RECON

An Employee-Owned Company

March 21, 2019

Mr. Rod Jones
Carjon Capital, LLC
Pro Real Estate Services
440 State Place
Escondido, CA 92029

Reference: Rockport Ranch Energy Conservation Assessment (RECON 8149)

Dear Mr. Jones:

This report provides the results of the energy consumption calculations performed for the proposed Rockport Ranch Project (project) in city of Menifee, California (City). This analysis evaluates whether the project would results in potentially significant environmental impacts due to wasteful, inefficient, or unnecessary consumption of energy resources during project construction or operation.

1.0 Project Description

The project site is located in the city of Menifee, California, south of Old Newport Road, west of Briggs Road, north of the Wilderness Lakes Recreational Vehicle Resort, and east of Camellia at the Lakes Residential Complex (under construction). Figure 1 shows the regional location of the project site. Figure 2 shows an aerial photograph of the project site and vicinity. The project site consists of single 79.68-acre parcel: Assessor's Parcel Number 364-190-004. The project applicant proposes to construct 305 detached single-family residences and associated amenities. Figure 3 shows the proposed site plan for the project.

2.0 Regulatory Framework

The following is a discussion of the applicable federal, state, and local regulatory framework related to energy use associated with the project.

2.1 Federal

2.1.1 Federal Energy Policy and Conservation Act and Amendments

The Energy Policy and Conservation Act was enacted in 1975. It established a number of federal programs that play a key role in reducing energy use, most notably the Corporate Average Fuel Economy (CAFE) standards and the Energy Conservation Program for Consumer Products. The CAFE standards establish minimum fuel efficiency requirements for cars and light trucks (e.g., vans, pickup trucks, and sports utility vehicles) sold in the United States and have been strengthened multiple times since their adoption. The Energy Conservation Program for Consumer Products sets energy efficiency standards for certain types of appliances, including air conditioners, refrigerators, water heaters, clothes washers, and dishwashers.

The federal CAFE standards determine the fuel efficiency of certain vehicle classes in the United States. Current CAFE standards require vehicle manufacturers of passenger cars and light-duty trucks to achieve an average fuel economy of 35.5 miles per gallon as of 2016 and an average fuel economy of 54.5 miles per gallon by 2025.

2.1.2 Energy Independence and Security Act of 2007

The Energy Independence and Security Act was enacted in 2007 and contains four key titles to promote energy efficiency and renewable energy generation. Titles 1 and 2 increase the federal CAFE standards,

promote renewable energy use in vehicles, and create incentive programs for hybrid vehicles. Title 3 strengthens energy efficiency standards for various appliances and light bulbs, including requiring the phasing out of outdated and inefficient incandescent light bulbs. Title 4 promotes energy efficiency in buildings by establishing several educational and incentive programs.

2.2 State

2.2.1 Renewables Portfolio Standard

The Renewables Portfolio Standard (RPS) promotes diversification of the state's electricity supply and decreased reliance on fossil fuel energy sources. Originally adopted in 2002 with a goal to achieve a 20 percent renewable energy mix by 2020 (referred to as the "Initial RPS"), the goal has been accelerated and increased by Executive Orders S-14-08 and S-21-09 to a goal of 33 percent by 2020. In April 2011, Senate Bill 2 (1X) codified California's 33 percent RPS goal. In September 2015, the California Legislature passed Senate Bill 350, which increases California's renewable energy mix goal to 50 percent by year 2030. Renewable energy includes (but is not limited to) wind, solar, geothermal, small hydroelectric, biomass, anaerobic digestion, and landfill gas. The project would be served by Southern California Edison (SCE). As of 2017, SCE had a 32 percent procurement of renewable energy (CPUC 2018).

2.2.2 California Code of Regulations, Title 24 – California Building Code

The California Code of Regulations, Title 24, is referred to as the California Building Code. It consists of a compilation of several distinct standards and codes related to building construction, including plumbing, electrical, interior acoustics, energy efficiency, handicap accessibility, and so on. Of particular relevance to greenhouse gas (GHG) reductions are the California Building Code's energy efficiency and green building standards as outlined below.

