000	27.1390	27.1390	1.1400e-003	4.3000e-003	28.4494
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	6.1000e-004	4.3000e-004	5.6900e-003	2.0000e-005	2.0600e-003	1.0000e-005	2.0700e-003	5.5000e-004	1.0000e-005	5.6000e-004	0.0000	1.5715	1.5715	4.0000e-005	4.0000e-005	1.5845
Total	1.7600e-003	0.0584	0.0225	2.9000e-004	0.0106	5.8000e-004	0.0112	2.9000e-003	5.5000e-004	3.4500e-003	0.0000	28.7105	28.7105	1.1800e-003	4.3400e-003	30.0338

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0347	0.0000	0.0347	0.0167	0.0000	0.0167	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	4.5400e-003	0.0197	0.2219	3.7000e-004		9.0000e-005	9.0000e-005		9.0000e-005	9.0000e-005	0.0000	32.5799	32.5799	0.0105	0.0000	32.8433
Total	4.5400e-003	0.0197	0.2219	3.7000e-004	0.0347	9.0000e-005	0.0348	0.0167	9.0000e-005	0.0168	0.0000	32.5799	32.5799	0.0105	0.0000	32.8433

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.3 Grading - 2024

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	1.1500e-003	0.0580	0.0168	2.7000e-004	8.5600e-003	5.7000e-004	9.1300e-003	2.3500e-003	5.4000e-004	2.8900e-003	0.0000	27.1390	27.1390	1.1400e-003	4.3000e-003	28.4494
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	6.1000e-004	4.3000e-004	5.6900e-003	2.0000e-005	2.0600e-003	1.0000e-005	2.0700e-003	5.5000e-004	1.0000e-005	5.6000e-004	0.0000	1.5715	1.5715	4.0000e-005	4.0000e-005	1.5845
Total	1.7600e-003	0.0584	0.0225	2.9000e-004	0.0106	5.8000e-004	0.0112	2.9000e-003	5.5000e-004	3.4500e-003	0.0000	28.7105	28.7105	1.1800e-003	4.3400e-003	30.0338

3.4 Building Construction - 2024

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1597	1.4587	1.7541	2.9200e-003		0.0665	0.0665		0.0626	0.0626	0.0000	251.5563	251.5563	0.0595	0.0000	253.0434
Total	0.1597	1.4587	1.7541	2.9200e-003		0.0665	0.0665		0.0626	0.0626	0.0000	251.5563	251.5563	0.0595	0.0000	253.0434

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3.4 Building Construction - 2024

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	1.4300e-003	0.0485	0.0191	2.3000e-004	8.2100e-003	3.4000e-004	8.5500e-003	2.3700e-003	3.2000e-004	2.6900e-003	0.0000	22.3792	22.3792	5.7000e-004	3.3100e-003	23.3789
Worker	0.0106	7.5100e-003	0.0987	2.9000e-004	0.0357	1.7000e-004	0.0359	9.4800e-003	1.6000e-004	9.6400e-003	0.0000	27.2810	27.2810	6.6000e-004	7.0000e-004	27.5064
Total	0.0120	0.0560	0.1179	5.2000e-004	0.0439	5.1000e-004	0.0444	0.0119	4.8000e-004	0.0123	0.0000	49.6602	49.6602	1.2300e-003	4.0100e-003	50.8853

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0356	0.2425	1.8944	2.9200e-003		6.6000e-004	6.6000e-004		6.6000e-004	6.6000e-004	0.0000	251.5560	251.5560	0.0595	0.0000	253.0431
Total	0.0356	0.2425	1.8944	2.9200e-003		6.6000e-004	6.6000e-004		6.6000e-004	6.6000e-004	0.0000	251.5560	251.5560	0.0595	0.0000	253.0431

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3.4 Building Construction - 2024

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	1.4300e-003	0.0485	0.0191	2.3000e-004	8.2100e-003	3.4000e-004	8.5500e-003	2.3700e-003	3.2000e-004	2.6900e-003	0.0000	22.3792	22.3792	5.7000e-004	3.3100e-003	23.3789
Worker	0.0106	7.5100e-003	0.0987	2.9000e-004	0.0357	1.7000e-004	0.0359	9.4800e-003	1.6000e-004	9.6400e-003	0.0000	27.2810	27.2810	6.6000e-004	7.0000e-004	27.5064
Total	0.0120	0.0560	0.1179	5.2000e-004	0.0439	5.1000e-004	0.0444	0.0119	4.8000e-004	0.0123	0.0000	49.6602	49.6602	1.2300e-003	4.0100e-003	50.8853

