DISC 2022

CEQA Addendum

Prepared for

City of Davis

December 2021

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DiSC 2022
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December 2021

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A. INTRODUCTION AND BACKGROUND

On July 7, 2021, a revised application was submitted to the City of Davis Department of Community Development and Sustainability for a project previously known as the Davis Innovation and Sustainability Campus (DISC) project. The current project, to which the revised application applies, is known as the DiSC 2022 project (proposed project), and the City of Davis (City) is the lead agency. In general, the proposed project consists of a reduced version of the formerly approved DISC project, for which Davis City Council certified a Subsequent Environmental Impact Report (SEIR) on July 7, 2020. The following discussion provides the background necessary to understand the previous planning and environmental review efforts for the project site.

The currently proposed project is the latest version of a development proposal that has previously undergone multiple rounds of environmental analysis pursuant to CEQA. The first iteration of the proposed project, which was considered by the City in 2017, was known as the Mace Ranch Innovation Center (MRIC) project. The MRIC project, as evaluated in the MRIC EIR, included two distinct components: buildout of the 212-acre MRIC site, which encompassed the entire 102-acre project site planned for the currently proposed DiSC 2022 project, and future development of the 16.5-acre Mace Triangle site, the property in which the Ikeda's Market and Mace Park-and-Ride Lot are located. The MRIC site included a 25-acre City-owned parcel in the northwest portion of the proposed development area, and the project included approximately 1,510,000 square feet (sf) for research, office, and research and development (R&D) uses; approximately 884,000 sf for manufacturing and research uses; and up to 260,000 sf of supportive commercial uses, including a 160,000-sf hotel and conference center and 100,000 sf of supportive retail. The City included the 16.5-acre Mace Triangle property within the overall MRIC project boundaries to ensure that an agricultural and unincorporated island would not be created, and to allow the continuation and expansion of existing uses. As such, the MRIC EIR also evaluated development of up to 71,056 sf of general commercial uses, including up to 45,900 sf of research, office, and R&D, and up to 25,155 sf of retail on the Mace Triangle site. The MRIC EIR also included an equal-weight analysis of a Mixed-Use Alternative in Chapter 8. The Mixed-Use Alternative provided the same non-residential square footage and land uses as the proposed MRIC project, but included up to 850 workforce housing units intended to support the innovation center's employee-generated demand for housing within the City. Another way in which the Mixed-Use Alternative differed from the MRIC project was proposed building heights (max height of 85 feet for the Mixed-Use Alternative, whereas max height for MRIC Project was 75 feet). The circulation network for the alternative was generally the same as the MRIC Project with the exception of the additional northwesterly access along the "Mace Curve", at its intersection with County Road (CR) 104. At the applicant's request, the Davis City Council considered certification of the MRIC EIR without concurrent consideration to approve a project. On September 19, 2017, the City Council adopted Resolution 17-125, certifying the Final MRIC EIR (State Clearinghouse [SCH] #2014112012) for the MRIC. By certifying the Final MRIC EIR, the City determined that the EIR adequately evaluated the environmental impacts of the proposed MRIC project and the related Mixed-Use Alternative.

In 2019, the MRIC project applicant team re-engaged the City and expressed the desire to proceed with bringing a project before the City Council for consideration of approval. The applicant team chose to seek approval of the Mixed-Use Alternative previously evaluated in the certified

MRIC EIR; however, the newly proposed Mixed-Use Alternative was renamed the Aggie Research Campus (ARC) project and consisted of various modifications to the previously analyzed alternative. Notably, the ARC project largely eliminated the City-owned 25-acre parcel from the proposed development area; although, the parcel was still included in a proposed annexation into the City limits as part of the ARC project. The slightly reconfigured 194-acre ARC project consisted of 36.7 acres of research and development offices and retail uses, 65.2 acres of research and development manufacturing offices, and approximately 850 residential units on 27.4 acres. The non-residential square footage under the ARC project was identical to the MRIC project. Additionally, the project included 10.9 acres dedicated to a park and greenway, as well as 22.6 acres of agricultural buffer along the perimeter of the site, consisting of multi-use trails and greenways. Other minor differences consisted of revisions to the on-site infrastructure and roadways to improve circulation within the site. Because criteria set forth in Section 15162 of the CEQA Guidelines was determined by the City to be triggered, a SEIR was prepared for the ARC project. The SEIR was certified by the Davis City Council on July 7, 2020, concurrent with approval of the ARC project. The ARC project was renamed as the DISC project prior to the entitlement hearings on the project, without any substantive changes to the actual project. Finally, the project was placed on the November 2020 Yolo County ballot under Measure J/R/D; however, the project did not obtain a majority of support from the City's electorate.

Now in a third iteration, the currently proposed DiSC 2022 project would be implemented within a smaller portion of the area of impact previously analyzed in the SEIR. In general, the proposed project reduces the formerly approved DISC project by approximately 50 percent in both land area and development intensity -- the project footprint is reduced from 194 acres to 102 acres; development intensity is reduced from 2.4 million sf to 1.1 million sf of office, laboratory, and advanced manufacturing space; and the number of residential units is reduced from 850 to 460 units. A detailed description of DiSC 2022 is included in the next section.

B. SUBSEQUENT ENVIRONMENTAL REVIEW

This Addendum to the SEIR has been prepared in accordance with the California Environmental Quality Act of 1970, Public Resources Code (PRC) Section 21000 et seq., as amended (CEQA) and the Guidelines for Implementation of the California Environmental Quality Act, California Code of Regulations (CCR) Title 14, Section 15000 et seq. (CEQA Guidelines). Per Section 15164(a) of the CEQA Guidelines, the lead agency or responsible agency shall prepare an Addendum to a previously certified EIR if some changes or additions are necessary but none of the conditions described in Section 15162 calling for preparation of a SEIR or Negative Declaration have occurred. Per Section 15164(b), an Addendum to a certified EIR may be prepared if only minor technical changes or additions are necessary. The analysis within this document will demonstrate that the proposed modifications to the original DISC project will not trigger the criteria set forth in Section 15162, and thus, an Addendum is the appropriate CEQA document. See Section F below for further discussion on this topic.

Scope of the Addendum

This Addendum includes the following sections that will address various aspects about the proposed project:

- Project Background;
- Project Location and Existing Setting;
- Project Description;
- Required Public Approvals;
- CEQA Analysis Approach; and

- Environmental Impact Comparison to the 2020 SEIR, using the criteria established by the current CEQA Guidelines.

C. PROJECT LOCATION AND EXISTING SETTING

The proposed project includes an annexation area comprised of the 102-acre project site and 16.5-acre Mace Triangle property. The project site is located immediately to the east of Mace Boulevard and to the north of CR 32A, northeast of the City limits, in a currently unincorporated area of the County (see Figure 1 and Figure 2). The project site is identified by Assessor's Parcel Number (APN) 033-630-009. The Mace Triangle property, located to the southwest of the project site to the south of CR 32A, consists of three parcels. The Mace Triangle site is identified by APNs 033-630-006, -011, and -012.

The proposed annexation area is located near the "Mace Curve", approximately 2.5 miles east of Downtown Davis. Regional access to the project site is provided by the Interstate 80 (I-80)/Mace Boulevard interchange, located to the southwest of the annexation area. Mace Boulevard is located parallel to the project site's western boundary. The project site and the Mace Triangle property are bisected by CR 32A, which becomes Second Street, west of Mace Boulevard.

General Plan Designation and Zoning Designation

The existing Yolo County General Plan land use designation for the project site is Agriculture (AG), and the existing zoning designation is Agricultural Intensive (A-N). The existing County General Plan land use designations for the Mace Triangle property are Public and Quasi-Public (PQ) (APN 033-630-006) and AG (APNs 033-630-011 and -012), and the existing zoning designations for the property are A-N (APNs 033-630-006 and -012) and Agricultural Commercial (A-C) (APN 033-630-011).

Existing Setting

The project site is largely devoid of structures and has historically been used for agricultural operations. Tall, dense, and dry weed grasses occur along the perimeter of the annexation area and along a City drainage ditch, known as the Mace Drainage Channel (MDC), which runs in a west-to-east direction and bounds the project site to the north. A detention basin is located south of the MDC, at the eastern boundary of the project site. An irrigation well, pad-mounted electrical transformer, and associated pump equipment are situated in the southwestern corner of the project site. The Mace Triangle property is partially developed with an Ikeda's Market and an associated gravel parking lot, which are located in the northern parcel (APN 033-630-011). The southwestern parcel (APN 033-630-006) is developed with a City-owned water tank and the Mace Park-and-Ride lot. The third and easternmost parcel (APN 033-630-012) is undeveloped but disturbed as a result of ongoing agricultural operations. Vehicular access to the Mace Triangle property is provided by two driveways from CR 32A: a graveled driveway for Ikeda's Market and a paved driveway for the Park-and-Ride lot.

Surrounding Land Uses

Immediately to the north of the project site, on the opposite side of the MDC, is an 85-acre agricultural parcel that was previously planned for development as part of the DISC project, as well as the 25-acre City-owned parcel that was included within the proposed annexation area of the DISC project, but not proposed for development. Both parcels have historically been used for agricultural purposes and do not include structures.

Figure 1
Regional Vicinity Map

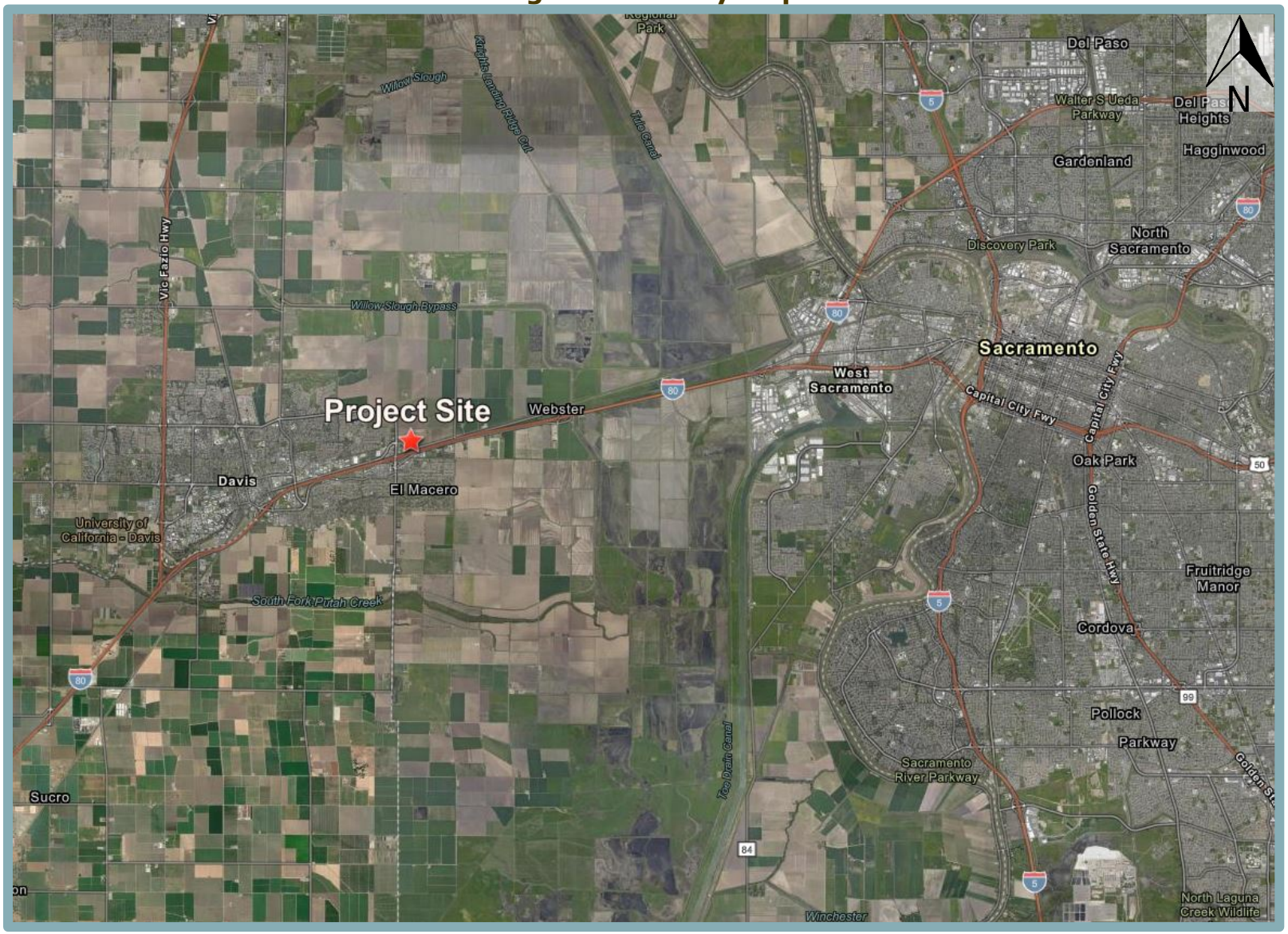


Figure 2
DiSC 2022 Project Location Map

Similarly, the parcels to the northeast and east of the project site are part of a 360-acre agricultural easement property, which is planted with almond trees. The City-owned Howatt Ranch property, totaling approximately 774 acres, is located immediately east of the 360-acre easement and stretches from CR 105 to the Yolo Causeway. The Mace Triangle property, Union Pacific Railroad (UPRR) tracks, and I-80 are located to the south of the project site. Immediately west of the project site, on the opposite side of Mace Boulevard, is the 5.99-acre Offices at Mace Ranch business park, the University Covenant Church, and a Chevron gas station, car wash, and convenience store. Directly west of the Mace Triangle property is a Residence Inn by Marriott hotel and existing commercial development within the Mace Ranch Planned Development (PD 4-88). The nearest residential area consists of the Alhambra at Mace Ranch and Seville at Mace Ranch apartments, located approximately 640 feet west of the project site, on the opposite side of Mace Boulevard. In addition, a single-family residential community is located approximately 1,064 feet west of the project site, adjacent to the Seville at Mace Ranch apartments. Frances Harper Junior High School is located approximately 0.31 miles to the northwest of the project site; and the Fred T. Korematsu Elementary School & Garden at Mace Ranch is located approximately 0.75 miles west of the project site.

D. DiSC 2022 PROJECT DESCRIPTION

The DiSC 2022 project is now the currently proposed project. Thus, the following section provides an equivalent level of detail as the description of the DISC project analyzed in the certified SEIR, which as discussed, was renamed as DISC prior to the entitlement hearings. As a general summary, the currently proposed project is similar to the previous iteration in that the current project would retain the mix of previously proposed land uses; however, such land uses would be implemented at a reduced scale. Table 1 summarizes the differences between the previous DISC project and the currently proposed DiSC 2022 project.

Table 1
Comparison of DISC Project to DiSC 2022 Project

Land Use	Previous DISC Project	DiSC 2022 Project
Office; R&D; Laboratory	1,510,000 sf	550,000 sf (63.6% reduction)
Advanced Manufacturing; Prototyping; Product Testing	884,000 sf	550,000 sf (37.8% reduction)
Residential (average density 30 dwelling units per acre)	850 units	460 units (45.9% reduction)
Ancillary Retail	100,000 sf	80,000 sf (20% reduction)
Hotel and Conference Center	160,000 sf (150 rooms)	160,000 sf (150 rooms)
Green Space	49.1 acres	23.2 acres* (52.7% reduction)
Transit Plaza	0.6 acres	0.6 acres
Total Acres	194 acres	102 acres (47.4% reduction)
Total Commercial Square Footage	2,654,000 sf	1,340,000 sf (49.6% reduction)

Note: *A two-acre off-site easement located north of the MDC, which will be utilized for agricultural buffer area is included in the total (the previous DISC project included a 6.8-acre easement).

As detailed in Table 1 above, DiSC 2022 would include an even split between the square footage allotted to office/R&D/laboratory use types and advanced manufacturing, with each land use category planned to include 550,000 sf of building space. The foregoing delineation marks a notable change from the prior DISC project, which was roughly two-thirds office/R&D/laboratory space and one-third advance manufacturing. This shift toward more manufacturing space reflects the generally anticipated assumption that demand for traditional office space will decrease as a result of COVID-19. While many employers are allowing for greater flexibility in work schedules

(i.e., a "hybrid model"), with more opportunities to work remotely, this flexibility is not expected in laboratory or advanced manufacturing sectors, which are, for the most part, engaged in activities that cannot be conducted from home or coworking spaces.

DiSC 2022 continues to include support retail uses, up to 80,000 sf (a reduction of 20,000 sf compared to the previous DISC project). The ancillary retail space within DiSC 2022 is intended to provide employees, residents, and visitors with basic conveniences such as: lodging/accommodations, health and fitness facilities, convenient coffee and dining opportunities all located within walking distance of the project's primary businesses and housing. DiSC 2022 also retains the approximately 160,000 sf of hotel/conference center use. The hotel/conference center would be located in the southwestern corner, near the intersection of Mace Boulevard and Second Street, as shown in Figure 3. Most of the supportive retail would be on the ground floor of the proposed research/office/R&D or multi-family residential buildings adjacent to the main park and the transit plaza, resulting in vertically integrated mixed-use buildings.

On the Mace Triangle site, the SEIR analysis assumed the same development assumptions identified for the Mace Triangle in the Project Description chapter and technical sections of the certified Final EIR for the MRIC project. The analysis in this Addendum is premised on the same development assumptions for the Mace Triangle site.

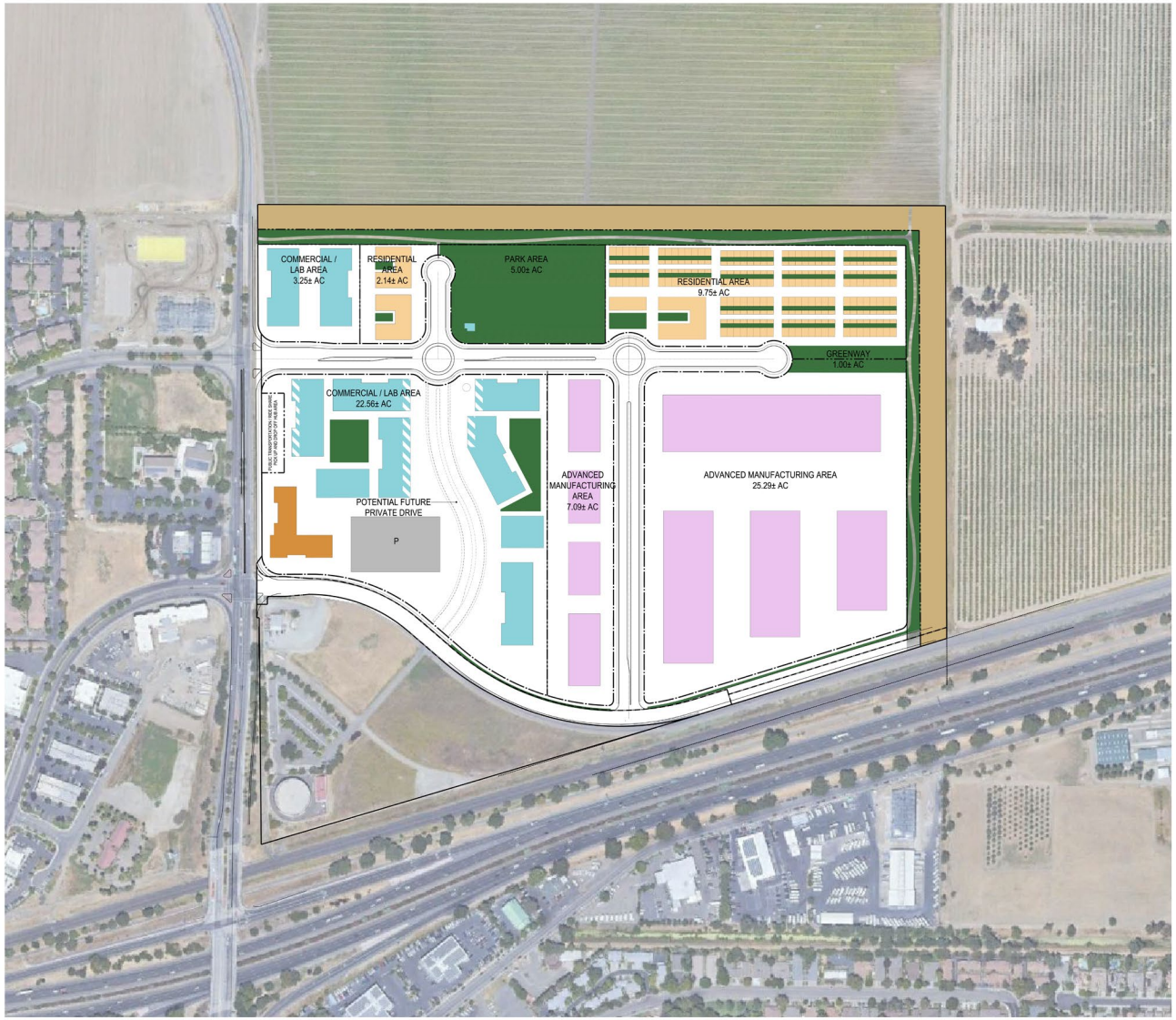
Permitted and Conditional Uses

The DiSC 2022 project would include site-specific zoning through a P-D. The purpose of the P-D district for DiSC 2022 is to provide a setting in which leading-edge institutions and local, regional, and international companies can cluster and connect with start-ups, business incubators, and accelerators, as well as UC Davis, to create a productive research and development center. The P-D will identify principally permitted uses and conditional uses.

Conceptual DiSC 2022 Site Layout by Use Type

The Preliminary P-D submitted for DiSC 2022 includes an exhibit identifying site access, infrastructure, conceptual building locations and project amenities by use type. As indicated in Figure 3, the project site would be accessible from Mace Boulevard to the west with an extension of Alhambra Drive and a new north-to-south connection from CR 32A. The foregoing new roadways would connect to create a circulation loop. A Class I bikeway would be located along the project site's northern and eastern boundaries and would connect to the existing bike lanes on Mace Boulevard and CR 32A, essentially forming a ringed bicycle and pedestrian pathway around the property's boundaries, which would connect the project site to Downtown Davis and regional trails through the existing bike and pedestrian facilities in the broader project vicinity. Advanced manufacturing uses are proposed along both sides of the primary north-to-south interior access road from CR 32A in the eastern portion of the project site. The office/R&D/laboratory uses would be located in the property's western area, proximate to Mace Boulevard and the proposed Transit Plaza. Workforce housing would be primarily situated within the northerly one-third of the project site in two areas between the extension of Alhambra Drive and the MDC, with a five-acre multi-functional sports park located between the residential areas.

Figure 3
DiSC 2022 Preliminary Land Plan



It should be noted that although the anticipated configuration has been proposed for review and approval, the building locations are conceptual and subject to change during the Final P-D process, per Municipal Code Section 40.22.090. If the currently requested entitlements are approved, in accordance with the City's P-D district requirements, the project applicant would need to file one or more Final P-Ds for the DiSC 2022 project, which would be subject to discretionary review and approval by the City of Davis, and if necessary, additional environmental review under CEQA. The Final P-D would need to identify site-specific details, such as locations of buildings on the land, including all dimensions necessary to indicate size of structure, setbacks and yard areas; elevations and design details sufficient to determine consistency with Design Guidelines; proposed tentative subdivision map or parcel map; landscaping, fencing, and screening; types and/or areas for commercial uses and other uses to be established by the district; etc.

Notwithstanding the potential for building locations to shift during the Final P-D process, the applicant's Preliminary P-D for the DiSC 2022 project includes a foreseeable placement of uses and structures, such that a meaningful analysis of the currently proposed project can be conducted at this stage of entitlements. Figure 3 illustrates a conceptual layout of uses proposed in the Preliminary P-D with limits on maximum square footages and/or number of residential units. However, the precise size and location of a building or residential structure may shift or condense as long as the use proposed therein would not result in an exceedance of square footage or maximum number of units permitted for a given use type. The various P-D components are discussed in further detail below.

Commercial and Residential Components

The principal commercial land uses are proposed in a manner to create a cohesive site with distinctive districts. The placement of advanced manufacturing in the eastern portion of the project site would allow the commercial vehicles potentially servicing such uses to avoid most portions of Mace Boulevard. Siting advanced manufacturing in the eastern areas would also place more intensive uses away from existing development to the west of Mace Boulevard and closer to I-80 and agricultural operations. Conversely, the office/R&D/laboratory uses, which would have a greater employee population, would be located on the west, closer to existing residential communities and transit routes. The DiSC 2022 project also proposes office/R&D/laboratory in the northwest corner of the project site, north of the extension of Alhambra Drive and across from the Nugget Market corporate headquarters at the Offices at Mace Ranch business park.

The residential component for the DiSC 2022 project would be located along the northern property boundary, adjacent to an agricultural buffer and the MDC to the north, with the project site's main park feature located between the two residential subareas, providing easy access to recreation for all residences. The locating of residences north of the Alhambra Drive extension would provide a separation from the project's larger proposed commercial land use, but within walking distance to all on-site jobs.

Building Heights

The tallest buildings proposed for DiSC 2022 – the multi-family housing and hotel and conference center – would be a maximum height of 85 feet. The office/R&D/laboratory buildings would be up to 65 feet tall. A maximum height of 45 feet would generally apply to the proposed advanced manufacturing uses; although certain building features may extend up to 65 feet to accommodate specific interior uses (e.g., crane to move equipment). The height limitations remain unchanged from the prior DISC project.

Density and Floor Area Ratio

The DiSC 2022 project's residential densities would range from 15 to 50 du/ac, with an average net density of 30 du/ac. The residential densities are identical to those included in the previous DISC project. The project site would have an overall net floor area ratio (FAR) of 0.71, which would be a slight reduction in overall FAR from the previous project (0.93). The reduced FAR primarily corresponds with the reduction in residential units represented in the currently proposed project. However, 0.71 FAR would exceed the 0.5 FAR minimum threshold established by the City in the 2014 "Request for Expressions of Interest" (RFEI), which was issued to gauge market interest and alternative options to be considered by the City and its partner agencies from parties interested in developing Innovation Centers that would serve the Davis research and technology sectors and create a place for Davis technology companies to continue to grow. The MRIC project originated in response to the 2014 RFEI.

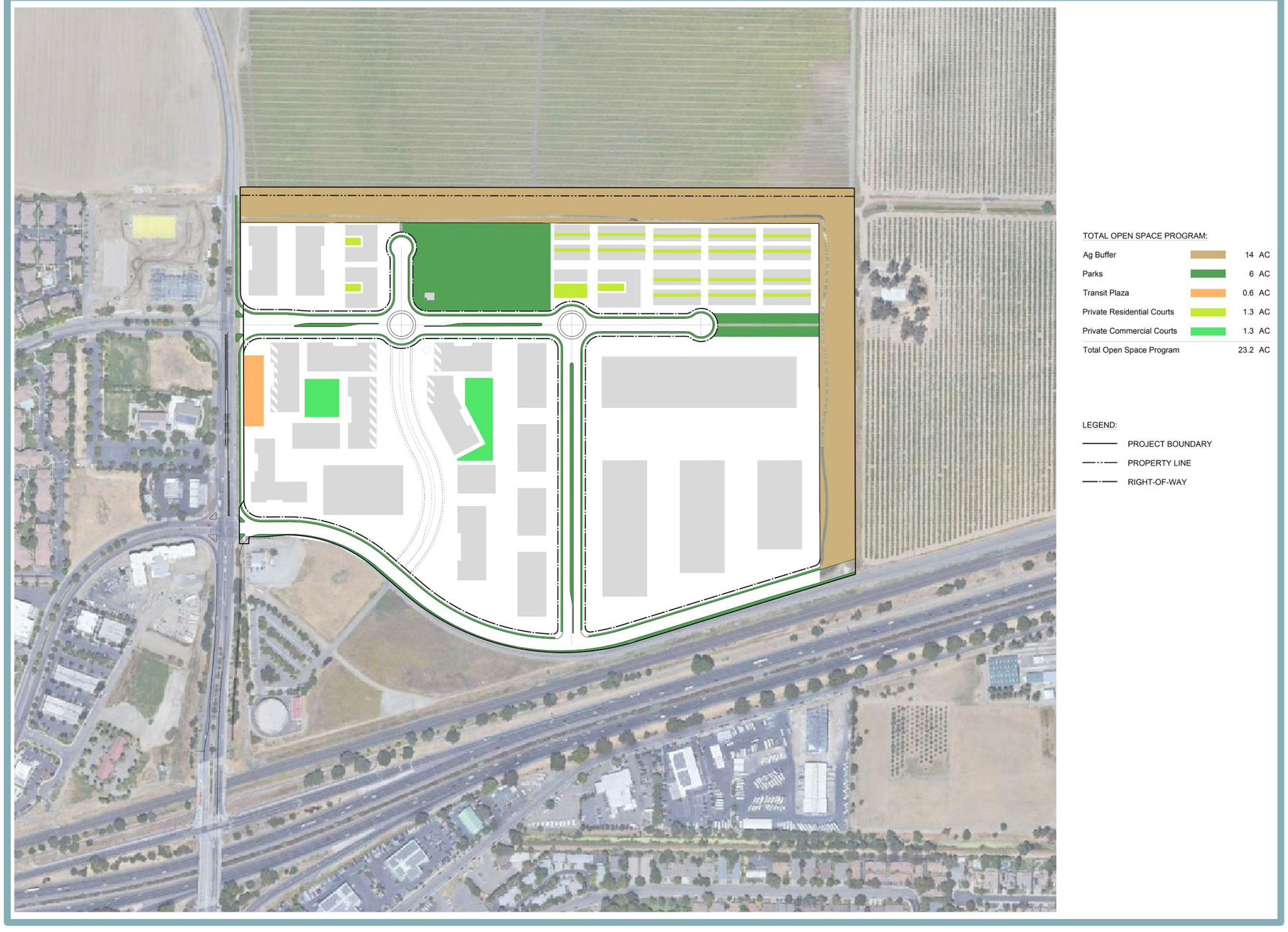
Parks and Green Space

Like its predecessor, the DiSC 2022 project would incorporate several privately maintained parks and open space areas throughout the project site (see Figure 4). The total green space, including the agricultural buffer areas, would be approximately 23.2 acres, representing a 53 percent reduction in green space acreage from such uses that would have been provided in the previous DISC project. The reduction is proportionate with the reduction in overall project size represented by the currently proposed project and is largely attributable to reduced agricultural buffer acreages.

Parks and open space areas would be accessible from all structures and would include programmed parks, greenways, plazas, natural open spaces, and courtyards. The project site would be anchored by a five-acre sports-focused park, which would feature a number of sports fields, lights for evening games, and either a commercial corner or other defining feature. The sports park is anticipated to include a softball field and potentially a multi-purpose field for sports such as soccer, lacrosse, rugby, and cricket. The park would be privately maintained, but open to the public and available for use to several Davis sports organizations. Additionally, an approximately one-acre park would be located just south of the easterly residential area and is anticipated to serve the more localized needs of residents and as a connection to the proposed trail located on the project site's periphery.

The project would include a peripheral greenbelt with walking and bicycle trails within the agricultural buffer areas along its northern and eastern borders. The Class 1 bike trails and walking path features within the agricultural buffer area would connect to pathways within landscaped areas along the property's southern and western boundaries to form an approximately 1.5-mile ring around the site. Consistent with the previous DISC project, the Class I bike trails would connect to the adjacent regional trail system, thereby serving as both an on-site amenity and nonautomotive access to Downtown Davis and the region. The northerly greenway parallels the MDC. As part of the currently proposed project and consistent with the previous DISC project, the MDC would be improved within the portions that flow through the project site to provide aesthetic and habitat value.

Figure 4
DiSC 2022 Open Space Exhibit



The agricultural buffer for the DiSC 2022 project would include planned and natural spaces, used in part for drainage swales, on-site detention, bioswales, visual and noise attenuation, energy generation, owl habitat, and cycling and pedestrian trails. Such uses are consistent with what was proposed and analyzed as part of the previous DISC project. The agricultural buffer, which would abut active agricultural operations located adjacent to the northern and eastern property boundaries, would total approximately 14 acres. Consistent with the City's agricultural buffer requirements set forth in Section 40A.01.050 of the Municipal Code, the minimum 150-foot agricultural buffer/agricultural transition area would be comprised of two components: an inner 50-foot-wide agricultural transition area and a contiguous 100-foot-wide agricultural buffer, which would be located adjacent to the agricultural areas to the north and east. The following uses would occur within the publicly accessible 50-foot agricultural transition area: Class I bike paths that encircle the project and connect to off-site facilities; pedestrian walking trails; community gardens with an emphasis on native plants and pollinators; benches; and pedestrian-scale lighting. The 100-foot-wide portion would be primarily designed to provide drainage and habitat amenities.

The proposed project would also include approximately 2.6 acres of private courtyards, plazas, and commons. Such passive recreational spaces would link project land uses and create quasi-secluded areas for social gatherings. Where possible, courtyards would be designed to connect with and be open to the commons, establishing walking links throughout the project site, and thereby minimizing pedestrian interface with vehicular roadways.

Circulation Network

The circulation framework for the DiSC 2022 project is built upon a primary circulation loop that would extend easterly from the Mace Boulevard/Alhambra Drive intersection to a new north-to-south roadway alignment connecting to CR 32A at the project site's southern property line (see Figure 3). The proposed roadways and circulation pattern remain unchanged from the previous DISC project, but due to the reduced project footprint, the project roadways would not extend north over the MDC. From the Mace Boulevard/Alhambra Drive intersection, primary access would be provided by way of the Alhambra Drive extension, which would be extended generally into the center of the project site. Primary access along the southern boundary would be provided by way of the new north-to-south roadway from an access point along CR 32A and would be the principal point of entry for heavy-duty trucks. Additionally, a secondary access point along the southern boundary would be located along CR 32A, to the north of the existing Park-and-Ride lot access road. The secondary access roadway would effectively serve as the fourth leg of the intersection of CR 32A and the existing access road and is proposed as a private drive, rather than a public right-of-way (ROW). The road would provide light-duty vehicular access to the office/R&D/laboratory uses and the hotel and conference center in the southwestern section of the project site. The proposed roadway alignments remain unchanged from those previously analyzed, as the DiSC 2022 project does not include new or different intersections from those proposed as part of the previous DISC project.

Transit

The project site is proximate to the existing Mace Park-and-Ride lot, located north of I-80 adjacent to the City's water tank. The Park-and-Ride lot serves as an existing Yolobus stop and the "Mace" stop along Sacramento Regional Transit-Yolobus Causeway Connection route. The Causeway Connection is a multi-agency venture that provides continuous service from UC Davis to the UC Davis Medical Center and Aggie Square in Sacramento. A landscaped pedestrian connection would be implemented along a north-to-south pedestrian promenade, which provide a connection from the Park-and-Ride lot to the densest area of the project site.

Additionally, an existing transit stop is located on Mace Boulevard, south of Alhambra Drive, adjacent to the project site. The proposed project would expand and enhance this bus stop into a new Transit Plaza. The previous DISC project proposed a centralized Transit Plaza, which led to considerable discussion as to when buses would be routed through the project site. DiSC 2022 has moved that concept to Mace Boulevard, so that Unitrans and Yolobus would not need to deviate from existing routes. The currently proposed Transit Plaza would be capable of stacking up to three buses at a time. Given the reduced project site associated with the currently proposed project, the newly proposed location on Mace Boulevard for the Transit Plaza would be within a half-mile distance of nearly all project components, including all of the residential units. All of the office/R&D/laboratory uses would be within one-quarter mile of the Transit Plaza, which would likely increase ridership and make the project more transit-oriented.

In addition to local bus service, the Transit Plaza would also serve as a terminal for electric bike-share and scooter programs. Additional transportation demand management strategies that may occur at the Transit Plaza include a primary drop-off/pick-up area for local shuttles to downtown Davis and the Amtrak station, and other more direct destination shuttles (UC Davis, Sacramento Airport). To the extent feasible, proximate car-share parking spots and dedicated carpool/vanpool drop-offs would be located at the site to facilitate the use of alternative modes of transportation by both employees and residents at the project site.

Bicycle and Pedestrian Paths

As previously noted, the DiSC 2022 project includes on-site bicycle and pedestrian facilities, implements off-site safety improvements, and creates regional trail connections. For example, the project site would connect to the existing Davis pedestrian trail system and regional bike paths to facilitate convenient nonautomotive connections to and from the project site, thereby encouraging nonautomotive commutes. Direct access would be provided through modifications and improvements at the Mace Boulevard/Second Street and Mace Boulevard/Alhambra Drive intersections. The intersection redesign would be principally focused on serving all transportation modes. For improved safety on the “Mace Curve,” the proposed project would extend the existing bike lane along the westerly portion of the “Mace Curve,” which would fill an existing gap and complete the connection, thereby allowing employees to more safely bike to work and children to more safely bike to school. The proposed project would acquire and dedicate land to accommodate a future grade-separated bike/pedestrian crossing on Mace Boulevard, which would be located north of the MDC. The land dedication would align to the existing City easement located at the south end of Frances Harper Junior High School and connect to the greenbelt system in the Kaufman and Broad residential neighborhood and Lake Alhambra Estates community, both located to the west of the project site.

In addition, as previously discussed, the DiSC 2022 project would include an approximately 1.5-mile Class I bike path and adjacent pedestrian trail that would encircle the project site within the 50-foot transition zone of the agricultural buffer and on landscaped buffer areas. The Class I bike path would immediately connect to the existing Class II bike lane on CR 32A at the project site’s southeastern corner. The Class II bike lane on CR 32A provides connectivity to the following: 1) Old Lincoln Highway Class I (separated) bike path along I-80 by way of the UPRR tracks at-grade crossing; 2) Class II (striped) bicycle lanes on CR 32A, east of CR 105 and the UPRR crossing; and 3) Class I bicycle path on the Yolo Causeway.

Additional on-site amenities that promote cycling would include: racks designed to accommodate bicycles of varied styles, storage lockers at all buildings, showers available in all building

complexes, and a repair kiosk provided within the sports park to enable bike repairs. Unlike the automotive parking, bicycle parking would meet or exceed City standard ratios.

Parking

The parking ratios used for DiSC 2022's commercial components are consistent with those planned in the previous DISC project, which represented a considerable reduction from the parking requirements set forth in Davis Municipal Code Section 40.25.090. Similarly, at a ratio of 1:1, parking associated with the project's residential units is proposed at a standard less than the City average and in a manner that reflects the walkability of the project site and current trends in personal transit preferences. While the number of parking spaces provided for the hotel and conference center would remain identical to those previously planned for the DISC project, parking provided for all other land uses would be reduced from the amount previously proposed. Overall, the DiSC 2022 project would include 2,050 parking spaces, representing a reduction of 3,808 spaces from those previously proposed. The overall parking ratios for the DiSC 2022 project and total number of spaces are shown in Table 2.

Table 2
DISC Parking Versus DiSC 2022 Proposed On-Site Parking

Land Use	Square Footage	Ratio	Parking Spaces
Previous DISC Project			
Office/R&D/Supportive Retail	1,610,000 sf	1:418 sf	3,848
Advanced Manufacturing	884,000 sf	1:707 sf	813
Hotel and Conference Center	150 rooms	1:1.35 rooms	111
Residential	850 units	1:0.8 units	1,086
		Total	**5,858**
DiSC 2022 Project			
Office/R&D/Supportive Retail	630,000 sf	1:600 sf	1,050
Advanced Manufacturing	550,000 sf	1:1,250 sf	440
Hotel and Conference Center	150 rooms	1:1.5 rooms	100
Residential	460 units	1:1 unit	460
		Total	**2,050**

As shown in the table, the currently proposed project would not exceed 1,590 parking spaces for commercial uses. However, the project applicant has proposed creation of a parking reservoir to allow the allotted 1,590 commercial parking stalls to be distributed throughout the project site as needed, rather than strict parking ratios being applied at the issuance of each building permit based upon use type. For example, if an advanced manufacturing use is more employee-dense than typical manufacturing, and as such, requires parking for employees at a number that exceeds the 1:1,250 sf ratio, DiSC 2022 could accommodate that particular user's need. However, the 1,590-stall capacity within the project's envelope would not increase. Therefore, future users would be parked at a level below the overall allotted ratio. Effectively, the parking envelope allows DiSC 2022 to collectively park the site as is determined necessary during buildout, based upon an evaluation of user needs and transit patterns. Phase 1 users have been assumed to desire to park at, or slightly above, the reduced parking ratios identified in Table 2, but the demand for parking would be reduced in the future as critical mass of employees is achieved on-site; the on-site jobs/housing balance is realized; transit and shuttles are fully used at the proposed Transit Plaza; car-share and carpooling spaces are dedicated on-site; bike path connections are developed and further improved to Downtown Davis and the region; tenant companies retain a transportation manager to coordinate all modes of transportation to and from the project site; and transit reimbursements and bike credits are offered by tenants to their employees.

Multi-family units would have shared parking facilities identified for the exclusive use of residents with assigned stalls. Single-family units and townhomes would have private garages. Similar to the commercial component, the 460 parking spaces allotted for residential units may be distributed as deemed appropriate by the developer. A portion of the project's single-family units could include two-car garages, and multi-family units, particularly micro-units or studios, could be parked at a ratio of 0.5:1 unit. Shared parking arrangements would be permitted on-site between commercial and residential uses at appropriate locations. The shared corporate and multi-family residential parking areas result in more efficient use of land since the demand for business parking is greatest from 8:00 AM to 5:00 PM during weekdays and residential parking demand peaks between 5:00 PM and 8:00 AM on weekdays and weekends.

All off-street parking areas would be designed to incorporate trees and to maximize the installation of solar arrays. Where possible, permeable surfaces would be utilized to assist in drainage and groundwater recharge. As a result of user demand-driven buildout, parking fields may be converted to parking structures over time to accommodate development at greater densities. Parking lots would be constructed with infrastructure included to easily accommodate the expansion of charging stations as demand increases. On-street parking is proposed adjacent to the sports park and could be utilized elsewhere within the project site, based upon locational considerations. On-street parking stalls would not be withdrawn from the parking envelopes available to residential or nonresidential uses, as they would be primarily intended to accommodate visitors to the project site, such as those using the sports facilities, rather than employees or residents.

Infrastructure

Infrastructure would be extended from nearby existing utilities to serve the site with public water, wastewater collection, and stormwater detention. The following discussion pertains to the proposed water, wastewater, drainage, and other infrastructure-related improvements, which are intended to be supplied to the project site in a manner substantially consistent with the proposals submitted and reviewed for the southern half of the project site as part of Chapter 8 of the MRIC EIR and reaffirmed in the DISC SEIR.

Water

Domestic water would be supplied by extending the existing 12-inch diameter City water main located in Mace Boulevard. The main would be looped throughout the site to supply potable water to internal businesses and workforce housing. The looped water main would provide the site's interior-use service connections for the planned office/R&D/industrial, residential, and fire-fighting uses. The improvements required to tie the proposed site loop to the City's existing water infrastructure are anticipated to be at two or three locations on Mace Boulevard. The water improvements could likely be coordinated with proposed surface improvements along the site's western frontage. Alternatively, the project may consider the option of making one of the loop connections to the existing 20-inch main that connects to the booster pumping station at the four-million-gallon (MG) City water tank.

The project applicant proposes to install a new irrigation well in the northeast portion of the site near the MDC, which may also include a holding tank and a booster pump, in order to meet approximately 80 percent of the project's non-potable, irrigation water needs. The irrigation well would serve the proposed parks and recreation field areas, as well as other open space areas on-site, using a dedicated irrigation distribution piping system. The well may also be used for irrigating street landscaping within the proposed street corridors on-site, as well as other public

common areas. As an alternative to installing a new irrigation well, the project may use an existing agricultural well, provided the well proves adequate for the intended use.

The existing water supply infrastructure available to the site does not include a recycled water distribution system, nor is a source for such water needed to service the demands of the project. However, in order to conserve water resources, the future landowners and users at the project site may desire to use recycled water if and when it is made available from the City's Wastewater Treatment Plant (WWTP). In order for recycled water to be provided to the project site, off-site distribution infrastructure would need to be installed from the WWTP to the site. While such off-site distribution infrastructure is not proposed by the project applicant, the applicant has proposed to install recycled water/purple pipe infrastructure within the property, with pipe stubs at the property boundaries, in the event that the City, or another entity, constructs off-site distribution infrastructure at a future date. Should the necessary off-site infrastructure be installed, recycled water from the City's WWTP could then be supplied to the project site at a future date.

Wastewater

The DiSC 2022 project would include installation of a gravity sewer pipe within the internal roads' ROW. The gravity sewer line would collect wastewater generated on-site and route the wastewater to the northeastern corner of the project site. From the northeastern corner, an off-site wastewater delivery pipe would be installed, the alignment of which would run north of the project site, approximately 1.05 miles. From the latter location, the pipe would connect to an existing manhole along CR 30, near an existing rural residence (see Figure 5). Wastewater from the project site would then flow east through an existing 42-inch gravity sewer line, along CR 30, to the CR 30/CR 105 intersection, where the pipe extends northward along CR 105 to the WWTP.

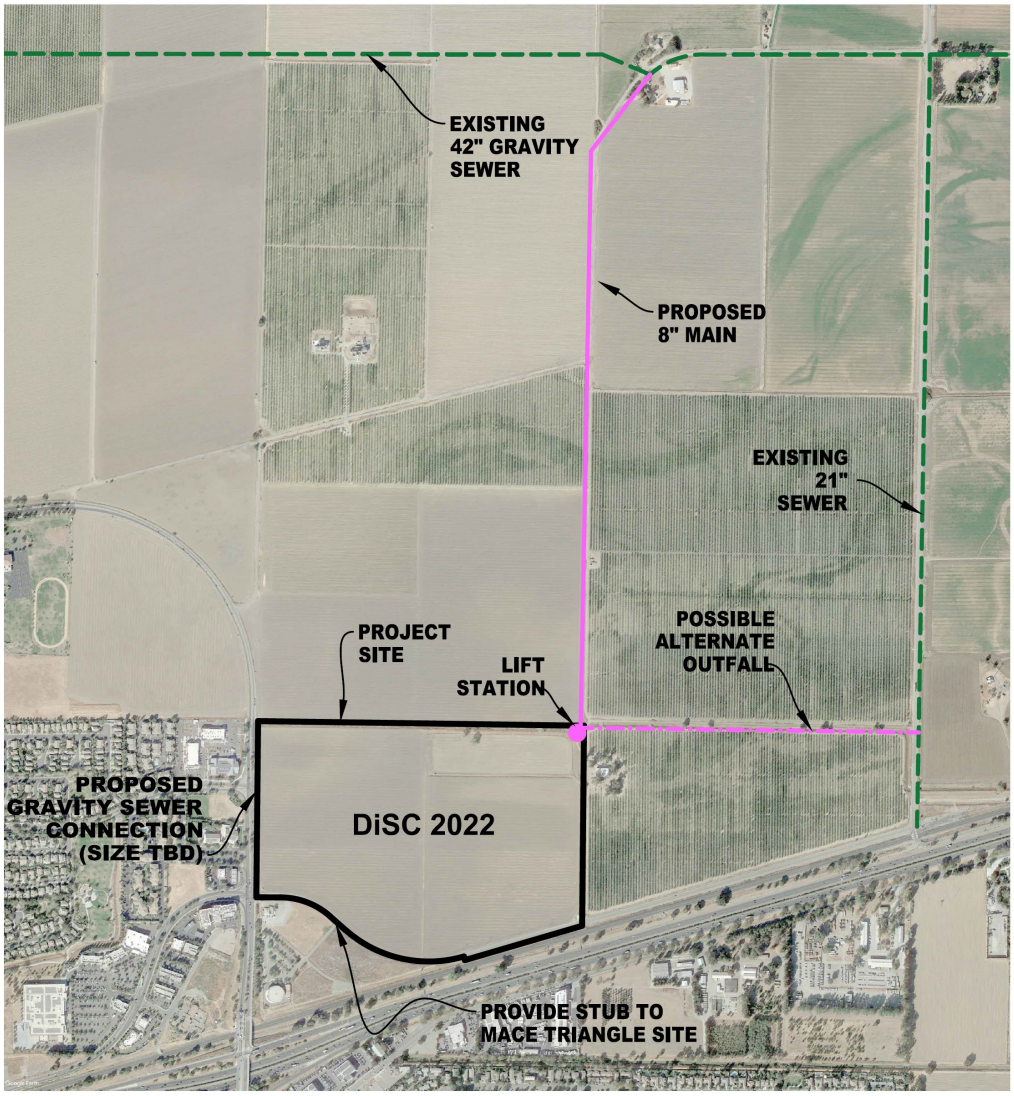
An alternative off-site sewer alignment has also been identified for the DiSC 2022 project and is evaluated in the MRIC EIR and DISC SEIR for potential resultant environmental impacts. As shown in Figure 5, the alternative sewer alignment would extend east from the project site, along the MDC, and would connect to the existing 21-inch sewer pipe in CR 105, from which point the project's wastewater would flow north to the City's WWTP.

Prior to installing the new off-site sewer alignment, during a portion of the first phase of development, the project would include the ability to tie into the existing sewer main located in Mace Boulevard. The temporary connection to and use of existing sewer infrastructure would require the use of a lift station and a force main to be replaced with the off-site, gravity-fed sewer line with the implementation of Phase 2.

Drainage

The existing MDC, which transverses the northern boundary of the project site, would predominantly remain in place and continue to serve drainage flows from the property as well as much of the eastern portion of the City limits. Due to its importance to the City's drainage conveyance, ensuring sustained and improved capacity of the MDC would be paramount. The proposed project also intends to enhance the MDC through the project site, as it would add aesthetic and habitat value. The detention basin located at the eastern project boundary would be modified in shape and slope to ensure safety and functionality. Both the MDC and detention basin are anticipated to be reconfigured to be more attractive and compatible with the proposed project.

Figure 5
DiSC 2022 Conceptual Off-Site Sewer System



600 300 0 600 1200
SCALE: 1" = 1200'

NOTES:
1. SITE AERIAL IMAGERY TAKEN IN 2020 AND WAS ACQUIRED JUNE 6, 2021 FROM GOOGLE EARTH.

DESIGNED SG DRAWN LE CHECKED SG DATE: 07/06/21 JOB No: 1239.10.01	**DiSC 2022** **SANITARY SEWER PHASING** CITY OF DAVIS CALIFORNIA	CUNNINGHAM ENGINEERING CECWEST.COM Project Planning ▪ Civil Engineering ▪ Landscape Architecture ▪ Sacramento Office 2120 20th Street, Suite Three Sacramento, CA 95818 (916) 455-2026 ▪ Davis Office 2940 Spafford Street, Suite 200 Davis, CA 95618 (530) 758-2026	SCALE 1" = 1,200' SHEET 1 OF 1

S:\Projects\1200\1239 Mace East Davis\AutoCAD\1239-10 EXHIBITS\1239-10 UPDATED APPLICATION EXHIBITS\1239-10-01-SANITARY SEWER.dwg - SSWR 7/06/2021 - 5:23PM Plotted by: Liz

Internal drainage corridors and perimeter drainage retention areas, swales, and corridors would be constructed within the project site for the purposes of collecting surface drainage, providing distributed detention storage and water quality treatment, maximizing groundwater recharge, and systematically routing the drainage to the existing MDC. Treated stormwater would then flow off-site through the existing MDC to the east, where the runoff would eventually be retained as necessary, before entering the Yolo Bypass. During major storm events, when the Yolo Bypass is flowing at a high level, ponding near the Yolo Bypass levee area currently occurs. The extent and duration of ponding is completely dependent on both local runoff and the water elevation in the Bypass. The ponding occurs on City-owned property and a recorded flood easement already exists. In order to address the projected increase in total volume of runoff during major storm events, additional storage and/or conveyance would be necessary. Two engineering solutions were previously identified and evaluated, which include an off-site replacement storage area or a small pump station. The off-site replacement storage area was previously identified as the easternmost parcel owned by the City of Davis, adjacent to the MDC and Yolo Bypass levee. Consistent with the commitment made by the applicant in the Development Agreement approved by City Council for the DISC project, the current DiSC 2022 project would similarly eliminate the off-site replacement storage area as an option.

The pump station option would entail either a permanent pump station facility or a portable pump station of sufficient capacity to mitigate for increased stormwater runoff volumes. The pump intake would be in the channel and convey stormwater over the Bypass levee. If a portable trailer-mounted, self-contained pump is used, it would be stored at the City facilities when not in use, and could be set up for pumping in several hours.

Fiberoptic Internet

High-speed internet capability with bandwidth sufficient to service the technology sector is available for immediate extension into the project site. Existing fiber optics infrastructure within the UPRR ROW would be extended to the project site and would proceed in a manner consistent with overall project buildout.

Phasing

Buildout of the DISC 2022 project is anticipated to occur gradually over the course of approximately 10 to 15 years. The initial development would likely occur along the western edge at Mace Boulevard, from which infrastructure could be easily extended into the project site. Demand for advanced manufacturing space is also anticipated to result in early development of the internal connection to CR 32A, which would serve development within the property's southeastern quadrant. As soon as demand is realized for both office/R&D/laboratory and advanced manufacturing, infrastructure would be implemented through the project site and the primary circulation loop would be constructed. Thus, in recognition of where infrastructure is currently available, development would start at the periphery near primary intersections and then would gradually be implemented in the project site's central core. The proposed development pattern represents a logical sequencing with structures gradually extending from the current urbanized area; although, the exact pattern of buildout would be driven by user demand and infrastructure costs. The MRIC EIR discusses site buildout in the context of four phases, with the phasing framework continued in the SEIR. For the purposes of the currently proposed project and continuing to use the same general framework for identifying impacts and assigning mitigation measures, the DiSC 2022 project should be viewed as two phases.

Phase 1 of the currently proposed project is anticipated to consist of approximately 50 acres and would include 550,000 sf of innovation building space, 80,000 sf of supportive retail, and up to

275 residential units, comprised of single- and multi-family housing types and estimated to consist of approximately 183 multi-family units and 92 townhouse units. Construction of the residential units would be timed to slightly trail the commercial development, so that jobs are created on-site prior to offering housing. Consistent with the previous DISC project, housing would be permitted at the DiSC 2022 site at a ratio of one unit for every 2,000 sf of nonresidential development (supportive retail excluded). The objective continues to be to time the availability of the homes to be concurrent with the creation of jobs, thereby maximizing the likelihood that on-site employees would occupy the units. Such an approach would achieve the greatest environmental benefit of including housing within the project site. The housing is planned to include a variety of mixed-use, rental, and for-sale residential options, including many affordable units, catering to the needs and demands of the full array of on-site employees. However, the housing would not be restricted to only employees, but would be available to the at-large community.

Two vehicular access points would be provided for Phase 1: 1) an enlarged and enhanced intersection at Mace Boulevard and Alhambra Drive, and 2) the new southern access point, which would connect to CR 32A at the existing park-and-ride lot driveway. The two roadways would connect within the project site, thereby creating through-site circulation for vehicles and pedestrians alike. In addition, Phase 1 would include the Transit Plaza along Mace Boulevard and the sports park.

A sub-area of Phase 1 (Phase 1A), located at the northeast corner of the intersection of Mace Boulevard and Alhambra Drive, would likely develop first. The area is approximately 3.3 acres and would include approximately 60,000 to 100,000 sf of office/R&D/laboratory uses. Development at the location is feasible given its adjacency to existing roadways and the ease of extending existing infrastructure. Additionally, the recent success of the Offices at Mace Ranch business park, across from Mace Boulevard, has demonstrated a high demand for such uses in the project vicinity. Phase 1A would serve as a catalyst for the proposed project and set the stage for the remainder of DiSC 2022.

Phase 2 is projected to be 550,000 sf of innovation use and 160,000 sf proposed for the hotel and conference center. Phase 2 also includes the remaining 185 workforce housing units, continuing the direct linkage between the creation of jobs prior to the construction of homes. The central feature of Phase 2 would be the connection of the primary north-to-south roadway to the extension of Alhambra Drive, thereby completing the circulation loop.

Sustainability Features

The DiSC 2022 project includes several sustainability features, such as:

- Buildings shall be designed to incorporate passive heating and cooling so as to reduce overall energy demands.
- To achieve a project that is fueled by 100 percent clean energy, the project developer commits all structures, residential and non-residential, to purchase power from solely renewable sources such as Valley Clean Energy's "UltraGreen" 100 percent renewable program or its equivalent, to offset any electric deficit.
- In furtherance of the commitment to utilize 100 percent renewable energy, the installation of photovoltaics or future renewable energy technology would be required on every conducive structure.
- The proposed project would enter into a power purchase agreement with Valley Clean Energy (or another electric utility company under reasonable economic terms) to which it

will sell and distribute all electricity generated on-site. Such an arrangement would ensure that all power generated on-site that is not used on-site is used locally.

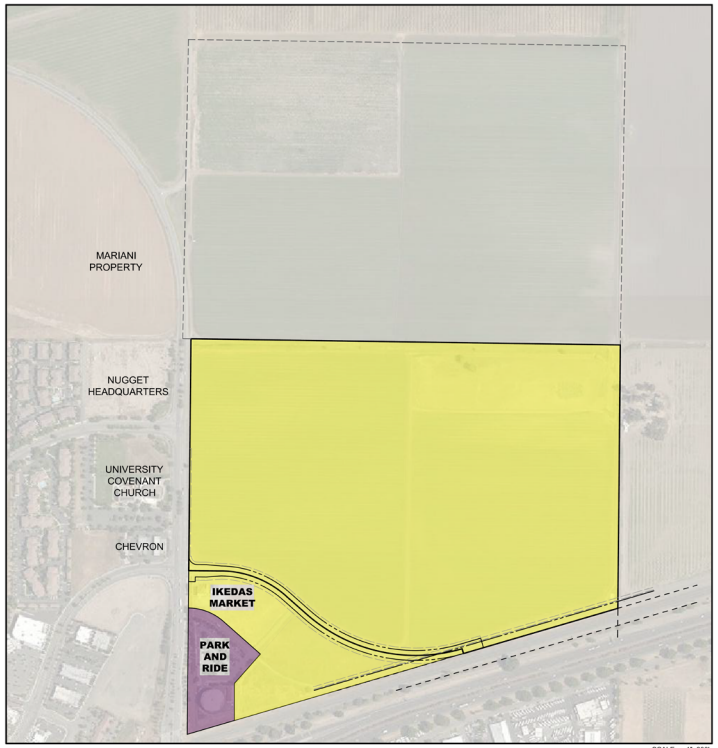
- In anticipation of improved solar-connected energy storage, the project shall be designed and pre-wired for future microgrid capacity and energy storage.
- All on-site residential units would be all-electric, would not include natural gas, and would use the Residential Energy Reach Code.
- Commercial buildings shall be all-electric for the building envelope, i.e., those functions servicing the common areas such as HVAC systems and water heaters.
- To provide an opportunity for a car-free lifestyle, parking associated with multi-family rental housing would be unbundled. Multi-family rental units would be charged for parking separate from rent.
- Use drought-tolerant plantings and incorporate native species adapted to the local climate. Include stormwater management features such as dispersed detention basins and bioswales. Use the agricultural buffer areas to help enhance the efficacy of such features, particularly as they relate to protecting and enhancing natural and ecological systems.
- Maximize the use of permeable surfaces to reduce stormwater runoff and assist in groundwater recharge.
- Use the latest building technology mechanical/electrical systems for energy efficiency, including remote monitoring and setting modification systems, and energy reductions on plug-loads and ventilation systems.
- Use natural ventilation for buildings when feasible.
- Promote water conservation and reductions, where feasible, including the use of smart and/or high-efficiency fixtures and appliances.
- Incorporate a multitude of Transportation Demand Management (TDM) strategies such as carpooling, bus transit, shuttles, car-share, and other smartphone technologies to assist in providing transportation options for employees.
- Dedicate drop-off and pick-up zones for buses, dedicated shuttles, and have carpool uses integrated into the proposed project, including a specific “Transit Plaza” to help facilitate alternative modes of transportation to and from the project site for employees and residents.
- Support a Transportation Manager who would coordinate transportation options for the project site and help to facilitate the use of alternative modes for all workers and residents.
- Install bicycle supportive facilities such as abundant racks to accommodate a diversity of bicycles, storage lockers, a repair station, and showers in all building complexes to encourage and help establish the use of bicycles as a predominant mode of transportation to the project site.

E. REQUIRED PUBLIC APPROVALS

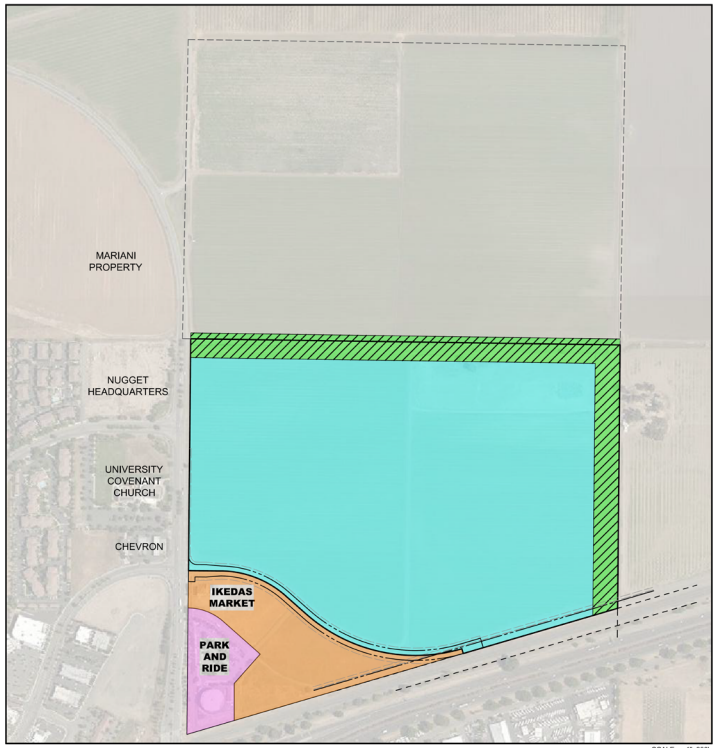
The City of Davis has discretionary authority and is the lead agency for the proposed project. The project would require City approval of the following entitlements:

1. General Plan Amendment to create a new City of Davis land use designation of Innovation Center, relocate the Urban Agricultural Transition Area along the eastern and northern boundaries of the DiSC 2022 Site, and assign City land use designations to the project site and the 16.5-acre Mace Triangle property, as follows (see Figure 6):
    i. DiSC 2022 Project Site: Innovation Center designation (88.01 acres) and Urban Agricultural Transition Area (13.99 acres); and
    ii. Mace Triangle Property: General Commercial and Public/Semi-Public.

Figure 6
DiSC 2022 Project - Proposed General Plan Amendment



EXISTING YOLO COUNTY GENERAL PLAN DESIGNATION



PROPOSED CITY OF DAVIS GENERAL PLAN DESIGNATION

- PUBLIC AND QUASI-PUBLIC (PQ)
- PUBLIC/SEMI-PUBLIC (P/SP)
- AGRICULTURAL (AG)
- INNOVATION CENTER
- URBAN AGRICULTURE TRANSITION AREA
- GENERAL COMMERCIAL

EXISTING AND PROPOSED GENERAL PLAN DESIGNATION
FOR
DiSC 2022
DAVIS, CALIFORNIA

PREPARED BY:
CUNNINGHAM ENGINEERING
CECWEST.COM
Project Planning • Civil Engineering • Landscape Architecture
Sacramento Office: 2120 20th Street, Suite Three, Sacramento, CA 95818, (916) 455-2026
Davis Office: 2940 Spafford Street, Suite 200, Davis, CA 95618, (530) 759-2026

2. Prezoning to determine the zoning in the event of subsequent annexation (Davis Municipal Code Section 40.34.010) as follows (see Figure 7):
    i. DiSC 2022 Project Site: From Yolo County Agricultural Intensive (A-N) to City DiSC 2022 Planned Development (P-D); and
    ii. Mace Triangle Property: From Yolo County A-N and Agricultural Commercial (A-C) to Mace Triangle P-D.
3. Development Agreement for the proposed DiSC 2022 project in order to provide certainty and mutual assurances between the City and the project applicant (Government Code 65864 et seq.).
4. Action by the City Council to set the baseline features of the project and call for an election (Davis Municipal Code Section 41.01.020).

Responsible Agency Approvals

Per CEQA Guidelines Section 15381, a "Responsible Agency" means a public agency which proposes to carry out or approve a project, for which a lead agency is preparing or has prepared an EIR. For the purposes of CEQA, the term "responsible agency" includes all public agencies other than the lead agency which have discretionary approval power over the project. The project would require Yolo LAFCo approval of the following entitlements as part of the requested annexation into the incorporated boundaries of the City of Davis:

1. Combined Municipal Service Review (MSR) and Sphere of Influence (SOI) Amendment in order to bring the 102-acre project site and 16.5-acre Mace Triangle property into the City of Davis' SOI (Government Code Section 56428).
2. Annexation of the 102-acre project site and the 16.5-acre Mace Triangle property (comprised of APNs 033-630-009, 033-630-006, -011, and -012) into the City of Davis (Government Code Section 56737) (see Figure 8).
3. Detachment of the 102-acre project site and the 16.5-acre Mace Triangle property from the East Davis County Fire Protection District.

Other Agency Approvals and Permits

The proposed project will not require additional agency approvals and permits until such time that the project applicant(s) receive approval of additional discretionary entitlements from the City of Davis, thereby enabling on-site construction. At this later stage, subsequent to City of Davis approval of a Final P-D and Tentative Subdivision Map(s), the following agency approvals and permits would likely be required for the project:

1. Central Valley Regional Water Quality Control Board – Stormwater Pollution Prevention Plan (SWPPP) approval prior to construction activities.
2. Yolo-Solano Air Quality Management District – Approval of permit(s) to operate for stationary sources, as may be required by the District.
3. California Department of Transportation (Caltrans) – Issuance of an encroachment permit for any work or traffic control that would encroach onto the State right-of-way.

Figure 7
DiSC 2022 Project - Proposed Rezone

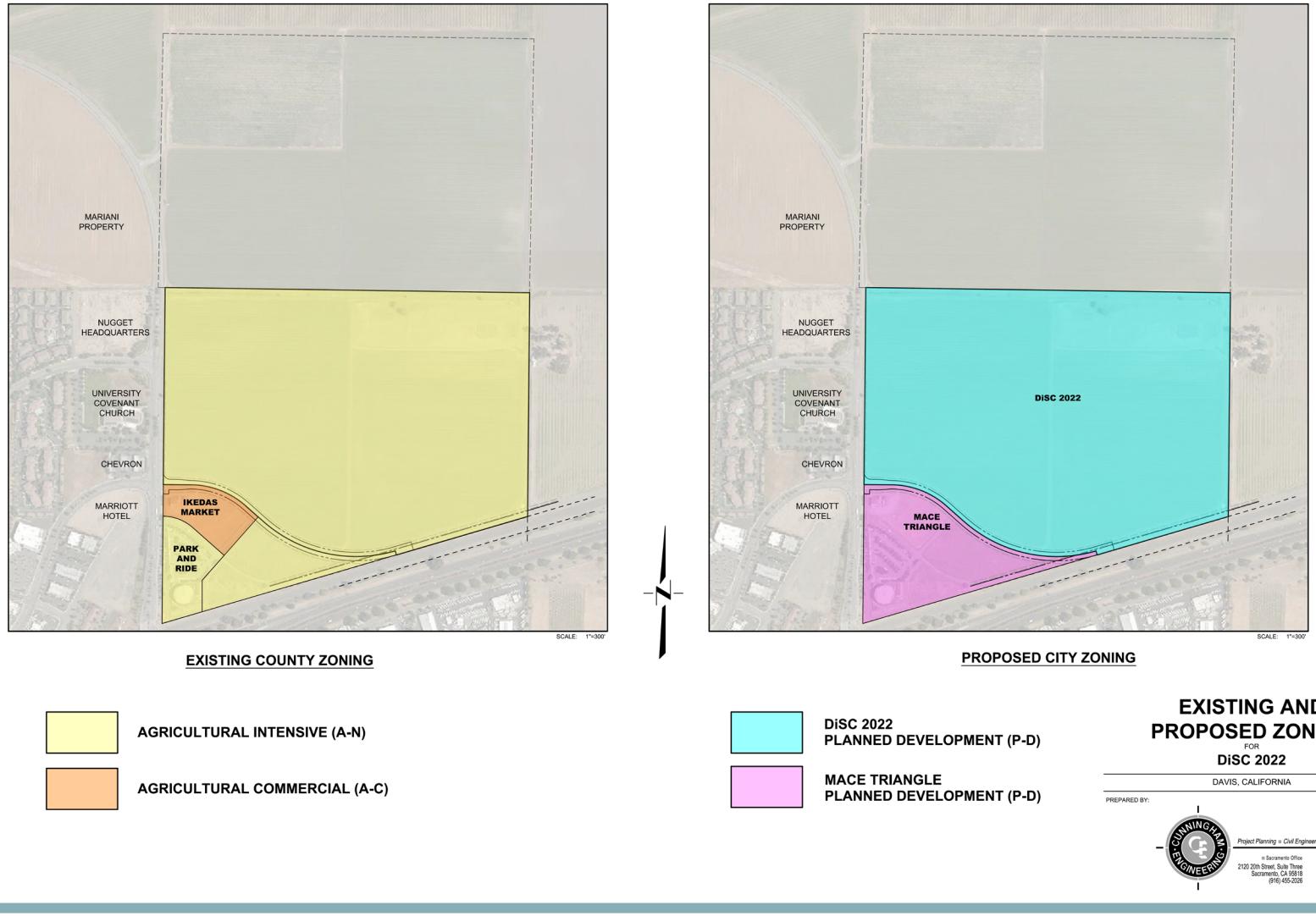
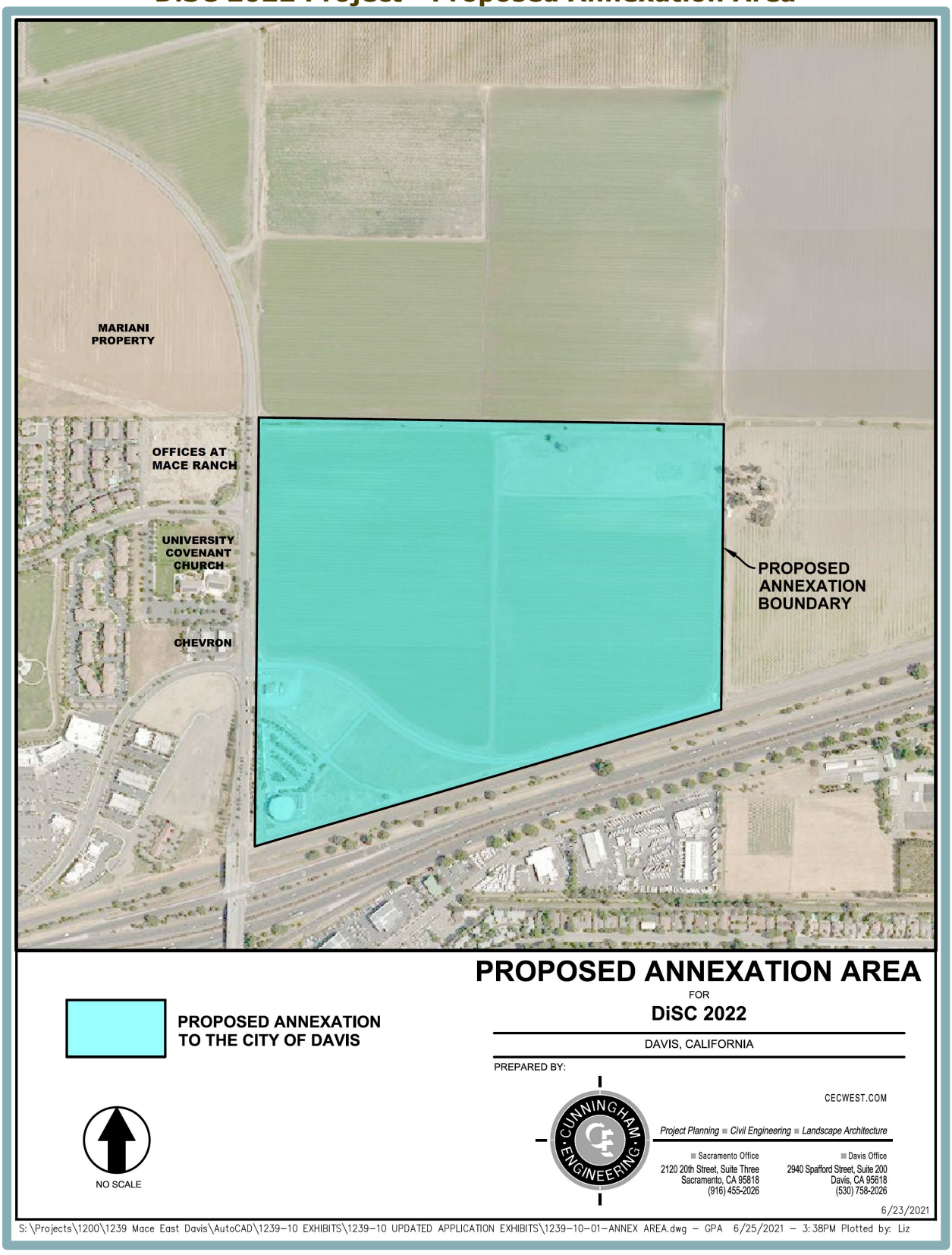


Figure 8
DiSC 2022 Project – Proposed Annexation Area



F. CEQA ANALYSIS APPROACH

In the case of a project proposal requiring discretionary approval by the City for which the City has certified an EIR for the overall project, the City must determine whether an SEIR is required. The CEQA Guidelines provide guidance in this process by requiring an examination of whether, since the certification of the EIR and approval of the proposed project, changes in the project or conditions have been made to such an extent that the proposal may result in new significant impacts not previously identified or a substantial increase in severity of previously identified significant impacts. If so, the City would be required to prepare an SEIR. The examination of impacts is the first step taken by the City in reviewing the CEQA treatment of the project. The following review proceeds with the requirements of CEQA Guidelines Section 15162 in mind. Section 15162 is discussed in detail below.

