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November 15, 2016

Ray Dorame
Sam-Sweetwater, LLC
20201 SW Birch St., Suite 100
Newport Beach, CA 92660

RE: Global Climate Change Supplemental Letter - Sweetwater Place Residential Development (PDS2014-GPA-14-003, PDS2014-REZ14-003, PDS2014-TM5588, PDS2014-STP-14-015) County of San Diego, CA

The purpose of the following Greenhouse Gas (GHG) Thresholds is to assist the County and the public in determining whether GHG emissions associated with the proposed project may have a significant effect on the environment with respect to GHG emissions in response to the California Supreme Court's decision published on November 30, 2015 in *Center for Biological Diversity v. California Department of Fish and Wildlife* (Case No. 217763) (the "CBD Case"). The proposed GHG Thresholds are not intended to be standalone polices and are to be used in conjunction with commonly accepted professional standards, judgments, and practices. This supplemental report is in addition to the previous assessment conducted by Ldn for the Project *(Source: Sweetwater Place Residential Development Global Climate Change, Ldn Consulting April 30, 2015)*.

Project Description

The proposed development is located in the unincorporated County of San Diego. The project site is located on the northeast corner of the Sweetwater Springs Boulevard/ Jamacha Boulevard (SR-54) intersection in the County of San Diego. Access to the Project site is will be provided by both Sweetwater Springs Boulevard and by Jamacha Boulevard.

The Project proposes the development of a 20 acre lot which was previously used as an agricultural nursery site with 122 condominium style residential and a 2.08-acre park. Grading could potentially start in late 2016 with full build out in 2017-2018.

Climate Change Background

In response to AB 32, California Air Resource Board (ARB) developed the Climate Change Scoping Plan. In that plan, ARB developed GHG emission reduction strategies which expanded energy efficiency programs, increased utility renewable energy requirements, developed clean

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car standards and LCFS, developed the cap-and-trade program, and identified adopted discretionary measures to assist the state in meeting the 2020 limits established by AB 32.

In May 2014, the ARB adopted the first update to the original Scoping Plan which was necessary to establish long-term GHG policies to make deep GHG emission reductions to achieve an 80% reduction below 1990 levels by 2050. The update includes key recommendations for six key economic sectors (energy, transportation, agriculture, water, waste management, and natural and working lands) as well as short-lived climate pollutants, green buildings, and the Cap-and-Trade Program. The findings largely affect regulatory measures that will indirectly reduce GHG emissions and generate a need to update local policies. The 2014 Scoping Plan indicates that 2020 emissions would equal approximately 509 Million Metric Tons (MMT) CO2e under 2020 Business as Usual (BAU) conditions. BAU is the level of emissions that would have occurred in the absence of regulatory emissions reductions, design considerations, or updated standards (e.g. 2008 Title 24 standards). The 2014 Scoping Plan also determined that in order to meet the 2020 GHG reduction target per Executive Order S-3-05, total GHG emissions state-wide would need to be reduced to 431 MMT CO2e by 2020, representing a reduction of approximately 16% below 2020 BAU emission levels.

In September 2016, the Governor signed SB 32 (Pavley. California Global Warming Solutions Act of 2006: emissions limit) into law. SB 32 would require that the State Air Resources Board ensure that statewide greenhouse gas emissions are reduced to 40% below the 1990 level by 2030, thereby codifying the attainment of the 2030 reduction goal identified in EOs B-30-15 and S-3-05. However, currently there are no proposed or adopted significance thresholds for analyzing post-2020 emissions for development projects in California, there are no adopted statewide or local plans to reduce emissions 40% below 1990 levels by 2030 and the regulatory framework to achieve the 2030 target is in its infancy.

In addition, in accordance with CEQA Guidelines section 15064.4(b)(3), this section evaluates whether the project's post-buildout GHG emissions trajectory would impede the attainment of the 2050 GHG reduction goals identified in EOs B-30-15 and S-3-05, However, there has been no legislative action to adopt the 2050 GHG reduction targets. Executive Order S-3-05.B-30-15 sets its trajectory toward meeting or exceeding the long-term emission reduction goal of reducing GHG emissions to 80% below 1990 levels by 2050.

