

APPENDIX F
ENERGY STUDY

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Rincon Consultants, Inc.

449 15th Street, Suite 303
Oakland, California 94612

510 834 4455 OFFICE AND FAX

info@rinconconsultants.com
www.rinconconsultants.com

August 27, 2019
Project No: 18-05692

Andrew Metzger
Circlepoint
46 S 1st Street
San Jose, California 95113
Via email: a.metzger@circlepoint.com

Subject: **1095 Rollins Road Apartment Project IS-MND, Energy Letter Report**
1095 Rollins Road, Burlingame, California, 94010

Dear Ms. Zagazeta:

This letter report analyzes the potential energy impacts of the proposed 1095 Rollins Road Apartment Project (project) in Burlingame, California. Rincon Consultants, Inc. (Rincon) prepared this letter report under contract to Circlepoint for use by the City of Burlingame in support of the environmental documentation being prepared pursuant to the California Environmental Quality Act (CEQA). This analysis considers both temporary impacts that would result from project construction and long-term energy impacts associated with operation of the project.

Project Location

The project site is a 1.08-acre property comprising two assessor's parcels, located at 1095 Rollins Road in Burlingame, California (Assessor Parcel Numbers 026-231-250 and 026-231-260). The project site currently contains a restaurant on the western portion of the site and elevated tennis courts located on top of a parking structure on the eastern portion of the site. The project site is bound by a gas station to the west, Rollins Road and U.S. 101 to the north, a City utility station to the east, and a multi-family residential complex (Northpark Apartments) to the south and east.

Project Description

The project would include demolition of all existing structures on-site and construction of a six-story, 150-unit multi-family residential apartment building. Ten percent of units would be designated as affordable housing for moderate-income households. The building would also include a one-level subterranean garage with 192 parking spaces in traditional and stacked parking configurations. The building would include multiple roof decks with barbeques and fire pits, a programmed courtyard with bocce ball court, a fitness center, clubhouse, bicycle parking, and on-site storage. Access to the site would be provided via an entrance and exit along Rollins Road. See Attachment 1 for the project site plan.



Background

Electricity and Natural Gas

In 2018, California used 285,488 gigawatt-hours (GWh) of electricity, of which 31 percent were from renewable resources.¹ California also consumed approximately 12,638 million U.S. therms (MMthm) of natural gas in 2018. Electricity and natural gas for the project site would be provided by Pacific Gas and Electric (PG&E). Table 1 and Table 2 show PG&E's total electricity and natural gas consumption for its service area as well as consumption by sector. In 2018, PG&E provided approximately 27.9 percent of the total electricity and approximately 37.9 percent of the total natural gas usage in California.

Table 1 Electricity Consumption in the PG&E Service Area in 2018

Agriculture and Water Pump	Commercial Building	Commercial Other	Industry	Mining and Construction	Residential	Streetlight	Total Usage
5735.1	29,650.0	4,195.1	10,344.7	1,567.3	27,964.8	318.6	79,775.7

Notes: All usage expressed in GWh²

Table 2 Natural Gas Consumption in PG&E Service Area in 2018

Agriculture and Water Pump	Commercial Building	Commercial Other	Industry	Mining and Construction	Residential	Total Usage
37.2	899.1	59.0	1,776.0	190.2	1832.8	4,794.4

Notes: All usage expressed in MMthm³

Petroleum

In 2018, approximately 28 percent of the state's energy consumption was used for transportation activities.⁴ Californians presently consume over 19 billion gallons of motor vehicle fuels per year. Though California's population and economy are expected to grow, gasoline demand is projected to decline from roughly 15.8 billion gallons in 2017 to between 12.3 billion and 12.7 billion gallons in 2030, a 20 to 22 percent reduction. This forecast decline is due to both increasing use of electric vehicles and improved fuel economy for new gasoline vehicles.⁵

¹ California Energy Commission (CEC). 2019. Total System Electric Generation. Available at: https://www.energy.ca.gov/almanac/electricity_data/total_system_power.html (accessed August 2019).

² California Energy Commission (CEC). 2018. Electricity Consumption by Entity. Available at: <https://ecdms.energy.ca.gov/elecbyutil.aspx> (accessed August 2019).

³ California Energy Commission (CEC). 2018. Gas Consumption by Entity. Available at: <https://ecdms.energy.ca.gov/gasbyutil.aspx> (accessed August 2019).

⁴ United States Energy Information Administration (EIA). 2019. Monthly Energy Review, July. Table 2.5, Transportation Sector Energy Consumption. Available at: <https://www.eia.gov/totalenergy/data/monthly/pdf/mer.pdf> (accessed August 2019).

⁵ California Energy Commission (CEC). 2019. California Energy Almanac. Available at: <https://www.energy.ca.gov/almanac/> (accessed August 2019).



Methodology

The project's construction and operational energy usage were estimated using the California Emissions Estimator Model (CalEEMod), version 2016.3.2 (see Attachment 2). CalEEMod uses project-specific information, including the project's land uses, square footages for different uses (e.g., mid-rise apartments), and location, to estimate a project's construction and operational emissions and energy consumption. Consumption factors were drawn from CalEEMod for project natural gas and electricity consumption. Energy demand for off-road construction equipment is based on anticipated equipment, usage hours, horsepower, load factors, and construction phase duration provided by the CalEEMod output, as well as Exhaust and Crankcase Emission Factors for Nonroad Compression Ignition Engines.⁶

Operational energy is currently required for the existing restaurant and tennis court on the project site. These existing uses were modelled using CalEEMod to consider the existing energy demand in the form of electricity and natural gas consumption to compare with future project consumption. Based on these models, estimated electricity consumed by existing uses is 0.4 GWh per year and natural gas consumed by the existing uses is 0.02 MMthms. However, in order to represent a highly conservative estimate of project energy consumption, calculated energy consumption estimates did not deduct existing energy use from the restaurant and tennis court currently on the project site.

Operational energy demand considers transportation-based fuel consumption as well as electricity and natural gas consumption associated with the project. Transportation fuel demand for operation of the project was estimated based on the annual vehicle miles travelled (VMT) generated after project buildup. Electricity and natural gas consumption were also based on CalEEMod outputs and compared to existing consumption in the PG&E service areas.

Thresholds

CEQA Thresholds

To determine whether a project would have a significant impact to energy, Appendix G of the *CEQA Guidelines* requires consideration of whether a project would:

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

Impact Analysis

Threshold 1: Would the project result in a potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy, or wasteful use of energy resources, during project construction or operations?

Construction Energy Demand

⁶ United States Environmental Protection Agency (USEPA). 2018. Exhaust and Crankcase Emission Factors for Nonroad Compression-Ignition Engines in MOVES2014b. July 2018. Available at: <https://nepis.epa.gov/Exe/ZyPDF.cgi?Dockey=P100UXEN.pdf>



Construction activity would use energy in the form of petroleum-based fuels used to power off-road construction vehicles and equipment on the project site, construction worker travel to and from the project site, and vehicles used to deliver materials to the site. The project would require demolition of existing structures; site preparation and grading, including hauling material off-site; pavement and asphalt installation; building construction; architectural coating; and landscaping and hardscaping.

The total consumption of gasoline and diesel fuel during project construction was estimated using the assumptions and factors from CalEEMod (Attachment 2). Table 3 summarizes the estimated construction energy consumption for the project. Diesel fuel consumption, including construction equipment operation, hauling trips, and vendor trips, would consume an estimated 91,965 gallons of fuel over the project construction period. Worker trips would consume an estimated 10,175 gallons of petroleum fuel during project construction. Refer to Table 3 for the overall estimated fuel consumption during construction.

Table 3 Estimated Fuel Consumption during Construction

Fuel Type	Gallons of Fuel	MMBtu ⁴
Diesel Fuel (Construction Equipment) ¹	23,644	3,014
Diesel Fuel (Hauling & Vendor Trips) ²	68,321	8,708
Other Petroleum Fuel (Worker Trips) ³	10,175	1,117
Total	102,140	12,839

¹ Fuel demand rate for construction equipment is derived from the total hours of operation, the equipment's horse power, the equipment's load factor, and the equipment's fuel usage per horse power per hour of operation, which are all taken from CalEEMod outputs (see Attachment 2), and from compression-ignition engine brake-specific fuel consumptions factors for engines between 0 to 100 horsepower and greater than 100 horsepower.⁷ Fuel consumed for all construction equipment is assumed to be diesel fuel.

² Fuel demand rate for hauling and vendor trips (cut material imports) is derived from hauling and vendor trip number, hauling and vendor trip length, and hauling and vendor vehicle class from "Trips and VMT" Table contained in Section 3.0, *Construction Detail*, of the CalEEMod results (see Attachment 2). The fuel economy for hauling and vendor trip vehicles is derived from the United States Department of Transportation.⁸ Fuel consumed for all hauling trucks is assumed to be diesel fuel.

³ The fuel economy for worker trip vehicles is derived from DOT National Transportation Statistics (24 mpg).⁹ Fuel consumed for all worker trips is assumed to be gasoline fuel.

⁴ CaRFG CA-GREET 2.0 fuel specification of 109,786 Btu/gallon used to identify conversion rate for fuel energy consumption for worker trips specified above. Low-sulfur Diesel CA-GREET 2.0 fuel specification of 127,464 Btu/gallon used to identify conversion rate for fuel energy consumption for construction equipment specified above.¹⁰ Totals may not add up due to rounding.

The construction energy estimates represent a conservative estimate as the construction equipment used in each phase of construction was assumed to be operating every day of construction. Construction equipment would be maintained to all applicable standards as required, and construction activity and associated fuel consumption and energy use would be temporary and typical for construction sites. It is also reasonable to assume contractors would avoid wasteful, inefficient, and unnecessary fuel consumption during construction to reduce construction costs. Therefore, the proposed project would

⁷ United States Environmental Protection Agency (USEPA). 2018. Exhaust and Crankcase Emission Factors for Nonroad Compression-Ignition Engines in MOVES2014b. July 2018. Available at: <https://nepis.epa.gov/Exe/ZyPDF.cgi?Dockey=P100UXEN.pdf>.

⁸ United States Department of Transportation (DOT), Bureau of Transportation Statistics. 2018. National Transportation Statistics. Available at: <https://www.bts.gov/topics/national-transportation-statistics> (accessed August 2019).

⁹ United States Department of Transportation (DOT), Bureau of Transportation Statistics. 2018. National Transportation Statistics. Available at: <https://www.bts.gov/topics/national-transportation-statistics> (accessed August 2019).

¹⁰ California Air Resources Board (CARB). 2015. California modified Greenhouse Gases, Regulated Emissions, and Energy Use in Transportation (CA-GREET) 2.0 Model. September 2015.



not involve the inefficient, wasteful, and unnecessary use of energy during construction, and the construction-phase impact related to energy consumption would be less than significant.