An Addendum to a certified EIR may be prepared if only minor technical changes or additions are required, and none of the conditions identified in CEQA Guidelines Section 15162 are present. The following identifies the standards set forth in Section 15162(a) as they relate to the project:

(1) Substantial changes are proposed in the project which will require major revisions of the previous EIR or negative declaration due to the involvement of new significant environmental effects or a substantial increase in the severity of previously identified significant effects;

(2) Substantial changes occur with respect to the circumstances under which the project is undertaken which will require major revisions of the previous EIR or negative declaration due to the involvement of new significant environmental effects or a substantial increase in the severity of previously identified significant effects; or

(3) New information of substantial importance, which was not known and could not have been known with the exercise of reasonable diligence at the time the previous EIR was certified as complete or the negative declaration was adopted, shows any of the following:

    (a) The project will have one or more significant effects not discussed in the previous EIR or negative declaration;

    (b) Significant effects previously examined will be substantially more severe than shown in the previous EIR [or negative declaration];

    (c) Mitigation measures or alternatives previously found not to be feasible would in fact be feasible, and would substantially reduce one or more significant effects of the project, but the project proponents decline to adopt the mitigation measure or alternative; or

    (d) Mitigation measures or alternatives which are considerably different from those analyzed in the previous EIR would substantially reduce one or more significant effects on the environment, but the project proponents decline to adopt the mitigation measure or alternative.

Section 15162 provides that the lead agency's role in project approval is completed upon certification of the EIR or Negative Declaration and approval of the project, unless further discretionary action is required. The approvals requested as part of the project are considered discretionary actions. Therefore, CEQA review is required.

Confirmation of Addendum

The following discussion confirms that the project has been evaluated for significant impacts pursuant to CEQA. The discussion is meaningfully different than a determination that the project is "exempt" from CEQA review, which is not the case. Rather, the determination here is that the project's impacts have been considered in a previous CEQA document (i.e., the 2020 DISC SEIR) that was reviewed and certified by the Davis City Council and deemed a sufficient and adequate analysis of the environmental impacts of the proposed project. The discussion concludes that the conditions set forth in Section 15162 are not present. As such, an addendum is the appropriate environmental document for the proposed project, pursuant to CEQA Guidelines Section 15164.

G. ENVIRONMENTAL IMPACT COMPARISON

The purpose of the comparison is to evaluate the categories in terms of any "**changes**" or "**new information**" that may result in a changed environmental impact evaluation. A "no" answer does not necessarily mean that potential impacts do not exist relative to the environmental category, but that a relevant change would not occur in the condition or status of the impact due to its insignificance or its treatment in a previous environmental document.

Explanation of Impact Evaluation Categories

Environmental Issue Area: This column presents the environmental resource area to be discussed and the relevant 2021 CEQA Guidelines Appendix G questions to be analyzed.

Where Impact Was Analyzed in the Previous CEQA Documents: This column provides a reference to the page(s) of the 2020 SEIR where information and analysis may be found relative to the environmental issue listed under each topic.

Do Proposed Changes Involve New or More Severe Impacts? Pursuant to Section 15162(a)(1) of the CEQA Guidelines, this column indicates whether the changes represented by the current project will result in new significant impacts that have not already been considered and mitigated by a previous EIR or that substantially increase the severity of a previously identified significant impact. If a "yes" answer is given and more severe impacts are specified, additional mitigations will be specified in the discussion section including a statement of impact status after mitigation.

Any New Circumstances Involving New or More Severe Impacts? Pursuant to Section 15162(a)(2) of the CEQA Guidelines, this column indicates whether there have been changes to the project site or the vicinity (environmental setting) that have occurred subsequent to the certification of an EIR, which would result in the current project having significant impacts that were not considered or mitigated by that EIR or which substantially increase the severity of a previously identified significant impact.

Any New Information Requiring New Analysis or Verification? Pursuant to Section 15162(a)(3) of the CEQA Guidelines, this column indicates whether new information is available requiring an update to the analysis of a previous EIR to verify that the environmental conclusions and mitigations remain valid. This also applies to any new regulations that might change the nature of analysis or the specifications of a mitigation measure. If additional analysis is conducted as part of this environmental impact comparison and the environmental conclusion remains the same, no new or additional mitigation is necessary. If the analysis indicates that a mitigation requires supplemental specifications, no additional environmental documentation is needed if it is found that the modified mitigation achieves a reduction in impact to the same level as originally intended.

Discussion: A discussion of the elements of the impact is provided for each impact statement in order to support the findings. The discussion provides information about the particular environmental issue, how the project relates to the issue, and the status of any mitigation that may be required or that has already been implemented.

Conclusion: A conclusion relating to the need for additional environmental documentation is contained in each section.

Mitigation Sections

Mitigation Measures from the Previous CEQA Documents: Applicable mitigation measures from the previous CEQA documents that apply to the changes or new information are referenced under each environmental category.

Modified Mitigation Measures: Where applicable the mitigation measures from the previous CEQA documents have been modified for application to the project. The modification of previous mitigation measures ensures the incorporation of relevant site-specific information to maintain potential project related impacts at a level equal to those identified in the previous CEQA documents. Deleted text that does not apply to the currently proposed project is shown as ~~struck through~~. New text that has been added to more specifically address the currently proposed project components is shown in double underline.

Additional Project-Specific Mitigation Measures: If changes or new information involve new impacts, additional mitigation measures, if available and feasible, are listed under each environmental category. As will be demonstrated below, no additional project-specific mitigation measures have been identified for DiSC 2022.

Environmental Factors Potentially Affected

The environmental factors checked below would be potentially affected by this project, involving at least one impact that is a new significant impact or a substantially more severe significant environmental impact than what was previously analyzed in the 2020 SEIR, as indicated by the discussion on the following pages.

☐ **Aesthetics**	☐ **Agriculture and Forest Resources**	☐ **Air Quality**
☐ **Biological Resources**	☐ **Cultural Resources**	☐ **Energy**
☐ **Geology and Soils**	☐ **Greenhouse Gas Emissions**	☐ **Hazards and Hazardous Materials**
☐ **Hydrology and Water Quality**	☐ **Land Use and Planning**	☐ **Mineral Resources**
☐ **Noise**	☐ **Population and Housing**	☐ **Public Services**
☐ **Recreation**	☐ **Transportation**	☐ **Tribal Cultural Resources**
☐ **Utilities and Service Systems**	☐ **Wildfire**	☐ **Mandatory Findings of Significance**

Environmental Issue Area	Where Impact Was Analyzed in Previous CEQA Documents?	Do Proposed Changes Involve New or More Severe Impacts?	Any New Circumstances Involving New or More Severe Impacts?	Any New Information Requiring New Analysis or Verification?
I. Aesthetics. *Would the project:*				
a. Have a substantial adverse effect on a scenic vista?	2020 SEIR pg. 3-36	No	No	No
b. Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a State scenic highway?	2020 SEIR pg. 3-36	No	No	No
c. In non-urbanized areas, substantially degrade the existing visual character or quality of public views of the site and its surroundings? (Public views are those that are experienced from publicly accessible vantage point). If the project is in an urbanized area, would the project conflict with applicable zoning and other regulations governing scenic quality?	2020 SEIR pgs. 3-36 to 3-38	No	No	No
d. Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?	2020 SEIR pgs. 3-38 to 3-39	No	No	No

Discussion

Since the release of the certified Final SEIR, the project site has remained vacant and undeveloped, and substantial changes in the environmental and regulatory settings related to aesthetics, as described in the SEIR, have not occurred. Construction of the Offices at Mace Ranch business park, located northwest of the Mace Boulevard/Alhambra Drive intersection, has since been completed. While such development has altered the visual character of the DiSC 2022 area, the changes in circumstances are not considered substantial to the extent that major revisions of the previous SEIR would be required.

Relative to the DISC project, the DiSC 2022 project would involve a substantially reduced development footprint area, due to the currently proposed project excluding the 92-acre area north of the MDC, which was a portion of the previous DISC project site. The DiSC 2022 project would include similar project components as the previous DISC project, albeit, at a reduced scale. Building height standards remain unchanged from the previous project. DiSC 2022 would have a reduced FAR compared to the previous project, which primarily corresponds with the reduction in residential units that are currently proposed.

a,b. Examples of typical scenic vistas include mountain ranges, ridgelines, or bodies of water as viewed from a highway, public space, or other area designated for the express purpose of viewing and sightseeing. In general, a project's impact to a scenic vista would occur if development of the project would substantially change or remove a scenic vista. The SEIR analyzed the potential for

implementation of the DISC project to result in impacts to scenic vistas as well as scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings, within a State scenic highway and concluded that the project would have resulted in a less-than-significant impact. As detailed under Impact 3-1 in the SEIR, officially designated State scenic highways, corridors, vistas, or viewing areas do not exist within the City's planning area and established scenic vistas are not located on or adjacent to the DISC project site. As such, the SEIR concluded buildout of the DISC project would not have resulted in substantial adverse effects to such visual resources.

The currently proposed DiSC 2022 project would be implemented within the development footprint area previously analyzed in the SEIR. Considering that new scenic vistas have not been identified within or beyond the development footprint since the DISC project was analyzed, the currently proposed project would not result in an impact beyond what was determined in the SEIR. Additionally, according to the California Department of Transportation's (Caltrans) California State Scenic Highway System Map,[1] officially designated or eligible State scenic highways do not currently occur within the project vicinity. Therefore, the currently proposed project would not result in an impact beyond what was determined in the SEIR with respect to scenic resources within a State scenic highway.

Based on the above information, the currently proposed project would not result in new significant impacts or substantially more severe impacts related to scenic vistas or scenic resources within a State scenic highway beyond what were previously identified in the SEIR. Therefore, the proposed project would be consistent with the conclusions of the SEIR.

c. The SEIR analyzed the potential for implementation of the DISC project to substantially degrade the existing visual character or quality of public views of the site and the site's surroundings under Impact 3-2 and concluded that the DISC project would have resulted in a significant and unavoidable impact. With respect to the DISC site, the SEIR found that the previously proposed development would have had the potential to substantially degrade the visual quality of the site as viewed from I-80 and sections of Mace Boulevard, even with implementation of landscaping improvements and agricultural buffers. As part of the determination, the SEIR cited the maximum 85-foot building height that would have been allowed for the project's residential and hotel components and the 45-foot to 65-foot maximum building height that would have been permitted for the manufacturing uses. The building heights proposed for the DISC project were greater than those provided for the MRIC project and analyzed in the MRIC EIR. In addition, the SEIR considered the fact that the DISC project would have converted an agricultural field to commercial and residential uses in an area that was outside of the City's SOI. Therefore, as the MRIC EIR concluded that impacts to visual character would have been significant and unavoidable when factoring in comparatively shorter building heights, the SEIR similarly determined the same conclusion.

With respect to the Mace Triangle property, the SEIR determined that development of the site would have been visible to motorists traveling along I-80, but generally not visible from residential areas north of I-80. However, because development would not have blocked views of the mural and kinetic element on the East Area Tank and utility building within the property, the SEIR concluded that changes in visual character/quality of the Mace Triangle property would not have

[1] California Department of Transportation. *California State Scenic Highway System Map*. Available at: https://dot.ca.gov/programs/design/lap-landscape-architecture-and-community-livability/lap-liv-i-scenic-highways. Accessed September 2021.

been anticipated to result in significant impacts, given that the viewer exposure to the changes would have been limited (i.e., motorists, bicyclists, workers).

The currently proposed DiSC 2022 project would be implemented within the development footprint area previously analyzed in the SEIR; however, the DiSC 2022 project would involve a substantially reduced development footprint area, due to the currently proposed project excluding the area immediately north of the MDC, which was a portion of the previous DISC project site. Additionally, the DiSC 2022 project would include similar project components as the previous DISC project, albeit, at a noticeably reduced scale. Building height standards are unchanged from the previous project. DiSC 2022 would have a reduced FAR compared to the previous project, which primarily corresponds with the reduction in residential units that are currently proposed. Similar to the previous DISC project, the currently proposed project would still convert an agricultural field to commercial and residential uses in an area that is outside of the City's SOI.

Based on the above information, while the modifications associated with the DiSC 2022 project would reduce the magnitude of alterations to the visual character of the project site and its surroundings, the previously identified significant and unavoidable impact would still occur. Nevertheless, the currently proposed project would not result in new significant impacts or substantially more severe significant impacts related to substantial degradation of the existing visual character or quality of public views of the project site and the site's surroundings beyond what were previously identified in the SEIR. Therefore, the proposed project would be consistent with the conclusions of the SEIR.

d. The SEIR assessed the potential for the DISC project to create a new source of substantial light or glare that would adversely affect day or nighttime views in the area under Impact 3-3 and concluded that with incorporation of Mitigation Measure 3-3, impacts would have been reduced to a less-than-significant level. As part of the determination, the SEIR cited the fact that the DISC project would have included development of tall structures in proximity to Mace Boulevard, which would have resulted in light emanating from windows on the upper floors of proposed residences and offices that would have likely been visible from existing residences and other uses off-site. Therefore, without incorporation of mitigation, light and glare under the DISC project could have resulted in adverse effects to nearby sensitive receptors. However, Mitigation Measure 3-3 would have sufficiently addressed such effects.

The currently proposed DiSC 2022 project would be implemented within the development footprint area previously analyzed in the SEIR; however, the DiSC 2022 project would involve a substantially reduced development footprint area, due to the currently proposed project excluding the parcel immediately north of the MDC, which was a portion of the previous DISC project site. Nevertheless, the DiSC 2022 project would include similar project components as the previous DISC project, albeit, at a noticeably reduced scale, and building height standards are unchanged from the previous project. Therefore, the currently proposed project would still be subject to Mitigation Measure 3-3, which would ensure that the project does not result in an impact beyond what was determined in the SEIR.

Based on the above information, the currently proposed project would not result in new significant impacts or substantially more severe impacts related to the creation of a new source of substantial light or glare which would adversely affect day or nighttime views in the area beyond what were previously identified in the SEIR. Therefore, the proposed project would be consistent with the conclusions of the SEIR.

Conclusion

Based on the above, the DiSC 2022 project would not result in any changes, new circumstances, or new information that would involve new significant impacts or substantially more severe significant impacts from what had been anticipated for the project site in the previous CEQA documents related to aesthetics. It should be noted that the previously required mitigation measures from the SEIR, as presented below, would still be required to be implemented for the proposed project.

Mitigation Measure(s)

The following mitigation measure(s) would apply to the currently proposed DiSC 2022 project.

Mitigation Measures from the Previous CEQA Documents

The mitigation measures from the SEIR applicable to the proposed project are presented below. It should be noted that this mitigation measure formerly referenced "ARC" as part of the previous SEIR; thus, such references have been changed to "DiSC 2022" in this Addendum in ~~strikethrough~~ and double underline format. No other changes have been made to the following mitigation.

~~ARC~~ DiSC 2022 Project and Mace Triangle

3-3 *In conjunction with submittal of improvement plans for the Mace Triangle and each phase of development for the ~~ARC~~ DiSC 2022 Site, the applicant shall submit a lighting plan to the Department of Community Development and Sustainability for review and approval. The lighting plan shall be designed to limit light trespass and glare onto off-site properties to a reasonable level through the use of shielding, directional lighting methods (including, but not limited to, fixture location and height), and application of a low-emissivity coating on exterior glass surfaces of proposed structures. If low-emissivity coating is used, the low-emissivity coating shall reduce the reflection of visible light that strikes the exterior glass and prevent interior light from being emitted brightly through the glass. The Plan shall comply with Chapter 6 of the Davis Municipal Code - Article 8: Outdoor Lighting Control.*

Modified Mitigation Measures

None required.

Additional Project-Specific Mitigation Measures

None required.

Environmental Issue Area	Where Impact Was Analyzed in Previous CEQA Documents?	Do Proposed Changes Involve New or More Severe Impacts?	Any New Circumstances Involving New or More Severe Impacts?	Any New Information Requiring New Analysis or Verification?
II. Agriculture and Forestry Resources. *Would the project:*				
a. Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?	2020 SEIR pgs. 3-41 to 3-43	No	No	No
b. Conflict with existing zoning for agricultural use, or a Williamson Act contract?	2020 SEIR pg. 3-43	No	No	No
c. Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code section 12220(g)), timberland (as defined by Public Resources Code section 4526), or timberland zoned Timberland Production (as defined by Government Code section 51104(g))?	N/A	No	No	Yes
d. Result in the loss of forest land or conversion of forest land to non-forest use?	2020 SEIR pgs. 3-44 to 3-45	No	No	No
e. Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use or conversion of forest land to non-forest use?	2020 SEIR pgs. 3-46 to 3-49	No	No	No

Discussion

Since the release of the certified Final SEIR, the project site has remained vacant and undeveloped. Agricultural production continues to occur on the properties to the north and east of the DiSC 2022 site. Substantial changes in the environmental and regulatory settings related to agriculture and forestry resources, or in circumstances that would affect the analysis in the SEIR related to agriculture and forestry resources have not occurred.

Relative to the DISC project, the DiSC 2022 project would involve a substantially reduced development footprint area, due to the currently proposed project excluding the 92 acres immediately north of the MDC, which was a portion of the previous DISC project site. By excluding the north of the MDC, the DiSC 2022 project would encompass only 102 acres, as compared to the 194 acres planned for the previous DISC

project. Project changes or circumstances that would adversely affect the analysis in the SEIR related to agriculture and forestry resources have not occurred.

a. The SEIR evaluated the potential for the DISC project to convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use under Impact 3-5 and concluded that the project would have resulted in a significant and unavoidable impact. With respect to the DISC site, the SEIR cited the fact that the project would have involved the conversion of Prime Farmland, Farmland of Local Potential, and Farmland of Statewide Importance to non-agricultural uses. Even with incorporation of Mitigation Measures 3-5(a) and 3-5(b), the impact would not have been reduced to a less-than-significant level. With respect to the Mace Triangle property, the SEIR noted that the California Department of Conservation (DOC) Important Farmland Map designated the entire 16.5-acre site as Urban and Built-up Land. Therefore, the SEIR determined that while the DISC project, on the whole, would have resulted in a significant and unavoidable impact, impacts related specifically to development of the Mace Triangle property would have been less than significant.

The currently proposed DiSC 2022 project would be implemented within the development footprint area previously analyzed in the SEIR; however, the DiSC 2022 project would involve a substantially reduced development footprint area, due to the currently proposed project excluding the 92 acres immediately north of the MDC. According to the DOC Important Farmland Map, development of the DiSC 2022 site would still result in the conversion of Prime Farmland, and Farmland of Local Potential to non-agricultural uses.[2] Table 3 below provides a Farmland conversion comparison of the previous DISC project and the currently proposed DiSC 2022 project.

Table 3
Farmland Conversion Comparison

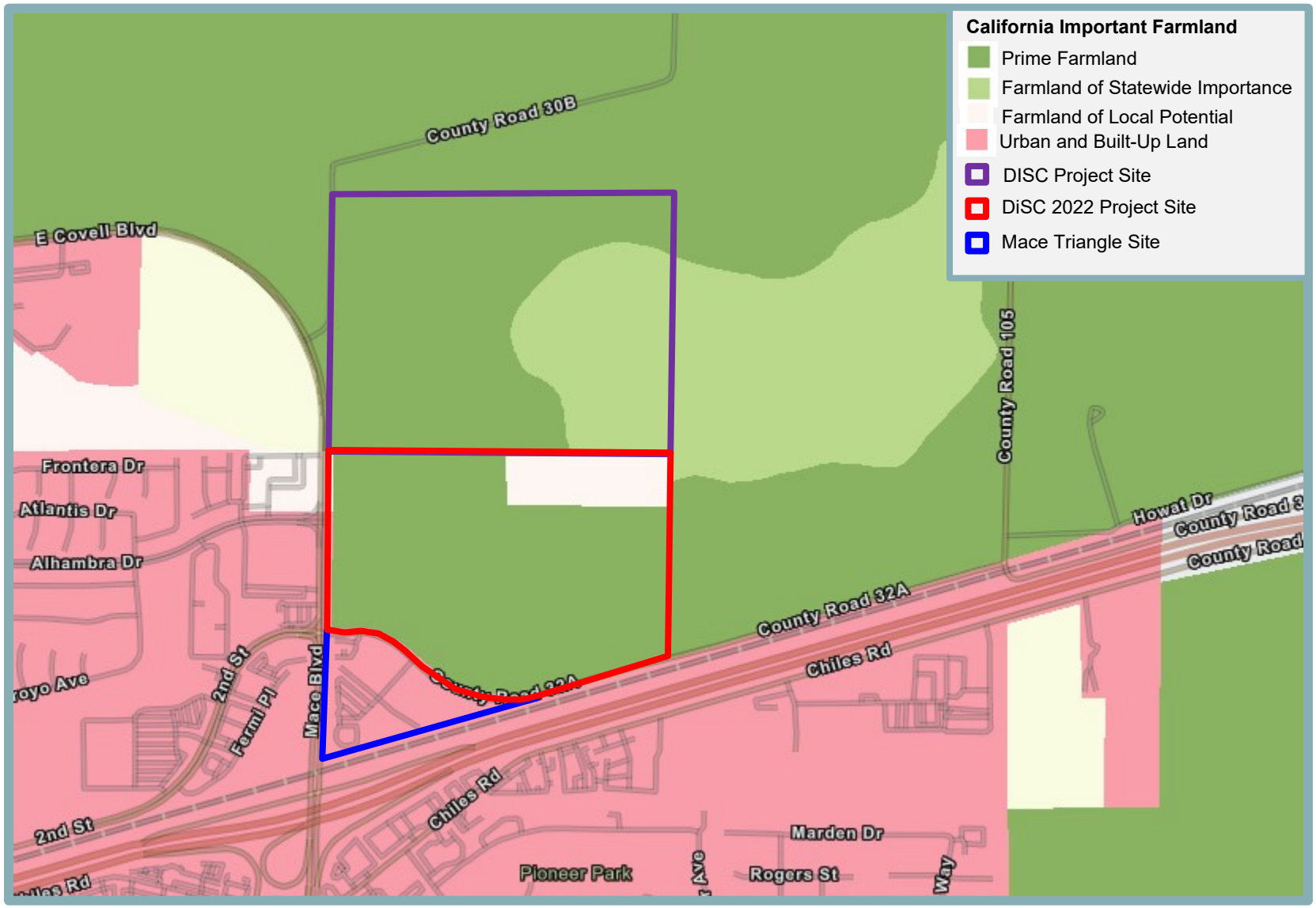
Farmland Category	Previous DISC Project	DiSC 2022 Project	Difference
Prime Farmland	143.8 acres	88.7 acres	-55.1 acres
Farmland of Statewide Importance	36.9 acres	0.0 acres	-36.9 acres
Farmland of Local Potential	11.6 acres	11.6 acres	0.0 acres
Urban and Built-Up Land	1.7 acres	1.7 acres	0.0 acres
Total	**194 acres**	**102 acres**	**-92 acres**

Source: California Department of Conservation. California Important Farmland Finder.

As shown in the table, the currently proposed project would result in the conversion of 55.1 less acres of Prime Farmland, as compared to the previous DISC project, and would not impact any Farmland of Statewide Importance. Figure 9 below provides an illustration of the reduced impacts. Based on the reduced conversion of Prime Farmland, the DiSC 2022 project would result in fewer impacts; however, as the currently proposed project would still result in the conversion of 88.7 acres of Prime Farmland, the project would still be subject to Mitigation Measures 3-5(a) and 3-5(b). The impact would remain significant and unavoidable.

[2] California Department of Conservation. *California Important Farmland Finder.* Available at: https://maps.conservation.ca.gov/dlrp/ciff/. Accessed September 2021.

Figure 9
DiSC 2022 Farmland Conversion



The Mace Triangle property continues to be completely designated as Urban and Built-up Land. As such, the currently proposed project would not result in an impact beyond what was determined in the SEIR.

Based on the above information, the currently proposed project would not result in new significant impacts or substantially more severe significant impacts related to the conversion of Prime Farmland, Unique Farmland, or Farmland of Statewide Importance, as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use beyond what were previously identified in the SEIR. Therefore, the proposed project would be consistent with the conclusions of the SEIR.

b. The SEIR assessed the potential for the DISC project to conflict with existing zoning for agricultural use under Impact 3-6 and concluded that the impact would have been less than significant. In support of the conclusion, the SEIR noted that the County zoning for the DISC site was (and still is) A-N. With respect to the Mace Triangle property, the County zoning was (and still is) A-N and A-C. The SEIR reasoned that with approval by the City Council of the project, the requested Prezoning to P-D would be approved concurrently and a conflict with existing zoning for agricultural use would not occur. As such, upon approval of the requested Prezoning, the DISC project would have resulted in a less-than-significant impact related to existing zoning for agricultural use.

The currently proposed DiSC 2022 project would be implemented within the development footprint area previously analyzed in the SEIR. Thus, the project site is currently zoned A-N and the Mace Triangle property is zoned A-N and A-C. However, as was the case in the previous DISC project, with approval by the City Council of the currently proposed DiSC 2022 project, the requested Prezoning to P-D for the project site and Mace Triangle site would be approved concurrently, and a conflict with existing zoning for agricultural use would not occur. Additionally, neither the project site nor the Mace Triangle property are currently under a Williamson Act contract.

Based on the above information, the currently proposed project would not result in new significant impacts or substantially more severe significant impacts related to conflicts with existing zoning for agricultural use or a Williamson Act contract beyond what were previously identified in the SEIR. Therefore, the proposed project would be consistent with the conclusions of the SEIR.

c. The SEIR did not address potential impacts related to conflicts with existing zoning for, or cause rezoning of, forest land (as defined in PRC Section 12220[g]), timberland (as defined by PRC Section 4526), or timberland zoned Timberland Production (as defined by Government Code Section 51104[g]) associated with the DISC project. With respect to the currently proposed DiSC 2022 project, neither the project site nor the Mace Triangle property are considered forest land, timberland, or zoned Timberland Production, as defined by the respective sections of the PRC and Government Code. Therefore, the currently proposed DiSC 2022 project would have no impact with respect to conversion of forest land or any potential conflict with forest land, timberland, or Timberland Production zoning.

d. The current DiSC 2022 site does not include forest land. As such, the currently proposed project would not result in the loss of forest land or conversion of forest land to non-forest use, and the project would result in no impact. Based on the above information, the currently proposed project would not result in new significant impacts or substantially more severe significant impacts related to the loss of forest land or conversion of forest land to non-forest use beyond what were previously identified in the SEIR. Therefore, the proposed project would be consistent with the conclusions of the SEIR.

e. The SEIR evaluated the potential for the DISC project to result in the loss of agricultural land, as defined by the Davis Municipal Code, or conversion of agricultural land to non-agricultural use under Impact 3-7 and concluded that the impact would have been significant and unavoidable. As part of reaching the conclusion, the SEIR noted that because the project site was in agricultural use, as defined by the City's Municipal Code, agricultural mitigation was required for the development of the site with urban uses. Implementation of Mitigation Measures 3-5(a) and 3-5(b), as required by Mitigation Measure 3-7(a), provided for preservation of agricultural land at a 2:1 ratio, consistent with the requirements set forth in Chapter 40A.03 of the City's Municipal Code; however, the impact would not have been reduced to a less-than-significant level, due to the fact that active agricultural land would have still been permanently converted to urban uses. With respect to the Mace Triangle property, although the site was not currently in agricultural use, the SEIR noted that the easternmost parcel and a portion of the Ikeda's Market parcel had been used for such purposes in the past. Accordingly, the undeveloped portions of the Mace Triangle property would have been subject to agricultural mitigation per the City's ordinance, as the agricultural portions of the Mace Triangle site consisted of the 8.4-acre easternmost parcel and approximately 2.5 acres of the Ikeda's Market parcel, for a total of 10.9 acres. As part of ensuring consistency with Chapter 40A.03 of the Municipal Code, the SEIR also required Mitigation Measure 3-7(b) for Mace Triangle farmland impacts, which established approximate acreages of protected farmland for agricultural purposes to be set aside at a 2:1 minimum ratio.

The currently proposed DiSC 2022 project would be implemented within the development footprint area previously analyzed in the SEIR; however, the DiSC 2022 project would involve a substantially reduced development footprint area, due to the currently proposed project excluding the 92 acres immediately north of the MDC, which was a portion of the previous DISC project site. Nevertheless, as the project site and Mace Triangle property would still require agricultural mitigation prior to/upon development, the currently proposed project would still be subject to Mitigation Measures 3-7(a) and 3-7(b) to ensure impacts related to the conversion of agricultural land are addressed, consistent with the requirements set forth in Chapter 40A.03 of the City's Municipal Code.

The SEIR further evaluated impacts to agricultural land in Impact 3-8, specifically, whether the proposed uses for the DISC project could impair ongoing agricultural operations occurring adjacent to the project site. The SEIR noted that the Yolo County Agricultural Commissioner has established conditions covering the use of restricted materials, the purposes of which are to minimize undue hazards and risks associated with the application and handling of restricted materials and the potential for pesticide drift to proximate urbanized areas and sensitive uses. Condition #1 addresses the use of restricted materials in the proximity of environmentally sensitive areas, which include residential areas, schools, playgrounds, bus stops (when in use), parks, hospitals, shopping centers, occupied labor camps, organic crops, estuaries, reservoirs, lakes, waterways, livestock, state wildlife management areas, and critical habitats of rare, endangered or threatened species. According to Condition #1, restricted pesticides shall not be applied in close proximity to environmentally sensitive areas unless the minimum distance between the closest operating nozzle and the sensitive area is maintained as follows:

TYPE OF PESTICIDE APPLICATION EQUIPMENT	MINIMUM DISTANCE BETWEEN CLOSEST OPERATING NOZZLE AND THE NON-TARGET AREA	
	DANGER	WARNING/CAUTION
AIRCRAFT	500 FEET	300 FEET
AIR BLAST ORCHARD SPRAYER	300 FEET	50 FEET
GROUND RIGS (except when applying baits)**	100 FEET	50 FEET

The almond orchard to the east of the DISC site is not aerially sprayed. The orchard uses an air blast orchard sprayer for pesticide application, which may be applied within 300 feet of sensitive areas on the DISC site. The DISC project would have included two potentially sensitive areas: the agricultural transition area and the proposed residences. The effects of the environment on the project's future residents and users was (and still is) outside of the scope of CEQA review. Thus, the following discussion is included in the SEIR insofar as it may relate to induced conversion of adjacent, off-site agricultural lands.

Condition #1 does not include bicycle/pedestrian trail within its definitions for environmentally sensitive areas and the City Municipal Code specifically identifies bike paths, lighting, and benches as appropriate uses within the 50-foot agricultural transition area (Municipal Code Section 40A.01.050[d]). Users will not be compelled to use the trail, use will be completely voluntary, and users with concerns about agricultural operations on adjoining fields on any given day could avoid or leave the trail during periods of any given agricultural activity. Additionally, the City views the trails and buffer areas as defining components of the community's pro-agriculture and open space values. Moreover, the City has consistently implemented agricultural buffers of the same minimum size and conceptual design in other locations. The 150-foot width is a City minimum and the SEIR appropriately relied on such minimum distance. The SEIR noted that the Yolo County Agricultural Commissioner has indicated that he would consider recreational uses proximate to a farm operation that applies restricted materials to be potentially incompatible. Nevertheless, the pedestrian/bike path would be located further than 100 feet from the project's eastern and northern property lines, and thus, outside of the range of any ground rig spraying that could occur on the neighboring agricultural property. Furthermore, the nearest possible distance at which ground rigs could spray pesticides would be approximately 120 feet from the proposed DISC pedestrian/bike trail, which, per the Yolo County Agricultural Commissioner's conditions, would be considered acceptable for ground rig application. The DiSC 2022 project similarly includes a bicycle/pedestrian trail along the northern and eastern perimeters of the site, and thus, the above discussion is applicable to the DiSC 2022 project. There are no changes to the proposed DiSC 2022 project that would alter the conclusions of the SEIR. In actuality, due to the reduced scale of the currently proposed project, the amount of perimeter trail would be reduced, which could reduce the amount of potential conflict between trail users and adjacent agricultural operations.

The DISC project would introduce a sensitive use identified in Condition #1 (residential housing) to the DISC site. However, the majority of the residences would be setback from the agricultural operations to the north and east at a distance greater than 300 feet. One residential area would have been located central to the site, south of the MDC, and only slightly beyond the 150-foot agricultural buffer separating the DISC project from the agricultural operations to the east. Such residences would have been within 300 feet of the neighboring almond orchard where pesticides are applied. Because a total setback of 300 feet would have been required from residential uses, approximately 130 feet of the required setback would have needed to encroach into the adjacent farmer's orchard. Therefore, the SEIR included Mitigation Measures 3-8(a), which required barrier plantings in accordance with NRSC guidelines, to reduce potential impacts associated with the application of pesticides to a less-than-significant level. In addition, Mitigation Measure 3-8(b) required the applicant to mitigate for potential pesticide drift through use of a windscreen, in a manner consistent with Mitigation Measure 3-8(a), prior to the public use of the recreational bicycle and pedestrian trails within the agricultural transition area. The DiSC 2022 project would similarly place residences around 50 feet beyond the proposed 150-foot agricultural buffer (e.g., near the northern portion of the site), though many residences would be located farther away from the ag buffer. Thus, the analysis and mitigation contained in the SEIR would be applicable to the DiSC 2022 project; and the significant impact would not be substantially increased in severity.

Based on the above information, the currently proposed project would not result in new significant impacts or substantially more severe significant impacts related to other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use or conversion of forest land to non-forest use beyond what were previously identified in the SEIR. Therefore, the proposed project would be consistent with the conclusions of the SEIR.

Conclusion

Based on the above, the DiSC 2022 project would not result in any changes, new circumstances, or new information that would involve new significant impacts or substantially more severe significant impacts from what had been anticipated for the project site in the previous CEQA documents related to agriculture and forestry resources. It should be noted that the previously required mitigation measures from the SEIR, as presented below, would still be required to be implemented for the proposed project.

Mitigation Measure(s)

The following mitigation measure(s) would apply to the currently proposed DiSC 2022 project.

Mitigation Measures from the Previous CEQA Documents

The mitigation measures from the SEIR applicable to the proposed project are presented below. It should be noted that the mitigation measures formerly referenced "ARC" as part of the previous SEIR; thus, such references have been changed to "DiSC 2022" in this Addendum in ~~strikethrough~~ and double underline format. No other changes have been made to the following mitigation.

~~ARC~~ DiSC 2022 Project

3-5(a) Prior to initiation of grading activities for each phase of development at the ~~ARC~~ DiSC 2022 Site, the project applicant for the ~~ARC~~ DiSC 2022 Site shall set aside in perpetuity, at a minimum ratio of 2:1 of active agricultural acreage, an amount equal to the current phase. The applicant may choose to set aside in perpetuity an amount equal to the remainder of the ~~ARC~~ DiSC 2022 Site instead of at each phase. The agricultural land shall be located elsewhere in unincorporated Yolo County, through the purchase of development rights and execution of an irreversible conservation or agricultural easement, consistent with Section 40A.03.025 of the Davis Municipal Code. The location and amount of active agricultural acreage for the proposed project is subject to the review and approval by the City Council. The amount of agricultural acreage set aside shall account for farmland lost due to the conversion of the ~~ARC~~ DiSC 2022 Site, as well as any off-site improvements, including but not necessarily limited to the off-site sewer pipe. The amount of agricultural acreage that needs to be set aside for off-site improvements shall be verified for each phase of the ~~ARC~~ DiSC 2022 Project during improvement plan review. Pursuant to Davis Code Section 40A.03.040, the agricultural mitigation land shall be comparable in soil quality with the agricultural land whose use is being changed to nonagricultural use. The easement land must conform with the policies and requirements of LAFCo including a LESA score no more than 10 percent below that of the project site. The easement instrument used to satisfy this measure shall comply with Section 40A.03.060 of the City's Municipal Code.

3-5(b) The ~~ARC~~ DiSC 2022 Master Owners' Association (MOA) shall encourage, and exercise control over, interim agricultural operations on-site through specific terms of agricultural leases. Terms shall specify duration of leases and require each new leasee to coordinate with the Yolo County Agricultural Commissioner to determine appropriate types of agricultural crops and uses for urban/ag interface areas. The MOA shall work cooperatively with the

farmer(s) to minimize incompatibilities between ongoing agricultural operations on-site and ~~ARC~~ DiSC 2022 businesses, such that the ~~ARC~~ DiSC 2022 Site can continue to be farmed successfully until the ~~ARC~~ DiSC 2022 Project is fully built out. Minimization measures should include the appropriate timing of on-site agricultural operations (i.e., use of equipment) to avoid early morning or nighttime noise generation; prohibiting disking operations during periods of high winds; minimization of pesticide applications; etc.

~~ARC~~ DiSC 2022 Project

3-7(a) Implement Mitigation Measures 3-5(a) and (b).

Mace Triangle

3-7(b) Prior to initiation of grading activities for APN 033-630-012 or APN 033-630-011 within the Mace Triangle Site, the future project applicant(s) shall set aside in perpetuity, at a minimum ratio of 2:1 of active agricultural acreage, the following approximate acreages of protected farmland for agricultural purposes:

- *APN 033-630-011 (Ikeda's): Mitigate conversion of approximately 2.5 acres at a 2:1 ratio = 5 acres*
- *APN 033-630-012 (Easternmost Parcel): Mitigate conversion of approximately 8.4 acres at a 2:1 ratio = 16.8 acres*

The agricultural land shall be located elsewhere in unincorporated Yolo County, through the purchase of development rights and execution of an irreversible conservation or agricultural easement, consistent with Section 40A.03.025 of the Davis Municipal Code. The location and amount of active agricultural acreage for the proposed project is subject to the review and approval by the City Council. The amount of agricultural acreage set aside shall account for farmland lost due to the conversion of the Mace Triangle Site as well as any off-site improvements. Pursuant to Davis Code Section 40A.03.040, the agricultural mitigation land shall be comparable in soil quality with the agricultural land whose use is being changed to nonagricultural use. The easement land must conform with the policies and requirements of LAFCo including a LESA score no more than 10 percent below that of the Mace Triangle Site. The easement instrument used to satisfy this measure shall comply with Section 40A.03.060 of the City's Municipal Code.

~~ARC~~ DiSC 2022 Project

3-8(a) Prior to the construction of residential uses within 300 feet of neighboring orchards, the ~~ARC~~ DiSC 2022 Project applicant shall mitigate for potential pesticide drift through the implementation of barrier plantings. The applicant shall utilize the Natural Resources Conservation Services'[3] best practices for establishing an appropriate windscreen between residential structures and adjacent agricultural operations to the satisfaction of the Yolo County Agricultural Commissioner. Written confirmation of compliance shall be provided to the Community Development and Sustainability Director prior to issuance of residential building permit within 300 feet of neighboring agriculture.

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[3] See Natural Resources Conservation Service, *Windbreak/Shelterbelt Establishment, Conservation Practice Job Sheet 380*. April 2013. As noted, when used as a living screen, windbreaks control views, reduce noise, and intercept airborne particulate matter, chemicals and odors.

3-8(b) Prior to the public use of the recreational bicycle and pedestrian trails located within the agricultural transition area, the ~~ARC~~ DiSC 2022 Project applicant shall mitigate for potential pesticide drift. Mitigation shall be achieved pursuant to utilization of a windscreen in a manner consistent with MM 3-8(a). Alternatively, applicant shall enter into an agreement with the neighboring property owner pursuant to which the agricultural operator provides notice to the ~~ARC~~ DiSC 2022 Project applicant or the MOA of the days on which pesticide application will occur and the applicant shall close the recreational trails during the period in which pesticides are applied within 300 feet of the trail. Notice of closure shall be provided by the MOA to disseminate to employees and residences, and closure notice shall be posted at all points of access onto the impacted portion of trail during the period of pesticide application.

Modified Mitigation Measures

None required.

Additional Project-Specific Mitigation Measures

None required.

Environmental Issue Area	Where Impact Was Analyzed in Previous CEQA Documents?	Do Proposed Changes Involve New or More Severe Impacts?	Any New Circumstances Involving New or More Severe Impacts?	Any New Information Requiring New Analysis or Verification?
III. Air Quality. *Would the project:*				
a. Conflict with or obstruct implementation of the applicable air quality plan?	2020 SEIR pgs. 3-53 to 3-61	No	No	No
b. Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard?	2020 SEIR pgs. 3-291 to 3-299	No	No	No
c. Expose sensitive receptors to substantial pollutant concentrations?	2020 SEIR pgs. 3-61 to 3-67	No	No	No
d. Result in other emissions (such as those leading to odors) adversely affecting a substantial number of people?	2020 SEIR pgs. 3-67 to 3-68	No	No	No

Discussion

Since the release of the certified Final SEIR, the project site has remained vacant and undeveloped, and substantial changes in the environmental and regulatory settings related to air quality, as described in the SEIR, have not occurred. It is noted that the California Emissions Estimator Model (CalEEMod) has been updated since the certification of the SEIR. The updates to CalEEMod include changes to the emission rates of certain activities, as well as accounting for compliance with the most recent (2019) California Building Standards Code (CBSC). In addition, at the time of preparation of the SEIR, the Sacramento Metropolitan Air Quality Management District's (SMAQMD's) *Guidance to Address the Friant Ranch Ruling for CEQA Projects in the Sac Metro Air District* (Guidance), which was used to address potential health effects associated with criteria pollutants, was only in draft form; however, the Guidance has since been formally adopted by the SMAQMD Board in October of 2020.

Relative to the DISC project, the DiSC 2022 project would involve a substantially reduced development footprint area, due to the currently proposed project excluding the parcel immediately north of the MDC, which was a portion of the previous DISC project site. By excluding the 92 acres north of the MDC, the DiSC 2022 project would encompass 102 acres, as compared to the 194 acres planned for the previous DISC project. The DiSC 2022 project would include similar project components as the previous DISC project, but at a reduced scale. In addition, the DiSC 2022 project would not include implementation of the off-site detention basin that was proposed as an option for the previous DISC project and, therefore, would not require the associated 130,000 cubic yards of soil export. Thus, under the DiSC 2022 project, construction intensity would be reduced and the emissions associated with project operations are anticipated to be lower, as compared to the previous DISC project. Project changes or circumstances that would adversely affect the analysis in the SEIR related to air quality have not occurred.

a. The SEIR analyzed the DISC project's potential to conflict with or obstruct implementation of an applicable air quality plan by calculating an estimate of emissions associated with the project and

comparing such emissions to the thresholds of significance adopted by the Yolo-Solano Air Quality Management District (YSAQMD). The YSAQMD has established significance thresholds for emissions of the ozone precursors reactive organic gases (ROG) and oxides of nitrogen (NO_X), expressed in tons per year (tons/yr), as well as for particulate matter 10 microns in diameter or smaller (PM_{10}), expressed in pounds per day (lbs/day). The thresholds of significance are presented in Table 4.

Table 4
YSAQMD Thresholds of Significance

Pollutant	Construction Thresholds	Operational Thresholds
ROG	10 tons/yr	10 tons/yr
NO_X	10 tons/yr	10 tons/yr
PM_{10}	80 lbs/day	80 lbs/day

Source: YSAQMD. Handbook for Assessing and Mitigating Air Quality Impacts. July 11, 2007.

The currently proposed project's construction and operational emissions have been estimated and compared to the DISC project emissions identified in the SEIR, as well as the YSAQMD's thresholds of significance. The results of the analysis are discussed further below.

Construction Emissions

In the SEIR, construction of Phase 1 of the DISC project was applied to CalEEMod for the construction emissions estimate, which was determined to represent the most intense phase of construction. Based on the modeling conducted for the SEIR, construction-related emissions associated with the DISC project were determined not to exceed the YSAQMD's thresholds of significance for ROG or PM_{10}. However, construction emissions were found to exceed the YSAQMD's threshold of significance for NO_X, and, as a result, the SEIR required Mitigation Measure 3-10 to reduce the impact to a less-than-significant level. Mitigation Measure 3-10 of the SEIR required that all heavy-duty equipment to be used during project construction would achieve, at a minimum, a 20 percent reduction in NO_X as compared to the 2023 California Air Resources Board fleet average.

Similar to the analysis conducted in the SEIR, for the purposes of this Addendum, construction of Phase 1 of the DiSC 2022 project was modeled using CalEEMod in order to estimate the worst-case construction emissions associated with the proposed project. An updated version of CalEEMod (Version 2020.4.0) was released in June of 2021, while the SEIR relied on the previous version of the model (Version 2016.3.2). Version 2020.4.0 of CalEEMod assumes compliance with the 2019 CBSC, as opposed to Version 2016.3.2, which assumes compliance with the 2016 CBSC. In addition, Version 2020.4.0 incorporates updated vehicle emissions factors and updated emission factors associated with electricity generation, where emission factors tend to decrease over time due to evolving technologies and increasingly stringent regulations governing air quality. The modeling results are included as Appendix A of this Addendum. The following assumptions were made for the project construction modeling:

- Demolition would not be required;
- Construction of the project was assumed to commence in Spring 2023 and Phase 1 construction would occur over approximately three years;
- The duration of site preparation, grading, building construction, and architectural coating was adjusted based on applicant-provided information; and
- Phase 1 of the DiSC 2022 project is anticipated to include buildout of 550,000 sf of R&D uses, 80,000 sf of retail uses, 0.60-acre for the transit plaza, 754 surface parking lot

spaces, 388 parking garage spaces, 183 multi-family residential units, and 92 townhouse units.

Although the general information for construction of the DISC and the DiSC 2022 projects is known or can be reasonably estimated, a similar level of information for the Mace Triangle site is not currently available and cannot be reasonably estimated. Due to the lack of project-specific information for the Mace Triangle site, any construction emissions modeling prepared for the Mace Triangle site would be speculative, and would not allow for a meaningful analysis of potential future development of the Mace Triangle site. Consequently, construction emissions resulting from speculative future development of the Mace Triangle site have not been modeled at this time. Although speculative, it is reasonable to assume that construction of the Mace Triangle site would occur after Phase 1 of the proposed project, given that a developer for the Mace Triangle site has not been identified at this time. Because construction within the Mace Triangle site is not anticipated to overlap with Phase 1 of the DiSC 2022 project, and that the size of the future Mace Triangle site development is smaller relative to the development included in each phase of the DiSC 2022 project, even if construction of the Mace Triangle site occurs simultaneous with future phases of the DiSC 2022 project, the total amount of emissions occurring at one time would not exceed the worst-case scenario described above and analyzed herein.

Table 5 presents the maximum unmitigated construction emissions associated with the DISC project, as presented in Table 3-8 of the SEIR, in comparison to the maximum unmitigated construction emissions associated with the proposed DiSC 2022 project.

Table 5
Maximum Unmitigated Construction-Related Emissions: Phase 1 of the Previous DISC Project Compared to Phase 1 of the Proposed DiSC 2022 Project

	ROG (tons/yr)	NO_X (tons/yr)	PM_{10} (lbs/day)
Previous DISC Project	7.50	12.19	28.89
Proposed DiSC 2022 Project	1.77	3.24	21.06
Net Difference	*-5.73*	*-8.95*	*-7.83*
YSAQMD Threshold	**10**	**10**	**80**
Exceed?	**NO**	**NO**	**NO**

Note: Cells shaded in yellow represent emissions that exceed the applicable threshold of significance.

Source: CalEEMod, February 2020 and CalEEMod, October 2021.

As shown in the table, a net decrease in construction-related emissions associated with Phase 1 of the DiSC 2022 project would occur, as compared to Phase 1 of the DISC project. In addition, the construction-related emissions associated with the DiSC 2022 project would be below the applicable thresholds of significance for all criteria pollutants. Accordingly, construction of the DiSC 2022 project would reduce the previously identified impact related to construction criteria pollutant emissions to a less-than-significant level and Mitigation Measure 3-10 set forth in the SEIR for the DISC project would no longer be required for the proposed project. Therefore, the proposed project would not result in any new or more severe significant impacts related to construction criteria pollutant emissions from what was previously analyzed in the SEIR.

Operational Emissions

In the SEIR, emissions associated with operations of the DISC project and the Mace Triangle site were estimated for the year 2035. The DISC project was determined to result in operational emissions of ROG, NO_X, and PM_{10} in excess of the applicable YSAQMD thresholds of significance under the Existing Plus Project conditions and under Cumulative Plus Project conditions, as presented in Table 3-9 of the SEIR (see Table 6 of this Addendum). Accordingly, the SEIR concluded that the DISC project would result in a contribution to the region's nonattainment status of ozone and PM, and could violate an air quality standard or contribute substantially to an existing or projected air quality violation, and a significant impact was identified. Mitigation Measure 3-11 was required, which involved the project applicant developing and implementing a plan to reduce criteria pollutant emissions during operations through actions such as implementing a Traffic Demand Management Program, using passive heating and cooling systems, and providing electric vehicle charging stations in excess of State and local standards. Even after implementation of Mitigation Measure 3-11, the impact was determined to remain significant and unavoidable.

The DiSC 2022 project would include similar project components as the previous DISC project, but at a reduced scale. As noted previously, the CalEEMod software was updated since preparation of the SEIR. CalEEMod 2016.3.2 assumed that roadways in the YSAQMD were not paved; however, one of the updates that took place for CalEEMod 2020.4.0 included the assumption that roadways in the YSAQMD area are paved. As a result, the modeling conducted for this Addendum did not need to apply corrections regarding the percentage of paved roadways, as was applied to the modeling conducted for the previous DISC project. Emissions related to operations of the proposed DiSC 2022 project were modeled in CalEEMod Version 2020.4.0 under the following assumptions:

- Project land uses were based on the land uses presented in Section D of this Addendum (refer to Table 4);
- Project-related trip rates and vehicle miles traveled (VMT) were adjusted based on project-specific information from Fehr and Peers;[4]
- Future residences would not include fireplaces; and
- In compliance with YSAQMD rules and regulations, only low-volatile organic compound containing cleaning products would be used on-site.

In addition to the emissions modeling of the proposed DiSC 2022 project, and in order to be consistent with the SEIR, operations of a potential future buildout scenario for the Mace Triangle site were also modeled. The emissions modeling for the Mace Triangle site relied on the following assumptions:

- Mace Triangle site land uses were based on those assumed in the MRIC Certified Final EIR;
- Mace Triangle site-related trip rates and VMT were adjusted based on project-specific information from Fehr and Peers;[5] and
- In compliance with YSAQMD rules and regulations, only low-volatile organic compound containing cleaning products would be used on the site.

[4] Fehr and Peers. *Davis Innovations & Sustainability Campus 2022 (DiSC 2022), Volume 1 – Transportation Impact Study*. September 2021.

[5] Fehr and Peers. *Davis Innovations & Sustainability Campus 2022 (DiSC 2022), Volume 1 – Transportation Impact Study*. September 2021.

As noted above, and consistent with the analysis in the SEIR, CalEEMod was adjusted to reflect project-specific trip generation and VMT information from Fehr and Peers. Fehr and Peers prepared an operational analysis of the proposed project under two scenarios: an Existing Plus Project scenario and a Cumulative Plus Project scenario. Although the trip generation rates did not vary between the two scenarios, the VMT rates did vary. Consequently, operations of the proposed project have been modeled under both scenarios. The modeling results are included as Appendix A to this Addendum.

In the SEIR, for the purposes of the air quality analysis, an operational year of 2035 was selected as the year for which project modeling was conducted. However, the proposed DiSC 2022 project is anticipated to be fully operational by approximately 2033 and, thus, the modeling was conducted for the anticipated first fully operational year of 2033. To maintain consistency between the emissions modeling prepared for the DiSC 2022 project and the Mace Triangle site, an operational year of 2033 was also used for the Mace Triangle site. Various sources of emissions, such as vehicle fleets and electricity generation are assumed by CalEEMod to become less emissions intensive with time, thus, the selection of the year 2033 as the operational year represents a conservative approach to analysis, as compared to the year 2035 that was used in the SEIR. Operational emissions associated with the previous DISC project and the Mace Triangle site in the year 2035, as compared to operations of the proposed DiSC 2022 project and Mace Triangle site during an operational year of 2033, are presented in Table 6.

Table 6
Maximum Unmitigated Operational Emissions:
Previous DISC Project and Mace Triangle Site Compared to Proposed DiSC 2022 Project and Mace Triangle Site

	ROG (tons/yr)	NO_X (tons/yr)	PM_{10} (lbs/day)
Existing Plus Project Conditions			
Previous DISC Project	19.41	42.25	230.47
Mace Triangle Site	0.44	1.35	7.29
Previous DISC Project Total	*19.85*	*43.60*	*237.76*
Proposed DiSC 2022 Project	13.45	11.34	108.27
Mace Triangle Site	0.72	0.81	8.41
Proposed DiSC 2022 Project Total	*14.17*	*12.15*	*116.68*
Net Difference	*-5.68*	*-31.45*	*-121.08*
YSAQMD Threshold	**10**	**10**	**80**
Exceed?	**YES**	**YES**	**YES**
Cumulative Plus Project Conditions			
Previous DISC Project	19.04	39.31	188.92
Mace Triangle Site	0.43	1.23	5.74
Previous DISC Project Total	*19.47*	*40.54*	*194.66*
Proposed DiSC 2022 Project	12.82	10.00	91.01
Mace Triangle Site	0.66	0.68	6.63
Proposed DiSC 2022 Project Total	*13.48*	*10.68*	*97.64*
Net Difference	*-5.99*	*-29.86*	*-97.02*
YSAQMD Threshold	**10**	**10**	**80**
Exceed?	**YES**	**YES**	**YES**

Note: Cells shaded in yellow represent emissions that exceed the applicable threshold of significance.

Source: CalEEMod, February 2020 and CalEEMod, October 2021.

As presented in the table, operations of the proposed DiSC 2022 project would result in a net decrease in criteria pollutant emissions as compared to operations of the previous DISC project. However, like the DISC project, operational emissions of ROG, NO_X, and PM_{10} would exceed the applicable YSAQMD thresholds of significance under the Existing Plus Project conditions and under Cumulative Plus Project conditions for the DiSC 2022 project. Thus, implementation of Mitigation Measure 3-11 would still be required for the DiSC 2022 project. In addition, similar to the conclusion made in the SEIR, significant uncertainty exists as to the degree to which the individual emissions reduction actions set forth by Mitigation Measure 3-11 could be implemented. Given the uncertainty of implementation of Mitigation Measure 3-11, the impact of the proposed DiSC 2022 project would remain significant and unavoidable, similar to the previous conclusion within the SEIR. Overall, the proposed project would not result in any new or more severe significant impacts related to operational criteria pollutant emissions from what was previously analyzed in the SEIR.

Conclusion

Based on the above, construction of the DiSC 2022 project would reduce the previously identified significant impact related to construction criteria pollutant emissions to a less-than-significant level and Mitigation Measure 3-10 set forth in the SEIR for the DISC project would no longer be required. However, consistent with the SEIR analysis for the previous DISC project, operations of the proposed DiSC 2022 project would result in a significant and unavoidable impact, even with incorporation of Mitigation Measure 3-11 related to criteria pollutant emissions. Overall, the proposed project would not result in new significant impacts or substantially more severe significant impacts from what was previously analyzed in the SEIR related to a conflict with or obstruction of implementation of an applicable air quality plan.

b. Air pollution is largely a cumulative impact. Cumulative future development would result in increases in the amount of criteria air pollutants in the ambient air, which would contribute towards the current nonattainment status of the ozone and PM ambient air quality standards (AAQS). Thus, impacts related to cumulative development within the Sacramento Valley Air Basin (SVAB) could be considered cumulatively significant.

Cumulative Increase in Criteria Pollutants

The YSAQMD has established mass emissions thresholds of significance for criteria pollutants, which are intended to be the level at which the YSAQMD considers an individual project to have the potential to impede attainment of the AAQS and, thus, the level necessary to reduce regional emissions associated with anticipated future growth to AAQS. As the YSAQMD's mass emissions thresholds of significance for criteria pollutants represent the level at which an individual project has the potential to impede attainment of AAQS, as well as the level necessary to reduce regional emissions associated with anticipated future growth to AAQS, the YSAQMD's approach to determining cumulative air quality impacts from development projects is based on whether a project's individual emissions would exceed the YSAQMD thresholds of significance. If a project's estimated emissions would be below the YSAQMD thresholds of significance, the project would not be expected to result in a cumulatively considerable contribution to a significant cumulative impact.

Based on the analysis conducted in the SEIR, the SEIR concluded that buildout of the previous DISC project and the Mace Triangle site, in conjunction with cumulative buildout, would result in a substantial increase in regional emissions from what has been anticipated for the area. Even with the implementation of Mitigation Measure 3-88, which requires implementation of Mitigation

Measure 3-11, the impact was determined to remain cumulatively considerable and significant and unavoidable.

Similar to the previous DISC project, as demonstrated in Table 6, operations of the DiSC 2022 project and the Mace Triangle site would result in emissions of ROG, NO_X, and PM_{10} in excess of the YSAQMD's thresholds of significance. As a result, Mitigation Measure 3-88, which requires implementation of Mitigation Measure 3-11, would still be required for the proposed project. As described above, due to the uncertainty regarding the efficacy of the actions set forth within Mitigation Measure 3-11, and consistent with the conclusion of the SEIR, the proposed project's impact related to a cumulatively considerable net increase in criteria pollutant emissions would remain cumulatively considerable and significant and unavoidable.

Health Effects Due to Cumulative Increase in Criteria Pollutants

As discussed in the SEIR, rulings from the California Supreme Court (including the *Sierra Club v. County of Fresno* (2018) 6 Cal. 5th 502 case regarding the proposed Friant Ranch Project) have underscored the need for analysis of potential health impacts resulting from the emission of criteria pollutants during operations of proposed projects. Although analysis of project-level health risks related to the emission of carbon monoxide (CO) and toxic air contaminants (TACs) has long been practiced under CEQA, the analysis of health impacts due to individual projects resulting from emissions of criteria pollutants is a relatively new field. Health risks from criteria pollutants are largely a cumulative impact and occur over entire air basins, such as the Sacramento Federal Nonattainment Area (SFNA) for ground-level ozone, which encompasses all of Sacramento and Yolo counties, and portions of Placer, El Dorado, Solano, and Sutter counties. As a result, attributing health risks at any specific geographic location to a single proposed project is not feasible.

At the time of preparation of the SEIR, the SMAQMD had released a *Draft Guidance to Address the Friant Ranch Ruling for CEQA Projects in the Sac Metro Air District* (Draft Guidance) for the analysis of criteria emissions in areas within the SMAQMD's jurisdiction.[6] The Draft Guidance had not been adopted by YSAQMD, nor had YSAQMD adopted any other such guidance. Although the project site is not located in the jurisdiction of the SMAQMD, in the absence of any other available guidance, the SMAQMD's Draft Guidance was used to prepare a preliminary analysis of the potential health risks that could occur. According to the SMAQMD Draft Guidance, projects with emissions between two and six times greater than SMAQMD's adopted thresholds were directed to use the SMAQMD Strategic Area Project Health Screening Tool.[7] Based on the unmitigated project criteria pollutant emissions calculated for the DISC project in comparison to the SMAQMD's thresholds of significance, SMAQMD's Strategic Area Project Health Screening Tool was determined to be the applicable tool for estimating the health risks related to criteria pollutant emissions associated with the DISC project. For the analysis presented in the SEIR, the operational criteria pollutant emissions estimated for the DISC project were input into SMAQMD's Strategic Area Project Health Screening Tool to determine the associated health risks. It should be noted that the Tool estimates health risks for projects in proximity to a chosen "Strategic Area Location," which are distributed throughout the SFNA. The Strategic Area Location used for the DISC project analysis was the Vacaville location, which was chosen based on the determination that the location presented a worst-case estimation of health effects for the DISC project.

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6 Sacramento Metropolitan Air Quality Management District. *Draft Guidance to Address the Friant Ranch Ruling for CEQA Projects in the Sac Metro Air District*. January 2020.

7 Sacramento Metropolitan Air Quality Management District. *Guidance to Address the Friant Ranch Ruling for CEQA Projects in the Sac Metro Air District* [pgs 5-10]. October 2020.

The SEIR concluded that health risks resulting from criteria pollutant emissions associated with operations of the DISC project would represent a small fraction of the background rate of health incidences due to cumulative development in region. Nonetheless, implementation of the DISC project was determined to result in an increase in the average incidences of health effects per year due to both ozone and $PM_{2.5}$ emissions. The SEIR states that YSAQMD, SMAQMD, nor any other air district in California has yet adopted thresholds of significance for criteria pollutant health risks. In the absence of adopted thresholds of significance, and despite the highly speculative nature of the health risk analysis, because the DISC project was determined to result in emissions of criteria pollutants in excess of YSAQMD's thresholds of significance, and because emissions of criteria pollutants from the project were anticipated to result in an increased average incidence of health risks per year, for the purposes of the SEIR, the DISC project was considered to result in a cumulatively considerable net increase in health risks due to criteria pollutants. As a result, the SEIR required implementation of Mitigation Measure 3-88, which requires implementation of Mitigation Measure 3-11. However, as noted in the SEIR, because additional feasible mitigation measures to further reduce operational criteria pollutant emissions associated with the project to below the applicable YSAQMD thresholds of significance do not exist, and because a threshold of significance for health effects of criteria pollutants has not been adopted, the impact was determined to remain cumulatively considerable and significant and unavoidable.

Since the preparation of the SEIR, SMAQMD revised the Draft Guidance in response to feedback received during the public review period for the Draft Guidance. In October 2020, SMAQMD adopted the *Guidance to Address the Friant Ranch Ruling for CEQA Projects in the Sac Metro Air District* (Guidance). One change that occurred when finalizing the Guidance is that the Strategic Area Project Health Screening Tool is now recommended for use for projects with criteria pollutant emissions that are between two and eight times greater than SMAQMD's thresholds, whereas the tool was previously only recommended for use for projects with emissions between two and six times greater than SMAQMD's adopted thresholds. It is noted that, although the Guidance is now adopted by SMAQMD, neither SMAQMD nor YSAQMD have adopted thresholds of significance related to health effects from criteria pollutants.

The proposed project's health risks due to operational criteria pollutant emissions have been analyzed using the adopted Strategic Area Project Health Screening Tool and compared to the results for the DISC project that were presented in the SEIR. Similar to the DISC project analysis, the Vacaville Strategic Area Location was selected in order to be consistent with the analysis in the SEIR. Table 7 and Table 8 below present the health risks related to operational criteria pollutant emissions resulting from implementation of the DISC Project and Mace Triangle site as compared to the proposed DiSC 2022 project and Mace Triangle site under both the Existing Plus Project and Cumulative Plus Project VMT scenarios. As presented in the tables, a net decrease in adverse health effects would occur with implementation of the DiSC 2022 project as compared to the previous DISC project. Nonetheless, in the absence of adopted thresholds of significance, because emissions of criteria pollutants from the proposed DiSC 2022 project are anticipated to result in an increased average incidence of health risks per year, the DiSC 2022 project, like the previous DISC project, is considered to result in a cumulatively considerable net increase in health risks due to criteria pollutants for which the project region is in non-attainment. Thus, the impact would be cumulatively considerable and Mitigation Measure 3-88, which requires implementation of Mitigation Measure 3-11, would still be required for the proposed project.

Table 7
SMAQMD Health Effects Tool: Existing Plus Project Conditions
Previous DISC Project and Mace Triangle Site Compared to
Proposed DiSC 2022 Project and Mace Triangle Site

Health Endpoint	Age Range[1]	Previous DISC Project		Proposed DiSC 2022 Project		Net Difference in Percentage (%)
		Incidences (per year)[2] (Mean)	Percent of Background Health Incidence[3]	Incidences (per year)[2] (Mean)	Percent of Background Health Incidence[3]	
$PM_{2.5}$						
Emergency Room Visits, Asthma	0 - 99	1.8013	0.2272%	1.8	0.0013%	*-0.23%*
Mortality, All Cause	30 - 99	3.4129	0.1853%	3.3	0.0012%	*-0.18%*
Hospital Admissions, Asthma	0 - 64	0.0659	0.0745%	0.064	0.00084%	*-0.07%*
Hospital Admissions, All Cardiovascular (less Myocardial Infarctions)	65 - 99	0.2169	0.0206%	0.21	0.00018%	*-0.02%*
Hospital Admissions, All Respiratory	65 - 99	0.5179	0.0573%	0.50	0.00042%	*-0.06%*
Acute Myocardial Infarction, Nonfatal	18 - 24	0.0001	0.0817%	0.00014	0.00055%	*-0.08%*
Acute Myocardial Infarction, Nonfatal	25 - 44	0.0068	0.0609%	0.0066	0.00058%	*-0.06%*
Acute Myocardial Infarction, Nonfatal	45 - 54	0.0178	0.0620%	0.017	0.00059%	*-0.06%*
Acute Myocardial Infarction, Nonfatal	55 - 64	0.0246	0.0510%	0.024	0.00058%	*-0.05%*
Acute Myocardial Infarction, Nonfatal	65 - 99	0.1176	0.0578%	0.11	0.00054%	*-0.06%*
Ozone						
Hospital Admissions, All Respiratory	65 - 99	0.2318	0.0257%	0.13	0.00031%	*-0.03%*
Mortality, Non-Accidental	0 - 99	0.1404	0.0114%	0.080	0.00013%	*-0.01%*
Emergency Room Visits, Asthma	0 - 17	1.2045	0.5014%	0.68	0.0058%	*-0.50%*
Emergency Room Visits, Asthma	18 - 99	1.9967	0.3614%	1.1	0.0043%	*-0.36%*

(Table continued on next page)

Table 7
SMAQMD Health Effects Tool: Existing Plus Project Conditions Previous DISC Project and Mace Triangle Site Compared to Proposed DiSC 2022 Project and Mace Triangle Site

Health Endpoint	Age Range[1]	Previous DISC Project		Proposed DiSC 2022 Project		Net Difference in Percentage (%)
		Incidences (per year)[2] (Mean)	Percent of Background Health Incidence[3]	Incidences (per year)[2] (Mean)	Percent of Background Health Incidence[3]	

Notes:
1 Affected age ranges are shown. Other age ranges are available, but the endpoints and age ranges shown here are the ones used by the USEPA in their health assessments. The age ranges are consistent with the epidemiological study that is the basis of the health function.
2 Health effects are shown in terms of incidences of each health endpoint and how it compares to the base (2035 base year health effect incidences, or "background health incidence") values. Health effects and background health incidences are across the Northern California model domain.
3 The percent of background health incidence uses the mean incidence. The background health incidence is an estimate of the average number of people that are affected by the health endpoint in a given population over a given period of time. In this case, these background incidence rates cover the modeled domain. Health incidence rates and other health data are typically collected by the government as well as the World Health Organization. The background incidence rates used here are obtained from BenMAP.

Source: SMAQMD, Strategic Area Project Health Effects Tool. 2020.

Table 8
SMAQMD Health Effects Tool: Cumulative Plus Project Conditions Previous DISC Project and Mace Triangle Site Compared to Proposed DiSC 2022 Project and Mace Triangle Site

Health Endpoint	Age Range[1]	Previous DISC Project		Proposed DiSC 2022 Project		Net Difference
		Incidences (per year)[2] (Mean)	Percent of Background Health Incidence[3]	Incidences (per year)[2] (Mean)	Percent of Background Health Incidence[3]	
$PM_{2.5}$						
Emergency Room Visits, Asthma	0 - 99	1.8013	0.2272%	1.8	0.0013%	*-0.23%*
Mortality, All Cause	30 - 99	3.4129	0.1853%	3.3	0.0012%	*-0.18%*
Hospital Admissions, Asthma	0 - 64	0.0659	0.0745%	0.064	0.00084%	*-0.07%*
Hospital Admissions, All Cardiovascular (less Myocardial Infarctions)	65 - 99	0.2169	0.0206%	0.21	0.00018%	*-0.02%*

(Table continued on next page)

Table 8
SMAQMD Health Effects Tool: Cumulative Plus Project Conditions Previous DISC Project and Mace Triangle Site Compared to Proposed DiSC 2022 Project and Mace Triangle Site

Health Endpoint	Age Range[1]	Previous DISC Project		Proposed DiSC 2022 Project		Net Difference
		Incidences (per year)[2] (Mean)	Percent of Background Health Incidence[3]	Incidences (per year)[2] (Mean)	Percent of Background Health Incidence[3]	
Hospital Admissions, All Respiratory	65 - 99	0.5179	0.0573%	0.50	0.00042%	*-0.06%*
Acute Myocardial Infarction, Nonfatal	18 - 24	0.0001	0.0817%	0.00014	0.00055%	*-0.08%*
Acute Myocardial Infarction, Nonfatal	25 - 44	0.0068	0.0609%	0.0066	0.00058%	*-0.06%*
Acute Myocardial Infarction, Nonfatal	45 - 54	0.0178	0.0620%	0.017	0.00059%	*-0.06%*
Acute Myocardial Infarction, Nonfatal	55 - 64	0.0246	0.0510%	0.024	0.00058%	*-0.05%*
Acute Myocardial Infarction, Nonfatal	65 - 99	0.1176	0.0578%	0.11	0.00054%	*-0.06%*
Ozone						
Hospital Admissions, All Respiratory	65 - 99	0.2318	0.0257%	0.13	0.00031%	*-0.03%*
Mortality, Non-Accidental	0 - 99	0.1404	0.0114%	0.080	0.00013%	*-0.01%*
Emergency Room Visits, Asthma	0 - 17	1.2045	0.5014%	0.68	0.0058%	*-0.50%*
Emergency Room Visits, Asthma	18 - 99	1.9967	0.3614%	1.1	0.0043%	*-0.36%*

Notes:
1 Affected age ranges are shown. Other age ranges are available, but the endpoints and age ranges shown here are the ones used by the USEPA in their health assessments. The age ranges are consistent with the epidemiological study that is the basis of the health function.
2 Health effects are shown in terms of incidences of each health endpoint and how it compares to the base (2035 base year health effect incidences, or "background health incidence") values. Health effects and background health incidences are across the Northern California model domain.
3 The percent of background health incidence uses the mean incidence. The background health incidence is an estimate of the average number of people that are affected by the health endpoint in a given population over a given period of time. In this case, these background incidence rates cover the modeled domain. Health incidence rates and other health data are typically collected by the government as well as the World Health Organization. The background incidence rates used here are obtained from BenMAP.

Source: SMAQMD, Strategic Area Project Health Effects Tool. 2020.

Similar to the conclusion of the SEIR for the DISC project and as noted above, due to the uncertainty regarding the efficacy of the actions set forth within Mitigation Measure 3-11, the impact would remain significant and unavoidable, however, less than the impacts associated with the previously approved DISC project. Therefore, impacts related to health effects due to a cumulative increase in criteria pollutant emissions would be similar, but lesser in magnitude under the proposed project as compared to the DISC project, and the conclusion of the SEIR would remain the same.

Conclusion

Buildout of the previous DISC project as well as the Mace Triangle site was anticipated to result in a cumulatively considerable and significant and unavoidable impact related to the cumulative emissions of operational criteria pollutants. Similar to the conclusions reached in the SEIR, the proposed DiSC 2022 project, combined with potential future buildout of the Mace Triangle site, would be anticipated to result in a significant contribution to cumulative emissions of criteria pollutants for which the project region is non-attainment. Notwithstanding, the DiSC 2022 project would result in a substantial reduction in criteria pollutant emissions, compared to the original DISC project. Therefore, the proposed project would not result in a new significant impact or substantially more severe significant impact than was previously concluded in the SEIR, with respect to a cumulatively considerable net increase in criteria pollutants.

c. The SEIR concluded that implementation of the previous DISC project would not result in the exposure of sensitive receptors to substantial pollutant concentrations sufficient to result in negative health effects. Consequently, the SEIR concluded that the DISC project would result in a less-than-significant impact and mitigation measures were not required.