<u>Arguably, whether the project would conflict with or impede substantial progress towards the statewide reduction targets established by EO S-3-05 for 2050 and for 2030 established by SB 32 cannot be determined at this time</u> because no statutes or regulations have been adopted to

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translate these goals into comparable, scientifically-based emission reduction targets. In other words, rendering a significance determination relative to these two targets would be speculative because they establish goals 14 and 34 years into the future; no agency with subject matter expertise has adopted regulations to achieve these statewide goals at the project-level level; and, available models cannot presently quantify all project-related emissions in those future years.

Nonetheless, this analysis renders a determination as to whether the project would conflict with or impede substantial progress towards the statewide reduction goals established by EO B-30-15 for 2030 and by EO S-3-05 for 2050. In this case a project would not be considered cumulatively considerable if it does not conflict with the CARB programs.

It should be noted, CARB has expressed optimism with regard to both the 2030 and 2050 goals. It states in the First Update to the Climate Change Scoping Plan that "California is on track to meet the near-term 2020 greenhouse gas limit and is well positioned to maintain and continue reductions beyond 2020 as required by AB 32." (see First Update to Scoping Plan, p. ES2.) With regard to the 2050 target for reducing GHG emissions to 80 percent below 1990 levels, the First Update to the Climate Change Scoping Plan states:

"This level of reduction is achievable in California. In fact, if California realizes the expected benefits of existing policy goals (such as 12,000 megawatts [MW] of renewable distributed generation by 2020, net zero energy homes after 2020, existing building retrofits under AB 758, and others) it could reduce emissions by 2030 to levels squarely in line with those needed in the developed world and to stay on track to reduce emissions to 80 percent below 1990 levels by 2050. Additional measures, including locally driven measures and those necessary to meet federal air quality standards in 2032, could lead to even greater emission reductions."

In other words, the experts at CARB attest the State is on a trajectory to meet the 2020, 2030 and 2050 GHG reduction targets set forth in AB 32, Executive Order B-30-15 and Executive Order S-3-05.

Thresholds of Significance

The State CEQA Guidelines do not indicate what amount of GHG emissions would constitute a significant impact on the environment. Instead, they authorize the lead agency to consider thresholds of significance previously adopted or recommended by other public agencies or recommended by experts, provided the decision of the lead agency to adopt such thresholds

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is supported by substantial evidence (State CEQA Guidelines Sections 15064.4(a) and 15064.7(c)). A number of agencies throughout the state, including multiple air districts, have drafted and/or adopted varying threshold approaches and guidelines for analyzing GHG emissions and climate change in CEQA documents. However, none of these are binding; they are only recommendations for consideration by CEQA lead agencies. Some commonly used threshold approaches include (1) consistency with a qualified GHG reduction strategy, (2) performance-based reductions, (3) numeric "bright-line" thresholds, and (4) efficiency-based thresholds.

The Newhall Ranch decision suggested several approaches for determining significance of GHG emissions are appropriate, but did not foreclose other methodologies that may be used by lead agencies. Some of the approaches are discussed below in the context of the proposed project.

Performance-Based Reductions

Performance-based thresholds are based on a percentage reduction from a projected future condition. For example, reducing future BAU emissions by the AB 32 target of 29% (below 2020 BAU levels) through a combination of State measures, project design features (e.g., renewable energy), or mitigation is a performance-based threshold. The performance-based approach is based on the project's reduction in emissions from an unmitigated condition. With the Newhall Ranch decision, relating a given project to the achievement of State reduction targets would likely require adjustments to ARB's statewide BAU model not only to isolate new development emissions but also to consider unique geographic conditions that would be required to use the BAU performance-based methodology for a specific project. To date, this type of adjustment to the statewide BAU target has not been formulated and, therefore, is not appropriate for the project's analysis.