Operational Energy Demand

Operation of the project would require energy use in the form of electricity, natural gas, and gasoline consumption. Natural gas and electricity would be used for heating and cooling systems, lighting, appliances, water use, and the overall operation of the project. Gasoline consumption would be attributed to vehicular travel from residents and guests traveling to and from the project site. The project's estimated number of average daily trips from CalEEMod is used to determine the energy consumption associated with fuel use from project operation. According to the CalEEMod calculations, the project would result in 690,152 annual vehicle miles travelled (VMT) (Attachment 2). Table 4 shows the estimated total annual fuel consumption of the project using the estimated VMT with the assumed vehicle fleet mix (Attachment 2).

Table 4 Estimated Project Annual Transportation Energy Consumption

Vehicle Type ¹	Percent of Vehicle Trips ²	Annual Vehicle Miles Traveled ³	Average Fuel Economy (miles/gallon) ⁴	Total Annual Fuel Consumption (gallons)	Total Fuel Consumption (MMBtu) ⁵
Passenger Cars	47.1	324,803	24.0	13,533	1,486
Light/Medium Trucks	45.7	315,145	17.4	18,112	1,988
Heavy Trucks/Other	6.4	43,883	7.4	5,930	756
Motorcycles	0.9	6,321	43.9	144	16
Total	100.0	690,152	—	37,719	4,246

¹ Vehicle classes provided in CalEEMod do not correspond exactly to vehicle classes in DOT fuel consumption data, except for motorcycles. Therefore, it was assumed that passenger cars correspond to the light-duty, short-base vehicle class, light/medium trucks correspond to the light-duty long-base vehicle class, and heavy trucks/other correspond to the single unit, 2-axle 6-tire or more class.

² Percent of vehicle trips from Table 4.4 "Fleet Mix" in Air Quality and Greenhouse gas Emissions Study, CalEEMod output (see Attachment 2).

³ Mitigated annual VMT found in Table 4.2 "Trip Summary Information" in Air Quality and Greenhouse Gas Emissions Study CalEEMod output (see Attachment 2).

⁴ Average Fuel Economy¹¹

⁵ CaRFG fuel specification of 109,786 Btu/gallon used to identify conversion rate for fuel energy consumption for vehicle classes specified above.¹²

Notes: Totals may not add up due to rounding.

As shown in Table 4, the project would consume an estimated 37,719 gallons of fuel, or 4,246 MMBtu, each year for transportation uses from the operation.

The project's electricity demand would be served by PG&E, which provided 79,776 GWh of electricity in 2018. Operation of the project would consume approximately 0.8 GWh of electricity per year, which would be less than 0.01 percent of PG&E's current electricity demand (electricity use provided in the

¹¹ United States Department of Transportation (DOT), Bureau of Transportation Statistics. 2018. National Transportation Statistics. Available at: <https://www.bts.gov/topics/national-transportation-statistics> (accessed August 2019).

¹² California Air Resources Board (CARB). 2015. California modified Greenhouse Gases, Regulated Emissions, and Energy Use in Transportation (CA-GREET) 2.0 Model. September 2015.



CalEEMod output of Attachment 2). The project would include the use of nine mechanical parking garage stackers that would require additional electrical energy. Each stacker would require 0.96 kilowatts of energy and would operate for 30 seconds to lift cars in the proposed parking structure. According to the traffic study prepared for the project, approximately 816 trips would occur to and from the parking garage each day that would require stacking in the parking garage. In comparison to the overall operation of the project, the electricity use required to run the stackers would be minimal, and would not result in wasteful, inefficient, or unnecessary consumption of energy use. The project's natural gas demand would be serviced by PG&E, which provided approximately 4,795 MMthm per year in 2018. Estimated natural gas consumption for the project would be approximately 0.01 MMthm per year, which would be less than 0.01 percent of PG&E's current natural gas demand (natural gas use provided in the CalEEMod output of Attachment 2). Therefore, PG&E would have sufficient electricity and natural gas supplies for the project. It is important to note that calculated energy consumption estimates did not deduct existing energy use from the restaurant and tennis court currently on the project site and therefore represent a highly conservative estimate.

The project would be required to comply with all standards set in California Building Code (CBC) Title 24, which would minimize the wasteful, inefficient, or unnecessary consumption of energy resources during operation. California's Green Building Standards Code (CALGreen; California Code of Regulations, Title 24, Part 11) requires implementation of energy efficient light fixtures and building materials into the design of new construction projects. Furthermore, the 2019 Building Energy Efficiency Standards (CBC Title 24, Part 6) requires newly constructed buildings to meet energy performance standards set by the Energy Commission. These standards are specifically crafted for new buildings to result in energy efficient performance so that the buildings do not result in wasteful, inefficient, or unnecessary consumption of energy. The standards are updated every three years and each iteration is more energy efficient than the previous standards. For example, according to the CEC, residences built with the 2019 standards will use about seven percent less energy due to energy efficiency measures versus those built under the 2016 standards, or 53 percent less energy with rooftop solar, and nonresidential buildings will use about 30 percent less energy due mainly to lighting upgrades.¹³ Furthermore, the project would continue to reduce its use of nonrenewable energy resources as the electricity generated by renewable resources provided by PG&E continues to increase to comply with state requirements through Senate Bill 100, which requires electricity providers to increase procurement from eligible renewable energy resources to 33 percent of total retail sales by 2020, 60 percent by 2030, and 100 percent by 2045. Operational impacts related to energy consumption would be less than significant.

In conclusion, energy demand associated with project construction would be temporary and typical of similar projects, and would not result in the wasteful, inefficient, or unnecessary consumption of energy. While project operation would involve the consumption of fuel, natural gas, and electricity, the project's energy usage would be in conformance with the latest version of California's Green Building Standards Code and the Building Energy Efficiency Standards. In addition, PG&E has sufficient supplies to serve the project and the project would include rooftop solar PV panels that would further offset energy consumption. Therefore, the project would have a less than significant impact.

¹³ California Energy Commission (CEC). 2018. 2019 Building Energy Efficiency Standards. March. Available at: https://www.energy.ca.gov/title24/2019standards/documents/2018_Title_24_2019_Building_Standards_FAQ.pdf (accessed August 2019).



Threshold 2: Would the project conflict with or obstruct a state or local plan for renewable energy or energy efficiency?

As mentioned above, SB 100 mandates 100 percent clean electricity for California by 2045. Because the project would be powered by the existing electricity grid, the project would eventually be powered by renewable energy mandated by SB 100 and would not conflict with this statewide plan. Additionally, the project would be subject to energy efficiency standards pursuant to CCR Title 24 requirements.

The Burlingame Climate Action Plan (CAP) contains emissions-reduction measures the City may implement, several of which are energy-related. The Burlingame CAP is a voluntary planning study undertaken by the City to quantify emissions through an inventory analysis and forecast and to generate possible measures the City could take in the future. The CAP was adopted by the City in June of 2009, and an updated Draft 2030 Climate Action Plan and amendment to the City's General Plan has been completed and is available for public review.^{14,15} Although the updated CAP has not yet been adopted by the City, the 2030 CAP Update is intended to build on and replace the City's previous CAP. It also contains the City's new greenhouse gas (GHG) emissions reduction strategy, addresses the community's potential vulnerability to climate change impacts, and provides clear implementation and monitoring programs to direct climate action in Burlingame.

The City's existing CAP includes five major strategies to reduce emissions for Burlingame, one of which specifically identifies energy efficiency and green building as a strategy to meet emissions targets in the City. The project would be consistent with measures and actions from the City's CAP and General Plan. Those policies specifically pertaining to energy include General Plan Policy CC-1.9: *Green Building Practices and Standards*, Policy HP-2.7: *Residential Solar Power*, and Policy HP-2.8: *Energy Efficiency*. Policy CC-1.9, states that the City shall encourage new residential development to comply with the State's Tier 1 and Tier 2 voluntary energy efficiency provisions. The project would incorporate several green building features including installation of energy efficient LED light fixtures with daylight dimming, use occupancy, and automatic shut-off requirements, use of Energy Star-rated appliances in the proposed clubhouse and all apartment units, and future installation of PV solar panels on at least 15 percent of the roof area. This plan for installation of solar panels would also be consistent with Policy HP-2.7 which encourages new residences to utilize solar as an alternative energy system. The project would not interfere with the CAP or General Plan's energy performance and efficiency strategies and would not conflict with or obstruct the state plan for renewable energy. Impacts would be less than significant.

Conclusions and Recommendations

Construction and operational energy impacts would be less than significant. Therefore, no measures are recommended.

Thank you for the opportunity to assist with this assignment. Please do not hesitate to contact us if you have questions about this report.

¹⁴ City of Burlingame. 2009. Climate Action Plan. June. Available at: http://www.cec Burlingame.com/wp-content/uploads/2015/02/climate_action_plan.pdf (accessed August 2019).

¹⁵ City of Burlingame. 2019. Draft 2030 Climate Action Plan Update. April. Available at: https://www.burlingame.org/document_center/Sustainability/Burlingame_CAP_20190412_low_res.pdf (accessed August 2019).



Circlepoint
1095 Rollins Road Apartment Project Energy Analysis

Sincerely,
Rincon Consultants, Inc.

A handwritten signature in blue ink that appears to read "Kari Zajac".

Kari Zajac, MESM
Project Manager

A handwritten signature in blue ink that appears to read "Abe Leider".