Title 24, Part 6 – Energy Efficiency Standards

Title 24, Part 6 of the California Code of Regulations is the California Energy Efficiency Standards for Residential and Nonresidential Buildings (also known as the California Energy Code). This code, originally enacted in 1978 in response to legislative mandates, establishes energy-efficiency standards for residential and non-residential buildings in order to reduce California's energy consumption. The Energy Code is updated periodically to incorporate and consider new energy-efficiency technologies and methodologies as they become available, and incentives in the form of rebates and tax breaks are provided on a sliding scale for buildings achieving energy efficiency above the minimum standards.

The current version of the Energy Code, known as 2016 Title 24, or the 2016 Energy Code, became effective January 1, 2017. The 2016 Energy Code provides mandatory energy efficiency measures as well as voluntary tiers for increased energy efficiency. The California Energy Commission (CEC), in conjunction with the CPUC, has adopted a goal that all new residential and commercial construction achieve zero net energy by 2020 and 2030, respectively. It is expected that achievement of the zero net energy goal will occur via revisions to the Title 24 standards.

New construction and major renovations must demonstrate their compliance with the current Energy Code through submission and approval of a Title 24 Compliance Report to the local building permit review authority and the CEC. The compliance reports must demonstrate a building's energy performance through use of CEC-approved energy performance software that shows iterative increases in energy efficiency obtained through a given selection of various heating, ventilation, and air-conditioning; sealing; glazing; insulation; and other components related to the building envelope.

The next version of the Energy Code, known as the 2019 Energy Code, was adopted May 9, 2018 and will take effect on January 1, 2020. The 2019 Energy Code will include provisions for smart residential photovoltaic (PV) systems, updated thermal envelope standards (preventing heat transfer from the interior to exterior and vice versa), residential and nonresidential ventilation requirements, and nonresidential

lighting requirements. The new Energy Code aims to reduce energy use in new homes by requiring that all new homes include individual or community solar PV systems or community shared battery storage system that achieves equivalent time-dependent value energy use reduction. Accounting for solar PV requirements, the CEC's preliminary estimates indicate that homes built consistent under the 2019 Energy Code will result in 53 percent less energy use than those built under the 2016 standards.

Title 24, Part 11 – California Green Building Standards Code

Title 24, Part 11 of the California Code of Regulations is the California Green Building Standards Code (CALGreen). Beginning in 2011, CALGreen instituted mandatory minimum environmental performance standards for all ground-up new construction of commercial and low-rise residential buildings, state-owned buildings, schools, and hospitals. It also includes voluntary tiers (I and II) with stricter environmental performance standards for these same categories of residential and non-residential buildings. Local jurisdictions must enforce the minimum mandatory requirements and may adopt CALGreen with amendments for stricter requirements.

The mandatory standards require:

- 20 percent reduction in indoor water use relative to specified baseline levels;
- 50 percent construction/demolition waste diverted from landfills;
- inspections of energy systems to ensure optimal working efficiency;
- low-pollutant emitting exterior and interior finish materials such as paints, carpets, vinyl flooring, and particle boards;
- dedicated circuitry to facilitate installation of electric vehicle charging stations in newly constructed attached garages for single-family and duplex dwellings; and
- installation of electric vehicle charging stations for at least three percent of the parking spaces for all new multi-family developments with 17 or more units.

Similar to the compliance reporting procedure for demonstrating Energy Code compliance in new buildings and major renovations, compliance with the CALGreen water reduction requirements must be demonstrated through completion of water use reporting forms for new low-rise residential and non-residential buildings. The water use compliance form must demonstrate a 20 percent reduction in indoor water use by either showing a 20 percent reduction in the overall baseline water use as identified in CALGreen or a reduced per-plumbing-fixture water use rate.

2.2.3 California Energy Plan

The CEC is responsible for preparing the State Energy Plan, which identifies emerging trends related to energy supply, demand, conservation, public health and safety, and the maintenance of a healthy economy. The plan calls for the State to assist in the transformation of the transportation system to improve air quality, reduce congestion, and increase the efficient use of fuel supplies with the fewest environmental and energy costs. To further this policy, the plan identifies a number of strategies, including providing assistance to public agencies and fleet operators.