Compliance with a Qualified GHG Reduction Plan

Under this approach, a qualified plan may be used in the cumulative impact analysis for later projects when the analysis "identifies those requirements specified in the plan that apply to the project." For a GHG reduction plan to be considered a qualified plan, it must meet certain criteria established under State CEQA Guidelines Sections 15183.5 (b) and 15064.4, also specified above. Consequently, if a project is consistent with a local CAP that was created to meet AB 32's GHG targets, then the project would be considered consistent with statewide GHG reduction goals for 2020. The County has not completed a revision to its CAP that would

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set forth GHG reduction targets and reduction measures and, therefore, is not appropriate for the project's analysis.

Numerical Bright-Line

In general, numerical bright-line thresholds identify the point at which additional analysis and mitigation of project-related GHG emission impacts is necessary. No bright-line threshold has been formally adopted by an air district or other lead agencies for use in the San Diego region. The screening thresholds published by the California Air Pollution Control Officers Association (CAPCOA) for determining the need for additional analysis and mitigation for GHG-related impacts under CEQA. The CAPCOA white paper recommends a 900 MT CO2e/year screening level to determine the size of projects that would be likely to have a less than considerable contribution to the cumulative impact of climate change. Project exceeding this would require further analysis and mitigation, as necessary (California Air Pollution Control Officers Association, 2008). In any event, the screening level identifies projects that would result in sufficiently low GHG emissions to be less than cumulatively considerable without mitigation and is not used for the project.

Efficiency Metric (Per Service Population)

Another type of quantitative threshold is an efficiency-based threshold. Efficiency-based thresholds represent the GHG efficiency needed for development to achieve California's GHG emissions target established under AB 32. The intent of AB 32 is to accommodate a population and economic growth in California, but in a way that achieves a lower rate of GHG emissions statewide. One commonly-accepted approach for addressing the potential significance of a project's impacts due to GHG emissions is to demonstrate a reduced rate of emissions per service population (i.e., GHG emissions per capita based on the number of residents and employees) as compared to the existing rate of emissions per service population for the local area. Another very commonly-accepted approach is the Performance-Based Percent Reduction Target threshold approach which would require a project to meet a percent reduction target based on the average reductions needed from the BAU emissions from all GHG sources. Using the 2020 target, this approach would require all discretionary projects to achieve a certain percent reduction from projected business-as-usual emissions in order to be considered less than significant.

A number of air districts in the State of California have recommended or adopted efficiency metric or "service population" thresholds as a method for analyzing cumulative GHG emissions and significance of impacts under CEQA. A project's "service population" refers to a project's

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residents plus employees that would be generated by the proposed project's development. This efficiency metric is expressed as MT CO2e per service population per year (MT CO2e/year/service population).

Service population is a term used to express the total GHG emissions associated with a project or study area, divided by the total population and employment forecasted for the local study area. The service population for projects that accommodate only employment and no residences would be the total number of employees accommodated at build-out. Projects that accommodate population (i.e. housing projects) would estimate the number of residents accommodated at full occupancy. Projects, such as the proposed, would estimate both the number of residents and the employees. Net annual emissions would consider plans and projects that reduce emissions through selection of a project site and adding land use diversity that reduces cumulative area-wide vehicle miles travelled (VMT) with and without the project, GHG-efficient project design features, and other on-site strategies, as well as taking actions off-site and the impact on the project from the state's implementation of GHG-reducing programs and regulations. Net emissions represent the total after cumulative emissions are calculated less these GHG-reducing programs, features and measures.

Through the per-capita and performance-based percent reduction approaches, individual projects can demonstrate that project-specific emissions would not interfere with California's ability to accommodate expected population growth and achieve economic development objectives while also abiding by AB 32's emissions target and supporting efforts to reduce emissions beyond 2020. The service population approach allows lead agencies to assess whether any given project or plan would interfere with the State's ability to accommodate population and employment growth in a way that is consistent with the AB 32 Statewide Target, while also accounting for existing sources of GHG emissions and their potential for cumulatively inhibiting the ability of the State and local agencies to achieve the objectives of AB 32.