Abe Leider, AICP CEP
Principal

Attachments

Attachment 1 Project Site Plan

Attachment 2 California Emissions Estimator Model Results

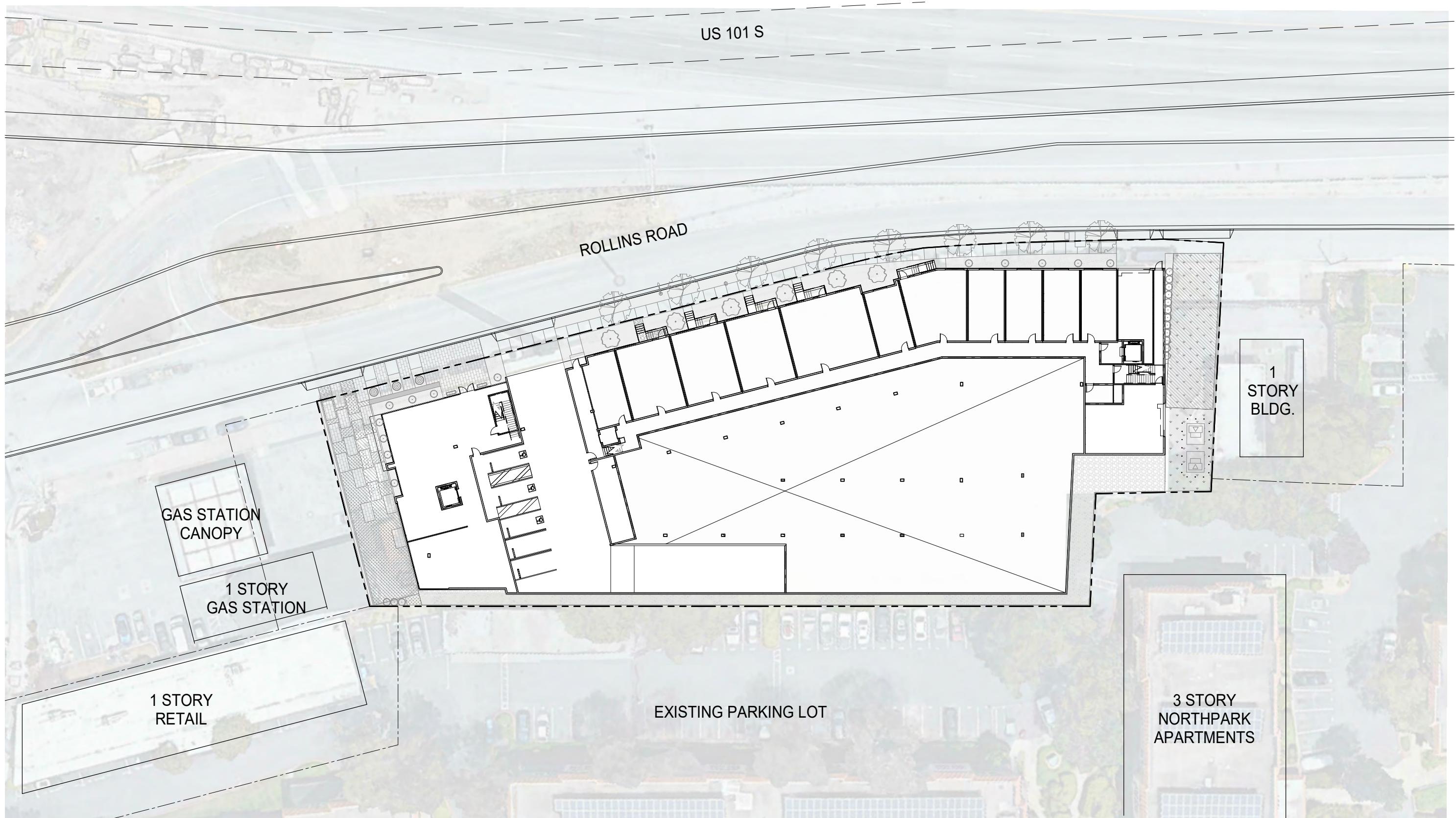


Attachment 1

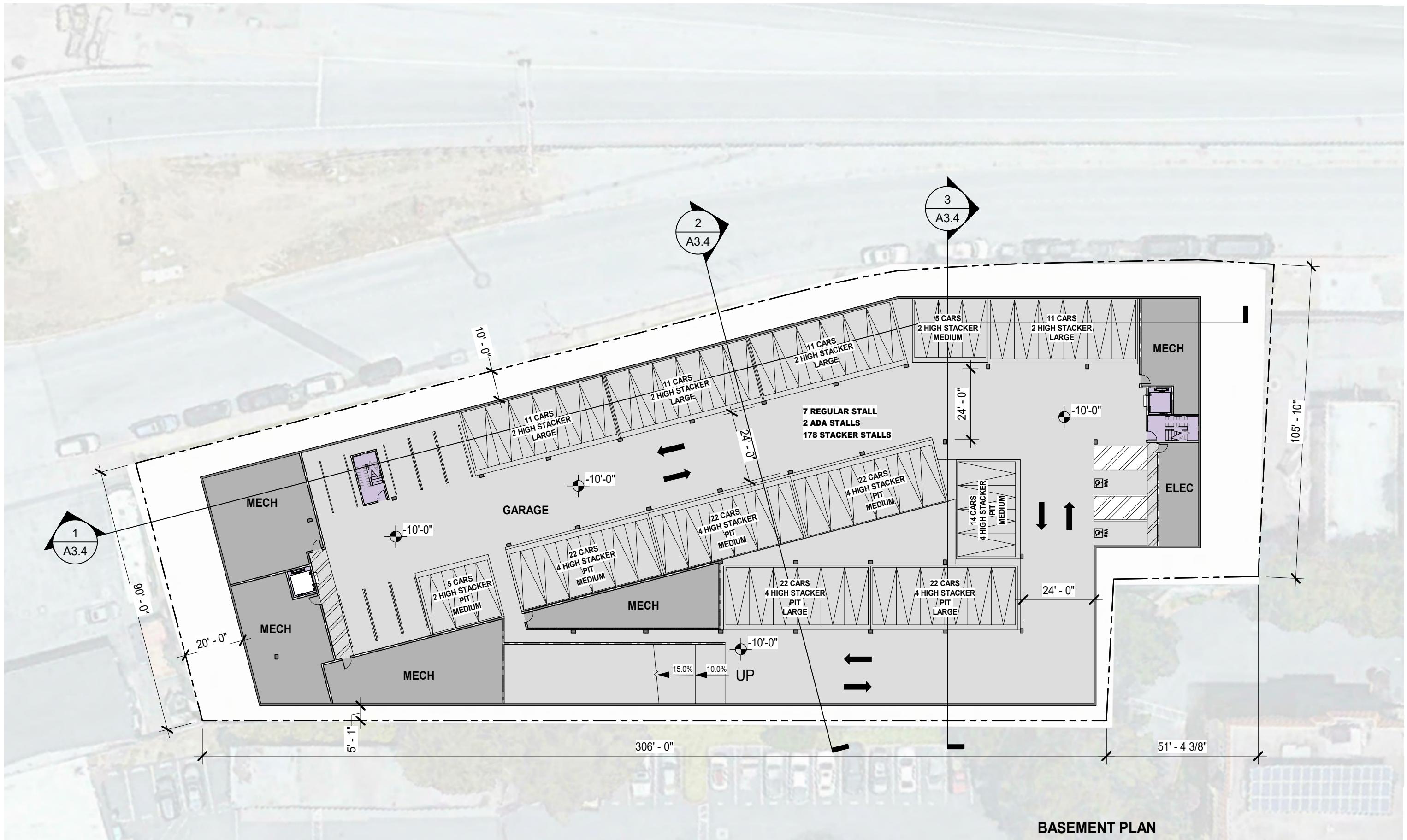
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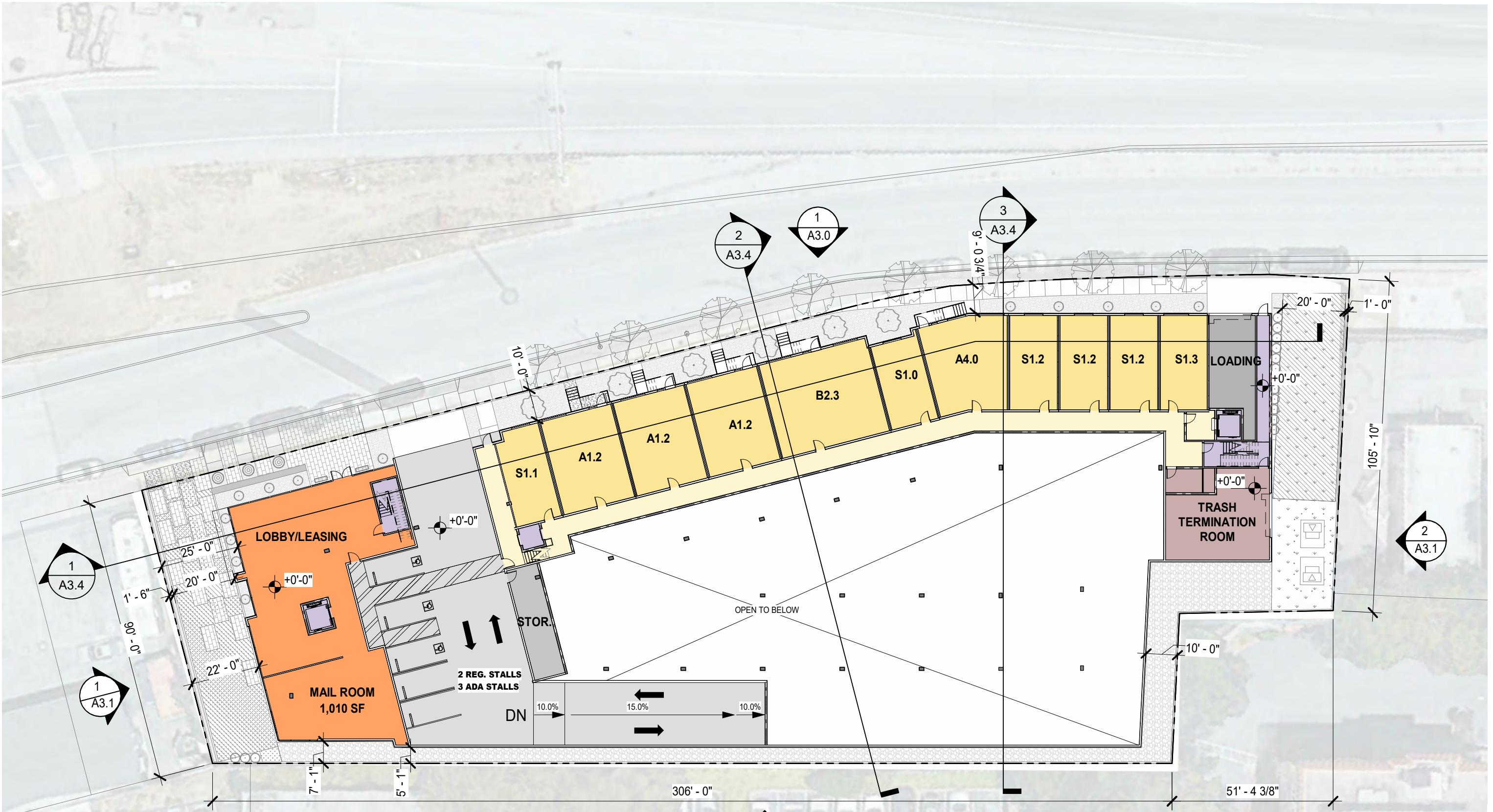
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PLANNING SUBMITTAL**