The principal categories of pollutants of concern are CO, TACs, and criteria pollutants. The proposed project's potential to increase the aforementioned pollutant concentrations of concern from what was analyzed for the DISC project and concluded in the SEIR is discussed in further detail below.

Localized CO

Based on the analysis included in the SEIR, the highest predicted concentrations of localized CO would be associated with the worst-case intersections that would be affected by the DISC project traffic (i.e., the I-80 WB Ramps/Mace Boulevard and the I-80 EB Off-Ramp/Chiles Road intersections). Accordingly, such concentrations were modeled and were determined to be well below the 1-hour and 8-hour State AAQS for CO. Because all other affected intersections would involve lower volumes of traffic, less of a delay, and would be located further from the nearest sensitive receptor, the CO concentrations resultant of all other affected intersections would be less than what was estimated for the worst-case intersections. Therefore, the SEIR concluded that the DISC project's impact related to a contribution to local mobile-source concentrations of CO would be less than significant.

According to Fehr & Peers, the DiSC 2022 project would generate 11,284 net new daily vehicle trips, with 1,052 trips occurring during the AM peak hour and 1,155 trips occurring during the PM peak hour. For comparison, the previous DISC project would generate 23,888 new daily vehicle trips, with 2,232 trips occurring during the AM peak hour and 2,479 trips occurring during the PM peak hour. Due to the substantial decrease in vehicle trips as a result of the DiSC 2022 project, in comparison to the DISC project, the potential for the DiSC 2022 project to cause localized CO concentrations would be substantially less than the DISC project. Thus, a full CO analysis was not warranted for the proposed project. Because the DISC project was determined to result in a

less-than-significant impact related to localized CO emissions, the proposed DiSC 2022 project would also result in a less-than-significant impact related to such. Thus, the proposed project would not result in a new significant impact or substantially more severe significant impact related to localized CO than was previously identified in the SEIR

TAC Emissions

According to CARB's Handbook, major sources of air pollution and TACs include: high traffic freeways and roads; distribution centers; rail yards; ports; refineries; chrome plating facilities; dry cleaners; and large gas dispensing facilities. The proposed DiSC 2022 project would not include any such uses. The proposed DiSC 2022 project could include warehousing and distribution associated with R&D or advanced manufacturing land uses; however, distribution centers generating substantial heavy-truck traffic would not be permitted in the project's PD zoning. The CARB specifies that the term "distribution center", when considered a major source of TACs, would include 100 or more heavy truck trips per day. In addition, as noted in the SEIR, residential and commercial land uses are not typically associated with long-term TAC emissions. Thus, the SEIR concluded that the DISC project would not be expected to involve long-term operation of any stationary diesel engines or other major on-site stationary source of TACs. The DiSC 2022 project would include operations of a stormwater pump during operations, but the engine would be used intermittently and only during large storm events and, thus, would not be considered a major source of TACs.

However, the potential for the DISC project to generate emissions of TACs, particularly DPM, during construction was addressed in the SEIR. To analyze potential health risks to nearby receptors from DPM emissions associated with off-road equipment at the DISC project site, DPM emissions from project construction were estimated. DPM is considered a subset of $PM_{2.5}$; thus, the CalEEMod-estimated $PM_{2.5}$ emissions from construction exhaust was conservatively assumed to represent all DPM emitted on-site and related to hauling of material from the off-site drainage basin.

The increased cancer risk and non-cancer hazard index at the maximally exposed receptor resulting from exposure to the maximum quantified concentration of DPM over the entire work period for the DISC project are shown in Table 9 (Table 3-11 of the SEIR). As noted in the SEIR, and as presented herein, construction of the previous DISC project was determined not to result in health risks in excess of the YSAQMD thresholds being applied for the project. Consequently, the SEIR concluded that construction of the DISC project would not result in the exposure of nearby receptors to substantial concentrations of TACs.

Table 9
Cancer Risk and Hazard Index Associated with Unmitigated DISC Project Construction DPM

	Cancer Risk (per million persons)	Non-Cancer Hazard Index	
		Acute	Chronic
At Maximally Exposed Receptor	6.26	0.00	0.00
Thresholds of Significance	10	1.0	1.0
Exceeds Threshold?	**NO**	**NO**	**NO**

Source: CalEEMod, AERMOD, and HARP 2 RAST, January and February 2020.

The proposed project covers a substantially smaller area than the DISC project. In addition, the proposed project would not involve construction of the off-site detention basin and, as a result,

would not require the soil hauling associated with such. Construction of Phase 1 of the DiSC 2022 project is assumed to occur over approximately three years, whereas construction of Phase 1 of the previous DISC project was assumed to occur over approximately five years. Accordingly, the potential exposure period for any nearby sensitive receptors would be reduced under the proposed project. As presented in Table 5, construction of the DiSC 2022 project was demonstrated to be less emissions-intensive than the previous DISC project. Specifically, based on the modeling for the DISC project, as presented in the SEIR, the maximum emissions of exhaust $PM_{2.5}$ were estimated to be 0.28 tons/yr. For the proposed project, the maximum emissions of exhaust $PM_{2.5}$ are estimated to be 0.09 tons/yr. Accordingly, construction of the proposed project would result in fewer emissions of $PM_{2.5}$ as compared to the DISC project.

Given the shorter duration of construction and the reduced emissions of exhaust $PM_{2.5}$, construction of the proposed project is expected to result in fewer health-related impacts associated with the exposure of sensitive receptors to construction-related DPM than what would occur under the DISC project. Consistent with the conclusion presented in the SEIR, the DiSC 2022 project would also result in a less-than-significant impact related to exposing sensitive receptors to substantial pollutant concentrations during construction. Overall, impacts related to health effects from construction activities would be reduced under the proposed project as compared to the DISC project, and the conclusion of the SEIR would remain the same.

The SEIR also included an evaluation of cumulative health risks to nearby receptors associated with construction of the DISC project in conjunction with operations associated with the existing ARCO gas station (now a Chevron gas station) located immediately west of the project site, across Mace Boulevard. To provide a worst-case analysis, the SEIR conservatively estimated health risks from implementation of the DISC project at the nearest receptor, combined with the health risks associated with the ARCO gas station calculated by the YSAQMD. The resulting health risks are presented in Table 10 below (Table 3-11 of the SEIR). As noted in the SEIR, YSAQMD's thresholds of significance presented in the table are only intended for use when analyzing individual sources of health risks and, because the table presents health risks from two different sources, the use of YSAQMD's single-source threshold of significance is not necessarily applicable. Nevertheless, the total health risks were presented in the context of YSAQMD's single-source threshold for informational purposes. Even when the combined health risk of the DISC project construction and ARCO gas station operations were considered together, the combined health risks were determined not to exceed YSAQMD's single-source threshold of significance. Consequently, the SEIR concluded that implementation of the DISC project in combination with existing sources of TACs was determined not to result in the exposure of sensitive receptors to substantial pollutant concentrations, and a less-than-significant impact would occur.

As discussed above, the health risks associated with construction of the DiSC 2022 project would be less than what was anticipated for the DISC project, as evidenced by the reduced exhaust emissions of $PM_{2.5}$. The health risks associated with operations of the ARCO gas station are assumed to remain constant. Thus, given the reduced health risk associated with construction of the DiSC 2022 project, the overall health risk would be reduced under the proposed DiSC 2022 project as compared to the previous DISC project.

Therefore, impacts related to the cumulative health risk associated with construction of the DiSC 2022 project, combined with operations of the existing Chevron gas station, would be reduced as compared to the DISC project, and the conclusion of the SEIR would remain the same.

Table 10
Cancer Risk and Hazard Index Associated with DISC Project Construction DPM and the Existing ARCO Gas Station

	Cancer Risk (per million persons)	Non-Cancer Hazard Index	
		Acute	Chronic
DISC Project	6.26	0.00	0.00
Existing ARCO Gas Station	0.08	0.13	0.09
Total	6.34	0.13	0.09
Thresholds of Significance	10	1.0	1.0
Exceeds Threshold?	**NO**	**NO**	**NO**

Sources: CalEEMod, AERMOD, and HARP 2 RAST, January and February 2020; YSAQMD. AB2588 Summary Report. September 9, 2017.

Criteria Pollutants

Health effects from criteria pollutants are generally experienced on a cumulative air basin-wide level. Thus, the potential for implementation of the proposed project to result in increased exposure of sensitive receptors to substantial criteria pollutant concentrations in comparison to the DISC project, as analyzed in the SEIR, is discussed under question 'b' above.

Conclusion

Based on the above, consistent with the SEIR conclusion for the DISC project, implementation of the proposed DiSC 2022 project would result in a less-than-significant impact related to exposing sensitive receptors to substantial pollutant concentrations. Thus, the proposed project would not result in new significant impacts or substantially more severe significant impacts to sensitive receptors beyond what was identified in the SEIR.

d. Pollutants of principal concern include emissions leading to odors, visible emission (including dust), or emissions considered to constitute air pollutants. Air pollutants have been discussed above. Therefore, the following discussion focuses on emissions of odors and visible emissions.

The SEIR concluded that the previous DISC project would result in a less-than-significant impact with respect to other emissions, such as those leading to odors and visible emissions, that would affect a substantial number or people. The potential for the proposed project to result in increased impacts related to emissions of odors and visible emissions compared to the DISC project is discussed in further detail below.

Odors

The proposed DiSC 2022 project would include the same types of land uses as the DISC project, but at a reduced development intensity. In either case, the proposed land uses (i.e., residential, hotel, research and development, industrial, etc.) are not typically associated with the generation of objectionable odors. Diesel fumes from construction equipment are often found to be objectionable; however, construction is temporary and associated diesel emissions would be regulated in accordance with the In-Use Off-Road Diesel Vehicle Regulation. In addition, the construction period for the DiSC 2022 project would be shorter than the construction period associated with the original DISC project and, thus, the exposure period of sensitive receptors to diesel odors would be reduced under the DiSC 2022 project. Furthermore, similar to the DISC project, the proposed project would be required to comply with all applicable YSAQMD rules and

regulations, including, but not limited to, Rule 2.1, Rule 2.28, and Rule 2.5, which would help to control construction-related odorous emissions.

Visible Emissions/Dust

With regard to visible emissions and dust, YSAQMD Regulation II Rule 2.5 prohibits discharge of air contaminants from any source that cause injury, detriment, nuisance, or annoyance to any considerable number of persons or the public, with limited exceptions for agricultural activities. One category of emissions that would be controlled under Rule 2.5 is visible emissions. YSAQMD Rule 2.3 regulates visible emissions from various sources and establishes standard requirements for control of such emissions. Construction equipment on-site would be required to meet the visible emissions standards of Rule 2.3, and, considering the regulated nature of construction equipment, as well as the temporary use of such equipment on-site, would not be anticipated to result in substantial visible emissions.

Similar to the DISC project, the proposed project would be subject to all of the aforementioned YSAQMD regulations. Furthermore, like the DISC project, should operation of the DiSC 2022 project include equipment or other processes that result in emissions, such sources of emissions would not only be subject to the foregoing regulations, but would be required to comply with all relevant sections of Regulation III, related to the YSAQMD's permit system. The combined effect of the aforementioned regulations and rules would be that visible emissions during both construction and operational activities within the DiSC 2022 and Mace Triangle sites would be heavily regulated, and YSAQMD would ensure that visible emissions are addressed and any potential effects are reduced to a less-than-significant level. Therefore, impacts related to visible emissions and dust would be similar under the proposed project as compared to the DISC project, and the conclusion of the SEIR would remain the same.

Conclusion

Based on the above, the proposed project would not result in new significant impacts or substantially more severe significant impacts related to other emissions such as those leading to dust or odors that would affect a substantial number of people beyond what was identified in the SEIR.

Conclusion

Based on the above, the DiSC 2022 project would reduce the previously identified impact related to construction criteria pollutant emissions to a less-than-significant level and Mitigation Measure 3-10 set forth in the SEIR for the DISC project would no longer be required. However, all other previously required mitigation measures from the SEIR related to air quality, as presented below, would still be required for the proposed project. Overall, the DiSC 2022 project would not result in any changes, new circumstances, or new information that would involve new significant impacts or substantially more severe significant impacts from what had been anticipated for the project site in the previous CEQA documents related to air quality.

Mitigation Measure(s)

The following mitigation measure(s) would reduce the above impacts related to operational emissions of criteria pollutants to the maximum extent feasible. However, significant uncertainty exists as to the degree to which the individual emissions reduction actions presented below can be implemented in the DiSC 2022 Project. Consequently, given the uncertainty of implementation of the following mitigation measure, and similar to the SEIR conclusions for the DISC project, even with implementation of mitigation, the impact would remain *significant and unavoidable*. Mitigation Measure 3-10 set forth in the SEIR for the DISC project would no longer be required.

Mitigation Measures from the Previous CEQA Documents

The mitigation measures from the SEIR applicable to the proposed project are presented below. It should be noted that the mitigation measures formerly referenced "ARC" as part of the previous SEIR; thus, such references have been changed to "DiSC 2022" in this Addendum in ~~strikethrough~~ and double underline format. No other changes have been made to the following mitigation.

~~ARC~~ DiSC 2022 Project and Mace Triangle

3-11 *Prior to approval of any subsequent entitlement or permit, the project applicant shall work with the City of Davis, the YSAQMD, and/or other air districts within the region (as appropriate) to develop and implement a strategy to mitigate ROG and NOx, and PM_{10}. The strategy must reduce emissions from project operation to levels at or below the applicable YSAQMD thresholds of significance to the maximum extent feasible. Feasible on-site actions to reduce emissions shall receive highest priority for implementation. Emissions that cannot be reduced through on-site actions shall be mitigated through off-site action. The strategy and all actions shall be subject to review and approval by the City in consultation with the YSAQMD, and, if applicable, the air quality management district or air pollution control district within which the off-site mitigation project is located. On-site actions may include, but shall not be limited to the following:*

- *Reducing the total amount of paved area within the ~~ARC~~ DiSC 2022 Site in order to reduce off-gassing, emissions from restriping and painting, and the urban heat island effect;*
- *Using concrete or other non-emitting materials for parking lots instead of asphalt;*
- *Reducing vehicle trips through implementation of a Traffic Demand Management program, such as that required in Mitigation Measure 3-72(a);*
- *Using passive heating and cooling systems for buildings;*
- *Using natural lighting in buildings to the extent practical;*
- *Installing mechanical air conditioners and refrigeration units that use non-ozone depleting chemicals;*
- *Providing electric outlets outside of buildings, sufficient to allow for use of electric landscaping equipment;*
- *Hiring landscaping companies that use primarily electric landscaping equipment;*
- *Using zero-VOC paints, finishes, adhesives, and cleaning supplies on all buildings on the project site;*
- *Employing vehicle fleets that use only cleaner-burning fuels;*
- *Prohibiting the installation of natural gas fueled space and water heating equipment, and/or other large appliances such as ranges and stoves, within portions of the project; and*
- *Providing electrical vehicle charging stations in excess of local and/or State standards in each phase of the project.*

Off-site actions may include, but shall not be limited to, the following:

- *Retrofitting stationary sources such as back-up generators or boilers with new technologies that reduce emissions;*
- *Replacing diesel agriculture water pumps with alternative fuels;*
- *Funding projects within an adopted bicycle/pedestrian plan;*

- *Replacing non-USEPA wood-burning devices with natural gas or USEPA-approved fireplaces;*
- *Providing energy efficiency upgrades at government buildings;*
- *Installing alternative energy supply on buildings;*
- *Replacing older landscape maintenance equipment with newer, lower-emission equipment;*
- *Payment of mitigation fees into an established air district emissions offset program.*

The Reduction Strategy shall include requirements to ensure that the Reduction Strategy document is enforceable and measurable. A mechanism for oversight, monitoring and reporting through the project Master Owners Association (MOA) to the City shall be included as a part of the strategy. Because ROG, NO_X, and PM_{10} are pollutants of regional concern, the emissions reductions for these pollutants may occur anywhere within the lower Sacramento Valley Air Basin (e.g., within YSAQMD, the Sacramento Metropolitan Air Quality Management District, or the Placer County Air Pollution Control District).

In General, emissions reduction measures implemented for development within the ~~ARC~~ DiSC 2022 Site shall use the following prioritization:

- *First Priority – building specific actions;*
- *Second priority – onsite (within ~~ARC~~ DiSC 2022 Site) actions;*
- *Third priority – community based (within Davis) actions;*
- *Fourth priority – within YSAQMD jurisdiction;*
- *Fifth priority – within the Sacramento Federal Nonattainment Area; and*
- *Sixth priority – within California.*

3-88 *Implement Mitigation Measure 3-11*.

Modified Mitigation Measures

None required.

Additional Project-Specific Mitigation Measures

None required.

Environmental Issue Area	Where Impact Was Analyzed in Previous CEQA Documents?	Do Proposed Changes Involve New or More Severe Impacts?	Any New Circumstances Involving New or More Severe Impacts?	Any New Information Requiring New Analysis or Verification?
IV. Biological Resources. *Would the project:*				
a. Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?	2020 SEIR pgs. 3-80 to 3-114	No	No	No
b. Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the California Department of Fish and Game or US Fish and Wildlife Service?	2020 SEIR pgs. 3-114 to 3-115	No	No	No
c. Have a substantial adverse effect on state or federally protected wetlands (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?	2020 SEIR pg. 3-116	No	No	No
d. Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?	2020 SEIR pgs. 3-116 to 3-117	No	No	No
e. Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?	2020 SEIR pgs. 3-117 to 3-118	No	No	No
f. Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?	2020 SEIR pg. 3-118	No	No	No

Discussion

Since the release of the certified Final SEIR, the project site has remained vacant and undeveloped. Agricultural production continues to occur on the properties to the north and east of the DiSC 2022 site. Substantial changes in the environmental and regulatory settings related to biological resources, or in circumstances that would affect the analysis in the SEIR related to biological resources have not occurred.

Relative to the DISC project, the DiSC 2022 project would involve a substantially reduced development footprint area, due to the currently proposed project excluding the 92 acres immediately north of the MDC, which was a portion of the previous DISC project site. By excluding the parcel north of the MDC, the DiSC 2022 project would encompass 102 acres, as compared to the 194 acres planned for the previous DISC project. Project changes or circumstances that would adversely affect the analysis in the SEIR related to biological resources have not occurred.

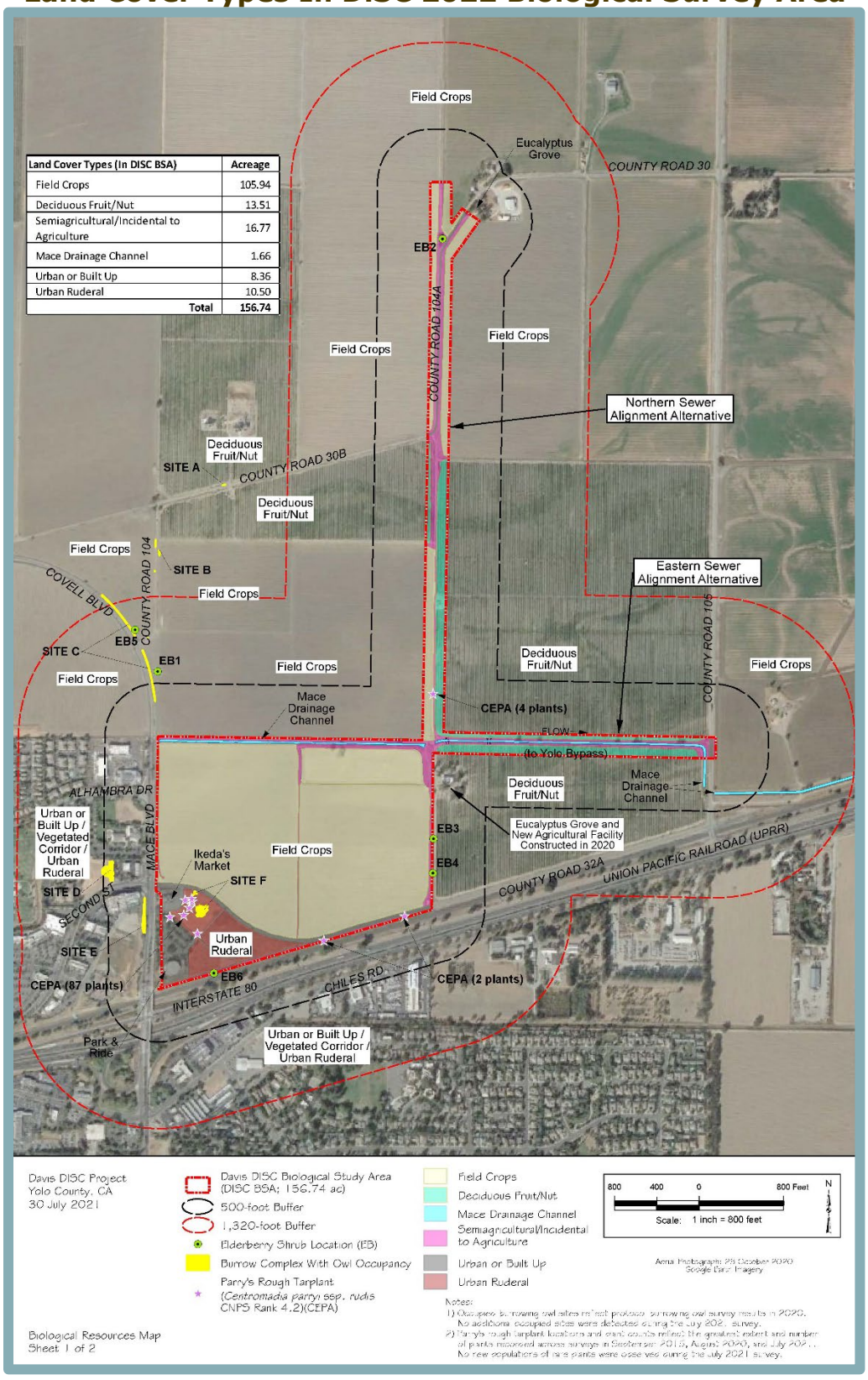
a. The DiSC 2022 site is located within the boundaries of the Yolo Habitat Conservation Plan/Natural Conservation Community Plan (Yolo HCP/NCCP). The goal of the Yolo HCP/NCCP is to conserve natural open space and agricultural areas that provide habitat for special-status and at-risk species found within the habitats and natural communities in Yolo County. The Yolo HCP/NCCP provides permits and associated mitigation pursuant to the federal and State Endangered Species Acts for a variety of development activities and infrastructure improvements identified for construction over the next 50 years in Yolo County. The Yolo HCP/NCCP provides coverage for impacts associated with the proposed DiSC 2022 site, which is consistent with the former MRIC site and DISC site (See Yolo HCP/NCCP, Section 3.5.1.3.1.) The impact analysis and required mitigation measures in the SEIR are consistent with the requirements of the Yolo HCP/NCCP.

   As part of evaluating the potential for the currently proposed DiSC 2022 project to result in a substantial adverse effect to any species identified as a candidate, sensitive, or special-status species, Sycamore Environmental Consultants, Inc. prepared a 2021 Biological Survey Update (2021 BSU) (see Appendix B of this Addendum).[8] The DiSC 2022 Biological Survey Area (BSA) includes two components: 1) the 156.74-acre project site study area located northeast of the intersection of Mace Boulevard and I-80, which encapsulates the 102-acre DiSC 2022 footprint, the City annexation area south of CR 32A, and two off-site sewer alignment alternatives that extend from the DiSC 2022 site to the east and north (see Figure 10); and 2) the 100-acre stormwater capacity area consisting of agricultural fields located approximately 1.5 miles east of the main site, adjacent to the Yolo Bypass. As previously discussed, consistent with the commitment made by the applicant in the Development Agreement approved by City Council for the DISC project, the current DiSC 2022 project would similarly eliminate the off-site stormwater capacity area as a potential project feature. As a result, the off-site, 100-acre stormwater capacity area is not further discussed in this section.

   The 2020 Biological Resources Evaluation (BRE) prepared by Sycamore Environmental Consultants for use in the SEIR included an analysis of known records of special-status species within the nine-quad area encompassing the Biological Survey Area (BSA). As will be further discussed below, the only special-status species with CNDDB records in or adjacent to the BSA were Swainson's hawk (Occurrence #111, #409, #465, and #1466) and burrowing owl (Occurrence #614, #695, #734, and #994). This remains the case in October 2021.

[8] Sycamore Environmental Consultants, Inc. *2021 Biological Survey Update for the Davis DISC Project, Yolo County, CA*. August 11, 2021.

Figure 10
Land Cover Types In DiSC 2022 Biological Survey Area



New CNDDB records of special-status species mapped overlapping the BSA have not occurred. A new record for western spadefoot occurs in the nine-quad search area, but neither the BSA, nor adjacent areas, contain breeding habitat for this species. Washes, river floodplains, alluvial fans, playas, or alkali flats do not occur in the BSA. In summary, updates to CNDDB records do not indicate new or increased project impacts.

The following is a discussion of the analysis contained in the SEIR and an analysis of the currently proposed project.

Potential Impacts to Special-Status Plants

The SEIR evaluated the potential for the DISC project to result in impacts to special-status plant species under Impact 3-15 and determined that with incorporation of Mitigation Measure 3-15, the project would have resulted in a less-than-significant impact. As noted in the SEIR, protocol-level floristic botanical surveys of the project site conducted by Sycamore Environmental did not identify special-status plant species within the DISC BSA[9]. The surveys were conducted on May 19 and September 11, 2015 as well as August 7, 2019 for the overall project site, coincident with the evident and identifiable period for 12 special-status plants identified as having potential for occurring within the project vicinity.

The three protocol floristic botanical surveys did not detect special-status plant species on the DISC site, nor the Mace Triangle site. A total of 93 Parry's rough tarplant (*Centromadia parryi* ssp. *rudis*) plants were documented during the September 11, 2015 botanical survey. The plants were verified as still present in approximately the same abundance during the botanical survey conducted on August 7, 2019. Eighty-seven (87) of the Parry's rough tarplant plants were found near the parking area of Ikeda's Market. Two of the plants were found along the south side of CR 32. Four of the plants were found on the east side of the irrigation ditch along the eastern edge of the site, approximately 700 feet north of the Eucalyptus grove. During the July 27, 2021 field survey, Parry's rough tarplant was observed growing in approximately the same location as documented previously (within a shallow depression adjacent to the gravel parking lot serving Ikeda's Market). However, additional Parry's rough tarplant populations were not observed during the survey. A total of 13 plants were observed in the DiSC 2022 BSA, down from approximately 93 plants documented previously. Figure 10 shows the greatest extent and number of Parry's rough tarplant observed across surveys conducted on the project site.

Parry's rough tarplant is a CNPS California Rare Plant Rank 4.2 species (a watch list species of limited distribution; CNPS 2020). CNPS Rank 4.2 species may be considered under CEQA at the Lead Agency's discretion. Based on herbarium specimen records, the SEIR determined that the species is not especially uncommon locally or regionally. The Parry's rough tarplant individuals observed within the Mace Triangle site were not at the periphery of the taxon's range, and the plant individuals observed did not exhibit unusual morphology and were not observed on unusual substrate. As such, the SEIR concluded that the observed Parry's rough tarplant did not meet the definition of Rare or Endangered under CEQA Guidelines Section 15125(c) or Section 15380. However, the USFWS considers plant surveys to be valid for only three years. Therefore, the SEIR determined that construction activity could impact special-status plant species in the event that project construction is delayed by more than three years from the date of the 2019 survey. As a result, the SEIR required mitigation to ensure impacts related to the disturbance of special-status plant species could be reduced to a less-than-significant level.

[9] The DISC BSA generally consists of 265-acres made up of 187-acre DISC Site, City-owned 25-acre property, Mace Triangle Site, and Off-Site Sewer Alternative alignments.

Based on the results of the updated database queries and the July 27, 2021 field survey, the 2021 BSU found that noteworthy changes have not occurred within the DiSC 2022 BSA with respect to biological communities and land uses documented in the SEIR and 2020 BRE. The DiSC 2022 BSA is heavily disturbed by ongoing agricultural uses (primarily row crops) and existing development (Ikeda's Market and the Mace Park-and-Ride Lot), which thus, limits the potential for the project site to accommodate special-status plant species. It should be noted that the updated database queries returned a record for one potential special-status plant species: cotula navarretia (*Navarretia cotulifolia*). Cotula navarretia is a CNPS California Rare Plant Rank 4.2 species and an annual herb found in chaparral, cismontane woodland, and valleys and foothill grasslands. The plant species occurs primarily in adobe clay soils, is known to occur in the counties of Lake, Marin, Napa, Sonoma, and Yolo, and blooms from May to June. However, the 2021 BSU concluded that cotula navarretia does not have the potential to occur within the DiSC 2022 BSA, as on-site conditions lack the adobe clay soils necessary to support the species. Additionally, the species was not observed during the most recent field survey conducted for the currently proposed project or previous surveys conducted for the DISC project.

The currently proposed DiSC 2022 project would be implemented within the development footprint area previously analyzed in the SEIR; however, the DiSC 2022 project would involve a substantially reduced development footprint, due to the currently proposed project excluding the 92 acres immediately north of the MDC, which was a portion of the previous DISC project site. Additionally, the DiSC 2022 project would include similar project components as the previous DISC project, albeit, at a noticeably reduced scale. Because the USFWS considers plant surveys to be valid for only three years, implementation of the DiSC 2022 project could impact special-status plant species, in the event that project construction has not occurred within three years from the date of the protocol floristic field survey and such species have colonized the site. Therefore, the currently proposed project would still be subject to Mitigation Measure 3-15, which would ensure potential impacts are mitigated to a less-than-significant level.

Potential Impacts to Valley Elderberry Longhorn Beetle

The SEIR analyzed the potential for the DISC project to result in impacts to valley elderberry longhorn beetle (VELB) under Impact 3-16 and concluded that with incorporation of Mitigation Measure 3-16, the project would have resulted in a less-than-significant impact. According to the SEIR, blue elderberry (*Sambucus nigra* ssp. *caerulea*; formerly, *Sambucus mexicana*) shrubs were identified in two locations in the DISC BSA during the original biological analysis conducted for the MRIC EIR. The locations were determined to provide marginal habitat for VELB. Three additional elderberry shrubs were observed just outside the DISC BSA during the August 7, 2019 field survey. Two of the shrubs occurred along the eastern boundary of the site, approximately 280 and 600 feet north of CR 32A, respectively. The third shrub was on the road shoulder north of the Mace Curve, just north of the CR 104 intersection. Valley elderberry longhorn beetle exit holes were not observed on the shrubs. The five elderberry shrub locations are shown in Figure 10. The elderberry shrubs within the DISC BSA occurred in non-riparian habitat and were isolated in a disturbed, agricultural setting. The nearest riparian habitat that could have included elderberry shrubs appeared to be more than one mile north of the DISC site, along the Willow Slough Bypass. Additionally, VELB were not observed in the Mace Triangle site during biological surveys; however, several elderberry shrubs occurred off-site along the shoulder of I-80, south of the Mace Triangle site. Nevertheless, the individual shrubs were more than 100 feet from the Mace Triangle site and separated from the site by the railroad prism. As such, the SEIR found that future development of the Mace Triangle site would not have impacted VELB or their habitat.

Because at least one elderberry shrub (EB Shrub #2) could have been impacted by the DISC project's off-site sewer line improvements, the SEIR concluded mitigation would have been required in order to reduce potential impacts to a less-than-significant level.

During the July 27, 2021 field survey, one additional elderberry shrub (EB Shrub #6, see Figure 10) was observed on the railroad berm, just outside of the DiSC 2022 BSA's southern boundary. Per the 2021 BSU, EB Shrub #6 is still a sapling and is growing close to the railroad tracks where vegetation is managed. EB Shrub #6 and the five other previously documented elderberry shrubs (EB Shrubs #1-5) were surveyed for evidence of VELB exit holes. Evidence of VELB was not observed. Furthermore, as a result of the reduced project footprint, EB Shrubs #1 and #3-5 do not occur within 500 feet of the DiSC 2022 site.

The currently proposed DiSC 2022 project would be implemented within the development footprint area previously analyzed in the SEIR; however, the currently proposed project would involve a substantially reduced development footprint. Additionally, the DiSC 2022 project would include similar project components as the previous DISC project, including two off-site sewer pipe alignment alternatives, one of which (northerly alignment) would result in impacts to EB Shrub #2. Thus, the currently proposed project would still be subject to Mitigation Measure 3-16 to ensure all potential impacts related to VELB are reduced to a less-than-significant level.

Potential Impacts to Giant Garter Snake

The SEIR analyzed the potential for the DISC project to result in impacts to giant garter snake (GGS) under Impact 3-17 and concluded that with incorporation of Mitigation Measure 3-17, the project would have resulted in a less-than-significant impact. According to the SEIR, GGS were not observed during the field surveys conducted for the DISC BSA. The closest potentially occupied GGS habitat to the site appeared to have coincided with the closest known populations of GGS, which occurred in the Yolo Bypass and in the Willow Slough Bypass. The DISC site does not occur in an area of rice production, which typically offers suitable habitat for GGS due to surface water conditions. Instead, agricultural fields in the project vicinity consists of upland row crops and deciduous nut/fruit orchards. Additionally, the SEIR noted that insufficient water exists in the MDC during the GGS active season to support a GGS population, or to facilitate dispersal. To enter the MDC, GGS would have to travel across the Yolo Bypass levee, which is mostly barren and approximately 170 feet wide. The MDC also lacks the emergent aquatic vegetation that is an essential component of GGS habitat for most of the channel's length, and vegetation in most of the MDC does not indicate perennially, or near-perennially inundated conditions, a condition that would be necessary for the MDC to accommodate GGS. Regular removal of vegetation in the MDC also reduces the amount of emergent aquatic vegetation present in the channel. Altogether, the SEIR cited the DISC site's urban influence, artificial hydrology, vegetation maintenance, culverts, and lack of water and suitable prey items during the active season to determine that it was unlikely that GGS would have been able to travel to the site and that suitable GGS habitat is not present in the MDC within the DISC site. None of these conditions have changed since the SEIR was prepared, as confirmed by Sycamore in the 2021 BSU.

The SEIR found that any future development on the Mace Triangle site would not have impacted GGS or their habitat, as the Mace Triangle site is disturbed and does not contain any agricultural ditches or drainage channels through which GGS could disperse.

Whereas the SEIR found that the off-site stormwater capacity pond could impact GGS seeking refuge in burrows or cracks in upland habitats near the Yolo Bypass, consistent with the commitment made by the applicant in the Development Agreement approved by City Council for

the DISC project, the current DiSC 2022 project similarly eliminates the off-site stormwater capacity area as a potential project feature. As such, potential impacts to GGS habitat related to the off-site stormwater capacity area would not apply to DiSC 2022. However, should the currently proposed project implement the permanent pump station or portable trailer-mounted pump to address increased runoff volumes (as discussed in further detail in Section X, Hydrology and Water Quality, of this Addendum), depending on the location of such facilities, DiSC 2022 could still result in potential impacts to GGS habitat. Therefore, the currently proposed project would still be subject to Mitigation Measure 3-17, which would reduce the potential impact to a less-than-significant level.

Potential Impacts to Burrowing Owl

The SEIR analyzed the potential for the DISC project to result in impacts to burrowing owl under Impact 3-18 and concluded that with incorporation of Mitigation Measure 3-18, the project would have resulted in a less-than-significant impact. Within the last three years, Sycamore Environmental biologists have conducted numerous burrowing owl surveys and monitoring events covering the areas within 500 feet of the DISC BSA, including a full set of protocol-level (CDFW 2012) breeding season surveys in 2020 (Sycamore Environmental 2020b). As noted in the SEIR, burrowing owl burrows were found in the project vicinity, and the DISC site, including the site's agricultural buffer area, provided suitable foraging habitat for burrowing owl. As such, the project's creation of an agricultural buffer could have potentially resulted in temporary impacts to burrowing owl habitat, and the installation of a bike/walking trail within the first 50-feet of the buffer could have resulted in permanent impacts to burrowing owl habitat. A query of the CNDDB returned 79 records of burrowing owl in the nine-quad search area centered on the DISC site. The two closest records (Occurrence #614 and #695) were mapped along Mace Boulevard, partially overlapping the DISC project's area of analysis. A third record (Occurrence #734) occurred approximately 500 feet east of the project's eastern sewer line alternative. A fourth record (Occurrence #994) occurred approximately 500 feet north of the DISC site, along CR 30B. In addition, six burrow complexes occupied by burrowing owl occurred in the DISC BSA or within 500 feet, and burrowing owls and/or their signs (e.g., feathers, whitewash, pellets) were observed at the burrows within the three years preceding the SEIR's preparation. Furthermore, based on CNDDB records, burrowing owl was observed in or near the Mace Triangle site, near Ikeda's Market, leading the SEIR to conclude that burrowing owls could have been present or could have become established within the Mace Triangle site prior to any future development.

According to the 2021 BSU, additional occupied burrowing owl sites were not detected during the July 27, 2021 field survey. The known occupied burrowing owl burrow complexes within or near to the DiSC 2022 BSA are the six complexes previously identified as part of the SEIR's analysis (see Figure 10). During the July 2021 survey, Sites A through F were surveyed for burrowing owl and signs thereof. Additional suitable burrows were observed among the complexes at each site, indicating continued ground squirrel activity. One burrowing owl with a blue band on the left leg was observed within Site E, near a culvert opening, approximately 400 feet south of the Mace Boulevard/Second Street intersection, on the west side of Mace Boulevard. Two other burrows at Site E (roughly 300 to 400 feet south of the Mace Boulevard/Second Street intersection) displayed recent burrowing owl signs, including molted down feathers and prey bones. Burrowing owls were not observed at any of the other sites during the July 2021 survey. Signs of burrowing owls were not observed at any of the other sites within the DiSC 2022 BSA and 500-foot buffer during the July 2021 survey. Some faded whitewash was observed at a burrow entrance at Site B, beyond the 500-foot buffer.

Due to the DiSC 2022 project's reduced footprint, occupied burrowing owl Sites A, B, and most of C are no longer within 500 feet of the project footprint. Of the sites within the 500-foot buffer, only Site E is known or suspected to include breeding within the last three years. Occupied burrowing owl sites do not occur within the 102-acre DiSC 2022 project footprint. One site (Site F) occurs within the City annexation area south of CR 32A. Since the last protocol burrowing owl survey in June of 2020, burrowing owl observations have been documented on eBird.org within the 500-foot buffer. One burrowing owl observation occurred at the edge of the buffer, near Site C in a disked field. Another was recorded near CR 104A, near the northern-most tip of the project site. Both of the locations were checked during the July 2021 survey. Owls or signs of owls were not observed at either location.

Based on the above, the DiSC 2022 project would still be subject to Mitigation Measure 3-18 to ensure all potential impacts to burrowing owl are reduced to a less-than-significant level. It is also noted that, similar to the original DISC project, the DiSC 2022 project would create habitat on-site, within the agricultural buffer areas, including establishing artificial burrow systems, conducting seasonal mowing, or preferably stock grazing of grassland areas in the buffer to maintain short grass height preferred by burrowing owls.

Potential Impacts to Swainson's Hawk

The SEIR analyzed the potential for the DISC project to result in impacts to Swainson's hawk under Impact 3-19 and concluded that with incorporation of Mitigation Measure 3-19, the project would have resulted in a less-than-significant impact. The SEIR cited the adoption of the Yolo HCP/NCCP, whose conservation strategy includes the incorporation of 4,795 acres of Swainson's hawk habitat on pre-permit reserve lands and biological objectives for the conservation of Swainson's hawk, including maintaining crop types that support Swainson's hawk habitat within 14,362 acres of newly protected agricultural lands; protecting 4,430 acres of natural (grassland) foraging habitat; protecting and maintaining at least 40 protected nest trees; and maintaining a density of one suitable nest tree per 10 acres of agricultural lands in the reserve system. Through compliance with all applicable provisions, the Yolo HCP/NCCP EIS/EIR concluded that impacts to Swainson's hawk would be less than significant.

With respect to the DISC BSA, the SEIR determined that the Fremont cottonwood trees in the study area's detention basin and willows and cottonwoods along the MDC provided marginal nesting habitat. Nesting habitat was considered marginal because the trees were young. Within 1,320 feet of the DISC BSA, potential nesting habitat occurred in the groves of eucalyptus trees located to the east and north. Suitable off-site nesting habitat also occurred in landscaping corridors with large trees located along I-80, Mace Boulevard, and Chiles Road as well as large willows and cottonwoods present along portions of the MDC and Railroad Channel. In addition, the SEIR found that agricultural and ruderal areas in the DISC BSA provided foraging habitat for Swainson's hawk.

Based on CNDDB records, which included 500 records for Swainson's hawk in the nine-quad area centered on the DISC BSA, two records (Occurrence #409 and #465) are mapped partially overlapping the DISC BSA. Another record (Occurrence #111) occurred within 1,320 feet of the DISC BSA. During field surveys of the study areas, Swainson's hawks were observed soaring over the DISC BSA on September 11, 2015 and August 7, 2019. However, potential Swainson's hawk nests were not detected in the DISC BSA during biological surveys, nor were they detected in the areas located within 1,320 feet of the study areas. Nevertheless, the SEIR acknowledged that active nests could have later become established in the Fremont cottonwoods present in the DISC BSA as well as in any of the suitable nest trees known to occur within 1,320 feet, especially

in eucalyptus groves located immediately east and north of the DISC BSA, which had previously contained active Swainson's hawk nests.

Finally, with respect to the Mace Triangle site, Swainson's hawks were not observed on the site during biological surveys. In addition, the SEIR determined that the site's largely developed and/or disturbed habitats did not serve as Swainson's hawk foraging habitat. However, when viewed in the context of the adjacent Swainson's hawk foraging habitats, the SEIR found that the Mace Triangle site contributed value to the hawk's overall foraging area.

Based on the above, the SEIR concluded that suitable nesting and foraging habitat for Swainson's hawk existed within the DISC BSA, and thus, required mitigation to reduce potential impacts to a less-than-significant level.

According to the 2021 BSU, an active Swainson's hawk nest was detected in a eucalyptus grove approximately 300 feet to the east of the DiSC 2022 site during 2020 protocol burrowing owl surveys. The nest occurred in the same grove associated with CNDDB Swainson's hawk Occurrence #409. The nest was monitored and did not show signs of activity during the July 27, 2021 survey. The 2021 BSU could not determine if the nest was active earlier in 2021. In addition, one juvenile Swainson's hawk was observed perched in a Fremont's cottonwood tree in the northeast corner of the DiSC 2022 BSA, approximately 50 feet south of the MDC, and approximately 18 Swainson's hawks were observed soaring over the fields north and south of the MDC. Active nests of Swainson's hawk or other tree-nesting raptors were not observed in the study area or within 1,320 feet during the survey.

As previously discussed, current site conditions are similar to those documented in the 2020 BRE. The currently proposed DiSC 2022 project would be implemented within the development footprint area previously analyzed in the SEIR; however, the currently proposed project would involve a substantially reduced development footprint, and thus, reduced impacts to Swainson's hawk foraging habitat. Additionally, the DiSC 2022 project would include similar project components as the previous DISC project, albeit, at a noticeably reduced scale. Given that current site conditions have not changed from those previously analyzed and the general similarities of the currently proposed project components to those previously proposed, the DiSC 2022 project would still be subject to Mitigation Measure 3-19 to ensure potential impacts to Swainson's hawk are reduced to a less-than-significant level.

Potential Impacts to Raptors, Nesting Birds, or Other Birds Protected Under the MBTA

The SEIR analyzed the potential for the DISC project to result in impacts to raptors and nesting birds protected under the MBTA under Impact 3-20 and concluded that with incorporation of Mitigation Measures 3-20(a) through (c), the project would have resulted in a less-than-significant impact. According to the SEIR, the DISC BSA includes suitable habitat for the following special-status birds: white-tailed kite (CDFW Fully Protected species); song sparrow – Modesto population (Species of Special Concern); mountain plover (Species of Special Concern); northern harrier (Species of Special Concern); and tricolored blackbird (State Threatened). White-tailed kite and tricolored blackbird are also species covered under the Yolo HCP/NCCP. In terms of non-special-status migratory birds protected under the federal MBTA, the SEIR found that such birds could have nested in trees, the MDC, ruderal vegetation, and on disturbed ground in or adjacent to the DISC BSA. Potential raptor nests were not observed in the study area during the former and recent biological field surveys.

The currently proposed DiSC 2022 project would be implemented within the development footprint area previously analyzed in the SEIR; although, the project would involve a substantially reduced development footprint. Additionally, the DiSC 2022 project would include similar project components as the previous DISC project, albeit, at a noticeably reduced scale. The reduced footprint and scale of the currently proposed project would reduce the potential to impact nesting birds; however, impacts would still occur given that site conditions have not changed from those previously analyzed and the project maintains generally similar project components to those previously proposed. The DiSC 2022 project would still be subject to Mitigation Measures 3-20(a) through (c) to ensure potential impacts to raptors and nesting birds protected under the federal MBTA are reduced to a less-than-significant level.

Conclusion

Based on the above, the currently proposed project would not result in new significant impacts or substantially more severe significant impacts related to potential substantial adverse effects, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game (now known as CDFW) or USFWS beyond what were previously identified in the SEIR. Therefore, the proposed project would be consistent with the conclusions of the SEIR.

b. The SEIR evaluated the potential for the DISC project to have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the CDFW or USFWS under Impact 3-21 and concluded that with incorporation of Mitigation Measure 3-21, the project would have resulted in a less-than-significant impact. According to the SEIR, the only feature within the DISC BSA that contained sensitive natural habitats, albeit limited in nature, is the MDC. The MDC, which traversed the center of the DISC site and continued off-site to the east along the project's eastern sewer line alignment, would have remained in place and continued to serve drainage flows from the DISC site, with improvements to the MDC included as part of the DISC project. The City of Davis has an agreement with CDFW that specifies conditions for channel maintenance. The Mace Triangle site does not contain riparian habitat.

While the SEIR found that the DISC project had only limited potential to result in impacts to riparian habitat, Mitigation Measure 3-21 ensured any impacts would have been reduced to a less-than-significant level by requiring the project applicant to notify CDFW pursuant to Section 1602 of the California Fish and Game Code, with the applicant required to obtain a Streambed Alteration Agreement (SAA), if determined to be necessary by CDFW, and complying with all conditions of the SAA, including the payment of any applicable Yolo HCP/NCCP fees.

The currently proposed DiSC 2022 project would be implemented within the development footprint area previously analyzed in the SEIR; however, the DiSC 2022 project would involve a substantially reduced development footprint, due to the currently proposed project excluding the 92 acres immediately north of the MDC. Given that the DiSC 2022 project would convey stormwater runoff by way of the MDC, and improve the MDC, as discussed in the Project Description section of this Addendum, the currently proposed project would still be subject to Mitigation Measures 3-21.

Based on the above, the currently proposed project would not result in new significant impacts or substantially more severe significant impacts related to substantial adverse effects on any riparian habitat or other sensitive natural community identified in local or regional plans, policies,

regulations or by CDFW or USFWS beyond what were previously identified in the SEIR. Therefore, the proposed project would be consistent with the conclusions of the SEIR.

c. The SEIR assessed the DISC project's potential to have a substantial adverse effect on State or federally protected wetlands (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means under Impact 3-22 and concluded that the project would have resulted in a less-than-significant impact. As noted in the SEIR, based on a wetland delineation report prepared by Sycamore Environmental Consultants, Inc. on December 10, 2014, the MDC was determined to be a non-navigable, man-made stormwater drainage ditch maintained by the City of Davis. The MDC is excavated in uplands, drains only uplands, is not a realigned natural channel, and lacks relatively permanent flow of water. For such reasons, the MDC was determined not to be jurisdictional. With respect to State-protected wetlands, the SEIR noted that the cattails and non-native invasive perennial pepperweed in the bottom of the MDC could have constituted an "artificial wetland," as defined by the State Procedures.[10] However, pursuant to Section II.3.d.iii of the State Procedures, such artificial wetland were not waters of the State, because the MDC was constructed in uplands and used and maintained by the City of Davis primarily for the purpose of conveying "runoff subject to regulation under a municipal stormwater permitting program," which is the Phase II Small MS4 General Permit. In addition, State- or federally protected wetlands were not located on the Mace Triangle site.

   The currently proposed DiSC 2022 project would be implemented within the development footprint area previously analyzed in the SEIR; however, the DiSC 2022 project would involve a substantially reduced development footprint, due to the currently proposed project excluding the 92 acres immediately north of the MDC. Additionally, the DiSC 2022 project would include similar project components as the previous DISC project, albeit, at a noticeably reduced scale. Because the DiSC 2022 project would be implemented within the footprint previously analyzed for the DISC project, the same on-site conditions would be present with respect to State or federally protected wetlands.

   Based on the above information, the currently proposed project would not result in new significant impacts or substantially more severe significant impacts related to substantial adverse effects on State- or federally protected wetlands beyond what were previously identified in the SEIR. Therefore, the proposed project would be consistent with the conclusions of the SEIR.

d. The SEIR evaluated the potential for the DISC project to interfere substantially with the movement of native, resident, or migratory fish or wildlife species or established native resident or migratory wildlife corridors under Impact 3-23 and concluded that the project would have resulted in a less-than-significant impact. According to the SEIR, the MDC would not have been filled and would have been retained as a drainage feature upon development of the DISC project. Additionally, the project would have also included agricultural buffers along the perimeter of the DISC site and open space areas within the site, which could have allowed for wildlife movement. Furthermore, the adjacent agricultural uses would provide space for the movement of wildlife. With respect to the Mace Triangle site, the SEIR determined that the movement of wildlife on the site was limited by existing development associated with urban uses, as well as the presence of I-80 to the south, Mace Boulevard to the west, and CR 104 to the north of the site. The existing roadways enclosing the Mace Triangle site also provide barriers to wildlife movement.

[10] California State Water Resources Control Board. *State Wetland Definition and Procedures for Discharges of Dredged or Fill Material to Waters of the State*. Available at: https://www.waterboards.ca.gov/water_issues/programs/cwa401/docs/procedures_conformed.pdf. Accessed October 2021.

The currently proposed DiSC 2022 project would be implemented within the development footprint area previously analyzed in the SEIR; however, the DiSC 2022 project would involve a substantially reduced development footprint, due to the currently proposed project excluding the 92 acres immediately north of the MDC. Given the agricultural nature of the northerly area, the DiSC 2022 project could increase the amount of wildlife movement habitat in comparison to the original DISC project. Additionally, the DiSC 2022 project would include similar project components as the previous DISC project, albeit, at a noticeably reduced scale. Such components would include agricultural buffers along the northern and eastern boundaries of the DiSC 2022 site, which could allow for wildlife movement. Given that adjacent agricultural uses would continue to provide space for wildlife movement, similar to the previous DISC project, the DiSC 2022 project would not interfere substantially with the movement of native, resident, or migratory fish or wildlife species or established native resident or migratory wildlife corridors.

Based on the above information, the currently proposed project would not result in new significant impacts or substantially more severe significant impacts related to substantial interference with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impeding the use of native wildlife nursery sites beyond what were previously identified in the SEIR. Therefore, the proposed project would be consistent with the conclusions of the SEIR.

e. The SEIR assessed the potential for the DISC project to conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance, under Impact 3-24, and concluded that the project would have resulted in a less-than-significant impact. According to the SEIR, the eight trees in the DISC site are located along the MDC, near the detention basin, and along Mace Boulevard. The trees consist of two London planes (*Platanus* x *acerifolia*), one Chinese elm (*Ulmus parvifolia*), four Fremont cottonwoods (*Populus fremontii* ssp. *fremontii*), and one Goodding's black willow (*Salix gooddingii*). Landmark trees are not located on the DISC site. Seven of the eight trees on the property qualify for protection under the City of Davis Municipal Code, having a diameter at breast height (DBH) of five or more inches and being one of the species listed for protection. The seven protected trees include one London plane, one Chinese elm, four Fremont cottonwoods, and one Goodding's black willow. It was determined that some of the protected on-site trees could be preserved due to the proposed building layout, as some of the trees are located along the MDC, which would be preserved as green space.

According to Section 37.03.070 of the Davis Municipal Code, prior to any site disturbance or construction activity for any phase wherein trees are located, a project applicant must submit an arborist survey of all trees on the project site and trees within the limits of off-site improvements to the City of Davis Department of Community Development and Sustainability. The arborist report must be accompanied by a Tree Protection Plan, the components of which shall be complied with during construction. Prior to removal of any protected trees, the applicant must obtain a tree removal permit from the City of Davis in accordance with the City's tree preservation ordinance. Accordingly, through compliance with Section 37.03.070 of the Municipal Code, impacts related to a conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance, under the DISC project would have been reduced to a less-than-significant level.

With respect to the Mace Triangle site, the SEIR noted that various trees are located on the site, though they are concentrated along the Mace Boulevard frontage and within the Park-and-Ride lot. Therefore, any future development on the Ikeda's property or the easternmost parcel was not expected to result in adverse impacts to trees. In the event that existing landscaping trees were

damaged during construction, the City would have required replacement in accordance with Article 37.03 of the Davis Municipal Code.

The currently proposed DiSC 2022 project would be implemented within the development footprint area previously analyzed in the SEIR; however, the DiSC 2022 project would involve a substantially reduced development footprint, due to the currently proposed project excluding the 92 acres immediately north of the MDC. Additionally, the DiSC 2022 project would include similar project components as the previous DISC project, albeit, at a noticeably reduced scale. Given that the DiSC 2022 project footprint would be reduced in comparison to the previous project iteration, the currently proposed project would not result in greater impacts to on-site trees. In addition, the project would be required to comply with all applicable provisions of Article 37.03 of the City's Municipal Code, which would ensure the project is consistent with the City's tree preservation ordinance.

Based on the above information, the currently proposed project would not result in new significant impacts or substantially more severe significant impacts related to conflicts with any local policies or ordinances protecting biological resources beyond what were previously identified in the SEIR. Therefore, the proposed project would be consistent with the conclusions of the SEIR.

f. The SEIR assessed the potential for the DISC project to conflict with an adopted HCP, NCCP, or other approved local, regional, or state habitat conservation plan under Impact 3-25 and concluded that the project would have resulted in a less-than-significant impact. As demonstrated above, the impact analysis contained in the SEIR and required mitigation measures in the preceding impact statements are consistent with the requirements of the Yolo HCP/NCCP. The majority of Land Cover types within the DISC BSA, as identified by the Yolo HCP/NCCP, would require payment of Land Cover fees prior to disturbance. The mitigation measures related to protection of covered species required the applicant for the DISC project and Mace Triangle to obtain coverage under the Yolo HCP/NCCP, as applicable, including payment of any applicable HCP/NCCP fees and implementation of avoidance and minimization measures. As such, the DISC project would have been consistent with the provisions set forth by the Yolo HCP/NCCP.

As demonstrated above, the currently proposed DiSC 2022 project would continue to be subject to all applicable mitigation measures set forth in the SEIR, which are consistent with the requirements of the Yolo HCP/NCCP. The project would be required to pay all applicable Land Cover fees prior to disturbance and obtain coverage under the Yolo HCP/NCCP, as applicable, including payment of any applicable HCP/NCCP fees and implementation of avoidance and minimization measures. Therefore, the DiSC 2022 project would be consistent with the provision set forth by the Yolo HCP/NCCP.

Based on the above information, the currently proposed project would not result in new significant impacts or substantially more severe significant impacts related to conflicts with the provisions of an adopted HCP, NCCP, or other approved local, regional, or State habitat conservation plan beyond what were previously identified in the SEIR. Therefore, the proposed project would be consistent with the conclusions of the SEIR.

Conclusion

Based on the above, the DiSC 2022 project would not result in any changes, new circumstances, or new information that would involve new significant impacts or substantially more severe significant impacts from what had been anticipated for the project site in the previous CEQA documents related to biological

resources. It should be noted that the previously required mitigation measures from the SEIR, as presented below, would still be required to be implemented for the proposed project.

Mitigation Measure(s)

The following mitigation measure(s) would reduce the above potential impacts to a *less-than-significant* level.

Mitigation Measures from the Previous CEQA Documents

The mitigation measures from the SEIR applicable to the proposed project are presented below. It should be noted that the mitigation measures formerly referenced "ARC" as part of the previous SEIR; thus, such references have been changed to "DiSC 2022" in this Addendum in ~~strikethrough~~ and double underline format. No other changes have been made to the following mitigation.

~~ARC~~ DiSC 2022 Project and Mace Triangle

3-15 To ensure avoidance and minimization of potential impacts to special-status plant species, the following measures shall be implemented:

- *Prior to initiation of any ground disturbance activities occurring after August 7, 2022, for the Mace Triangle and for each phase of the ~~ARC~~ DiSC 2022 Project, the applicant shall retain a qualified botanist to conduct a botanical survey during spring (April to May) and fall (July to September), during the evident and identifiable periods for special-status plants with potential to occur on the site. The botanical survey must also cover all potential utility line alignments and any other off-site work required for any phase of development. The survey shall be submitted to the City of Davis Department of Community Development and Sustainability for review. If special-status plants are not identified within the areas proposed for disturbance, further mitigation is not required for that phase.*

- *Any special-status plants that are within the limits of grading for on- or off-site improvements shall be propagated to suitable habitat in designated open space areas, or for the Mace Triangle, another pre-approved location. The propagation shall be overseen by a qualified botanist, approved by the City of Davis Department of Community Development and Sustainability and CDFW. The botanist shall identify the location to receive the plants, identify the methods of propagation, and oversee the work.*

~~ARC~~ DiSC 2022 Project

3-16 To ensure avoidance and minimization of impacts to VELB, the project applicant for the ~~ARC~~ DiSC 2022 Site shall obtain coverage under the Yolo HCP/NCCP for on-site, and as may be determined necessary by Yolo Habitat Conservancy, for off-site infrastructure work, for each phase of development. In addition to payment of any applicable HCP/NCCP fees, the applicant shall implement Yolo HCP/NCCP Avoidance and Minimization Measure AMM-12 (Minimize Take and Adverse Effects on Habitat of Valley Elderberry Longhorn Beetle) to the satisfaction of the City and the YHC. AMM-12 provides:

- *The project proponent will retain a qualified biologist who is familiar with valley elderberry longhorn beetle and evidence of its presence (i.e., exit holes in elderberry shrubs) to map all elderberry shrubs in and within 100 feet of the project footprint with*

stems that are greater than one inch in diameter at ground level. To avoid take of valley elderberry longhorn beetle fully, the project proponent will maintain a buffer of at least 100 feet from any elderberry shrubs with stems greater than one inch in diameter at ground level. A lesser buffer may be applied in some circumstances, as described in AMM-1 (Establish Buffers) of the Yolo HCP/NCCP.

- *For elderberry shrubs that cannot be avoided with a designated buffer distance as described above, the qualified biologist will quantify the number of stems one inch or greater in diameter to be affected, and the presence or absence of exit holes. The Conservancy will use this information to determine the number of plants or cuttings to plant on a riparian restoration site to help offset the loss, consistent with Section 6.4.2.4.1, Valley Elderberry Longhorn Beetle. Additionally, prior to construction, the project proponent will transplant elderberry shrubs identified within the project footprint that cannot be avoided.*
- *Transplantation will only occur if a shrub cannot be avoided and, if indirectly affected, the indirect effects would otherwise result in the death of stems or the entire shrub. If the project proponent chooses, in coordination with a qualified biologist, not to transplant the shrub because the activity would not likely result in death of stems of the shrub, then the qualified biologist will monitor the shrub annually for a five-year monitoring period. The monitoring period may be reduced with concurrence from the wildlife agencies if the latest research and best available information at the time indicates that a shorter monitoring period is warranted. If death of stems at least one inch in diameter occurs within the monitoring period, and the qualified biologist determines that the shrub is sufficiently healthy to transplant, the project proponent will transplant the shrub as described in the following paragraph, in coordination with the qualified biologist. If the shrub dies during the monitoring period, or the qualified biologist determines that the shrub is no longer healthy enough to survive transplanting, then the Conservancy will offset the shrub loss consistent with the preceding paragraph.*
- *The project proponent will transplant the shrubs into a location in the HCP/NCCP reserve system that has been approved by the Conservancy. Elderberry shrubs outside the project footprint but within the 100-foot buffer will not be transplanted.*
- *Transplanting will follow the following measures:*
    1. *Monitor: A qualified biologist will be on-site for the duration of the transplanting of the elderberry shrubs to ensure the effects on elderberry shrubs are minimized.*
    2. *Timing: The project proponent will transplant elderberry plants when the plants are dormant, approximately November through the first two weeks of February, after they have lost their leaves. Transplanting during the non-growing season will reduce shock to the plant and increase transplantation success.*
    3. *Transplantation procedure:*
        a. *Cut the plant back three to six feet from the ground or to 50 percent of its height (whichever is taller) by removing branches and stems above this height. Replant the trunk and stems measuring one inch or greater in diameter. Remove leaves that remain on the plants.*
        b. *Relocate plant to approved location in the reserve system, and replant as described in Section 6.4.2.4.1, Valley Elderberry Longhorn Beetle.*

~~ARC~~ DiSC 2022 Project

3-17 To ensure avoidance and minimization of impacts to GGS, the project applicant for the ~~ARC~~ DiSC 2022 Project shall obtain coverage under the Yolo HCP/NCCP for on-site, and as may be determined necessary by Yolo Habitat Conservancy, for off-site infrastructure work, for each phase of development. In addition to payment of any applicable HCP/NCCP fees, the applicant shall implement Yolo HCP/NCCP Avoidance and Minimization Measure AMM-15 (Minimize Take and Adverse Effects on Habitat of Giant Garter Snake) to the satisfaction of the City and the YHC. AMM-15 provides:

The project proponent will avoid effects on areas where planning-level surveys indicate the presence of suitable habitat for giant garter snake. To avoid effects on giant garter snake aquatic habitat, the project proponent will conduct no in-water/in-channel activity and maintain a permanent 200-foot non-disturbance buffer from the outer edge of potentially occupied aquatic habitat (see Figure 3-12 [of the SEIR]).

If the project proponent cannot avoid effects of construction activities, the project proponent will implement the measures below to minimize effects of construction projects (measures for maintenance activities are described after the following bulleted list).

- *Conduct preconstruction clearance surveys using USFWS-approved methods within 24 hours prior to construction activities within identified giant garter snake aquatic and adjacent upland habitat. If construction activities stop for a period of two weeks or more, conduct another preconstruction clearance survey within 24 hours prior to resuming construction activity.*
- *Restrict all construction activity involving disturbance of giant garter snake habitat to the snake's active season, May 1 through October 1. During this period, the potential for direct mortality is reduced because snakes are expected to move and avoid danger.*
- *In areas where construction is to take place, encourage giant garter snakes to leave the site on their own by dewatering all irrigation ditches, canals, or other aquatic habitat (i.e., removing giant garter snake aquatic habitat) between April 15 and September 30. Dewatered habitat must remain dry, with no water puddles remaining, for at least 15 consecutive days prior to excavating or filling of the habitat. If a site cannot be completely dewatered, netting and salvage of giant garter snake prey items may be necessary to discourage use by snakes.*
- *Provide environmental awareness training for construction personnel, as approved by the Conservancy. Training may consist of showing a video prepared by a qualified biologist, or an in-person presentation by a qualified biologist. In addition to the video or in-person presentation, training may be supplemented with the distribution of approved brochures and other materials that describe resources protected under the Yolo HCP/NCCP and methods for avoiding effects.*
- *A qualified biologist will prepare a giant garter snake relocation plan which must be approved by the Conservancy prior to work in giant garter snake habitat. The qualified biologist will base the relocation plan on criteria provided by CDFW or USFWS, through the Conservancy.*
- *If a live giant garter snake is encountered during construction activities, immediately notify the project's biological monitor and USFWS and CDFW. The monitor will stop construction in the vicinity of the snake, monitor the snake, and allow the snake to leave on its own. The monitor will remain in the area for the remainder of the work day to ensure the snake is not harmed or, if it leaves the site, does not return. If the giant*

garter snake does not leave on its own, the qualified biologist will relocate the snake consistent with the relocation plan described above.

- *Employ the following management practices to minimize disturbances to habitat:*
  - *Install temporary fencing to identify and protect adjacent marshes, wetlands, and ditches from encroachment from construction equipment and personnel.*
  - *Maintain water quality and limit construction runoff into wetland areas through the use of hay bales, filter fences, vegetative buffer strips, or other accepted practices. No plastic, monofilament, jute, or similar erosion-control matting that could entangle snakes or other wildlife will be permitted.*

Ongoing maintenance covered activities by local water and flood control agencies typically involve removal of vegetation, debris, and sediment from water conveyance canals as well as resloping, rocking, and stabilizing the canals that serve agricultural water users. Maintenance of these conveyance facilities can typically occur only from mid-January through April when conveyance canals and ditches are not in service by the agency, although some drainages are used for storm conveyance during the winter and are wet all year. This timing is during the giant garter snake's inactive period. This is when snakes may be using underground burrows and are most vulnerable to take because they are unable to move out of harm's way. Maintenance activities, therefore, will be limited to the giant garter snake's active season (May 1 to October 1) when possible. All personnel involved in maintenance activities within giant garter snake habitat will first participate in environmental awareness training for giant garter snake, as described above for construction related activities. To minimize the take of giant garter snake, the local water or flood control agency will limit maintenance of conveyance structures located within modeled giant garter snake habitat (Appendix A, Covered Species Accounts) to clearing one side along at least 80 percent of the linear distance of canals and ditches during each maintenance year (e.g., the left bank of a canal is maintained in the first year and the right bank in the second year). To avoid collapses when re-sloping canal and ditch banks composed of heavy clay soils, clearing will be limited to one side of the channel during each maintenance year.

For channel maintenance activities conducted within modeled habitat for giant garter snake, the project proponent will place removed material in existing dredged sites along channels where prior maintenance dredge disposal has occurred. For portions of channels that do not have previously used spoil disposal sites and where surveys have been conducted to confirm that giant garter snakes are not present, removed materials may be placed along channels in areas that are not occupied by giant garter snake and where materials will not re-enter the canal because of stormwater runoff.

Modifications to this AMM may be made with the approval of the Conservancy, USFWS, and CDFW. This includes any modifications needed to ensure compliance with the City's existing agreement with CDFW regarding maintenance of the Mace Drainage Channel.

~~ARC~~ DiSC 2022 Project and Mace Triangle

3-18 To ensure avoidance and minimization of impacts to Western Burrowing Owl, the project applicant for ~~ARC~~ DiSC 2022 shall obtain coverage under the Yolo HCP/NCCP for on-site, and as may be determined necessary by Yolo Habitat Conservancy, for offsite infrastructure work, for each phase of development. In addition to payment of any applicable HCP/NCCP fees, the applicant shall implement Yolo HCP/NCCP Avoidance and Minimization Measure

AMM-18 (Minimize Take and Adverse Effects on Western Burrowing Owl) to the satisfaction of the City and the YHC. AMM-18[11] provides:

The project proponent will retain a qualified biologist to conduct planning-level surveys and identify western burrowing owl habitat (as defined in Appendix A of the Yolo HCP/NCCP, Covered Species Accounts) within or adjacent to (i.e., within 500 feet of) a covered activity. If habitat for this species is present, additional surveys for the species by a qualified biologist are required, consistent with CDFW guidelines (Yolo HCP/NCCP, Appendix L).

If burrowing owls are identified during the planning-level survey, the project proponent will minimize activities that will affect occupied habitat as follows. Occupied habitat is considered fully avoided if the project footprint does not impinge on a non-disturbance buffer around the suitable burrow. For occupied burrowing owl nest burrows, this non-disturbance buffer could range from 150 to 1,500 feet (Table 3-17 [in the SEIR], Recommended Restricted Activity Dates and Setback Distances by Level of Disturbance for Burrowing Owls), depending on the time of year and the level of disturbance, based on current guidelines (California Department of Fish and Game 2012).

Table 3-17 (in the SEIR)
Recommended Restricted Activity Dates and Setback Distances by Level of Disturbance for Burrowing Owls Time of Year Level of Disturbance (feet) from Occupied Burrows

	Level of Disturbance (feet) from Occupied Burrows		
Time of Year	**Low**	**Medium**	**High**
April 1 – August 15	600	1,500	1,500
August 16 – October 15	600	600	1,500
October 16-March 31	150	300	1,500

The Yolo HCP/NCCP generally defines low, medium, and high levels of disturbances of burrowing owls as follows.

- *Low: Typically 71-80 dB, generally characterized by the presence of passenger vehicles, small gas-powered engines (e.g., lawn mowers, small chain saws, portable generators), and high tension power lines. Includes electric hand tools (except circular saws, impact wrenches and similar). Management and enhancement activities would typically fall under this category. Human activity in the immediate vicinity of burrowing owls would also constitute a low level of disturbance, regardless of the noise levels.*
- *Moderate: Typically 81-90 dB, and would include medium- and large-sized construction equipment, such as backhoes, front end loaders, large pumps and generators, road graders, dozers, dump trucks, drill rigs, and other moderate to large diesel engines. Also includes power saws, large chainsaws, pneumatic drills and impact wrenches, and large gasoline-powered tools. Construction activities would normally fall under this category.*
- *High: Typically 91-100 dB, and is generally characterized by impacting devices, jackhammers, compression ("jake") brakes on large trucks, and trains. This category includes both vibratory and impact pile drivers (smaller steel or wood piles) such as used to install piles and guard rails, and large pneumatic tools such as chipping*

[11] Per Table 5-2(b) of the HCP/NCCP, no injury or mortality of individuals would occur with application of avoidance and minimization measures (Final HCP/NCCP, pg. 5-21 to 5-25).

machines. It may also include large diesel and gasoline engines, especially if in concert with other impacting devices. Felling of large trees (defined as dominant or subdominant trees in mature forests), truck horns, yarding tower whistles, and muffled or underground explosives are also included. Very few covered activities are expected to fall under this category, but some construction activities may result in this level of disturbance.

The project proponent may qualify for a reduced buffer size, based on existing vegetation, human development, and land use, if agreed upon by CDFW and USFWS (California Department of Fish and Game 2012).

If the project does not fully avoid direct and indirect effects on nesting sites (i.e., if the project cannot adhere to the buffers described above), the project proponent will retain a qualified biologist to conduct preconstruction surveys and document the presence or absence of western burrowing owls that could be affected by the covered activity. Prior to any ground disturbance related to covered activities, the qualified biologist will conduct the preconstruction surveys within three days prior to ground disturbance in areas identified in the planning-level surveys as having suitable burrowing owl burrows, consistent with CDFW preconstruction survey guidelines (Yolo HCP/NCCP, Appendix L, Take Avoidance Surveys). The qualified biologist will conduct the preconstruction surveys three days prior to ground disturbance. Time lapses between ground disturbing activities will trigger subsequent surveys prior to ground disturbance.

If the biologist finds the site to be occupied by western burrowing owls during the breeding season (February 1 to August 31), the project proponent will avoid all nest sites, based on the buffer distances described above, during the remainder of the breeding season or while the nest is occupied by adults or young (occupation includes individuals or family groups that forage on or near the site following fledging). Construction may occur inside of the disturbance buffer during the breeding season if the nest is not disturbed and the project proponent develops an AMM plan that is approved by the Conservancy, CDFW, and USFWS prior to project construction, based on the following criteria:

- *The Conservancy, CDFW, and USFWS approves the AMM plan provided by the project proponent.*
- *A qualified biologist monitors the owls for at least three days prior to construction to determine baseline nesting and foraging behavior (i.e., behavior without construction).*
- *The same qualified biologist monitors the owls during construction and finds no change in owl nesting and foraging behavior in response to construction activities.*
- *If the qualified biologist identifies a change in owl nesting and foraging behavior as a result of construction activities, the qualified biologist will have the authority to stop all construction related activities within the non-disturbance buffers described above. The qualified biologist will report this information to the Conservancy, CDFW, and USFWS within 24 hours, and the Conservancy will require that these activities immediately cease within the non-disturbance buffer. Construction cannot resume within the buffer until the adults and juveniles from the occupied burrows have moved out of the project site, and the Conservancy, CDFW, and USFWS agree.*
- *If monitoring indicates that the nest is abandoned prior to the end of nesting season and the burrow is no longer in use by owls, the project proponent may remove the non-disturbance buffer, only with concurrence from CDFW and USFWS. If the burrow cannot be avoided by construction activity, the biologist will excavate and collapse the*

burrow in accordance with CDFW's 2012 guidelines to prevent reoccupation after receiving approval from the wildlife agencies.