CARB approved the Scoping Plan in 2008, with the most recent update occurring in May 2014. The Scoping Plan provides guidance for local communities to meet AB 32 and EO S-3-05 targets. The Scoping Plan adopted a quantified cap on GHG emission representing 1990 emission levels, instituted a schedule to meet the emission cap, and developed tracking, reporting, and enforcement tools to assist the State in meeting the required GHG emission reductions. The Scoping Plan recommends that local governments target 2020 emissions at 15% below 2005 levels to account for emissions growth since 1990, as a proxy for 1990

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emissions, since few localities have conducted a detailed GHG emissions inventory to estimate 1990 emission levels.

During preparation of the County's General Plan, the University of San Diego's Energy Policy Initiatives Center (EPIC) calculated GHG emissions for the County for both community-wide sectors and County government operations for the years 1990 and 2006, with emissions projections for 2020. The 2005 GHG Inventory concluded that total emissions in the County of San Diego in 2005 comprised approximately 4,512,580 metric tons (MT) of carbon dioxide equivalent (CO2e) San Diego Foundation, 2011 . Accordingly, and based on the Scoping Plan's recommendation, a 15% reduction from the baseline year GHG emissions in the County of San Diego would have totaled approximately 3,835,693 MT CO2e/year. Thus, the total 2020 GHG emission target for the County pursuant to EO S-3-05 would be 3,835,693 MT CO2e/year.

According to the San Diego Association of Governments (SANDAG), the unincorporated County of San Diego is estimated to have a total 2020 population of 545,451 with approximately 114,338 jobs. Thus, the 2020 service population for the County would be 659,789 (SANDAG, 2016). In order to achieve the County emission level of 3,835,693 MT CO2e, the required efficiency target in 2020 would be approximately 5.8 MT CO2e per service population. (SANDAG, 2016). This information shows the relationship between the project and the state's Scoping Plan with existing local conditions in response to the California Supreme Court's decision published on November 30, 2015 in *Center for Biological Diversity v.California Department of Fish and Wildlife* (Case No. 217763) and puts into perspective the County of San Diego's decision to utilize the more conservative States average efficiency ratio as described below.

However, to be conservative, the Project, has decided to utilize the State average efficiency ratio of 4.9 MT CO2e/year/service population for the year 2020 as defined in the latest Scoping Plan (CARB, 2014).

Findings and Conclusions

Based on the original assessment conducted by Ldn for the Project *(Source: Sweetwater Place Residential Development Global Climate Change, Ldn Consulting April 30, 2015)*, the proposed project will emit GHGs directly through the burning of carbon-based fuels such as gasoline and natural gas as well as indirectly through usage of electricity, water and from the anaerobic bacterial breakdown of organic solid waste. The proposed project would generate approximately 1,846.20 Metric Tons of CO2e each year under an unmitigated scenario.

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Combining mitigation measures such as Advanced Clean Cars, Low Carbon Fuel Standards, Tire Pressure Regulations, Utility renewable portfolio reductions, increasing building efficiency to 25% above Title 24, 2008, implementing a waste recycling program, reducing water demand through adding low flow fixtures will reduce emissions by 315.27 Metric Tons of CO2e each year. Therefore, the Project's annually emissions are anticipated to be 1,530.93 Metric Tons of CO2e.

In addition, the applicant has added a design feature of incorporating Photovoltaic Solar Panels that would reduce GHG emissions. The applicant will be adding at least 8 - 285 watt solar panel to each of the 122 units for a minimum of 976 panels on the project. Based on review of the number of panels and the renewables onsite would generate roughly 483,275 kWh per year (see Attachment A to this letter). This design feature was calculated using the CalEEMod model. Based on the reductions in electrical requirements, this design feature would reduce emissions by 158.48 MT per year. The CalEEMod outputs for the solar panel emission reductions are provided in Attachment B. After this design feature is implemented into this project, the project would only produce 1,372.45 MT of CO2e.

The proposed project would be developed to include 122 multi-family residential units and fully operational in 2017-2018. It is anticipated that each residential unit will have 2.84 people per SANDAG's Series 12 Regional Growth Forecast for the year 2020. Therefore, the service population of the project would be 346.48 (2.84*122). Based on the project's mitigated levels of GHGs of 1,372.45 Metric Tons of CO2e and a service population of 346.48, the project would have an efficiency ratio of 3.96 MT CO2e/year/service population. Accordingly, because the Project's efficiency ratio is below the required 4.9 MT CO2e/year/service population needed to achieve the needed reductions required by EO S-3-05. The Project's mitigated GHG emissions would be less-than-cumulatively considerable.