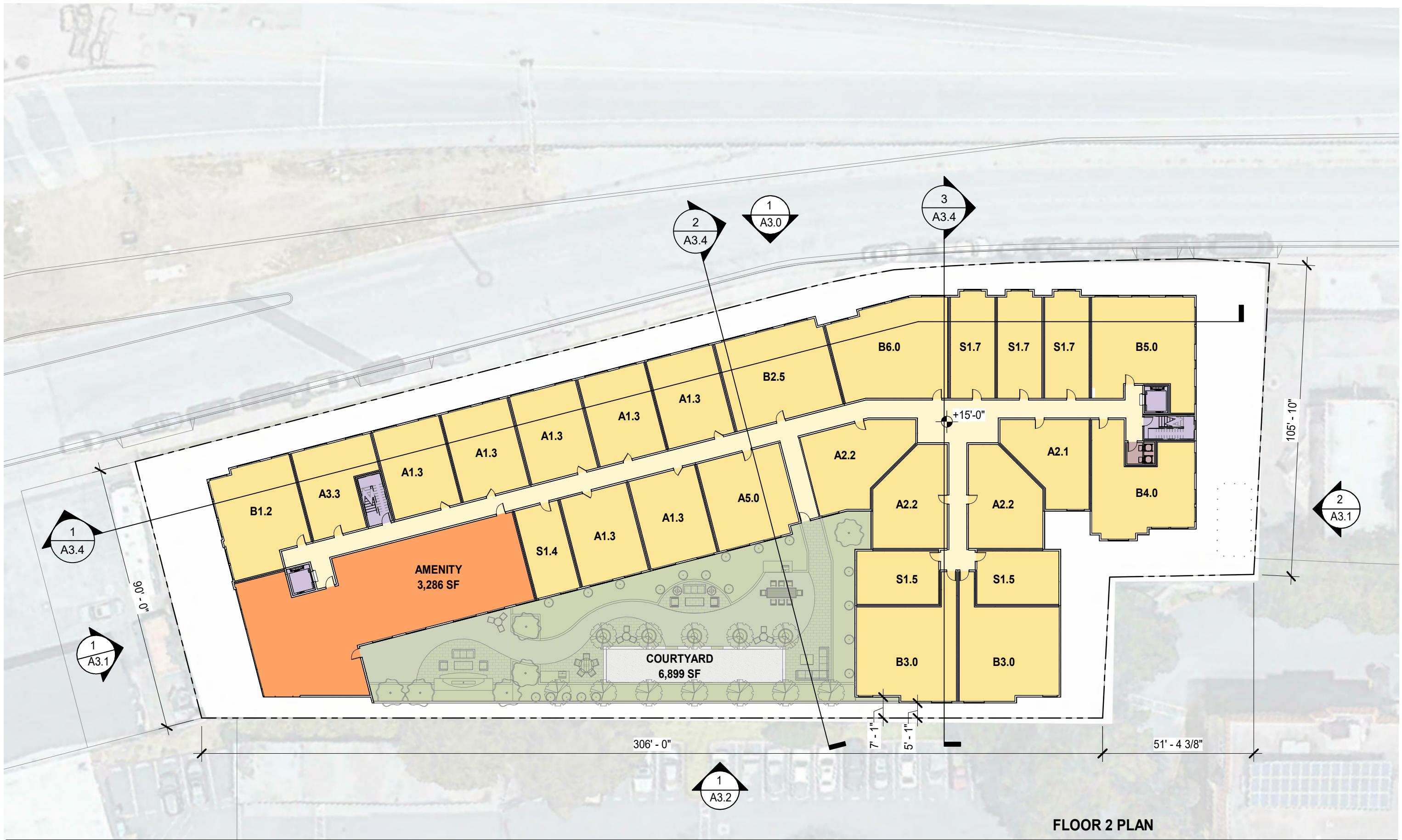


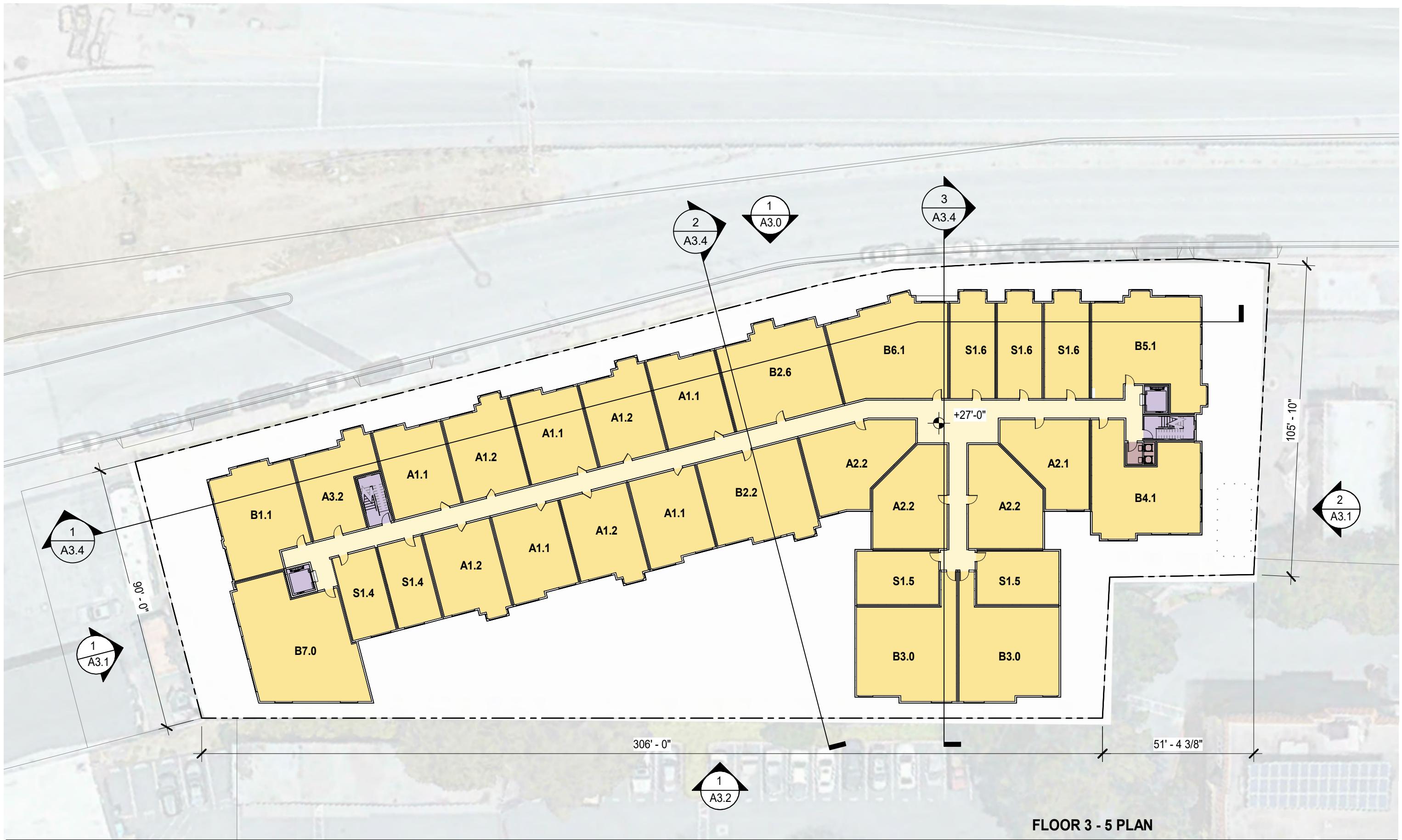
SITE PLAN



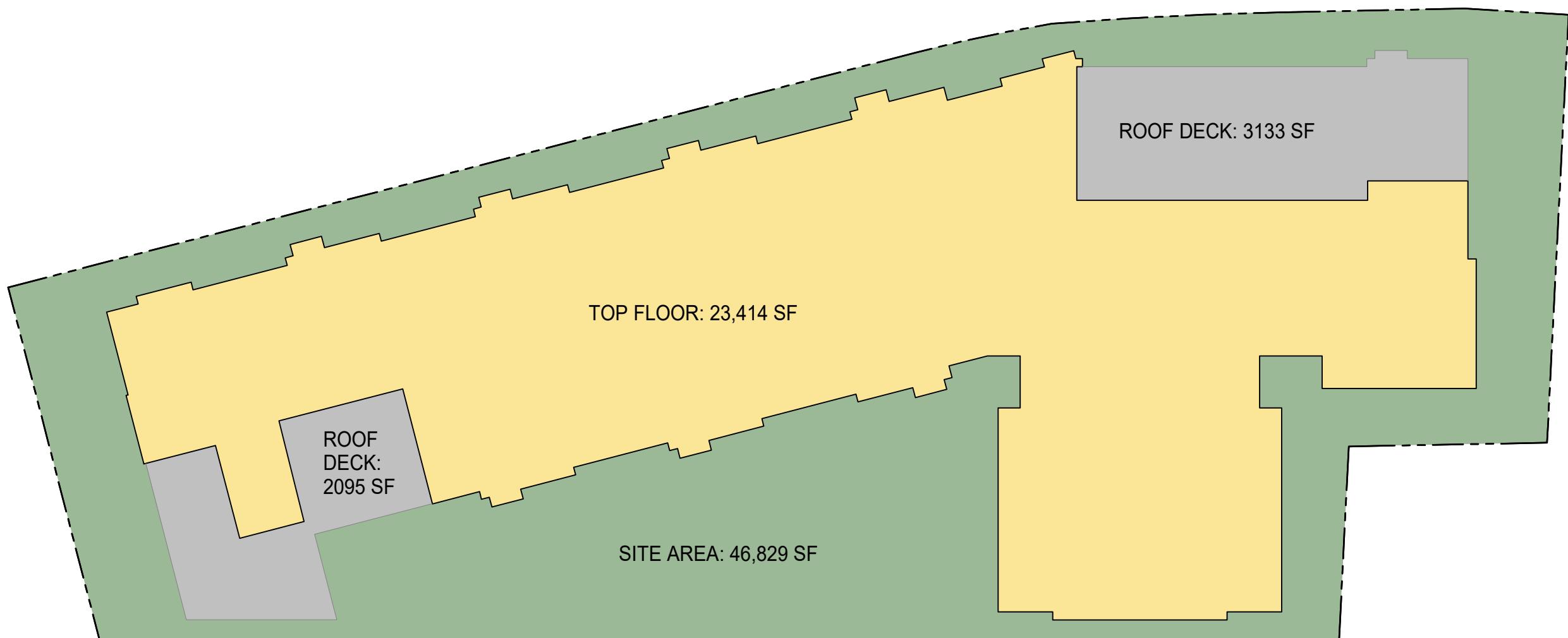


FLOOR 1 PLAN









LOT COVERAGE	
SITE AREA =	46,829 SF Area within Property Line
BUILDING FOOTPRINT =	28,642 SF Top Floor + Roof Decks (23,414 SF + 3,133 SF + 2,095 SF)
50% OF SITE AREA =	23,414 SF (46,827 SF/2)
TOP FLOOR =	23,414 SF Excludes Roof Deck

LOT COVERAGE





Attachment 2

California Emissions Estimator Model Results

1095 Rollin Roads - San Mateo County, Annual

1095 Rollin Roads
San Mateo County, Annual

1.0 Project Characteristics**1.1 Land Usage**

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Enclosed Parking with Elevator	28.60	1000sqft	0.00	28,600.00	0
Apartments Mid Rise	150.00	Dwelling Unit	1.07	166,400.00	429

1.2 Other Project Characteristics

Urbanization	Urban	Wind Speed (m/s)	2.2	Precipitation Freq (Days)	70
Climate Zone	5			Operational Year	2023
Utility Company	Pacific Gas & Electric Company				
CO2 Intensity (lb/MWhr)	641.35	CH4 Intensity (lb/MWhr)	0.029	N2O Intensity (lb/MWhr)	0.006

1.3 User Entered Comments & Non-Default Data

1095 Rollin Roads - San Mateo County, Annual

Project Characteristics -

Land Use - Source: planning submittal 9.14.18; building gross sf = 195,000 sf (-parking sf); site area = 46,829 sf (1.075 acres); although there are 192 parking spots 175 are stackers stalls, parking garage sf provided by applicant. See site plans for details.