If evidence of western burrowing owl is detected outside the breeding season (December 1 to January 31), the project proponent will establish a non-disturbance buffer around occupied burrows, consistent with Table 4-2, as determined by a qualified biologist. Construction activities within the disturbance buffer are allowed if the following criteria are met to prevent owls from abandoning important overwintering sites:

- *A qualified biologist monitors the owls for at least three days prior to construction to determine baseline foraging behavior (i.e., behavior without construction).*
- *The same qualified biologist monitors the owls during construction and finds no change in owl foraging behavior in response to construction activities.*
- *If there is any change in owl roosting and foraging behavior as a result of construction activities, these activities will cease within the buffer.*
- *If the owls are gone for at least one week, the project proponent may request approval from the Conservancy, CDFW, and USFWS for a qualified biologist to excavate and collapse usable burrows to prevent owls from reoccupying the site if the burrow cannot be avoided by construction activities. The qualified biologist will install one-way doors for a 48-hour period prior to collapsing any potentially occupied burrows. After all usable burrows are excavated, the buffer will be removed and construction may continue.*

Monitoring must continue as described above for the nonbreeding season as long as the burrow remains active.

A qualified biologist will monitor the site, consistent with the requirements described above, to ensure that buffers are enforced and owls are not disturbed. Passive relocation (i.e., exclusion) of owls has been used in the past in the Plan Area to remove and exclude owls from active burrows during the nonbreeding season (Trulio 1995). Exclusion and burrow closure will not be conducted during the breeding season for any occupied burrow. If the Conservancy determines that passive relocation is necessary, the project proponent will develop a burrowing owl exclusion plan in consultation with CDFW biologists. The methods will be designed as described in the species monitoring guidelines (California Department of Fish and Game 2012) and consistent with the most up-to-date checklist of passive relocation techniques. This may include the installation of one-way doors in burrow entrances by a qualified biologist during the nonbreeding season. These doors will be in place for 48 hours and monitored twice daily to ensure that the owls have left the burrow, after which time the biologist will collapse the burrow to prevent reoccupation. Burrows will be excavated using hand tools. During excavation, an escape route will be maintained at all times. This may include inserting an artificial structure, such as piping, into the burrow to prevent collapsing until the entire burrow can be excavated and it can be determined that no owls are trapped inside the burrow. The Conservancy may allow other methods of passive or active relocation, based on best available science, if approved by the wildlife agencies. Artificial burrows will be constructed prior to exclusion and will be created less than 300 feet from the existing burrows on lands that are protected as part of the reserve system.

~~ARC~~ DiSC 2022 Project and Mace Triangle

3-19 To ensure avoidance and minimization of impacts to Swainson's hawk and their habitat, the project applicant for ~~ARC~~ DiSC 2022, or the Mace Triangle as applicable, shall obtain coverage under the Yolo HCP/NCCP for on-site, and as may be determined necessary by Yolo Habitat Conservancy, for off-site infrastructure work, for each phase of development. In addition to payment of any applicable HCP/NCCP fees, the applicant shall implement Yolo HCP/NCCP Avoidance and Minimization Measure AMM-16 (Minimize Take and Adverse Effects on Habitat of Swainson's Hawk and White-Tailed Kite) to the satisfaction of the City and the YHC. AMM-16[12] provides:

> *The project proponent will retain a qualified biologist to conduct planning-level surveys and identify any nesting habitat present within 1,320 feet of the project footprint. Adjacent parcels under different land ownership will be surveyed only if access is granted or if the parcels are visible from authorized areas.*
>
> *If a construction project cannot avoid potential nest trees (as determined by the qualified biologist) by 1,320 feet, the project proponent will retain a qualified biologist to conduct preconstruction surveys for active nests consistent, with guidelines provided by the Swainson's Hawk Technical Advisory Committee (2000), between March 15 and August 30, within 15 days prior to the beginning of the construction activity. The results of the survey will be submitted to the Conservancy and CDFW. If active nests are found during preconstruction surveys, a 1,320-foot initial temporary nest disturbance buffer shall be established. If project related activities within the temporary nest disturbance buffer are determined to be necessary during the nesting season, then the qualified biologist will monitor the nest and will, along with the project proponent, consult with CDFW to determine the best course of action necessary to avoid nest abandonment or take of individuals. Work may be allowed only to proceed within the temporary nest disturbance buffer if Swainson's hawk are not exhibiting agitated behavior, such as defensive flights at intruders, getting up from a brooding position, or flying off the nest, and only with the agreement of CDFW and USFWS. The designated on-site biologist/monitor shall be on-site daily while construction-related activities are taking place within the 1,320-foot buffer and shall have the authority to stop work if raptors are exhibiting agitated behavior. Up to 20 Swainson's hawk nest trees (documented nesting within the last 5 years) may be removed during the permit term, but they must be removed when not occupied by Swainson's hawks.*
>
> *For covered activities that involve pruning or removal of a potential Swainson's hawk nest tree, the project proponent will conduct preconstruction surveys that are consistent with the guidelines provided by the Swainson's Hawk Technical Advisory Committee (2000). If active nests are found during preconstruction surveys, no tree pruning or removal of the nest tree will occur during the period between March 1 and August 30 within 1,320 feet of an active nest, unless a qualified biologist determines that the young have fledged and the nest is no longer active.*

[12] Per Table 5-2(b) of the HCP/NCCP, no injury or mortality of individuals would occur with application of avoidance and minimization measures (Final HCP/NCCP, pp. 5-21 to 5-25).]

~~ARC~~ DiSC 2022 Project

3-20(a) *White-tailed kite. To ensure avoidance and minimization of impacts to White-Tailed Kite, the project applicant for the ~~ARC~~ DiSC 2022 Project shall obtain coverage under the Yolo HCP/NCCP for on-site, and as may be determined necessary by Yolo Habitat Conservancy, for off-site infrastructure work, for each phase of development. In addition to payment of any applicable HCP/NCCP fees, the applicant shall implement Yolo HCP/NCCP Avoidance and Minimization Measure AMM-16 (Minimize Take and Adverse Effects on Habitat of Swainson's Hawk and White-Tailed Kite) to the satisfaction of the City and the YHC. AMM-16[13] provides:*

> *The project proponent will retain a qualified biologist to conduct planning-level surveys and identify any nesting habitat present within 1,320 feet of the project footprint. Adjacent parcels under different land ownership will be surveyed only if access is granted or if the parcels are visible from authorized areas.*
>
> *If a construction project cannot avoid potential nest trees (as determined by the qualified biologist) by 1,320 feet, the project proponent will retain a qualified biologist to conduct preconstruction surveys for active nests consistent, with guidelines provided by the Swainson's Hawk Technical Advisory Committee (2000), between March 15 and August 30, within 15 days prior to the beginning of the construction activity. The results of the survey will be submitted to the Conservancy and CDFW. If active nests are found during preconstruction surveys, a 1,320-foot initial temporary nest disturbance buffer shall be established. If project related activities within the temporary nest disturbance buffer are determined to be necessary during the nesting season, then the qualified biologist will monitor the nest and will, along with the project proponent, consult with CDFW to determine the best course of action necessary to avoid nest abandonment or take of individuals. Work may be allowed only to proceed within the temporary nest disturbance buffer if white-tailed kite are not exhibiting agitated behavior, such as defensive flights at intruders, getting up from a brooding position, or flying off the nest, and only with the agreement of CDFW and USFWS. The designated on-site biologist/monitor shall be on-site daily while construction-related activities are taking place within the 1,320-foot buffer and shall have the authority to stop work if raptors are exhibiting agitated behavior.*
>
> *For covered activities that involve pruning or removal of a potential white-tailed kite nest tree, the project proponent will conduct preconstruction surveys that are consistent with the guidelines provided by the Swainson's Hawk Technical Advisory Committee (2000). If active nests are found during preconstruction surveys, no tree pruning or removal of the nest tree will occur during the period between March 1 and August 30 within 1,320 feet of an active nest, unless a qualified biologist determines that the young have fledged and the nest is no longer active.*

3-20(b) *Tricolored blackbird. To ensure avoidance and minimization of impacts to Tricolored Blackbird, the project applicant for the ~~ARC~~ DiSC 2022 Project shall obtain coverage under the Yolo HCP/NCCP for on-site, and as may be determined necessary by Yolo Habitat Conservancy, for off-site infrastructure work, for each phase of development. In addition to payment of any applicable HCP/NCCP fees, the applicant shall implement Yolo HCP/NCCP Avoidance and Minimization Measure AMM-21 (Minimize Take and Adverse Effects on*

[13] Per Table 5-2(b) of the HCP/NCCP, no injury or mortality of individuals would occur with application of avoidance and minimization measures (Final HCP/NCCP, pp. 5-21 to 5-25).]

Habitat of Tricolored Blackbird) to the satisfaction of the City and the YHC. AMM-21[14] *provides:*

> *The project proponent will retain a qualified biologist to identify and quantify (in acres) tricolored blackbird nesting and foraging habitat (as defined in Appendix A of the Yolo HCP/NCCP, Covered Species Accounts) within 1,300 feet of the footprint of the covered activity. If a 1,300-foot buffer from nesting habitat cannot be maintained, the qualified biologist will check records maintained by the Conservancy (which will include CNDDB data, and data from the tricolored blackbird portal) to determine if tricolored blackbird nesting colonies have been active in or within 1,300 feet of the project footprint during the previous five years. If there are no records of nesting tricolored blackbirds on the site, the qualified biologist will conduct visual surveys to determine if an active colony is present, during the period from March 1 to July 30, consistent with protocol described by Kelsey (2008).*
>
> *Operations and maintenance activities or other temporary activities that do not remove nesting habitat and occur outside the nesting season (March 1 to July 30) do not need to conduct planning or construction surveys or implement any additional avoidance measures.*
>
> *If an active tricolored blackbird colony is present or has been present within the last five years within the planning-level survey area, the project proponent will design the project to avoid adverse effects within 1,300 feet of the colony site(s), unless a shorter distance is approved by the Conservancy, USFWS, and CDFW. If a shorter distance is approved, the project proponent will still maintain a 1,300-foot buffer around active nesting colonies during the nesting season but may apply the approved lesser distance outside the nesting season. Adjacent parcels under different land ownership will be surveyed only if access is granted or if the parcels are visible from authorized areas.*

~~ARC~~ DiSC 2022 Project and Mace Triangle

3-20(c) *Northern harrier, mountain plover, Modesto song sparrow and other migratory birds. The project applicant shall implement the following measures to avoid or minimize impacts to migratory birds and other protected bird species during on- and off-site construction:*

- *If any site disturbance or construction activity for any phase of development begins outside the February 1 to August 31 breeding season, a preconstruction survey for active nests shall not be needed.*
- *If any site disturbance or construction activity for any phase of development is scheduled to begin between February 1 and August 31, a qualified biologist shall conduct a preconstruction survey for active nests from publicly accessible areas within 14 days prior site disturbance or construction activity for any phase of development. The survey area shall cover the construction site and the area surrounding the construction site, including a 100-foot radius for MBTA birds, and a 250-foot radius for birds of prey. If an active nest of a bird of prey, MBTA bird, or other CDFW-protected bird is not found, then no further mitigation measures are necessary. The preconstruction survey shall be submitted to the City of Davis Department of Community Development and Sustainability for review.*

[14] Per Table 5-2(b) of the HCP/NCCP, no injury or mortality of individuals would occur with application of avoidance and minimization measures (Final HCP/NCCP, pp. 5-21 to 5-25).]

- *If an active nest of a bird of prey, MBTA bird, or other CDFW-protected bird is discovered that may be adversely affected by any site disturbance or construction or an injured or killed bird is found, the project applicant shall immediately:*
  - *Stop all work within a 100-foot radius of the discovery.*
  - *Notify the City of Davis Department of Community Development and Sustainability and Public Works.*
  - *Do not resume work within the 100-foot radius until authorized by the biologist.*
  - *The biologist shall establish a minimum 250-foot Environmentally Sensitive Area (ESA) around the nest if the nest is of a bird of prey, and a minimum 100-foot ESA around the nest if the nest is of an MBTA bird other than a bird of prey. The ESA may be reduced if the biologist determines that a smaller ESA would still adequately protect the active nest. No work may occur within the ESA until the biologist determines that the nest is no longer active.*

~~ARC~~ DiSC 2022 Project

3-21 *The project applicant for the ~~ARC~~ DiSC 2022 Site shall implement the following measure to avoid or minimize impacts to the Mace Drainage Channel:*

- *Prior to conducting non-maintenance work within the bed and banks in the Mace Drainage Channel for any phase of development, as applicable, the project applicant for the ~~ARC~~ DiSC 2022 Site shall notify CDFW pursuant to Section 1602 of the Fish and Wildlife Code. If CDFW determines that a Streambed Alteration Agreement (SAA) is necessary, the applicant shall obtain a SAA and comply with all conditions of that Agreement, including the payment of any applicable Yolo HCP/NCCP fees. Compliance with the SAA shall be ensured by the City of Davis Department of Community Development and Sustainability. This does not apply to City maintenance work within the Mace Drainage Channel, for which the City already has an agreement with CDFW.*

Modified Mitigation Measures

None required.

Additional Project-Specific Mitigation Measures

None required.

Environmental Issue Area	Where Impact Was Analyzed in Previous CEQA Documents?	Do Proposed Changes Involve New or More Severe Impacts?	Any New Circumstances Involving New or More Severe Impacts?	Any New Information Requiring New Analysis or Verification?
V. Cultural Resources. *Would the project:*				
a. Cause a substantial adverse change in the significance of a historical resource pursuant to § 15064.5?	2020 SEIR pgs. 3-121 to 3-123	No	No	No
b. Cause a substantial adverse change in the significance of an archaeological resource pursuant to § 15064.5?	2020 SEIR pgs. 3-123 to 3-126	No	No	No
c. Disturb any human remains, including those interred outside of formal cemeteries?	2020 SEIR pgs. 3-126 to 3-127	No	No	No

Discussion

Since the release of the certified Final SEIR, the project site has remained vacant and undeveloped. Agricultural production continues to occur on the properties to the north and east of the DiSC 2022 site. Substantial changes in the environmental and regulatory settings related to cultural resources, or in circumstances that would affect the analysis in the SEIR related to cultural resources have not occurred.

Relative to the DISC project, the DiSC 2022 project would involve a substantially reduced development footprint area, due to the currently proposed project excluding the 92 acres immediately north of the MDC, which was a portion of the previous DISC project site. By excluding the area north of the MDC, the DiSC 2022 project would encompass 102 acres, as compared to the 194 acres planned for the previous DISC project. Project changes or circumstances that would adversely affect the analysis in the SEIR related to cultural resources have not occurred.

a. The SEIR analyzed the potential for the DISC project to cause a substantial adverse change in the significance of a historical resource under Impact 3-27 and concluded the project would have resulted in a less-than-significant impact, with incorporation of Mitigation Measure 3-27. In determining the conclusion, the SEIR cited the findings of the previous MRIC EIR, which similarly concluded impacts related to historical resources would have been less than significant with mitigation. Archival research associated with the MRIC location identified two historic resources that were potentially located within the Area of Potential Effects (APE) associated with the MRIC project's proposed off-site sewer alignment: the William Seward Wright Home and Farm (standing) and the William Robert Wright Family House (demolished). In addition to the standing structures, the MRIC EIR concluded that historic-period artifacts or subsurface remains were potentially present within the APE. With respect to the Mace Triangle property, a field survey and records search at the Northwest Information Center did not identify evidence of historic resources or sites on any of the property's parcels. Because the DISC project would have consisted of development over much of the same site as the MRIC project, the SEIR determined impacts related to a substantial adverse change in the significance of a historical resource under the DISC project would have been similar to the MRIC project.

The currently proposed DiSC 2022 project would be implemented within the development footprint area previously analyzed in the SEIR; however, the DiSC 2022 project would involve a substantially reduced development footprint area, due to the currently proposed project excluding the 92 acres immediately north of the MDC, which was a portion of the previous DISC project site. On-site conditions have not substantially changed within the project site, Mace Triangle property, or the proposed off-site sewer alignment since the approval of the SEIR. To ensure the currently proposed project would not result in impacts to subsurface historical resources, the project would still be subject to Mitigation Measure 3-27.

Based on the above information, the currently proposed project would not result in new significant impacts or substantially more severe significant impacts related to a substantial adverse change in the significance of a historical resource pursuant to CEQA Guidelines Section 15064.5 beyond what were previously identified in the SEIR. Therefore, the proposed project would be consistent with the conclusions of the SEIR.

b. The SEIR analyzed the potential for the DISC project to cause a substantial adverse change in the significance of an archaeological resource pursuant to Section 15064.5 under Impact 3-28 and concluded the project would have resulted in a less-than-significant impact, with incorporation of Mitigation Measures 3-28(a) through 3-28(c). The SEIR noted that a previous assessment for potential, buried archaeological deposits indicated that small areas of high archaeological sensitivity could extend into portions of the 6.8-acre agricultural buffer area on the City's 25-acre property, where disturbance would have occurred during buffer establishment. In addition, had the applicant selected the northerly off-site sewer pipe alignment, then installation of the sewer pipe could have resulted in adverse effects to archaeological resources if a prehistoric site was present within the limits of construction. With respect to the Mace Triangle property, the SEIR found that given the largely disturbed nature of the site, the possibility for encountering archaeological resource deposits during future construction of the Mace Triangle was limited. However, in the unlikely event that archaeological resource deposits were encountered during future construction, the SEIR required mitigation to address such impacts.

The currently proposed DiSC 2022 project would be implemented within the development footprint area previously analyzed in the SEIR; however, the DiSC 2022 project would involve a substantially reduced development footprint area, due to the currently proposed project excluding the 92 acres immediately north of the MDC, which was a portion of the previous DISC project site. Given the elimination of this northerly area from the DiSC 2022 project, where areas of high sensitivity for buried sites occur, Mitigation Measure 3-28(a) of the SEIR no longer applies, and the only remaining potential disturbance area having high sensitivity for buried archaeological sites is the northerly off-site sewer alignment, for which Mitigation Measure 3-28(b) of the SEIR is required. Because the northerly off-site sewer line is still being considered for the DiSC 2022 project, the project would still be subject to Mitigation Measure 3-28(b) to ensure impacts would not occur to subsurface archaeological resources.

Based on the above information, the currently proposed project would not result in new significant impacts or substantially more severe significant impacts related to a substantial adverse change in the significance of an archaeological resource pursuant to Section 15064.5 beyond what were previously identified in the SEIR. Therefore, the proposed project would be consistent with the conclusions of the SEIR.

c. The SEIR analyzed the potential for the DISC project to disturb any human remains, including those interred outside of formal cemeteries under Impact 3-30 and determined that with incorporation of Mitigation Measure 3-30, the project would have resulted in a less-than-significant

impact. The SEIR cited the fact that impacts related to disturbing human remains were determined to be less than significant with mitigation for the MRIC project and the Native American Heritage Commission's Sacred Lands File failed to indicate the presence of Native American cultural resources in the immediate area of the MRIC site. In addition, evidence for human remains or burials within the APE was not detected as part of analysis of the MRIC project. Nevertheless, because the potential for unknown human remains to be discovered during construction could not be eliminated, given the known prehistoric occupation of the project vicinity by Native American tribes, the SEIR concluded mitigation would have been required for the DISC project, similar to the MRIC project.

The currently proposed DiSC 2022 project would be implemented within the development footprint area previously analyzed in the SEIR; however, the DiSC 2022 project would involve a substantially reduced development footprint area, due to the currently proposed project excluding the 92 acres immediately north of the MDC, which was a portion of the previous DISC project site. Because the potential for unknown human remains to be discovered during construction could not be eliminated, given the known prehistoric occupation of the project vicinity by Native American tribes, the currently proposed project would still require mitigation to address potential impacts. However, relative to the previous iteration of the project, the currently proposed DiSC 2022 project has reduced potential to result in impacts to human remains, given the reduction in the development footprint area.

Based on the above information, the currently proposed project would not result in new significant impacts or substantially more severe significant impacts related to the disturbance of any human remains, including those interred outside of formal cemeteries, beyond what were previously identified in the SEIR. Therefore, the proposed project would be consistent with the conclusions of the SEIR.

Conclusion

Based on the above, the DiSC 2022 project would not result in any changes, new circumstances, or new information that would involve new significant impacts or substantially more severe significant impacts from what had been anticipated for the project site in the previous CEQA documents related to cultural resources. It should be noted that the previously required mitigation measures from the SEIR, as presented below, would still be required to be implemented for the proposed project.

Mitigation Measure(s)

The following mitigation measure(s) would reduce the above potential impacts to a *less-than-significant* level. Mitigation Measure 3-28(a) set forth in the SEIR for the DISC project would no longer be required.

Mitigation Measures from the Previous CEQA Documents

The mitigation measures from the SEIR applicable to the proposed project are presented below. It should be noted that the mitigation measures formerly referenced "ARC" as part of the previous SEIR; thus, such references have been changed to "DiSC 2022" in this Addendum in ~~strikethrough~~ and double underline format. No other changes have been made to the following mitigation.

~~ARC~~ DiSC 2022 Project

3-27 *If the northerly off-site sewer alignment is selected for the ~~ARC~~ DiSC 2022 Project, then prior to approval of design-level improvement plans for the off-site sewer pipe, the applicant shall retain a qualified archaeologist to design and implement a cultural study, the intent of which shall be to identify and investigate any subsurface historic remains within the northerly portion*

of the sewer pipe construction limits. Because of the potential for fragile prehistoric remains within this area, the evaluation shall include only metal detection and hand excavation. Metal detection should include a complete sweep of the APE adjacent to the farm structures, to test for subsurface features. Hand excavation should include testing of the metal detection finds. If no subsurface features are uncovered, no additional cultural investigations will necessary. If, on the other hand, structural remains are found, the investigation shall continue as formal evaluation to determine their eligibility for the California Register of Historical Resources. This shall include, at a minimum, additional exposure of the feature(s), and photo-documentation and recordation. If the evaluation determines that the features do not have sufficient data potential to be eligible for the California Register, no additional work should be required. However, if data potential exists – e.g., there is an intact feature – it will be necessary to mitigate any project impacts. The evaluation shall be submitted to the Davis Department of Community Development and Sustainability for review.

If it is determined that standing structures associated with the William Seward Wright house and farm are within, or immediately adjacent to, the off-site sewer APE, a qualified architectural historian shall conduct an evaluation of those structures for their potential eligibility for the California Register of Historical Resources. The evaluation should include a full assessment of the structures, archival research to confirm the age, occupants, and historic uses of the structures, and the dates and extent of any renovations that might impact the structures' historic integrity. Should the structures be determined to be eligible for the California Register, pursuant to Public Resources Code Section 5024.1, Title 14 CCR, Section 4852, any mitigation measures provided in the architectural historian's report shall be followed. Should the structures be determined ineligible for the California Register, no further consideration shall be required. The evaluation shall be submitted to the Davis Department of Community Development and Sustainability for review.

Mitigation of impacts might include avoidance of further disturbance to the resources through project redesign. If avoidance is determined to be infeasible, additional data recovery excavations shall be conducted for the resources, to collect enough information to exhaust the data potential of those resources. Impacts to the standing structures shall be mitigated through recordation to the standards of the National Park Service's Historic American Buildings Survey (HABS), as determined by the qualified architectural historian.

~~ARC~~ DiSC 2022 Project

3-28(b) *If the northerly off-site sewer alignment is selected for the ~~ARC~~ DiSC 2022 Project, then prior to approval of design-level improvement plans for the off-site sewer pipe, the applicant shall retain a qualified archaeologist to design and implement an archeological study, the intent of which shall be to identify and investigate any subsurface archaeological remains within the northerly portion of the sewer pipe construction limits. The subsurface sampling methodology outlined in the study shall be sufficient to enable the qualified archaeologist to define the physical extent and nature of any artifact-bearing deposits should they be discovered. Because of the potential for fragile prehistoric remains, the evaluation should include only hand excavation. Hand excavation should include placement of a series of small shovel probes across the site to look for prehistoric artifacts and features. If artifact-bearing deposits are not uncovered, additional archaeological investigations are not required. If artifact-bearing features are found, the investigation shall continue as formal evaluation to determine their eligibility for the California Register of Historical Resources. This formal evaluation shall be conducted by the qualified archaeologist in coordination with the City and Yocha Dehe Wintun Nation ("Tribe"). If the evaluation determines that the artifacts do not have sufficient data*

potential to be eligible for the California Register, additional work shall not be required. However, if data potential exists – e.g., there is an intact feature with a large and varied artifact assemblage – necessary mitigation measures shall be implemented to alleviate any project impacts. The evaluation shall be submitted to the Davis Department of Community Development and Sustainability and the Tribe for review.

Mitigation of impacts might include avoidance of further disturbance to the resources through project redesign. If redesign is not feasible, additional data recovery excavations shall be conducted for the archaeological resources, to collect enough information to exhaust the data potential of those resources. All cultural items, including ceremonial items and archeological items, which may be found at the project site should be turned over to the Tribe for appropriate treatment, unless otherwise ordered by a court or agency of competent jurisdiction.

~~ARC~~ DiSC 2022 Project and Mace Triangle

3-28(c) *If any prehistoric or historic artifacts, or other indications of archaeological resources are found during grading and construction activities, all work within the vicinity of the find shall cease and the applicant shall retain an archaeologist meeting the Secretary of the Interior's Professional Qualifications Standards in prehistoric or historical archaeology, as appropriate, to evaluate the finds, in coordination with the City and Yocha Dehe Wintun Nation ("Tribe"). If the resource is determined to be eligible for inclusion in the California Register of Historical Resources and project impacts cannot be avoided, data recovery shall be undertaken. Data recovery efforts can range from rapid photographic documentation to extensive excavation depending upon the physical nature of the resource. The degree of effort shall be determined at the discretion of a qualified archaeologist and the Tribe and should be sufficient to recover data considered important to the area's history and/or prehistory. All cultural items, including ceremonial items and archeological items, which may be found at the project site should be turned over to the Tribe for appropriate treatment, unless otherwise ordered by a court or agency of competent jurisdiction. This language of this mitigation measure shall be included on any future grading plans, utility plans, and subdivision improvement drawings approved by the City for the ~~ARC~~ DiSC 2022 Site and/or 16.49-acre Mace Triangle Site.*

~~ARC~~ DiSC 2022 Project and Mace Triangle

3-30 *During construction, if bone is uncovered that may be human, further disturbance shall not occur within 100 feet of the vicinity of the find(s), and the Yolo County Coroner shall be notified. Should the remains be determined to be of Native American descent, the NAHC shall be consulted to determine the Most Likely Descendant ("MLD") under California Public Resources Code Section 5097.98. If the location of the site and the history and prehistory of the area is culturally-affiliated with the Yocha Dehe Wintun Nation ("Tribe"), the NAHC will contact the Tribe and a Tribal member will be designated by the Tribe to consult with the landowner and/or project proponents. Should the NAHC determine that a member of Yocha Dehe Wintun Nation is the MLD, then subsequent actions shall be conducted consistent with Yocha Dehe Wintun Nation's Treatment Protocol for Handling Human Remains and Cultural Items Affiliated with the Yocha Dehe Wintun Nation ("Protocol"). Should the NAHC determine that a member of an Indian tribe other than Yocha Dehe Wintun Nation is the MLD, and the Tribe is in agreement with this determination, the terms of the Protocol relating to the treatment of such Native American human remains shall not be applicable, and the MLD shall make recommendations concerning the treatment of the remains within 48 hours, as provided in PRC 5097.98.*

Modified Mitigation Measures

None required.

Additional Project-Specific Mitigation Measures

None required.

Environmental Issue Area	Where Impact Was Analyzed in Previous CEQA Documents?	Do Proposed Changes Involve New or More Severe Impacts?	Any New Circumstances Involving New or More Severe Impacts?	Any New Information Requiring New Analysis or Verification?
VI. Energy. *Would the project:*				
a. Result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation?	2020 SEIR pgs. 3-147 to 3-154	No	No	Yes
b. b. Conflict with or obstruct a state or local plan for renewable energy or energy efficiency?	2020 SEIR pgs. 3-154 to 3-155	No	No	Yes

Discussion

Since the release of the certified Final SEIR, the project site has remained vacant and undeveloped, and agricultural production continues to occur on the properties to the north and east of the DiSC 2022 site. However, several circumstances outside of the physical condition of the project site have occurred. Valley Clean Energy (VCE) has become further established as an electricity provider to the cities of Davis and Woodland, as well as some unincorporated portions of Yolo County. Electricity provided by VCE is generated using a greater proportion of renewable energy as compared to PG&E. Consequently, electricity provided by VCE generates less greenhouse gas (GHG) emissions than electricity provided by PG&E. Although VCE provides less GHG-intensive electricity and would likely supply electricity to all future uses at the DiSC 2022 site, customers in Davis can opt out of VCE and continue to be supplied with electricity through PG&E. Both PG&E and VCE are working towards providing electricity from 100 percent renewable sources per the State's Renewable Portfolio Standards (RPS).

Relative to the DISC project, the DiSC 2022 project would involve a substantially reduced development footprint area, due primarily to the currently proposed project excluding the 92 acres immediately north of the MDC, which was a portion of the previous DISC project site. By excluding the area north of the MDC, the DiSC 2022 project would encompass 102 acres, as compared to the 194 acres planned for the previous DISC project. The reduced footprint translates to a 63.6 percent decrease in commercial square footage, a 37.8 percent reduction in advanced manufacturing square footage, a 45.9 percent decline in on-site residential units, and a 20 percent reduction in ancillary retail square footage. The reduced footprint results in environmental benefits when compared to the previous iteration of the project, as the currently proposed project would consume less energy. It should be noted that the scope of potential future development of the Mace Triangle site has remained unchanged since the preparation of the certified Final SEIR. Consequently, the potential for future development of the Mace Triangle site to result in impacts related to energy has not changed since preparation of the SEIR and the conclusions of the SEIR concerning the Mace Triangle site remain applicable, including the mitigation measures required for the Mace Triangle site. Thus, energy impacts associated with the Mace Triangle site are not further discussed in the analysis below. Project changes or circumstances that would adversely affect the analysis in the SEIR related to energy have not occurred.

a,b. Analysis of the proposed project's potential impacts related to energy during project construction and operations, as well as cumulative energy emissions, are discussed in detail below in comparison to the analysis of the DISC project within the SEIR.

Construction Energy

The SEIR evaluated the potential for development of the DISC project to result in impacts related to energy associated with construction under Impact 3-39, including construction fuel efficiency, demand on oil, gasoline and diesel, and demand on electricity from the grid, and concluded that the DISC project would have resulted in a less-than-significant impact.

As discussed in the SEIR, a number of federal, State, and local standards and regulations exist that require improvements in vehicle efficiency, fuel economy, cleaner-burning engines, and emissions reductions. For example, CARB's adopted In-Use Off-Road Diesel Vehicle Regulation is intended to reduce emissions from in-use, off-road, heavy-duty diesel vehicles in California by imposing limits on idling, requiring all vehicles to be reported to CARB, restricting the addition of older vehicles into fleets, and requiring fleets to reduce emissions by retiring, replacing, or repowering older engines, or installing exhaust retrofits. Implementation of the In-Use Off-Road Diesel Vehicle Regulation helps to improve fuel efficiency and reduce fuel consumption on a statewide basis. In addition, technological innovations and more stringent standards are being researched, such as multi-function equipment, hybrid-fueled equipment, or other design changes, which could help reduce demand on oil and emissions associated with construction. As such, fleet turnover during construction projects is anticipated to result in an overall and ongoing reduction in vehicle gasoline and diesel demand. Therefore, because the licensed contractor for the DISC project and equipment would have been required to comply with all applicable regulations, such as the In-Use Off-Road Heavy-Duty Vehicle Regulation, the SEIR determined that the DISC Project would not have resulted in impacts related to energy during project construction, and temporary increase in on-site energy demand, particularly gasoline and diesel demand from construction equipment and other vehicles, would not have been an inefficient, wasteful, unnecessary consumption of energy.

As also discussed in the SEIR, typically, at construction sites, electricity from the existing grid is used to power portable and temporary lights or office trailers. Because grid electricity would have been used primarily for steady sources such as lighting, and not sudden, intermittent sources such as welding or other hand-held tools, the SEIR found that the increase in electricity usage at the DISC project site during construction would not have been expected to cause any substantial peaks in demand. At the time of the certification of the Final SEIR, VCE provided electricity to the project site and surrounding areas; however, customers could have chosen to receive power from PG&E by opting out of VCE service. Nevertheless, both VCE and PG&E sourced large amounts of power from renewable sources; in 2018, the most recent year that such data was available for use in the SEIR, VCE provided 48 percent of its standard energy from renewable sources, while PG&E provided 39 percent of its standards energy from renewable sources. Both energy providers also offered customers the option to increase the amount of renewable energy they were provided by enrolling in either VCE's Ultra Green program (which includes 100 percent renewable electricity), or PG&E's solar choice program (which provides electricity that is either 50 or 100 percent renewably sourced depending on the customer's preference). California's RPS standards require that increasing proportions of electricity provided by public utilities be sourced from renewable sources of energy. As a result, an increasing proportion of the energy consumed during construction of the DISC project would have been renewably sourced as implementation of the project phases continued. Use of grid electricity power, as opposed to on-site generators, represents a more efficient means of providing electricity, and allows for construction operations to be powered by renewable sources of energy. Therefore, the SEIR determined that construction of the DISC project would not have caused a permanent or substantial increase in demand that would have exceeded PG&E's or VCE's demand projections, and the temporary increase in electricity demand would not have exceeded the ability of PG&E's infrastructure to handle the

increase. Thus, the SEIR concluded that construction of the DISC project would not have resulted in any significant impacts on local or regional electricity supplies, the need for additional capacity, or on peak or base period electricity demands. As such, the temporary increase in electricity demand due to DISC project construction activities would not have been considered an inefficient, wasteful, and unnecessary consumption.

The currently proposed DiSC 2022 project would involve a substantially reduced development footprint area compared to the DISC project, due to the exclusion of the 92 acres immediately north of the MDC, which was a portion of the previous DISC project site. In addition, the proposed project would not involve construction of the off-site detention basin and, as a result, would not require the soil disturbance and hauling associated with such. Accordingly, construction of the DiSC 2022 project would involve less intensive construction activities and the overall construction period for the DiSC 2022 project would be shorter than the construction period associated with the DISC project. Furthermore, the DiSC 2022 project, similar to the DISC project, would be subject to the current iterations of federal, State, and local standards and regulations that require improvements in vehicle efficiency, fuel economy, cleaner-burning engines, and emissions reductions, such as CARB's adopted In-Use Off-Road Diesel Vehicle Regulation. In addition, fleet turnover during construction would be anticipated to result in an overall and ongoing reduction in vehicle gasoline and diesel demand. Furthermore, use of grid electricity power, as opposed to on-site generators, represents a more efficient means of providing electricity, and would allow for construction operations to be powered by renewable sources of energy. As such, the currently proposed project would not result in new significant impacts or substantially more severe significant impacts related to construction energy use.

Operational Energy

The SEIR evaluated the potential for development of the DISC project to result in impacts related to energy associated with operations under Impact 3-40 and concluded that the DISC project would have resulted in a less-than-significant impact, with incorporation of Mitigation Measure 3-40. As part of its assessment, the SEIR noted that the DISC project would have resulted in an increase in energy demand and usage within the City, including building energy usage and transportation energy usage. Building energy usage and transportation energy usage associated with the proposed project in comparison to the DISC project are discussed in further detail below.

Building Energy

With respect to building energy usage, CalEEMod emissions estimations prepared for the DISC project took into account the updates provided to the 2019 CBSC and all energy efficiency improvements therein, which included more stringent energy efficiency requirements of new development. In addition, the SEIR cited the fact that the City of Davis required new development projects to meet the Tier 1 standards of the CALGreen Code, which unless mandated by a local jurisdiction, are voluntary. Through necessitating that new development meet Tier 1 standards, the DISC project would have resulted in a 10 percent improvement in energy efficiency as compared to the baseline CALGreen Code requirements. Additionally, the project applicant had committed to providing at least 50 percent of the DISC project's electrical energy demand through the incorporation of on-site renewable energy generation systems.

As estimated by CalEEMod, the DISC project would have been expected to result in consumption of electricity of a maximum of 13.64 gigawatt-hours (GWh) per year and consumption of natural gas of approximately 34,607,340 thousand British Thermal Units per year (kBTU/yr). In comparison, the currently proposed DiSC 2022 project is expected to result in consumption of electricity of a maximum of 6.89 GWh per year and consumption of natural gas of approximately

28,112,580 kBTU/yr. Similar to the original DISC project, all buildings within the DiSC 2022 site would be required to be designed in compliance with the CBSC in existence at the time of development. Accordingly, the increased energy demand would not represent an inefficient or wasteful consumption of energy, as all structures would be constructed to meet California's stringent energy efficiency standards. Moreover, the on-site generation of at least 50 percent of the project's total electricity demand through the incorporation of on-site renewable energy systems represents a significant reduction in demand on grid-supplied power. Furthermore, as noted above, to achieve a project that is fueled by 100 percent clean energy, the project developer commits all structures, residential and non-residential, to purchase power from solely renewable sources such as VCE's "UltraGreen" 100 percent renewable program or its equivalent, to offset any electric deficit.

The DiSC 2022 project is anticipated to be built out over approximately 10 or more years, roughly half the time predicted for the original DISC project. Although predicting future regulations and building codes is speculative, as noted in the SEIR, the California Energy Efficiency Strategic Plan has identified that all new commercial buildings constructed after 2030 must be zero net energy. Considering the State's intention to require all new commercial buildings to meet zero net energy standards prior to what had been anticipated for the date of full completion for the proposed project, portions of the project are anticipated to be built out under a zero net energy requirement. In order to comply with a zero net energy requirement, future on-site non-residential structures would likely require the installation of on-site renewable energy systems sufficient to provide 100 percent of each structure's energy demand.

The SEIR noted that implementation of the non-residential uses could have involved data centers, which are associated with large amounts of energy consumption. A similar center may be expected for the DiSC 2022 project. Data centers are spaces specifically designed to accommodate dense arrangements of computer equipment. Any space where dedicated HVAC is installed to handle computing equipment load is likely to be considered a data center. As such, the data centers must be designed to be energy efficient to the maximum extent practicable in order to avoid an inefficient, wasteful, or unnecessary consumption of energy. As such, the SEIR required Mitigation Measure 3-40, which would ensure energy use associated with potential on-site data centers is reduced to a less-than-significant level, by requiring the applicant to submit an Energy Management Plan to the City's Department of Community Development and Sustainability, prior to the issuance of building permit for non-residential buildings that include data centers. The Energy Management Plan would have been required to demonstrate compliance with principles for energy management for data centers. The DiSC 2022 project would still be subject to Mitigation Measure 3-40 regarding data centers.

Transportation Energy

The SEIR evaluated the potential for development of the DISC project to result in impacts related to transportation energy associated with operations under Impact 3-40 and concluded that the DISC project would have resulted in a less-than-significant impact. The Davis 2020 Climate Action and Adaptation Plan (CAAP) includes objectives for mobility within the City, with priorities to reduce VMT, improve efficiency of the transportation network, improve energy efficiency of the vehicle fleet by implementing more advanced technologies, and reduce the carbon content of fuels through the use of alternative fuels. As the City implements the CAAP objectives, the City's overall dependence on oil is expected to be reduced, including project-related consumption of gasoline. Per the SEIR, the DISC project, without consideration of the Mace Triangle, would have resulted in a daily VMT of 309,000 under the Existing Plus Project condition, and 253,000 under the Cumulative Project condition. The Mace Triangle project would have added approximately

10,800 miles per day to the Existing Plus Project condition and 8,500 miles per day to the Cumulative Project condition. The foregoing increases in daily VMT would have resulted in increased demand for gasoline, and to a lesser extent diesel, for traditionally fueled vehicles. In general, however, the anticipated increases in VMT were not considered unique to the DISC project, as any project of such scale would result in increases in VMT. In addition, the VMT per service population for the project would have been slightly less than local per service population averages, as discussed in the SEIR.

The DiSC 2022 project would involve substantially fewer VMT when compared to the original DISC project. Specifically, 149,200 total VMT under Existing Plus Project conditions and a total VMT per service population of 36.35. As such, VMT associated with the DiSC 2022 project would be fewer as compared to the previous project iteration.

Although the DiSC 2022 project would result in increased VMT, the increased demand for energy resources related to the use of vehicles associated with the project would be reduced, due to the following project features and programs:

- Design of the project would have been required to adhere to the electric vehicle parking space requirements included in the City of Davis' Electric Vehicle Charging Plan. Adherence to the City's Electric Vehicle Charging Plan would ensure that the proposed parking areas included in the DiSC 2022 project would include infrastructure necessary to facilitate the ongoing use of electric vehicles. By complying with the City's requirements for Electric Vehicle parking, the DiSC 2022 project would promote the efficient use of energy in transportation by allowing future employees and residents to use alternatively fueled vehicles.
- The DiSC 2022 project would be subject to mitigation measures requiring a TDM Program to be implemented. The TDM Program would be intended to increase the average vehicle ridership (i.e., increase the number of people within each vehicle by promoting carpooling, vanpooling, etc.), reduce VMT, and reduce the overall number of vehicle trips related to project operations. Implementation of the TDM Program would ensure that transportation-related energy usage is reduced to the maximum extent practicable, and that transportation to and from the site occurs in an efficient manner.
- The DiSC 2022 project would include sustainability features, which would contribute to a reduction in the potential increase in demand for oil, promote alternative modes of transportation, and encourage fuel consumption reductions and efficiency. Such features would include on- and off-site bicycle and pedestrian infrastructure, as well as on-site transit infrastructure. The inclusion of such features would promote active transportation, which requires little if any energy inputs, and public transportation.

Implementation of a TDM Program and the promotion of active and public modes of transportation would ensure the energy demanded for the DiSC 2022-related vehicle trips is not wasteful or inefficient, despite the anticipated increase in VMT associated with the project. In addition, the mixture of residential and non-residential uses could have allowed for the use of transportation beyond single-passenger vehicles, which would be in compliance with the City's CAAP. In addition, as previously noted, the DiSC 2022 project would substantially reduce VMT in comparison to the original DISC project. Accordingly, consistent with the SEIR conclusion for the DISC project, the current DiSC 2022 project would not result in an inefficient, wasteful, or unnecessary consumption of energy.

Conclusion

Based on the above, the currently proposed project would not result in new significant impacts or substantially more severe significant impacts related to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation or conflicting with or obstructing a State or local plan for renewable energy or energy efficiency beyond what were previously identified in the SEIR. Therefore, the proposed project would be consistent with the conclusions of the SEIR.

Conclusion

Based on the above, the DiSC 2022 project would not result in any changes, new circumstances, or new information that would involve new significant impacts or substantially more severe significant impacts from what had been anticipated for the project site in the previous CEQA documents related to energy. The previously required mitigation measures from the SEIR, as presented below, would still be required to be implemented for the proposed project.

Mitigation Measure(s)

The following mitigation measure(s) would reduce the above impacts to a *less-than-significant* level.

Mitigation Measures from the Previous CEQA Documents

The mitigation measure from the SEIR applicable to the proposed project is presented below. It should be noted that the mitigation measure formerly referenced "ARC" as part of the previous SEIR; thus, such references have been changed to "DiSC 2022" in this Addendum in ~~strikethrough~~ and double underline format. No other changes have been made to the following mitigation.

~~ARC~~ DiSC 2022 Project and Mace Triangle

3-40 Prior to issuance of building permits for non-residential buildings that include data centers, the applicant shall submit an Energy Management Plan to the City of Davis Department of Community Development and Sustainability demonstrating compliance with principles for energy management for data centers, which could include, but not be limited to the following:

- *IT Systems;*
- *Air Management;*
- *Centralized Air Handling;*
- *Cooling Plant Optimization;*
- *On-Site Generation;*
- *Uninterruptible Power Supply Systems.*

Other energy efficient technologies and best practices that are available at the time construction drawings are submitted could be included in the Energy Management Plan as well, such as any measures described by US Department of Energy Center of Expertise for Energy Efficiency in Data Centers.

Modified Mitigation Measures

None required.

Additional Project-Specific Mitigation Measures

None required.

Environmental Issue Area	Where Impact Was Analyzed in Previous CEQA Documents?	Do Proposed Changes Involve New or More Severe Impacts?	Any New Circumstances Involving New or More Severe Impacts?	Any New Information Requiring New Analysis or Verification?
VII. Geology and Soils. *Would the project:*				
a. Directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving: i. Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42.	2020 SEIR pgs. 3-128 to 3-129	No	No	No
ii. Strong seismic ground shaking?	2020 SEIR pgs. 3-128 to 3-129	No	No	No
iii. Seismic-related ground failure, including liquefaction?	2020 SEIR pgs. 3-128 to 3-129	No	No	No
iv. Landslides?	N/A	No	No	Yes
b. Result in substantial soil erosion or the loss of topsoil?	2020 SEIR pgs. 3-129 to 3-130	No	No	No
c. Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse?	2020 SEIR pgs. 3-130 to 3-132	No	No	No
d. Be located on expansive soil, as defined in Table 18-1B of the Uniform Building Code (1994), creating substantial direct or indirect risks to life or property?	2020 SEIR pgs. 3-132 to 3-133	No	No	No
e. Have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of wastewater?	2017 MRIC EIR pg. 4.6-11	No	No	No

Environmental Issue Area	Where Impact Was Analyzed in Previous CEQA Documents?	Do Proposed Changes Involve New or More Severe Impacts?	Any New Circumstances Involving New or More Severe Impacts?	Any New Information Requiring New Analysis or Verification?
f. Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?	2020 SEIR pg. 3-126	No	No	No

Discussion

Since the release of the certified Final SEIR, the project site has remained vacant and undeveloped, and substantial changes in the environmental and regulatory settings related to geology and soils, as described in the SEIR, have not occurred. Agricultural production continues to occur on the properties to the north and east of the DiSC 2022 site. Substantial changes in circumstances that would affect the analysis in the SEIR related to geology and soils have not occurred.

Relative to the DISC project, the DiSC 2022 project would involve a substantially reduced development footprint area, due to the currently proposed project excluding the 92 acres immediately north of the MDC, which was a portion of the previous DISC project site. By excluding the area north of the MDC, the DiSC 2022 project would encompass 102 acres, as compared to the 194 acres planned for the previous DISC project. In general, the reduced footprint reduces the potential for the currently proposed project to be exposed to and/or exacerbate hazardous geology and soil conditions. Project changes or circumstances that would adversely affect the analysis in the SEIR related to geology and soils have not occurred.

ai-aiii. The SEIR evaluated the potential for the DISC project to expose people and structures to risks associated with seismic activity, including ground shaking and ground failure, under Impact 3-32 and determined that the project would have resulted in a less-than-significant impact. In reaching the conclusion, the SEIR cited the fact that the DISC site is not located within an Alquist-Priolo Earthquake Fault Zone, and surface evidence of faulting was not observed during a site reconnaissance completed for the previous MRIC project. In addition, according to information obtained from shear wave velocity measurements taken on the DISC site, the soils on the property could have been designated as seismic site Class D in determining seismic design forces for the project, in accordance with Table Section 1613A.3 of the 2013 California Building Code (CBC). While a site-specific geotechnical report was not prepared for the Mace Triangle property, the findings for the DISC site were expected to be similar with respect to seismic activity, given the close proximity of the two locations.

Although damage to structures and risks to people from ground rupture and ground failure was highly unlikely to occur as part of the DISC project, the SEIR noted that all project structures would have been required to adhere to the provisions of the 2019 CBC, based upon seismic site Class D. The CBC contains provisions to safeguard against major structural failures or loss of life caused by earthquakes or other geologic hazards. Furthermore, because the DISC project would have involved buildout within the footprint previously analyzed for the MRIC project, the same geological conditions would have been expected to occur. Accordingly, as impacts related to risks to people and structures associated with seismic activity, including ground shaking and ground failure, were concluded to be less than significant for the MRIC project, the SEIR determined the same conclusion for the DISC project.

It should be noted that impacts related to liquefaction are addressed under question ‘c’ below.

The currently proposed DiSC 2022 project would be implemented within the development footprint area previously analyzed in the SEIR; however, the DiSC 2022 project would involve a substantially reduced development footprint, due to the currently proposed project excluding the 92 acres immediately north of the MDC, which was a portion of the previous DISC project site. Additionally, the DiSC 2022 project would include similar project components as the previous DISC project, albeit, at a noticeably reduced scale. The currently proposed commercial, advanced manufacturing, and ancillary retail uses would all include less sf, as compared to the previously proposed project. In addition, the currently proposed project would involve 460 residential units, which represents a 45.9 percent reduction from the previously proposed 850 residential units included as part of the DISC project. Because the DiSC 2022 project would be implemented within the footprint previously analyzed for the DISC project, the same geological conditions would be expected to occur. Furthermore, the currently proposed project would also be subject to the provisions of the 2019 CBC, based upon seismic site Class D, which safeguard against major structural failures or loss of life caused by earthquakes or other geologic hazards.

Based on the above information, the currently proposed project would not result in new significant impacts or substantially more severe significant impacts related to the potential to directly or indirectly cause substantial adverse effects, including the risk of loss, injury, or death involving rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map; strong seismic ground shaking; or seismic-related ground failure beyond what were previously identified in the SEIR. Therefore, the proposed project would be consistent with the conclusions of the SEIR.

aiv. The SEIR did not include analysis of the DISC project's potential to directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving landslides, as such hazards do not apply to the City of Davis. As noted in the City's General Plan EIR, certain impact categories were determined not to apply to the City in the Initial Study prepared for the General Plan. Such hazards include landslides. Given that the project site is currently located adjacent to the City limits, on flat topography, the DiSC 2022 project would not be subject to impacts related to landslides.

Based on the above information, the proposed project would not directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving landslides, and the project would result in no impact.

b. The SEIR assessed the potential for the DISC project to result in substantial soil erosion or the loss of top soil under Impact 3-33 and concluded that with incorporation of Mitigation Measure 3-33, the project would have resulted in a less-than-significant impact. The SEIR noted that according to the Soil Survey of Yolo County, California, the erosivity of the soils on the DISC site are "none" to "slight." In addition, the surface runoff potential ranges from "very slow" to "moderately slow." However, the potential for human-caused erosion associated with construction activities is always a valid concern that should be addressed. The DISC project would have included utility excavation and re-compaction of a portion of the on-site soils. During earthwork operations, existing soils would have required complete removal to expose firm undisturbed soil. Such earthwork activities could have resulted in the exposure of loose soil to wind and/or water. Eroded soils could have then been inadvertently transported into off-site drainage facilities. Similar to impacts related to seismic activity, the SEIR cited the fact that because the DISC project would have involved buildout within the footprint previously analyzed for the MRIC project, the same soil conditions would have been expected to occur. Thus, just as the MRIC project concluded that impacts related to risks associated with substantial erosion of topsoil would have

been less than significant with mitigation, the SEIR reached a similar conclusion for the DISC project.

With respect to the Mace Triangle property, the SEIR noted that the site does not contain any open channels and the Park-and-Ride lot would have not been disturbed as part of the DISC project. Future disturbance of topsoil within the Mace Triangle property was anticipated to be limited to any future development at the Ikeda's Market parcel and the easternmost vacant parcel.

The currently proposed DiSC 2022 project would be implemented within the development footprint area previously analyzed in the SEIR; however, the DiSC 2022 project would involve a substantially reduced development footprint, due to the currently proposed project excluding the 92 acres immediately north of the MDC, which was a portion of the previous DISC project site. This reduced area of development/disturbance would similarly reduce the potential for soil erosion. Nevertheless, the DiSC 2022 project would include utility excavation and re-compaction of a portion of on-site soils. During earthwork operations, existing soils could require complete removal. Such earthwork activities could result in the exposure of loose soil to wind and/or water, and eroded soils be inadvertently transported into off-site drainage facilities. As such, the currently proposed project would still be subject to Mitigation Measure 3-33, which would require the project proponent to submit a Notice of Intent (NOI) and SWPPP to the Central Valley Regional Water Quality Control Board, in accordance with the National Pollutant Discharge Elimination System General Construction Permit requirements. The SWPPP would be designed to control pollutant discharges utilizing Best Management Practices (BMPs) and technology to reduce erosion and sediments. Therefore, impacts related to substantial soil erosion or the loss of top soil would be similar to those previously evaluated in the SEIR.

Based on the above information, the currently proposed project would not result in new significant impacts or substantially more severe significant impacts related to substantial soil erosion or the loss of top soil beyond what were previously identified in the SEIR. Therefore, the proposed project would be consistent with the conclusions of the SEIR.

c. The SEIR assessed the potential for the DISC project to be located on a geologic unit or soil that is unstable or would become unstable as a result of the project and potentially result in lateral spreading, subsidence, liquefaction, or collapse under Impact 3-34 and determined that with incorporation of Mitigation Measures 3-34(a) and (b), the DISC project would have resulted in a less-than-significant impact. The previous analysis of each potential impact is discussed in further detail below.

Liquefaction

Based upon the relatively thick layers of cohesive soils, and the lack of historic occurrence of liquefaction, the potential for liquefaction of the soils beneath most of the DISC site was found to be relatively low. In addition, the results of a soil liquefaction test performed by Wallace-Kuhl & Associates as part of analysis of the MRIC project confirmed that the potential for liquefaction of the soils beneath the site is very low. As such, impacts related to liquefaction were concluded to be less than significant for the DISC project. Due to the fact that the DiSC 2022 project footprint is within a portion of the overall DISC footprint, the preceding SEIR conclusions would apply to DiSC 2022.

On-Site Fill

A review conducted as part of the SEIR of an aerial photograph taken in 1957 showed the DISC site as agricultural land, with a meandering, linear depression in the southwestern-southern

portion of the site. According to the analysis conducted for the MRIC project, the former linear depression was backfilled with soil excavated during the construction of the site's detention basin; however, documentation regarding the backfill observation/compaction operations was not available for the previous analyses. While the subsurface exploration completed for the MRIC project included three borings in the near vicinity of the former linear depression that did not produce evidence of the presence of fill soils, the SEIR determined that the area of the former linear depression would have required further investigation to evaluate and confirm the conditions of the backfill material, as excavations and depressions resulting from the removal of the fill items would have required backfill with engineered fill. This former linear depression is within the DiSC 2022 project boundaries. Therefore, the preceding SEIR conclusions similarly apply to DiSC 2022.

Unsuitable Topsoils

Due the presence of disturbed/soft surface and near-surface soils within the upper one to two feet of major portions of the DISC site, the SEIR concluded that a combination of over-excavation, processing, moisture conditioning, and uniform recompaction of the surface and near-surface soils would have likely been required to achieve stable support conditions for the improvements associated with the DISC project. Due to the fact that the DiSC 2022 project footprint is within a portion of the overall DISC footprint, the DiSC 2022 project would still be subject to Mitigation Measure 3-34(a) and the preceding SEIR conclusions are applicable to DiSC 2022.

Mace Triangle Property

A site-specific geotechnical report was not prepared for the Mace Triangle site. However, the SEIR evaluated the potential development of two of the three parcels, in the event that additional discretionary entitlements were first obtained from the City of Davis. While geotechnical issues were not anticipated for the Mace Triangle property, based upon the findings of the evaluation for the neighboring ARC Site, the SEIR determined that the possibility exists that fill material or other unsuitable soft soils could be located on portions of the Mace Triangle site. As such, the SEIR included Mitigation Measure 3-34(b), which required submittal of a geotechnical report in conjunction with any future development application submittal for the Mace Triangle parcels, and implementation of recommendations in foundation design, etc.

Conclusion

Based on the above information, the currently proposed project would be subject to Mitigation Measures 3-34(a) and (b) and would not result in new significant impacts or substantially more severe significant impacts related to substantial soil erosion or the loss of top soil beyond what were previously identified in the SEIR. Therefore, the proposed project would be consistent with the conclusions of the SEIR.

d. The SEIR evaluated the potential for the DISC project to be located on expansive soil as defined in Table 118-1-B of the Uniform Building Code, creating substantial risks to life or property, under Impact 3-35 and concluded that with incorporation of Mitigation Measures 3-35(a) and (b), the project would have resulted in a less-than-significant impact. According to the SEIR, laboratory testing of on-site clay soils revealed the near-surface soils of the DISC site are of high-to-very-high plasticity when tested in accordance with the ASTM D4318 industry standard. In addition, laboratory test results of near-surface soils collected from the upper four feet revealed the near-surface clay soils possess a "medium" to "very high" expansion potential when tested in accordance with the ASTM D4829 test method. Therefore, based on the results of the laboratory tests, the on-site near-surface clays were determined to be capable of exerting significant expansion pressures on structural foundations, interior slabs, exterior flatwork, and pavements.

However, with adherence to measures to reduce the effects of expansive soils at the DISC site, as provided in the Preliminary Geotechnical Engineering Report prepared for the MRIC project, impacts could be mitigated to a less-than-significant level.

With respect to the Mace Triangle property, the SEIR noted that the findings for the DISC site are expected to be similar for soil conditions on the Mace Triangle site in regards to expansive soils, given the close proximity of the two sites. As such, the SEIR also required mitigation to address the potential for expansive soils on the Mace Triangle property.

The currently proposed DiSC 2022 project would be implemented within the development footprint area previously analyzed in the SEIR; however, the DiSC 2022 project would involve a substantially reduced development footprint, due to the currently proposed project excluding the 92 acres immediately north of the MDC, which was a portion of the previous DISC project site. Additionally, the DiSC 2022 project would include similar project components as the previous DISC project, albeit, at a noticeably reduced scale. Because the DiSC 2022 project would be implemented within the footprint previously analyzed for the DISC project, the same on-site geological conditions would be present. Therefore, implementation of the DiSC 2022 project could result in the construction of structures on expansive soils. However, the currently proposed project would still be subject to Mitigation Measures 3-35(a) and (b). The foregoing mitigation measures require the implementation of Mitigation Measures 3-34(a) and (b), which necessitates that a design-level geotechnical engineering report must be produced by a California Registered Civil Engineer or Geotechnical Engineer prior to final design approval and issuance of building permits for each phase of the project as well as for future on-site development associated with the Mace Triangle property. The mitigation requires incorporation of recommended measures into foundation design, etc.

Based on the above information, the currently proposed project would not result in new significant impacts or substantially more severe significant impacts related to substantial soil erosion or the loss of top soil beyond what were previously identified in the SEIR. Therefore, the proposed project would be consistent with the conclusions of the SEIR.

e. The SEIR did not evaluate the potential for the DISC site to involve soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of wastewater, as such issues were addressed in the MRIC EIR. As noted in the MRIC EIR, the MRIC project would have connected to the existing City wastewater collection infrastructure and would have been served by the City's WWTP. Therefore, the MRIC project would not have included a septic tank system and no impact would have occurred.

Similarly, the currently proposed DiSC 2022 project would be required to connect to the City's sewer system. As such, the project would include installation of sanitary sewer infrastructure that would convey flows to the City's WWTP. Development associated with the Mace Triangle property would similarly discharge wastewater to the DiSC project's sewer system, which would then be conveyed to the City's WWTP.

Based on the above information, the currently proposed project would not result in new significant impacts or substantially more severe significant impacts related to soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of wastewater beyond what were previously identified in the SEIR. Therefore, the proposed project would be consistent with the conclusions of the SEIR.

f. The SEIR assessed the DISC project's potential to directly or indirectly destroy a unique paleontological resource or unique geologic feature on the DISC site under Impact 3-29 and concluded that with incorporation of Mitigation Measure 3-29, the project would have resulted in a less-significant-impact. As noted in the SEIR, based upon a records search of the University of California Museum of Paleontology, a paleontological walkover survey was determined to not be required at the DISC site or Mace Triangle site, because the land is disturbed, does not contain outcrops, and is geologically mapped as Holocene, the deposits of which are too young to be considered fossils. Although the potential for paleontological resources to be impacted during construction was considered remote, the SEIR determined that unknown resources could be encountered during excavation activities. Thus, the SEIR concluded the DISC project required mitigation to reduce potential impacts to a less-than-significant level.

The currently proposed DiSC 2022 project would be implemented within the development footprint area previously analyzed in the SEIR; however, the DiSC 2022 project would involve a substantially reduced development footprint, due to the currently proposed project excluding the 92 acres immediately north of the MDC, which was a portion of the previous DISC project site. Because the DiSC 2022 project would be implemented within the footprint previously analyzed for the DISC project, unknown paleontological resources could be encountered during implementation of the DiSC 2022 project. The currently proposed project would still be subject to Mitigation Measures 3-29, which contains protective measures to avoid impacts in the event a potential, unknown paleontological resource is discovered during ground-disturbing activities associated with the project.

Based on the above information, the currently proposed project would not result in new significant impacts or substantially more severe significant impacts related to a unique paleontological resource or unique geologic feature beyond what were previously identified in the SEIR. Therefore, the proposed project would be consistent with the conclusions of the SEIR.

Conclusion

Based on the above, the DiSC 2022 project would not result in any changes, new circumstances, or new information that would involve new significant impacts or substantially more severe significant impacts from what had been anticipated for the project site in the previous CEQA documents related to geology and soils. The previously required mitigation measures from the SEIR, as presented below, would still be required to be implemented for the proposed project.

Mitigation Measure(s)

The mitigation measures from the SEIR applicable to the proposed project are presented below.

Mitigation Measures from the Previous CEQA Documents

The mitigation measures from the SEIR applicable to the proposed project are presented below. It should be noted that the mitigation measures formerly referenced "ARC" as part of the previous SEIR; thus, such references have been changed to "DiSC 2022" in this Addendum in ~~strikethrough~~ and <u>double underline</u> format. No other changes have been made to the following mitigation.

~~ARC~~ <u>DiSC 2022</u> Project and Mace Triangle

3-29 If any vertebrate bones or teeth are found by the construction crew, the contractor shall cease all work in the immediate vicinity of the discovery until an on-site archaeological monitor, if present, inspects the discovery; if none is present, or if recommended by the monitor, a professional paleontologist shall evaluate the find. If deemed significant with respect to

authenticity, completeness, preservation, and identification, the resource(s) shall then be salvaged and deposited in an accredited and permanent scientific institution (e.g., UCMP), where it will be properly curated and preserved for the benefit of current and future generations. The language of this mitigation measure shall be included on any future grading plans, utility plans, and subdivision improvement drawings approved by the City for the ~~ARC~~ DiSC 2022 Site and/or 16.49-acre Mace Triangle Site, where excavation work will be required.

~~ARC~~ DiSC 2022 Project and Mace Triangle

3-33 Prior to initiation of any grading activities for each phase of development at the ~~ARC~~ DiSC 2022 Site, or Mace Triangle Site, the project proponent shall submit a Notice of Intent (NOI) and Storm Water Pollution Prevention Plan (SWPPP) to the RWQCB in accordance with the NPDES General Construction Permit requirements. The SWPPP shall be designed to control pollutant discharges utilizing Best Management Practices (BMPs) and technology to reduce erosion and sediments. BMPs may consist of a wide variety of measures taken to reduce pollutants in stormwater runoff from the project site. Measures shall include temporary erosion control measures (such as silt fences, staked straw bales/wattles, silt/sediment basins and traps, check dams, geofabric, sandbag dikes, and temporary revegetation or other groundcover) that will be employed to control erosion from disturbed areas. Final selection of BMPs will be subject to approval by the City of Davis and the RWQCB. The SWPPP will be kept on site during construction activity and will be made available upon request to representatives of the RWQCB.

~~ARC~~ DiSC 2022 Project

3-34(a) Prior to final design approval and issuance of building permits for each phase of the project, the project applicant for the ~~ARC~~ DiSC 2022 Site shall submit to the City of Davis Building Inspection Division, for review and approval, a design-level geotechnical engineering report produced by a California Registered Civil Engineer or Geotechnical Engineer. The report shall include the recommendations in the report entitled Preliminary Geotechnical Engineering Report, Mace Ranch Innovation Center, dated January 20, 2015 unless it is determined in the design-level report that one or more recommendations need to be revised. The design-level report shall address, at a minimum, the following:

- *Compaction specifications and subgrade preparation for on-site soils;*
- *Structural foundations, including retaining wall design (if applicable);*
- *Grading practices; and*
- *Expansive/unstable soils, including fill.*

Design-level recommendations shall be included in the foundation and improvement plans and approved by the Davis Public Works Department prior to issuance of any building permits.

Mace Triangle

3-34(b) Prior to final design approval and issuance of building permits for future on-site development, the future project applicant for the Mace Triangle Site shall submit a site-specific, design-level geotechnical report produced by a California Registered Geotechnical Engineer to the City of Davis Building Inspection Division for review and approval. The geotechnical report shall include, but would not be limited to, an analysis of the on-site geologic and seismic conditions, including soil sampling and testing. Recommendations shall be included regarding project

design measures to avoid risks to people and structures, including compliance with the latest CBC regulations, structural foundations, and grading practices.

~~ARC~~ DiSC 2022 Project

3-35(a) Implement Mitigation Measure 3-34(a).

Mace Triangle

3-35(b) Implement Mitigation Measure 3-34(b).

Modified Mitigation Measures

None required.

Additional Project-Specific Mitigation Measures

None required.

Environmental Issue Area	Where Impact Was Analyzed in Previous CEQA Documents?	Do Proposed Changes Involve New or More Severe Impacts?	Any New Circumstances Involving New or More Severe Impacts?	Any New Information Requiring New Analysis or Verification?
VIII. Greenhouse Gas Emissions. *Would the project:*				
a. Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?	2020 SEIR pgs 3-135 to 3-144	No	No	No
b. Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases?	2020 SEIR pgs 3-143 to 3-147; 3-154 to 3-155; and 3-303 to 3-304	No	No	No

Discussion

Since the release of the Certified Final SEIR, the project site has remained vacant and undeveloped, and substantial changes in the environmental and regulatory settings related to GHG emissions, as described in the SEIR, have not occurred. As discussed in the Air Quality section of this Addendum, CalEEMod has been updated since the certification of the SEIR. The updates to CalEEMod include changes to the emission rates of certain activities, as well as accounting for compliance with the 2019 CBSC.

Relative to the DISC project, the DiSC 2022 project would involve a substantially reduced development footprint area, due to the currently proposed project excluding the 92 acres immediately north of the MDC, which was a portion of the previous DISC project site. By excluding the parcel north of the MDC, the DiSC 2022 project would encompass 102 acres, as compared to the 194 acres planned for the previous DISC project. The DiSC 2022 project would include similar project components as the previous DISC project, but at a reduced scale. In addition, the DiSC 2022 project would not include implementation of the off-site detention basin that was proposed as an option under the previous DISC project and, therefore, would not require the associated 130,000 cubic yards of soil export. Thus, under the DiSC 2022 project, construction intensity would be reduced and the emissions associated with project operations are anticipated to be lower, as compared to the previous DISC project. Project changes that would adversely affect the analysis in the SEIR related to GHG emissions have not occurred.

a. Impacts related to the generation of GHG emissions associated with the DISC project were determined to be significant and unavoidable in the SEIR. Because the DiSC 2022 project would involve similar development types at a less intense level, impacts related to GHG emissions are anticipated to be less intense than what was anticipated for the DISC project. A detailed discussion related to emissions of GHGs during construction and operations of the proposed project in comparison to the DISC project is provided below.

Construction Emissions

In the SEIR, construction of Phase 1 of the DISC project was applied to CalEEMod for the construction emissions estimate, which was determined to represent the most intense phase of construction. As noted in the SEIR, the YSAQMD does not have adopted thresholds of significance for construction-related GHG emissions. Thus, for the analysis of construction-related emissions, SMAQMD's emissions threshold of 1,100 $MTCO_2e$/yr was applied. Based on

the modeling conducted for the SEIR, construction-related emissions of GHG associated with Phase 1 of the DISC project were determined to be significant. In addition to the analysis of construction-related emissions against SMAQMD's thresholds of significance, the SEIR evaluated construction-related emissions from the DISC project in combination with the anticipated operational emissions. GHG emissions from construction of the DISC project were amortized over the construction period and added to operational emissions. Operational GHG emissions are discussed in further detail below.

Similar to the analysis conducted in the SEIR, for the purposes of this Addendum, construction of Phase 1 of the DiSC 2022 project was modeled using CalEEMod in order to estimate the worst-case construction emissions associated with the proposed project (see Appendix A of this Addendum). The assumptions made for the project construction modeling are also presented in the Air Quality section of this Addendum.

The maximum unmitigated construction GHG emissions associated with the DISC project (as presented in Table 3-18 of the SEIR), in comparison to the maximum unmitigated construction GHG emissions associated with the proposed DiSC 2022 project are presented in Table 11. As shown in Table 11, while construction-related GHG emissions associated with both the DISC project and the proposed DiSC 2022 project would exceed SMAQMD's 1,100 $MTCO_2e$/yr threshold, construction of the DiSC 2022 project would result in substantially fewer annual GHG emissions as compared to the DISC project. Nonetheless, due to the emission of GHGs in excess of the threshold of significance being applied to the proposed project, construction of the proposed project could generate GHG emissions that may have a significant effect on the environment, similar to the conclusion made in the SEIR for the DISC project. Thus, the proposed project would not result in any new or more severe significant impacts related to construction GHG emissions from what was previously analyzed in the SEIR.

Table 11
Maximum Construction-Related GHG Emissions:
Previous DISC Project Compared to
Proposed DiSC 2022 Project

	Total Annual GHG Emissions ($MTCO_2e$/yr)
Previous DISC Project	4,156.07
Proposed DiSC 2022 Project	1,417.84
Net Difference	*-2,738.23*
SMAQMD Threshold	**1,100.00**
Exceed?	**YES**

Note: Cells shaded in yellow represent emissions that exceed the applicable threshold of significance.

Source: CalEEMod, February and April 2020 and CalEEMod, October 2021.

Operational Emissions

In the SEIR, the total annual GHG emissions, including annual operational GHG emissions and amortized construction GHG emissions, associated with the DISC project and the Mace Triangle site were estimated using CalEEMod at an assumed buildout year of 2035. Total construction emissions were amortized over a 14-year construction period. Emissions estimates were prepared for the Existing Plus Project and Cumulative Plus Project VMT conditions. The SEIR considered the calculation of the GHG emissions that currently occur on the project site (276.69 $MTCO_2e$/yr). Because the City of Davis has established a goal of net zero carbon by 2040, any net increase in GHG emissions was determined to be a significant impact. Based on the results

of such calculations, the SEIR concluded that operational emissions of GHGs under both VMT scenarios would result in a significant impact. Thus, the SEIR required Mitigation Measures 3-37(a) and (b), which require implementation of Mitigation Measures 3-11 and 3-72(a) and (b). However, as noted in the SEIR, because the ultimate reduction in GHG emissions resulting from Mitigation Measures 3-11 and 3-72(a) and (b) cannot be quantified, project-related GHG emissions would still be considered a substantial increase, and the impact would remain significant and unavoidable.

As discussed in further detail in the Air Quality section of this Addendum, an updated version of CalEEMod (Version 2020.4.0) was used to model the proposed project's emissions. The assumptions made for the project operations modeling are also presented in the Air Quality section of this Addendum. In addition to the emissions modeling of the proposed DiSC 2022 project, and in order to be consistent with the SEIR, operations of a potential future buildout scenario for the Mace Triangle site were also modeled using the assumptions noted in the Air Quality section of this Addendum. Consistent with the SEIR, amortized construction emissions were added to the annual operational GHG emissions. In the case of the DiSC 2022 project, applying the maximum annual construction emissions for the amortized value was determined to present the most conservative approach to analysis. A comparison of the maximum unmitigated operational emissions associated with the proposed DiSC 2022 project, including amortized construction emissions, in comparison with the DISC project is presented in Table 12 under both the Existing Plus Project and Cumulative Plus Project VMT conditions. Table 13 compares the operational GHG emissions estimate for the Mace Triangle site, as presented in the SEIR, with an updated emissions estimate using the updated version of CalEEMod and Existing Plus Project and Cumulative Plus Project VMT metrics provided by Fehr & Peers.

When comparing the operational GHG emissions that were modeled to occur under the previous DISC project with those modeled to occur under the proposed DiSC 2022 project, the proposed project would result in substantially fewer operational GHG emissions (a 53.6 percent reduction) under both the Existing Plus Project and Cumulative Plus Project VMT scenarios. Nonetheless, as presented above, total operational GHG emissions, including amortized construction emissions, would be considered a substantial net increase in GHG emissions as compared to those currently emanating from the site (approximately 267.69 $MTCO_2e$/yr). Therefore, operations of the proposed project could generate GHG emissions that may have a significant effect on the environment, and the impact would be considered significant.

In comparing modeled GHG emissions that would occur with operations of the Mace Triangle site, the updated modeling indicates that a minor net increase in emissions would occur. This increase in emissions is likely due to changes in the model that have occurred since preparation of the SEIR, and as a result of the YSAQMD providing updated information to the developers of CalEEMod. As noted in the SEIR, the portions of the Mace Triangle site that are assumed for future development do not currently experience activities resulting in emissions of GHGs; consequently, all anticipated emissions would be considered net new. The increase in GHG emissions estimated for the Mace Triangle site is a result of using the updated version of CalEEMod, rather than proposed modifications to the Mace Triangle site. Further, the increase in GHG emissions attributable to Mace Triangle, when compared to the original DISC project, is offset by the substantial reduction in GHG emissions resulting from the reduced project size.