2.2.4 California Appliance Efficiency Regulations

California's Appliance Efficiency Regulations, also known as Title 20, establish minimum energy efficiency standards for new appliances sold in California. It covers numerous appliances, including many not covered by the federal Energy Conservation Program for Consumer Products efforts. This includes computers, televisions, refrigerators, and air conditioners, among many others. The standards are developed and enforced by the CEC. Standards for individual equipment types are updated as needed.

3.0 Significance Thresholds

Section 15126.4(a)(1) of the CEQA Guidelines states that an environmental impact report (EIR) shall describe feasible measures which could minimize significant adverse impacts, including, where relevant, the inefficient and unnecessary consumption of energy. CEQA Guidelines, Appendix F, Energy Conservation, provides guidance for EIRs regarding the potential energy impacts of projects, with a particular emphasis on avoiding or reducing the inefficient, wasteful, and unnecessary consumption of energy. The California Natural Resources Agency amended Appendix F to make it clear that an energy analysis is mandatory. However, the Resources Agency also clarified that the energy analysis is limited to effects that are applicable to the project (California Natural Resources Agency 2009).

Consistent with CEQA Guidelines Appendix F, impacts to energy resources could be significant if implementation of the project would:

- result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation; or
- conflict with or obstruct a state or local plan for renewable energy or energy efficiency.

This letter analyzes energy use in three distinct categories, to better assess the environmental effects associated with different types of energy use in the project. These categories are:

- Construction-related vehicle and equipment energy use
- Transportation energy use from people traveling to and from the project area during operation
- Building and facility energy use of the proposed project during operation

4.0 Impact Analysis

4.1 Construction-related Energy Use

During construction, energy use would occur in two general categories: fuel use from vehicles used by workers commuting to and from the construction site, and fuel use by vehicles and other equipment to conduct construction activities. The construction equipment and worker trips required for the project were determined as a part of the Air Quality and GHG Analysis prepared for the project (RECON 2018). Heavy-duty construction equipment is usually diesel powered.

Fuel consumption associated with on-road worker trips and delivery and hauling trips were calculated using the total trips and trip lengths calculated in the Air Quality and GHG Analysis and EMFAC2014 fuel consumption rates. Fuel consumption associated with on-site construction equipment was calculated using the equipment quantities and phase lengths calculated in the Air Quality and GHG Analysis and California Air Resources Board OFF-ROAD model. Off-site and on-site fuel consumption that would occur over the entire construction period is summarized in Tables 1 and 2, respectively. Calculation data is provided in Attachment 1.

Table 1
Off-site Construction Vehicle Fuel Consumption

Trip Type	Total Vehicle Miles Traveled	Total Fuel Consumption (gallons)	
		Gasoline	Diesel
Workers	6,165,739	220,881	1,151
Deliveries	2,222	--	378
Hauling	588,700	--	100,059
TOTAL*	**6,756,660**	**220,881**	**101,588**
*Totals may vary due to independent rounding			

Table 2
On-site Construction Equipment Fuel Consumption

Phase	Phase Length (days)	Equipment	Amount	Total Usage Hours	Total Diesel Fuel Consumption (gallons)
Demolition	31	Concrete/Industrial Saws	3	744	2,525
		Excavators	9	2,232	6,918
		Rubber Tired Dozer	6	1,488	7,590
Site Preparation	19	Rubber Tired Dozer	9	1,368	6,978
		Tractors/Loaders/Backhoes	12	1,824	3,757
Grading	218	Excavators	2	3,488	10,811
		Graders	1	1,744	6,903
		Rubber Tired Dozer	1	1,744	8,895
		Scrapers	2	3,488	31,721
		Tractors/Loaders/Backhoes	2	3,488	7,185
Building Construction/ Architectural Coatings	482	Cranes	3	10,122	35,006
		Forklifts	9	34,704	35,453
		Generator Sets	3	11,568	41,269
		Tractors/Loaders/Backhoes	9	30,366	62,549
		Welders	3	11,568	13,743
		Air Compressors	3	8,676	18,643
Paving	34	Pavers	6	1,632	4,600
		Paving Equipment	6	1,632	4,004
		Rollers	6	1,632	2,847
TOTAL					**311,397**