Construction Phase - Applicant provided construction schedule

Off-road Equipment - Provided by applicant; hours/day = avg hours per day

Off-road Equipment - Provided by applicant; hours/day = avg hours per day

Off-road Equipment - Provided by applicant; hours/day = avg hours per day

Off-road Equipment - Provided by applicant; hours/day = avg hours per day

Off-road Equipment - Provided by applicant; hours/day = avg hours per day

Off-road Equipment - Provided by applicant; hours/day = avg hours per day

Trips and VMT - Applicant provided number of worker round trips per work day

Demolition - Applicant provided.

Grading - Applicant provided: total cubic yards of soil exported = 23,500 cy

Architectural Coating - BAAQMD Regulation 8 Rule 3: Architectural coatings (applied to interior, exterior and "traffic marking coatings" for parking)

Woodstoves - Applicant provided = 1 natural gas fireplace, 1 natural gas fire pit, 4 natural gas BBQ (all included under # gas fireplaces)

Area Coating - BAAQMD Regulation 8 rule 3

Construction Off-road Equipment Mitigation - DPM mitigation

Mobile Land Use Mitigation - Applicant provided information for LUT-1 (150 dwellings/1.075 acres) and LUT-6;
<https://ww3.arb.ca.gov/cc/capandtrade/auctionproceeds/kml/jobcentermap.htm> for LUT-4 and google maps for LUT-5

Area Mitigation - Architectural coating already reduced per BAAQMD regulation 8 rule 3

Energy Mitigation - Applicant plans include Energy Star-rated appliances installed at amenities clubhouse and in all apartment units.

Water Mitigation - Applicant provided information indicates that all plumbing fixtures will meet CalGreen and/or EPA's WaterSense low flow fixture rates.
Landscaping will be drought tolerant and smart programmable controllers will be used for irrigation

Vehicle Trips - Applicant provided traffic study: avg daily trip rate = 5.44; avg trip length = 5.26 miles

1095 Rollin Roads - San Mateo County, Annual

1095 Rollin Roads - San Mateo County, Annual

tblConstEquipMitigation	DPF	No Change	Level 3
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1095 Rollin Roads - San Mateo County, Annual

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1095 Rollin Roads - San Mateo County, Annual

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tblOffRoadEquipment	UsageHours	6.00	0.00
tblOffRoadEquipment	UsageHours	8.00	0.00
tblOffRoadEquipment	UsageHours	6.00	0.00
tblOffRoadEquipment	UsageHours	8.00	0.00
tblOffRoadEquipment	UsageHours	6.00	0.00
tblOffRoadEquipment	UsageHours	6.00	0.00
tblTripsAndVMT	WorkerTripNumber	13.00	35.00
tblTripsAndVMT	WorkerTripNumber	10.00	35.00
tblTripsAndVMT	WorkerTripNumber	20.00	35.00
tblTripsAndVMT	WorkerTripNumber	120.00	35.00
tblTripsAndVMT	WorkerTripNumber	24.00	35.00
tblTripsAndVMT	WorkerTripNumber	13.00	35.00
tblVehicleTrips	HO_TL	5.70	5.26
tblVehicleTrips	HS_TL	4.80	5.26
tblVehicleTrips	HW_TL	10.80	5.26
tblVehicleTrips	ST_TR	6.39	5.44
tblVehicleTrips	SU_TR	5.86	5.44
tblVehicleTrips	WD_TR	6.65	5.44
tblWoodstoves	NumberCatalytic	3.00	0.00
tblWoodstoves	NumberNoncatalytic	3.00	0.00

2.0 Emissions Summary

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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					
2020	0.0594	0.8974	0.6263	2.1000e-003	0.0652	0.0208	0.0861	0.0175	0.0195	0.0370	0.0000	204.0144	204.0144	0.0317	0.0000	204.8059
2021	0.6917	1.1726	1.2777	2.8600e-003	0.0759	0.0539	0.1297	0.0206	0.0534	0.0740	0.0000	255.5617	255.5617	0.0200	0.0000	256.0607
2022	0.1508	0.2162	0.2686	5.7000e-004	0.0153	0.0101	0.0254	4.1200e-003	0.0100	0.0142	0.0000	50.3361	50.3361	4.0000e-003	0.0000	50.4362
Maximum	0.6917	1.1726	1.2777	2.8600e-003	0.0759	0.0539	0.1297	0.0206	0.0534	0.0740	0.0000	255.5617	255.5617	0.0317	0.0000	256.0607

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					
2020	0.0594	0.8974	0.6263	2.1000e-003	0.0545	4.6700e-003	0.0592	0.0147	4.4100e-003	0.0191	0.0000	204.0144	204.0144	0.0317	0.0000	204.8058
2021	0.6917	1.1726	1.2777	2.8600e-003	0.0759	8.9400e-003	0.0848	0.0206	8.8100e-003	0.0294	0.0000	255.5615	255.5615	0.0200	0.0000	256.0606
2022	0.1508	0.2162	0.2686	5.7000e-004	0.0153	1.6500e-003	0.0169	4.1200e-003	1.6300e-003	5.7500e-003	0.0000	50.3361	50.3361	4.0000e-003	0.0000	50.4362
Maximum	0.6917	1.1726	1.2777	2.8600e-003	0.0759	8.9400e-003	0.0848	0.0206	8.8100e-003	0.0294	0.0000	255.5615	255.5615	0.0317	0.0000	256.0606

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	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	6.88	82.01	33.30	6.63	82.09	56.62	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	7-1-2020	9-30-2020	0.7272	0.7272
2	10-1-2020	12-31-2020	0.1893	0.1893
3	1-1-2021	3-31-2021	0.1359	0.1359
4	4-1-2021	6-30-2021	0.3586	0.3586
5	7-1-2021	9-30-2021	0.6769	0.6769
6	10-1-2021	12-31-2021	0.6795	0.6795
7	1-1-2022	3-31-2022	0.3787	0.3787
		Highest	0.7272	0.7272

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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	0.7509	0.0135	1.1146	6.0000e-005		6.2200e-003	6.2200e-003		6.2200e-003	6.2200e-003	0.0000	2.5689	2.5689	1.7700e-003	1.0000e-005	2.6171
Energy	7.0600e-003	0.0603	0.0257	3.9000e-004		4.8800e-003	4.8800e-003		4.8800e-003	4.8800e-003	0.0000	302.8727	302.8727	0.0119	3.4600e-003	304.2010
Mobile	0.1608	0.4260	1.6333	5.3800e-003	0.5145	4.4500e-003	0.5189	0.1383	4.1400e-003	0.1424	0.0000	493.0410	493.0410	0.0183	0.0000	493.4978
Waste						0.0000	0.0000		0.0000	0.0000	14.0064	0.0000	14.0064	0.8278	0.0000	34.7002
Water						0.0000	0.0000		0.0000	0.0000	3.1006	21.6574	24.7580	0.3194	7.7200e-003	35.0451
Total	0.9188	0.4998	2.7735	5.8300e-003	0.5145	0.0156	0.5300	0.1383	0.0152	0.1535	17.1069	820.1400	837.2469	1.1791	0.0112	870.0611

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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	0.7509	0.0135	1.1146	6.0000e-005		6.2200e-003	6.2200e-003		6.2200e-003	6.2200e-003	0.0000	2.5689	2.5689	1.7700e-003	1.0000e-005	2.6171	
Energy	7.0600e-003	0.0603	0.0257	3.9000e-004		4.8800e-003	4.8800e-003		4.8800e-003	4.8800e-003	0.0000	298.2404	298.2404	0.0117	3.4200e-003	299.5504	
Mobile	0.1342	0.3150	1.0778	2.8200e-003	0.2559	2.6100e-003	0.2585	0.0688	2.4200e-003	0.0712	0.0000	258.5372	258.5372	0.0108	0.0000	258.8063	
Waste						0.0000	0.0000		0.0000	0.0000	14.0064	0.0000	14.0064	0.8278	0.0000	34.7002	
Water						0.0000	0.0000		0.0000	0.0000	2.4804	18.1980	20.6784	0.2556	6.1900e-003	28.9115	
Total	0.8922	0.3888	2.2180	3.2700e-003	0.2559	0.0137	0.2696	0.0688	0.0135	0.0823	16.4868	577.5444	594.0312	1.1075	9.6200e-003	624.5854	

	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	2.90	22.21	20.03	43.91	50.26	11.83	49.13	50.26	11.29	46.38	3.62	29.58	29.05	6.07	14.03	28.21

3.0 Construction Detail**Construction Phase**

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Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	7/1/2020	9/2/2020	5	46	
2	Site Preparation	Site Preparation	9/3/2020	9/10/2020	5	6	
3	Grading	Grading	9/11/2020	11/20/2020	5	51	
4	Building Construction	Building Construction	11/23/2020	12/21/2022	5	326	
5	Paving	Paving	2/22/2022	3/22/2022	5	21	
6	Architectural Coating	Architectural Coating	5/24/2021	2/21/2022	5	196	

Acres of Grading (Site Preparation Phase): 1.35

Acres of Grading (Grading Phase): 0

Acres of Paving: 0

Residential Indoor: 336,960; Residential Outdoor: 112,320; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area: 1,716 (Architectural Coating – sqft)