Table 12
Maximum Unmitigated Operational GHG Emissions:
Previous DISC Project Compared to
Proposed DiSC 2022 Project

Emission Source	Previous DISC Project (2035) ($MTCO_2e$/yr)[1]	Proposed DiSC 2022 Project (2033) ($MTCO_2e$/yr)	Net Difference ($MTCO_2e$/yr)
Existing Plus Project Conditions			
Construction Emissions	3,533.96[1]	1,417.84[2]	*-2,116.12*
Operational Emissions	34,458.11	18,700.93	*-15,757.18*
Area	10.72	5.78	*-4.94*
Energy	2,719.02	2,152.69	*-566.33*
Mobile	29,483.36	15,330.71	*-14,152.65*
Stationary	0.00	0.20[3]	*0.20*
Solid Waste	899.71	553.96	*-345.75*
Water	1,345.30	657.60	*-687.70*
TOTAL ANNUAL GHG EMISSIONS	**37,992.07**	**20,118.77**	***-17,873.30***
Cumulative Plus Project Conditions			
Construction Emissions	3,533.96[1]	1,417.84[2]	*-2,116.12*
Operational Emissions	29,465.31	16,287.64	*-13,177.67*
Area	10.72	5.78	*-4.94*
Energy	2,719.02	2,152.69	*-566.33*
Mobile	24,490.56	12,917.41	*-11,573.15*
Stationary	0.00	0.20[3]	*0.20*
Solid Waste	899.71	553.96	*-345.75*
Water	1,345.30	657.60	*-687.7*
TOTAL ANNUAL GHG EMISSIONS	**33,019.27**	**17,705.48**	***-15,313.79***

Notes:
[1] Amortized maximum annual construction emissions over a conservatively estimated 14-year construction period (maximum annual construction emissions for the DISC project of 49,475.40 $MTCO_2e$ / 14 years = 3,533.96 $MTCO_2e$/yr).
[2] Annual construction emissions of the proposed project were conservatively assumed to equal the maximum annual construction-related GHG emissions.
[3] The stationary source emissions associated with the DiSC 2022 Project are related to the intermittent operations of the proposed stormwater pump.

Source: CalEEMod, February 2020 and CalEEMod, October 2021.

Table 13
Maximum Unmitigated Operational GHG Emissions: Previous Mace Triangle Site Modeling Compared to Updated Mace Triangle Site Modeling

Emission Source	Previous Modeling ($MTCO_2e/yr$)[1]	Updated Modeling ($MTCO_2e/yr$)	Net Difference
Existing Plus Project Conditions			
Area	0.00	0.00	*0.00*
Energy	46.09	125.56	*79.47*
Mobile	1,022.23	1,193.21	*170.98*
Solid Waste	15.04	15.04	*0.00*
Water	32.53	36.86	*4.33*
TOTAL ANNUAL GHG EMISSIONS	**1,115.89**	**1,370.67**	***254.78***
Cumulative Plus Project Conditions			
Area	0.00	0.00	*0.00*
Energy	46.09	125.56	*79.47*
Mobile	817.41	943.57	*126.16*
Solid Waste	15.04	15.04	*0.00*
Water	32.53	36.86	*4.33*
TOTAL ANNUAL GHG EMISSIONS	**911.07**	**1,121.04**	***209.97***

Source: CalEEMod, February 2020 and CalEEMod, October 2021.

To address the significant impact that would occur with operations of the DiSC 2022 project and the Mace Triangle site, Mitigation Measures 3-37(a) and (b) would still be required for the proposed project. Mitigation Measures 3-37(a) and (b) are related to VMT and would reduce GHGs associated with motor vehicle use. However, as noted in the SEIR, the ultimate efficacy of the mitigation measures is speculative at this time. For instance, technologies may not exist in time to ensure that early phases of the proposed project can achieve the required emissions reductions. Should off-site mitigation measures or the purchase of carbon off-sets be required to meet the emissions reduction requirements, the future availability of off-site mitigation or off-sets is unknown. Furthermore, in the event that technologies do exist to allow for on-site emissions reductions as required by the mitigation measures, such technologies may be prohibitively expensive or incongruent with the uses proposed. Further uncertainty regarding project-related emissions reductions is due to the uncertainty surrounding the future implementation of the TDM program required by Mitigation Measures 3-72(a) and (b). The TDM program would have a significant potential to reduce the project-related trip rates and VMT, but the extent to which such reductions would occur cannot be quantified with reasonable certainty at this time. Consequently, the extent to which full buildout of the proposed project would be able to meet the requirements is speculative. Considering that the ultimate reduction in GHG emissions resulting from Mitigation Measures 3-37(a) and 3-37(b) cannot be quantified, operational GHG emissions associated with the DiSC 2022 project and the Mace Triangle site would be considered a substantial increase, and the impact would remain significant and unavoidable, similar to the conclusion made in the SEIR for the DISC project, although at a substantially reduced level of emissions.

Conclusion

Based on the above, the proposed project would not result in any new or more severe significant impacts related to the generation of GHG emissions, either directly or indirectly, that may have a significant impact on the environment from what was previously analyzed in the SEIR.

b. As noted in the SEIR, the City of Davis has adopted a Climate Action and Adaptation Plan (CAAP), which is a citywide GHG reduction program for operational GHG emissions of existing and proposed developments in the City. The City's CAAP included a GHG emissions reductions target that identified a desired goal of reaching net carbon neutrality by the year 2050. Since adoption of the City's CAAP, the City has accelerated the desired date of net carbon neutrality to the year 2040. Accordingly, a project's compliance with the City's goal of net carbon neutrality by the year 2040 can be used to assess a project's consistency with the applicable plans, policies, and regulations related to reducing emissions of GHG in the City.

As presented above, the DISC project and Mace Triangle site would generate net new GHG emissions during operations. Because net emissions from the DISC project in the year 2035 would equal 37,992.07 $MTCO_2e$/yr, the project would not meet the City's target of net carbon neutrality by the year 2040. Similarly, potential future development at the Mace Triangle site is not anticipated to meet the City's target of net carbon neutrality by the year 2040. As a result, the SEIR concluded that the DISC project would result in a significant impact. The SEIR required implementation of Mitigation Measures 3-38(a) and (b), which require that each project component achieve consistency with the City's CAAP by demonstrating a fair-share reduction in GHG emissions. With implementation of the mitigation measures, the anticipated operational GHG emissions would be reduced or off-set to a level of net carbon neutrality as buildout of the DISC project and the Mace Triangle site progresses. However, as noted in the SEIR, several factors affect the certainty with which the efficacy of the following mitigation can be addressed. For instance, technologies may not exist in time to ensure that early phases of the DISC project can meet the emissions reductions requirements on-site. Thus, the potential exists that operational emissions would not be reduced sufficient to reach net carbon neutrality, and the SEIR concluded that implementation of the DISC project would result in a significant and unavoidable impact.

Additionally, as noted in the SEIR, based on the cumulative nature of global climate change, emissions from a project must be considered in the context of that project's contribution to cumulative global GHG emissions. As noted above, the DISC project's GHG emissions would not meet the reduction targets of the Davis CAAP and, thus, the SEIR determined that the DISC project would result in a substantial increase in GHG emissions from existing levels associated with the site. The SEIR required implementation of Mitigation Measures 3-93(a) and (b). However, as with Mitigation Measures 3-38(a) and (b), the potential exists that operational emissions would not be reduced sufficient to reach net carbon neutrality, and the SEIR concluded that the impact would remain cumulatively considerable and significant and unavoidable.

As discussed previously, operations of the DISC project and Mace Triangle site would generate net new GHG emissions. For this Addendum, a model year of 2033 was selected. Between the modeled year of 2033 and the year 2040, operational emissions associated with the DiSC 2022 project would decrease slightly from the levels presented above. Nonetheless, although emissions would be anticipated to decrease slightly, the operational emissions in the year 2040 would be expected to be substantively similar to those in the year 2033. Thus, similar to the DISC project, the proposed project would not achieve the City's target of net carbon neutrality by the year 2040.

Given the above, and similar to the DISC project, implementation of the proposed project could conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of GHG, resulting in a significant impact. Thus, Mitigation Measures 3-38(a) and (b) and 3-93(a) and (b) would still be required. However, as noted in the SEIR, the potential exists that operational emissions would not be reduced sufficient to reach net carbon neutrality, and, like the conclusion in the SEIR, implementation of the DiSC 2022 project would result in a cumulatively considerable and significant and unavoidable impact.

Conclusion

Based on the above, the proposed project would not result in any changes, new circumstances, or new information that would involve new significant impacts or substantially more severe significant impacts from what has been anticipated for the DISC project in the previous CEQA documents related to GHG emissions. The impacts would be to a lesser degree than those associated with the DISC project, but would remain significant after mitigation. The previously required mitigation measures from the SEIR, as presented below, would still be required to be implemented for the proposed project.

Mitigation Measure(s)

The following mitigation measure(s) would reduce the above impacts to the maximum extent feasible. However, as discussed above, the efficacy of the following mitigation cannot be determined, and the potential exists that implementation of the mitigation measures would not reduce operational GHG emissions sufficient to achieve carbon neutrality. Therefore, even with the implementation of mitigation, and consistent with the conclusion within the SIER, the impact would remain significant and unavoidable.

Mitigation Measures from the Previous CEQA Documents

The mitigation measures from the SEIR applicable to the proposed project are presented below. It should be noted that the mitigation measures formerly referenced “ARC” as part of the previous SEIR; thus, such references have been changed to “DiSC 2022” in this Addendum in ~~strikethrough~~ and double underline format. No other changes have been made to the following mitigation.

~~ARC~~ DiSC 2022 Project

3-37(a) Implement Mitigation Measures 3-11, 3-72(a), and 3-72(b).

3-93(a) Implement Mitigation Measure 3-11, 3-38(a), and 3-72(a) and (b).

Mace Triangle

3-37(b) Implement Mitigation Measure 3-11.

3-93(b) Implement Mitigation Measure 3-38(b).

Modified Mitigation Measures

The mitigation measures from the SEIR applicable to the proposed project that require modification are presented below.

~~ARC~~ DiSC 2022 Project

3-38(a) Prior to issuance of building permits, each individual development of the ~~ARC~~ DiSC 2022 Project shall demonstrate consistency with the City’s Climate Action and Adaptation Plan by demonstrating a fair-share reduction of GHG emissions towards ~~an ARC~~ a DiSC 2022

Project-wide reduction goal of 20,118.77 ~~37,724.31~~ $MTCO_2e$/yr, which would achieve carbon neutrality. Individual projects may choose one of the following methods for complying with this goal:

1. *Individual future developments undergoing Design Review, may prepare a Carbon Neutrality Plan for review and approval by the City's Department of Community Development and Sustainability. The Carbon Neutrality Plan must demonstrate the individual development's compliance with the City's net carbon neutrality goal for the year 2040. Compliance with the City's net carbon neutrality goal shall be demonstrated through the use of CalEEMod, or another method or model accepted for this purpose by the City, to demonstrate that emissions from the individual development, to the extent feasible, would reach a level of carbon neutrality by the year 2040.*
2. *If a project applicant chooses not to prepare a Carbon Neutrality Plan, the applicant must demonstrate that the individual development provides a fair-share contribution towards the ~~ARC~~ DiSC 2022 Project-wide emissions reductions need of 20,118.77 ~~37,724.31~~ $MTCO_2e$/yr, to the extent feasible. A fair-share contribution is to be made based on the total acreage proposed for development in any given project subject to Design Review, as compared to the entire area of development proposed within the ~~ARC~~ DiSC 2022 Site as a whole. For the purposes of this mitigation measure, areas not anticipated for development, such as parks, open spaces, and agricultural buffer areas, are not included in the total development acreage. Therefore, the total development area, is considered to be 78.8 ~~156.4~~ acres. Considering the total development area, a hypothetical ten-acre project would represent 12.7 ~~6.4~~ percent of the total development area and would be required to show a GHG emissions reduction, savings, or off-set, of 2,553.14 ~~2,414.36~~ $MTCO_2e$/yr from the emissions modeled herein, which would represent 12.7 ~~6.4~~ percent of the total 20,118.77 ~~37,724.31~~ $MTCO_2e$/yr reduction required for the project area as a whole. Proof of the fair-share GHG emissions reductions shall be submitted to the City's Department of Community Development and Sustainability.*

Examples of measures that may be used by future development projects in either of the above options include, but are not limited to, the following:

- *Trip and/or VMT reductions due participation in a Transportation Demand Management program or similar program;*
- *Electrifying loading docks to reduce emissions from engine idling of Transport Refrigeration Units;*
- *Inclusion of on-site renewable energy beyond the level anticipated in this analysis;*
- *Institution of a composting and recycling program in excess of local standards;*
- *Implementation of an Urban Forestry Management Plan or tree planting programs;*
- *Use of energy efficient street lighting fixtures;*
- *Limit the installation of natural gas infrastructure and appliances;*
- *Provide electric-vehicle charging stations in excess of minimum requirements;*
- *Construct separated on-site paths for alternative vehicles such as electric scooters, electric skateboards, and electric bicycles;*
- *Construct dedicated parking spaces for carsharing services;*
- *Require commercial tenants at the project site to provide transit subsidies to employees;*

- *Implement relevant measures from Mitigation Measure 3-11; and*
- *Purchase of off-site mitigation credits.*[15]

In general, GHG reduction measures implemented for development within the ~~ARC~~ DiSC 2022 Site shall use the following prioritization:

- *First priority – building specific actions;*
- *Second priority – onsite (within ~~ARC~~ DiSC 2022 Site) actions;*
- *Third priority – community based (within Davis) actions;*
- *Fourth priority – pay GHG reduction fees (carbon offsets) into a qualified existing local program, if one is in place; and*
- *Fifth priority – other demonstrated method of reducing emissions.*

Thus, as development progresses within the project area, each individual development would be required to show GHG emissions reductions in keeping with the project-wide reduction requirement. Emissions reductions shall be demonstrated prior to issuance of building permits for each development within the ~~ARC~~ DiSC 2022 Site.

Mace Triangle

3-38(b) *Prior to issuance of building permits, each individual development at the Mace Triangle Site shall demonstrate consistency with the City's Climate Action and Adaptation Plan by demonstrating a fair-share reduction of total GHG emissions generated at buildout of the Mace Triangle Site. This SEIR preliminarily estimates that full buildout of the Mace Triangle Site, not including construction emissions, would generate 1,370.67 ~~1,115.89~~ $MTCO_2e$/yr. Full operational and construction emissions shall be calculated for each individual development, at such time project-level details are available, as required below:*

- *Individual future developments undergoing Design Review, may prepare a Carbon Neutrality Plan for review and approval by the City's Department of Community Development and Sustainability. The Carbon Neutrality Plan must demonstrate the individual development's compliance with the City's net carbon neutrality goal for the year 2040. Compliance with the City's net carbon neutrality goal shall be demonstrated through the use of CalEEMod, or another method or model accepted for this purpose by the City, to demonstrate that emissions from the individual development, to the extent feasible, would reach a level of carbon neutrality by the year 2040.*

Examples of measures that may be used by future development projects include, but are not limited to, the following:

- *Trip and/or VMT reductions due participation in a Transportation Demand Management program or similar program;*
- *Electrifying loading docks to reduce emissions from engine idling of Transport Refrigeration Units;*
- *Inclusion of on-site renewable energy beyond the level anticipated in this analysis;*
- *Institution of a composting and recycling program in excess of local standards;*

[15] Purchase of off-site mitigation credits shall be negotiated with the City and YSAQMD at the time that credits are sought by future construction within the project areas.

- *Implementation of an Urban Forestry Management Plan or tree planting programs;*
- *Use of energy efficient street lighting fixtures;*
- *Limit the installation of natural gas infrastructure and appliances;*
- *Implement relevant measures from Mitigation Measure 3-11; and*
- *Purchase of off-site mitigation credits.*[16]

In general, GHG reduction measures implemented for development within the ~~ARC~~ Mace Triangle Site shall use the following prioritization:

- *First priority – building specific actions;*
- *Second priority – onsite (within ~~ARC~~ Mace Triangle Site) actions;*
- *Third priority – community based (within Davis) actions;*
- *Fourth priority – pay GHG reduction fees (carbon offsets) into a qualified existing local program, if one is in place; and*
- *Fifth priority – other demonstrated method of reducing emissions.*

Thus, as development progresses within the Mace Triangle Site, each individual development would be required to show GHG emissions reductions in keeping with the project wide reduction requirement. Emissions reductions shall be demonstrated prior to issuance of building permits for each development within the Mace Triangle Site.

Additional Project-Specific Mitigation Measures

None required.

[16] Purchase of off-site mitigation credits shall be negotiated with the City and YSAQMD at the time that credits are sought by future construction within the project areas.

Environmental Issue Area	Where Impact Was Analyzed in Previous CEQA Documents?	Do Proposed Changes Involve New or More Severe Impacts?	Any New Circumstances Involving New or More Severe Impacts?	Any New Information Requiring New Analysis or Verification?
IX. Hazards and Hazardous Materials. *Would the project:*				
a. Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?	2020 SEIR pgs. 3-156 to 3-157	No	No	No
b. Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?	2020 SEIR pgs. 3-157 to 3-162	No	No	No
c. Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?	2017 MRIC EIR pg. 4.8-9	No	No	No
d. Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?	2017 MRIC EIR pg. 4.8-9	No	No	No
e. For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard or excessive noise for people residing or working in the project area?	2017 MRIC EIR pg. 4.8-9	No	No	No
f. Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?	2020 SEIR pg. 3-162	No	No	No
g. Expose people or structures, either directly or indirectly, to a significant risk of loss, injury or death involving wildland fires?	2020 SEIR pgs. 3-162 to 3-163	No	No	No

Discussion

Since the release of the certified Final SEIR, the project site has remained vacant and undeveloped. Agricultural production continues to occur on the properties to the north and east of the DiSC 2022 site. Substantial changes in the environmental and regulatory settings related to hazards and hazardous materials, or in circumstances that would affect the analysis in the SEIR related to hazards and hazardous materials have not occurred.

Relative to the DISC project, the DiSC 2022 project would involve a substantially reduced development footprint area, due to the currently proposed project excluding the 92 acres immediately north of the MDC, which was a portion of the previous DISC project site. By excluding the area north of the MDC, the DiSC 2022 project would encompass 102 acres, as compared to the 194 acres planned for the previous DISC project. Project changes or circumstances that would adversely affect the analysis in the SEIR related to hazards and hazardous materials have not occurred.

a. The SEIR assessed the DISC project's potential to create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials under Impact 3-42 and determined that the project would have resulted in a less-than-significant impact. The SEIR noted that any businesses that could involve the use and/or storage of hazardous materials would be required to be reviewed by the Davis Fire Department and/or the Yolo County Environmental Health Division for compliance with the Fire Code and other related regulations.

   The DiSC 2022 project would include similar project components as the previous DISC project, albeit, at a noticeably reduced scale. Similar to the original DISC, any businesses implemented as part of the DiSC 2022 project involving the use and/or storage of hazardous materials would be required to be reviewed by the Davis Fire Department and/or the Yolo County Environmental Health Division for compliance with Fire Code and other related regulations. Accordingly, impacts related to the routine transport, use, or disposal of hazardous materials under the DiSC 2022 project would be similar to those determined for the previous DISC project.

   Based on the above information, the currently proposed project would not result in new significant impacts or substantially more severe significant impacts related to the routine transport, use, or disposal of hazardous materials beyond what were previously identified in the SEIR. Therefore, the proposed project would be consistent with the conclusions of the SEIR.

b. The SEIR evaluated the DISC project's potential to create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment under Impact 3-43 and concluded that with incorporation of Mitigation Measures 3-43(a) through (c), the project would have resulted in a less-than-significant impact. The SEIR based its analysis on the findings of the Phase I ESA prepared for the project.

   According to the Phase I ESA, two active irrigation wells with associated diesel-powered engines on trailers were identified on the DISC site. Without proper abandonment of the existing wells, the potential exists for upset or accident conditions to occur involving the release of hazardous materials into the environment. One of these irrigation wells is located in the northerly portion of the DISC site, which would be excluded from the DiSC 2022 boundaries. With respect to the Mace Triangle property, the SEIR found that the site would require submittal of a Phase I ESA in order to identify any on-site hazards, including on-site wells, and include recommendations, as necessary, for implementation at time of development. In addition, the SEIR noted that a former canal was located on the southern portion of the DISC site. The former canal was located on the

site from at least 1957 to at least 1992 and was filled and graded in 1993. Because the Phase I ESA could not confirm if any trash or other debris was within the canal at the time it was backfilled, any debris encountered within the former canal during construction activities would necessitate further evaluation of potential impacts associated with the debris. With respect to the Mace Triangle property, canals do not exist on-site. A vapor encroachment screening was conducted at the DISC site to confirm that nearby known or suspected contaminated properties would not result in any negative impacts on the site. According to the SEIR, based on the completion of the vapor encroachment screening, vapor encroachment conditions do not or are not likely to exist at the DISC site.

Due to the DISC site's agricultural uses, the SEIR noted that agricultural operations generally involve the use of pesticides and/or herbicides, as well as diesel-fueled farming equipment. Significant pesticide contamination to cropland is commonly associated with inorganic pesticides, as well as large farm headquarter facilities or agricultural dusting airstrips where the storage and repeated mixing of chemicals and the rinsing of application equipment have occurred. However, the SEIR found that the DISC site and its associated agricultural operations would not be considered a large farming headquarter facility, nor an agricultural dusting airstrip. Nonetheless, the potential existed for the presence of persistent pesticide residues, due to application during historical agricultural activities on-site. Therefore, a Surface Soil Investigation Report was prepared, which included evaluation of surface soil within the DISC site, detention basin, and canal for concentrations of organochlorine pesticides (OCPs), total arsenic, and total lead that would have posed a threat to human health under a commercial land use exposure scenario. Based on the Department of Toxic Substances Control Interim Guidance for Sampling Agricultural Properties (Third Revision), dated August 7, 2008 (DTSC Guidance), a total of 34 soil samples were collected for the characterization of the presence of OCPs in the soil. According to the laboratory analysis results, OCP was not present in any soil samples at concentrations exceeding reporting limits. Thus, OCP concentrations in the on-site soils would not pose a risk to human health. An additional 13 soil samples were collected to characterize the presence of total arsenic and lead in the soil. The maximum concentration of arsenic detected in the on- site soils was below the applicable threshold (12 mg/kg) for a sensitive land use. The associated increase in cancer risk associated with the maximum concentration of arsenic at the site was calculated to be within the California Environmental Protection Agency (Cal-EPA) typical range of acceptable exposure levels. Lead concentrations at the ARC Site ranged from 5.4 mg/kg to 7.4 mg/kg, which is below the 80 mg/kg threshold for residential exposure and the 320 mg/kg threshold for commercial exposure. Based on the results of the Surface Soil Investigation Report, the SEIR determined the on-site soils would not have created a significant hazard to the public or the environment. With respect to the Mace Triangle property, only the easternmost parcel of the Mace Triangle site was in agricultural production at the time the SEIR was prepared. However, given the agricultural history of the easternmost parcel, the SEIR concluded persistent pesticides could be present in the Mace Triangle site soils, which could result in adverse effects to construction workers. Therefore, the SEIR required soil sampling to be completed prior to future development of the Mace Triangle site, and implementation of soil treatment/removal if contamination were to be identified.

The currently proposed DiSC 2022 project would be implemented within the development footprint area previously analyzed in the SEIR; however, the DiSC 2022 project would involve a substantially reduced development footprint, due to the currently proposed project excluding the 92 acres immediately north of the MDC, which was a portion of the previous DISC project site. Additionally, the DiSC 2022 project would include similar project components as the previous DISC project, albeit, at a noticeably reduced scale. Because on-site conditions would not have changed since the certification of the Final SEIR, the currently proposed project would still be

subject to Mitigation Measures 3-43(a) through (c), which include provisions to ensure on-site wells are properly abandoned, any debris encountered in the site's former canal is properly evaluated for environmental hazard risks, and a Phase I ESA is prepared, and recommendations therein are implemented, prior to any development on the Mace Triangle property.

Based on the above information, the currently proposed project would not result in new significant impacts or substantially more severe significant impacts related to creating a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment, beyond what were previously identified in the SEIR. Therefore, the proposed project would be consistent with the conclusions of the SEIR.

c. Similar to when the SEIR was certified, the nearest existing school to the project site is Pioneer Elementary School, which is located approximately 0.26-mile south of the project site. In addition, Frances Harper Junior High School is located approximately 0.28-mile west of the site. Because the project is not within one-quarter mile of an existing or proposed school, the MRIC EIR concluded that the MRIC project would not have resulted in any impacts associated with emitting hazardous emissions or handling hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school.

Pioneer Elementary School and Frances Harper Junior High School continue to be the nearest schools to the project site. As such, the currently proposed DiSC 2022 project would not be located within one-quarter mile of an existing or proposed school.

Based on the above information, the currently proposed project would not result in new significant impacts or substantially more severe significant impacts related to emitting hazardous emissions or handling hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school beyond what were previously identified in the preceding environmental documents.

d. As noted in the preceding environmental documents, the project site is not located on a site that is on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5. Thus, the project would not create any hazard to the public or the environment associated with hazardous materials sites.

With respect to the currently proposed DiSC 2022 project, Government Code Section 65962.5 requires the Cal-EPA to annually develop an updated Hazardous Waste and Substances Site (Cortese) List. The DTSC's Cortese List does not currently include any site or facility located within or adjacent to the boundaries of the DiSC 2022 site.[17]

Based on the above information, the currently proposed project would not result in new significant impacts or substantially more severe significant impacts related to being located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment beyond what were previously identified in the preceding environmental documents.

e. As noted in the preceding environmental documents, the project site is not located within an airport land use plan or within two miles of a public airport or public use airport. The project site

[17] California Department of Toxic Substances Control. *Site Mitigation & Restoration Program*. Available at: https://dtsc.ca.gov/dtscs-cortese-list/. Accessed September 2021.

is also not within the vicinity of a private airstrip. Accordingly, a safety hazard for people residing or working in the project area associated with private airstrips would not occur as a result of the project. Circumstances have not changed since certification of the SEIR (e.g., new airports have not been constructed).

Based on the above information, the currently proposed project would not result in new significant impacts or substantially more severe significant impacts related to being located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, and result in a safety hazard or excessive noise for people residing or working in the project area, beyond what were previously identified in the preceding environmental documents.

f. The SEIR assessed the potential for the DISC project to impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan under Impact 3-44 and concluded that the project would have resulted in a less-than-significant impact. The SEIR found that the DISC project would not involve any operations or changes to the existing roadway network that would impair implementation or physically interfere with any adopted emergency response plan or emergency evacuation plan. According to the City's General Plan, the City of Davis Multi-Hazard Functional Planning Guide states that all major roads are available for emergency evacuation routes in the event of a disaster, depending on the location and type of emergency that arises. Major roads identified for evacuation include Russell Boulevard, State Route (SR) 113, I-80, Richards Boulevard, CR 102/Pole Line Road, Mace Boulevard southbound, CR 32A, Covell Boulevard/CR 31, "F" Street/CR 101A, and North Sycamore Frontage Road. The residents and employees resulting from the DISC project would have used the aforementioned roadways in case of an emergency evacuation, and the DISC project did not involve any operations or changes to the existing roadway network that would have impaired implementation or physically interfered with the City's Multi-Hazard Functional Planning Guide or the County's Emergency Operations Plan or Multi-Hazard Mitigation Plan (MHMP).

The currently proposed DiSC 2022 project would be implemented within the development footprint area previously analyzed in the SEIR; however, the DiSC 2022 project would involve a substantially reduced development footprint, due to the currently proposed project excluding the 92 acres immediately north of the MDC, which was a portion of the previous DISC project site. Additionally, the DiSC 2022 project would include similar project components as the previous DISC project, albeit, at a noticeably reduced scale. As was the case for the previous DISC project, the residents and employees resulting from the DiSC 2022 project would use the roadways listed above in case of an emergency evacuation. Additionally, the DiSC 2022 project would not involve any operations or changes to the existing roadway network that would impair implementation or physically interfere with the City's Multi-Hazard Functional Planning Guide or the County's Emergency Operations Plan or MHMP.

Based on the above information, the currently proposed project would not result in new significant impacts or substantially more severe significant impacts related to an adopted emergency response plan or emergency evacuation plan beyond what were previously identified in the SEIR. Therefore, the proposed project would be consistent with the conclusions of the SEIR.

g. The SEIR evaluated the potential for the DISC project to expose people or structures to a significant risk of loss, injury, or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands, under Impact 3-45, and determined that the project would have resulted in a less-than-significant impact. As noted in the SEIR, according to the California Department of Forestry and Fire Protection (CAL FIRE)

maps for Yolo County, the City of Davis and the DISC site were not within a State or local Fire Hazard Severity Zone (FHSZ) at the time of the SEIR's certification. In addition, the SEIR noted that the fields to the north of the DISC site could contain dry grasses that could pose a risk of ignition of dry vegetation during certain portions of the year, but the eastern agricultural land's almond trees would reduce the potential for grass fires along the DISC site's eastern boundary. Furthermore, the buildings proposed as part of the DISC project would have been set back from adjacent agricultural land, which would have helped to minimize threats from wildland fires.

The currently proposed DiSC 2022 project would be implemented within the development footprint area previously analyzed in the SEIR; however, the DiSC 2022 project would involve a substantially reduced development footprint, due to the currently proposed project excluding the 92 acres immediately north of the MDC, which was a portion of the previous DISC project site. The DiSC 2022 project would include similar project components as the previous DISC project, albeit, at a noticeably reduced scale. According to CAL FIRE, the City of Davis and the project site continue to not be located within or adjacent to a State or local Very High or High FHSZ.[18] Additionally, similar to the DISC project, the buildings proposed as part of the DiSC 2022 project would include setbacks from the agricultural land to the north and east of the project site, which would further reduce risks associated with wildland fire. Furthermore, all structures constructed as part of the currently proposed project would be built in accordance with the provisions set forth by the California Fire Code, as adopted in Section 13.01.040 of the City's Municipal Code, which includes requirements, where applicable, for automatic sprinkler systems in new buildings.

Based on the above information, the currently proposed project would not result in new significant impacts or substantially more severe significant impacts related to significant risk of loss, injury, or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands, beyond what were previously identified in the SEIR. Therefore, the proposed project would be consistent with the conclusions of the SEIR.

Conclusion

Based on the above, the DiSC 2022 project would not result in any changes, new circumstances, or new information that would involve new significant impacts or substantially more severe significant impacts from what had been anticipated for the project site in the previous CEQA documents related to hazards and hazardous materials. The previously required mitigation measures from the SEIR, as presented below, would still be required to be implemented for the proposed project.

Mitigation Measure(s)

The following mitigation measure(s) would reduce the above potential impacts to a *less-than-significant* level.

Mitigation Measures from the Previous CEQA Documents

The mitigation measures from the SEIR applicable to the proposed project are presented below. It should be noted that the mitigation measures formerly referenced "ARC" as part of the previous SEIR; thus, such references have been changed to "DiSC 2022" in this Addendum in ~~strikethrough~~ and double underline format. No other changes have been made to the following mitigation.

[18] California Department of Forestry and Fire Protection. *Fire Resource and Assessment Program: Yolo County*. Available at: https://osfm.fire.ca.gov/divisions/wildfire-planning-engineering/wildland-hazards-building-codes/fire-hazard-severity-zones-maps/. Accessed September 2021.

~~ARC~~ DiSC 2022 Project

3-43(a) Prior to any ground disturbance activities within 50 feet of a well on the ~~ARC~~ DiSC 2022 Site, the applicant shall hire a licensed well contractor to obtain a well abandonment permit for any wells not anticipated to be used from the Yolo County Environmental Health Services Department, and properly abandon the on-site wells, pursuant to review and approval by the City Engineer and the Yolo County Environmental Health Services Department.

3-43(b) If any debris is encountered within the former canal on APN 033-630-009 during construction activities, as shown on the construction plans for the ~~ARC~~ DiSC 2022 Site, the contractor shall contact the project applicant, who shall retain the services of a qualified environmental hazard firm, to evaluate the debris to determine whether it poses any environmental contamination risks. A written evaluation shall be submitted to the City of Davis Department of Community Development and Sustainability. If the debris is trash or other non-hazardous material, then the contractor shall dispose of the debris and no further mitigation shall be required. If the debris is associated with signs of soil staining or odors indicative of hazardous materials, the environmental hazard firm shall conduct additional evaluation, including but not necessarily limited to soil sampling. If soil samples detect concentrations of hazardous materials above applicable Regional Screening Levels (RSL), then the soils shall be remediated and disposed of at a landfill licensed to accept hazardous waste. If constituent concentrations are below RSLs, then no further mitigation shall be necessary.

Mace Triangle

3-43(c) In conjunction with submittal of a final planned development and/or tentative map for any parcel in the Mace Triangle property, the applicant shall submit a Phase I Environmental Site Assessment for that parcel, which shall evaluate on-site conditions, including but not limited to the presence of any wells, evidence of soil staining, or odors indicative of hazardous substances.

In addition, due to the past agricultural operations on the easternmost parcel, a soil sampling program shall be implemented to assess potential agrichemical impacts to surface soil within the easternmost parcel, as follows:

A soil sampling and analysis workplan shall be submitted for approval to Yolo County Environmental Health Department. The sampling and analysis plan will meet the requirements of the Department of Toxic Substances Control Interim Guidance for Sampling Agricultural Properties (2008).

If the sampling results indicate the presence of agrichemicals that exceed commercial screening levels, a removal action workplan shall be prepared in coordination with Yolo County Environmental Health Department. The removal action workplan shall include a detailed engineering plan for conducting the removal action, a description of the onsite contamination, the goals to be achieved by the removal action, and any alternative removal options that were considered and rejected and the basis for that rejection. A no further action letter will be issued by County Health for the proposed commercial development upon completion of the removal action. The removal action shall be deemed complete when the confirmation samples exhibit concentrations below the commercial screening levels, which will be established by the agencies.

If any stained soil or odor-impacted areas are encountered during the Phase I ESA, then soil sampling of these areas shall be included in the above soil sampling workplan, and depending upon the sampling results, included in the removal action workplan as well.

Modified Mitigation Measures

None required.

Additional Project-Specific Mitigation Measures

None required.

Environmental Issue Area	Where Impact Was Analyzed in Previous CEQA Documents?	Do Proposed Changes Involve New or More Severe Impacts?	Any New Circumstances Involving New or More Severe Impacts?	Any New Information Requiring New Analysis or Verification?
X. Hydrology and Water Quality. *Would the project:*				
a. Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality?	2020 SEIR pgs. 3-174 to 3-176	No	No	No
b. Substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin?	2020 SEIR pg. 3-177	No	No	No
c. Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would: i. Result in substantial erosion or siltation on- or off-site;	2020 SEIR pgs. 3-129 to 3-130	No	No	No
ii. Substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or offsite;	2020 SEIR pgs. 3-165 to 3-174	No	No	No
iii. Create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff; or	2020 SEIR pgs. 3-165 to 3-174	No	No	No
iv. Impede or redirect flood flows?	2020 SEIR pgs. 3-177 to 3-1778	No	No	No
d. In flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation?	2020 SEIR pgs. 3-177 to 3-1778	No	No	No

Environmental Issue Area	Where Impact Was Analyzed in Previous CEQA Documents?	Do Proposed Changes Involve New or More Severe Impacts?	Any New Circumstances Involving New or More Severe Impacts?	Any New Information Requiring New Analysis or Verification?
e. Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?	2020 SEIR pgs. 3-174 to 3-177	No	No	No

Discussion

Since the release of the certified Final SEIR, the project site has remained vacant and undeveloped, and substantial changes in the environmental and regulatory settings related to hydrology and water quality, as described in the SEIR, have not occurred.

Relative to the DISC project, the DiSC 2022 project would involve a substantially reduced development footprint area, due to the currently proposed project excluding the 92 acres immediately north of the MDC, which was a portion of the previous DISC project site. By excluding the area north of the MDC, the DiSC 2022 project would encompass 102 acres, as compared to the 194 acres planned for the previous DISC project. The reduced footprint translates to a 63.6 percent decrease in commercial square footage, a 37.8 percent reduction in advanced manufacturing square footage, a 45.9 percent decline in on-site residential units, and a 20 percent reduction in ancillary retail square footage. The reduced footprint reduces the amount of impervious surfaces that would be created by the proposed project, thus, reducing runoff and potential water quality impacts. Project changes or circumstances that would adversely affect the analysis in the SEIR related to hydrology and water quality have not occurred.

a. The SEIR evaluated the potential for the DISC project to violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or groundwater quality under Impacts 3-48 and 3-49 and concluded that with implementation of Mitigation Measure 3-48, the project would have resulted in a less-than-significant impact. As noted in the SEIR, implementation of the DISC project would have resulted in the potential to create or contribute additional sources of polluted runoff, violate water quality standards or waste discharge requirements, or otherwise degrade water quality during construction activities. However, because development at the DISC site and possible future development at the Mace Triangle site would require construction activities that would have resulted in a land disturbance greater than one acre, the applicant would have been required by the State to obtain a General Permit for Discharges of Storm Water Associated with Construction Activity (Construction General Permit), which pertains to pollution from grading and project construction. Compliance with the Construction General Permit requires the filing of a NOI with the State Water Resources Control Board (SWRCB) and the preparation of a SWPPP prior to construction. As such, the SWPPP for the DISC project would have incorporated BMPs in order to prevent, or reduce to the greatest feasible extent, adverse impacts to water quality from erosion and sedimentation. The DISC project's required compliance with the SWRCB standards, as mandated by Mitigation Measure 3-48, would have ensured that construction activities did not result in degradation of downstream water quality.

   During DISC operations, the SEIR determined that all development associated with the DISC site and Mace Triangle site would have been required to comply with the City of Davis' stormwater treatment standards included in the Municipal Code, which would have reduced impacts to a less-

than-significant level. Permanent stormwater quality treatment control measures (TCMs) for development in the City of Davis must be designed in accordance with the State's Phase II Small MS4 General Permit, the development standards of which have been adopted by reference in Chapter 30 of the City's Municipal Code. The Phase II Small MS4 General Permit requires that permanent stormwater control measures be incorporated into the proposed project to ensure that new development does not result in the discharge of polluted water or the increase in sources of polluted runoff. Regulated projects, under the Phase II Small MS4 General Permit, are required to divide the project area into Drainage Management Areas (DMAs) and implement and direct water to appropriately-sized TCMs, consistent with the sizing standards in Section E.12.e.(ii)(c) of the Provisions for all Small MS4 Permittees.[19] TCMs are designed after the inclusion of Site Design Measures (SDMs) consistent with the standards of Section E.12.b. and E.12.e.(ii)(d). Baseline Hydromodification Measures are implemented consistent with the prescriptive standards of Section E.12.e.(ii)(f). Regulated Projects must additionally include Source Control BMPs where possible. The City requires preliminary Stormwater Quality Plans at the discretionary phase to ensure that DMAs, TCMs and hydromodification measures are adequately designed into the conceptual development plan, demonstrating full compliance of the project's drainage system with the Phase II Small MS4 General Permit. As such, the SEIR found that each phase of the DISC project would have been required, as conditions of approval, to provide stormwater system sizing information, a Stormwater Quality Plan, stormwater calculations, a Stormwater Quality Maintenance Plan, and a Drainage Plan.

Similar to the DISC project, the currently proposed DiSC 2022 project would be subject to Mitigation Measure 3-48, which would ensure that the project prepares a SWPPP prior to initiation of any ground-disturbing activities and implements BMPs that comply with the Construction General Permit. The DiSC 2022 project would also be required to comply with the City of Davis' stormwater treatment standards included in the Municipal Code, which would entail complying with the foregoing provisions discussed above. Compliance with all applicable regulations and standards would ensure the proposed project does not violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or groundwater quality during project construction or operation.

Based on the above information, the currently proposed project would not result in new significant impacts or substantially more severe significant impacts related to the violation of any water quality standards or waste discharge requirements or the substantial degradation of surface or groundwater quality beyond what were previously identified in the SEIR. Therefore, the proposed project would be consistent with the conclusions of the SEIR.

b,e. The SEIR assessed the potential for the DISC project to substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level under Impact 3-50 and concluded that the project would have resulted in a less-than-significant impact. As noted in the SEIR, the DISC project would have likely installed a new well for irrigation purposes. Two existing irrigation wells are located within the DISC boundaries and used to irrigate crops on approximately 185 acres each year. As such, use of groundwater at the DISC site would not have been a new occurrence that would have been expected to lower the groundwater table and affect the production rate of existing wells. Additionally, the City relies heavily on surface water supplies. As

[19] California State Water Resources Control Board. *Phase II Small Municipal Separate Storm Sewer System (MS4) Program*. Available at: https://www.waterboards.ca.gov/water_issues/programs/stormwater/phase_ii_municipal.html. Accessed October 2021.

the DISC project would have similarly relied on surface water, the project would not have substantially depleted groundwater supplies

With respect to groundwater recharge, the SEIR determined that the DISC project would have incorporated an agricultural buffer and several parks and green space areas throughout the site, totaling approximately 49.2 acres of parks and green space. Runoff from the developed portions of the DISC site would have drained to the on-site detention areas and the MDC. In addition, a portion of the runoff from the DISC site could have been routed to an off-site detention area on a City-owned property. The aforementioned areas would have provided an opportunity for groundwater recharge in the area.

The currently proposed DiSC 2022 project would be implemented within the development footprint area previously analyzed in the SEIR; however, the DiSC 2022 project would involve a substantially reduced development footprint, due to the currently proposed project excluding the 92 acres immediately north of the MDC. This reduced development footprint would increase the amount of groundwater recharge occurring through precipitation/soil infiltration, as compared to the original DISC project. The currently proposed project would include agricultural buffers and 23.2 acres of green space. As such, the aforementioned areas would provide an opportunity for groundwater recharge. Additionally, similar to the former DISC, the DiSC 2022 project would rely primarily on surface water. Thus, the project would not substantially deplete groundwater supplies. Lastly, while the Yolo Subbasin Groundwater Agency has not yet adopted the Yolo Groundwater Sustainability Plan, the DiSC 2022 project would not conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan, as all potable water serving the project would be surface water from the City's water system, with an on-site well potentially providing the limited amount of water necessary for irrigation.

Based on the above information, the currently proposed project would not result in new significant impacts or substantially more severe significant impacts related to substantially decreasing groundwater supplies, interfering substantially with groundwater recharge such that the project could impede sustainable groundwater management of the basin, or conflicting with or obstructing implementation of a water quality control plan or sustainable groundwater management plan, beyond what were previously identified in the SEIR. Therefore, the proposed project would be consistent with the conclusions of the SEIR.

ci-ciii. The SEIR evaluated the potential for the DISC project to substantially alter the existing drainage pattern of the site or area, or create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems, or substantially increase the rate or amount of surface runoff in a manner that would result in flooding on- or off-site under Impact 3-47 and concluded that with incorporation of Mitigation Measures 3-47(a) through (c), the project would have resulted in a less-than-significant impact. As part of the analysis, the SEIR assessed the DISC project's effects on rate of runoff, volume of runoff, storage of runoff, and conveyance of runoff from the DISC site and Mace Triangle site. It should be noted that DISC project impacts related to erosion were addressed in the SEIR under Impact 3-33, which is discussed under question 'b' of Section VII, Geology and Soils, of this Addendum. More detailed discussions of the DISC project's effects related to the existing drainage pattern of the site are provided below.

Rate of Runoff

As noted in the SEIR, with development of the DISC project, the on-site impervious area would have substantially increased, leading to faster runoff rates. The increased rate of runoff would have been attenuated using on-site facilities. Runoff would have been conveyed along shallow

landscaped corridors that would have flowed to the buffer areas at the northern and southern edges. From there, the runoff would have been conveyed to the eastern buffer area where it would have flowed towards the MDC. The northern, southern, and eastern buffer areas would have provided a combination of conveyance and detention storage by way of wide, relatively shallow areas that may have been "benched" as the runoff moved toward the MDC. Stormwater discharge from each of the north and south buffer areas would have been conveyed into the MDC, near the eastern boundary of ARC Site.

Table 14 provides a summary of the MDC design flows.

Table 14
Summary of Design Flows along Mace Drainage Channel

Location	Design 100-yr flow (cfs)	Depth of Flow (ft)
Downstream of Mace Boulevard.	255(a)	4.8
Downstream of Detention Basin	225	4.5
At the Eastern Boundary of Mixed-Use Site	260	4.9
Upstream of CR 105	273	5.0
Downstream of CR 105	305	5.3
Downstream of Schultz Crossing	313	5.4
Downstream of Swingle PG&E Pumping Station	330	5.5

Notes:
(a) Based on recent updated modeling
cfs = cubic feet per second

Source: Watermark Engineering, Inc. March 13, 2015, Revised May 29, 2015

The overall drainage system design would have been such that the combination of attenuated on-site flows and the MDC and off-line detention modifications would have reduced 100-year flows leaving the developed DISC site to the original design capacity of 260 cubic feet per second (cfs), meaning that the project would not have increased the rate of flow leaving the DISC site. Consequently, the SEIR found that downstream impacts related to the existing capacity of the MDC would not have occurred.

With DiSC 2022, the north side of the original DISC site would remain as agriculture. The south side would provide detention storage to attenuate the south side developed runoff. According to Watermark Engineering, a 50 percent reduction of development runoff would not create new or increased impacts on the existing conveyance facilities (see Appendix C of this Addendum).[20] Adequate capacity would continue to exist within the MDC to convey the reduced runoff from DiSC 2022, with incorporation of perimeter detention on-site, as originally designed.

Volume of Runoff

According to the SEIR, the rate of runoff for the DISC project would have been attenuated on-site, as described above, such that peak runoff would have mimicked existing conditions. However, the volume of runoff was expected to increase as a result of development. During most rainstorms, such increased volume would go unnoticed as the MDC conveys all of the collected runoff to the Yolo Bypass. Approximately 7.5 square miles of land drain to the eastern terminus of the Railroad Channel at the Yolo Bypass, into which the MDC flows, including about 730 acres

[20] Watermark Engineering, Inc. *Applicability of MRIC Drainage Study (2015) for the Davis Innovation and Sustainability Campus 2022*. August 11, 2021, page 3.

of Mace Ranch and about 4,100 acres of agricultural land west of the Covell Drain and bounded by the Willow Slough Bypass levee to the north, the Union Pacific Railroad (UPRR) to the south, and the Yolo Bypass levee to the east. During typical rainstorms, runoff from the foregoing areas discharge into the Yolo Bypass.

However, during heavy and prolonged rainfall in Northern California, flow in the Yolo Bypass rises, creating backwater, which can completely stop MDC flows from entering the Yolo Bypass. When such rainfall occurs, runoff from the 7.5-square mile tributary area ponds "behind" the Yolo Bypass levee and remains in the location until the ponded water level is higher than the Bypass water level. In addition, during extreme storm events, and when the Bypass is high, both the Covell Drain and the North Davis Drain overflow to the east, adding runoff volume to the ponding area east of the Yolo Bypass levee.

The SEIR noted that the local storm event occurring over the City would not necessarily be of the same magnitude of storm event that occurs over Northern California and causes high water levels in the Yolo Bypass. Also, the duration of the high water levels in the Yolo Bypass probably lasts much longer than the duration of flooding from the local storm. Thus, to develop a "worst case" evaluation, the SEIR assumed that the water levels would have blocked the flow into the Yolo Bypass for the full duration of the local storm events occurring over the City and Yolo County. Such a result means that all of the increase in runoff from the DISC project would have contributed to increased flooding in the study area west of the Yolo Bypass. Based on engineering data for the MRIC project's Mixed-Use Alternative, which would have resulted in similar rates and amounts of stormwater runoff as the DISC project, the estimated increase in runoff from the development area for various, larger storm events associated with the DISC project is summarized in Table 15, which was included in the SEIR as Table 3-22. The increase in runoff from the Mace Triangle site for various, larger storm events, is also shown in the table. Runoff volumes are shown in acre-feet (ac-ft).

Table 15
Increases in Runoff Volumes Resulting from DISC Project

Local Storm Event	Triangle Increase in Runoff Volume, ac-ft	DISC Project Increase in Runoff Volume, ac-ft	Total Volume Increase, ac-ft
10-Year, 24-Hour	2.0	22	24
100-Year, 24-Hour	2.5	31	33.5
100-Year, 10-Day	6.7	78	84.7
200-Year, 10-Day	7.2	82	98.2

To address the estimated increase in runoff volume that was determined to occur as a result of the DISC project, the SEIR included two alternatives. The first option involved storing the increased runoff off-site at lower elevations, until such time that the Yolo Bypass flows receded and MDC and Railroad drain flows could enter the Yolo Bypass through the existing Bypass levee culvert. Consistent with the commitment made by the applicant in the Development Agreement approved by City Council for the DISC Project, the current DiSC 2022 Project would similarly eliminate the off-site replacement storage area as an option.

As discussed in the SEIR, an alternative method to convey the increased runoff volume into the Yolo Bypass, when the outfall is blocked by high water, would be by way of a small pump station. The pump station could be a permanent installation or a portable trailer-mounted unit. For the DISC project, the pump station would require approximately 12 days to pump about 70 ac-ft of

water resulting from post-project runoff in the 100-year, 10-day storm event. A permanent installation would be sited near the existing outfall. Pump intake would be in the Railroad Channel and the conveyance pipe would have gone "over" the Yolo Bypass levee, rather than "through" the levee, in order to maintain levee integrity. The SEIR found that no impact to the Yolo Bypass would have been expected, as the pump would be used only in the event of moderately high flow in the Yolo Bypass consisting of at least 10,000 cfs.

Additionally, the SEIR determined that a portable trailer-mounted, self-contained pump could be used. The portable pump could be stored at City facilities when not in use and set up for pumping in several hours. The portable pump would require fewer and/or less rigorous approvals from the Central Valley Flood Protection Board and could also be used at other locations.

The pump station continues to be a viable method for the DiSC 2022 project. According to Watermark Engineering, due to the reduced project size, the DiSC 2022 project could be expected to reduce the volume of stormwater runoff by roughly half. Thus, it is estimated that a pump station could pump the project's incremental volume of runoff into the Yolo Bypass during a 100-year, 10-day storm event in six days (see Appendix C of this Addendum). This method would thereby ensure a net increase in ponding depth does not occur as a result of the proposed project.

Potential Impacts to Mace Triangle Site

With respect to the Mace Triangle site, the SEIR's analysis assumed that the Park-and-Ride lot impervious surface area would not change, but the Ikeda's Market percent of impervious surface cover would increase from 20 to 90 percent, and the easternmost parcel from two to 90 percent. The increased runoff volume from future development of the site would need to be addressed, similar to the DISC site. As such, conceptual design criteria and facilities for the Mace Triangle site were identified as follows:

- The increased rate of flow as a result of development will be attenuated to mimic existing conditions.
- On-site drainage facilities will be some combination of surface and pipe conveyance to a detention basin at the east end of the Mace Triangle.
- The outfall pipe from the detention basin is sized to restrict outflow to be equal or less than existing conditions.

A conceptual location for a single detention basin was included in the SEIR in Figure 3-15. The single detention basin would have likely been constructed in the eastern portion of the Mace Triangle site. The single basin scenario assumed that the involved property owners would agree to locate a single detention basin at the proposed location. If such an agreement had not been reached, then each property owner would need to develop their own independent drainage system, either on a permanent basis or temporary basis, until such time that a central detention facility is constructed. The detention basin and storm drain facilities would be designed to meet City design standards in place at the time of development. The same reasonable assumptions evaluated for the Mace Triangle site in the SEIR remain applicable. Changes have not occurred to the Mace Triangle site since certification of the SEIR.

Conclusion

Because the DISC project would have resulted in new impervious surfaces and an associated increase in runoff volume as a result of project implementation, the SEIR required Mitigation Measures 3-47(a) through (c), which would have required that a design-level drainage report be submitted to the City of Davis Public Works Department for review and approval in conjunction with submittal of the first final planned development for the DISC site. The drainage report would identify specific storm drainage design features to control the 100-year, 24-day increased runoff from the project site to ensure that the rate of runoff leaving the developed DISC site would not exceed the original MDC design capacity of 260 cfs. While the DiSC 2022 project would substantially reduce the rate and amount of runoff generated at the site, as compared to the original DISC project, the same mitigation requirements remain applicable.

Based on the above, the currently proposed project would not result in new significant impacts or substantially more severe significant impacts related to substantially altering the existing drainage pattern of the site or area, or creating or contributing runoff water which would exceed the capacity of existing or planned stormwater drainage systems, or substantially increasing the rate or amount of surface runoff in a manner that would result in flooding on- or off-site beyond what were previously identified in the SEIR. Therefore, the proposed project would be consistent with the conclusions of the SEIR.

civ,d. The SEIR evaluated the potential for the DISC project to place structures within a 100-year flood hazard as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map (FIRM) or flood hazard delineation map; or place within a 100-year floodplain structures which would impede or redirect flood flows; or expose people or structures to significant risk of loss, injury or death involving flooding, including flooding as a result of the failure of a levee or dam under Impact 3-51 and concluded that the project would have resulted in a less-than-significant impact. It should be noted that the MRIC EIR addressed impacts related to seiche or tsunami hazards. Given that the nearest large body of water, Lake Berryessa, is located approximately 26 miles west of the site, as well as the fact that the project site is relatively flat and not located near any physical or geologic features that would produce a mudflow hazard, the MRIC concluded no impact would have occurred related to inundation by seiche, tsunami, or mudflow.

With respect to flood-related hazards, the SEIR noted that the DISC project would not have placed structures within a 100-year flood hazard area as mapped on a federal Flood Hazard Boundary or FIRM or flood hazard delineation map, or placed within a 100-year floodplain structures which would have impeded or redirected flood flows. The entire DISC site is located in Zone X on the applicable FIRM and is not considered a Federal Emergency Management Agency Special Flood Hazard Area.

The currently proposed DiSC 2022 project would be implemented within the development footprint area previously analyzed in the SEIR; however, the DiSC 2022 project would involve a substantially reduced development footprint, due to the currently proposed project excluding the 92 acres immediately north of the MDC. Additionally, the DiSC 2022 project would include similar project components as the previous DISC project, albeit, at a noticeably reduced scale. Given that on-site conditions have not changed, the currently proposed project would not place structures within a 100-year flood hazard as mapped on a federal Flood Hazard Boundary or FIRM or flood hazard delineation map; or place within a 100-year floodplain structures which would impede or redirect flood flows; or expose people or structures to significant risk of loss, injury or death involving flooding, including flooding as a result of the failure of a levee or dam.

Based on the above, the currently proposed project would not result in new significant impacts or substantially more severe significant impacts related to impeding or redirecting flood flows or flood hazard zones beyond what were previously identified in the SEIR. Therefore, the proposed project would be consistent with the conclusions of the SEIR.

Conclusion

Based on the above, the DiSC 2022 project would not result in any changes, new circumstances, or new information that would involve new significant impacts or substantially more severe significant impacts from what had been anticipated for the project site in the previous CEQA documents related to hydrology and water quality. The previously required mitigation measures from the SEIR, as presented below, would still be required to be implemented for the proposed project.

Mitigation Measure(s)

The following mitigation measure(s) would reduce the above potential impacts to a *less-than-significant* level.

Mitigation Measures from the Previous CEQA Documents

The mitigation measures from the SEIR applicable to the proposed project are presented below. It should be noted that the mitigation measures formerly referenced "ARC" as part of the previous SEIR; thus, such references have been changed to "DiSC 2022" in this Addendum in ~~strikethrough~~ and double underline format. No other changes have been made to the following mitigation.

~~ARC~~ DiSC 2022 Project

3-47(b) Prior to approval of the Phase 1 improvement plans for the ~~ARC~~ DiSC 2022 Site, the Public Works Department shall ensure that the plans include the development of the Phase 2 MDC improvements. The Phase 2 improvements shall consist of removal of the two 24-inch corrugated metal pipes in order to provide a continuous channel between the Phase 1 and Phase 2 improvements.

Mace Triangle

3-47(c) In conjunction with submittal of each final planned development for the Mace Triangle Site, a design-level drainage report for the development shall be completed and submitted to the City of Davis Public Works Department for review and approval. The drainage report shall identify specific storm drainage design features to control the 100-year, 24-hour increased runoff from the project site. This may be achieved through: onsite conveyance and detention facilities, offsite detention or retention facilities, channel modification, or equally effective measures to control the rate and volume of runoff.

The design-level drainage report shall include off-site drainage facilities sufficient to detain and control the increased run-off volume when the flow from the Mace Drainage Channel into the Yolo Bypass is blocked by high water levels in the Bypass. Preliminary estimates of increased runoff volumes for the Mace Triangle Site are as much as 7 acre-feet. The final amount of runoff volume to be detained for each proposed development would be determined with the design-level drainage report. This could result in detaining run-off volume for an extended time period. During this time period, additional large storms could occur; thus, the proposed detention storage facilities shall also be able to manage (detain with a controlled release) the 100-year, 24-hour storm event.

Design-level recommendations provided in the drainage report shall be included in the improvement plans prior to their approval by the Davis Public Works Department.

~~ARC~~ DiSC 2022 Project and Mace Triangle

3-48 Prior to initiation of any ground disturbing activities, the project applicant(s) for each discretionary development application shall prepare a Stormwater Pollution Prevention Plan (SWPPP), and implement Best Management Practices (BMPs) that comply with the General Construction Stormwater Permit from the Central Valley RWQCB, to reduce water quality effects during construction. Such BMPs may include: temporary erosion control measures such as silt fences, staked straw bales/wattles, silt/sediment basins and traps, check dams, geofabric, sandbag dikes, and temporary revegetation. The SWPPP shall be kept on-site and implemented during construction activities and shall be made available upon request to representatives of the City of Davis and/or RWQCB.

Modified Mitigation Measures

The mitigation measures from the SEIR applicable to the proposed project that require modification are presented below. The following modified mitigation measure would reduce impacts associated with the DiSC 2022 project to a *less-than-significant* level.

~~ARC~~ DiSC 2022 Project

3-47(a) In conjunction with submittal of the first final planned development for the ~~ARC~~ DiSC 2022 Site, a design-level drainage report shall be submitted to the City of Davis Public Works Department for review and approval. The drainage report shall identify specific storm drainage design features to control the 100-year, 24-day increased runoff from the project site to ensure that the rate of runoff leaving the developed ~~ARC~~ DiSC 2022 Site does not exceed the original Mace Drainage Channel (MDC) design capacity of 260 cfs. This may be achieved through: on-site conveyance and detention facilities, off-site detention or retention facilities, channel modification, or equally effective measures to control the rate and volume of runoff.

The design-level drainage report shall include off-site drainage facilities sufficient to detain ~~and~~ or control the increased runoff volume when the flow from the MDC into the Yolo Bypass is blocked by high water levels in the Bypass. ~~Preliminary estimates of increased runoff volumes are 78 acre-feet.~~ The final amount of runoff volume to be detained or controlled (e.g., pumped into the Yolo Bypass) would be determined with the design-level drainage report. ~~This could result in detaining run-off volume for an extended time period. During this time period, additional large storms could occur; thus, the proposed detention storage facilities pump station shall also be able to manage (detain with a controlled release) the 100-year, 24-hour storm event.~~

The design-level drainage report shall also include design for detaining ~~and~~ or controlling the increased run-off volume from the Mace Triangle Site. Preliminary estimates of increased runoff volumes are as much as 7 acre-feet. The final amount of runoff volume to be detained or controlled (e.g., pumped into the Yolo Bypass) would be determined with the design-level drainage report prepare for the ~~ARC~~ DiSC 2022 Site.

Design-level recommendations provided in the drainage report shall be included in the improvements plans prior to their approval by the Davis Public Works Department.

Additional Project-Specific Mitigation Measures

None required.

Environmental Issue Area	Where Impact Was Analyzed in Previous CEQA Documents?	Do Proposed Changes Involve New or More Severe Impacts?	Any New Circumstances Involving New or More Severe Impacts?	Any New Information Requiring New Analysis or Verification?
XI. Land Use and Planning. *Would the project:*				
a. Physically divide an established community?	2020 SEIR pgs. 3-180 to 3-184	No	No	No
b. Cause a significant environmental impact due to a conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect?	2020 SEIR pgs. 3-184 to 3-186	No	No	No

Discussion

Since the release of the certified Final SEIR, the project site has remained vacant and undeveloped. Agricultural production continues to occur on the properties to the north and east of the DiSC 2022 site. Substantial changes in the environmental and regulatory settings related to land use and planning, or in circumstances that would affect the analysis in the SEIR related to land use and planning have not occurred.

Relative to the DISC project, the DiSC 2022 project would involve a substantially reduced development footprint area, due to the currently proposed project excluding the 92 acres immediately north of the MDC, which was a portion of the previous DISC project site. By excluding the area north of the MDC, the DiSC 2022 project would encompass 102 acres, as compared to the 194 acres planned for the previous DISC project. The reduced footprint translates to a 63.6 percent decrease in commercial square footage, a 37.8 percent reduction in advanced manufacturing square footage, a 45.9 percent decline in on-site residential units, and a 20 percent reduction in ancillary retail square footage. Project changes or circumstances that would adversely affect the analysis in the SEIR related to land use and planning have not occurred.

a. The SEIR evaluated the potential for the DISC project to physically divide an established community under Impact 3-53 and concluded that the project would have resulted in a less-than-significant impact. As noted in the SEIR, the DISC project and potential future Mace Triangle development would have resulted in development of predominately vacant land adjacent to urbanized areas of Davis to the west and south. As such, development associated with the DISC project would not have physically divided an established community.

   The SEIR also assessed the potential for the DISC project to result in urban decay as a result of economic and social changes and/or effects, under Impact 3-54, and determined that with incorporation of Mitigation Measures 3-54(a) and (b), the project would have resulted in a less-than-significant impact. While time has passed since the Urban Decay analysis was performed for the MRIC project by ALH Urban & Regional Economics, the SEIR determined that the original findings regarding the effects of the proposed office and industrial space are reasonably anticipated to remain applicable. The justification for this conclusion remains applicable to the DiSC 2022 project, as demonstrated below.

As noted in the original analysis, it is difficult to know the amount of existing innovation-type space that could be at risk of potential relocation to the project site, in part due to the extended project timeframe. In all likelihood, it would be confined to the City's existing innovation sector tenants, as these are the type of tenants to which the project R&D/technology-oriented uses would be targeted. As noted, these tenants are estimated to occupy about 506,600 sf of the existing Davis office and industrial base.[21] Excluded are Expression Systems and DMG/Mori, given the likelihood that these businesses may be less likely to relocate because of the customization of their space to meet their specific needs.[22] As was the case during the original urban decay analysis, though now for different reasons,[23] the expectation is that FMC/Schilling Robotics would vacate 120,000 sf, leaving another 386,600 sf of innovation tenant space. If tenants comprising one-half of this remaining balance were to relocate, this would result in 313,300 sf becoming vacant (i.e., 120,000 sf for FMC/Schilling Robotics and half of the 386,800-sf balance).

Accounting for the additional demand for vacated office and industrial space that may result from related Sacramento Area Council of Government (SACOG)-projected job growth between 2008 and 2035 (1,617 new jobs in Davis), ALH concluded there may yet be vacant space in 2035. Based on the illustrative 313,300-sf increase in vacancy due to relocated innovation sector businesses, this could leave a balance of 151,575 sf of vacant office and industrial space. ALH's 2015 Urban Decay Analysis accounted for the demand for the project's use types by accounting for related job growth through 2035. This, coupled with consideration that substantial new R&D/office-type buildings have not been developed in Davis since the 2015 ALH analysis, renders the 2015 findings applicable to the present time.

ALH Economics concluded that the illustrative analysis suggests that regardless of the amount of space, some increment of existing office and industrial space is at risk of sustained vacancy following development of the project. The vacancies would remain sustained until such time as yet additional demand was generated due to economic growth and expansion. Numerous market factors could likely boost this demand potential, including the attraction of larger increments of office and industrial space and the draw of the City of Davis to businesses located in other regional locations like Woodland and West Sacramento that would prefer a Davis location.

The regulatory controls suggest existing City of Davis measures to avoid the onset of deterioration or decay are effective with regard to these types of land uses. In addition, innovation space is not subject to the same anchor tenant/small tenant forces to which retail space is subject, whereby small tenants can be greatly affected by larger anchor tenants going out of business. Moreover, many of the office and industrial properties in Davis are owned by major institutional and private real estate companies, with the financial wherewithal to provide them with the option of withstanding prolonged vacancy and funding the maintenance necessary for upkeep even during times of vacancy. Therefore, the potential for properties to be well-maintained during periods of prolonged vacancy exists. ALH Economics, therefore, concludes that the office and industrial components of the project are not anticipated to cause adverse physical impacts leading to urban decay, despite the anticipated potential of some prolonged existing office and industrial base vacancies.

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21 This estimate is based upon innovation-based employment in Davis in 2008, which equated to 1,427. Translating this into the amount of square feet was done using a metric of 355 square feet of space per worker, using Business Park Land Strategy data (see ALH Urban & Regional Economics. *Mace Ranch Innovation Center Urban Decay Analysis*. March 2015, pg. 18).

22 ALH Urban & Regional Economics. *Mace Ranch Innovation Center Urban Decay Analysis*. [pg. 20]. March 2015.

23 Woodland Daily Democrat. *West Sacramento Welcomes New Businesses*. Available at: https://www.dailydemocrat.com/2020/02/07/west-sacramento-welcomes-new-businesses. Accessed February 2020.

With respect to the proposed hotel, ALH's analysis determined that sufficient demand was anticipated to exist in the City of Davis to support the project's 150-room hotel along with the existing hotels. Notably, since ALH's analysis was prepared, a new 120-room hotel (Residence Inn) has been constructed proximate to the project site, southwest of the intersection of Mace Boulevard/Second Street. In addition, the Downtown Davis Specific Plan currently being prepared includes the potential for an additional 150,000 sf of hotel space, which could accommodate 150 rooms. While this is a change in circumstances, the certified Final EIR, through mitigation, prohibits the applicant from building the on-site hotel until the applicant demonstrates to the City's satisfaction that there is sufficient unmet demand from a combination of hotel demand from project employees and businesses and/or hotel demand from elsewhere within the Davis marketplace to support the hotel space for which the building permit is requested.

The objective of this requirement is to ensure that the hotel developed within the project will not re-allocate demand from existing Davis hotels, but will instead help the City to provide new hotel offerings that will satisfy currently unmet demand. This will ensure that the project's hotel would not lead to urban decay.[24]

With respect to retail space, the DiSC 2022 project would include 80,000 sf of ancillary retail, rather than the 100,000 sf of such uses proposed for the original DISC. The BAE *Economic Evaluation of Innovation Park Proposals* (2015) generally concluded that there would be more than sufficient internal demand to support the original MRIC project's ancillary retail space by buildout. In support of this finding, BAE assumed an estimated annual retail expenditure per employee of $6,459 and an average annual retail sales per square foot of $326. Using similar estimates, and assuming 2,800 employees for the DiSC 2022 project, using BAE's metrics, DiSC 2022's internal retail demand is estimated to support approximately 61,000 sf of retail. The project includes 80,000 sf of ancillary retail. While the amount of proposed ancillary retail is estimated to be greater than the estimated internally generated employee only demand, the DiSC 2022 project also include 460 residential units that generate more demand for local-serving retail uses. In addition, the certified SEIR includes an adopted mitigation measure requiring the applicant to demonstrate that the proposed ancillary retail development will not exceed the anticipated demand increase from new employees and residents. If the analysis cannot demonstrate that the proposed amount of ancillary retail space will not outpace employee- and resident-generated demand, then the ancillary retail uses shall be removed from the final planned development, or scaled back to be commensurate with the projected employee- and resident-generated demand. This will ensure that the project's ancillary retail space would not lead to urban decay.

Based on the above information, the currently proposed project would not result in new significant impacts or substantially more severe significant impacts related to the physical division of an established community or urban decay beyond what were previously identified in the SEIR. Therefore, the proposed project would be consistent with the conclusions of the SEIR.

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[24] It is useful to focus on what constitutes the *environmental* impact known as urban decay. In *Bakersfield Citizens for Local Control v. City of Bakersfield*, the court described the phenomenon as "a chain reaction of store closures and long-term vacancies, ultimately destroying existing neighborhoods and leaving decaying shells in their wake." The court also discussed prior case law that addressed the potential for large retail projects to cause "physical deterioration of [a] downtown area" or "a general deterioration of [a] downtown area." (Id. at pp. 1206, 1207). When looking at the phenomenon of urban decay, it is also helpful to note economic impacts that do not constitute urban decay. For example, a vacant building is not urban decay, even if the building were to be vacant over a relatively long time. Similarly, in the context of retail development, even a number of empty storefronts would not constitute urban decay. Based on the above description regarding urban decay, therefore, ALH Economics' analysis examined whether there was sufficient market demand to support the ARC's various land use components without affecting existing retailers or other businesses so severely such as to lead to a downward spiral toward decay of the existing physical environment.

b. The SEIR evaluated the potential for the DISC project to conflict, or create an inconsistency, with any applicable land use and urban decay plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect under Impact 3-55 and determined that the project would have resulted in a less-than-significant impact. The SEIR referenced a similar analysis conducted as part of the MRIC EIR, which was concluded to be less than significant. In addition, Table 3-23 of the SEIR includes applicable housing policies and regulations, with project consistency discussions provided therein. The DISC project was demonstrated to be generally consistent with all applicable land use plans, policies, or regulations.

It should be noted that each technical section of the SEIR also includes an analysis of consistency with applicable plans, policies, or regulations adopted for the purpose of avoiding or mitigating environmental effects with respect to the technical section's environmental issue area. Under Impact 3-4 in the SEIR's evaluation of aesthetics impacts, the SEIR concluded the DISC project would have been consistent with applicable plans, policies, or regulations adopted for the purpose of avoiding or mitigating environmental effects and would have resulted in a less-than-significant impact, with incorporation of Mitigation Measure 3-4. The mitigation measure would ensure that the DISC project's future design guidelines encourage incorporation of various design measures, consistent with General Plan policy direction. Under Impact 3-26 in the SEIR's evaluation of biological resources impacts, the SEIR concluded the DISC project would have been consistent with applicable plans, policies, or regulations adopted for the purpose of avoiding or mitigating environmental effects and would have resulted in a less-than-significant impact, with incorporation of Mitigation Measure 3-26. The mitigation measure would require the project applicant to submit a design plan for the proposed on-site buffer/drainage features to the City's Department of Community Development and Sustainability for review and approval, at or prior to final planned development or tentative map submittal, whichever would have occurred first.

The currently proposed DiSC 2022 project would be implemented within the development footprint area previously analyzed in the SEIR; however, the DiSC 2022 project would involve a substantially reduced development footprint, due to the currently proposed project excluding the 92 acres immediately north of the MDC, which was a portion of the previous DISC project site. The DiSC 2022 project would include similar project components as the previous DISC project, albeit, at a noticeably reduced scale. To ensure the DiSC 2022 design guidelines are consistent with General Plan policy, the currently proposed project would still be subject to Mitigation Measure 3-4, which would ensure consistency with applicable plans, policies, or regulations adopted for the purpose of avoiding or mitigating environmental effects. In addition, DiSC 2022 would be subject to Mitigation Measure 3-26 to ensure that the applicant submits a design plan for the proposed on-site buffer/drainage features to the City for review and approval, at or prior to final planned development or tentative map submittal, whichever occurs first. With submittal of the design plan, as required by the foregoing mitigation, the City would ensure the project's green spaces and landscaping trees accommodate wildlife species, to the maximum extent feasible.

Based on the above information, the currently proposed project would not result in new significant impacts or substantially more severe significant impacts related to inconsistency with any applicable land use and urban decay plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect beyond what were previously identified in the SEIR. Therefore, the proposed project would be consistent with the conclusions of the SEIR.

Conclusion

Based on the above, the DiSC 2022 project would not result in any changes, new circumstances, or new information that would involve new significant impacts or substantially more severe significant impacts

from what had been anticipated for the project site in the previous CEQA documents related to land use and planning. The previously required mitigation measures from the SEIR, as presented below, would still be required to be implemented for the proposed project.

Mitigation Measure(s)

The following mitigation measure(s) would reduce the above potential impacts to a *less-than-significant* level.

Mitigation Measures from the Previous CEQA Documents

The mitigation measures from the SEIR applicable to the proposed project are presented below. It should be noted that the mitigation measures formerly referenced "ARC" as part of the previous SEIR; thus, such references have been changed to "DiSC 2022" in this Addendum in ~~strikethrough~~ and double underline format. No other changes have been made to the following mitigation.

