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CONSULTING ENGINEERS

M E M O R A N D U M

TO: Adam Ross
City of Santa Rosa, Planning & Economic Development

FROM: Justin Witt

SUBJECT: DR20-014 3300 Industrial Blvd.
Air Quality Analysis
B&R File No. 5466.01

DATE: June 29, 2020

As part of the project's design review process, the City of Santa Rosa (City) has requested an air quality analysis to support its finding that the project is categorically exempt from the California Environmental Quality Act (CEQA) under a Class 32 In-fill Development Project Categorical Exemption. This memo provides a qualitative assessment based on the Bay Area Air Quality Management District's (BAAQMD) *2017 California Environmental Quality Act Air Quality Guidelines*[1] (Air Quality Guidelines). As explained below, a quantitative analysis in not necessary because the project falls below BAAQMD screening levels and would therefore have a less than significant impact.

PROJECT DESCRIPTION

The project applicant owns the first two parcels on Industrial Drive directly north of the Industrial Drive/Center Drive intersection in Santa Rosa. This proposal is to provide the infrastructure to support both parcels and to construct a new office / warehouse structure on the southernmost parcel, 3300 Industrial Drive. This parcel has an area of 28,215 square feet (SF) with dimensions of approximately 135 feet by 209 feet. The project application desires to construct a 9,282 SF single story office/warehouse building and relocate his electrical contracting business to this location. The site has a general plan designation of Light Industry with a zoning designation of IL (Light Industrial). Permitted land uses in the IL zones include Warehouse, wholesaling and distribution, and Office – Accessory. No structure is proposed at this time for the applicant's adjacent parcel. The infrastructure to support this future building, including the driveway access, will be constructed as part of this first phase of work.

The building is proposed to be constructed with tilt-up concrete panels with a lot coverage of 33 percent with 32 parking spaces provided. The existing site is currently unimproved and only vegetated with ruderal grass species. The proposed site plan shows 5,167 SF of new landscaping designed to capture runoff per city low impact development standard requirements. The applicant proposes several energy efficient building components, including: highly reflective single ply roof membrane, roof and wall insulation above minimum standards and thermally broken aluminum storefront with

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1 *California Environmental Quality Act Air Quality Guidelines*. Bay Area Air Quality Management District. May 2017.

dual glazed "Solarban 70" glass. Bicycle racks and electric vehicle infrastructure will be provided, consistent with the Nonresidential 2019 CALGreen+Tier 1 Checklist.

ENVIRONMENTAL SETTING

Bay Area Air Basin

The project is located in the San Francisco Bay Area Air Basin (BAAB) that consists of the counties surrounding the San Francisco Bay including portions of Sonoma and Solano Counties and all of Napa, Marin, San Francisco, San Mateo, Santa Clara, Alameda and Contra Costa Counties. The local air quality agency is the BAAQMD.

Regional Climate

Sonoma County's climate, like much of California, is Mediterranean in nature. Summers are warm and dry, and winters are cool and moist. Local climate variation is typical in Sonoma County. The Santa Rosa area typically has hot, dry summers and cool, wet winters. The average January high is 57 °F with an average low of 37 °F. July average high is 83 °F with an average low of 50 °F, influenced by proximity to the San Francisco Bay and coastal fog. Rainfall predominantly occurs during the months of November through March. The normal historic rainfall average is approximately 32 inches annually.

REGULATORY OVERVIEW

The project is located within the BAAQMD. The BAAQMD is designated by law to adopt and enforce regulations to achieve and maintain ambient air quality standards. The BAAQMD was the first regional agency created by the state in 1955 that regulates stationary sources of air pollution within the BAAB. The BAAQMD also regulates a variety of other programs such as Spare the Air, state Air Toxic Control Measures (ATCMs) and federal New Source Performance Standards (NSPSs) and open burning. The main purpose of the BAAQMD is to enforce local, state, and federal air quality laws, rules, and regulations in order to maintain the ambient air quality standards (AAQSs) and protect the public from air toxics through local, CARB ATCM, and federal EPA NESHAP-specific control regulations.