3.4 Building Construction - 2025

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	8.8900e-003	0.0811	0.1046	1.8000e-004		3.4300e-003	3.4300e-003		3.2300e-003	3.2300e-003	0.0000	15.0748	15.0748	3.5400e-003	0.0000	15.1634
Total	8.8900e-003	0.0811	0.1046	1.8000e-004		3.4300e-003	3.4300e-003		3.2300e-003	3.2300e-003	0.0000	15.0748	15.0748	3.5400e-003	0.0000	15.1634

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3.4 Building Construction - 2025

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	8.0000e-005	2.8900e-003	1.1300e-003	1.0000e-005	4.9000e-004	2.0000e-005	5.1000e-004	1.4000e-004	2.0000e-005	1.6000e-004	0.0000	1.3146	1.3146	3.0000e-005	1.9000e-004	1.3733
Worker	5.9000e-004	4.0000e-004	5.5000e-003	2.0000e-005	2.1400e-003	1.0000e-005	2.1500e-003	5.7000e-004	1.0000e-005	5.8000e-004	0.0000	1.5943	1.5943	4.0000e-005	4.0000e-005	1.6068
Total	6.7000e-004	3.2900e-003	6.6300e-003	3.0000e-005	2.6300e-003	3.0000e-005	2.6600e-003	7.1000e-004	3.0000e-005	7.4000e-004	0.0000	2.9089	2.9089	7.0000e-005	2.3000e-004	2.9802

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	2.1300e-003	0.0145	0.1135	1.8000e-004		4.0000e-005	4.0000e-005		4.0000e-005	4.0000e-005	0.0000	15.0748	15.0748	3.5400e-003	0.0000	15.1633
Total	2.1300e-003	0.0145	0.1135	1.8000e-004		4.0000e-005	4.0000e-005		4.0000e-005	4.0000e-005	0.0000	15.0748	15.0748	3.5400e-003	0.0000	15.1633

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3.4 Building Construction - 2025

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	8.0000e-005	2.8900e-003	1.1300e-003	1.0000e-005	4.9000e-004	2.0000e-005	5.1000e-004	1.4000e-004	2.0000e-005	1.6000e-004	0.0000	1.3146	1.3146	3.0000e-005	1.9000e-004	1.3733
Worker	5.9000e-004	4.0000e-004	5.5000e-003	2.0000e-005	2.1400e-003	1.0000e-005	2.1500e-003	5.7000e-004	1.0000e-005	5.8000e-004	0.0000	1.5943	1.5943	4.0000e-005	4.0000e-005	1.6068
Total	6.7000e-004	3.2900e-003	6.6300e-003	3.0000e-005	2.6300e-003	3.0000e-005	2.6600e-003	7.1000e-004	3.0000e-005	7.4000e-004	0.0000	2.9089	2.9089	7.0000e-005	2.3000e-004	2.9802

3.5 Paving - 2024

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	2.2000e-003	0.0207	0.0306	5.0000e-005		1.0000e-003	1.0000e-003		9.2000e-004	9.2000e-004	0.0000	4.0951	4.0951	1.2900e-003	0.0000	4.1273
Paving	4.7000e-004					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	2.6700e-003	0.0207	0.0306	5.0000e-005		1.0000e-003	1.0000e-003		9.2000e-004	9.2000e-004	0.0000	4.0951	4.0951	1.2900e-003	0.0000	4.1273

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3.5 Paving - 2024

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.6000e-004	1.2000e-004	1.5200e-003	0.0000	5.5000e-004	0.0000	5.5000e-004	1.5000e-004	0.0000	1.5000e-004	0.0000	0.4191	0.4191	1.0000e-005	1.0000e-005	0.4225
Total	1.6000e-004	1.2000e-004	1.5200e-003	0.0000	5.5000e-004	0.0000	5.5000e-004	1.5000e-004	0.0000	1.5000e-004	0.0000	0.4191	0.4191	1.0000e-005	1.0000e-005	0.4225

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	5.5000e-004	2.3800e-003	0.0338	5.0000e-005		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	4.0951	4.0951	1.2900e-003	0.0000	4.1272
Paving	4.7000e-004					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	1.0200e-003	2.3800e-003	0.0338	5.0000e-005		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	4.0951	4.0951	1.2900e-003	0.0000	4.1272