~~ARC~~ DiSC 2022 Project and Mace Triangle

3-4 At or prior to final planned development, or tentative map submittal, whichever occurs first, the applicant shall submit landscape and architectural details to the Department of Community Development and Sustainability showing the following:

Landscaping

- *Research/office/R&D and manufacturing areas shall have access connections at regular intervals along the perimeter of the project area to adjacent bike and pedestrian pathways and easily-accessible, landscaped pedestrian and bicycle access between various areas.*
- *Arterial and collector streets shall have planted medians, but with widths sized to accommodate tree and shrub plantings. Medians on collector streets shall be limited to locations where the median contributes to a specific purpose or solves a specific problem, such as enhancing an entry, calming traffic, or providing a needed pedestrian refuge at intersections. Removal of street trees to accommodate an increase in vehicular traffic shall occur only as a last resort, after review by appropriate boards and commissions.*
- *Trees that are planted in the future shall have wide canopies, sufficient to eventually provide, at maturity, at least 50 percent shade coverage of the pavement area of local streets and 30 percent shade coverage of the pavement area of collector and arterial streets.*

Architecture

- *A scale transition between intensified land uses and adjoining lower intensity land uses shall be provided, as applicable.*
- *Taller buildings shall be stepped back at upper levels in areas with a relatively smaller-scale character.*
- *Buildings shall be varied in size, density and design.*
- *Stored materials, goods, parts or equipment shall be screened from adjacent public streets or highways.*
- *Loading facilities shall be designed as an integral part of the building(s) which they serve and shall be located in an inconspicuous manner.*

- *Roof mounted equipment shall be screened from view of any ground level area accessible to the general public.*
- *Trash enclosures, noise generating equipment, and other nuisances shall be adequately screened or located away from any adjacent residential use.*

~~ARC~~ DiSC 2022 Project

3-26 At or prior to final planned development, or tentative map submittal, whichever occurs first, the applicant shall submit a design plan for the proposed on-site buffer/drainage features to the Department of Community Development and Sustainability and the Department of Public Works for review and approval. The design plan shall demonstrate how the buffer/drainage features will be wildlife friendly natural spaces, with respect to details such as plant types, detention slopes, etc. In addition, should staff determine that in order to meet the City's stated objectives for urban agricultural transition areas (UATA), as well as drainage and safety, the proposed buffer design shall be modified to concentrate the proposed buffer and drainage areas to the northern and eastern boundaries of the project site, in order to establish wider UATA segments.

~~ARC~~ DiSC 2022 Project

3-54(b) Prior to approval of the final planned development for the proposed hotel, the applicant shall demonstrate to the City's satisfaction that there is sufficient unmet demand from a combination of hotel demand from ~~ARC~~ DiSC 2022 Project employees and businesses and/or hotel demand from elsewhere within the Davis marketplace to support the hotel space for which the building permit is requested. The objective of this requirement is to ensure that the hotel developed within the ~~ARC~~ DiSC 2022 Project will not re-allocate demand from existing Davis hotels, but will instead help the City to provide new hotel offerings that will satisfy unmet demand.

Modified Mitigation Measures

The following mitigation measure has been modified for clarification purposes. Incorporation of the following mitigation measure would ensure impacts associated with DiSC 2022 are reduced to a *less-than-significant* level.

~~ARC~~ DiSC 2022 Project

3-54(a) In conjunction with submittal of any final planned development for the ~~ARC~~ DiSC 2022 Project that includes ancillary retail uses, an analysis shall be submitted to the City of Davis Department of Community Development and Sustainability, which shall demonstrate that the proposed ancillary retail development will not exceed the anticipated demand increase from new employees and/or residents. The demonstration to the City may be premised upon the number of employees (and/or residents) on-site, the commercial (and/or residential) square footage developed, or other factors relevant to the generation of on-site demand. If the analysis cannot demonstrate that the proposed amount of ancillary retail space will not outpace project-generated demand, then the ancillary retail uses shall be removed from the final planned development, or scaled back to be commensurate with the projected project-generated demand.

Additional Project-Specific Mitigation Measures

None required.

Environmental Issue Area	Where Impact Was Analyzed in Previous CEQA Documents?	Do Proposed Changes Involve New or More Severe Impacts?	Any New Circumstances Involving New or More Severe Impacts?	Any New Information Requiring New Analysis or Verification?
XII. Mineral Resources. *Would the project:*				
a. Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?	2017 MRIC EIR pgs. 4.6-10 to 4.6-11	No	No	No
b. Result in the loss of availability of a locally-important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan?	2017 MRIC EIR pgs. 4.6-10 to 4.6-11	No	No	No

Discussion

Since the release of the certified Final SEIR, the project site has remained vacant and undeveloped. Agricultural production continues to occur on the properties to the north and east of the DiSC 2022 site. Substantial changes in the environmental and regulatory settings related to mineral resources, or in circumstances that would affect the analysis in the SEIR related to mineral resources have not occurred.

Relative to the DISC project, the DiSC 2022 project would involve a substantially reduced development footprint area, due to the currently proposed project excluding the 92 acres immediately north of the MDC, which was a portion of the previous DISC project site. By excluding the area north of the MDC, the DiSC 2022 project would encompass 102 acres, as compared to the 194 acres planned for the previous DISC project. Project changes or circumstances that would adversely affect the analysis in the SEIR related to mineral resources have not occurred.

a,b. As noted in the MRIC EIR, according to the Davis General Plan, the most important mineral resources in the region are sand and gravel, which are mined on Cache Creek and other channels in Yolo County.[25] A survey of aggregate resources by the State Division of Mines and Geology did not show significant aggregate resources in the planning area. The only mineral resource known to exist in the City's planning area is natural gas, but resource areas have not been identified.[26] As a result, mineral resources were found not to be a significant issue for the City and further environmental analysis was not required in the Davis General Plan EIR. In addition, known mineral resources are not located on the project site or in the immediate vicinity and land designated or zoned for mineral resources is not within the City limits. As mineral resources are not located in the vicinity of the proposed project or the City, the preceding environmental documents determined implementation of the project would not have resulted in the loss of availability of a known mineral resource or of a locally important mineral resource recovery site.

Based on the above information, the currently proposed project would not result in new significant impacts or substantially more severe significant impacts related to the loss of availability of a known mineral resource that would be of value to the region and the residents of the State or the loss of availability of a locally important mineral resource recovery site delineated on a local

[25] City of Davis. *Davis General Plan [pg. 290].* Adopted May 2001. Amended through January 2007.
[26] *Ibid.*

general plan, specific plan or other land use plan beyond what were previously identified in the preceding environmental documents.

Conclusion

Based on the above, the DiSC 2022 project would not result in any changes, new circumstances, or new information that would involve new significant impacts or substantially more severe significant impacts from what had been anticipated for the project site in the previous CEQA documents related to mineral resources.

Mitigation Measure(s)

The DiSC 2022 project would not require mitigation related to mineral resources.

Mitigation Measures from the Previous CEQA Documents

None.

Modified Mitigation Measures

None required.

Additional Project-Specific Mitigation Measures

None required.

Environmental Issue Area	Where Impact Was Analyzed in Previous CEQA Documents?	Do Proposed Changes Involve New or More Severe Impacts?	Any New Circumstances Involving New or More Severe Impacts?	Any New Information Requiring New Analysis or Verification?
XIII. Noise. *Would the project result in:*				
a. Generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?	2020 SEIR pgs. 3-187 to 3-190 and 3-192 to 3-197	No	No	No
b. Generation of excessive groundborne vibration or groundborne noise levels?	2020 SEIR pgs. 3-190 to 3-192	No	No	No
c. For a project located within the vicinity of a private airstrip or an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?	2017 MRIC EIR pg. 4.11-17	No	No	No

Discussion

Since the release of the certified Final SEIR, the project site has remained vacant and undeveloped. Agricultural production continues to occur on the properties to the north and east of the DiSC 2022 site. Substantial changes in the environmental and regulatory settings related to noise, or in circumstances that would affect the analysis in the SEIR related to noise have not occurred.

Relative to the DISC project, the DiSC 2022 project would involve a substantially reduced development footprint area, due to the currently proposed project excluding the 92 acres immediately north of the MDC, which was a portion of the previous DISC project site. By excluding the area north of the MDC, the DiSC 2022 project would encompass 102 acres, as compared to the 194 acres planned for the previous DISC project. The reduced footprint translates to a 63.6 percent decrease in commercial square footage, a 37.8 percent reduction in advanced manufacturing square footage, a 45.9 percent decline in on-site residential units, and a 20 percent reduction in ancillary retail square footage. Project changes or circumstances that would adversely affect the analysis in the SEIR related to noise have not occurred.

a. The SEIR evaluated the potential for the DISC project to result in the generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies under multiple impact statements. The SEIR assessed the potential for the DISC project to generate a substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project under Impact 3-56 and concluded the project would have resulted in a less-than-significant impact.

As noted in the SEIR, during construction of the DISC project, noise from construction activities would have temporarily added to the noise environment in the project vicinity. Activities involved in construction would generate maximum noise levels ranging from 76 to 90 decibels (dB) at a distance of 50 feet (see Table 3-24 in the SEIR). The University Covenant Church, located approximately 150 west of the DISC site, was determined by the SEIR to be the nearest sensitive receptor. Assuming a worst-case scenario where construction activities were to occur at such distance, maximum construction noise levels would have been 75 to 80 dB Lmax. However, the majority of construction activity on the DISC site would have occurred at distances much greater than 150 feet. Construction activity occurring in the center of the DISC site would have been located approximately 1,500 feet from the church. At such distance, construction noise levels would have been approximately 55 to 60 dB Lmax. In addition, outdoor use areas at the church are located on the west side of the church building. Therefore, the additional distance and building shielding would provide an additional 5 dB of noise reduction to the outdoor use areas. Noise levels at outdoor use areas would be approximately 50 to 55 dB. In addition, the nearest residential receptors are located 650 feet or more from on-site construction activities. At such distance, construction-related activities were predicted to generate maximum noise levels ranging between 63 to 68 dB Lmax. Off-site construction of sewer lines (the northerly sewer alternative) could occur within approximately 60 to 80 feet of the existing rural residential receptor located north of the DISC site. At such distance, temporary construction-related activities are predicted to generate maximum noise levels ranging between 81 to 86 dB Lmax. While on-site construction activity after the first phase of development could occur near occupied buildings on the DISC site, noise effects on such on-site structures from construction elsewhere on the DISC site would be similar to those already identified above for nearby sensitive receptors, and such noise is not within the purview of CEQA, which is focused on the project's effects on the surrounding environment. With respect to the Mace Triangle property, the nearest residential receptors would be located 700 feet or more from construction activities on the site. At such distance, construction-related activities were predicted to generate maximum noise levels ranging between 57 to 62 dB Lmax.

The Davis Municipal Code makes exemptions for certain typical activities which may occur within the City. The exemptions are listed in Article 24.02.040, Special Provisions, and are summarized below:

> a) Normal operation of power tools for non-commercial purposes are typically exempted between the hours of 8 AM and 8 PM unless the operation unreasonably disturbs the peace and quiet of any neighborhood.
> b) Construction or landscape operations would be exempt during the hours of 7 AM to 7 PM Mondays through Fridays and between the hours of 8 AM to 8 PM Saturdays and Sundays assuming that the operations are authorized by valid city permit or business license, or carried out by employees or contractors of the city and one of the following conditions apply:
>
> > (1) No individual piece of equipment shall produce a noise level exceeding eighty-three dBA at a distance of twenty-five feet. If the device is housed within a structure on the property, the measurement shall be made outside the structure at a distance as close to twenty feet from the equipment as possible.
> > (2) The noise level at any point outside of the property plane of the project shall not exceed eighty-six dBA.
> > (3) The provisions of subdivisions (1) and (2) of this subsection shall not be applicable to impact tools and equipment; provided, that such impact tools and equipment shall have intake and exhaust mufflers recommended by manufacturers thereof and approved by the director of public works as best accomplishing maximum noise attenuation, and that pavement breakers and jackhammers shall also be equipped with acoustically attenuating shields or shrouds recommended by the

manufacturers thereof and approved by the director of public works as best accomplishing maximum noise attenuation. In the absence of manufacturer's recommendations, the director of public works may prescribe such means of accomplishing maximum noise attenuation as he or she may determine to be in the public interest. Construction projects located more than two hundred feet from existing homes may request a special use permit to begin work at 6:00 AM on weekdays from June 15th until September 1st. No percussion type tools (such as ramsets or jackhammers) can be used before 7:00 AM. The permit shall be revoked if any noise complaint is received by the police department.
(4) No individual powered blower shall produce a noise level exceeding seventy dBA measured at a distance of fifty feet.
(5) No powered blower shall be operated within one hundred feet radius of another powered blower simultaneously.
(6) On single-family residential property, the seventy dBA at fifty feet restriction shall not apply if operated for less than ten minutes per occurrence.

c) The City Code also exempts air conditioners, pool pumps, and similar equipment from the noise regulations, provided that they are in good working order.
d) Work related to public health and safety is exempt from the noise requirements.
e) Safety devices are exempt from the noise requirements.
f) Emergencies are exempt from the noise requirements.

Because construction activities associated with the DISC project would have been required to comply with the City's Noise Ordinance, phased construction of the DISC project would not have generated a substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing during project construction. The DiSC 2022 project would similarly be required to comply with the City's Noise Ordinance. As such, phased construction of the currently proposed project would not generate a substantial temporary or periodic increase in ambient noise levels in the project vicinity above existing levels during project construction. In addition, circumstances have not changed with respect to the project site and the distance to the nearest sensitive receptors since the certification of the Final SEIR. Furthermore, considering the reduced scale of DiSC 2022, construction duration would be reduced, relative to the previous iteration of the project.

In addition, the SEIR evaluated the potential for the DISC project to result in transportation noise impacts to existing sensitive receptors in the project vicinity under Impact 3-58 and concluded the DISC project would have resulted in a less-than-significant impact. To assess noise impacts due to project-related traffic increases on the existing local roadway network, noise levels were calculated for both the Existing and Existing Plus Project traffic conditions. Project trip generation volumes were provided by the project traffic engineer. Truck usage and vehicle speeds on the local area roadways were estimated from field observations.

The SEIR demonstrated that the FICON traffic noise level increase criteria would not have been exceeded as a result of project traffic.[27] According to Table 3-26 in the SEIR, the largest increase in transportation noise levels from the DISC project were estimated to be 1.6 dB on Covell Boulevard, from Alhambra to Harper Junior High School, less than the 3 dB traffic noise increase significance criteria for that location. The project-related increases in transportation noise levels were estimated to be less than the applicable FICON criteria. Therefore, traffic-related noise

[27] FICON provides guidance in the assessment of changes in ambient noise levels resulting from aircraft operations. The recommendations are based upon studies that relate aircraft noise levels to the percentage of persons highly annoyed by the noise. Although the FICON recommendations were specifically developed to assess aircraft noise impacts, it has been widely accepted that they are applicable to all sources of noise described in terms of cumulative noise exposure metrics such as the L_{dn}.

increases attributable to project-related vehicles would have resulted in a less-than-significant impact to existing sensitive receptors along nearby roadways. As previously discussed, the DiSC 2022 project, relative to the previous project iteration, would be implemented at a substantially reduced scale. As such, trip generation associated with the currently proposed project would be at a reduced level, as compared to the previous DISC project. As discussed in further detail in Section XVII, Transportation, of this Addendum, the DiSC 2022 project would generate an estimated 11,284 net new daily trips, more than a 50 percent reduction from the 23,888 daily new trips projected for the previous DISC project. Therefore, traffic-related noise increases attributable to DiSC 2022 project-related vehicles would result in a less-than-significant impact to existing sensitive receptors along nearby roadways.

The SEIR also assessed the potential for the DISC project to result in impacts related to operational noise under Impact 3-60 and concluded the project would have resulted in a less-than-significant impact. According to the SEIR, operational noise sources generated as part of DISC project implementation, in addition to the existing ambient noise, could have potentially affected the noise-sensitive receptors located in the project vicinity. Specifically, parking lot activities; heating, ventilation, and air-conditioning (HVAC) units; and outdoor events at the project's main park were noise sources that could have exceeded the City of Davis's exterior noise level standards. HVAC equipment can be a primary noise source associated with commercial or office uses. The types of equipment are often mounted on rooftops, located on the ground, or located within mechanical rooms. The noise sources can take the form of fans, pumps, air compressors, chillers, or cooling towers. Noise levels from such types of equipment can vary significantly and generally range between 45 dB to 70 dB at a distance of 50 feet. Shielding from rooftop parapets substantially reduces noise from these types of equipment. Based upon measurements conducted at various commercial and retail facilities, the SEIR determined that HVAC mechanical equipment was not expected to generate noise levels exceeding 45 to 50 dB Leq at distances beyond 50 feet from building facades, and the nearest residential property lines to the DISC site would be located approximately 800 feet or more from the nearest building facades. As such, noise associated with HVAC mechanical equipment were projected to be within acceptable levels. The preceding assumptions for the DISC analysis remain applicable to the DiSC 2022 project given the similar uses proposed for DiSC 2022, and the fact that the distance to the nearest sensitive receptors has not changed.

Parking lot noise typically includes periods of conversation, doors slamming, engines starting and stopping and vehicle passage. However, the center of the DISC site to the nearest residential receptors ranges from approximately 1,550 to 2,050 feet. Based upon such distances, parking lot noise levels would have ranged between 39 to 41 dBA Leq at the nearest receivers. If the noise generation was further adjusted based upon the distance from the westernmost proposed parking area to the nearest residential receptors, or approximately 900 feet, parking lot noise levels would have been approximately 46 dBA Leq at the nearest receivers. Therefore, the aforementioned noise levels would have been well below the City's Noise Ordinance limit of 55 dBA Leq during daytime hours. The preceding assumptions for the DISC analysis remain applicable to the DiSC 2022 project given that similar parking uses are proposed for DiSC 2022, and the fact that the distance to the nearest sensitive receptors has not changed.

With respect to the DISC project's main park, the park would be privately maintained but made available for public uses. Such is also the case for the proposed park for DiSC 2022. Other than general use by employees within the DISC project and some use by the public, periodic concerts could be scheduled by on-site businesses who could host events. Certain events are exempted by the City of Davis (Municipal Code Section 24.04.070) when approved through a registration process by the City. The process is outlined in Section 21.04.040 of the City's Municipal Code. It

should be noted that special events that require amplified noise could be allowed on-site. Any amplified sound at an event with more than 100 people in attendance is required to obtain a Sound (Noise) Permit from the Davis Police Department prior to the noise event. With approval of the Sound Permit, hypothetical noise events would be subject to applicable noise requirements and other limitations in order to ensure interior noise levels at nearby receptors are below acceptable levels.

Based upon the DISC project's proposed General Plan land use designation for the Mace Triangle site, the types of uses are expected to be similar to the DISC site. Therefore, noise generation from future similar uses would be similar to the DISC project. Based upon the analysis presented in the SEIR, noise levels from project operations on the Mace Triangle site would likely be in the range of 20 to 40 dBA Leq at the nearest receivers. The aforementioned noise levels would be well below the City's noise ordinance limit of 55 dBA Leq during daytime hours. These same assumptions for the Mace Triangle remain applicable as no changes in circumstances or future development assumptions for the Triangle have occurred.

Based on the above information, the currently proposed project would not result in new significant impacts or substantially more severe significant impacts related to ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies beyond what were previously identified in the SEIR. Therefore, the proposed project would be consistent with the conclusions of the SEIR.

b. The SEIR evaluated the potential for the DISC project to generate excessive groundborne vibration or groundborne noise levels under Impact 3-57 and concluded that the project would have resulted in a less-than-significant impact. As noted in the SEIR, the primary vibration-generating activities associated with the DISC project would have occurred during construction when activities such as grading, utilities placement, and parking lot construction occur. Sensitive receptors which could be impacted by construction-related vibrations, especially vibratory compactors/rollers, are located approximately 150 to 650 feet, or further, from the DISC site. Off-site sewer improvements could be as close as 60 to 80 feet from an existing residential use (northerly sewer alternative). However, at the aforementioned distances, construction vibrations were not predicted to exceed acceptable levels. In addition, construction activities would have been temporary in nature and would likely have occurred during normal daytime working hours.

The currently proposed DiSC 2022 project would be implemented within the development footprint area previously analyzed in the SEIR; however, the DiSC 2022 project would involve a substantially reduced development footprint, due to the currently proposed project excluding the 92 acres immediately north of the MDC. Additionally, the DiSC 2022 project would include similar project components as the previous DISC project, albeit, at a noticeably reduced scale. Because new sensitive receptors have not been constructed in closer proximity to the DiSC 2022 site than those previously identified in the SEIR, vibration-generating activities associated with the currently proposed project would not be above the levels identified in the SEIR.

Based on the above, the currently proposed project would not result in new significant impacts or substantially more severe significant impacts related to the generation of excessive groundborne vibration or groundborne noise levels beyond what were previously identified in the SEIR. Therefore, the proposed project would be consistent with the conclusions of the SEIR.

c. As noted in the preceding environmental documents, airports do not exist within two miles of the project site. The UC Davis University Airport is located approximately 5.3 miles southwest of the

project site and the Medlock Field airport is located approximately 4.3 miles northwest of the project site. These circumstances have not changed since certification of the SEIR.

Based on the above, the currently proposed project would not result in new significant impacts or substantially more severe significant impacts related to being located within the vicinity of a private airstrip or an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport beyond what were previously identified in the MRIC EIR. Therefore, the proposed project would be consistent with the conclusions of the MRIC EIR.

Conclusion

Based on the above, the DiSC 2022 project would not result in any changes, new circumstances, or new information that would involve new significant impacts or substantially more severe significant impacts from what had been anticipated for the project site in the previous CEQA documents related to noise.

Mitigation Measure(s)

None required.

Mitigation Measures from the Previous CEQA Documents

None.

Modified Mitigation Measures

None required.

Additional Project-Specific Mitigation Measures

None required.

Environmental Issue Area	Where Impact Was Analyzed in Previous CEQA Documents?	Do Proposed Changes Involve New or More Severe Impacts?	Any New Circumstances Involving New or More Severe Impacts?	Any New Information Requiring New Analysis or Verification?
XIV. Population and Housing. *Would the project:*				
a. Induce substantial unplanned population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?	2020 SEIR pgs. 3-199 to 3-200	No	No	No
b. Displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere?	2017 MRIC EIR pgs. 4.12-12 to 4.12-13	No	No	No

Discussion

Since the release of the certified Final SEIR, the project site has remained vacant and undeveloped, and substantial changes in the environmental and regulatory settings related to population and housing, as described in the SEIR, have not occurred. Agricultural production continues to occur on the properties to the north and east of the DiSC 2022 site. Substantial changes in circumstances that would affect the analysis in the SEIR related to population and housing have not occurred.

Relative to the DISC project, the DiSC 2022 project would involve a substantially reduced development footprint area, due to the currently proposed project excluding the 92 acres immediately north of the MDC, which was a portion of the previous DISC project site. By excluding the area north of the MDC, the DiSC 2022 project would encompass 102 acres, as compared to the 194 acres planned for the previous DISC project. The reduced footprint translates to a 63.6 percent decrease in commercial square footage, a 37.8 percent reduction in advanced manufacturing square footage, a 45.9 percent decline in on-site residential units, and a 20 percent reduction in ancillary retail square footage. Project changes or circumstances that would adversely affect the analysis in the SEIR related to population and housing have not occurred.

a,b. The SEIR assessed the DISC project's potential to induce substantial population growth under Impact 3-62 and determined that the project would have resulted in a less-than-significant impact. As noted in the SEIR, the non-residential portion of the DISC project would have generated approximately 5,882 employees, which would have correlated to an additional 815 housing units within the City needed to serve the projected employee population. As part of calculating the estimated housing need, the SEIR estimated that employee housing demand at buildout of the DISC project would have been 3,763 households. Based upon empirical commute patterns for Davis area employees, the SEIR assumed 45.4 percent of new DISC employees would have sought housing outside of the City, with 54.6 percent of new DISC employees living in Davis. As such, the DISC project would have resulted in an employee housing demand of 2,053 units within the City, and the remaining housing units (1,710) would have been met outside of Davis, within the six-county SACOG region. After accounting for City of Davis residential unit capacity, the SEIR determined that of the 2,053 units demanded by DISC project employees within the City, the project would have needed to provide approximately 815 units. The DISC project would have

met its housing need within the City by providing up to 850 residential, workforce units. As a result, the increase in housing demand associated with the DISC project could have been met within the City rather than the surrounding SACOG region. In addition, the DISC project would have provided secondary environmental benefits associated with on-site residential opportunities, such as reduced VMT on regional roadways, as well as potentially reducing the amount of regional residential development needed to support the employees generated from the DISC project. Therefore, the SEIR concluded the DISC project would not have induced substantial population growth.

It should be noted that the SEIR did not include analysis of the DISC project's potential to displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere, as such impacts were sufficiently addressed in the MRIC EIR. As noted in the analysis therein, neither the MRIC site nor the Mace Triangle site contained housing. Therefore, the MRIC project would not have resulted in potential impacts related to the substantial displacement of people or existing housing, necessitating the construction of replacement housing elsewhere. Given that site conditions had not changed at the time of the SEIR's preparation, the same held true of the DISC project, as it does today.

The currently proposed DiSC 2022 project would be implemented within the development footprint area previously analyzed in the SEIR and MRIC EIR; however, the DiSC 2022 project would involve a substantially reduced development footprint, due to the currently proposed project excluding the development on the 92 acres immediately north of the MDC, which was a portion of the previous DISC project site. Additionally, the DiSC 2022 project would include similar project components as the previous DISC project, albeit, at a noticeably reduced scale. Based upon the calculations used in the SEIR to determine the number of employees the DISC project would have generated, the DiSC 2022 project would generate an estimated 2,800 employees (reduced from 5,882 previously analyzed), which would result in a housing demand at buildout of approximately 1,729 units (reduced from the 3,763 previously analyzed). Using the same 54.6 percent estimate provided in the SEIR to account for the share of employees that would reasonably be expected to live within the City, a reduced amount of approximately 944 units would be required in Davis to accommodate the increased housing demand from DiSC 2022 employees.

Since certification of the SEIR, the City has adopted the 2021-2029 Housing Element. According to the City's adopted Housing Element (Table 64), the City of Davis has a total residential capacity of 2,755 units from planned and approved projects, exceeding the Regional Housing Needs Allocation of 2,075 units.[28] A total of 2,088 of the planned and approved units are proposed for moderate- or above moderate-income units, which are likely to align with the incomes of most DiSC 2022 employees. With that capacity, the raw demand for housing in Davis generated by DiSC 2022 could be met with the existing planned and approved units and, as such, the project does not induce a need for increased housing construction.

The SEIR identified an 815-unit deficit of approved housing within the City for the original DISC project, which was addressed by the inclusion of 850 units that would be constructed on-site. Utilizing the new Housing Element, that deficit between the project demand for housing and approved capacity no longer exists. Nevertheless, the project would continue to include a housing component. The inclusion of 460 units of on-site housing will further help ensure that adequate housing is available for the project's employees within the City of Davis wherein competition for available units is high and the timing of planned projects may not coincide with the timing of the need generated at DiSC 2022. The inclusion of residential uses on the project site would also

[28] City of Davis. *2021-2029 Housing Element*. Adopted August 31, 2021. Pg. 186.

provide opportunities to internalize a greater portion of project-related travel within the project site, particularly for trips between the project's residential and commercial components. The resulting effect would be less vehicle travel activity in Davis when compared to a scenario where the project's proposed residential component would be constructed off-site (e.g., the construction of 460 dwelling units elsewhere in Davis or in other communities in the greater Sacramento region). Reduced vehicle miles travelled also translates into reduction of greenhouse gas emissions.

Based on the above, the currently proposed project would not result in new significant impacts or substantially more severe significant impacts related to population and housing beyond what were previously identified in the preceding environmental documents. Therefore, the proposed project would be consistent with the conclusions of the SEIR.

Conclusion

Based on the above, the DiSC 2022 project would not result in any changes, new circumstances, or new information that would involve new significant impacts or substantially more severe significant impacts from what had been anticipated for the project site in the previous CEQA documents related to population and housing.

Mitigation Measure(s)

The DiSC 2022 project would not require mitigation related to population and housing.

Mitigation Measures from the Previous CEQA Documents

None.

Modified Mitigation Measures

None required.

Additional Project-Specific Mitigation Measures

None required.

Environmental Issue Area	Where Impact Was Analyzed in Previous CEQA Documents?	Do Proposed Changes Involve New or More Severe Impacts?	Any New Circumstances Involving New or More Severe Impacts?	Any New Information Requiring New Analysis or Verification?
XV. Public Services. *Would the project result in:*				
a. Substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for fire protection?	2020 SEIR pgs. 3-205 to 3-206	No	No	No
b. Police protection?	2020 SEIR pgs. 3-207 to 3-208	No	No	No
c. Schools?	2020 SEIR pg. 3-208	No	No	No
d. Parks?	2020 SEIR pgs. 3-209 to 3-210	No	No	No
e. Other public facilities?	2020 SEIR pgs. 3-210 to 3-211	No	No	No

Discussion

Since the release of the certified Final SEIR, the project site has remained vacant and undeveloped. Agricultural production continues to occur on the properties to the north and east of the DiSC 2022 site. Substantial changes in the environmental and regulatory settings related to public services, as described in the SEIR, have not occurred.

Relative to the DISC project, the DiSC 2022 project would involve a substantially reduced development footprint area, due to the currently proposed project excluding the 92 acres immediately north of the MDC, which was a portion of the previous DISC project site. By excluding the area north of the MDC, the DiSC 2022 project would encompass 102 acres, as compared to the 194 acres planned for the previous DISC project. The reduced footprint translates to a 63.6 percent decrease in commercial square footage, a 37.8 percent reduction in advanced manufacturing square footage, a 45.9 percent decline in on-site residential units, and a 20 percent reduction in ancillary retail square footage. Project changes or circumstances that would adversely affect the analysis in the SEIR related to public services have not occurred.

a. Potential impacts related to public services that were addressed in the SEIR and that would result from implementation of the currently proposed DiSC 2022 project are discussed below.

Fire Protection Services

The SEIR evaluated the potential for the DISC project to result in substantial adverse physical impacts associated with the provision of new or physically altered fire protection facilities, and/or the need for new or physically altered fire protection facilities, the construction of which could

cause significant environmental impacts in order to maintain acceptable service ratios, response times, or other performance objectives for fire protection facilities under Impact 3-64 and concluded that the project would have resulted in a less-than-significant impact. As discussed in the SEIR, the DISC site and Mace Triangle site are within the East Davis County Fire Protection District. Fire protection and prevention services within the East Davis County Fire Protection District are provided by the Davis Fire Department (DFD). Therefore, while the DISC site and Mace Triangle site would need to be formally detached from the East Davis County Fire Protection District, a change in service provider would not have resulted upon annexation to the City of Davis.

While the additional employee and residential population attributable to DISC would have increased demand for DFD equipment and personnel resources, the relevant CEQA question is whether the project would have resulted in substantial adverse physical impacts associated with the need for new or physically altered fire facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives. DFD Station 33, located at 425 Mace Boulevard, is approximately 0.50-mile south of the DISC site and provides fire protection and emergency medical services to the site and its vicinity. In 2015, the Davis Fire Chief indicated that Station 33 would have adequately served the MRIC site and Mace Triangle. The DFD can still adequately respond to the east Davis area where the project site is located.[29] Given the close proximity of Station 33, new fire facilities would not be required to serve the DiSC 2022 project. In addition, due to the substantial reduction in development potential, the DiSC 2022 project would reduce the potential demand upon the DFD as compared to the original DISC project.

Furthermore, the City of Davis has adopted citywide development impact fees, which include Public Safety Impact Fees. In accordance with existing law, prior to issuance of any building permits for any phase of development, the project applicant would pay the City's Public Safety Impact Fees, the revenues from which would help fund fire protection services in the City. In addition, the project structures would be designed in compliance with all applicable provisions of the California Fire Code and would include features such as fire sprinklers and smoke alarms to reduce potential fire hazards. Fire Code consistency review would be performed as part of the construction and development review process for the proposed project, which would include the payment of any necessary development impact fees related to fire safety services and facilities. Based on the above, the SEIR concluded the DISC project would not have necessitated the need for new or physically altered fire protection facilities, the construction of which would have resulted in substantial adverse environmental effects. The same finding applies to the DiSC 2022 project given that it would similarly be required to comply with applicable state and local code requirements.

Police Protection Services

The SEIR evaluated the potential for the DISC project to result in substantial adverse physical impacts associated with the provisions of new or physically altered police protection facilities, and/or the need for new or physically altered police protection facilities, the construction of which could cause significant environmental impacts in order to maintain acceptable service ratios, response times, or other performance objectives for police protection facilities under Impact 3-65 and concluded that the project would have resulted in a less-than-significant impact. As discussed in the SEIR, all non-residential and multi-family structures would be designed in accordance with the City's Security Ordinance, which is contained in the City's Municipal Code as Article 8.14.

[29] See for example the Davis State of the City Report, 2017, pg. 134, which indicates that most of the development within the City is currently within a five-minute response time of an existing station, with the exception of the planned development in the north central part of the City, served by the Core area station and the west station.

Compliance with the Security Ordinance would increase the security of the non-residential and multi-family structures and help to minimize security risks related to the project, thereby reducing the project's demand on police services. Furthermore, the project and future Mace Triangle development would be required to pay applicable development impact fees to fund police protection services. Based on the above, the SEIR concluded the DISC project would not have necessitated the need for new or physically altered police protection facilities, the construction of which would have resulted in substantial adverse environmental effects. The same finding is applicable to the DiSC 2022 project, though due to the substantial reduction in development potential, the DiSC 2022 project would reduce the potential demand upon the DPD as compared to the original DISC project.

School Services

The SEIR evaluated the potential for the DISC project to result in substantial adverse physical impacts associated with the provisions of new or physically altered school facilities, and/or the need for new or physically altered school facilities, the construction of which could cause significant environmental impacts in order to maintain acceptable service ratios, response times, or other performance objectives for school facilities under Impact 3-66 and concluded that the project would have resulted in a less-than-significant impact. According to the SEIR, the DISC project was expected to generate approximately 384 additional students for the DJUSD. Under the provisions of SB 50, a project's impacts on school facilities are deemed fully mitigated with the payment of the requisite new school construction fees established pursuant to Government Code Section 65995. In addition, the DJUSD recognizes that parents/guardians of students who reside in one district may, for a variety of reasons, choose to enroll their child in a school in another district. DJUSD approves inter-district transfer requests based upon space availability in the requested grade level at the requested school. If a parent/guardian of a student is employed in Davis a minimum of 10 hours per week, they are eligible for the transfer based upon parent/guardian employment. Through the payment by the applicant of applicable impact fees and ongoing revenues that would have come from taxes, the SEIR concluded the DISC project would not have necessitated the need for new or physically altered school facilities, the construction of which would have resulted in substantial adverse environmental effects.

The DiSC 2022 project would similarly be subject to new school construction fees established pursuant to Government Code Section 65995. However, the currently proposed project would reduce the number of new students that may need to be accommodated by the District. Whereas the previous DISC project was projected to generate 384 new students, the currently proposed DiSC 2022 project would generate 207 students.

Park Services

The SEIR evaluated the potential for the DISC project to result in substantial adverse physical impacts associated with the provisions of new or physically altered park facilities, and/or the need for new or physically altered park facilities, the construction of which could cause significant environmental impacts in order to maintain acceptable service ratios, response times, or other performance objectives for park facilities under Impact 3-67 and concluded that the project would have resulted in a less-than-significant impact. The DISC project included approximately 49.8 acres (including a 0.6-acre transit plaza), which included 22.6 acres defined as green space or agricultural buffer areas along the property edge, to provide a variety of uses. The remaining 27.2 acres would have been internal plazas, courtyards and landscaped areas. Given the lack of future residential uses associated with the Mace Triangle site, park acreage would not have been required.

The City of Davis has adopted citywide development impact fees, which include Parks Impact Fees. In compliance with existing law, prior to issuance of any building permits for any phase of development, the DISC project applicant would have been required to pay the City's Park Impact Fees, the revenues from which could have been used to address park impacts. Based on the above, the SEIR concluded the DISC project would not have necessitated the need for new or physically altered park facilities, the construction of which would have resulted in substantial adverse environmental effects.

Based on the methodology set forth in the City's General Plan and Municipal Code (e.g., Chapter 36 of the City's Municipal Code requires 0.0131 acres per dwelling unit), the DiSC 2022 project would be required to dedicate the following amounts of acreage:

- Parklands: 6.0 acres (460 units residential units x 0.0131 acres per unit).
- Greenways: 1.2 acres (10 percent of the 11.89 acres of the project that is residential development; not to be combined with parkland).
- Agricultural buffer: 14.0 acres. The internal 50 feet of the agricultural buffer, 4.6 acres, can be used to fulfill greenway obligations.

Based on the above, the DiSC 2022 project would be required to dedicate a total of 20.0 acres of appropriate parkland and facilities (14 acres of agricultural buffer, a portion of which would fulfill the greenway requirement, and 6.0 acres of park). The DiSC 2022 project would include 23.2 acres of parkland and both natural and programed open spaces. Of that, 14 acres are defined as agricultural buffer areas along the property edge (12 acres provided on-site and 2 acres in an easement), which includes 4.6 acres comprised of the internal 50 feet that meet the definition of greenways, 6.0 acres are parkland that would provide a variety of recreational uses, and the remaining 3.2 acres are internal plazas and courtyards, including a 0.6-acre transit plaza.

Other Public Facilities

The SEIR evaluated the potential for the DISC project to result in substantial adverse physical impacts associated with the provisions of new or physically altered other public facilities, and/or the need for new or physically altered other public facilities, the construction of which could cause significant environmental impacts in order to maintain acceptable service ratios, response times, or other performance objectives for other public facilities under Impact 3-68 and concluded that the project would have resulted in a less-than-significant impact. As noted in the SEIR, in compliance with existing law, prior to issuance of any building permits for any phase of development, the DISC project applicant would have been required to pay the City's Roadways and General Facilities Impact Fees. In addition, in accordance with LAFCo law, the City of Davis would have been required to negotiate a tax sharing agreement with the County of Yolo to ensure that the DISC project incorporation would have resulted in a similar exchange of both revenue and responsibility for service delivery among the County and the City. Based on the above, the SEIR concluded the DISC project would not have necessitated the need for new or physically altered other public facilities, the construction of which would have resulted in substantial adverse environmental effects. The DiSC 2022 project would similarly be required to pay the above-mentioned applicable facility-related fees and would be the subject of a tax-sharing agreement between the County of Yolo and the City of Davis.

Conclusion

Based on the above, the DiSC 2022 project would not result in any changes, new circumstances, or new information that would involve new significant impacts or substantially more severe significant impacts

from what had been anticipated for the project site in the previous CEQA documents related to public services.

Mitigation Measure(s)

The DiSC 2022 project would not require mitigation related to public services.

Mitigation Measures from the Previous CEQA Documents

None.

Modified Mitigation Measures

None required.

Additional Project-Specific Mitigation Measures

None required.

Environmental Issue Area	Where Impact Was Analyzed in Previous CEQA Documents?	Do Proposed Changes Involve New or More Severe Impacts?	Any New Circumstances Involving New or More Severe Impacts?	Any New Information Requiring New Analysis or Verification?
XVI. Recreation. *Would the project:*				
a. Increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?	2020 SEIR pgs. 3-209 to 3-210	No	No	No
b. Include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment?	2020 SEIR pgs. 3-209 to 3-210	No	No	No

Discussion

Since the release of the certified Final SEIR, the project site has remained vacant and undeveloped. Agricultural production continues to occur on the properties to the north and east of the DiSC 2022 site. Substantial changes in the environmental and regulatory settings related to recreation, as described in the SEIR, have not occurred.

Relative to the DISC project, the DiSC 2022 project would involve a substantially reduced development footprint area, due to the currently proposed project excluding the parcel immediately north of the MDC, which was a portion of the previous DISC project site. By excluding the parcel north of the MDC, the DiSC 2022 project would encompass only 102 acres, as compared to the 194 acres planned for the previous DISC project. The reduced footprint translates to a 63.6 percent decrease in commercial square footage, a 37.8 percent reduction in advanced manufacturing square footage, a 45.9 percent decline in on-site residential units, and a 20 percent reduction in ancillary retail square footage. Project changes or circumstances that would adversely affect the analysis in the SEIR related to recreation have not occurred.

a,b. While the SEIR did not specifically include analysis of questions ‘a’ and ‘b’ of Section XVI, Recreation, of CEQA Guidelines Appendix G, the SEIR did include an assessment of the potential for the DISC project to result in substantial adverse physical impacts associated with the provisions of new or physically altered park facilities, and/or the need for new or physically altered park facilities, the construction of which could cause significant environmental impacts in the analysis of public services under Impact 3-67 and concluded that the project would have resulted in a less-than-significant impact. In support of the conclusion, the SEIR cited the 49.8 acres of parkland facilities that would have been dedicated to the City as part of the project. The acreage exceeded the required amount, which according to the SEIR, was 44.71 acres. In addition, the SEIR noted that the project would have been subject to the City’s Parks Impact Fees, the revenues from which could have been used to address deterioration to the City’s existing park facilities.

The currently proposed DiSC 2022 project would be implemented within the development footprint area previously analyzed in the SEIR; however, the DiSC 2022 project would involve a substantially reduced development footprint, due to the currently proposed project excluding the parcel immediately north of the MDC. Additionally, the DiSC 2022 project would include similar project components as the previous DISC project, albeit, at a noticeably reduced scale. As such, the DiSC 2022 project's residential uses would not result in as many new residents as compared to the previous DISC project, and the currently proposed advanced manufacturing and commercial uses would not generate as many employees as the previous project iteration. The DiSC 2022 project would include 23.2 acres of open space areas and facilities. The foregoing acreage would include parkland, agricultural buffer areas, and a Class I bike path, the latter of which would be located adjacent to the agricultural buffer along the project site's northern and eastern boundaries. The Class I bike path would connect to the existing bike lanes on Mace Boulevard and CR32A. Given the incorporation of open space and parkland areas within the DiSC 2022 site, the currently proposed project would not increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration would occur.

As discussed throughout this Addendum, construction of the currently proposed open space areas and facilities associated with the DiSC 2022 project would not result in adverse physical effects on the environment. Where applicable, the proposed project would be subject to mitigation measures established in the SEIR to ensure impacts are reduced to a less-than-significant level.

Based on the above information, the currently proposed project would not result in new significant impacts or substantially more severe significant impacts related an increase in the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated or the construction or expansion of recreational facilities which might have an adverse physical effect on the environment beyond what were previously identified in the SEIR. Therefore, the proposed project would be consistent with the conclusions of the SEIR.

Conclusion

Based on the above, the DiSC 2022 project would not result in any changes, new circumstances, or new information that would involve new significant impacts or substantially more severe impacts from what had been anticipated for the project site in the previous CEQA documents related to recreation.

Mitigation Measure(s)

The DiSC 2022 project would not require mitigation related to recreation.

Mitigation Measures from the Previous CEQA Documents

None.

Modified Mitigation Measures

None required.

Additional Project-Specific Mitigation Measures

None required.

Environmental Issue Area	Where Impact Was Analyzed in Previous CEQA Documents?	Do Proposed Changes Involve New or More Severe Impacts?	Any New Circumstances Involving New or More Severe Impacts?	Any New Information Requiring New Analysis or Verification?
XVII. Transportation. *Would the project:*				
a. Conflict with a program, plan, ordinance or policy addressing the circulation system, including transit, roadway, bicycle and pedestrian facilities?	2020 SEIR pgs. 3-260 to 3-271	No	No	No
b. Would the project conflict or be inconsistent with CEQA Guidelines section 15064.3, subdivision (b)?	2020 SEIR pgs. 3-250 to 3-258	No	No	No
c. Substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?	2020 SEIR pgs. 3-259 to 3-260	No	No	No
d. Result in inadequate emergency access?	2020 SEIR pg. 3-258	No	No	No

Discussion

The SEIR included a Level of Service (LOS) analysis for several roadway segments and intersections within the DISC project vicinity. However, the law has changed with respect to how transportation-related impacts may be addressed under CEQA. Traditionally, lead agencies used LOS to assess the significance of such impacts, with greater levels of congestion considered to be more significant than lesser levels. Mitigation measures, such as those stipulated in the SEIR to address transportation impacts, typically took the form of capacity-increasing improvements, which often had their own environmental impacts (e.g., to biological resources). Depending on circumstances, and an agency's tolerance for congestion (e.g., as reflected in its general plan), LOS D, E, or F often represented significant environmental effects. In 2013, however, the Legislature passed legislation with the intention of ultimately doing away with LOS in most instances as a basis for environmental analysis under CEQA. Enacted as part of Senate Bill (SB) 743 (2013), PRC Section 21099, subdivision (b)(1), directed the Governor's Office of Planning and Research (OPR) to prepare, develop, and transmit to the Secretary of the Natural Resources Agency for certification and adoption proposed CEQA Guidelines addressing "criteria for determining the significance of transportation impacts of projects within transit priority areas. Those criteria shall promote the reduction of greenhouse gas emissions, the development of multimodal transportation networks, and a diversity of land uses. In developing the criteria, [OPR] shall recommend potential metrics to measure transportation impacts that may include, but are not limited to, VMT, VMT per capita, automobile trip generation rates, or automobile trips generated. The office may also establish criteria for models used to analyze transportation impacts to ensure the models are accurate, reliable, and consistent with the intent of this section."

Subdivision (b)(2) of Section 21099 further provides that "[u]pon certification of the guidelines by the Secretary of the Natural Resources Agency pursuant to this section, automobile delay, as described solely by level of service or similar measures of vehicular capacity or traffic congestion *shall not be*

considered a significant impact on the environment pursuant to [CEQA], except in locations specifically identified in the guidelines, if any." (Italics added.)

Pursuant to SB 743, the Natural Resources Agency promulgated CEQA Guidelines Section 15064.3 in late 2018. It became effective in early 2019. Subdivision (a) of that section provides that "[g]enerally, vehicle miles traveled is the most appropriate measure of transportation impacts. For the purposes of this section, 'vehicle miles traveled' refers to the amount and distance of automobile travel attributable to a project. Other relevant considerations may include the effects of the project on transit and non-motorized travel. Except as provided in subdivision (b)(2) below (regarding roadway capacity), a project's effect on automobile delay shall not constitute a significant environmental impact."[30]

Subdivision (c) of Section 15064.3 (Applicability) states that "[t]he provisions of this section shall apply prospectively *as described in Section 15007*. A lead agency may elect to be governed by the provisions of this section immediately. Beginning on July 1, 2020, the provisions of this section shall apply statewide." (Italics added)

In *Citizens for Positive Growth & Preservation v. City of Sacramento* (2019) 43 Cal.App.5th 609, 625-626 (*Citizens for Positive Growth*), the Court of Appeal refused to address the merits of a pending CEQA appeal involving the sufficiency of an EIR's LOS-based analysis of transportation-related impacts. The court found that this particular challenge was moot, in that, if the court were to find problems with the analysis and remand the matter back to the respondent city, the city would be under no obligation to undertake additional LOS-based analysis. After noting that Section 15064.3 "was promulgated, in part, pursuant to section 21099 and certified by the Secretary of the Natural Resources Agency before being approved by the Office of Administrative Law on December 28, 2018," the court reasoned as follows:

> "In mandamus proceedings like this one, "the law to be applied is that which is current at the time of judgment in the appellate court." [Citations.] Under section 21099, subdivision (b)(2), existing law is that "automobile delay, as described solely by level of service or similar measures of vehicular capacity or traffic congestion shall not be considered a significant impact on the environment" under CEQA, except for roadway capacity projects. Accordingly, the 2035 General Plan's impacts on LOS (i.e., automobile delay) cannot constitute a significant environmental impact, as Citizens argues, rendering Citizens's traffic impacts argument moot."

In short, as of December 28, 2018, "automobile delay, as described solely by level of service or similar measures of vehicular capacity or traffic congestion shall not be considered a significant impact on the environment" under CEQA, except for roadway capacity projects. Thus, the former obligation under CEQA to address LOS in transportation analyses ceased to exist as of that date, except (at agencies' discretion) with respect to transportation projects. EIRs for land use projects are therefore not required to address LOS issues, and "automobile delay," as described in terms of LOS, "shall not be considered a significant impact on the environment." Therefore, the following transportation analysis will focus on VMT, rather than LOS, to determine impact significance. As is required, other topics, such as emergency access, off-ramp queuing, and transit, bicycle, and pedestrian systems are evaluated.

It is important to note, however, that Fehr & Peers is performing a separate LOS analysis for the DiSC 2022 project to assess whether the proposed project would result in conflicts with the City's adopted

[30] Subdivision (b)(2) of section 15064.3 ("transportation projects") provides that "[t]ransportation projects that reduce, or have no impact on, vehicle miles traveled should be presumed to cause a less than significant transportation impact. For roadway capacity projects, agencies have discretion to determine the appropriate measure of transportation impact consistent with CEQA and other applicable requirements. To the extent that such impacts have already been adequately addressed at a programmatic level, such as in a regional transportation plan EIR, a lead agency may tier from that analysis as provided in Section 15152."

General Plan policies related to LOS. This additional LOS information can be compared against the LOS analysis that was included in the 2020 SEIR for an understanding of the revised DiSC 2022 project's LOS impacts. The City will review the findings of this separate LOS analysis to determine if the proposed project would be required to implement roadway and/or intersection improvements to relieve congestion attributable to the proposed project. Any congestion-related roadway and/or intersection improvements would be required through conditions of approval rather than as CEQA mitigation. The LOS mitigation measures from the SEIR will form the basis of DiSC 2022's traffic conditions of approval and will be modified as needed based on the updated traffic analysis. Further, the City intends to impose the previous LOS-based mitigation measures as conditions of approval to the maximum extent necessary, based on the updated Fehr & Peers LOS analysis.

a. To assess the potential impacts related to pedestrian, bicycle, and transit facilities as well as impacts related to VMT associated with the DiSC 2022 project, a Transportation Impact Study (TIS) was prepared by Fehr and Peers for the currently proposed project (see Appendix D of this Addendum).[31] DiSC 2022 project impacts related to VMT are discussed under question 'b' below. The following discussions address impacts related to conflicts with a program, plan, ordinance or policy addressing the circulation system, specifically as they relate to transit, bicycle, and pedestrian facilities associated with the previous DISC project and the currently proposed DiSC 2022 project.

Pedestrian and Bicycle Facilities

The SEIR evaluated the potential for the original DISC project to result in impacts to pedestrian and bicycle facilities under Impact 3-75 and concluded that even with incorporation of Mitigation Measures 3-75(a) through (c), the project would result in a significant and unavoidable impact. For reasons described below, the DiSC 2022 project, though substantially reduced in scale, would similarly be expected to create a significant impact related to increasing potential safety conflicts for bicyclists and pedestrians on the surrounding roadway network.

Existing facilities that are adjacent to the site include on-street bike lanes on Mace Boulevard, Second Street, and Alhambra Drive, and a shared use path on Alhambra Drive. Existing intersections near the site are typical of suburban roadway systems, in that the intersections were designed and constructed to prioritize the movement of vehicles over other modes of travel. Defining features of these intersections include channelized right-turn lanes, multiple travel lanes for each approach, long crossing distances for bicyclists and pedestrians, and uncontrolled mixing areas between bicyclists, pedestrians, and high-speed vehicular traffic. As noted in the SEIR, altogether, the intersection characteristics can diminish the safety and comfort of bicycle and pedestrian facilities and discourage walking and biking as a mode of travel.

The DiSC 2022 project description states that the proposed project would modify the Mace Boulevard/Second Street and Mace Boulevard/Alhambra Drive intersections to improve multi-modal travel. However, the precise nature of these improvements has not been identified at this time and thus, cannot be evaluated with respect to their effect on the safety, comfort, and performance of bicycle and pedestrian facilities.

The DiSC 2022 project would provide a bike path within the 50-foot transition zone of the on-site agricultural buffer, which would connect to the existing Class II bike lane on CR 32A at the project's southeastern corner. In addition, the project would provide bicycle support facilities such as bicycle racks, storage lockers, a repair station, and showers.

[31] Fehr and Peers. *Davis Innovation & Sustainability Campus 2022 (DiSC 2022) Volume 1 – Transportation Impact Study*. November 2021.

The DiSC 2022 project would also construct a Class I shared-use path on the west side of Mace Boulevard, from the proposed Mace Drainage Channel to Harper Junior High School. This path improvement along the inside of the Mace Curve would close an existing gap in the off-street path network in the project vicinity. In addition to facilitating bicycle and pedestrian travel to/from the project site, this gap closure project would accommodate students walking and biking to/from Harper Junior High School along Mace Boulevard with a bicycle and pedestrian facility separated from vehicular traffic.

Project-generated bicycle and pedestrian trips would primarily utilize the following facilities for travel to and from the project site:

- Proposed Class I shared-use path on the west side of the Mace Curve and existing Class I shared-use path on the south side of Covell Boulevard to/from Harper Junior High School, Wildhorse, Oak Tree Plaza, and North Davis
- Existing Class I shared-use paths throughout Mace Ranch and Class II bike lanes on Alhambra Drive to/from Mace Ranch, East Davis, Central Davis, Downtown Davis, and UC Davis
- Existing Class II bike lanes on Second Street to/from Target Shopping Center, Second Street employment centers, Downtown Davis, and UC Davis
- Existing Class II bike lanes on Mace Boulevard to/from the El Macero Shopping Center and South Davis
- Existing Class II bike lanes on CR 32A to/from Sacramento
- Existing sidewalks, paths, bike lanes, marked crosswalks, and/or crossings at the following intersections:
    - Mace Boulevard/Alhambra Drive
    - Mace Boulevard/Second Street/CR 32A
    - Mace Boulevard/I-80 WB Ramps
    - Mace Boulevard/I-80 EB Ramps
    - Mace Boulevard/Chiles Road

The substantial amount of project-generated vehicle trips would largely utilize the same roadway facilities for travel to and from the project site. Therefore, due to increases in bicycle, pedestrian, and vehicle trips generated by the project within the vicinity of the project site, transportation facilities that require mixing of vehicles, bicyclists, and pedestrians would experience increases in the competition for physical space between the modes and, in turn, an increase in the potential for conflicts involving bicyclists and pedestrians. These conditions could diminish the safety and performance of bicycle and pedestrian facilities, particularly at locations where bicyclists and pedestrians experience long crossing distances, long exposure times, uncontrolled conflicts with high-speed vehicular traffic, or blockages due to queued vehicles. Similar to the original DISC project (see pages 3-262 and 3-263 of SEIR), the project's contributions to these conditions would be substantial at the following locations:

- Mace Boulevard/Alhambra Drive
    - Existing southbound channelized right-turn lane due to project increases to bicycle and pedestrian crossings (bicycle-vehicle and pedestrian-vehicle conflicts).
    - Existing eastbound channelized right-turn lane due to project increases to diverted traffic from eastbound Covell Boulevard to Alhambra Drive and increases in bicycle and pedestrian crossings. Moreover, the inability for eastbound vehicles to turn right onto Mace Boulevard (due to worsened traffic congestion on southbound Mace

Boulevard caused by the project) could cause queue spillbacks that block the crosswalk (bicycle-vehicle and pedestrian-vehicle conflicts).
    - Proposed northbound and westbound channelized right-turn lanes due to project increases to vehicle traffic and bicycle and pedestrian crossings. Moreover, the inability for westbound vehicles to turn right onto Mace Boulevard (due to worsened traffic congestion on northbound Mace Boulevard caused by the project) could cause queue spillbacks that block the crosswalk in the westbound channelized right-turn lane (bicycle-vehicle and pedestrian-vehicle conflicts).
- Mace Boulevard/Second Street/CR 32A
    - Existing southbound channelized right-turn lane due to project increases to vehicle traffic and bicycle and pedestrian crossings (bicycle-vehicle and pedestrian-vehicle conflicts).
    - Existing eastbound channelized right-turn lane due to project increases to bicycle and pedestrian crossings. Moreover, the inability for eastbound vehicles to turn right onto Mace Boulevard (due to worsened traffic congestion on southbound Mace Boulevard caused by the project) could cause queue spillbacks that block the crosswalk (bicycle-vehicle and pedestrian-vehicle conflicts).
- Mace Boulevard/I-80 WB Ramps
    - Existing westbound channelized right-turn lane due to project increases to vehicle traffic and bicycle and pedestrian crossings. Moreover, the inability for westbound vehicles to turn right onto Mace Boulevard (due to worsened traffic congestion on northbound Mace Boulevard caused by the project) could cause queue spillbacks that block the crosswalk (bicycle-vehicle and pedestrian-vehicle conflicts).
    - Existing southbound approach bike lane and upstream unmarked bicycle-vehicle mixing zone due project increases to vehicle queue spillbacks into mixing zone (bicycle-vehicle conflict).
- Mace Boulevard/I-80 EB Ramps
    - Existing southbound slip ramp due to lengthy unmarked bicycle-vehicle mixing zones and project increases to vehicle traffic and bicycle crossings (bicycle-vehicle conflict)
    - Existing northbound slip ramp due to lengthy unmarked bicycle-vehicle mixing zones, unmarked pedestrian crosswalks, and project increases to vehicle traffic and bicycle and pedestrian crossings (bicycle-vehicle and pedestrian-vehicle conflicts).
- Mace Boulevard/Chiles Road
    - Existing southbound channelized right-turn lane due to project increases to vehicle traffic and bicycle crossings (bicycle-vehicle conflict).
    - Existing eastbound channelized right-turn lane due to project increases to bicycle and pedestrian crossings (bicycle-vehicle and pedestrian-vehicle conflicts).
    - Existing northbound channelized right-turn lane due to project increases to vehicle traffic and bicycle and pedestrian crossings (bicycle-vehicle and pedestrian-vehicle conflicts).
- CR 32A
    - The increase in vehicle trips on CR 32A could adversely affect bicycle flow along CR 32A between CR 105 and the access to the causeway bicycle path. The combination of the existing lane width (11 feet in each direction), high travel speeds, and soft shoulders plus the addition of project vehicle trips could disrupt bicycle flows on CR 32A. Bicycle flows could also be disrupted for westbound bicycle traffic on CR 32A that continues onto the path west of CR 105. These cyclists must cross vehicle traffic on CR 32A just southeast of the at-grade rail crossing where CR 32A has a sharp curve. Similarly, eastbound bicyclists accessing the causeway shared-use path must cross oncoming vehicle traffic on CR 32A just east of the I-80 off-ramp where CR 32A

has a curve. The addition of project peak hour vehicle trips to CR 32A has the potential to negatively affect bicyclists making these uncontrolled movements.

Note that except for the proposed westbound and northbound channelized right-turn lanes at the Mace Boulevard/Alhambra Drive intersection, all of the locations described above are existing features of the transportation system. Therefore, while the project would exacerbate the detrimental effects of these features, portions or all of these facilities may be considered existing deficiencies with respect to the bicycle and pedestrian environment.

The project would neither construct nor interfere with the implementation of planned bicycle facilities identified in the *City of Davis General Plan* or the *Beyond Platinum Bicycle Action Plan*. Proposed bicycle enhancements in the *City of Davis Beyond Platinum Bicycle Action Plan* include buffered bike lanes along Second Street, between Mace Boulevard and L Street, as well as bike lane conflict markings and bike intersection crossing markings on Mace Boulevard at the I-80 interchange ramps. Several of the roadways near the project site, including Mace Boulevard, Covell Boulevard, Second Street, and Chiles Road are designated as Greenstreets in the *City of Davis General Plan*. Action TRANS 2.1(k) calls for the City to review standards for these roadways to reflect other bicycle and pedestrian friendly policies in the Circulation Element, including the elimination of intersection standards that allow high speed right turns for motor vehicles.

Similar to the original DISC project, implementation of Mitigation Measures 3-75(a), (b), and (c) would reduce potentially significant impacts associated with bicycle facilities to a less-than-significant level by supporting bicycling to and from the DISC site and reducing conflicts between bicycles and other travel modes. However, elements of each mitigation measure would occur within Caltrans, Yolo County, and/or UPRR ROW and would be subject to final approval and actions by others. Moreover, because the remaining fair share contributions needed for the construction of the mitigation measure elements requiring the project's fair share contribution have not been identified by the relevant lead agency, fair share payment by the project applicant would not ensure construction. Finally, the ultimate improvements resulting from Mitigation Measure 3-75(c) are subject to change, pending the outcome of the Mace Boulevard Corridor Plan. Therefore, the implementation and effectiveness of the mitigation measures cannot be guaranteed. Due to uncertainties regarding the ability for the aforementioned mitigation measures to reduce impacts to bicycle and pedestrian facilities, bicycle and pedestrian facility impacts would be considered significant and unavoidable, similar to the SEIR's conclusion for the original DISC project.

It is important to note, however, that the magnitude of this impact would be reduced, insofar as the DiSC 2022 project is expected to reduce vehicle trips on the roadway network by 47 percent, compared to the original DISC project, which would reduce the potential for vehicle and pedestrian and/or bicycle safety conflicts. Additionally, the reduced scale of DiSC 2022 would generate fewer bicycle and pedestrian trips, as compared to the original DISC project, which would also reduce the magnitude of the previously identified impact.

Transit Services

The SEIR evaluated the DISC project's potential impacts related to transit services under Impact 3-76 and concluded that even with incorporation of Mitigation Measures 3-76(a) and (b), the project would have resulted in a significant and unavoidable impact. For reasons described below, the DiSC 2022 project, though substantially reduced in scale, would similarly be expected to create a significant impact related to transit services.

The DiSC 2022 project would introduce new office, manufacturing, and retail land uses that are situated in close proximity to the current transit stops (near Mace Boulevard/Second Street) for the A, O, P, Q, and Z bus routes operated by Unitrans. These routes serve a variety of retail, employment, medical, institutional, and recreational destinations throughout the City, and operate with 30-minute headways, and long service hours. The *City of Davis Short Range Transit Plan* indicates that 91 to 95 percent of all riders are UC Davis undergraduate students, three to six percent of riders are UC Davis graduate students, and just over 5 percent of riders are not UC Davis affiliates.

The *Unitrans General Manager's Report for Fiscal Year 2018-19* indicates that Unitrans experiences high levels of crowding (i.e., more than 60 passengers on standard bus or more than 100 passengers on a double-decker bus) on 3.5 percent of all bus trips. It should be noted that while more recent versions of the *Unitrans General Manager's Report* are available, the 2018-19 version of the report is the most recent version available that represents pre-COVID-19 conditions. The five routes that serve the project site have ridership levels that are well under the 60 passenger per hour threshold and the project would not result in an increase above that threshold. While the project is expected to increase transit ridership on Unitrans, given the expected number of project transit riders and existing transit patronage, the project would not cause a demand above that which is provided or planned.

On-time performance is defined by Unitrans as a bus arriving at the terminal before the scheduled time or within five minutes of the scheduled time. Arriving more than five minutes late is defined as "late". Unitrans has a systemwide on-time performance target of 90 percent. Systemwide, Unitrans on-time performance was 88 percent during the 2018-19 fiscal year, and thus failed to meet their on-time performance target. This constitutes a five percent drop in systemwide on-time performance from four years prior. Unitrans indicates that they may consider significant route changes on the A, P, Q, and Z lines in FY 2020 to help reduce travel time and improve on-time performance in East Davis. The DiSC 2022 project would cause substantial increases to vehicle travel demand and peak hour delay on roadways within the project site vicinity. Affected roadways include Mace Boulevard, Alhambra Drive, and Second Street, all of which are utilized by Unitrans routes serving the study area. Because Unitrans service would experience increases to peak hour delays at a level commensurate with general vehicle traffic, the project would cause adverse effects to Unitrans travel times and on-time performance. Reductions to route-level and systemwide on-time performance caused by the project would require Unitrans to restructure service or increase operating costs in order to maintain acceptable on-time performance thresholds.

The DiSC 2022 project includes the construction of a Transit Plaza on northbound Mace Boulevard, south of Alhambra Drive. Existing Unitrans and Yolobus routes would be able to access the Transit Plaza without requiring deviation from their existing route alignments on northbound Mace Boulevard, as would have been the case for the original DISC project, given that the Transit Plaza was located internal to the project site. The design details of the Transit Plaza are not known at this time; therefore, the Transit Plaza cannot be evaluated for its effect on transit operations. The project would not modify transit facilities on southbound Mace Boulevard near the project site.

Similar to the original DISC project, implementation of Mitigation Measures 3-76(a) and (b) would reduce potential significant impacts associated with transit service and facilities by supporting transit use to and from the project site and minimizing adverse effects to transit operations that would be caused by the project. However, elements of Mitigation Measure 3-75(c), as implemented by Mitigation Measure 3-76(b), would occur within Caltrans ROW and would be

subject to final approval and actions by others. In addition, the ultimate improvements resulting from Mitigation Measure 3-75(c) are subject to change pending the outcome of the Mace Boulevard Corridor Plan process described in Mitigation Measure 3-75(c). Therefore, the implementation of the mitigation measures and their effectiveness cannot be guaranteed. Due to uncertainties regarding the ability for the aforementioned mitigation measures to reduce impacts to transit facilities, transit impacts would be considered significant and unavoidable, similar to the SEIR's conclusion for the original DISC project.

It is important to note, however, that the DiSC 2022 project would substantially reduce vehicle trips compared to the original DISC project (approximately 47 percent fewer daily, AM and PM peak hour trips), which would reduce the magnitude of impact to Unitrans travel times and on-time performance, in comparison to the original DISC project.

Other Transportation Considerations

Off-Ramp Queuing

The TIS analyzed peak hour traffic operations to determine the extent to which the DiSC 2022 project would cause off-ramp queues to spill back to the I-80 mainline. To the extent possible, Caltrans strives to prevent off-ramp queues from extending to the freeway mainline in order to minimize the potential for associated adverse operational and safety effects (e.g., speed differentials between vehicle traffic on the freeway mainline and stopped/queued off-ramp vehicle traffic that could increase the potential for conflicts).

Existing Plus Project Conditions

Table 16 displays the 95th percentile freeway off-ramp queue at the I-80/Mace Boulevard/Chiles Road and I-80/CR 32A interchanges under Existing Plus Project conditions, with and without DiSC 2022. The table indicates that the 95th percentile vehicle queues at the Chiles Road off-ramp would spill back onto the freeway mainline during the AM peak hour, which would conflict with Caltrans' performance expectations for the State Highway System. Please see the appendix to the TIS for more information on the technical calculations used to determine the freeway off-ramp queuing.

Based on the above, similar to the SEIR, the TIS concluded the impact related to off-ramp queuing under Existing Plus Project conditions for DiSC 2022 is considered significant.

Table 16
Freeway Off-Ramp Queuing – Existing Plus Project Conditions

Off-Ramp	Off-Ramp Distance[1]	95th Percentile Queue Length[2]			
		Existing		Existing Plus Project[3]	
		AM Peak Hour	PM Peak Hour	AM Peak Hour	PM Peak Hour
Mace Boulevard/I-80 WB Off-Ramp	1,200 feet	175 feet	175 feet	175 feet	225 feet
Chiles Road/I-80 EB Off-Ramp	1,100 feet	100 feet	100 feet	1,125 feet	225 feet
CR 32A/I-80 WB Off-Ramp	1,200 feet	25 feet	25 feet	50 feet	50 feet
Chiles Road/CR 32B/I-80 EB Off-Ramp	1,000 feet	25 feet	75 feet	25 feet	25 feet

[1] Measured from the intersection stop bar to the gore point of the freeway off-ramp. Does not include auxiliary lane on freeway mainline.
[2] Results at the Mace Boulevard/Chiles Road interchange are based on results from SimTraffic micro-simulation model. Results at the CR 32A interchange are based on results from Synchro traffic operations analysis software. Queues are maximum per lane, rounded up to the nearest 25 feet.
[3] Highlighted cells represent conditions in which the queue would spill onto the freeway mainline.

Source: Fehr & Peers, 2021.

Cumulative Plus Project Conditions

Table 17 displays the 95th percentile freeway off-ramp queue at the I-80/Mace Boulevard interchange off-ramps, without and with the DiSC 2022 project. The table indicates that vehicle queues would spill back from both off-ramps onto I-80 under Cumulative conditions during the AM peak hour. The DiSC 2022 project would exacerbate these queue spillbacks during the AM peak hour and also cause the queue to spill back to the freeway during the PM peak hour, which would conflict with Caltrans' performance expectations for the State Highway System.

Based on the above, similar to the SEIR, the TIS concluded the impact related to off-ramp queuing under Cumulative Plus Project conditions for DiSC 2022 is considered significant.

Table 17
Freeway Off-Ramp Queuing – Cumulative Plus Project Conditions

Off-Ramp	Off-Ramp Distance[1]	95th Percentile Queue Length[2]			
		Existing		Existing Plus Project[3]	
		AM Peak Hour	PM Peak Hour	AM Peak Hour	PM Peak Hour
Mace Boulevard/I-80 WB Off-Ramp	1,200 feet	2,600 feet	475 feet	2,725 feet	975 feet
Chiles Road/I-80 EB Off-Ramp	1,100 feet	2,175 feet	1,075 feet	3,270 feet	1,300 feet

[1] Measured from the intersection stop bar to the gore point of the freeway off-ramp. Does not include auxiliary lane on freeway mainline.
[2] Results at the Mace Boulevard/Chiles Road interchange are based on results from SimTraffic micro-simulation model.
[3] Highlighted cells represent conditions in which the queue would spill onto the freeway mainline.

Source: Fehr & Peers, 2021.

Union Pacific Railroad At-Grade Crossing

The proposed project would add approximately 250 new peak hour vehicle trips between the project site and the I-80/CR 32A interchange, located to the east of the project site. These trips would be generated by project employees and residents traveling between the project site, the City of Sacramento, and surrounding communities by way of I-80. The trips are expected to use the I-80/CR 32A interchange instead of the I-80/Mace Boulevard interchange, due to delays on I-80, east of Mace Boulevard, and on Mace Boulevard, within the interchange vicinity that would make use of the I-80/County Road 32A interchange more attractive from a travel time standpoint.

These additional project vehicle trips would primarily use CR 32A to travel between the project site and the I-80/CR 32A interchange, which would have an adverse effect on the existing UPRR at-grade rail crossing on CR 32A, immediately south of the CR 32A/CR 105 stop-controlled intersection. Vehicle-train collisions are not uncommon due to trespassing events (i.e., vehicles on the tracks) at this location, due to the current physical configuration of the crossing. Yolo County, together with UPRR and the City of Davis, is currently evaluating potential modifications to this at-grade crossing to reduce the potential for conflicts with rail operations. The addition of approximately 250 peak hour project vehicle trips could increase the potential for conflicts with rail operations at this location.

Conclusion

Based on the above, while the DiSC 2022 project would result in significant and unavoidable impacts with respect to conflicts with a program, plan, ordinance or policy addressing the circulation system, specifically as they relate to transit, bicycle, and pedestrian facilities, as well as off-ramp queuing and the UPRR at-grade rail crossing, the currently proposed project would not result in new significant impacts or substantially more severe significant impacts beyond what were previously identified in the SEIR. Therefore, the proposed project would be consistent with the conclusions of the SEIR, and generally, the same mitigation measures would be applicable to DiSC 2022 as were required for the prior project.

b. The SEIR assessed the potential for the DISC project to result in an increase in VMT above applicable City thresholds under Impact 3-72 and concluded that the project would have resulted in a significant and unavoidable impact, even with incorporation of Mitigation Measures 3-72(a) and (b). According to the SEIR, the DISC project was considered to result in a significant impact if the project-generated VMT per service population exceeded any of the following thresholds relative to the existing local or regional VMT per service population averages:

- VMT Threshold #1: Project-generated VMT per service population would be less than or equal to the existing local or regional VMT per service population averages, as analyzed for recent City of Davis CEQA documents;
- VMT Threshold #2: Project-generated VMT per service population would be less than or equal to 15 percent lower than the local or regional VMT per service population averages, as recommended by OPR in the Technical Advisory on Evaluating Transportation Impacts in CEQA; and
- VMT Threshold #3: Project-generated VMT per service population would be less than or equal to 14.3 percent lower than the local or regional VMT per service population averages, the threshold needing to be met in order to be consistent with the 2017 Scoping Plan Update and to achieve State climate goals as defined by the CARB in the Technical Advisory on Evaluating Transportation Impacts in CEQA.

These thresholds remain applicable to the DiSC 2022 project, and as such, will be used to determine impact significance in this analysis.

The currently proposed DiSC 2022 project would be implemented within the development footprint area previously analyzed in the SEIR; however, the DiSC 2022 project would involve a substantially reduced development footprint, due to the currently proposed project excluding the 92 acres immediately north of the MDC. Additionally, the DiSC 2022 project would include similar project components as the previous DISC project, albeit, at a noticeably reduced scale. To assess VMT impacts associated with the currently proposed project, the TIS calculated project-generated VMT estimates using the UC Davis/City of Davis travel demand model, SACOG's SACSIM travel demand model, and the California Statewide Travel Demand Model. Project-generated VMT was determined by multiplying the project's estimated weekday external vehicle trips by the average trip length. The average trip lengths were derived from the UC Davis/City of Davis travel demand model, with extra distance appended to project trips with trip ends outside of that local model's boundaries using the SACMET travel demand model and the California Statewide Travel Demand Model (e.g., to capture longer trips to/from the Bay Area that would not otherwise be reflected in the local model).