Source: CalEEMod, OFF-ROAD

Consistent with federal requirements, all equipment was assumed to meet CARB Tier 3 In-Use Off-Road Diesel Engine Standards. There are no known conditions in the project area that would require nonstandard equipment or construction practices that would increase fuel-energy consumption above typical rates. Therefore, the project would not result in the use of excessive amounts of fuel or other forms of energy during construction. Impacts would be less than significant.

4.2 Transportation-Related Energy Use

Buildout of the project and occupation by residents would result in transportation energy use. Trips by individuals traveling to and from the project site would result from use of passenger vehicles or public transit. Passenger vehicles would be mostly powered by gasoline, with some fueled by diesel or electricity. Public transit would be powered by diesel or natural gas, and could potentially be fueled by electricity. The project would generate 9.52 trips per unit (Linscott Law & Greenspan Engineers 2016). An average trip length of 6.05 miles was derived from EMFAC2014 data for the air basin subarea in Riverside County. Thus, the project would generate 17,567 daily vehicle miles traveled (VMT) and 6,411,875 annual VMT. Total gasoline and diesel fuel consumption was calculated using EMFAC2014 fuel consumption rates and fleet data for light duty autos. The results are summarized in Table 3. Calculation data is provided in Attachment 1.

Table 3
Vehicle Fuel/Electricity Consumption

Fuel Type	Daily VMT	Fuel Efficiency (miles per gallon)	Gallons of Fuel per Day	Electric Efficiency (kWh per mile)*	Electric Vehicle kWh per day
Gasoline	17,036	30.1	566	--	--
Diesel	166	39.8	4	--	--
Electric	365	--	--	3.4	107
TOTAL	**17,567**		**570**		**107**

kWh = kilowatt hour
Note: Totals may vary due to independent rounding
*EMFAC does not provide estimates for energy used by electric vehicles. This data was estimated using existing kWh per mile data and estimates of future electric vehicle efficiencies provided by the Federal Highway Administration.

An existing neighborhood shopping center is located in the vicinity of the project, approximately 0.5 mile west of the project site, and a larger regional shopping center is located less than two miles west of the project site. In addition, bus routes are located in the vicinity of the project site along Menifee Road, approximately 0.75 mile west of the project site. The proximity of regional shopping and local bus routes would help reduce VMT generated by the project. In addition, project fuel consumption would decline over time beyond initial operational year of the project as a result of continued implementation of increased federal and state vehicle efficiency standards. There is no component of the project that would result in unusually high vehicle fuel use during operation. As such, operation of the project would not create a land use pattern that would result in wasteful, inefficient, or unnecessary use of energy. Impacts would be less than significant.

4.3 Building-Related Energy Use

Electricity service to the project site is provided by SCE, and natural gas service to the project site is provided by Southern California Gas Company (SoCalGas). The proposed single-family residential units would use electricity and natural gas to run various appliances and equipment, including space and water heaters, air conditioners, ventilation equipment, lights, and numerous other devices. Generally, electricity use is higher in the warmer months due to increased air conditioning needs, and natural gas use is highest when the weather is colder as a result of high heating demand. Residential uses would likely require the most energy use in the evening as people return from work.

As a part of the Air Quality and GHG Analysis prepared for the project (RECON 2018), CalEEMod was used to estimate the total electricity and natural gas consumption associated with the project. Additionally, to reduce GHG emissions, the following mitigation measure was included in the analysis:

GHG-1 Prior to occupancy, the project applicant, or an agent thereof, shall install solar photovoltaic (PV) systems capable of a total generation of 1,707,561 kilowatt-hours (KWh) per year. Solar PV panels may be located on the rooftops of residences or elsewhere. Where the project is completed in phases, residences may be occupied if the project applicant can demonstrate to the satisfaction of City staff that the relative portion of the total solar generation is met (i.e., renewable generation is equal to or greater than 5,599 KWh annually per residence).