Because the BAAB is not an attainment area for all state and federal criteria pollutants, the BAAQMD is required to update its Clean Air Plan. The most recent update is the 2017 Clean Air Plan[2]. The BAAQMD provides the following summary of the Clean Air Plan:

> The 2017 Plan provides a regional strategy to protect public health and protect the climate. To protect public health, the plan describes how the Air District will continue our progress toward attaining all state and federal air quality standards and eliminating health risk disparities from exposure to air pollution among Bay Area communities. To protect the climate, the plan defines a vision for transitioning the region to a post-carbon economy needed to achieve ambitious greenhouse gas reduction targets for 2030 and 2050, and provides a regional climate protection strategy that will put the Bay Area on a pathway to achieve those GHG reduction targets.

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2 2017 *Clean Air Plan: Spare the Air, Cool the Climate*. BAAQMD. April 9, 2017.

The 2017 Plan includes a wide range of control measures designed to decrease emissions of the air pollutants that are most harmful to Bay Area residents, such as particulate matter, ozone, and toxic air contaminants; to reduce emissions of methane and other "super-GHGs" that are potent climate pollutants in the near-term; and to decrease emissions of carbon dioxide by reducing fossil fuel combustion.

Criteria Pollutants

Pollutants subject to federal ambient standards are referred to as "criteria" pollutants because the US EPA publishes criteria documents to justify the choice of standards. California and Federal standards for criteria pollutants for the year are shown below.

Pollutant	Averaging Time	State Standard	Federal Primary Standard
Ozone	1-Hour 8-Hour	0.09 ppm 0.07 ppm	-- 0.070 ppm
PM10	Annual 24-Hour	20 ug/m^3 50 ug/m^3	-- 150 ug/m^3
PM2.5	Annual 24-Hour	12 ug/m^3 ---	12 ug/m^3 35 ug/m^3
Carbon Monoxide	8-Hour 1-Hour	9.0 ppm 20.0 ppm	9.0 ppm 35.0 ppm
Nitrogen Dioxide	Annual 1-Hour	0.03 ppm 0.18 ppm	.053 ppm 100 ppb
Sulfur Dioxide	24-Hour 3-Hour 1-Hour	0.04 ppm -- 0.25 ppm	.14ppm -- 75 ppb
Lead	30-Day Avg. Calendar Quarter 3-Month Avg.	1.5 ug/m^3 -- --	-- 1.5 ug/m^3 0.15 ug/m^3

ppm = parts per million
ppb = parts per billion
ug/m^3 = micrograms per cubic meter

Monitoring Station Data

Ambient air quality measurements are routinely conducted at nearby air quality monitoring stations. The nearest monitoring station to the project is located in Santa Rosa. Both CARB and the US EPA use this type of monitoring data to designate areas according to attainment status for criteria air pollutants established by the agencies. The purpose of these designations is to identify those areas with air quality problems and thereby initiate planning efforts for improvements. The three basic designation categories are nonattainment, attainment, and unclassified. Unclassified is used in an area that cannot be classified on the basis of available information as meeting or not meeting the standards. In addition, the California designations include a subcategory of the nonattainment designation, called nonattainment-transitional. The nonattainment-transitional designation is given to nonattainment areas that are progressing and nearing attainment.

The BAAB is currently designated as nonattainment for several state and national ambient air quality standards shown below, most recently updated in 2018.

Standard	2018 State Status[3]	2018 Federal Status
Ozone 8-Hour	Nonattainment	Nonattainment
Ozone 1-Hour	N/A	N/A
PM2.5	Nonattainment	Nonattainment
PM10	Nonattainment	Unclassified
Carbon Monoxide	Attainment	Unclassified/Attainment
Nitrogen Dioxide	Attainment	Unclassified/Attainment
Sulfur Dioxide	Attainment	Unclassified/Attainment
Sulfates	Attainment	N/A
Lead	Attainment	Unclassified/Attainment
Hydrogen Sulfide	Unclassified	N/A
Visibility Reducing Particles	Unclassified	N/A

AIR QUALITY ANALYSIS

The BAAQMD provides useful guidance in assessing project impacts on attainment status and air quality in general. The BAAQMD's Air Quality Guidelines establish recommended thresholds of significance for criteria pollutants for project construction and operation for CEQA analysis. The Air Quality Guidelines also provide screening levels to determine if it is necessary to conduct an analysis of potential project-related air quality impacts. The BAAQMD Air Quality Guidelines indicate that the BAAQMD developed:

> screening criteria to provide lead agencies and project applicants with a conservative indication of whether the proposed project could result in potentially significant air quality impacts. If all of the screening criteria are met by a proposed project, then the lead agency or applicant would not need to perform a detailed air quality assessment of their project's air pollutant emissions. These screening levels are generally representative of new development on greenfield sites without any form of mitigation measures taken into consideration. In addition, the screening criteria in this section do not account for project design features, attributes, or local development requirements that could also result in lower emissions. For projects that are mixed-use, infill, and/or proximate to transit service and local services, emissions would be less than the greenfield type project that these screening criteria are based on.

Criteria Air Pollutants and Precursors

The screening levels established by the BAAQMD Air Quality Guidelines address criteria air pollutants and precursors:

> Operational-Related Impacts
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> If the project meets the screening criteria in Table 3-1, the project would not result in the generation of operational-related criteria air pollutants and/or precursors that exceed the Thresholds of Significance shown in Table 2-2. Operation of the proposed project would

3 http://www.arb.ca.gov/desig/adm/adm.htm

> therefore result in a less-than-significant cumulative impact to air quality from criteria air pollutant and precursor emissions...

Relevant excerpts from the BAAQMD's Air Quality Guidelines Table 3-1 are shown below.

Table 3-1 BAAQMD Operational-Related Criteria Air Pollutant and Precursor Screening Level Sizes			
Land Use Type	**Operational Criteria Pollutant Screening Size (square feet)**	**Operational GHG Screening Size (square feet)**	**Construction-Related Screening Size (square feet)**
Office Park	323,000	50,000	277,000
General Light Industry	541,000	121,000	259,000
Warehouse	864,000	64,000	259,000

The project proposes a 9,282 SF office/warehouse building. While the proposed project does not entirely fit within any of the land use types contained in Table 3-1, portions of the 9,282 SF would be utilized for office space, warehousing and activities that could be similar to those associated with light industry. Those three land use types and their screening criteria are represented above. The proposed project is under the screening thresholds. The BAAQMD indicates that:

> If the project meets the screening criteria in Table 3-1, the project would not result in the generation of operational-related criteria air pollutants and/or precursors that exceed the Thresholds of Significance.

Because the project is below screening criteria, the project will not result in a significant impact to criteria air pollutants and/or precursors and no quantification of impacts is required.

The BAAQMD Air Quality Guidelines also include screening criteria for construction-related impacts, as follows:

> Construction-Related Impacts
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> This preliminary screening provides the Lead Agency with a conservative indication of whether the proposed project would result in the generation of construction-related criteria air pollutants and/or precursors that exceed the Thresholds of Significance shown in Table 2-4.
>
> If all of the following Screening Criteria are met, the construction of the proposed project would result in a less-than-significant impact from criteria air pollutant and precursor emissions.
>
> 1. The project is below the applicable screening level size shown in Table 3-1; and
>
> 2. All Basic Construction Mitigation Measures would be included in the project design and implemented during construction; and
>
> 3. Construction-related activities would not include any of the following:
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> a. Demolition;
>
> b. Simultaneous occurrence of more than two construction phases (e.g., paving and building construction would occur simultaneously);
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> c. Simultaneous construction of more than one land use type (e.g., project would develop residential and commercial uses on the same site) (not applicable to high density infill development);

> d. Extensive site preparation (i.e., greater than default assumptions used by the Urban Land Use Emissions Model [URBEMIS] for grading, cut/fill, or earth movement); or
>
> e. Extensive material transport (e.g., greater than 10,000 cubic yards of soil import/export) requiring a considerable amount of haul truck activity.

The proposed project is within the parameters established by the screening criteria above. While dust control and reduction of idling is typically part of the construction documents, the City should ensure that the BAAQMD's Basic Construction Mitigation Measures (Table 8-2 of the BAAQMD's Air Quality Guidelines) are included in the project's conditions of approval to comply with the screening criteria above and support the finding that construction-related emissions are less than significant.