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.5 Paving - 2024

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.6000e-004	1.2000e-004	1.5200e-003	0.0000	5.5000e-004	0.0000	5.5000e-004	1.5000e-004	0.0000	1.5000e-004	0.0000	0.4191	0.4191	1.0000e-005	1.0000e-005	0.4225
Total	1.6000e-004	1.2000e-004	1.5200e-003	0.0000	5.5000e-004	0.0000	5.5000e-004	1.5000e-004	0.0000	1.5000e-004	0.0000	0.4191	0.4191	1.0000e-005	1.0000e-005	0.4225

3.5 Paving - 2025

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	5.3300e-003	0.0490	0.0792	1.2000e-004		2.2900e-003	2.2900e-003		2.1200e-003	2.1200e-003	0.0000	10.6459	10.6459	3.3400e-003	0.0000	10.7295
Paving	1.2200e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	6.5500e-003	0.0490	0.0792	1.2000e-004		2.2900e-003	2.2900e-003		2.1200e-003	2.1200e-003	0.0000	10.6459	10.6459	3.3400e-003	0.0000	10.7295

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3.5 Paving - 2025

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	3.9000e-004	2.7000e-004	3.6600e-003	1.0000e-005	1.4300e-003	1.0000e-005	1.4300e-003	3.8000e-004	1.0000e-005	3.8000e-004	0.0000	1.0629	1.0629	2.0000e-005	3.0000e-005	1.0712
Total	3.9000e-004	2.7000e-004	3.6600e-003	1.0000e-005	1.4300e-003	1.0000e-005	1.4300e-003	3.8000e-004	1.0000e-005	3.8000e-004	0.0000	1.0629	1.0629	2.0000e-005	3.0000e-005	1.0712

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	1.4300e-003	6.1800e-003	0.0880	1.2000e-004		3.0000e-005	3.0000e-005		3.0000e-005	3.0000e-005	0.0000	10.6459	10.6459	3.3400e-003	0.0000	10.7295
Paving	1.2200e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	2.6500e-003	6.1800e-003	0.0880	1.2000e-004		3.0000e-005	3.0000e-005		3.0000e-005	3.0000e-005	0.0000	10.6459	10.6459	3.3400e-003	0.0000	10.7295

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3.5 Paving - 2025

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	3.9000e-004	2.7000e-004	3.6600e-003	1.0000e-005	1.4300e-003	1.0000e-005	1.4300e-003	3.8000e-004	1.0000e-005	3.8000e-004	0.0000	1.0629	1.0629	2.0000e-005	3.0000e-005	1.0712
Total	3.9000e-004	2.7000e-004	3.6600e-003	1.0000e-005	1.4300e-003	1.0000e-005	1.4300e-003	3.8000e-004	1.0000e-005	3.8000e-004	0.0000	1.0629	1.0629	2.0000e-005	3.0000e-005	1.0712

3.6 Architectural Coating - 2024

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	0.0263					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	4.5000e-004	3.0500e-003	4.5300e-003	1.0000e-005		1.5000e-004	1.5000e-004		1.5000e-004	1.5000e-004	0.0000	0.6383	0.6383	4.0000e-005	0.0000	0.6392
Total	0.0268	3.0500e-003	4.5300e-003	1.0000e-005		1.5000e-004	1.5000e-004		1.5000e-004	1.5000e-004	0.0000	0.6383	0.6383	4.0000e-005	0.0000	0.6392

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3.6 Architectural Coating - 2024

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	5.0000e-005	3.0000e-005	4.5000e-004	0.0000	1.6000e-004	0.0000	1.7000e-004	4.0000e-005	0.0000	4.0000e-005	0.0000	0.1257	0.1257	0.0000	0.0000	0.1268
Total	5.0000e-005	3.0000e-005	4.5000e-004	0.0000	1.6000e-004	0.0000	1.7000e-004	4.0000e-005	0.0000	4.0000e-005	0.0000	0.1257	0.1257	0.0000	0.0000	0.1268

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	0.0263					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	7.0000e-005	3.2000e-004	4.5800e-003	1.0000e-005		0.0000	0.0000		0.0000	0.0000	0.0000	0.6383	0.6383	4.0000e-005	0.0000	0.6392
Total	0.0264	3.2000e-004	4.5800e-003	1.0000e-005		0.0000	0.0000		0.0000	0.0000	0.0000	0.6383	0.6383	4.0000e-005	0.0000	0.6392

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3.6 Architectural Coating - 2024