If you should have any questions regarding these findings, please do not hesitate to contact me at (760) 473-1253 at your convenience.

Sincerely,
Ldn Consulting, Inc.

Jeremy Louden, Principal

Attachment A

Source: https://eosweb.larc.nasa.gov

Model elevation

Northern boundary
34

Western boundary
-118

Center
Latitude **33.5**
Longitude **-117.5**

Eastern boundary
-117

Southern boundary
33

Parameters for Tilted Solar Panels:

Monthly Averaged Radiation Incident On An Equator-Pointed Tilted Surface (kWh/m^2/day)

Lat 33.36 Lon -117.07	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual Average
SSE HRZ	3.05	3.80	5.05	6.38	6.72	6.97	6.97	6.52	5.53	4.26	3.44	2.86	5.13
K	0.56	0.56	0.59	0.63	0.60	0.60	0.61	0.62	0.61	0.58	0.60	0.57	0.59
Diffuse	0.90	1.18	1.48	1.71	2.08	2.19	2.07	1.82	1.54	1.25	0.90	0.80	1.50
Direct	5.09	5.27	6.22	7.29	6.91	7.06	7.25	7.16	6.59	5.75	5.76	5.14	6.30
Tilt 0	3.00	3.77	5.00	6.23	6.69	6.93	6.93	6.49	5.45	4.23	3.37	2.83	5.08
Tilt 18	3.96	4.60	5.63	6.53	6.58	6.67	6.74	6.59	5.95	5.03	4.39	3.85	5.55
Tilt 33	4.52	5.02	5.83	6.39	6.13	6.09	6.20	6.29	6.03	5.40	4.98	4.47	5.61
Tilt 48	4.82	5.17	5.71	5.92	5.38	5.21	5.36	5.67	5.78	5.48	5.28	4.83	5.38
Tilt 90	4.19	4.10	3.86	3.16	2.48	2.25	2.35	2.84	3.60	4.15	4.50	4.34	3.48
OPT	4.87	5.17	5.83	6.53	6.71	6.93	6.94	6.61	6.04	5.49	5.31	4.9[illegible]	5.95
OPT ANG	57.0	48.0	35.0	20.0	5.00	0.00	2.00	12.0	29.0	44.0	55.0	60.0	50.4

NOTE: *Diffuse radiation, direct normal radiation and tilted surface radiation are not calculated when the clearness index (K) is below 0.3 or above 0.8.*

Parameter Definition

$$E\ (kWh) = \#Panels * Panel\ Rating * H * 365days * PR$$

#Panels = 976

Panel Rating in kWp = .285 kWp

H= Annual Average irradiation on tilted panels (kwh/m^2/year) = 5.95 (365) = 2,171.75

PR=Performance Ratio (Between .5 and .9) = .80

E=Energy (kWh) = 976 panels * .285kwp * 2171.75 (kwh/m^2/year) *.80 = 483,275 kWh

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
User Defined Industrial	-483275	-157.9385	-0.0064	-0.0013	-158.4797
Total		**-157.9385**	**-0.0064**	**-0.001[illegible]**	**-158.4797**

Sweetwater Place Solar

San Diego County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
User Defined Industrial	1.00	User Defined Unit	1.00	0.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.6	**Precipitation Freq (Days)**	40
Climate Zone	13			**Operational Year**	2020
Utility Company	San Diego Gas & Electric				
CO2 Intensity (lb/MWhr)	720.49	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics - Project would install 976 Solar Panels 285 Watts Each