Table 4 summarizes the anticipated energy and natural gas use, and GHG-1 electricity generation. Calculation data is provided in Attachment 2.

Table 4
Electricity and Natural Gas Use

	Total Use	Amount Generated On-site	Total SCE/SoCalGas Demand
Electricity	2,658,526 kWh/Year	1,707,561 kWh/Year	950,965 kWh/Year
Natural Gas	9,331,826 BTU/Year	--	9,331,826 BTU/Year
Source: RECON 2018			

Buildout of the project would result in an increase of electricity and natural gas usage when compared to the existing condition. The applicable state plans that address renewable energy and energy efficiency are CALGreen, the California Energy Code, and RPS. The project would be required to meet the mandatory energy requirements of CALGreen and the California Energy Code (Title 24, Part 6 of the California Code of Regulations) and would benefit from the efficiencies associated with these regulations as they relate to building heating, ventilating, and air conditioning mechanical systems, water-heating systems, and lighting. Additionally, rebate and incentive programs that promote the installation and use of energy-efficient plug-in appliances and lighting would be available as incentives for future development. In addition, the project would implement mitigation measure GHG-1 and would generate approximately 64 percent of the total required electricity on site from a renewable energy source. Further, electricity would be provided to the project by SCE, which currently has an energy mix that includes 32 percent renewables and is on track to

achieve 50 percent by 2030 as required by RPS. Thus, there are no features of the project that would support the use of excessive amounts of energy or would create unnecessary energy waste, or conflict with any adopted plan for renewable energy efficiency. Impacts would be less than significant.

In summary, implementation of the project would not result in the use of excessive amounts of fuel or other forms of energy during construction or operation, or conflict with any adopted plan for renewable energy efficiency.

Sincerely,

Jessica Fleming
Environmental Specialist
Noise, Air Quality, GHG

JLF:jg

5.0 References

California Public Utilities Commission (CPUC)
2018 2018 California Renewables Portfolio Standard Annual Report. November 2018.

California Natural Resources Agency
2009 California Environmental Quality Act, Appendix F – Energy Conservation. Revised 2009.

Linscott, Law & Greenspan, Engineers, Inc.
2016 Traffic Impact Analysis Report, Rockport Ranch. April 26, 2016.

RECON Environmental, Inc. (RECON)
2018 Air Quality and Greenhouse Gas Analysis prepared for the Rockport Ranch Project, Menifee, California. Prepared for Excel Engineering. RECON Number 8149. January 29, 2018.

ATTACHMENT 1

Phase	Worker Trips/Day	Worker Trip Length	Worker VMT/Day	Phase Length (Days)	Work VMT (Total)	Vendor Trips (Total)	Vendor Trip Length	Vendor VMT (Total)	Hauling Trips	Hauling Trip Length	Hauling VMT (Total)	
Demolition	45	14.7	661.50	31	20,506.50	0	6.9	0	79	20	1,580.00	
Site Preparation	53	14.7	779.10	19	14,802.90	0	6.9	0	0	20	0	
Grading	20	14.7	294.00	218	64,092.00	0	6.9	0	29,356	20	587,120.00	
Building Construction	853	14.7	12,539.10	482	6,043,846.20	322	6.9	2,221.80	0	20	0	
Architectural Coatings	171	14.7	2,513.70	482*	0.00	0	6.9	0	0	20	0	
Paving	45	14.7	661.50	34	22,491.00	0	6.9	0	0	20	0	Total VMT
					6,165,738.60			2,221.80			588,700.00	6,756,660.40

*Architectural coatings simultaneous with building construction and would require same workers.