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	5.0000e-005	3.0000e-005	4.5000e-004	0.0000	1.6000e-004	0.0000	1.7000e-004	4.0000e-005	0.0000	4.0000e-005	0.0000	0.1257	0.1257	0.0000	0.0000	0.1268
Total	5.0000e-005	3.0000e-005	4.5000e-004	0.0000	1.6000e-004	0.0000	1.7000e-004	4.0000e-005	0.0000	4.0000e-005	0.0000	0.1257	0.1257	0.0000	0.0000	0.1268

3.6 Architectural Coating - 2025

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	0.0684					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	1.1100e-003	7.4500e-003	0.0118	2.0000e-005		3.3000e-004	3.3000e-004		3.3000e-004	3.3000e-004	0.0000	1.6596	1.6596	9.0000e-005	0.0000	1.6619
Total	0.0695	7.4500e-003	0.0118	2.0000e-005		3.3000e-004	3.3000e-004		3.3000e-004	3.3000e-004	0.0000	1.6596	1.6596	9.0000e-005	0.0000	1.6619

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3.6 Architectural Coating - 2025

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.2000e-004	8.0000e-005	1.1000e-003	0.0000	4.3000e-004	0.0000	4.3000e-004	1.1000e-004	0.0000	1.2000e-004	0.0000	0.3189	0.3189	1.0000e-005	1.0000e-005	0.3214
Total	1.2000e-004	8.0000e-005	1.1000e-003	0.0000	4.3000e-004	0.0000	4.3000e-004	1.1000e-004	0.0000	1.2000e-004	0.0000	0.3189	0.3189	1.0000e-005	1.0000e-005	0.3214

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	0.0684					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	1.9000e-004	8.4000e-004	0.0119	2.0000e-005		0.0000	0.0000		0.0000	0.0000	0.0000	1.6596	1.6596	9.0000e-005	0.0000	1.6619
Total	0.0686	8.4000e-004	0.0119	2.0000e-005		0.0000	0.0000		0.0000	0.0000	0.0000	1.6596	1.6596	9.0000e-005	0.0000	1.6619

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3.6 Architectural Coating - 2025

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.2000e-004	8.0000e-005	1.1000e-003	0.0000	4.3000e-004	0.0000	4.3000e-004	1.1000e-004	0.0000	1.2000e-004	0.0000	0.3189	0.3189	1.0000e-005	1.0000e-005	0.3214
Total	1.2000e-004	8.0000e-005	1.1000e-003	0.0000	4.3000e-004	0.0000	4.3000e-004	1.1000e-004	0.0000	1.2000e-004	0.0000	0.3189	0.3189	1.0000e-005	1.0000e-005	0.3214

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.0425	0.0653	0.4316	9.7000e-004	0.1046	7.8000e-004	0.1054	0.0279	7.3000e-004	0.0287	0.0000	91.7782	91.7782	5.2000e-003	4.5700e-003	93.2712
Unmitigated	0.0425	0.0653	0.4316	9.7000e-004	0.1046	7.8000e-004	0.1054	0.0279	7.3000e-004	0.0287	0.0000	91.7782	91.7782	5.2000e-003	4.5700e-003	93.2712

4.2 Trip Summary Information

Land Use	Average Daily Trip Rate			Unmitigated	Mitigated
	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Government (Civic Center)	89.81	89.81	89.81	277,353	277,353
Parking Lot	0.00	0.00	0.00		
Total	89.81	89.81	89.81	277,353	277,353

4.3 Trip Type Information

Land Use	Miles			Trip %			Trip Purpose %		
	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Government (Civic Center)	16.60	8.40	6.90	75.00	20.00	5.00	50	34	16
Parking Lot	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Government (Civic Center)	0.543085	0.056300	0.173085	0.134258	0.025645	0.007009	0.011926	0.017481	0.000552	0.000248	0.024848	0.000956	0.004606
Parking Lot	0.543085	0.056300	0.173085	0.134258	0.025645	0.007009	0.011926	0.017481	0.000552	0.000248	0.024848	0.000956	0.004606

5.0 Energy Detail

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Electricity Mitigated						0.0000	0.0000		0.0000	0.0000	0.0000	34.0423	34.0423	2.8700e-003	3.5000e-004	34.2179
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	34.0423	34.0423	2.8700e-003	3.5000e-004	34.2179
Natural Gas Mitigated	3.5000e-004	3.1500e-003	2.6500e-003	2.0000e-005		2.4000e-004	2.4000e-004		2.4000e-004	2.4000e-004	0.0000	3.4320	3.4320	7.0000e-005	6.0000e-005	3.4524
Natural Gas Unmitigated	3.5000e-004	3.1500e-003	2.6500e-003	2.0000e-005		2.4000e-004	2.4000e-004		2.4000e-004	2.4000e-004	0.0000	3.4320	3.4320	7.0000e-005	6.0000e-005	3.4524