For a detailed discussion of the VMT methodology for DiSC 2022, please refer to Appendix D of this Addendum. For example, the project's trip generation must be calculated in order to calculate VMT. Section 5 of Appendix D includes a thorough description of the detailed methodology employed to calculate the proposed project's trip generation. In short, the project would generate an estimated 11,284 net new daily trips, 1,052 net AM peak hour trips, and 1,155 net PM peak hour trips during a typical weekday. In comparison, the original DISC project was estimated to result in 23,888 new daily trips, 2,232 AM peak hour trips, and 2,479 PM peak hour trips.

The TIS' estimated weekday VMT per service population associated with the DiSC 2022 project is shown in Table 18. As shown in the table, the proposed DiSC 2022 project is estimated to generate 138,400 VMT under existing conditions and 116,200 VMT under cumulative conditions on a typical weekday. The Mace Triangle project component is estimated to generate 10,800 VMT under existing conditions and 8,500 VMT under cumulative conditions on a typical weekday.[32] The project would generate an estimated 36.34 VMT per service population (i.e., residents plus employees) under Existing Plus Project conditions.

The 2020 SACOG MTP/SCS analyzed existing (2016) and future (2040) VMT per capita for geographic areas throughout the SACOG region. According to the SACOG analysis, the DiSC 2022 project is located within a high VMT generating area, where VMT per capita levels measure between 115 and 150 percent of the regional average.

[32] Changes to project-generated VMT estimates between Existing Plus Project and Cumulative Plus Project can be primarily attributed to changes in travel distances made by project residents and employees. They occur because of different local and regional land use patterns that would alter travel behavior within and between the City of Davis and neighboring jurisdictions (e.g., planned residential development within the City of Davis and on the UC Davis campus would enable a greater number of project employees to live locally, thereby reducing their work commute trip distance).

Table 18
DiSC 2022 Weekday VMT per Service Population: Existing Plus Project Conditions

Metric	Project Site[1]	City of Davis[2]	City of Davis and UC Davis[3]	SACOG Region[4]
Total VMT	149,200	3,411,358	4,268,554	123,034,634
Residents	1,148	71,755	80,794	2,374,910
Employees	2,958	13,987	26,365	940,683
Service Population	4,106	85,742	106,159	3,315,593
Total VMT per Service Population	**36.34**	**39.79**	**40.21**	**37.11**
VMT Significance Criteria Comparison				
% difference between DiSC 2022 project-generated VMT per service population and existing local/regional VMT per service population		-8.67%	-9.62%	-2.07%
Exceed VMT Threshold #1 (+0%)?		No	No	No
Exceed VMT Threshold #2 (-15%)?		**Yes**	**Yes**	**Yes**
Exceed VMT Threshold #3 (-14.3%)?		**Yes**	**Yes**	**Yes**

[1] Includes both the DiSC 2022 and the Mace Triangle. DiSC 2022 and Mace Triangle employee estimates derived from City of Davis Economic Evaluation of Innovation Park Proposals (BAE, July 2015) as follows: 2,800 DiSC 2022 employees + 158 Mace Triangle employees = 2,957 total project employees. DiSC 2022 resident estimates derived from American Community Survey unit occupancy estimates for the City of Davis as follows: (300 multi-family units x 2.44 occupants per unit) + (160 single-family units x 2.6 occupants per unit) = 1,148 total project residents.

[2] Resident and employee totals derived from the UC Davis/City of Davis Travel Demand Model land use inputs. Includes UC Davis residential uses located off-campus in the City of Davis (e.g., 8th and Wake Apartments).

[3] Resident and employee totals derived from the UC Davis/City of Davis Travel Demand Model land use inputs. Includes both City of Davis residents and employees and UC Davis on-campus residents and employees.

[4] Resident and employee totals derived from the UC Davis/City of Davis Travel Demand Model and SACSIM travel demand model land use inputs.

City of Davis, City of Davis with UC Davis, and SACOG region VMT per service population represent existing conditions.

Service population defined as residents plus employees.

Source: Fehr & Peers, 2021.

SACOG analyses were performed using US Census OnTheMap database for 2017 conditions. The analysis determined that there is a sizeable number of persons residing in the Sacramento metropolitan area that commute long distances to work destinations west of Davis, including many in the Bay Area. If the employment component of the DiSC 2022 project could induce some of these employers to relocate their operations or operate satellite work centers at the project site, many of these trips could be 'intercepted', resulting in considerably shortened trip distances. This would reduce the project-generated VMT and VMT per service population below the estimates presented in this analysis.

Data currently does not exist to enable quantification of the expected number of 'regional commute' employees that would shift their work destination to the DiSC 2022 project. Thus, the VMT estimates presented herein are reasonable, if not somewhat conservative, so as to ensure impacts are not understated. Potential information that would provide supporting evidence on this topic would include, but is not limited to, surveys of prospective DISC 2022 employers, employees, and residents and a detailed economic analysis of existing and anticipated future local and regional housing and employment trends (specifically those related to the City of Davis and UC Davis).

As a point of comparison with the original DISC project, according to the SEIR (Table 3-39), the original DISC project was estimated to generate 309,000 VMT under Existing Plus Project conditions, on a typical weekday. Thus, the reduced scale of the DiSC 2022 project would result in a 45 percent reduction in daily VMT when compared to the original DISC project.

Conclusion

As shown in the table above, DiSC 2022 project-generated VMT per service population would measure below the average VMT per service population generated by the City of Davis, by the City of Davis with UC Davis, and by the SACOG region. However, the DiSC 2022 project would exceed VMT Thresholds #2 and #3. Thus, the currently proposed project would be subject to similar mitigation measures (Mitigation Measures 3-72(a) and (b)) as required for the DISC project SEIR. However, similar to the previous project iteration, and SEIR conclusions, due to uncertainties regarding the ability for the mitigation measures to reduce VMT impacts to a less-than-significant level, the DiSC 2022 VMT impacts would be considered significant and unavoidable.

Implementation of Mitigation Measures 3-72(a) and (b) would reduce project-generated VMT per service population by instituting a TDM program to reduce external vehicle trips generated by the DISC project, as well as future development of the Mace Triangle site. However, the effectiveness of the TDM strategies is not known and subsequent vehicle trip reduction effects could not be guaranteed. Furthermore, the SEIR noted that existing evidence indicated that the effectiveness of TDM strategies with respect to vehicle trip reduction could vary based on a variety of factors, including the context of the surrounding built environment (e.g., urban versus suburban) and the aggregate effect of multiple TDM strategies deployed together. Moreover, many TDM strategies are not just site-specific, but also rely on implementation and/or adoption by private entities (e.g., elective use of carpool program by office building tenants). A portion of the TDM strategies could have also proven to be economically infeasible. Based on the above, the SEIR concluded that the required mitigation measures could not be guaranteed to reduce the DISC project's VMT impacts to a less-than-significant level. While the same conclusion applies to DiSC 2022, it should be noted that DiSC 2022 would result in a substantial reduction in VMT compared to the original DISC project. In addition, the DiSC 2022 project includes sustainability features that would help to reduce project-generated VMT, such as parking associated with multi-family rental housing would be unbundled, with multi-family rental units charged for parking separately from rent; incorporation of carpooling, bus transit, shuttles, car-share, and other smartphone technologies to assist in providing transportation options for employees; and a Transportation Manager who would coordinate transportation options for the project site and help to facilitate the use of alternative modes for all workers and residents.

Based on the above, the currently proposed project would not result in new significant impacts or substantially more severe significant impacts beyond what were previously identified in the SEIR. Therefore, the proposed project would be consistent with the conclusions of the SEIR.

c. The SEIR assessed the DISC project's potential to substantially increase hazards under Impact 3-74, which specifically evaluated the project's potential impacts associated with construction vehicle traffic. The SEIR concluded that with incorporation of Mitigation Measure 3-74, the project would have resulted in a less-than-significant impact. As noted in the SEIR, construction of the DISC project, including site preparation, construction, and delivery activities, would have generated employee trips and a variety of construction-related vehicles. Construction activities would include disruptions to the transportation network near the project site, including the possibility of temporary lane closures, street closures, sidewalk closures, and bikeway closures. Bicycle and transit access could also be disrupted. Unlike the original DISC project evaluated in the SEIR, DiSC 2022 would not potentially involve substantial heavy truck traffic associated with moving excavated soil from the off-site storage pond to the project site. The SEIR estimated that a total of approximately 10,833 trucks would have been required to transport the excavated soil approximately two miles to the site for stockpiling. The hauling would have occurred over 30 work days, resulting in an average of approximately 720 truck trips per day (i.e., 360 truckloads per day, with two trips – one loaded trip to the site, one return empty trip – for each load). Use of CR 32A by construction trucks could have caused a short-term adverse impact to bicyclists using existing bike lanes.

According to the TIS, construction of the DiSC 2022 project would generate employee trips and a variety of construction-related vehicles, which would include disruptions to the transportation network near the project site. While the currently proposed project would no longer include the potential for heavy truck traffic associated with hauling excavated soil from the off-site storage pond as the storage pond is no longer being considered by the project applicant, to ensure construction-related roadway hazards do not occur, the DiSC 2022 project would still be subject to Mitigation Measure 3-74, which requires the preparation and implementation of a Construction Traffic Control Plan, prior to initiation of construction activities.

Based on the above, the currently proposed project would not result in new significant impacts or substantially more severe significant impacts related to increased hazards due to a geometric design feature or incompatible uses beyond what were previously identified in the SEIR. Therefore, the proposed project would be consistent with the conclusions of the SEIR.

d. The SEIR evaluated the potential for the DISC project to result in impacts related to emergency vehicle access (EVA) under Impact 3-73 and concluded that the project would have resulted in a less-than-significant impact. Similar to the original DISC project, emergency vehicles could access the DiSC 2022 project from multiple directions. Fire access from the South Davis fire station (located one-half mile south of the project site on Mace Boulevard) would be available via northbound Mace Boulevard. Fire access from the Downtown Davis fire station (located nearly three miles west of the project site) would be available via eastbound Fifth Street and Alhambra Drive. Medical emergency service access to/from Sutter Davis Hospital (located over four miles west of the project site) would be available via Covell Boulevard. Each of these corridors have traffic signals equipped with emergency vehicle pre-emption, providing signal priority to emergency vehicles in the event of an emergency. Furthermore, the design of the on-site roadways and intersections would have been subject to the City of Davis Municipal Code and Public Works Department staff review and approval.

Based on the above, the currently proposed project would not result in new significant impacts or substantially more severe significant impacts related to inadequate emergency access beyond what were previously identified in the SEIR. Therefore, the proposed project would be consistent with the conclusions of the SEIR.

Conclusion

Based on the above, the DiSC 2022 project would not result in any changes, new circumstances, or new information that would involve new significant impacts or substantially more severe significant impacts from what had been anticipated for the project site in the previous CEQA documents related to transportation. The previously required mitigation measures from the SEIR, as presented below, would still be required to be implemented for the proposed project, subject to the noted modifications.

Mitigation Measure(s)

Mitigation Measure 3-74 would reduce the potential impact related to construction vehicle traffic and roadway safety to a *less-than-significant* level. However, even with incorporation of Mitigation Measures 3-70(a), 3-72(a) and (b), 3-75(a) through (c), and 3-76(a) and (b), the VMT, bicycle/pedestrian/transit, and off-ramp queuing and UPRR at-grade crossing impacts would remain *significant and unavoidable*.

It should be noted that as summarized earlier, as result of SB 743, local jurisdictions may no longer rely on vehicle LOS and similar measures related to delay as the basis for determining the significance of transportation impacts under CEQA. As such, the DiSC 2022 project would not be subject to SEIR Mitigation Measures 3-70(b) and (c) or 3-71, as such measures relate to LOS consistency. However, the City of Davis retains full discretion to require a project to ensure consistency with all applicable local policies, regulations, and standards through project conditions of approval. Therefore, while the DiSC 2022 project is not subject to the foregoing mitigation measures as part of this Addendum, the City retains full discretion to condition DiSC 2022 to fulfill the requirements set forth by the aforementioned measures, and intends to impose the previous LOS-based mitigation measures as conditions of approval to the maximum extent necessary, based on the updated Fehr & Peers LOS analysis.

Mitigation Measures from the Previous CEQA Documents

The mitigation measures from the SEIR applicable to the proposed project are presented below. It should be noted that the mitigation measures formerly referenced "ARC" as part of the previous SEIR; thus, such references have been changed to "DiSC 2022" in this Addendum in ~~strikethrough~~ and double underline format. No other changes have been made to the following mitigation.

~~ARC~~ DiSC 2022 Project

3-72(a) *Prior to issuance of the first building permit in the first phase of development, the applicant shall develop a TDM program for the entire ~~ARC~~ DiSC 2022 Project, including any anticipated phasing, and shall submit the TDM program to the City Department of Public Works for review and approval. The TDM program must be designed to achieve the following.*

1. *Reduce trips to achieve one and five-tenths (1.5) Average Vehicle Ridership (AVR) in accordance with Davis Municipal Code Section 22.15.060; and*
2. *Reduce project-generated VMT such that the project achieves all three VMT significance criteria.*

The Master Owner's Association (MOA) shall be responsible for implementing the TDM Program.

(a) The MOA shall be responsible for funding and overseeing the delivery of trip reduction/TDM proposed programs and strategies to achieve the project-generated VMT and AVR objectives, which may include, but are not limited to, the following:

(1) *Establishment of carpool, buspool, or vanpool programs;*
(2) *Vanpool purchase incentives;*
(3) *Cash allowances, passes or other public transit subsidies and purchase incentives;*
(4) *Low emission vehicle purchase incentives/subsidies;*
(5) *Parking management strategies including limiting parking supply, as may be determined appropriate through subsequent traffic studies for each phase; charging parking fees; unbundling parking costs; and providing parking cash-out programs;*
(6) *Full or partial parking subsidies for ridesharing vehicles;*
(7) *Preferential parking locations for ridesharing vehicles;*
(8) *Computerized commuter rideshare matching service;*
(9) *Guaranteed ride-home program for ridesharing;*
(10) *Alternative workweek and flex-time schedules;*
(11) *Telecommuting or work-at-home programs;*
(12) *On-site lunch rooms/cafeterias;*
(13) *On-site commercial services such as banks, restaurants, groceries, and small retail;*
(14) *On-site day care facilities;*
(15) *Bicycle programs including bike purchase incentives, storage, maintenance programs, and on-site education program;*
(16) *Car share and bike share services;*
(17) *Enhancements to Unitrans, Yolobus, or other regional bus service;*
(18) *Enhancements to Capitol Corridor or other regional rail service;*
(19) *Enhancements to the citywide bicycle network;*
(20) *Dedicated employee housing located either on-site or elsewhere in the City of Davis;*
(21) *Designation of an on-site transportation coordinator for the project;*
(22) *Implement a fair value commuting program where fees charged to single-occupancy vehicle (SOV) commuters (e.g., through parking pricing) are tied to project vehicle trip reduction targets and fee revenue is rebated to non-SOV commuters, or other pricing of vehicle travel and parking;*
(23) *Support management strategies (e.g., pricing, vehicle occupancy requirements) on roadways or roadway lanes, particularly I-80 over the causeway;*
(24) *Contribute to a VMT mitigation bank or exchange to support VMT reductions elsewhere in the City or region; and*
(25) *Change the project to increase project trip internalization (e.g., decrease employment uses and/or increase residential uses).*

(b) *Single-phase development projects shall achieve project-generated VMT and AVR targets within five (5) years of issuance of any certificate of occupancy. Multi-phased projects shall achieve the project-generated VMT and AVR targets for each phase within three (3) years of the issuance of any certificate of occupancy.*

(c) *In conjunction with final map approval, recorded codes, covenants and restrictions (CC&Rs) shall include provisions to guarantee adherence to the TDM objectives and perpetual operation of the TDM program regardless of property*

ownership, inform all subsequent property owners of the requirements imposed herein, and identify potential consequences of nonperformance.

Each space use agreement (i.e., lease document) shall also include TDM provisions for the site as a means to inform and commit tenants to, and participate in, helping specific applicable developments meet TDM performance requirements.

(d) Ongoing reporting:

(1) ***Annual TDM Report.*** *The MOA for the Project shall submit an annual status report on the TDM program to the City Department of Public Works beginning a year after the issuance of any certificate of occupancy and continuing until full project buildout. Data shall be collected in October of each year and the Annual Report submitted by December 31st of each year. The report shall be prepared in the form and format designated by the City, which must either approve or disapprove the program.*

i. The TDM performance reports shall focus on the trip reduction incentives offered by the project, their effectiveness, the estimated greenhouse gas (GHG) emissions generated by the project, and the methods by which a continued trajectory towards carbon neutrality in 2040 can be achieved consistent with Mitigation Measure 3-38(a). The report shall:

- *Report the project-generated VMT levels attained;*
- *Report the AVR levels attained;*
- *Verify the TDM plan incentives that have been offered;*
- *Describe the use of those incentives offered by employers;*
- *Evaluate why the plan did or did not work to achieve the AVR targets and explain why the revised plan is more likely to achieve the AVR target levels;*
- *List additional incentives which can be reasonably expected to correct deficiencies;*
- *Evaluate the feasibility and effectiveness of trip reduction/TDM program and strategies, as implemented;*
- *Estimate the GHG emissions generated by project transportation operations; and*
- *Identify off-setting GHG credits to be secured by the project to achieve carbon neutrality.*

ii. The MOA shall develop and implement an annual monitoring program to determine if project-generated VMT and AVR targets are being met. The monitoring program could include employee travel surveys, traffic counts at project site ingress/egress points, and other relevant information.

iii. If the project-generated VMT and/or AVR targets are not met for any two consecutive years, the applicant or current owner(s) of the site will contribute funding to be determined in a separate study toward the provision of additional or more intensive travel demand management programs, such as enhanced regional

transit service to the site, employee shuttles, and other potential measures.

iv. *In the event that other TDM objectives are not met as documented in the Annual Monitoring Report submitted by December 31st of each year, the MOA shall:*

- *Submit to the City within thirty (30) days of submittal of the annual report, a list of TDM measures that will be implemented to meet the TDM objectives within one hundred eighty (180) days of submittal of annual report. At the end of the one-hundred-eighty-day period, the MOA shall submit a revised performance report to determine compliance with TDM objectives. No further measures will be necessary if the TDM objectives are met.*

Should the TDM objectives not be satisfied by the end of the one-hundred-eighty-day period, the MOA shall pay a TDM penalty fee to the City in an amount determined by resolution of the City Council. Said penalty fee may be used to provide new transit service and/or subsidize existing transit service, construct bicycle facilities, and/or improve street capacity through construction of physical improvements to be selected by the City of Davis from the list of area-wide improvements identified in the City's CIP.

Mace Triangle

3-72(b) *Prior to issuance of a building permit for development within the Mace Triangle Site, each applicant shall develop a TDM program coordinated with, and compliant with, the requirements of the ~~ARC~~ DiSC 2022 TDM program and any pre-existing TDM programs on the Mace Triangle Site. The program shall be submitted to the City Department of Public Works for review and approval. This includes achievement of the same trip reduction requirements, GHG-reducing transportation strategies, and monitoring and reporting requirements as ~~ARC~~ DiSC 2022, as set forth in Mitigation Measure 3-72(a). This may be satisfied by joining the ~~ARC~~ DiSC 2022 TDM program as a participating member.*

~~ARC~~ DiSC 2022 Project and Mace Triangle

3-74 *Prior to any construction activities for the ~~ARC~~ DiSC 2022 and Mace Triangle Sites, the project applicant shall prepare a detailed Construction Traffic Control Plan and submit it for review and approval by the City Department of Public Works. The applicant and the City shall consult with Yolo County, Caltrans, Unitrans, Yolobus, and local emergency service providers for their input prior to approving the Plan. The Plan shall ensure that acceptable operating conditions on local roadways and freeway facilities are maintained during construction. At a minimum, the Plan shall include:*

- *The number of truck trips, time, and day of street closures;*
- *Time of day of arrival and departure of trucks;*
- *Limitations on the size and type of trucks*
- *Provision of a staging area with a limitation on the number of trucks that can be waiting;*

- *Provision of a truck circulation pattern that minimizes impacts to existing vehicle traffic during peak traffic flows and maintains safe bicycle circulation;*
- *Minimize use of CR 32A by construction truck traffic;*
- *Prior to certificate of occupancy or acceptance of any public improvement by the city, the developer shall resurface and/or repair any damage to roadways that occurs as a result of construction traffic;*
- *Provision of driveway access plan so that safe vehicular, pedestrian, and bicycle movements are maintained (e.g., steel plates, minimum distances of open trenches, and private vehicle pick up and drop off areas);*
- *Maintain safe and efficient access routes for emergency vehicles;*
- *Manual traffic control when necessary;*
- *Proper advance warning and posted signage concerning street closures; and*
- *Provisions for bicycle, pedestrian, and transit access and safety.*

A copy of the Construction Traffic Control Plan shall be submitted to local emergency response agencies and these agencies shall be notified at least 14 days before the commencement of construction that would partially or fully obstruct roadways.

3-76(b) Implement Mitigation Measure 3-75(c).

Modified Mitigation Measures

The mitigation measures below include modifications to applicable mitigation measures adopted in the SEIR, in accordance with the DiSC 2022 TIS (Vol. 1). Mitigation Measure 3-70(a) is included below insofar as it relates to off-ramp queuing and UPRR at-grade crossing impacts. The modifications are intended to focus the mitigation on safety-related improvements. Other LOS-related measures will be addressed through project conditions of approval, as previously mentioned. Mitigation Measure 3-75(a) no longer includes subdivision (1) given that the proposed project does not include a grade-separated crossing of Mace Boulevard. Rather, the proposed project would acquire and dedicate land to accommodate a future grade-separated bike/pedestrian crossing on Mace Boulevard, which would be located north of the MDC. Mitigation Measure 3-75(c) now includes subdivision (2)(c) to facilitate coordination of the mitigation language with the separate non-CEQA DiSC 2022 transportation operations analysis, as applicable. Mitigation Measure 3-76(a) has been revised to eliminate requirements related to the Transit Plaza that are no longer applicable. The modifications do not change the analysis or conclusions of the SEIR.

Implementation of Mitigation Measures 3-70(c) and 3-75(c) would reduce significant impacts associated with freeway off-ramp queues by preventing queues at the Chiles Road off-ramp from spilling back onto the I-80 mainline. Table 19 and Table 20 illustrates how the operational enhancements identified in Mitigation Measures 3-70(c) and 3-75(c) would benefit freeway off-ramp queuing at the I-80/Mace Boulevard interchange under Existing Plus Project and Cumulative Plus Project conditions, respectively.

As shown in Table 19, vehicle queues would not spill back onto the I-80 mainline with implementation of these enhancements under Existing Plus Project conditions. As shown in Table 20, under Cumulative Plus Project conditions, these mitigation measures would reduce impacts associated with freeway off-ramp queues by preventing queues at the Chiles Road off-ramp from spilling back onto the I-80 mainline during the a.m. and p.m. peak hours. However, queue spillbacks onto the I-80 mainline would still occur during the a.m. peak hour at the Mace Boulevard/I-80 WB Off-Ramp.

Implementation of Mitigation Measure 3-70(a)(6) would reduce the potential for conflicts at the UPRR at-grade crossing with CR 32A that would otherwise occur due to the implementation of the project.

Table 19
Freeway Off-Ramp Queuing – Existing Plus Project Conditions with Potential Operational Enhancements

Off-Ramp	Off-Ramp Distance[1]	95th Percentile Queue Length[2]					
		Existing Conditions		Existing Plus Project Conditions[3]		Existing Plus Project Conditions with Potential Operational Enhancements[3]	
		AM Peak Hour	PM Peak Hour	AM Peak Hour	PM Peak Hour	AM Peak Hour	PM Peak Hour
Mace Boulevard/ I-80 WB Off-Ramp	1,200 feet	175 feet	175 feet	175 feet	225 feet	175 feet	175 feet
Chiles Road/I-80 EB Off-Ramp	1,100 feet	100 feet	100 feet	1,125 feet	225 feet	125 feet	100 feet

[1] Measured from the intersection stop bar to the gore point of the freeway off-ramp. Does not include auxiliary lane on freeway mainline.
[2] Results at the Mace Boulevard/Chiles Road interchange are based on results from SimTraffic micro-simulation model.
[3] Highlighted cells represent conditions in which the queue would spill onto the freeway mainline.

Source: Fehr & Peers, 2021.

Table 20
Freeway Off-Ramp Queuing – Cumulative Plus Project Conditions with Potential Operational Enhancements

Off-Ramp	Off-Ramp Distance[1]	95th Percentile Queue Length[2]					
		Existing Conditions		Existing Plus Project Conditions[3]		Existing Plus Project Conditions with Potential Operational Enhancements[3]	
		AM Peak Hour	PM Peak Hour	AM Peak Hour	PM Peak Hour	AM Peak Hour	PM Peak Hour
Mace Boulevard/ I-80 WB Off-Ramp	1,200 feet	2,600 feet	475 feet	2,725 feet	975 feet	2,750 feet	300 feet
Chiles Road/I-80 EB Off-Ramp	1,100 feet	2,175 feet	1,075 feet	3,270 feet	1,300 feet	475 feet	125 feet

[1] Measured from the intersection stop bar to the gore point of the freeway off-ramp. Does not include auxiliary lane on freeway mainline.
[2] Results at the Mace Boulevard/Chiles Road interchange are based on results from SimTraffic micro-simulation model.
[3] Highlighted cells represent conditions in which the queue would spill onto the freeway mainline.

Source: Fehr & Peers, 2021.

As discussed in the SEIR, elements of both Mitigation Measures 3-70(a) and 3-75(c) would occur within Caltrans, Yolo County, and/or UPRR rights-of-way and would be subject to final approval and actions by others. Given that the required improvements are outside of the City's jurisdiction, the City, as lead agency, cannot legally impose the recommended improvements.

~~ARC~~ DiSC 2022 Project and Mace Triangle

3-70(a) *In conjunction with submittal of a final planned development, or tentative map, whichever occurs first, for each phase of development, the Master Owners' Association (MOA) for the Project, or applicant (i.e., Mace Triangle project), shall submit a focused traffic impact study to determine if any of the below-listed intersection and roadway improvements are required based on the additional traffic generated by the development phase. The focused traffic study shall address the impact of adding the individual phase of development to existing plus other approved/pending development projects. Existing conditions should represent conditions present at the time of each study. The traffic study shall use the current version of the City travel demand forecasting model available at the time of the study, and the traffic operations analysis methods utilized in this SEIR. If operations are found to have declined to unacceptable levels based on the relevant criteria under Standards of Significance, the project applicant shall construct physical improvements or pay its fair share as described prior to the issuance of the first certificate of occupancy for the first building in that phase.*

Intersection improvements

If any of the identified improvements require Caltrans or Yolo County approval, the applicant shall make a good faith effort to work with Caltrans and/or Yolo County and the City for the purpose of identifying and implementing physical improvements to the network which have a nexus to the project's impact.

1. *Southbound Mace Boulevard: Extend the second eastbound/southbound lane from Harper Junior High School to Alhambra Drive. Add a third southbound lane from 2nd Street to connect with the dedicated right-turn lane onto the I-80 WB on-ramps.*
2. *Northbound Mace Boulevard: Extend the third northbound lane from the I80 WB off-ramps to connect with a new northbound "trap" right-turn lane at the Mace Boulevard/2nd Street/CR 32A intersection. Add a second northbound/westbound lane from 2nd Street to the Harper Junior High School signalized intersection.*
3. *Mace Boulevard/Chiles Road and Chiles Road/I-80 EB Off-Ramp Intersections: This pair of tightly spaced intersections (situated 450 feet apart) requires signal coordination/timing adjustments ~~and a lane reassignment~~ on the eastbound Chiles Road approach to Mace Boulevard due to the heavy project-related off-ramp volume during the AM peak hour. ~~Modifying the eastbound through lane to a shared left/through lane would require the~~ The east and west approaches would be modified to operate with split phasing. Signal coordination (particularly critical during the AM peak hour) would synchronize the green interval for the I-80 off-ramp movement with the eastbound approach on Chiles Road at Mace Boulevard to facilitate the flow of motorists off of I-80. The signal would be modified to operate the southbound left-turn and westbound right-turn during a shared overlap phase. This modification would also require the prohibition of southbound U-turns.*
4. *~~I-80 Eastbound Loop On-Ramp: This on-ramp consists of a single entry lane from southbound Mace Boulevard, which widens to a metered general purpose lane and an unmetered HOV bypass lane. During the PM peak hour, the addition of project trips would cause queue spillback from the ramp meter onto the overpass,~~*

~~*thereby causing queue spillback to extend further upstream. The recommended modification from an unmetered HOV bypass lane to a metered general purpose lane was found to provide more ramp metering storage, and reduced effects on the surface street. Similar modifications have been considered by Caltrans elsewhere in the Sacramento region.*~~

~~5~~4. *Mace Boulevard/2nd Street/CR 32A Intersection: Modify the northbound approach to add a "trap" right-turn lane. Modify the westbound approach to two left-turn lanes and a shared through-right lane. Modify westbound CR 32A between this intersection and the adjacent CR 32A/Mace Park-and Ride/West ARC Driveway intersection to two through lanes.*

~~6. Mace Boulevard/Alhambra Drive/South ARC Driveway Intersection: Modify the westbound approach to two left-turn lanes and a shared through-right lane. Provide a southbound left-turn lane, two through lanes, and a right-turn lane.~~

~~7. Mace Boulevard/CR 30B/North ARC Driveway Intersection: Install a traffic signal. Provide a southbound left-turn lane and two through lanes. Provide a northbound through lane and shared through-right lane.~~

~~8~~5. *CR 32A/Mace Park-and-Ride/West ARC Driveway Intersection: Install a traffic signal. Provide a southbound left-turn lane and a shared through right lane. Provide an eastbound left-turn lane.*

~~9~~6. *UPRR at-grade rail crossing improvements: The UPRR track/CR 32A crossing could be converted from an at-grade crossing to a grade-separated crossing. A near-term improvement prior to provision of the grade separation could consist of relocating the CR 32A/CR 105 intersection about 200 feet to the north and installing double gates on the south approach to the grade crossing in order to improve safety and traffic functionality at the grade crossing.*

~~10~~7. *I-80/CR 32A interchange improvements: Construct capacity improvements at the CR 32 interchange and along CR 32A to allow this interchange to serve more project traffic.*

~~ARC~~ DiSC 2022 Project and Mace Triangle

3-75(a) *Prior to issuance of the first certificate of occupancy of the ~~ARC~~ DiSC 2022 Project, the applicant shall construct the following proposed off-site bicycle and pedestrian facilities to the satisfaction of the Public Works Department, as described in the ~~ARC~~ DiSC 2022 Project description and shown on the ~~ARC~~ DiSC 2022 Site plan:*

~~1) Grade-separated bicycle and pedestrian crossing of Mace Boulevard north of Alhambra Drive~~

2) *Class I shared-use path on the west side of Mace Boulevard between ~~proposed grade-separated crossing~~ Mace Drainage Channel and Harper Junior High School*
3) *Pedestrian and landscaping improvements on the access road between the Mace Park-and-Ride and CR 32A*

Responsibility for implementation of this mitigation measure shall be assigned to the ~~ARC~~ DiSC 2022 Project and Mace Triangle on a fair share basis.

3-75(b) *Prior to issuance of the first certificate of occupancy of the ~~ARC~~ DiSC 2022 Project, the applicant shall contribute fair share funding to cover their proportionate cost of the following improvements:*

1) *Widen CR 32A between CR 105 and the ~~Causeway Bicycle Path Access~~ causeway shared-use path access point to meet Yolo County standards for a two-lane arterial (14-foot travel lanes and 6-foot shoulder/on-street bike lanes).*
2) *Westbound bicycle crossing improvements at the existing at-grade railroad crossing at CR 32A and CR 105. Potential improvements include a marked bicycle crossing for westbound bicyclists with advanced warning devices for vehicle traffic. These improvements would facilitate westbound bicyclists continuing west onto the shared-use path located between the UPRR mainline and I-80 (e.g., to the west of CR 105). As noted earlier, Yolo County, together with Union Pacific and the City of Davis, are currently evaluating potential modifications to this at-grade crossing to reduce the potential for conflicts with rail operations. Therefore, the ultimate improvements constructed at this crossing should be consistent with the preferred modifications identified in this County-led study.*
3) *Eastbound bicycle crossing improvements for bicyclists turning left from CR 32A onto the causeway shared-use path. Potential improvements include the installation of a marked crossing on the east leg of the CR 32A/I-80 WB off-ramp intersection and construction of a two-way path on the north side of CR 32A between the CR 32A/I-80 WB off-ramp intersection and the entrance to the causeway path.*

Implementation of these improvements, or a set of improvements of equal effectiveness, would improve bicycle facilities on CR 32A by reducing the potential for bicycle-vehicle conflicts.

3-75(c) *The project applicant shall identify and construct complete streets improvements on the Mace Boulevard corridor, including the following actions:*

1) *Prior to approval of the first tentative subdivision map for the ~~ARC~~ DiSC 2022 Project, the applicant shall fund and complete (in conjunction with City staff) a corridor plan for the Mace Boulevard corridor between Harper Junior High School and Cowell Boulevard.[33] At a minimum, the corridor plan shall identify complete streets improvements that achieve the following goals:*
    a. *Provide safe and comfortable access for pedestrian and bicyclists*
    b. *Minimize the potential for bicycle-vehicle and pedestrian-vehicle conflicts*
    c. *Provide fast and efficient transit operations*
    d. *Minimize cut-through traffic on residential roadways*
    e. *Avoid operating conditions that degrade roadway safety (e.g., off-ramp queue spillback to freeway mainline)*

    The corridor plan shall be prepared to the satisfaction of the City of Davis Public Works Department and be approved by the City of Davis City Council. The corridor plan should include a thorough public engagement process to understand the transportation priorities of the surrounding community. This should include an initial

[33] Policy TRANS 2.8 of the *City of Davis General Plan* calls for the preparation of corridor plans for selected corridors throughout the City. The segment of Mace Boulevard referenced in this mitigation measure includes all of corridor #15 (Mace Boulevard – Harper Junior High School to Interstate 80) and portions of corridors #2 (Chiles Road – Drummond Avenue to East City Limit) and #16 (Mace Boulevard – Interstate 80 to South City Limit) as shown in Map 5 of the *General Plan* Circulation Element. Corridors #2 and #15 do not currently have corridor plans. Corridor #16 south of Cowell Boulevard was recently modified based on prior corridor planning efforts. The segment of Corridor #16 between Cowell Boulevard and Interstate 80 was excluded from those efforts and does not currently have a corridor plan.

hearing before the Planning Commission and the Bicycling, Transportation, and Street Safety Commission (BTSSC) to solicit initial input and a second hearing for review of the draft plan.

2) *In conjunction with submittal of a final planned development or tentative map, whichever occurs first, for each ~~ARC~~ DiSC 2022 Project phase, the MOA for the ~~ARC~~ DiSC 2022 Project shall submit a focused transportation impact study for the phase under review. ~~This could be the same study as required under Mitigation Measure 3-70(a), but must also include the information set forth in this measure.~~ The study shall document current conditions at the time and identify the anticipated transportation system effects associated with the development proposed for the phase under review and the necessary transportation system improvements to ameliorate these effects in accordance with the methods and significance thresholds used in this transportation impact analysis. Improvements should be consistent with the complete streets goals and improvements identified in the Mace Boulevard Corridor Plan to be funded and completed by the applicant as described above. The study shall also address the degree to which improvements would address any significant impacts caused by the ~~ARC~~ DiSC 2022 Project at buildout as identified in the Transportation Impact Analysis prepared for the ~~ARC~~ DiSC 2022 Project by Fehr & Peers (2020). Potential improvements include, but are not limited to, the following:*
    a. *Improvements to on- and off-street bicycle facilities on Mace Boulevard and connecting roadways, including Covell Boulevard, Alhambra Drive, 2nd Street, CR 32A, and Chiles Road.*
    b. *Improvements to bicycle and pedestrian crossings at the following intersections:*

        i. *Mace Boulevard/Alhambra Drive;*
        ii. *Mace Boulevard/2nd Street/CR 32A;*
        iii. *Mace Boulevard/I-80 WB Ramps;*
        iv. *Mace Boulevard/I-80 EB Ramps; and*
        v. *Mace Boulevard/Chiles Road.*

        Crossing improvements shall reduce the potential for bicycle-vehicle and pedestrian-vehicle conflicts and provide for safe and comfortable access for pedestrians and bicyclists. Potential crossing improvements include, but are not limited to bike lane conflict markings, intersection crossing markings, reductions to crossing distances, and physically separating bicyclists from vehicles (e.g., conversion to a protected intersection). Additionally, crossing improvements shall include the modification of existing channelized right-turn lanes to either a) remove and replace the lanes with standard right-turn lanes, or b) retrofit the lanes to reduce vehicles speeds and increase yield compliance rates.
    c. *Construction of a grade-separated bicycle and pedestrian crossing of Mace Boulevard within the project site vicinity.*

    Improvements identified in the focused transportation impact study should achieve the following performance measures:

a. *Reduce the number and/or severity of bicycle-vehicle and pedestrian-vehicle conflict points at intersections, at intersection approaches, and on roadway segments.*
b. *Eliminate otherwise anticipated increases in transit travel times and/or adverse changes to transit on-time performance that would be caused by the ~~ARC~~ DiSC 2022 Project in accordance with standards established by Unitrans, Yolobus, and other potential future transit operators.*
c. *Eliminate otherwise anticipated adverse effects to emergency vehicle response times that would be caused by the ~~ARC~~ DiSC 2022 Project in accordance with standards established by the City of Davis Fire and Police Departments.*
d. *Eliminate otherwise anticipated increases in cut-through traffic on residential roadways that would be caused by the ~~ARC~~ DiSC 2022 Project.*
e. *Eliminate otherwise anticipated vehicle queuing that would be caused by the ~~ARC~~ DiSC 2022 Project that would adversely affect roadway safety, including off-ramp queue spillbacks to the freeway mainline, queue spillbacks that block bicycle and/or pedestrian facilities, and queue spillbacks that exceed available turn pocket storage and block adjacent through travel lanes.*

The focused transportation impact study should also identify the funding and implementing responsibilities for each improvement, including whether the improvement should be constructed by the applicant or if the applicant should contribute fair share funding to cover their proportionate cost for the improvements. The applicant shall construct the improvement and/or contribute fair share funding prior to the issuance of the first certificate of occupancy for each project phase under review.

~~ARC~~ DiSC 2022 Project and Mace Triangle

3-76(a) *Prior to the approval of improvement plans of the first ~~ARC~~ DiSC 2022 Project phase, the project applicant shall fund and construct new bus stops with turnouts on both sides of Mace Boulevard at the new primary project access point at Alhambra Drive. The project applicant shall prepare design plans, to be reviewed and approved by the City Public Works Department, and construct bus stops with shelters, paved pedestrian waiting areas, lighting, real time transit information signage, and pedestrian connections between the new bus stops and all buildings on the ~~ARC~~ DiSC 2022 Site. Responsibility for implementation of this mitigation measure shall be assigned to the ~~ARC~~ DiSC 2022 Project and Mace Triangle on a fair share basis. ~~Upon completion of the DiSC 2022 Project transit plaza, in consultation with Unitrans and Yolobus, the bus stops shall be moved to the transit plaza at the expense of the ARC Project applicant.~~*

Additional Project-Specific Mitigation Measures

None required.

Environmental Issue Area	Where Impact Was Analyzed in Previous CEQA Documents?	Do Proposed Changes Involve New or More Severe Impacts?	Any New Circumstances Involving New or More Severe Impacts?	Any New Information Requiring New Analysis or Verification?
XVIII. Tribal Cultural Resources. *Would the project cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American Tribe, and that is:*				
a. Listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code section 5020.1(k).	2020 SEIR pg. 3-121	No	No	No
b. A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code Section 5024.1. In applying the criteria set forth in subdivision (c) of Public Resources Code Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe.	2020 SEIR pg. 3-121	No	No	No

Discussion

Since the release of the certified Final SEIR, the project site has remained vacant and undeveloped. Agricultural production continues to occur on the properties to the north and east of the DiSC 2022 site. Substantial changes in the environmental and regulatory settings related to tribal cultural resources, or in circumstances that would affect the analysis in the SEIR related to tribal cultural resources have not occurred.

Relative to the DISC project, the DiSC 2022 project would involve a substantially reduced development footprint area, due to the currently proposed project excluding the 92 acres immediately north of the MDC, which was a portion of the previous DISC project site. By excluding the area north of the MDC, the DiSC 2022 project would encompass 102 acres, as compared to the 194 acres planned for the previous DISC project. Project changes or circumstances that would adversely affect the analysis in the SEIR related to tribal cultural resources have not occurred.

a,b. The SEIR included a discussion on the DISC project's potential impacts related to tribal cultural resources in the 'Changes in Circumstances' subsection of the Cultural Resources section. As noted therein, a search of the Native American Heritage Commission (NAHC) Sacred Lands File failed to indicate the presence of Native American cultural resources in the immediate DISC project area. In addition, the City of Davis consulted with Native American tribes pursuant to Senate Bill (SB) 18 requirements for the original MRIC EIR. None of the tribes who were contacted

indicated any concerns regarding the MRIC project's potential to impact tribal cultural resources. The City subsequently had correspondence with Yocha Dehe Wintun Nation during the processing of the previous DISC project. Based on this correspondence, the City issued a Second Erratum to the Final SEIR (June 2020), which made several modifications to the cultural resources mitigation measures included in the SEIR. These modified measures were adopted as part of the Final SEIR and are included in Section V, Cultural Resources, of this Addendum.

As previously discussed, the DiSC 2022 project would involve a substantially reduced development footprint area, due to the currently proposed project excluding the 92 acres immediately north of the MDC, which was a portion of the previous DISC project site. Thus, the potential for the proposed project to impact tribal cultural resources would be reduced as a result of the DiSC 2022 project. In addition, the proposed project would be subject to the modified mitigation measures adopted along with the Final SEIR.

Based on the above, the currently proposed project would not result in new significant impacts or substantially more severe significant impacts related to being listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in PRC Section 5020.1 or a resource determined by the lead agency to be significant pursuant to criteria set forth in subdivision (c) of PRC Section 5024.1 beyond what were previously identified in the SEIR. Therefore, the proposed project would be consistent with the conclusions of the SEIR.

Conclusion

Based on the above, the DiSC 2022 project would not result in any changes, new circumstances, or new information that would involve new significant impacts or substantially more severe significant impacts from what had been anticipated for the project site in the previous CEQA documents related to tribal cultural resources. The previously required mitigation measures from the SEIR, as presented in Section V, Cultural Resources, of this Addendum, would still be required to be implemented for the proposed project.

Mitigation Measure(s)

Mitigation measures includes in Section V, Cultural Resources, of this Addendum would reduce the above impacts to a *less-than-significant* level.

Mitigation Measures from the Previous CEQA Documents

None.

Modified Mitigation Measures

None required.

Additional Project-Specific Mitigation Measures

None required.

Environmental Issue Area	Where Impact Was Analyzed in Previous CEQA Documents?	Do Proposed Changes Involve New or More Severe Impacts?	Any New Circumstances Involving New or More Severe Impacts?	Any New Information Requiring New Analysis or Verification?
XIX. Utilities and Service Systems. *Would the project:*				
a. Require or result in the relocation or construction of new or expanded water, wastewater treatment or storm water drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects?	2020 SEIR pgs. 3-275 to 3-282 and 3-283 to 3-284	No	No	No
b. Have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry and multiple dry years?	2020 SEIR pgs. 3-275 to 3-278	No	No	No
c. Result in a determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?	2020 SEIR pgs. 3-278 to 3-282	No	No	No
d. Generate solid waste in excess of State or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals?	2020 SEIR pgs. 3-282 to 3-283	No	No	No
e. Comply with federal, state, and local management and reduction statutes and regulations related to solid waste?	2020 SEIR pgs. 3-282 to 3-283	No	No	No

Discussion

Since the release of the certified Final SEIR, the project site has remained vacant and undeveloped. Agricultural production continues to occur on the properties to the north and east of the DiSC 2022 site. Substantial changes in the environmental and regulatory settings related to utilities and service systems, as described in the SEIR, have not occurred.

Relative to the DISC project, the DiSC 2022 project would involve a substantially reduced development footprint area, due to the currently proposed project excluding the 92 acres immediately north of the MDC, which was a portion of the previous DISC project site. By excluding the area north of the MDC, the DiSC

2022 project would encompass 102 acres, as compared to the 194 acres planned for the previous DISC project. The reduced footprint translates to a 63.6 percent decrease in commercial square footage, a 37.8 percent reduction in advanced manufacturing square footage, a 45.9 percent decline in on-site residential units, and a 20 percent reduction in ancillary retail square footage. Project changes or circumstances that would adversely affect the analysis in the SEIR related to utilities and service systems have not occurred.

a. The SEIR evaluated the potential for the DISC project require or result in the relocation or construction of new or expanded utilities and service systems facilities under various impact statements. Specific discussions of each utility service, the impacts to such service identified in the SEIR, and the potential impacts that would result from DiSC 2022 project implementation are discussed below.

Water Facilities

The SEIR assessed the potential for the DISC project to result in impacts related to the project components' connection to the City's domestic water system under Impact 3-79 and concluded that the project would have resulted in a less-than-significant impact. As noted in the SEIR, the DISC project would have connected to the City's water system by way of an extension of the existing 12-inch diameter City water main located along Mace Boulevard. The main would have been looped throughout the site to supply potable water to internal businesses and workforce housing. The loop would have provided the site's interior-use service connections for the planned office/R&D/industrial, residential, and fire-fighting uses. The improvements required to tie the proposed site loop to the City's existing water infrastructure were anticipated to be at three or four locations on Mace Boulevard.

The DiSC 2022 project's proposed connections to the City's water system remain generally similar to the previous iteration of the project without any notable changes that would result in a previously unidentified significant effect on the environment. Domestic water for the DiSC 2022 project would be supplied by extending the existing 12-inch diameter City water main located in Mace Boulevard. The main would be looped throughout the reduced site to supply potable water to internal businesses and workforce housing. The improvements required to tie the proposed site loop to the City's existing water infrastructure are anticipated to be at two or three locations on Mace Boulevard and could be coordinated with proposed surface improvements along the site's western frontage. Alternatively, the project may consider the option of making one of the loop connections to the existing 20-inch main that connects to the booster pumping station at the four MG City water tank.

Conclusion

Based on the above information, the currently proposed project would not result in new significant impacts or substantially more severe significant impacts related to the relocation or construction of new or expanded water facilities, the construction or relocation of which could cause significant environmental effects beyond what were previously identified in the SEIR. Therefore, the proposed project would be consistent with the conclusions of the SEIR.

Wastewater Facilities

The SEIR assessed the potential for the DISC project to result in impacts related to the project components' connection to the City's wastewater system under Impact 3-80 and concluded that the project would have resulted in a less-than-significant impact. According to the SEIR, the DISC project would have included installation of a gravity sewer pipe within the internal road ROW. The gravity sewer line would have collected wastewater generated on-site and routed the wastewater to the northeastern corner of the site. From the northeastern corner, an off-site wastewater

delivery pipe would have been installed within an existing easement, the alignment of which would have run north of the DISC site. The pipe would have then connected to an existing manhole along CR 30, near an existing rural residence. Wastewater from the site would have then flowed east through an existing 42-inch gravity sewer line, along CR 30, to the intersection of CR 30/CR 105, where the pipe extends north along CR 105 to the City's WWTP. An alternative off-site sewer alignment was also identified, which would have extended east from the site, along the MDC, within an existing easement, and would have connected to the existing 21-inch sewer pipe in CR 105, from which point the project's wastewater would have flowed north to the City's WWTP.

Prior to installing the new off-site sewer alignment, during the first phase of development, the DISC project included the ability to tie into the existing sewer main located in Mace Boulevard. The temporary connection to and use of existing sewer infrastructure would have required the use of a lift station and a force main to be replaced with the off-site gravity fed sewer line with the implementation of Phase 2.

The DiSC 2022 project's proposed connections to the City's wastewater system remain generally similar to the previous iteration of the project without any notable changes that would result in a previously unidentified significant effect on the environment (see Figure 5).

Conclusion

Based on the above information, the currently proposed project would not result in new significant impacts or substantially more severe significant impacts related to the relocation or construction of new or expanded wastewater facilities, the construction or relocation of which could cause significant environmental effects beyond what were previously identified in the SEIR. Therefore, the proposed project would be consistent with the conclusions of the SEIR.

Stormwater Drainage Facilities

The SEIR's analysis of the DISC project's potential impacts to stormwater drainage facilities and impacts that would result from DiSC 2022 project implementation are discussed in Section X, Hydrology and Water Quality, of this Addendum.

Gas and Electric Facilities

The SEIR assessed the potential for the DISC project to result in impacts related to the project components' connection to natural gas and electricity facilities under Impact 3-82 and concluded that the project would have resulted in a less-than-significant impact. Based on the CalEEMod results for the original DISC project, the project was expected to result in consumption of electricity of a maximum of 13.64 gigawatt-hours (GWh) per year and consumption of natural gas of approximately 34,607,340 kBTU/yr. In comparison, the currently proposed DiSC 2022 project is expected to result in consumption of electricity of a maximum of 6.89 GWh per year and consumption of natural gas of approximately 28,112,580 kBTU/yr, which constitutes a substantial reduction in energy demand. As discussed in the SEIR, according to PG&E, the load demand created by the previously analyzed MRIC Project would have been able to be accommodated by existing substations in the area. In addition, according to utility maps provided by PG&E, existing gas and electric infrastructure is located within the roadways surrounding the project site. The project applicant, and any future applicants associated with buildout at the Mace Triangle site, would be responsible for funding the construction of the on-site gas and electric infrastructure needed to connect to existing, adjacent infrastructure. The design-level details for each phase of development would be worked out in consultation with PG&E, or VCE as appropriate, prior to confirmation of service.

Based on the above information, the currently proposed project would not result in new significant impacts or substantially more severe significant impacts related to the relocation or construction of new or expanded gas and/or electricity facilities, the construction or relocation of which could cause significant environmental effects beyond what were previously identified in the SEIR. Therefore, the proposed project would be consistent with the conclusions of the SEIR.

Telecommunications Facilities

The SEIR assessed the potential for the DISC project to result in impacts related to the project components' connection to telecommunications facilities under Impact 3-83 and concluded that the project would have resulted in a less-than-significant impact. The same conclusion remains applicable to the DiSC 2022 project. High speed internet capability with bandwidth sufficient to service the technology sector is available for immediate extension to the DiSC 2022 Site. Existing fiber optics infrastructure within the UPRR right-of-way would be extended to the project site and would proceed in a manner consistent with overall project phasing. Prior to constructing each phase of the DISC project, the applicant would coordinate with service providers to identify points of connection to existing telecommunications lines and any needed upgrades to the existing system, which would be designed to occur within existing development areas.

Overall Utilities Facilities Conclusion

Based on the above information, the currently proposed project would not result in new significant impacts or substantially more severe significant impacts related to requiring or resulting in the relocation or construction of new or expanded water, wastewater treatment or storm water drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects beyond what were previously identified in the SEIR. Therefore, the proposed project would be consistent with the conclusions of the SEIR.

b. The SEIR evaluated the potential for the DISC project to result in impacts related to the City of Davis having sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry and multiple dry years under Impact 3-79 and concluded that the project would have resulted in a less-than-significant impact. As shown in Tables 3-42 and 3-43 of the SEIR, the capacities of the City's water supply facilities were determined to be sufficient to supply the City's buildout demand of the existing service area and the demands of the DISC project as well as other development outside of the City limits during normal year or average year conditions over the 15-year planning horizon. In addition, Table 3-44 of the SEIR provides a water supply and demand comparison for single- and multiple-dry years through the year 2035. As illustrated in the table, the SEIR determined that the City had the supplies to be able to meet dry year demands of the existing service area and the DISC project and other proposed developments over the 20-year planning horizon. Overall, sufficient water supplies were concluded to be available to serve the DISC project and other proposed projects, as well as the buildout demands of the City's service area over the next 15 years during normal year, single year, and multiple dry year scenarios.

The currently proposed DiSC 2022 project would include generally similar project components as compared to the previous project iteration; however, the currently proposed components would be at a substantially reduced scale. As such, the DiSC 2022 project would require significantly less water supplies than the demand levels identified for the previous DISC project. Since the certification of the SEIR, the City of Davis has adopted the 2020 Urban Water Management Plan

(UWMP).[34] As part of its analysis of estimated water supplies and demands during normal year, single year, and multiple dry year scenarios through 2045, the 2020 UWMP accounted for growth in the City and County in accordance with land uses provided in the City of Davis General Plan and Yolo County General Plan. As shown in Tables 7-3, 7-4, and 7-5 in the 2020 UWMP, the City's projected water supplies would exceed projected demand levels in normal year, single year, and multiple dry year scenarios through 2045. However, the 2020 UWMP did not include any version of the DISC or DiSC 2022 projects as part of the projected growth. Therefore, to determine whether the City of Davis would have sufficient water supplies to serve the project, the DiSC 2022 project's water demand was estimated and compared to the estimated water demand of previous iterations of the project, as well as to the City's projected water supplies. The DiSC 2022 project is estimated to result in a water demand of 215 acre-feet per year (ac-ft/yr). The previous Mixed-Use Alternative for the MRIC project, on which the DISC project was based, would have required approximately 404 ac-ft/yr. Thus, the DiSC 2022 project would result in a substantial reduction in water demand relative to previous project iterations. In addition, as shown in Tables 7-3, 7-4, and 7-5 of the 2020 UWMP, the City through 2045 is projected to have a minimum of 10,406 ac-ft/yr of surplus supplies in normal years, a minimum of 6,443 ac-ft/yr of surplus supplies in single dry years, and a minimum of 6,443 ac-ft/yr during multiple dry years. Thus, the estimated 215 ac-ft/yr that would be necessary to supply the DiSC 2022 project would be well within the surplus shown in the UWMP for normal, single dry, and multiple dry year scenarios, and sufficient water supplies would be available to serve the DiSC 2022 project and other proposed projects, as well as the buildout demands of the City's service area through 2045.

Based on the above information, the currently proposed project would not result in new significant impacts or substantially more severe significant impacts related to the City of Davis having sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry and multiple dry years beyond what were previously identified in the SEIR. Therefore, the proposed project would be consistent with the conclusions of the SEIR.

c. The 2020 SEIR assessed if the DISC project would have resulted in a determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments under Impact 3-80 and concluded that with incorporation of Mitigation Measures 3-80(a) through (c), the project would have resulted in a less-than-significant impact. According to the SEIR, per a technical memorandum prepared for the DISC project, the average dry weather flow (ADWF) from the DISC project's residential and non-residential uses would have resulted in 0.303 million gallons per day (mgd) (sewer flow factor basis of calculation) and 0.393 mgd (water use basis). Wastewater treatment for the DISC project would have been provided by the City's WWTP, which was estimated in the SIER to have an available ADWF capacity of 1.66 mgd, or 28 percent of design capacity. As such, the SEIR concluded that the DISC project's estimated ADWF of 0.303 mgd (sewer flow factor basis) and 0.393 mgd (water use basis) would have both been within the remaining WWTP capacity and adequate WWTP capacity would have been available to accommodate the increase in wastewater generation.

However, the SEIR also assessed the potential for the WWTP to have enough biochemical oxygen demand (BOD) loading capacity to accommodate the DISC project. The SEIR found that the DISC project would have generated a BOD load of 700 pounds per day (lbs/day), which would have reduced the WWTP's BOD loading capacity to 1,100 lbs/day. Taking a conservative approach, the SEIR concluded that mitigation would be required to mandate the project applicant

[34] City of Davis. *2020 Urban Water Management Plan*. Available at: https://www.cityofdavis.org/city-hall/public-works-utilities-and-operations/water/documents. Accessed October 2021.

to provide funding for the City to perform a WWTP analysis to identify the current WWTP BOD loading capacity prior to approval of improvement plans for Phase II of the DISC project, and if necessary, fund WWTP improvements.

With respect to the eight-inch sewer line in Mace Boulevard, the SEIR determined the sewer line did not have capacity to convey wastewater flows generated by the DISC project at buildout. The SEIR noted that it was possible that the sewer line could have been able to service Phase I of the project in an interim condition, based on the fact that several contributing neighboring land uses had not been developed at the densities originally intended in the City's sewer master plan. A sewer study would have been required to determine what, if any, capacity remained in the existing Mace Boulevard line. Assuming there was surplus capacity in the Mace Boulevard line, the Phase I flows could have been pumped by way of a lift station and force-main in the interim condition to Mace Boulevard. At buildout, upon completion of the off-site sewer connection, flows could have been redirected with the remainder of the on-site sewer flows to the planned sewer line improvements. With respect to the Mace Triangle site, the SEIR concluded that the sewer line in Mace Boulevard would have sufficient capacity to collect the wastewater generated by the maximum development potential of the Mace Triangle site. In the event that the DISC project developed its sewer infrastructure ahead of the Mace Triangle, then the Mace Triangle development could have connected to the DISC project's sewer system.

As previously discussed, the currently proposed DiSC 2022 project would include generally similar project components as the previous DISC project, albeit, at a significantly reduced scale. Additionally, the DiSC 2022 project's proposed connections to the City's wastewater system remain generally similar to the previous iteration of the project without any notable changes that would result in a previously unidentified substantial effect on the environment (see Figure 5). To ensure adequate BOD loading capacity exists to accommodate the DiSC 2022 project, the project would still be subject to Mitigation Measure 3-80(a). In addition, the currently proposed project would still be subject to Mitigation Measures 3-80(b) and (c) to provide annual wet-weather monitoring of the project's off-site sewer alignment and to prepare a sewer study to determine available capacity in the eight-inch sewer line in Mace Boulevard, respectively. The latter mitigation would only apply if the project applicant pursues such connection.

Based on the above information, the currently proposed project would not result in new significant impacts or substantially more severe significant impacts related to a determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments beyond what were previously identified in the SEIR. Therefore, the proposed project would be consistent with the conclusions of the SEIR.

d,e. The SEIR evaluated if the DISC project would be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs or fail to comply with federal, State, and local statutes and regulations related to solid waste under Impact 3-81 and concluded that the project would have resulted in a less-than-significant impact. As discussed in the SEIR, the DISC project would have used the City's solid waste services, and solid waste would have been transferred to the Yolo County Central Landfill for disposal. The SEIR determined that the amount of waste generated by the DISC project would have been 5,275.9 tons of waste per year. An additional 5,275.9 tons (24,201 cubic yards) of waste per year would have constituted only 0.07 percent of the remaining capacity at the Yolo County Central Landfill, which was approximately 35,171,142 cubic yards. In addition, the DISC project would have been required to comply with applicable State and local requirements, including those pertaining to solid waste, construction waste diversion, and recycling. Specifically, Chapter 32 of the City's Municipal Code

regulates the management of garbage, recyclables, and other wastes. Chapter 32 sets forth solid waste collection and disposal requirements for residential and commercial customers, and addresses yard waste, hazardous materials, recyclables, and other forms of solid waste.

As previously discussed, the currently proposed DiSC 2022 project would include generally similar project components as the previous DISC project, albeit, at a significantly reduced scale. Therefore, the currently proposed project would generate significantly less waste than that projected of the previous DISC project. According to the California Department of Resources Recycling and Recovery (CalRecycle), the Yolo County Central Landfill currently has a remaining capacity of 33,800,218 cubic yards. As such, the landfill would be able to accommodate waste generated by the DiSC 2022 project. Additionally, the DiSC 2022 project would be required to comply with applicable State and local requirements, including those set forth in Chapter 32 of the City's Municipal Code.

Based on the above information, the currently proposed project would not result in new significant impacts or substantially more severe significant impacts related to the generation of solid waste in excess of State or local standards, or in excess of the capacity of local infrastructure; the impairment or attainment of solid waste reduction goals; or compliance with federal, State, and local management and reduction statutes and regulations related to solid waste beyond what were previously identified in the SEIR. Therefore, the proposed project would be consistent with the conclusions of the SEIR.

Conclusion

Based on the above, the DiSC 2022 project would not result in any changes, new circumstances, or new information that would involve new significant impacts or substantially more severe significant impacts from what had been anticipated for the project site in the previous CEQA documents related to utilities and service systems. The previously required mitigation measures from the SEIR, as presented below, would still be required to be implemented for the proposed project.

Mitigation Measure(s)

The following mitigation measure(s) would reduce the above impacts to a *less-than-significant* level.

Mitigation Measures from the Previous CEQA Documents

The mitigation measures from the SEIR applicable to the proposed project are presented below. It should be noted that the mitigation measures formerly referenced "ARC" as part of the previous SEIR; thus, such references have been changed to "DiSC 2022" in this Addendum in ~~strikethrough~~ and double underline format. No other changes have been made to the following mitigation.

~~ARC~~ DiSC 2022 Project

3-80(b) The applicant shall provide for annual wet-weather monitoring of the existing offsite 42-inch or 21-inch sanitary sewer line, depending upon which off-site sewer alignment is chosen for the project, over the course of project buildout to confirm that there is capacity within the line to serve the ~~ARC~~ DiSC 2022 Project, in combination with existing and future projected General Plan buildout. If the wet weather monitoring fails to confirm capacity within the chosen existing sanitary sewer line, the applicant shall either upsize the existing sewer line, subject to reimbursement, or install a parallel line, subject to review and approval by the City Engineer.

3-80(c) If the applicant pursues a connection to the existing 8-inch sewer line in Mace Boulevard to serve Phase 1 of the ~~ARC~~ DiSC 2022 Project, then prior to approval of Improvement Plans

for Phase 1, the applicant shall prepare and submit to the Davis Public Works Department, a sewer study, which shall determine the available capacity in the 8-inch sewer pipe in Mace Boulevard. If the 8-inch line has adequate capacity for Phase 1 of the ~~ARC~~ DiSC 2022 Project, then no further mitigation is needed. If the sewer study determines that the 8-inch line does not have adequate capacity to serve Phase 1, then the applicant shall upsize the sewer pipe within Mace Boulevard, or pursue construction of the northerly or easterly off-site sewer pipe connection alternative. The design of the sewer pipe improvements shall be reviewed and approved by the City Engineer prior to approval of Phase 1 Improvement Plans.

Modified Mitigation Measures

Mitigation Measure 3-80(a) of the SEIR is hereby modified to reflect that the DiSC 2022 project would be limited to two phases.

3-80(a) *Prior to approval of improvement plans for Phase 2 of development, ~~and all subsequent phases,~~ the applicant shall provide funding for the City to perform a WWTP analysis to identify the then-current City of Davis WWTP BOD loading capacity. If the WWTP analysis determines that adequate BOD loading capacity exists at the WWTP to serve the ~~ARC~~ DiSC 2022 Project phase under review, further action is not required for the phase under review. If the analysis finds that the WWTP BOD loading capacity is not sufficient to serve the particular development phase under review, that phase of development shall not be approved until a plan for financing and constructing additional BOD loading capacity improvements has been prepared and approved, the additional BOD loading capacity improvements have been constructed, and the City Engineer has verified that sufficient capacity exists to serve said phase.*

Additional Project-Specific Mitigation Measures

None required.

Environmental Issue Area	Where Impact Was Analyzed in Previous CEQA Documents?	Do Proposed Changes Involve New or More Severe Impacts?	Any New Circumstances Involving New or More Severe Impacts?	Any New Information Requiring New Analysis or Verification?
XX. Wildfire. *If located in or near state responsibility areas or lands classified as very high fire hazard severity zones, would the project:*				
a. Substantially impair an adopted emergency response plan or emergency evacuation plan?	2020 SEIR pg. 3-156	No	No	No
b. Due to slope, prevailing winds, and other factors, exacerbate wildfire risks, and thereby expose project occupants to, pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire?	2020 SEIR pg. 3-156	No	No	No
c. Require the installation or maintenance of associated infrastructure (such as roads, fuel breaks, emergency water sources, power lines or other utilities) that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment?	2020 SEIR pg. 3-156	No	No	No
d. Expose people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes?	2020 SEIR pg. 3-156	No	No	No

Discussion

Since the release of the certified Final SEIR, the project site has remained vacant and undeveloped. Agricultural production continues to occur on the properties to the north and east of the DiSC 2022 site. Substantial changes in the environmental and regulatory settings related to wildfire, as described in the SEIR, have not occurred.

Relative to the DISC project, the DiSC 2022 project would involve a substantially reduced development footprint area, due to the currently proposed project excluding the 92 acres immediately north of the MDC, which was a portion of the previous DISC project site. By excluding the area north of the MDC, the DiSC 2022 project would encompass 102 acres, as compared to the 194 acres planned for the previous DISC project. Project changes or circumstances that would adversely affect the analysis in the SEIR related to wildfire have not occurred.

a-d. The SEIR included an analysis of the potential for the DISC project to result in wildfire-related impacts within the 'Changes in Circumstances' subsection of the Hazards and Hazardous Materials section. As noted therein as well as under Impact 3-45, with respect to Section XX, Wildfire, of Appendix G of the CEQA Guidelines, the DISC site and Mace Triangle site are not

located within a designated State or local fire hazard severity zone. Therefore, impacts related to wildfire hazards were concluded to not be applicable to the DISC project.

Similarly, as discussed under question 'g' of Section IX, Hazards and Hazardous Materials, of this Addendum, the currently proposed DiSC 2022 site would be implemented within the development footprint previously analyzed in the SEIR for the DISC project. According to CAL FIRE, the City of Davis and the project site continue to not be located within or adjacent to a State or local Very High or High FHSZ. As such, the DiSC 2022 project would not result in significant impacts related to being located in a Very High FHSZ.

Based on the above, the currently proposed project would not result in new significant impacts or substantially more severe significant impacts related to being located in or near State responsibility areas or lands classified as Very High FHSZs beyond what were previously identified in the SEIR. Therefore, the proposed project would be consistent with the conclusions of the SEIR.

Conclusion

Based on the above, the DiSC 2022 project would not result in any changes, new circumstances, or new information that would involve new significant impacts or substantially more severe significant impacts from what had been anticipated for the project site in the previous CEQA documents related to wildfire.

Mitigation Measure(s)

None required.

Mitigation Measures from the Previous CEQA Documents

None.

Modified Mitigation Measures

None required.

Additional Project-Specific Mitigation Measures

None required.

Environmental Issue Area	Where Impact Was Analyzed in Previous CEQA Documents?	Do Proposed Changes Involve New or More Severe Impacts?	Any New Circumstances Involving New or More Severe Impacts?	Any New Information Requiring New Analysis or Verification?
XXI. Mandatory Findings of Significance.				
a. Does the project have the potential to substantially degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, substantially reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory?	2020 SEIR pgs.3-80 to 3-118 and 3-121 to 3-127	No	No	No
b. Does the project have impacts that are individually limited, but cumulatively considerable? ("Cumulatively considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects)?	2020 SEIR pgs. 3-285 to 3-337	No	No	No
c. Does the project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?	2020 SEIR pgs. 3-61 to 3-67, 3-156 to 3-163, and 3-187 to 3-197	No	No	No

Discussion

Since the release of the certified Final SEIR, the project site has remained vacant and undeveloped. Agricultural production continues to occur on the properties to the north and east of the DiSC 2022 site. Relative to the DISC project, the DiSC 2022 project would involve a substantially reduced development footprint area, due to the currently proposed project excluding the 92 acres immediately north of the MDC, which was a portion of the previous DISC project site. By excluding the parcel north of the MDC, the DiSC 2022 project would encompass 102 acres, as compared to the 194 acres planned for the previous DISC project. The reduced footprint translates to a 63.6 percent decrease in commercial square footage, a 37.8 percent reduction in advanced manufacturing square footage, a 45.9 percent decline in on-site residential units, and a 20 percent reduction in ancillary retail square footage. Project changes or circumstances that would adversely affect the cumulative analysis in the SEIR have not occurred.

a. As discussed throughout the analysis included in Section IV, Biological Resources, and Section V, Cultural Resources, of this Addendum, the SEIR evaluated the potential for the DISC project

to substantially degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, substantially reduce the number or restrict the range of a rare or endangered plant or animal, or eliminate important examples of the major periods of California history or prehistory and concluded that with incorporation of the mitigation measures set forth in the SEIR, the DISC project would have resulted in a less-significant-impact with respect to the applicable thresholds of significance for evaluating impacts to biological resources, cultural resources, and tribal cultural resources, as required in accordance with Appendix G of the CEQA Guidelines.

As discussed above, the currently proposed DiSC 2022 project would be implemented within the development footprint area previously analyzed in the SEIR; however, the DiSC 2022 project would involve a substantially reduced development footprint. Additionally, the DiSC 2022 project would include similar project components as the previous DISC project, albeit, at a noticeably reduced scale. Furthermore, the DiSC 2022 project would still be subject to all of the mitigation measures included in the SEIR to address impacts to biological resources, cultural resources, and tribal cultural resources, subject to modifications noted in this Addendum, which would ensure impacts are reduced to a less-than-significant level. Considering that on-site conditions have not changed since the certification of the SEIR, the currently proposed DiSC 2022, through compliance with the mitigation measures included in this Addendum, would not substantially degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, substantially reduce the number or restrict the range of a rare or endangered plant or animal, or eliminate important examples of the major periods of California history or prehistory.

Based on the above, the currently proposed project would not result in new significant impacts or substantially more severe significant impacts with respect to the quality of the environment, the habitat of a fish or wildlife species, a fish or wildlife population level, a plant or animal community, the range of a rare or endangered plant or animal, or important examples of the major periods of California history or prehistory beyond what were previously identified in the SEIR. Therefore, the proposed project would be consistent with the conclusions of the SEIR.

b. The SEIR evaluated the potential for the DISC project to result in cumulatively considerable impacts throughout various discussions included in the Cumulative Impacts section of Chapter 3 of the SEIR. The SEIR concluded that the DISC project would have resulted in cumulatively considerable and significant and unavoidable impacts, even with compliance with existing law and incorporation of applicable mitigation measures, under Impacts 3-85 (long-term changes in visual character of the region), 3-87 (cumulative loss of agricultural land), 3-88 (cumulatively considerable net increase of any criteria pollutant), 3-93 (cumulative impacts related to GHG emissions and global climate change), 3-102 (cumulative impacts to fire protection services from the proposed project in combination with future developments in the City of Davis), 3-104 (conflict with a program, plan, ordinance or policy addressing the circulation system under Cumulative Plus Project conditions), 3-105 (cumulative increase in VMT), and 3-106 (cumulative impacts to pedestrian, bicycle, and transit facilities). The preceding significant cumulative impacts generally refer to project-level mitigation measures to ensure that the project's incremental effect is reduced to the maximum extent feasible. In one case, fire protection services, the SEIR identified a cumulative impact related to fire protection services, for which a new mitigation measure is provided (Mitigation Measure 3-102). Mitigation Measure 3-102 is remains applicable to the DiSC 2022 project and is included below.

As discussed above, the currently proposed DiSC 2022 project would be implemented within the development footprint area previously analyzed in the SEIR; however, the DiSC 2022 project would involve a substantially reduced development footprint. Additionally, the DiSC 2022 project would include similar project components as the previous DISC project, albeit, at a noticeably reduced scale. The DiSC 2022 project would be subject to all applicable policies, regulations, and standards set forth at the federal, State, and local levels. Furthermore, this Addendum requires that the DiSC 2022 project still be subject to all of the applicable mitigation measures set forth in the SEIR. Considering the reduced footprint and reduced scale of the currently proposed project as compared to the previous project iteration, the DiSC 2022 project's contribution to cumulative impacts would not exceed those identified in the SEIR for the previous DISC project.

Based on the above, the currently proposed project would not result in new significant impacts or substantially more severe significant impacts with respect to cumulatively considerable impacts beyond what were previously identified in the SEIR. Therefore, the proposed project would be consistent with the conclusions of the SEIR.

c. As discussed above, the currently proposed DiSC 2022 project would be implemented within the development footprint area previously analyzed in the SEIR; however, the DiSC 2022 project would involve a substantially reduced development footprint. Additionally, the DiSC 2022 project would include similar project components as the previous DISC project, albeit, at a noticeably reduced scale. The DiSC 2022 project would be subject to all applicable policies, regulations, and standards set forth at the federal, State, and local levels. Furthermore, this Addendum requires that the DiSC 2022 project still be subject to the applicable mitigation measures set forth in the SEIR's analysis of air quality, hazards and hazardous materials, and noise impacts. Considering the reduced footprint and reduced scale of the currently proposed project, as compared to the previous project iteration, the DiSC 2022 project, with incorporation of applicable mitigation measures, would not cause potential substantial adverse effects to human beings beyond what was identified in the SEIR.