OffRoad Equipment

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Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition	Concrete/Industrial Saws	1	0.70	81	0.73
Demolition	Excavators	2	6.00	158	0.38
Demolition	Rubber Tired Dozers	1	1.80	247	0.40
Demolition	Tractors/Loaders/Backhoes	1	2.70	97	0.37
Site Preparation	Graders	1	3.60	187	0.41
Site Preparation	Rubber Tired Dozers	1	2.40	247	0.40
Site Preparation	Tractors/Loaders/Backhoes	2	2.40	97	0.37
Grading	Bore/Drill Rigs	1	1.20	221	0.50
Grading	Bore/Drill Rigs	1	0.60	221	0.50
Grading	Excavators	1	5.40	158	0.38
Grading	Generator Sets	1	4.00	84	0.74
Grading	Tractors/Loaders/Backhoes	2	3.60	97	0.37
Building Construction	Forklifts	1	4.00	89	0.20
Building Construction	Welders	3	1.70	46	0.45
Architectural Coating	Aerial Lifts	2	0.40	63	0.31
Architectural Coating	Air Compressors	8	4.10	78	0.48
Paving	Pavers	1	2.00	130	0.42
Paving	Rollers	1	0.80	80	0.38
Paving	Tractors/Loaders/Backhoes	1	1.60	97	0.37
Paving	Cement and Mortar Mixers	1	0.00	9	0.56
Building Construction	Cranes	1	0.00	231	0.29
Building Construction	Generator Sets	1	0.00	84	0.74
Grading	Graders	1	0.00	187	0.41
Paving	Paving Equipment	1	0.00	132	0.36
Grading	Rubber Tired Dozers	1	0.00	247	0.40
Building Construction	Tractors/Loaders/Backhoes	1	0.00	97	0.37

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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
Demolition	5	35.00	0.00	112.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Site Preparation	4	35.00	0.00	2,938.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Grading	8	35.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	7	35.00	21.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	10	35.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Paving	5	35.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Use DPF for Construction Equipment

Water Exposed Area

3.2 Demolition - 2020**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					0.0121	0.0000	0.0121	1.8300e-003	0.0000	1.8300e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	
Off-Road	0.0165	0.1649	0.1592	2.6000e-004		8.3400e-003	8.3400e-003		7.7000e-003	7.7000e-003	0.0000	22.7368	22.7368	7.0700e-003	0.0000	22.9136		
Total	0.0165	0.1649	0.1592	2.6000e-004	0.0121	8.3400e-003	0.0204	1.8300e-003	7.7000e-003	9.5300e-003	0.0000	22.7368	22.7368	7.0700e-003	0.0000	22.9136		

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3.2 Demolition - 2020**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	5.0000e-004	0.0181	7.5300e-003	5.0000e-005	9.4000e-004	6.0000e-005	9.9000e-004	2.6000e-004	5.0000e-005	3.1000e-004	0.0000	4.6778	4.6778	5.8000e-004	0.0000	4.6924	
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	2.2000e-003	1.4900e-003	0.0157	6.0000e-005	6.3400e-003	4.0000e-005	6.3800e-003	1.6900e-003	4.0000e-005	1.7200e-003	0.0000	5.2770	5.2770	1.0000e-004	0.0000	5.2796	
Total	2.7000e-003	0.0196	0.0232	1.1000e-004	7.2800e-003	1.0000e-004	7.3700e-003	1.9500e-003	9.0000e-005	2.0300e-003	0.0000	9.9548	9.9548	6.8000e-004	0.0000	9.9719	

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					5.4300e-003	0.0000	5.4300e-003	8.2000e-004	0.0000	8.2000e-004	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0165	0.1649	0.1592	2.6000e-004		1.2500e-003	1.2500e-003		1.1600e-003	1.1600e-003	0.0000	22.7368	22.7368	7.0700e-003	0.0000	22.9136
Total	0.0165	0.1649	0.1592	2.6000e-004	5.4300e-003	1.2500e-003	6.6800e-003	8.2000e-004	1.1600e-003	1.9800e-003	0.0000	22.7368	22.7368	7.0700e-003	0.0000	22.9136

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3.2 Demolition - 2020**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	5.0000e-004	0.0181	7.5300e-003	5.0000e-005	9.4000e-004	6.0000e-005	9.9000e-004	2.6000e-004	5.0000e-005	3.1000e-004	0.0000	4.6778	4.6778	5.8000e-004	0.0000	4.6924	
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	2.2000e-003	1.4900e-003	0.0157	6.0000e-005	6.3400e-003	4.0000e-005	6.3800e-003	1.6900e-003	4.0000e-005	1.7200e-003	0.0000	5.2770	5.2770	1.0000e-004	0.0000	5.2796	
Total	2.7000e-003	0.0196	0.0232	1.1000e-004	7.2800e-003	1.0000e-004	7.3700e-003	1.9500e-003	9.0000e-005	2.0300e-003	0.0000	9.9548	9.9548	6.8000e-004	0.0000	9.9719	

3.3 Site Preparation - 2020**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					7.4600e-003	0.0000	7.4600e-003	3.2600e-003	0.0000	3.2600e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	1.9900e-003	0.0225	0.0103	2.0000e-005		1.0100e-003	1.0100e-003		9.3000e-004	9.3000e-004	0.0000	1.9538	1.9538	6.3000e-004	0.0000	1.9696
Total	1.9900e-003	0.0225	0.0103	2.0000e-005	7.4600e-003	1.0100e-003	8.4700e-003	3.2600e-003	9.3000e-004	4.1900e-003	0.0000	1.9538	1.9538	6.3000e-004	0.0000	1.9696

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3.3 Site Preparation - 2020**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	0.0130	0.4741	0.1976	1.1900e-003	0.0246	1.4700e-003	0.0261	6.7500e-003	1.4100e-003	8.1600e-003	0.0000	122.7076	122.7076	0.0153	0.0000	123.0905	
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	2.9000e-004	1.9000e-004	2.0400e-003	1.0000e-005	8.3000e-004	1.0000e-005	8.3000e-004	2.2000e-004	0.0000	2.2000e-004	0.0000	0.6883	0.6883	1.0000e-005	0.0000	0.6886	
Total	0.0133	0.4743	0.1997	1.2000e-003	0.0254	1.4800e-003	0.0269	6.9700e-003	1.4100e-003	8.3800e-003	0.0000	123.3960	123.3960	0.0153	0.0000	123.7792	

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					3.3600e-003	0.0000	3.3600e-003	1.4700e-003	0.0000	1.4700e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	
Off-Road	1.9900e-003	0.0225	0.0103	2.0000e-005		1.5000e-004	1.5000e-004		1.4000e-004	1.4000e-004	0.0000	1.9538	1.9538	6.3000e-004	0.0000	1.9696	
Total	1.9900e-003	0.0225	0.0103	2.0000e-005	3.3600e-003	1.5000e-004	3.5100e-003	1.4700e-003	1.4000e-004	1.6100e-003	0.0000	1.9538	1.9538	6.3000e-004	0.0000	1.9696	

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3.3 Site Preparation - 2020**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	0.0130	0.4741	0.1976	1.1900e-003	0.0246	1.4700e-003	0.0261	6.7500e-003	1.4100e-003	8.1600e-003	0.0000	122.7076	122.7076	0.0153	0.0000	123.0905	
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	2.9000e-004	1.9000e-004	2.0400e-003	1.0000e-005	8.3000e-004	1.0000e-005	8.3000e-004	2.2000e-004	0.0000	2.2000e-004	0.0000	0.6883	0.6883	1.0000e-005	0.0000	0.6886	
Total	0.0133	0.4743	0.1997	1.2000e-003	0.0254	1.4800e-003	0.0269	6.9700e-003	1.4100e-003	8.3800e-003	0.0000	123.3960	123.3960	0.0153	0.0000	123.7792	

3.4 Grading - 2020**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	0.0157	0.1544	0.1678	3.0000e-004		8.1500e-003	8.1500e-003		7.7000e-003	7.7000e-003	0.0000	26.0132	26.0132	6.4900e-003	0.0000	26.1754
Total	0.0157	0.1544	0.1678	3.0000e-004	0.0000	8.1500e-003	8.1500e-003	0.0000	7.7000e-003	7.7000e-003	0.0000	26.0132	26.0132	6.4900e-003	0.0000	26.1754

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3.4 Grading - 2020**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	2.4300e-003	1.6500e-003	0.0174	6.0000e-005	7.0300e-003	4.0000e-005	7.0700e-003	1.8700e-003	4.0000e-005	1.9100e-003	0.0000	5.8506	5.8506	1.1000e-004	0.0000	5.8535	
Total	2.4300e-003	1.6500e-003	0.0174	6.0000e-005	7.0300e-003	4.0000e-005	7.0700e-003	1.8700e-003	4.0000e-005	1.9100e-003	0.0000	5.8506	5.8506	1.1000e-004	0.0000	5.8535	

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	0.0157	0.1544	0.1678	3.0000e-004		1.2200e-003	1.2200e-003		1.1500e-003	1.1500e-003	0.0000	26.0132	26.0132	6.4900e-003	0.0000	26.1754
Total	0.0157	0.1544	0.1678	3.0000e-004	0.0000	1.2200e-003	1.2200e-003	0.0000	1.1500e-003	1.1500e-003	0.0000	26.0132	26.0132	6.4900e-003	0.0000	26.1754

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3.4 Grading - 2020**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	2.4300e-003	1.6500e-003	0.0174	6.0000e-005	7.0300e-003	4.0000e-005	7.0700e-003	1.8700e-003	4.0000e-005	1.9100e-003	0.0000	5.8506	5.8506	1.1000e-004	0.0000	5.8535	
Total	2.4300e-003	1.6500e-003	0.0174	6.0000e-005	7.0300e-003	4.0000e-005	7.0700e-003	1.8700e-003	4.0000e-005	1.9100e-003	0.0000	5.8506	5.8506	1.1000e-004	0.0000	5.8535	

3.5 Building Construction - 2020**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	4.2100e-003	0.0239	0.0249	3.0000e-005		1.5000e-003	1.5000e-003		1.4500e-003	1.4500e-003	0.0000	2.7135	2.7135	5.7000e-004	0.0000	2.7278
Total	4.2100e-003	0.0239	0.0249	3.0000e-005		1.5000e-003	1.5000e-003		1.4500e-003	1.4500e-003	0.0000	2.7135	2.7135	5.7000e-004	0.0000	2.7278

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3.5 Building Construction - 2020**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	1.1800e-003	0.0353	0.0141	8.0000e-005	1.9800e-003	1.8000e-004	2.1600e-003	5.7000e-004	1.7000e-004	7.4000e-004	0.0000	8.0691	8.0691	7.0000e-004	0.0000	8.0866	
Worker	1.3800e-003	9.4000e-004	9.8800e-003	4.0000e-005	4.0000e-003	3.0000e-005	4.0200e-003	1.0600e-003	2.0000e-005	1.0900e-003	0.0000	3.3268	3.3268	6.0000e-005	0.0000	3.3284	
Total	2.5600e-003	0.0363	0.0239	1.2000e-004	5.9800e-003	2.1000e-004	6.1800e-003	1.6300e-003	1.9000e-004	1.8300e-003	0.0000	11.3959	11.3959	7.6000e-004	0.0000	11.4150	