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Government (Civic Center)	64312.5	3.5000e-004	3.1500e-003	2.6500e-003	2.0000e-005		2.4000e-004	2.4000e-004		2.4000e-004	2.4000e-004	0.0000	3.4320	3.4320	7.0000e-005	6.0000e-005	3.4524
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total		3.5000e-004	3.1500e-003	2.6500e-003	2.0000e-005		2.4000e-004	2.4000e-004		2.4000e-004	2.4000e-004	0.0000	3.4320	3.4320	7.0000e-005	6.0000e-005	3.4524

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Government (Civic Center)	64312.5	3.5000e-004	3.1500e-003	2.6500e-003	2.0000e-005		2.4000e-004	2.4000e-004		2.4000e-004	2.4000e-004	0.0000	3.4320	3.4320	7.0000e-005	6.0000e-005	3.4524
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total		3.5000e-004	3.1500e-003	2.6500e-003	2.0000e-005		2.4000e-004	2.4000e-004		2.4000e-004	2.4000e-004	0.0000	3.4320	3.4320	7.0000e-005	6.0000e-005	3.4524

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Government (Civic Center)	172313	30.5589	2.5800e-003	3.1000e-004	30.7165
Parking Lot	19642	3.4834	2.9000e-004	4.0000e-005	3.5014
Total		34.0423	2.8700e-003	3.5000e-004	34.2179

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Government (Civic Center)	172313	30.5589	2.5800e-003	3.1000e-004	30.7165
Parking Lot	19642	3.4834	2.9000e-004	4.0000e-005	3.5014
Total		34.0423	2.8700e-003	3.5000e-004	34.2179

6.0 Area Detail

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.0715	1.0000e-005	9.5000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	1.8600e-003	1.8600e-003	0.0000	0.0000	1.9800e-003
Unmitigated	0.0715	1.0000e-005	9.5000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	1.8600e-003	1.8600e-003	0.0000	0.0000	1.9800e-003

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.0714					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	9.0000e-005	1.0000e-005	9.5000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	1.8600e-003	1.8600e-003	0.0000	0.0000	1.9800e-003
Total	0.0715	1.0000e-005	9.5000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	1.8600e-003	1.8600e-003	0.0000	0.0000	1.9800e-003

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6.2 Area by SubCategory

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.0714					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	9.0000e-005	1.0000e-005	9.5000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	1.8600e-003	1.8600e-003	0.0000	0.0000	1.9800e-003
Total	0.0715	1.0000e-005	9.5000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	1.8600e-003	1.8600e-003	0.0000	0.0000	1.9800e-003

7.0 Water Detail

7.1 Mitigation Measures Water

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	14.2814	0.1225	3.0000e-003	18.2374
Unmitigated	14.2814	0.1225	3.0000e-003	18.2374

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Government (Civic Center)	3.72487 / 2.28298	14.2814	0.1225	3.0000e-003	18.2374
Parking Lot	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		14.2814	0.1225	3.0000e-003	18.2374

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7.2 Water by Land Use

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Government (Civic Center)	3.72487 / 2.28298	14.2814	0.1225	3.0000e-003	18.2374
Parking Lot	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		14.2814	0.1225	3.0000e-003	18.2374

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	21.6957	1.2822	0.0000	53.7501
Unmitigated	21.6957	1.2822	0.0000	53.7501

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8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Government (Civic Center)	106.88	21.6957	1.2822	0.0000	53.7501
Parking Lot	0	0.0000	0.0000	0.0000	0.0000
Total		21.6957	1.2822	0.0000	53.7501

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Government (Civic Center)	106.88	21.6957	1.2822	0.0000	53.7501
Parking Lot	0	0.0000	0.0000	0.0000	0.0000
Total		21.6957	1.2822	0.0000	53.7501

9.0 Operational Offroad

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type
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10.0 Stationary Equipment

Fire Pumps and Emergency Generators

Equipment Type	Number	Hours/Day	Hours/Year	Horse Power	Load Factor	Fuel Type
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Boilers

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type
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User Defined Equipment

Equipment Type	Number
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11.0 Vegetation