EMFAC2014 (v1.0.7) Emissions Inventory
Region Type: Sub-Area
Region: Riverside (SC)
Calendar Year: 2020
Season: Annual
Vehicle Classification: EMFAC2011 Categories
Units: miles/day for VMT, trips/day for Trips, tons/day for Emissions, 1000 gallons/day for Fuel Consumption

Region	CalYr	VehClass	Fuel	Riv Population	Pop %	Riv VMT	Fuel Consumption (1,000 gal/day)	Riv Gallons/Day	Fuel Efficiency (mpg)	Total VMT	Total Fuel Consumption	
Workers												
Riverside (SC)	2020	LDA	GAS	604,502.91	70.9%	22,856,344.54	759.35	759,351.44	30.10	4,369,831.22	145,177.97	GAS
Riverside (SC)	2020	LDA	DSL	5,880.57	0.7%	239,755.31	6.02	6,019.35	39.83	42,509.46	1,067.25	220,881.46
Riverside (SC)	2020	LDT1	GAS	47,805.09	5.6%	1,625,397.95	64.37	64,374.43	25.25	345,573.49	13,686.55	
Riverside (SC)	2020	LDT1	DSL	47.09	0.0%	1,122.69	0.04	37.48	29.96	340.39	11.36	DSL
Riverside (SC)	2020	LDT2	GAS	194,394.78	22.8%	7,770,832.27	342.95	342,947.00	22.66	1,405,241.16	62,016.94	1,151.07
Riverside (SC)	2020	LDT2	DSL	310.27	0.0%	14,109.11	0.46	455.81	30.95	2,242.88	72.46	

Delivery/Hauling										**Delivery Total VMT**	**Delivery Fuel Consumption**	**Hauling Total VMT**	**Haluing Fuel Consumption**
Riverside (SC)	2020	T7 CAIRP	DSL	1,308.72	10.0%	273,370.78	43.47	43,469.44	6.29	222.51	35.38	58,958.34	9,375.13
Riverside (SC)	2020	T7 CAIRP construction	DSL	104.39	0.8%	24,788.88	3.96	3,956.67	6.27	17.75	2.83	4,702.95	750.66
Riverside (SC)	2020	T7 NNOOS	DSL	1,333.91	10.2%	338,980.10	50.50	50,503.59	6.71	226.80	33.79	60,093.22	8,953.10
Riverside (SC)	2020	T7 NOOS	DSL	529.05	4.0%	107,981.38	17.56	17,561.70	6.15	89.95	14.63	23,834.01	3,876.28
Riverside (SC)	2020	T7 POLA	DSL	2,255.67	17.3%	340,497.08	55.30	55,301.51	6.16	383.52	62.29	101,618.76	16,504.32
Riverside (SC)	2020	T7 Public	DSL	676.62	5.2%	15,518.32	3.02	3,024.87	5.13	115.04	22.42	30,482.15	5,941.66
Riverside (SC)	2020	T7 Single	DSL	2,014.55	15.4%	222,678.22	34.24	34,238.89	6.50	342.52	52.67	90,756.20	13,954.63
Riverside (SC)	2020	T7 single construction	DSL	673.61	5.2%	64,125.58	10.00	9,999.03	6.41	114.53	17.86	30,346.44	4,731.89
Riverside (SC)	2020	T7 SWCV	DSL	654.42	5.0%	30,141.35	11.92	11,920.70	2.53	111.27	44.01	29,481.84	11,659.87
Riverside (SC)	2020	T7 tractor	DSL	2,885.59	22.1%	389,133.63	59.04	59,043.88	6.59	490.62	74.44	129,996.79	19,724.62
Riverside (SC)	2020	T7 tractor construction	DSL	532.82	4.1%	47,810.36	7.52	7,519.77	6.36	90.59	14.25	24,003.67	3,775.38
Riverside (SC)	2020	T7 utility	DSL	98.24	0.8%	2,247.51	0.41	412.32	5.45	16.70	3.06	4,425.63	811.91
										2,221.80	377.63	588,700.00	100,059.44
											Total Diesel		101,588.15