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	4.2100e-003	0.0239	0.0249	3.0000e-005		2.3000e-004	2.3000e-004		2.2000e-004	2.2000e-004	0.0000	2.7135	2.7135	5.7000e-004	0.0000	2.7278	
Total	4.2100e-003	0.0239	0.0249	3.0000e-005		2.3000e-004	2.3000e-004		2.2000e-004	2.2000e-004	0.0000	2.7135	2.7135	5.7000e-004	0.0000	2.7278	

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3.5 Building Construction - 2020**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	1.1800e-003	0.0353	0.0141	8.0000e-005	1.9800e-003	1.8000e-004	2.1600e-003	5.7000e-004	1.7000e-004	7.4000e-004	0.0000	8.0691	8.0691	7.0000e-004	0.0000	8.0866	
Worker	1.3800e-003	9.4000e-004	9.8800e-003	4.0000e-005	4.0000e-003	3.0000e-005	4.0200e-003	1.0600e-003	2.0000e-005	1.0900e-003	0.0000	3.3268	3.3268	6.0000e-005	0.0000	3.3284	
Total	2.5600e-003	0.0363	0.0239	1.2000e-004	5.9800e-003	2.1000e-004	6.1800e-003	1.6300e-003	1.9000e-004	1.8300e-003	0.0000	11.3959	11.3959	7.6000e-004	0.0000	11.4150	

3.5 Building Construction - 2021**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	0.0336	0.2025	0.2192	3.1000e-004		0.0116	0.0116		0.0112	0.0112	0.0000	24.4213	24.4213	4.8700e-003	0.0000	24.5431	
Total	0.0336	0.2025	0.2192	3.1000e-004		0.0116	0.0116		0.0112	0.0112	0.0000	24.4213	24.4213	4.8700e-003	0.0000	24.5431	

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3.5 Building Construction - 2021**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	8.7500e-003	0.2854	0.1225	7.2000e-004	0.0179	6.5000e-004	0.0185	5.1700e-003	6.3000e-004	5.7900e-003	0.0000	71.7198	71.7198	6.2000e-003	0.0000	71.8747	
Worker	0.0116	7.5700e-003	0.0821	3.2000e-004	0.0360	2.2000e-004	0.0362	9.5700e-003	2.0000e-004	9.7700e-003	0.0000	28.8762	28.8762	5.2000e-004	0.0000	28.8893	
Total	0.0204	0.2930	0.2046	1.0400e-003	0.0538	8.7000e-004	0.0547	0.0147	8.3000e-004	0.0156	0.0000	100.5960	100.5960	6.7200e-003	0.0000	100.7641	

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	0.0336	0.2025	0.2192	3.1000e-004		1.7400e-003	1.7400e-003		1.6800e-003	1.6800e-003	0.0000	24.4213	24.4213	4.8700e-003	0.0000	24.5431	
Total	0.0336	0.2025	0.2192	3.1000e-004		1.7400e-003	1.7400e-003		1.6800e-003	1.6800e-003	0.0000	24.4213	24.4213	4.8700e-003	0.0000	24.5431	

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3.5 Building Construction - 2021**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	8.7500e-003	0.2854	0.1225	7.2000e-004	0.0179	6.5000e-004	0.0185	5.1700e-003	6.3000e-004	5.7900e-003	0.0000	71.7198	71.7198	6.2000e-003	0.0000	71.8747	
Worker	0.0116	7.5700e-003	0.0821	3.2000e-004	0.0360	2.2000e-004	0.0362	9.5700e-003	2.0000e-004	9.7700e-003	0.0000	28.8762	28.8762	5.2000e-004	0.0000	28.8893	
Total	0.0204	0.2930	0.2046	1.0400e-003	0.0538	8.7000e-004	0.0547	0.0147	8.3000e-004	0.0156	0.0000	100.5960	100.5960	6.7200e-003	0.0000	100.7641	

3.5 Building Construction - 2022**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	4.2000e-003	0.0263	0.0298	4.0000e-005		1.3600e-003	1.3600e-003		1.3100e-003	1.3100e-003	0.0000	3.3685	3.3685	6.5000e-004	0.0000	3.3847	
Total	4.2000e-003	0.0263	0.0298	4.0000e-005		1.3600e-003	1.3600e-003		1.3100e-003	1.3100e-003	0.0000	3.3685	3.3685	6.5000e-004	0.0000	3.3847	

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3.5 Building Construction - 2022**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	1.1300e-003	0.0370	0.0169	1.0000e-004	2.4600e-003	8.0000e-005	2.5400e-003	7.1000e-004	8.0000e-005	7.9000e-004	0.0000	9.7652	9.7652	8.5000e-004	0.0000	9.7864	
Worker	1.5200e-003	9.4000e-004	0.0105	4.0000e-005	4.9600e-003	3.0000e-005	4.9900e-003	1.3200e-003	3.0000e-005	1.3500e-003	0.0000	3.8372	3.8372	7.0000e-005	0.0000	3.8389	
Total	2.6500e-003	0.0380	0.0274	1.4000e-004	7.4200e-003	1.1000e-004	7.5300e-003	2.0300e-003	1.1000e-004	2.1400e-003	0.0000	13.6024	13.6024	9.2000e-004	0.0000	13.6253	

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	4.2000e-003	0.0263	0.0298	4.0000e-005		2.0000e-004	2.0000e-004		2.0000e-004	2.0000e-004	0.0000	3.3685	3.3685	6.5000e-004	0.0000	3.3847
Total	4.2000e-003	0.0263	0.0298	4.0000e-005		2.0000e-004	2.0000e-004		2.0000e-004	2.0000e-004	0.0000	3.3685	3.3685	6.5000e-004	0.0000	3.3847

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3.5 Building Construction - 2022**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	1.1300e-003	0.0370	0.0169	1.0000e-004	2.4600e-003	8.0000e-005	2.5400e-003	7.1000e-004	8.0000e-005	7.9000e-004	0.0000	9.7652	9.7652	8.5000e-004	0.0000	9.7864	
Worker	1.5200e-003	9.4000e-004	0.0105	4.0000e-005	4.9600e-003	3.0000e-005	4.9900e-003	1.3200e-003	3.0000e-005	1.3500e-003	0.0000	3.8372	3.8372	7.0000e-005	0.0000	3.8389	
Total	2.6500e-003	0.0380	0.0274	1.4000e-004	7.4200e-003	1.1000e-004	7.5300e-003	2.0300e-003	1.1000e-004	2.1400e-003	0.0000	13.6024	13.6024	9.2000e-004	0.0000	13.6253	

3.6 Paving - 2022**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	1.0600e-003	0.0108	0.0142	2.0000e-005		5.6000e-004	5.6000e-004		5.1000e-004	5.1000e-004	0.0000	1.9001	1.9001	6.1000e-004	0.0000	1.9154
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	1.0600e-003	0.0108	0.0142	2.0000e-005		5.6000e-004	5.6000e-004		5.1000e-004	5.1000e-004	0.0000	1.9001	1.9001	6.1000e-004	0.0000	1.9154

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3.6 Paving - 2022**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	8.8000e-004	5.5000e-004	6.1400e-003	2.0000e-005	2.8900e-003	2.0000e-005	2.9100e-003	7.7000e-004	2.0000e-005	7.9000e-004	0.0000	2.2384	2.2384	4.0000e-005	0.0000	2.2393	
Total	8.8000e-004	5.5000e-004	6.1400e-003	2.0000e-005	2.8900e-003	2.0000e-005	2.9100e-003	7.7000e-004	2.0000e-005	7.9000e-004	0.0000	2.2384	2.2384	4.0000e-005	0.0000	2.2393	

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	1.0600e-003	0.0108	0.0142	2.0000e-005		8.0000e-005	8.0000e-005		8.0000e-005	8.0000e-005	0.0000	1.9001	1.9001	6.1000e-004	0.0000	1.9154
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	1.0600e-003	0.0108	0.0142	2.0000e-005		8.0000e-005	8.0000e-005		8.0000e-005	8.0000e-005	0.0000	1.9001	1.9001	6.1000e-004	0.0000	1.9154

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3.6 Paving - 2022**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	8.8000e-004	5.5000e-004	6.1400e-003	2.0000e-005	2.8900e-003	2.0000e-005	2.9100e-003	7.7000e-004	2.0000e-005	7.9000e-004	0.0000	2.2384	2.2384	4.0000e-005	0.0000	2.2393	
Total	8.8000e-004	5.5000e-004	6.1400e-003	2.0000e-005	2.8900e-003	2.0000e-005	2.9100e-003	7.7000e-004	2.0000e-005	7.9000e-004	0.0000	2.2384	2.2384	4.0000e-005	0.0000	2.2393	

3.7 Architectural Coating - 2021**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	0.5345						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0960	0.6725	0.8036	1.3100e-003		0.0412	0.0412		0.0412	0.0412	0.0000	112.8425	112.8425	8.0400e-003	0.0000	113.0436
Total	0.6305	0.6725	0.8036	1.3100e-003		0.0412	0.0412		0.0412	0.0412	0.0000	112.8425	112.8425	8.0400e-003	0.0000	113.0436

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3.7 Architectural Coating - 2021**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	7.1400e-003	4.6400e-003	0.0503	2.0000e-004	0.0220	1.3000e-004	0.0222	5.8700e-003	1.2000e-004	5.9900e-003	0.0000	17.7019	17.7019	3.2000e-004	0.0000	17.7099	
Total	7.1400e-003	4.6400e-003	0.0503	2.0000e-004	0.0220	1.3000e-004	0.0222	5.8700e-003	1.2000e-004	5.9900e-003	0.0000	17.7019	17.7019	3.2000e-004	0.0000	17.7099	

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	0.5345						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	
Off-Road	0.0960	0.6725	0.8036	1.3100e-003		6.1900e-003	6.1900e-003		6.1900e-003	6.1900e-003	0.0000	112.8424	112.8424	8.0400e-003	0.0000	113.0435	
Total	0.6305	0.6725	0.8036	1.3100e-003		6.1900e-003	6.1900e-003		6.1900e-003	6.1900e-003	0.0000	112.8424	112.8424	8.0400e-003	0.0000	113.0435	