Land Use - Rooftop Solar

Construction Phase -

Off-road Equipment -

Off-road Equipment - zero hours

Trips and VMT - zero

Grading -

Architectural Coating -

Vehicle Trips -

Woodstoves - asdf

Area Coating -

Landscape Equipment - zero

Energy Use - E=Energy (kWh) = 6500 * .3 * 2171.75 *.80 = 3,387,930 kWh

Water And Wastewater -

Energy Mitigation -

Table Name	Column Name	Default Value	New Value
tblAreaMitigation	UseLowVOCPaintNonresidentialExteriorValue	250	0
tblConstructionPhase	PhaseEndDate	12/30/2016	12/31/2016
tblLandUse	LotAcreage	0.00	1.00
tblOffRoadEquipment	UsageHours	8.00	0.00
tblProjectCharacteristics	OperationalYear	2014	2020
tblTripsAndVMT	WorkerTripNumber	3.00	0.00

2.0 Emissions Summary

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					
2016	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
Total	**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**

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					
2016	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
Total	**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**

	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**	**N20**	**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**

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	0.0000	0.0000	1.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	2.0000e-005
Energy	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
Mobile	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
Waste						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Water						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**1.0000e-005**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**2.0000e-005**	**2.0000e-005**	**0.0000**	**0.0000**	**2.0000e-005**

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	0.0000	0.0000	1.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	2.0000e-005
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	-157.9385	-157.9385	-0.0064	-0.0013	-158.4797
Mobile	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
Waste						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Water						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**1.0000e-005**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**-157.9385**	**-157.9385**	**-0.0064**	**-0.0013**	**-158.4797**

	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	N20	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**	**789,692,550.00**	**789,692,550.00**	**0.00**	**0.00**	**792,398,700.00**

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	12/30/2016	12/31/2016	5	1	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 0

Acres of Paving: 0

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 0; Non-Residential Outdoor: 0 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Site Preparation	Graders	1	0.00	174	0.41

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	1	0.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

3.2 Site Preparation - 2016

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					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	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	**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**

3.2 Site Preparation - 2016

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	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
Total	**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**

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					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	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	**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**

3.2 Site Preparation - 2016

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	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
Total	**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**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	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	0.0000	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
Unmitigated	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

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
User Defined Industrial	0.00	0.00	0.00		
Total	0.00	0.00	0.00		

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	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
User Defined Industrial	9.50	7.30	7.30	0.00	0.00	0.00	0	0	0

LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
0.513300	0.073549	0.191092	0.130830	0.036094	0.005140	0.012550	0.022916	0.001871	0.002062	0.006564	0.000586	0.003446

4.4 Fleet Mix

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

Kilowatt Hours of Renewable Electricity Generated

	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	-157.9385	-157.9385	-0.0064	-0.0013	-158.4797
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
NaturalGas Mitigated	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
NaturalGas Unmitigated	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

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					
User Defined Industrial	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		**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**

5.2 Energy by Land Use - NaturalGas

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					
User Defined Industrial	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		**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**

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
User Defined Industrial	0	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**

5.3 Energy by Land Use - Electricity

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
User Defined Industrial	-483275	-157.9385	-0.0064	-0.0013	-158.4797
Total		**-157.9385**	**-0.0064**	**-0.0013**	**-158.4797**

6.0 Area Detail

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	0.0000	0.0000	1.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	2.0000e-005
Unmitigated	0.0000	0.0000	1.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	2.0000e-005

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	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	0.0000	0.0000	1.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	2.0000e-005
Total	**0.0000**	**0.0000**	**1.0000e-005**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**2.0000e-005**	**2.0000e-005**	**0.0000**	**0.0000**	**2.0000e-005**

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	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	0.0000	0.0000	1.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	2.0000e-005
Total	**0.0000**	**0.0000**	**1.0000e-005**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**2.0000e-005**	**2.0000e-005**	**0.0000**	**0.0000**	**2.0000e-005**

7.0 Water Detail

7.1 Mitigation Measures Water

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	0.0000	0.0000	0.0000	0.0000
Unmitigated	0.0000	0.0000	0.0000	0.0000

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
User Defined Industrial	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**

7.2 Water by Land Use

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
User Defined Industrial	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Unmitigated	0.0000	0.0000	0.0000	0.0000
Mitigated	0.0000	0.0000	0.0000	0.0000

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
User Defined Industrial	0	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
User Defined Industrial	0	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**

9.0 Operational Offroad

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

10.0 Vegetation