The BAAQMD's also includes screening criteria for greenhouse gas emissions, as described below:

> Greenhouse Gases
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> Projects below the applicable screening criteria shown in Table 3-1 would not exceed the 1,100 MT of CO2e/yr GHG threshold of significance for projects other than permitted stationary sources.
>
> If a project, including stationary sources, is located in a community with an adopted qualified GHG Reduction Strategy, the project may be considered less than significant if it is consistent with the GHG Reduction Strategy. A project must demonstrate its consistency by identifying and implementing all applicable feasible measures and policies from the GHG Reduction Strategy into the project.

As indicated earlier, the project is below the BAAQMD's Table 3-1 screening level threshold and would be considered to be less than significant for its potential greenhouse gas emissions by the BAAQMD.

The City adopted its Climate Action Plan (CAP) in 2012[4] to guide new development within the City consistent with its GHG reduction goals. As part of the CAP, the City developed Appendix E: CAP New Development Checklist (similar to a GHG Reduction Strategy). Appendix E is intended to be used during project review by City staff to ensure compliance with the CAP. The City passed the *Resolution of the Council of the City of Santa Rosa Endorsing the Declaration of a Climate Emergency and Immediate Emergency Mobilization to Restore a Safe Climate* (RES-2020-002) on January 14, 2020. To be consistent with the CAP and RES-2020-002, Appendix E was completed for this project and the project was found to be consistent with the CAP.

Because the project is below BAAQMD screening levels and is consistent with the CAP, as defined by Appendix E, the project will have a less than significant impact to greenhouse gas emissions.

Odors

The proposed project is not a type typically associated with the generation of odors. The BAAQMD Air Quality Guidelines contains screening levels for projects associated with odors, contained in Table 3-3 below.

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4 *Climate Action Plan. City of Santa Rosa.* June 5, 2012.

Table 3-3 BAAQMD Odor Screening Distances	
Land Use/Type of Operation	**Project Screening Distance**
Wastewater Treatment Plant	2 miles
Wastewater Pumping Facilities	1 mile
Sanitary Landfill	2 miles
Transfer Station	1 mile
Composting Facility	1 mile
Petroleum Refinery	2 miles
Asphalt Batch Plant	2 miles
Chemical Manufacturing	2 miles
Fiberglass Manufacturing	1 mile
Painting/Coating Operations	1 mile
Rendering Plant	2 miles
Coffee Roaster	1 mile
Food Processing Facility	1 mile
Confined Animal Facility/Feed Lot/Dairy	1 mile
Green Waste and Recycling Operations	1 mile
Metal Smelting Plants	2 miles

Based on the types of projects included in the screening criteria and the lack of odors associated with the type of project being reviewed, the project would have a less than significant potential to emit odors.

Sensitive Receptors

The California Air Resources Board defines sensitive receptors as: "children, elderly, asthmatics and others who are at a heightened risk of negative health outcomes due to exposure to air pollution. The locations where these sensitive receptors congregate are considered sensitive receptor locations. Sensitive Receptor locations may include hospitals, schools, and day care centers, and such other locations." Known sensitive receptors within 1,000 feet of the project location include the easterly portion of the Schaefer Elementary School playfield, the Catholic Diocese of Santa Rosa and the Living Word Family Church.

The proposed project does not include long-term uses that would result in hazardous emissions and would not impact sensitive receptors. However, construction-related emissions, primarily associated with site preparation, would include dust (PM2.5) and diesel particulates, both potentially harmful to sensitive receptors. Inclusion of the BAAQMD's Basic Construction Mitigation Measures (Table 8-2 of the BAAQMD's Air Quality Guidelines) in the project's conditions of approval to comply with the screening criteria will support the finding that construction-related emissions are less than significant.

RECOMMENDATIONS

The project falls under the screening criteria for both air quality impacts and greenhouse gas emissions and does not require quantification of emissions. Because the project falls under screening criteria and does not have any unusual circumstances or uses that would prevent utilizing screening criteria, it will have a less than significant impact to air quality and does not preclude the use of a Categorical Exemption.

The City should include the BAAQMD's Basic Construction Mitigation Measures in the project's conditions of approval to ensure compliance with construction-related dust and emissions reductions.