Phase	Phase Length (Days)	Equipment	Amount	Daily Usage Hours	Total Usage Hours	Horse Power	Load Factor	Fuel Used (Gallons)
Demolition	31	Concrete/Industrial Saws	3	8	744	81	0.73	2,525
	31	Excavators	9	8	2,232	158	0.38	6,918
	31	Rubber Tired Dozer	6	8	1,488	247	0.40	7,590
Site Preparation	19	Rubber Tired Dozer	9	8	1,368	247	0.40	6,978
	19	Tractors/Loaders/Backhoes	12	8	1,824	97	0.37	3,757
Grading	218	Excavators	2	8	3,488	158	0.38	10,811
	218	Graders	1	8	1,744	187	0.41	6,903
	218	Rubber Tired Dozer	1	8	1,744	247	0.40	8,895
	218	Scrapers	2	8	3,488	367	0.48	31,721
	218	Tractors/Loaders/Backhoes	2	8	3,488	97	0.37	7,185
Building Construction	482	Cranes	3	7	10,122	231	0.29	35,006
	482	Forklifts	9	8	34,704	89	0.20	35,453
	482	Generator Sets	3	8	11,568	84	0.74	41,269
	482	Tractors/Loaders/Backhoes	9	7	30,366	97	0.37	62,549
	482	Welders	3	8	11,568	46	0.45	13,743
Architectural Coatings	482	Air Compressors	3	6	8,676	78	0.48	18,643
Paving	34	Pavers	6	8	1,632	130	0.42	4,600
	34	Paving Equipment	6	8	1,632	132	0.36	4,004
	34	Rollers	6	8	1,632	80	0.38	2,847
								311,397

EMFAC2014 (v1.0.7) Emissions Inventory	Units	305	Units
	Population	921	Residents
Region Type: Sub-Area	Trip Rate	9.52	Trips/Unit
Region: Riverside (SC)	Trip Length	6.05	Miles
Calendar Year: 2020	Project Daily VMT	17,566.78	VMT
Season: Annual	Project Annual VMT	6,411,874.70	VMT
Vehicle Classification: EMFAC2011 Categories	Annual VMT Per Capita	6,961.86	

Units: miles/day for VMT, trips/day for Trips, tons/day for Emissions, 1000 gallons/day for Fuel Consumption

Region	CalYr	VehClass	Fuel	Riv Population	Pop %	Riv VMT	Riv Trips	Fuel Consumption (1,000 gal/day)	Riv Gallons/Day	Fuel Efficiency	VMT	Gallons or kWh/Day	Gallons or kWh/Year
Riverside (SC)	2020	LDA	GAS	604,502.91	97.0%	22,856,344.54	3,821,902.50	759.35	759,351.44	30.10 mpg	17,036.13	565.99	206,585.46
Riverside (SC)	2020	LDA	DSL	5,880.57	0.9%	239,755.31	37,057.85	6.02	6,019.35	39.83 mpg	165.73	4.16	1,518.68
Riverside (SC)	2020	LDA	ELEC	12,948.96	2.1%	664,673.38	84,348.76	0.00	0.00	3.40 kWh/mile	364.93	107.33	39,176.10
						23,760,773.23	3,943,309.10	765.37	765,370.79		17,566.78	677.48	247,280.23
							6.05						

LandUseType	LandUseSubType	LandUseUnitAmount	LandUseSizeMetric
Parking	Other Asphalt Surfaces	1009.11	1000sqft
Parking	Other Non-Asphalt Surfaces	759.41	1000sqft
Residential	Single Family Housing	305	Dwelling Unit

EnergyUseLandUseSubType	T24E (kWh/size/year)	NT24E (kWh/size/year)	LightingElect (kWh/size/year)	T24NG (BTU/size/year)	NT24NG (BTU/size/year)
Other Asphalt Surfaces	0	0	0	0	0
Other Non-Asphalt Surfaces	0	0	0	0	0
Single Family Housing	951.67	6,155.97	1,608.84	24,566.15	6,030.00
Total/year	290,259.35	1,877,570.85	490,696.20	7,492,675.75	1,839,150.00
	kWh/year	kWh/year	kWh/year	BYU/year	BYU/year

Total Energy without GHG-1

kwh/yr electricity	2,658,526.40
BTU/yr natural gas	9,331,825.75

KwhGenerated On-Site

Mitigation Measure GHG-1	1,707,561.00

Total Energy with GHG-1

kwh/yr electricity	950,965.40
BTU/yr natural gas	9,331,825.75