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3.7 Architectural Coating - 2021**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	7.1400e-003	4.6400e-003	0.0503	2.0000e-004	0.0220	1.3000e-004	0.0222	5.8700e-003	1.2000e-004	5.9900e-003	0.0000	17.7019	17.7019	3.2000e-004	0.0000	17.7099	
Total	7.1400e-003	4.6400e-003	0.0503	2.0000e-004	0.0220	1.3000e-004	0.0222	5.8700e-003	1.2000e-004	5.9900e-003	0.0000	17.7019	17.7019	3.2000e-004	0.0000	17.7099	

3.7 Architectural Coating - 2022**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	0.1203						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	
Off-Road	0.0202	0.1396	0.1804	3.0000e-004		8.0600e-003	8.0600e-003		8.0600e-003	8.0600e-003	0.0000	25.3896	25.3896	1.7200e-003	0.0000	25.4326	
Total	0.1405	0.1396	0.1804	3.0000e-004		8.0600e-003	8.0600e-003		8.0600e-003	8.0600e-003	0.0000	25.3896	25.3896	1.7200e-003	0.0000	25.4326	

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3.7 Architectural Coating - 2022**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	1.5200e-003	9.4000e-004	0.0105	4.0000e-005	4.9600e-003	3.0000e-005	4.9900e-003	1.3200e-003	3.0000e-005	1.3500e-003	0.0000	3.8372	3.8372	7.0000e-005	0.0000	3.8389	
Total	1.5200e-003	9.4000e-004	0.0105	4.0000e-005	4.9600e-003	3.0000e-005	4.9900e-003	1.3200e-003	3.0000e-005	1.3500e-003	0.0000	3.8372	3.8372	7.0000e-005	0.0000	3.8389	

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	0.1203						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	
Off-Road	0.0202	0.1396	0.1804	3.0000e-004		1.2100e-003	1.2100e-003		1.2100e-003	1.2100e-003	0.0000	25.3895	25.3895	1.7200e-003	0.0000	25.4326	
Total	0.1405	0.1396	0.1804	3.0000e-004		1.2100e-003	1.2100e-003		1.2100e-003	1.2100e-003	0.0000	25.3895	25.3895	1.7200e-003	0.0000	25.4326	

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3.7 Architectural Coating - 2022**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	1.5200e-003	9.4000e-004	0.0105	4.0000e-005	4.9600e-003	3.0000e-005	4.9900e-003	1.3200e-003	3.0000e-005	1.3500e-003	0.0000	3.8372	3.8372	7.0000e-005	0.0000	3.8389	
Total	1.5200e-003	9.4000e-004	0.0105	4.0000e-005	4.9600e-003	3.0000e-005	4.9900e-003	1.3200e-003	3.0000e-005	1.3500e-003	0.0000	3.8372	3.8372	7.0000e-005	0.0000	3.8389	

4.0 Operational Detail - Mobile**4.1 Mitigation Measures Mobile**

Increase Density

Improve Destination Accessibility

Increase Transit Accessibility

Integrate Below Market Rate Housing

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	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	0.1342	0.3150	1.0778	2.8200e-003	0.2559	2.6100e-003	0.2585	0.0688	2.4200e-003	0.0712	0.0000	258.5372	258.5372	0.0108	0.0000	258.8063	
Unmitigated	0.1608	0.4260	1.6333	5.3800e-003	0.5145	4.4500e-003	0.5189	0.1383	4.1400e-003	0.1424	0.0000	493.0410	493.0410	0.0183	0.0000	493.4978	

4.2 Trip Summary Information

Land Use	Average Daily Trip Rate			Unmitigated		Mitigated	
	Weekday	Saturday	Sunday	Annual VMT		Annual VMT	
Apartments Mid Rise	816.00	816.00	816.00	1,387,473		690,152	
Enclosed Parking with Elevator	0.00	0.00	0.00				
Total	816.00	816.00	816.00	1,387,473		690,152	

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
Apartments Mid Rise	5.26	5.26	5.26	31.00	15.00	54.00	86	11	3
Enclosed Parking with Elevator	9.50	7.30	7.30	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
Apartments Mid Rise	0.470625	0.050338	0.265549	0.140745	0.017339	0.006996	0.024054	0.006595	0.004215	0.003104	0.009159	0.000488	0.000793
Enclosed Parking with Elevator	0.470625	0.050338	0.265549	0.140745	0.017339	0.006996	0.024054	0.006595	0.004215	0.003104	0.009159	0.000488	0.000793

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

Install Energy Efficient Appliances

	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	228.3570	228.3570	0.0103	2.1400e-003	229.2518
Electricity Unmitigated							0.0000	0.0000		0.0000	0.0000	232.9894	232.9894	0.0105	2.1800e-003	233.9023
NaturalGas Mitigated	7.0600e-003	0.0603	0.0257	3.9000e-004		4.8800e-003	4.8800e-003	4.8800e-003	4.8800e-003	0.0000	69.8834	69.8834	1.3400e-003	1.2800e-003	70.2986	
NaturalGas Unmitigated	7.0600e-003	0.0603	0.0257	3.9000e-004		4.8800e-003	4.8800e-003	4.8800e-003	4.8800e-003	0.0000	69.8834	69.8834	1.3400e-003	1.2800e-003	70.2986	

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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					
Apartments Mid Rise	1.30956e+006	7.0600e-003	0.0603	0.0257	3.9000e-004		4.8800e-003	4.8800e-003		4.8800e-003	4.8800e-003	0.0000	69.8834	69.8834	1.3400e-003	1.2800e-003	70.2986	
Enclosed Parking with Elevator	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		7.0600e-003	0.0603	0.0257	3.9000e-004		4.8800e-003	4.8800e-003		4.8800e-003	4.8800e-003	0.0000	69.8834	69.8834	1.3400e-003	1.2800e-003	70.2986	

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					
Apartments Mid Rise	1.30956e+006	7.0600e-003	0.0603	0.0257	3.9000e-004		4.8800e-003	4.8800e-003		4.8800e-003	4.8800e-003	0.0000	69.8834	69.8834	1.3400e-003	1.2800e-003	70.2986	
Enclosed Parking with Elevator	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		7.0600e-003	0.0603	0.0257	3.9000e-004		4.8800e-003	4.8800e-003		4.8800e-003	4.8800e-003	0.0000	69.8834	69.8834	1.3400e-003	1.2800e-003	70.2986	

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5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Apartments Mid Rise	633299	184.2338	8.3300e-003	1.7200e-003	184.9557
Enclosed Parking with Elevator	167596	48.7556	2.2000e-003	4.6000e-004	48.9466
Total		232.9894	0.0105	2.1800e-003	233.9023

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Apartments Mid Rise	617375	179.6014	8.1200e-003	1.6800e-003	180.3051
Enclosed Parking with Elevator	167596	48.7556	2.2000e-003	4.6000e-004	48.9466
Total		228.3570	0.0103	2.1400e-003	229.2518

6.0 Area Detail

6.1 Mitigation Measures Area

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Use Low VOC Paint - Residential Interior

Use Low VOC Paint - Residential Exterior

Use Low VOC Paint - Non-Residential Interior

Use Low VOC Paint - Non-Residential Exterior

Use only Natural Gas Hearths

	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	0.7509	0.0135	1.1146	6.0000e-005		6.2200e-003	6.2200e-003		6.2200e-003	6.2200e-003	0.0000	2.5689	2.5689	1.7700e-003	1.0000e-005	2.6171	
Unmitigated	0.7509	0.0135	1.1146	6.0000e-005		6.2200e-003	6.2200e-003		6.2200e-003	6.2200e-003	0.0000	2.5689	2.5689	1.7700e-003	1.0000e-005	2.6171	

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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	0.0655					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.6517					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth	8.0000e-005	6.5000e-004	2.8000e-004	0.0000		5.0000e-005	5.0000e-005		5.0000e-005	5.0000e-005	0.0000	0.7490	0.7490	1.0000e-005	1.0000e-005	0.7535
Landscaping	0.0336	0.0128	1.1143	6.0000e-005		6.1700e-003	6.1700e-003		6.1700e-003	6.1700e-003	0.0000	1.8198	1.8198	1.7500e-003	0.0000	1.8636
Total	0.7509	0.0135	1.1146	6.0000e-005		6.2200e-003	6.2200e-003		6.2200e-003	6.2200e-003	0.0000	2.5689	2.5689	1.7600e-003	1.0000e-005	2.6171

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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	0.0655					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.6517					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth	8.0000e-005	6.5000e-004	2.8000e-004	0.0000		5.0000e-005	5.0000e-005		5.0000e-005	5.0000e-005	0.0000	0.7490	0.7490	1.0000e-005	1.0000e-005	0.7535
Landscaping	0.0336	0.0128	1.1143	6.0000e-005		6.1700e-003	6.1700e-003		6.1700e-003	6.1700e-003	0.0000	1.8198	1.8198	1.7500e-003	0.0000	1.8636
Total	0.7509	0.0135	1.1146	6.0000e-005		6.2200e-003	6.2200e-003		6.2200e-003	6.2200e-003	0.0000	2.5689	2.5689	1.7600e-003	1.0000e-005	2.6171

7.0 Water Detail**7.1 Mitigation Measures Water**

Install Low Flow Bathroom Faucet

Install Low Flow Kitchen Faucet

Install Low Flow Toilet

Install Low Flow Shower

Use Water Efficient Irrigation System

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	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	20.6784	0.2556	6.1900e-003	28.9115
Unmitigated	24.7580	0.3194	7.7200e-003	35.0451

7.2 Water by Land Use**Unmitigated**

	Indoor/Out door Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Apartments Mid Rise	9.7731 / 6.1613	24.7580	0.3194	7.7200e-003	35.0451
Enclosed Parking with Elevator	0 / 0	0.0000	0.0000	0.0000	0.0000

		Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Apartments Mid Rise	9.7731 / 6.1613	24.7580	0.3194	7.7200e-003	35.0451
Enclosed Parking with Elevator	0 / 0	0.0000	0.0000	0.0000	0.0000

Total		24.7580	0.3194	7.7200e-003	35.0451
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7.2 Water by Land Use

Mitigated

	Indoor/Out door Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Apartments Mid Rise	7.81848 / 5.78547	20.6784	0.2556	6.1900e- 003	28.9115
Enclosed Parking with Elevator	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		20.6784	0.2556	6.1900e- 003	28.9115

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	14.0064	0.8278	0.0000	34.7002
Unmitigated	14.0064	0.8278	0.0000	34.7002

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8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Apartments Mid Rise	69	14.0064	0.8278	0.0000	34.7002
Enclosed Parking with Elevator	0	0.0000	0.0000	0.0000	0.0000
Total		14.0064	0.8278	0.0000	34.7002

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Apartments Mid Rise	69	14.0064	0.8278	0.0000	34.7002
Enclosed Parking with Elevator	0	0.0000	0.0000	0.0000	0.0000
Total		14.0064	0.8278	0.0000	34.7002

9.0 Operational Offroad

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