Based on the above, the currently proposed project would not result in new significant impacts or substantially more severe significant impacts with respect to environmental effects that would cause substantial adverse effects on human beings beyond what were previously identified in the SEIR. Therefore, the proposed project would be consistent with the conclusions of the SEIR.

Conclusion

Based on the above, the DiSC 2022 project would not result in any changes, new circumstances, or new information that would involve new significant impacts or substantially more severe significant impacts from what had been anticipated for the project site in the previous CEQA documents related to mandatory findings of significance.

Mitigation Measure(s)

The following mitigation measure(s) would reduce the above impacts to a less-than-significant level, if one of the above two mitigation options is implemented. However, because successful implementation of each option cannot be assured, as the full amount of funding for the improvement(s) has not been secured nor programmed into an identified improvement program, the project's incremental contribution to this significant impact would remain *cumulatively considerable* and *significant and unavoidable*.

Mitigation Measures from the Previous CEQA Documents

The mitigation measure from the SEIR applicable to the proposed project is presented below. It should be noted that the mitigation measure formerly referenced "ARC" as part of the previous SEIR; thus, such

references have been changed to "DiSC 2022" in this Addendum in ~~strikethrough~~ and double underline format. No other changes have been made to the following mitigation.

~~ARC~~ DiSC 2022 Project and Mace Triangle

3-102 Prior to issuance of building permits for each phase of development, the project applicant shall contribute the project's fair share funding towards one of the following mitigation options, as determined by the City of Davis Department of Community Development and Sustainability and Davis Fire Department:

1. *Construct a fourth fire station within the City of Davis.*
2. *Modify existing Davis fire facilities, which may include renovation of existing fire stations.*

Once the mitigation option is selected, the identified improvement project(s) shall be included in the City's Capital Improvement Program and the City's Fire Impact Fee updated accordingly. In addition, each improvement project shall be subject to its own environmental review process, unless the improvement can be determined by the City to be exempt from CEQA.

Modified Mitigation Measures

None required.

Additional Project-Specific Mitigation Measures:

None required.

H. SOURCES

Technical reports prepared for this Addendum and previous materials prepared for the DISC SEIR and MRIC EIR are available upon request from the City of Davis Department of Community Development and Sustainability. The Department is located at 23 Russell Boulevard, Suite 2, Davis, CA 95616. Due to the COVID-19 pandemic, materials may be accessed by way of the City's website at https://www.cityofdavis.org/city-hall/community-development-and-sustainability. Technical reports and modeling results used for the preparation of this Addendum are included herein as appendices. Overall, the following documents are referenced information sources used for purposes of this Addendum:

1. CalEEMod Air Quality Modeling Results. January 2021. (Appendix A)
2. California Department of Conservation. *California Important Farmland Finder*. Available at: https://maps.conservation.ca.gov/dlrp/ciff/. Accessed September 2021.
3. California Department of Forestry and Fire Protection. *Fire Resource and Assessment Program: Yolo County*. Available at: https://osfm.fire.ca.gov/divisions/wildfire-planning-engineering/wildland-hazards-building-codes/fire-hazard-severity-zones-maps/. Accessed September 2021.
4. California Department of Toxic Substances Control. *Site Mitigation & Restoration Program*. Available at: https://dtsc.ca.gov/dtscs-cortese-list/. Accessed September 2021.
5. California Department of Transportation. *California State Scenic Highway System Map*. Available at: https://dot.ca.gov/programs/design/lap-landscape-architecture-and-community-livability/lap-liv-i-scenic-highways. Accessed September 2021.
6. California State Water Resources Control Board. *Phase II Small Municipal Separate Storm Sewer System (MS4) Program*. Available at: https://www.waterboards.ca.gov/water_issues/programs/stormwater/phase_ii_municipal.html. Accessed October 2021.
7. California State Water Resources Control Board. *State Wetland Definition and Procedures for Discharges of Dredged or Fill Material to Waters of the State*. Available at: https://www.waterboards.ca.gov/water_issues/programs/cwa401/docs/procedures_conformed.pdf. Accessed October 2021.
8. City of Davis. *Davis General Plan [pg. 290].* Adopted May 2001. Amended through January 2007.
9. City of Davis. *2020 Urban Water Management Plan*. Available at: https://www.cityofdavis.org/city-hall/public-works-utilities-and-operations/water/documents. Accessed October 2021.
10. Fehr and Peers. *Davis Innovation & Sustainability Campus 2022 (DiSC 2022) Volume 1 – Transportation Impact Study*. September 2021. (Appendix D)
11. Sycamore Environmental Consultants, Inc. *2021 Biological Survey Update for the Davis DISC Project, Yolo County, CA*. August 11, 2021. (Appendix B)
12. Watermark Engineering, Inc. *Applicability of MRIC Drainage Study (2015) for the Davis Innovation and Sustainability Campus 2022*. August 11, 2021. (Appendix C)

APPENDIX A

AIR QUALITY AND GHG MODELING RESULTS

DiSC 2022 Constrution of Phase I - Yolo/Solano AQMD Air District, Annual

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

DiSC 2022 Constrution of Phase I

Yolo/Solano AQMD Air District, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Research & Development	550.00	1000sqft	12.63	550,000.00	0
Other Asphalt Surfaces	0.60	Acre	0.60	26,136.00	0
Parking Lot	754.00	Space	6.79	301,600.00	0
Unenclosed Parking with Elevator	388.00	Space	3.49	155,200.00	0
Apartments Mid Rise	183.00	Dwelling Unit	4.82	183,000.00	523
Condo/Townhouse	92.00	Dwelling Unit	5.75	92,000.00	263
Regional Shopping Center	80.00	1000sqft	1.84	80,000.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	55
Climate Zone	2			**Operational Year**	2033
Utility Company	Pacific Gas and Electric Company				
CO2 Intensity (lb/MWhr)	203.98	**CH4 Intensity (lb/MWhr)**	0.033	**N2O Intensity (lb/MWhr)**	0.004

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use -

Construction Phase - Phase timing based on applicant-provided questionnaire.

Grading -

DiSC 2022 Constrution of Phase I - Yolo/Solano AQMD Air District, Annual

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

Table Name	Column Name	Default Value	New Value
tblConstructionPhase	NumDays	55.00	600.00
tblConstructionPhase	NumDays	740.00	600.00
tblConstructionPhase	NumDays	75.00	15.00
tblConstructionPhase	NumDays	55.00	5.00
tblConstructionPhase	NumDays	30.00	5.00
tblGrading	MaterialImported	0.00	30,000.00

2.0 Emissions Summary

DiSC 2022 Constrution of Phase I - Yolo/Solano AQMD Air District, Annual

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

2.1 Overall Construction

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2023	0.8727	2.2298	2.6170	9.1300e-003	0.5715	0.0711	0.6426	0.1753	0.0669	0.2422	0.0000	843.2738	843.2738	0.0626	0.0621	863.3480
2024	1.7743	3.2413	4.5704	0.0150	0.8715	0.0990	0.9705	0.2358	0.0937	0.3295	0.0000	1,388.5131	1,388.5131	0.0906	0.0908	1,417.8359
2025	1.4557	2.4900	3.5931	0.0119	0.7063	0.0698	0.7761	0.1911	0.0661	0.2572	0.0000	1,103.8462	1,103.8462	0.0716	0.0712	1,126.8593
Maximum	**1.7743**	**3.2413**	**4.5704**	**0.0150**	**0.8715**	**0.0990**	**0.9705**	**0.2358**	**0.0937**	**0.3295**	**0.0000**	**1,388.5131**	**1,388.5131**	**0.0906**	**0.0908**	**1,417.8359**

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					
2023	0.8727	2.2298	2.6170	9.1300e-003	0.5715	0.0711	0.6426	0.1753	0.0669	0.2422	0.0000	843.2736	843.2736	0.0626	0.0621	863.3478
2024	1.7743	3.2413	4.5704	0.0150	0.8715	0.0990	0.9705	0.2358	0.0937	0.3295	0.0000	1,388.5127	1,388.5127	0.0906	0.0908	1,417.8355
2025	1.4557	2.4900	3.5931	0.0119	0.7063	0.0698	0.7761	0.1911	0.0661	0.2572	0.0000	1,103.8459	1,103.8459	0.0716	0.0712	1,126.8590
Maximum	**1.7743**	**3.2413**	**4.5704**	**0.0150**	**0.8715**	**0.0990**	**0.9705**	**0.2358**	**0.0937**	**0.3295**	**0.0000**	**1,388.5127**	**1,388.5127**	**0.0906**	**0.0908**	**1,417.8355**

DiSC 2022 Constrution of Phase I - Yolo/Solano AQMD Air District, Annual

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

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)
1	**6-1-2023**	**8-31-2023**	1.3705	1.3705
2	**9-1-2023**	**11-30-2023**	1.2982	1.2982
3	**12-1-2023**	**2-29-2024**	1.2751	1.2751
4	**3-1-2024**	**5-31-2024**	1.2568	1.2568
5	**6-1-2024**	**8-31-2024**	1.2486	1.2486
6	**9-1-2024**	**11-30-2024**	1.2511	1.2511
7	**12-1-2024**	**2-28-2025**	1.2145	1.2145
8	**3-1-2025**	**5-31-2025**	1.2092	1.2092
9	**6-1-2025**	**8-31-2025**	1.2012	1.2012
10	**9-1-2025**	**9-30-2025**	0.3917	0.3917
		Highest	1.3705	1.3705

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

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	29.4782	0.4744	33.6455	0.0572		4.4416	4.4416		4.4416	4.4416	422.2463	122.4991	544.7454	0.3979	0.0320	564.2391
Energy	0.0784	0.7022	0.5238	4.2700e-003		0.0541	0.0541		0.0541	0.0541	0.0000	1,426.1249	1,426.1249	0.1201	0.0270	1,437.1666
Mobile	3.0087	4.3746	27.1106	0.0576	6.9413	0.0417	6.9830	1.8586	0.0391	1.8978	0.0000	5,684.6481	5,684.6481	0.3647	0.3205	5,789.2831
Waste						0.0000	0.0000		0.0000	0.0000	51.2146	0.0000	51.2146	3.0267	0.0000	126.8821
Water						0.0000	0.0000		0.0000	0.0000	93.3598	152.1616	245.5215	9.6136	0.2294	554.2217
Total	**32.5653**	**5.5512**	**61.2798**	**0.1190**	**6.9413**	**4.5374**	**11.4788**	**1.8586**	**4.5349**	**6.3935**	**566.8207**	**7,385.4338**	**7,952.2545**	**13.5229**	**0.6090**	**8,471.7925**

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

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	29.4782	0.4744	33.6455	0.0572		4.4416	4.4416		4.4416	4.4416	422.2463	122.4991	544.7454	0.3979	0.0320	564.2391
Energy	0.0784	0.7022	0.5238	4.2700e-003		0.0541	0.0541		0.0541	0.0541	0.0000	1,426.1249	1,426.1249	0.1201	0.0270	1,437.1666
Mobile	3.0087	4.3746	27.1106	0.0576	6.9413	0.0417	6.9830	1.8586	0.0391	1.8978	0.0000	5,684.6481	5,684.6481	0.3647	0.3205	5,789.2831
Waste						0.0000	0.0000		0.0000	0.0000	51.2146	0.0000	51.2146	3.0267	0.0000	126.8821
Water						0.0000	0.0000		0.0000	0.0000	93.3598	152.1616	245.5215	9.6136	0.2294	554.2217
Total	**32.5653**	**5.5512**	**61.2798**	**0.1190**	**6.9413**	**4.5374**	**11.4788**	**1.8586**	**4.5349**	**6.3935**	**566.8207**	**7,385.4338**	**7,952.2545**	**13.5229**	**0.6090**	**8,471.7925**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Site Preparation	Site Preparation	6/1/2023	6/7/2023	5	5	
2	Grading	Grading	6/8/2023	6/28/2023	5	15	
3	Paving	Paving	6/29/2023	7/5/2023	5	5	Construction of Phase 1

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

4	Building Construction	Building Construction	7/6/2023	10/22/2025	5	600	
5	Architectural Coating	Architectural Coating	7/20/2023	11/5/2025	5	600	

Acres of Grading (Site Preparation Phase): 7.5

Acres of Grading (Grading Phase): 45

Acres of Paving: 10.88

Residential Indoor: 556,875; Residential Outdoor: 185,625; Non-Residential Indoor: 945,000; Non-Residential Outdoor: 315,000; Striped Parking Area: 28,976 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Site Preparation	Rubber Tired Dozers	3	8.00	247	0.40
Site Preparation	Tractors/Loaders/Backhoes	4	8.00	97	0.37
Grading	Excavators	2	8.00	158	0.38
Grading	Graders	1	8.00	187	0.41
Grading	Rubber Tired Dozers	1	8.00	247	0.40
Grading	Scrapers	2	8.00	367	0.48
Grading	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Building Construction	Cranes	1	7.00	231	0.29
Building Construction	Forklifts	3	8.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes	3	7.00	97	0.37
Building Construction	Welders	1	8.00	46	0.45
Paving	Pavers	2	8.00	130	0.42
Paving	Paving Equipment	2	8.00	132	0.36
Paving	Rollers	2	8.00	80	0.38
Architectural Coating	Air Compressors	1	6.00	78	0.48

Trips and VMT

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

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Site Preparation	7	18.00	0.00	0.00	10.00	7.00	20.00	LD_Mix	HDT_Mix	HHDT
Grading	8	20.00	0.00	3,750.00	10.00	7.00	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	9	602.00	212.00	0.00	10.00	7.00	20.00	LD_Mix	HDT_Mix	HHDT
Paving	6	15.00	0.00	0.00	10.00	7.00	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	120.00	0.00	0.00	10.00	7.00	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

3.2 Site Preparation - 2023

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					0.0491	0.0000	0.0491	0.0253	0.0000	0.0253	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	6.6500e-003	0.0688	0.0456	1.0000e-004		3.1700e-003	3.1700e-003		2.9100e-003	2.9100e-003	0.0000	8.3627	8.3627	2.7000e-003	0.0000	8.4303
Total	**6.6500e-003**	**0.0688**	**0.0456**	**1.0000e-004**	**0.0491**	**3.1700e-003**	**0.0523**	**0.0253**	**2.9100e-003**	**0.0282**	**0.0000**	**8.3627**	**8.3627**	**2.7000e-003**	**0.0000**	**8.4303**

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

3.2 Site Preparation - 2023

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.2000e-004	8.0000e-005	9.5000e-004	0.0000	3.3000e-004	0.0000	3.3000e-004	9.0000e-005	0.0000	9.0000e-005	0.0000	0.2690	0.2690	1.0000e-005	1.0000e-005	0.2714
Total	**1.2000e-004**	**8.0000e-005**	**9.5000e-004**	**0.0000**	**3.3000e-004**	**0.0000**	**3.3000e-004**	**9.0000e-005**	**0.0000**	**9.0000e-005**	**0.0000**	**0.2690**	**0.2690**	**1.0000e-005**	**1.0000e-005**	**0.2714**

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					0.0491	0.0000	0.0491	0.0253	0.0000	0.0253	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	6.6500e-003	0.0688	0.0456	1.0000e-004		3.1700e-003	3.1700e-003		2.9100e-003	2.9100e-003	0.0000	8.3627	8.3627	2.7000e-003	0.0000	8.4303
Total	**6.6500e-003**	**0.0688**	**0.0456**	**1.0000e-004**	**0.0491**	**3.1700e-003**	**0.0523**	**0.0253**	**2.9100e-003**	**0.0282**	**0.0000**	**8.3627**	**8.3627**	**2.7000e-003**	**0.0000**	**8.4303**

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

3.2 Site Preparation - 2023

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.2000e-004	8.0000e-005	9.5000e-004	0.0000	3.3000e-004	0.0000	3.3000e-004	9.0000e-005	0.0000	9.0000e-005	0.0000	0.2690	0.2690	1.0000e-005	1.0000e-005	0.2714
Total	**1.2000e-004**	**8.0000e-005**	**9.5000e-004**	**0.0000**	**3.3000e-004**	**0.0000**	**3.3000e-004**	**9.0000e-005**	**0.0000**	**9.0000e-005**	**0.0000**	**0.2690**	**0.2690**	**1.0000e-005**	**1.0000e-005**	**0.2714**

3.3 Grading - 2023

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					0.0707	0.0000	0.0707	0.0277	0.0000	0.0277	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0249	0.2589	0.2104	4.7000e-004		0.0107	0.0107		9.8300e-003	9.8300e-003	0.0000	40.9014	40.9014	0.0132	0.0000	41.2321
Total	**0.0249**	**0.2589**	**0.2104**	**4.7000e-004**	**0.0707**	**0.0107**	**0.0814**	**0.0277**	**9.8300e-003**	**0.0375**	**0.0000**	**40.9014**	**40.9014**	**0.0132**	**0.0000**	**41.2321**

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

3.3 Grading - 2023

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	4.2500e-003	0.2379	0.0524	1.1200e-003	0.0319	2.1800e-003	0.0341	8.7600e-003	2.0800e-003	0.0109	0.0000	107.8637	107.8637	2.1000e-004	0.0170	112.9209
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	4.0000e-004	2.6000e-004	3.1500e-003	1.0000e-005	1.1000e-003	1.0000e-005	1.1100e-003	2.9000e-004	1.0000e-005	3.0000e-004	0.0000	0.8967	0.8967	3.0000e-005	2.0000e-005	0.9048
Total	**4.6500e-003**	**0.2381**	**0.0556**	**1.1300e-003**	**0.0330**	**2.1900e-003**	**0.0352**	**9.0500e-003**	**2.0900e-003**	**0.0112**	**0.0000**	**108.7604**	**108.7604**	**2.4000e-004**	**0.0170**	**113.8257**

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					0.0707	0.0000	0.0707	0.0277	0.0000	0.0277	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0249	0.2589	0.2104	4.7000e-004		0.0107	0.0107		9.8300e-003	9.8300e-003	0.0000	40.9014	40.9014	0.0132	0.0000	41.2321
Total	**0.0249**	**0.2589**	**0.2104**	**4.7000e-004**	**0.0707**	**0.0107**	**0.0814**	**0.0277**	**9.8300e-003**	**0.0375**	**0.0000**	**40.9014**	**40.9014**	**0.0132**	**0.0000**	**41.2321**

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

3.3 Grading - 2023

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	4.2500e-003	0.2379	0.0524	1.1200e-003	0.0319	2.1800e-003	0.0341	8.7600e-003	2.0800e-003	0.0109	0.0000	107.8637	107.8637	2.1000e-004	0.0170	112.9209
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	4.0000e-004	2.6000e-004	3.1500e-003	1.0000e-005	1.1000e-003	1.0000e-005	1.1100e-003	2.9000e-004	1.0000e-005	3.0000e-004	0.0000	0.8967	0.8967	3.0000e-005	2.0000e-005	0.9048
Total	**4.6500e-003**	**0.2381**	**0.0556**	**1.1300e-003**	**0.0330**	**2.1900e-003**	**0.0352**	**9.0500e-003**	**2.0900e-003**	**0.0112**	**0.0000**	**108.7604**	**108.7604**	**2.4000e-004**	**0.0170**	**113.8257**

3.4 Paving - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	2.5800e-003	0.0255	0.0365	6.0000e-005		1.2800e-003	1.2800e-003		1.1700e-003	1.1700e-003	0.0000	5.0067	5.0067	1.6200e-003	0.0000	5.0472
Paving	9.6800e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0123**	**0.0255**	**0.0365**	**6.0000e-005**		**1.2800e-003**	**1.2800e-003**		**1.1700e-003**	**1.1700e-003**	**0.0000**	**5.0067**	**5.0067**	**1.6200e-003**	**0.0000**	**5.0472**

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3.4 Paving - 2023

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	1.0000e-004	6.0000e-005	7.9000e-004	0.0000	2.8000e-004	0.0000	2.8000e-004	7.0000e-005	0.0000	7.0000e-005	0.0000	0.2242	0.2242	1.0000e-005	1.0000e-005	0.2262
Total	**1.0000e-004**	**6.0000e-005**	**7.9000e-004**	**0.0000**	**2.8000e-004**	**0.0000**	**2.8000e-004**	**7.0000e-005**	**0.0000**	**7.0000e-005**	**0.0000**	**0.2242**	**0.2242**	**1.0000e-005**	**1.0000e-005**	**0.2262**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	2.5800e-003	0.0255	0.0365	6.0000e-005		1.2800e-003	1.2800e-003		1.1700e-003	1.1700e-003	0.0000	5.0067	5.0067	1.6200e-003	0.0000	5.0472
Paving	9.6800e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0123**	**0.0255**	**0.0365**	**6.0000e-005**		**1.2800e-003**	**1.2800e-003**		**1.1700e-003**	**1.1700e-003**	**0.0000**	**5.0067**	**5.0067**	**1.6200e-003**	**0.0000**	**5.0472**

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3.4 Paving - 2023

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	1.0000e-004	6.0000e-005	7.9000e-004	0.0000	2.8000e-004	0.0000	2.8000e-004	7.0000e-005	0.0000	7.0000e-005	0.0000	0.2242	0.2242	1.0000e-005	1.0000e-005	0.2262
Total	**1.0000e-004**	**6.0000e-005**	**7.9000e-004**	**0.0000**	**2.8000e-004**	**0.0000**	**2.8000e-004**	**7.0000e-005**	**0.0000**	**7.0000e-005**	**0.0000**	**0.2242**	**0.2242**	**1.0000e-005**	**1.0000e-005**	**0.2262**

3.5 Building Construction - 2023

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	0.0999	0.9134	1.0315	1.7100e-003		0.0444	0.0444		0.0418	0.0418	0.0000	147.1960	147.1960	0.0350	0.0000	148.0714
Total	**0.0999**	**0.9134**	**1.0315**	**1.7100e-003**		**0.0444**	**0.0444**		**0.0418**	**0.0418**	**0.0000**	**147.1960**	**147.1960**	**0.0350**	**0.0000**	**148.0714**

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

3.5 Building Construction - 2023

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	0.0140	0.5711	0.1789	2.5800e-003	0.0851	3.4900e-003	0.0886	0.0246	3.3400e-003	0.0279	0.0000	247.1362	247.1362	7.1000e-004	0.0376	258.3584
Worker	0.1016	0.0656	0.8034	2.4600e-003	0.2813	1.4800e-003	0.2828	0.0748	1.3600e-003	0.0762	0.0000	228.5160	228.5160	6.9200e-003	6.3500e-003	230.5823
Total	**0.1156**	**0.6367**	**0.9823**	**5.0400e-003**	**0.3664**	**4.9700e-003**	**0.3713**	**0.0994**	**4.7000e-003**	**0.1041**	**0.0000**	**475.6522**	**475.6522**	**7.6300e-003**	**0.0440**	**488.9407**

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	0.0999	0.9134	1.0315	1.7100e-003		0.0444	0.0444		0.0418	0.0418	0.0000	147.1958	147.1958	0.0350	0.0000	148.0712
Total	**0.0999**	**0.9134**	**1.0315**	**1.7100e-003**		**0.0444**	**0.0444**		**0.0418**	**0.0418**	**0.0000**	**147.1958**	**147.1958**	**0.0350**	**0.0000**	**148.0712**

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

3.5 Building Construction - 2023

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	0.0140	0.5711	0.1789	2.5800e-003	0.0851	3.4900e-003	0.0886	0.0246	3.3400e-003	0.0279	0.0000	247.1362	247.1362	7.1000e-004	0.0376	258.3584
Worker	0.1016	0.0656	0.8034	2.4600e-003	0.2813	1.4800e-003	0.2828	0.0748	1.3600e-003	0.0762	0.0000	228.5160	228.5160	6.9200e-003	6.3500e-003	230.5823
Total	**0.1156**	**0.6367**	**0.9823**	**5.0400e-003**	**0.3664**	**4.9700e-003**	**0.3713**	**0.0994**	**4.7000e-003**	**0.1041**	**0.0000**	**475.6522**	**475.6522**	**7.6300e-003**	**0.0440**	**488.9407**

3.5 Building Construction - 2024

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1928	1.7611	2.1179	3.5300e-003		0.0803	0.0803		0.0756	0.0756	0.0000	303.7223	303.7223	0.0718	0.0000	305.5179
Total	**0.1928**	**1.7611**	**2.1179**	**3.5300e-003**		**0.0803**	**0.0803**		**0.0756**	**0.0756**	**0.0000**	**303.7223**	**303.7223**	**0.0718**	**0.0000**	**305.5179**

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

3.5 Building Construction - 2024

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0281	1.1760	0.3612	5.2200e-003	0.1756	7.2200e-003	0.1828	0.0508	6.9100e-003	0.0577	0.0000	500.2617	500.2617	1.3900e-003	0.0762	522.9910
Worker	0.1951	0.1205	1.5460	4.9100e-003	0.5803	2.9000e-003	0.5832	0.1543	2.6700e-003	0.1570	0.0000	459.4891	459.4891	0.0129	0.0122	463.4502
Total	**0.2231**	**1.2964**	**1.9073**	**0.0101**	**0.7558**	**0.0101**	**0.7659**	**0.2051**	**9.5800e-003**	**0.2146**	**0.0000**	**959.7507**	**959.7507**	**0.0143**	**0.0884**	**986.4412**

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	0.1928	1.7611	2.1179	3.5300e-003		0.0803	0.0803		0.0756	0.0756	0.0000	303.7220	303.7220	0.0718	0.0000	305.5175
Total	**0.1928**	**1.7611**	**2.1179**	**3.5300e-003**		**0.0803**	**0.0803**		**0.0756**	**0.0756**	**0.0000**	**303.7220**	**303.7220**	**0.0718**	**0.0000**	**305.5175**

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

3.5 Building Construction - 2024

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0281	1.1760	0.3612	5.2200e-003	0.1756	7.2200e-003	0.1828	0.0508	6.9100e-003	0.0577	0.0000	500.2617	500.2617	1.3900e-003	0.0762	522.9910
Worker	0.1951	0.1205	1.5460	4.9100e-003	0.5803	2.9000e-003	0.5832	0.1543	2.6700e-003	0.1570	0.0000	459.4891	459.4891	0.0129	0.0122	463.4502
Total	**0.2231**	**1.2964**	**1.9073**	**0.0101**	**0.7558**	**0.0101**	**0.7659**	**0.2051**	**9.5800e-003**	**0.2146**	**0.0000**	**959.7507**	**959.7507**	**0.0143**	**0.0884**	**986.4412**

3.5 Building Construction - 2025

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1443	1.3156	1.6969	2.8400e-003		0.0557	0.0557		0.0524	0.0524	0.0000	244.6750	244.6750	0.0575	0.0000	246.1129
Total	**0.1443**	**1.3156**	**1.6969**	**2.8400e-003**		**0.0557**	**0.0557**		**0.0524**	**0.0524**	**0.0000**	**244.6750**	**244.6750**	**0.0575**	**0.0000**	**246.1129**

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

3.5 Building Construction - 2025

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0221	0.9426	0.2857	4.1200e-003	0.1414	5.7900e-003	0.1472	0.0409	5.5400e-003	0.0464	0.0000	394.6326	394.6326	1.0800e-003	0.0601	412.5678
Worker	0.1467	0.0871	1.1669	3.8200e-003	0.4673	2.2300e-003	0.4695	0.1243	2.0500e-003	0.1263	0.0000	360.9625	360.9625	9.4600e-003	9.2000e-003	363.9419
Total	**0.1689**	**1.0297**	**1.4526**	**7.9400e-003**	**0.6087**	**8.0200e-003**	**0.6167**	**0.1651**	**7.5900e-003**	**0.1727**	**0.0000**	**755.5950**	**755.5950**	**0.0105**	**0.0693**	**776.5097**

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	0.1443	1.3156	1.6969	2.8400e-003		0.0557	0.0557		0.0524	0.0524	0.0000	244.6747	244.6747	0.0575	0.0000	246.1126
Total	**0.1443**	**1.3156**	**1.6969**	**2.8400e-003**		**0.0557**	**0.0557**		**0.0524**	**0.0524**	**0.0000**	**244.6747**	**244.6747**	**0.0575**	**0.0000**	**246.1126**

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

3.5 Building Construction - 2025

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0221	0.9426	0.2857	4.1200e-003	0.1414	5.7900e-003	0.1472	0.0409	5.5400e-003	0.0464	0.0000	394.6326	394.6326	1.0800e-003	0.0601	412.5678
Worker	0.1467	0.0871	1.1669	3.8200e-003	0.4673	2.2300e-003	0.4695	0.1243	2.0500e-003	0.1263	0.0000	360.9625	360.9625	9.4600e-003	9.2000e-003	363.9419
Total	**0.1689**	**1.0297**	**1.4526**	**7.9400e-003**	**0.6087**	**8.0200e-003**	**0.6167**	**0.1651**	**7.5900e-003**	**0.1727**	**0.0000**	**755.5950**	**755.5950**	**0.0105**	**0.0693**	**776.5097**

3.6 Architectural Coating - 2023

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	0.5787					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0112	0.0762	0.1060	1.7000e-004		4.1400e-003	4.1400e-003		4.1400e-003	4.1400e-003	0.0000	14.9365	14.9365	8.9000e-004	0.0000	14.9589
Total	**0.5899**	**0.0762**	**0.1060**	**1.7000e-004**		**4.1400e-003**	**4.1400e-003**		**4.1400e-003**	**4.1400e-003**	**0.0000**	**14.9365**	**14.9365**	**8.9000e-004**	**0.0000**	**14.9589**

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

3.6 Architectural Coating - 2023

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0187	0.0120	0.1475	4.5000e-004	0.0517	2.7000e-004	0.0519	0.0137	2.5000e-004	0.0140	0.0000	41.9646	41.9646	1.2700e-003	1.1700e-003	42.3441
Total	**0.0187**	**0.0120**	**0.1475**	**4.5000e-004**	**0.0517**	**2.7000e-004**	**0.0519**	**0.0137**	**2.5000e-004**	**0.0140**	**0.0000**	**41.9646**	**41.9646**	**1.2700e-003**	**1.1700e-003**	**42.3441**

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	0.5787					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0112	0.0762	0.1060	1.7000e-004		4.1400e-003	4.1400e-003		4.1400e-003	4.1400e-003	0.0000	14.9365	14.9365	8.9000e-004	0.0000	14.9589
Total	**0.5899**	**0.0762**	**0.1060**	**1.7000e-004**		**4.1400e-003**	**4.1400e-003**		**4.1400e-003**	**4.1400e-003**	**0.0000**	**14.9365**	**14.9365**	**8.9000e-004**	**0.0000**	**14.9589**

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

3.6 Architectural Coating - 2023

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0187	0.0120	0.1475	4.5000e-004	0.0517	2.7000e-004	0.0519	0.0137	2.5000e-004	0.0140	0.0000	41.9646	41.9646	1.2700e-003	1.1700e-003	42.3441
Total	**0.0187**	**0.0120**	**0.1475**	**4.5000e-004**	**0.0517**	**2.7000e-004**	**0.0519**	**0.0137**	**2.5000e-004**	**0.0140**	**0.0000**	**41.9646**	**41.9646**	**1.2700e-003**	**1.1700e-003**	**42.3441**

3.6 Architectural Coating - 2024

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	1.2959					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0237	0.1597	0.2371	3.9000e-004		7.9800e-003	7.9800e-003		7.9800e-003	7.9800e-003	0.0000	33.4476	33.4476	1.8800e-003	0.0000	33.4947
Total	**1.3196**	**0.1597**	**0.2371**	**3.9000e-004**		**7.9800e-003**	**7.9800e-003**		**7.9800e-003**	**7.9800e-003**	**0.0000**	**33.4476**	**33.4476**	**1.8800e-003**	**0.0000**	**33.4947**

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

3.6 Architectural Coating - 2024

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0389	0.0240	0.3082	9.8000e-004	0.1157	5.8000e-004	0.1162	0.0308	5.3000e-004	0.0313	0.0000	91.5925	91.5925	2.5800e-003	2.4300e-003	92.3821
Total	**0.0389**	**0.0240**	**0.3082**	**9.8000e-004**	**0.1157**	**5.8000e-004**	**0.1162**	**0.0308**	**5.3000e-004**	**0.0313**	**0.0000**	**91.5925**	**91.5925**	**2.5800e-003**	**2.4300e-003**	**92.3821**

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	1.2959					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0237	0.1597	0.2371	3.9000e-004		7.9800e-003	7.9800e-003		7.9800e-003	7.9800e-003	0.0000	33.4476	33.4476	1.8800e-003	0.0000	33.4947
Total	**1.3196**	**0.1597**	**0.2371**	**3.9000e-004**		**7.9800e-003**	**7.9800e-003**		**7.9800e-003**	**7.9800e-003**	**0.0000**	**33.4476**	**33.4476**	**1.8800e-003**	**0.0000**	**33.4947**

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

3.6 Architectural Coating - 2024

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0389	0.0240	0.3082	9.8000e-004	0.1157	5.8000e-004	0.1162	0.0308	5.3000e-004	0.0313	0.0000	91.5925	91.5925	2.5800e-003	2.4300e-003	92.3821
Total	**0.0389**	**0.0240**	**0.3082**	**9.8000e-004**	**0.1157**	**5.8000e-004**	**0.1162**	**0.0308**	**5.3000e-004**	**0.0313**	**0.0000**	**91.5925**	**91.5925**	**2.5800e-003**	**2.4300e-003**	**92.3821**

3.6 Architectural Coating - 2025

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	1.0931					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0189	0.1266	0.1999	3.3000e-004		5.6900e-003	5.6900e-003		5.6900e-003	5.6900e-003	0.0000	28.2135	28.2135	1.5400e-003	0.0000	28.2519
Total	**1.1120**	**0.1266**	**0.1999**	**3.3000e-004**		**5.6900e-003**	**5.6900e-003**		**5.6900e-003**	**5.6900e-003**	**0.0000**	**28.2135**	**28.2135**	**1.5400e-003**	**0.0000**	**28.2519**

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

3.6 Architectural Coating - 2025

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0306	0.0182	0.2436	8.0000e-004	0.0976	4.7000e-004	0.0980	0.0260	4.3000e-004	0.0264	0.0000	75.3627	75.3627	1.9800e-003	1.9200e-003	75.9848
Total	**0.0306**	**0.0182**	**0.2436**	**8.0000e-004**	**0.0976**	**4.7000e-004**	**0.0980**	**0.0260**	**4.3000e-004**	**0.0264**	**0.0000**	**75.3627**	**75.3627**	**1.9800e-003**	**1.9200e-003**	**75.9848**

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	1.0931					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0189	0.1266	0.1999	3.3000e-004		5.6900e-003	5.6900e-003		5.6900e-003	5.6900e-003	0.0000	28.2134	28.2134	1.5400e-003	0.0000	28.2519
Total	**1.1120**	**0.1266**	**0.1999**	**3.3000e-004**		**5.6900e-003**	**5.6900e-003**		**5.6900e-003**	**5.6900e-003**	**0.0000**	**28.2134**	**28.2134**	**1.5400e-003**	**0.0000**	**28.2519**

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

3.6 Architectural Coating - 2025

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0306	0.0182	0.2436	8.0000e-004	0.0976	4.7000e-004	0.0980	0.0260	4.3000e-004	0.0264	0.0000	75.3627	75.3627	1.9800e-003	1.9200e-003	75.9848
Total	**0.0306**	**0.0182**	**0.2436**	**8.0000e-004**	**0.0976**	**4.7000e-004**	**0.0980**	**0.0260**	**4.3000e-004**	**0.0264**	**0.0000**	**75.3627**	**75.3627**	**1.9800e-003**	**1.9200e-003**	**75.9848**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

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

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	3.0087	4.3746	27.1106	0.0576	6.9413	0.0417	6.9830	1.8586	0.0391	1.8978	0.0000	5,684.6481	5,684.6481	0.3647	0.3205	5,789.2831
Unmitigated	3.0087	4.3746	27.1106	0.0576	6.9413	0.0417	6.9830	1.8586	0.0391	1.8978	0.0000	5,684.6481	5,684.6481	0.3647	0.3205	5,789.2831

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Apartments Mid Rise	995.52	898.53	748.47	2,483,523	2,483,523
Condo/Townhouse	673.44	748.88	577.76	1,759,692	1,759,692
Other Asphalt Surfaces	0.00	0.00	0.00		
Parking Lot	0.00	0.00	0.00		
Regional Shopping Center	3,020.00	3,689.60	1688.00	4,151,114	4,151,114
Research & Development	6,193.00	1,045.00	610.50	10,230,562	10,230,562
Unenclosed Parking with Elevator	0.00	0.00	0.00		
Total	10,881.96	6,382.01	3,624.73	18,624,891	18,624,891

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Apartments Mid Rise	10.00	5.00	7.00	46.00	13.00	41.00	86	11	3
Condo/Townhouse	10.00	5.00	7.00	46.00	13.00	41.00	86	11	3
Other Asphalt Surfaces	10.00	5.00	7.00	0.00	0.00	0.00	0	0	0
Parking Lot	10.00	5.00	7.00	0.00	0.00	0.00	0	0	0
Regional Shopping Center	10.00	5.00	7.00	16.30	64.70	19.00	54	35	11

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

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Research & Development	10.00	5.00	7.00	33.00	48.00	19.00	82	15	3
Unenclosed Parking with	10.00	5.00	7.00	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	0.534400	0.056822	0.179165	0.124517	0.023767	0.006150	0.026136	0.017163	0.000490	0.000694	0.027210	0.000627	0.002860
Condo/Townhouse	0.534400	0.056822	0.179165	0.124517	0.023767	0.006150	0.026136	0.017163	0.000490	0.000694	0.027210	0.000627	0.002860
Other Asphalt Surfaces	0.534400	0.056822	0.179165	0.124517	0.023767	0.006150	0.026136	0.017163	0.000490	0.000694	0.027210	0.000627	0.002860
Parking Lot	0.534400	0.056822	0.179165	0.124517	0.023767	0.006150	0.026136	0.017163	0.000490	0.000694	0.027210	0.000627	0.002860
Regional Shopping Center	0.534400	0.056822	0.179165	0.124517	0.023767	0.006150	0.026136	0.017163	0.000490	0.000694	0.027210	0.000627	0.002860
Research & Development	0.534400	0.056822	0.179165	0.124517	0.023767	0.006150	0.026136	0.017163	0.000490	0.000694	0.027210	0.000627	0.002860
Unenclosed Parking with Elevator	0.534400	0.056822	0.179165	0.124517	0.023767	0.006150	0.026136	0.017163	0.000490	0.000694	0.027210	0.000627	0.002860

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

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

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Electricity Mitigated						0.0000	0.0000		0.0000	0.0000	0.0000	650.5729	650.5729	0.1053	0.0128	657.0059
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	650.5729	650.5729	0.1053	0.0128	657.0059
NaturalGas Mitigated	0.0784	0.7022	0.5238	4.2700e-003		0.0541	0.0541		0.0541	0.0541	0.0000	775.5520	775.5520	0.0149	0.0142	780.1607
NaturalGas Unmitigated	0.0784	0.7022	0.5238	4.2700e-003		0.0541	0.0541		0.0541	0.0541	0.0000	775.5520	775.5520	0.0149	0.0142	780.1607

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

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Apartments Mid Rise	1.72317e+006	9.2900e-003	0.0794	0.0338	5.1000e-004		6.4200e-003	6.4200e-003		6.4200e-003	6.4200e-003	0.0000	91.9549	91.9549	1.7600e-003	1.6900e-003	92.5014
Condo/Townhouse	1.73622e+006	9.3600e-003	0.0800	0.0340	5.1000e-004		6.4700e-003	6.4700e-003		6.4700e-003	6.4700e-003	0.0000	92.6516	92.6516	1.7800e-003	1.7000e-003	93.2022
Other Asphalt Surfaces	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
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Regional Shopping Center	926400	5.0000e-003	0.0454	0.0382	2.7000e-004		3.4500e-003	3.4500e-003		3.4500e-003	3.4500e-003	0.0000	49.4362	49.4362	9.5000e-004	9.1000e-004	49.7300
Research & Development	1.01475e+007	0.0547	0.4974	0.4178	2.9800e-003		0.0378	0.0378		0.0378	0.0378	0.0000	541.5092	541.5092	0.0104	9.9300e-003	544.7272
Unenclosed 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		**0.0784**	**0.7022**	**0.5238**	**4.2700e-003**		**0.0541**	**0.0541**		**0.0541**	**0.0541**	**0.0000**	**775.5520**	**775.5520**	**0.0149**	**0.0142**	**780.1607**

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

5.2 Energy by Land Use - NaturalGas

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	1.72317e+006	9.2900e-003	0.0794	0.0338	5.1000e-004		6.4200e-003	6.4200e-003		6.4200e-003	6.4200e-003	0.0000	91.9549	91.9549	1.7600e-003	1.6900e-003	92.5014
Condo/Townhouse	1.73622e+006	9.3600e-003	0.0800	0.0340	5.1000e-004		6.4700e-003	6.4700e-003		6.4700e-003	6.4700e-003	0.0000	92.6516	92.6516	1.7800e-003	1.7000e-003	93.2022
Other Asphalt Surfaces	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
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Regional Shopping Center	926400	5.0000e-003	0.0454	0.0382	2.7000e-004		3.4500e-003	3.4500e-003		3.4500e-003	3.4500e-003	0.0000	49.4362	49.4362	9.5000e-004	9.1000e-004	49.7300
Research & Development	1.01475e+007	0.0547	0.4974	0.4178	2.9800e-003		0.0378	0.0378		0.0378	0.0378	0.0000	541.5092	541.5092	0.0104	9.9300e-003	544.7272
Unenclosed 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		**0.0784**	**0.7022**	**0.5238**	**4.2700e-003**		**0.0541**	**0.0541**		**0.0541**	**0.0541**	**0.0000**	**775.5520**	**775.5520**	**0.0149**	**0.0142**	**780.1607**

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

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Apartments Mid Rise	712551	65.9279	0.0107	1.2900e-003	66.5798
Condo/Townhouse	448615	41.5076	6.7200e-003	8.1000e-004	41.9180
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Parking Lot	105560	9.7668	1.5800e-003	1.9000e-004	9.8634
Regional Shopping Center	909600	84.1596	0.0136	1.6500e-003	84.9918
Research & Development	4.554e+006	421.3533	0.0682	8.2600e-003	425.5197
Unenclosed Parking with Elevator	301088	27.8578	4.5100e-003	5.5000e-004	28.1333
Total		**650.5729**	**0.1053**	**0.0128**	**657.0059**

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

5.3 Energy by Land Use - Electricity

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Apartments Mid Rise	712551	65.9279	0.0107	1.2900e-003	66.5798
Condo/Townhouse	448615	41.5076	6.7200e-003	8.1000e-004	41.9180
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Parking Lot	105560	9.7668	1.5800e-003	1.9000e-004	9.8634
Regional Shopping Center	909600	84.1596	0.0136	1.6500e-003	84.9918
Research & Development	4.554e+006	421.3533	0.0682	8.2600e-003	425.5197
Unenclosed Parking with Elevator	301088	27.8578	4.5100e-003	5.5000e-004	28.1333
Total		**650.5729**	**0.1053**	**0.0128**	**657.0059**

6.0 Area Detail

6.1 Mitigation Measures Area

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

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	29.4782	0.4744	33.6455	0.0572		4.4416	4.4416		4.4416	4.4416	422.2463	122.4991	544.7454	0.3979	0.0320	564.2391
Unmitigated	29.4782	0.4744	33.6455	0.0572		4.4416	4.4416		4.4416	4.4416	422.2463	122.4991	544.7454	0.3979	0.0320	564.2391

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	0.2968					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	3.5657					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth	25.5533	0.4507	31.5927	0.0571		4.4303	4.4303		4.4303	4.4303	422.2463	119.1320	541.3783	0.3946	0.0320	560.7905
Landscaping	0.0624	0.0236	2.0527	1.1000e-004		0.0114	0.0114		0.0114	0.0114	0.0000	3.3671	3.3671	3.2600e-003	0.0000	3.4486
Total	**29.4782**	**0.4744**	**33.6455**	**0.0572**		**4.4416**	**4.4416**		**4.4416**	**4.4416**	**422.2463**	**122.4991**	**544.7454**	**0.3979**	**0.0320**	**564.2391**

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

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	0.2968					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	3.5657					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth	25.5533	0.4507	31.5927	0.0571		4.4303	4.4303		4.4303	4.4303	422.2463	119.1320	541.3783	0.3946	0.0320	560.7905
Landscaping	0.0624	0.0236	2.0527	1.1000e-004		0.0114	0.0114		0.0114	0.0114	0.0000	3.3671	3.3671	3.2600e-003	0.0000	3.4486
Total	**29.4782**	**0.4744**	**33.6455**	**0.0572**		**4.4416**	**4.4416**		**4.4416**	**4.4416**	**422.2463**	**122.4991**	**544.7454**	**0.3979**	**0.0320**	**564.2391**

7.0 Water Detail

7.1 Mitigation Measures Water

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

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	245.5215	9.6136	0.2294	554.2217
Unmitigated	245.5215	9.6136	0.2294	554.2217

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

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Apartments Mid Rise	11.9232 / 7.51679	12.1862	0.3899	9.3400e-003	24.7160
Condo/Townhouse	5.99417 / 3.77893	6.1264	0.1960	4.6900e-003	12.4255
Other Asphalt Surfaces	0 / 0	0.0000	0.0000	0.0000	0.0000
Parking Lot	0 / 0	0.0000	0.0000	0.0000	0.0000
Regional Shopping Center	5.9258 / 3.63194	6.0229	0.1938	4.6400e-003	12.2498
Research & Development	270.432 / 0	221.1861	8.8339	0.2107	504.8305
Unenclosed Parking with Elevator	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		**245.5215**	**9.6136**	**0.2294**	**554.2217**

7.2 Water by Land Use

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Apartments Mid Rise	11.9232 / 7.51679	12.1862	0.3899	9.3400e-003	24.7160
Condo/Townhouse	5.99417 / 3.77893	6.1264	0.1960	4.6900e-003	12.4255
Other Asphalt Surfaces	0 / 0	0.0000	0.0000	0.0000	0.0000
Parking Lot	0 / 0	0.0000	0.0000	0.0000	0.0000
Regional Shopping Center	5.9258 / 3.63194	6.0229	0.1938	4.6400e-003	12.2498
Research & Development	270.432 / 0	221.1861	8.8339	0.2107	504.8305
Unenclosed Parking with Elevator	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		**245.5215**	**9.6136**	**0.2294**	**554.2217**

8.0 Waste Detail

8.1 Mitigation Measures Waste

DiSC 2022 Constrution of Phase I - Yolo/Solano AQMD Air District, Annual

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

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	51.2146	3.0267	0.0000	126.8821
Unmitigated	51.2146	3.0267	0.0000	126.8821

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

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Apartments Mid Rise	84.18	17.0878	1.0099	0.0000	42.3343
Condo/Townhouse	42.32	8.5906	0.5077	0.0000	21.2828
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Parking Lot	0	0.0000	0.0000	0.0000	0.0000
Regional Shopping Center	84	17.0512	1.0077	0.0000	42.2437
Research & Development	41.8	8.4850	0.5015	0.0000	21.0213
Unenclosed Parking with Elevator	0	0.0000	0.0000	0.0000	0.0000
Total		**51.2146**	**3.0267**	**0.0000**	**126.8821**

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

8.2 Waste by Land Use

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Apartments Mid Rise	84.18	17.0878	1.0099	0.0000	42.3343
Condo/Townhouse	42.32	8.5906	0.5077	0.0000	21.2828
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Parking Lot	0	0.0000	0.0000	0.0000	0.0000
Regional Shopping Center	84	17.0512	1.0077	0.0000	42.2437
Research & Development	41.8	8.4850	0.5015	0.0000	21.0213
Unenclosed Parking with Elevator	0	0.0000	0.0000	0.0000	0.0000
Total		**51.2146**	**3.0267**	**0.0000**	**126.8821**

9.0 Operational Offroad

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

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

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

DiSC 2022 Constrution of Phase I - Yolo/Solano AQMD Air District, Annual

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

Boilers

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

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

DiSC 2022 Constrution of Phase I - Yolo/Solano AQMD Air District, Summer

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

DiSC 2022 Constrution of Phase I

Yolo/Solano AQMD Air District, Summer

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Research & Development	550.00	1000sqft	12.63	550,000.00	0
Other Asphalt Surfaces	0.60	Acre	0.60	26,136.00	0
Parking Lot	754.00	Space	6.79	301,600.00	0
Unenclosed Parking with Elevator	388.00	Space	3.49	155,200.00	0
Apartments Mid Rise	183.00	Dwelling Unit	4.82	183,000.00	523
Condo/Townhouse	92.00	Dwelling Unit	5.75	92,000.00	263
Regional Shopping Center	80.00	1000sqft	1.84	80,000.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	55
Climate Zone	2			**Operational Year**	2033
Utility Company	Pacific Gas and Electric Company				
CO2 Intensity (lb/MWhr)	203.98	**CH4 Intensity (lb/MWhr)**	0.033	**N2O Intensity (lb/MWhr)**	0.004

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use -

Construction Phase - Phase timing based on applicant-provided questionnaire.

Grading -

DiSC 2022 Constrution of Phase I - Yolo/Solano AQMD Air District, Summer

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

Table Name	Column Name	Default Value	New Value
tblConstructionPhase	NumDays	55.00	600.00
tblConstructionPhase	NumDays	740.00	600.00
tblConstructionPhase	NumDays	75.00	15.00
tblConstructionPhase	NumDays	55.00	5.00
tblConstructionPhase	NumDays	30.00	5.00
tblGrading	MaterialImported	0.00	30,000.00

2.0 Emissions Summary

DiSC 2022 Constrution of Phase I - Yolo/Solano AQMD Air District, Summer

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

2.1 Overall Construction (Maximum Daily Emission)

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	lb/day										lb/day					
2023	14.0943	64.5383	38.0703	0.2132	19.7939	1.7155	21.0607	10.1388	1.5889	11.3042	0.0000	21,999.0433	21,999.0433	1.9797	2.4936	22,791.6189
2024	13.8199	24.1816	36.7332	0.1186	6.8694	0.7558	7.6252	1.8534	0.7149	2.5682	0.0000	12,088.2692	12,088.2692	0.7549	0.7552	12,332.1764
2025	13.5647	22.9931	35.5646	0.1161	6.8693	0.6592	7.5285	1.8533	0.6235	2.4768	0.0000	11,878.1469	11,878.1469	0.7390	0.7350	12,115.6395
Maximum	**14.0943**	**64.5383**	**38.0703**	**0.2132**	**19.7939**	**1.7155**	**21.0607**	**10.1388**	**1.5889**	**11.3042**	**0.0000**	**21,999.0433**	**21,999.0433**	**1.9797**	**2.4936**	**22,791.6189**

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	lb/day										lb/day					
2023	14.0943	64.5383	38.0703	0.2132	19.7939	1.7155	21.0607	10.1388	1.5889	11.3042	0.0000	21,999.0433	21,999.0433	1.9797	2.4936	22,791.6189
2024	13.8199	24.1816	36.7332	0.1186	6.8694	0.7558	7.6252	1.8534	0.7149	2.5682	0.0000	12,088.2692	12,088.2692	0.7549	0.7552	12,332.1764
2025	13.5647	22.9931	35.5646	0.1161	6.8693	0.6592	7.5285	1.8533	0.6235	2.4768	0.0000	11,878.1469	11,878.1469	0.7390	0.7350	12,115.6395
Maximum	**14.0943**	**64.5383**	**38.0703**	**0.2132**	**19.7939**	**1.7155**	**21.0607**	**10.1388**	**1.5889**	**11.3042**	**0.0000**	**21,999.0433**	**21,999.0433**	**1.9797**	**2.4936**	**22,791.6189**

DiSC 2022 Constrution of Phase I - Yolo/Solano AQMD Air District, Summer

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

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

DiSC 2022 Constrution of Phase I - Yolo/Solano AQMD Air District, Summer

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

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	lb/day										lb/day					
Area	645.1092	11.2559	793.3627	1.3931		108.1813	108.1813		108.1813	108.1813	11,352.3617	3,244.1810	14,596.5427	10.6496	0.8613	15,119.4505
Energy	0.4294	3.8479	2.8702	0.0234		0.2967	0.2967		0.2967	0.2967		4,684.3820	4,684.3820	0.0898	0.0859	4,712.2189
Mobile	25.5817	28.0477	192.4244	0.4225	49.5378	0.2881	49.8259	13.2287	0.2705	13.4991		46,015.0991	46,015.0991	2.6453	2.3595	46,784.3507
Total	**671.1203**	**43.1515**	**988.6574**	**1.8390**	**49.5378**	**108.7662**	**158.3040**	**13.2287**	**108.7485**	**121.9772**	**11,352.3617**	**53,943.6620**	**65,296.0237**	**13.3846**	**3.3066**	**66,616.0200**

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	lb/day										lb/day					
Area	645.1092	11.2559	793.3627	1.3931		108.1813	108.1813		108.1813	108.1813	11,352.3617	3,244.1810	14,596.5427	10.6496	0.8613	15,119.4505
Energy	0.4294	3.8479	2.8702	0.0234		0.2967	0.2967		0.2967	0.2967		4,684.3820	4,684.3820	0.0898	0.0859	4,712.2189
Mobile	25.5817	28.0477	192.4244	0.4225	49.5378	0.2881	49.8259	13.2287	0.2705	13.4991		46,015.0991	46,015.0991	2.6453	2.3595	46,784.3507
Total	**671.1203**	**43.1515**	**988.6574**	**1.8390**	**49.5378**	**108.7662**	**158.3040**	**13.2287**	**108.7485**	**121.9772**	**11,352.3617**	**53,943.6620**	**65,296.0237**	**13.3846**	**3.3066**	**66,616.0200**

DiSC 2022 Constrution of Phase I - Yolo/Solano AQMD Air District, Summer

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

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Site Preparation	Site Preparation	6/1/2023	6/7/2023	5	5	
2	Grading	Grading	6/8/2023	6/28/2023	5	15	
3	Paving	Paving	6/29/2023	7/5/2023	5	5	
4	Building Construction	Building Construction	7/6/2023	10/22/2025	5	600	
5	Architectural Coating	Architectural Coating	7/20/2023	11/5/2025	5	600	

Acres of Grading (Site Preparation Phase): 7.5

Acres of Grading (Grading Phase): 45

Acres of Paving: 10.88

Residential Indoor: 556,875; Residential Outdoor: 185,625; Non-Residential Indoor: 945,000; Non-Residential Outdoor: 315,000; Striped Parking Area: 28,976 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Site Preparation	Rubber Tired Dozers	3	8.00	247	0.40
Site Preparation	Tractors/Loaders/Backhoes	4	8.00	97	0.37
Grading	Excavators	2	8.00	158	0.38
Grading	Graders	1	8.00	187	0.41
Grading	Rubber Tired Dozers	1	8.00	247	0.40
Grading	Scrapers	2	8.00	367	0.48

DiSC 2022 Constrution of Phase I - Yolo/Solano AQMD Air District, Summer

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

Grading	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Building Construction	Cranes	1	7.00	231	0.29
Building Construction	Forklifts	3	8.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes	3	7.00	97	0.37
Building Construction	Welders	1	8.00	46	0.45
Paving	Pavers	2	8.00	130	0.42
Paving	Paving Equipment	2	8.00	132	0.36
Paving	Rollers	2	8.00	80	0.38
Architectural Coating	Air Compressors	1	6.00	78	0.48

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Site Preparation	7	18.00	0.00	0.00	10.00	7.00	20.00	LD_Mix	HDT_Mix	HHDT
Grading	8	20.00	0.00	3,750.00	10.00	7.00	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	9	602.00	212.00	0.00	10.00	7.00	20.00	LD_Mix	HDT_Mix	HHDT
Paving	6	15.00	0.00	0.00	10.00	7.00	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	120.00	0.00	0.00	10.00	7.00	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

DiSC 2022 Constrution of Phase I - Yolo/Solano AQMD Air District, Summer

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

3.2 Site Preparation - 2023

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	lb/day										lb/day					
Fugitive Dust					19.6570	0.0000	19.6570	10.1025	0.0000	10.1025			0.0000			0.0000
Off-Road	2.6595	27.5242	18.2443	0.0381		1.2660	1.2660		1.1647	1.1647		3,687.3081	3,687.3081	1.1926		3,717.1219
Total	**2.6595**	**27.5242**	**18.2443**	**0.0381**	**19.6570**	**1.2660**	**20.9230**	**10.1025**	**1.1647**	**11.2672**		**3,687.3081**	**3,687.3081**	**1.1926**		**3,717.1219**

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	lb/day										lb/day					
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
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
Worker	0.0551	0.0278	0.4297	1.2600e-003	0.1369	7.0000e-004	0.1376	0.0363	6.4000e-004	0.0370		129.0826	129.0826	3.3800e-003	3.0800e-003	130.0855
Total	**0.0551**	**0.0278**	**0.4297**	**1.2600e-003**	**0.1369**	**7.0000e-004**	**0.1376**	**0.0363**	**6.4000e-004**	**0.0370**		**129.0826**	**129.0826**	**3.3800e-003**	**3.0800e-003**	**130.0855**

DiSC 2022 Constrution of Phase I - Yolo/Solano AQMD Air District, Summer

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

3.2 Site Preparation - 2023

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	lb/day										lb/day					
Fugitive Dust					19.6570	0.0000	19.6570	10.1025	0.0000	10.1025			0.0000			0.0000
Off-Road	2.6595	27.5242	18.2443	0.0381		1.2660	1.2660		1.1647	1.1647	0.0000	3,687.3081	3,687.3081	1.1926		3,717.1219
Total	**2.6595**	**27.5242**	**18.2443**	**0.0381**	**19.6570**	**1.2660**	**20.9230**	**10.1025**	**1.1647**	**11.2672**	**0.0000**	**3,687.3081**	**3,687.3081**	**1.1926**		**3,717.1219**

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	lb/day										lb/day					
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
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
Worker	0.0551	0.0278	0.4297	1.2600e-003	0.1369	7.0000e-004	0.1376	0.0363	6.4000e-004	0.0370		129.0826	129.0826	3.3800e-003	3.0800e-003	130.0855
Total	**0.0551**	**0.0278**	**0.4297**	**1.2600e-003**	**0.1369**	**7.0000e-004**	**0.1376**	**0.0363**	**6.4000e-004**	**0.0370**		**129.0826**	**129.0826**	**3.3800e-003**	**3.0800e-003**	**130.0855**

DiSC 2022 Constrution of Phase I - Yolo/Solano AQMD Air District, Summer

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

3.3 Grading - 2023

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	lb/day										lb/day					
Fugitive Dust					9.4298	0.0000	9.4298	3.6880	0.0000	3.6880			0.0000			0.0000
Off-Road	3.3217	34.5156	28.0512	0.0621		1.4245	1.4245		1.3105	1.3105		6,011.4777	6,011.4777	1.9442		6,060.0836
Total	**3.3217**	**34.5156**	**28.0512**	**0.0621**	**9.4298**	**1.4245**	**10.8543**	**3.6880**	**1.3105**	**4.9985**		**6,011.4777**	**6,011.4777**	**1.9442**		**6,060.0836**

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	lb/day										lb/day					
Hauling	0.5851	29.9917	6.9312	0.1497	4.3739	0.2902	4.6642	1.1990	0.2777	1.4767		15,844.1405	15,844.1405	0.0317	2.4901	16,586.9959
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
Worker	0.0612	0.0309	0.4775	1.4000e-003	0.1521	7.7000e-004	0.1529	0.0404	7.1000e-004	0.0411		143.4251	143.4251	3.7600e-003	3.4200e-003	144.5395
Total	**0.6463**	**30.0227**	**7.4087**	**0.1511**	**4.5261**	**0.2910**	**4.8171**	**1.2394**	**0.2784**	**1.5177**		**15,987.5656**	**15,987.5656**	**0.0355**	**2.4936**	**16,731.5353**

DiSC 2022 Constrution of Phase I - Yolo/Solano AQMD Air District, Summer

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

3.3 Grading - 2023

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	lb/day										lb/day					
Fugitive Dust					9.4298	0.0000	9.4298	3.6880	0.0000	3.6880			0.0000			0.0000
Off-Road	3.3217	34.5156	28.0512	0.0621		1.4245	1.4245		1.3105	1.3105	0.0000	6,011.4777	6,011.4777	1.9442		6,060.0836
Total	**3.3217**	**34.5156**	**28.0512**	**0.0621**	**9.4298**	**1.4245**	**10.8543**	**3.6880**	**1.3105**	**4.9985**	**0.0000**	**6,011.4777**	**6,011.4777**	**1.9442**		**6,060.0836**

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	lb/day										lb/day					
Hauling	0.5851	29.9917	6.9312	0.1497	4.3739	0.2902	4.6642	1.1990	0.2777	1.4767		15,844.1405	15,844.1405	0.0317	2.4901	16,586.9959
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
Worker	0.0612	0.0309	0.4775	1.4000e-003	0.1521	7.7000e-004	0.1529	0.0404	7.1000e-004	0.0411		143.4251	143.4251	3.7600e-003	3.4200e-003	144.5395
Total	**0.6463**	**30.0227**	**7.4087**	**0.1511**	**4.5261**	**0.2910**	**4.8171**	**1.2394**	**0.2784**	**1.5177**		**15,987.5656**	**15,987.5656**	**0.0355**	**2.4936**	**16,731.5353**

DiSC 2022 Constrution of Phase I - Yolo/Solano AQMD Air District, Summer

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

3.4 Paving - 2023

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	lb/day										lb/day					
Off-Road	1.0327	10.1917	14.5842	0.0228		0.5102	0.5102		0.4694	0.4694		2,207.5841	2,207.5841	0.7140		2,225.4336
Paving	3.8724					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**4.9051**	**10.1917**	**14.5842**	**0.0228**		**0.5102**	**0.5102**		**0.4694**	**0.4694**		**2,207.5841**	**2,207.5841**	**0.7140**		**2,225.4336**

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	lb/day										lb/day					
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
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
Worker	0.0459	0.0232	0.3581	1.0500e-003	0.1141	5.8000e-004	0.1147	0.0303	5.3000e-004	0.0308		107.5688	107.5688	2.8200e-003	2.5700e-003	108.4046
Total	**0.0459**	**0.0232**	**0.3581**	**1.0500e-003**	**0.1141**	**5.8000e-004**	**0.1147**	**0.0303**	**5.3000e-004**	**0.0308**		**107.5688**	**107.5688**	**2.8200e-003**	**2.5700e-003**	**108.4046**

DiSC 2022 Constrution of Phase I - Yolo/Solano AQMD Air District, Summer

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

3.4 Paving - 2023

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	lb/day										lb/day					
Off-Road	1.0327	10.1917	14.5842	0.0228		0.5102	0.5102		0.4694	0.4694	0.0000	2,207.5841	2,207.5841	0.7140		2,225.4336
Paving	3.8724					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**4.9051**	**10.1917**	**14.5842**	**0.0228**		**0.5102**	**0.5102**		**0.4694**	**0.4694**	**0.0000**	**2,207.5841**	**2,207.5841**	**0.7140**		**2,225.4336**

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	lb/day										lb/day					
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
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
Worker	0.0459	0.0232	0.3581	1.0500e-003	0.1141	5.8000e-004	0.1147	0.0303	5.3000e-004	0.0308		107.5688	107.5688	2.8200e-003	2.5700e-003	108.4046
Total	**0.0459**	**0.0232**	**0.3581**	**1.0500e-003**	**0.1141**	**5.8000e-004**	**0.1147**	**0.0303**	**5.3000e-004**	**0.0308**		**107.5688**	**107.5688**	**2.8200e-003**	**2.5700e-003**	**108.4046**

DiSC 2022 Constrution of Phase I - Yolo/Solano AQMD Air District, Summer

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

3.5 Building Construction - 2023

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	lb/day										lb/day					
Off-Road	1.5728	14.3849	16.2440	0.0269		0.6997	0.6997		0.6584	0.6584		2,555.2099	2,555.2099	0.6079		2,570.4061
Total	**1.5728**	**14.3849**	**16.2440**	**0.0269**		**0.6997**	**0.6997**		**0.6584**	**0.6584**		**2,555.2099**	**2,555.2099**	**0.6079**		**2,570.4061**

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	lb/day										lb/day					
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
Vendor	0.2283	8.5395	2.7794	0.0406	1.3772	0.0548	1.4321	0.3965	0.0525	0.4490		4,286.1702	4,286.1702	0.0126	0.6518	4,480.7232
Worker	1.8422	0.9311	14.3711	0.0422	4.5794	0.0233	4.6027	1.2147	0.0214	1.2362		4,317.0954	4,317.0954	0.1132	0.1031	4,350.6381
Total	**2.0705**	**9.4706**	**17.1505**	**0.0827**	**5.9566**	**0.0781**	**6.0348**	**1.6113**	**0.0739**	**1.6851**		**8,603.2656**	**8,603.2656**	**0.1258**	**0.7549**	**8,831.3613**

DiSC 2022 Constrution of Phase I - Yolo/Solano AQMD Air District, Summer

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

3.5 Building Construction - 2023

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	lb/day										lb/day					
Off-Road	1.5728	14.3849	16.2440	0.0269		0.6997	0.6997		0.6584	0.6584	0.0000	2,555.2099	2,555.2099	0.6079		2,570.4061
Total	**1.5728**	**14.3849**	**16.2440**	**0.0269**		**0.6997**	**0.6997**		**0.6584**	**0.6584**	**0.0000**	**2,555.2099**	**2,555.2099**	**0.6079**		**2,570.4061**

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	lb/day										lb/day					
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
Vendor	0.2283	8.5395	2.7794	0.0406	1.3772	0.0548	1.4321	0.3965	0.0525	0.4490		4,286.1702	4,286.1702	0.0126	0.6518	4,480.7232
Worker	1.8422	0.9311	14.3711	0.0422	4.5794	0.0233	4.6027	1.2147	0.0214	1.2362		4,317.0954	4,317.0954	0.1132	0.1031	4,350.6381
Total	**2.0705**	**9.4706**	**17.1505**	**0.0827**	**5.9566**	**0.0781**	**6.0348**	**1.6113**	**0.0739**	**1.6851**		**8,603.2656**	**8,603.2656**	**0.1258**	**0.7549**	**8,831.3613**

DiSC 2022 Constrution of Phase I - Yolo/Solano AQMD Air District, Summer

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

3.5 Building Construction - 2024

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.4716	13.4438	16.1668	0.0270		0.6133	0.6133		0.5769	0.5769		2,555.6989	2,555.6989	0.6044		2,570.8077
Total	**1.4716**	**13.4438**	**16.1668**	**0.0270**		**0.6133**	**0.6133**		**0.5769**	**0.5769**		**2,555.6989**	**2,555.6989**	**0.6044**		**2,570.8077**

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	lb/day										lb/day					
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
Vendor	0.2224	8.5240	2.7200	0.0398	1.3772	0.0550	1.4322	0.3965	0.0526	0.4491		4,205.6092	4,205.6092	0.0120	0.6400	4,396.6243
Worker	1.7119	0.8296	13.3709	0.0408	4.5794	0.0221	4.6015	1.2147	0.0204	1.2351		4,206.9236	4,206.9236	0.1023	0.0960	4,238.0968
Total	**1.9342**	**9.3536**	**16.0909**	**0.0806**	**5.9566**	**0.0771**	**6.0337**	**1.6112**	**0.0730**	**1.6842**		**8,412.5328**	**8,412.5328**	**0.1143**	**0.7360**	**8,634.7211**

DiSC 2022 Constrution of Phase I - Yolo/Solano AQMD Air District, Summer

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

3.5 Building Construction - 2024

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	lb/day										lb/day					
Off-Road	1.4716	13.4438	16.1668	0.0270		0.6133	0.6133		0.5769	0.5769	0.0000	2,555.6989	2,555.6989	0.6044		2,570.8077
Total	**1.4716**	**13.4438**	**16.1668**	**0.0270**		**0.6133**	**0.6133**		**0.5769**	**0.5769**	**0.0000**	**2,555.6989**	**2,555.6989**	**0.6044**		**2,570.8077**

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	lb/day										lb/day					
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
Vendor	0.2224	8.5240	2.7200	0.0398	1.3772	0.0550	1.4322	0.3965	0.0526	0.4491		4,205.6092	4,205.6092	0.0120	0.6400	4,396.6243
Worker	1.7119	0.8296	13.3709	0.0408	4.5794	0.0221	4.6015	1.2147	0.0204	1.2351		4,206.9236	4,206.9236	0.1023	0.0960	4,238.0968
Total	**1.9342**	**9.3536**	**16.0909**	**0.0806**	**5.9566**	**0.0771**	**6.0337**	**1.6112**	**0.0730**	**1.6842**		**8,412.5328**	**8,412.5328**	**0.1143**	**0.7360**	**8,634.7211**

DiSC 2022 Constrution of Phase I - Yolo/Solano AQMD Air District, Summer

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

3.5 Building Construction - 2025

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.3674	12.4697	16.0847	0.0270		0.5276	0.5276		0.4963	0.4963		2,556.4744	2,556.4744	0.6010		2,571.4981
Total	**1.3674**	**12.4697**	**16.0847**	**0.0270**		**0.5276**	**0.5276**		**0.4963**	**0.4963**		**2,556.4744**	**2,556.4744**	**0.6010**		**2,571.4981**

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	lb/day										lb/day					
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
Vendor	0.2175	8.4842	2.6709	0.0390	1.3771	0.0548	1.4319	0.3965	0.0524	0.4489		4,119.4621	4,119.4621	0.0116	0.6271	4,306.6248
Worker	1.5982	0.7452	12.5068	0.0394	4.5794	0.0211	4.6005	1.2147	0.0194	1.2342		4,102.9071	4,102.9071	0.0926	0.0899	4,132.0253
Total	**1.8157**	**9.2294**	**15.1777**	**0.0784**	**5.9565**	**0.0759**	**6.0324**	**1.6112**	**0.0718**	**1.6831**		**8,222.3692**	**8,222.3692**	**0.1042**	**0.7170**	**8,438.6501**

DiSC 2022 Constrution of Phase I - Yolo/Solano AQMD Air District, Summer

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

3.5 Building Construction - 2025

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	lb/day										lb/day					
Off-Road	1.3674	12.4697	16.0847	0.0270		0.5276	0.5276		0.4963	0.4963	0.0000	2,556.4744	2,556.4744	0.6010		2,571.4981
Total	**1.3674**	**12.4697**	**16.0847**	**0.0270**		**0.5276**	**0.5276**		**0.4963**	**0.4963**	**0.0000**	**2,556.4744**	**2,556.4744**	**0.6010**		**2,571.4981**

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	lb/day										lb/day					
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
Vendor	0.2175	8.4842	2.6709	0.0390	1.3771	0.0548	1.4319	0.3965	0.0524	0.4489		4,119.4621	4,119.4621	0.0116	0.6271	4,306.6248
Worker	1.5982	0.7452	12.5068	0.0394	4.5794	0.0211	4.6005	1.2147	0.0194	1.2342		4,102.9071	4,102.9071	0.0926	0.0899	4,132.0253
Total	**1.8157**	**9.2294**	**15.1777**	**0.0784**	**5.9565**	**0.0759**	**6.0324**	**1.6112**	**0.0718**	**1.6831**		**8,222.3692**	**8,222.3692**	**0.1042**	**0.7170**	**8,438.6501**

DiSC 2022 Constrution of Phase I - Yolo/Solano AQMD Air District, Summer

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

3.6 Architectural Coating - 2023

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	lb/day										lb/day					
Archit. Coating	9.8922					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.1917	1.3030	1.8111	2.9700e-003		0.0708	0.0708		0.0708	0.0708		281.4481	281.4481	0.0168		281.8690
Total	**10.0838**	**1.3030**	**1.8111**	**2.9700e-003**		**0.0708**	**0.0708**		**0.0708**	**0.0708**		**281.4481**	**281.4481**	**0.0168**		**281.8690**

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	lb/day										lb/day					
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
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
Worker	0.3672	0.1856	2.8647	8.4100e-003	0.9128	4.6400e-003	0.9175	0.2421	4.2700e-003	0.2464		860.5506	860.5506	0.0226	0.0205	867.2368
Total	**0.3672**	**0.1856**	**2.8647**	**8.4100e-003**	**0.9128**	**4.6400e-003**	**0.9175**	**0.2421**	**4.2700e-003**	**0.2464**		**860.5506**	**860.5506**	**0.0226**	**0.0205**	**867.2368**

DiSC 2022 Constrution of Phase I - Yolo/Solano AQMD Air District, Summer

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

3.6 Architectural Coating - 2023

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	lb/day										lb/day					
Archit. Coating	9.8922					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.1917	1.3030	1.8111	2.9700e-003		0.0708	0.0708		0.0708	0.0708	0.0000	281.4481	281.4481	0.0168		281.8690
Total	**10.0838**	**1.3030**	**1.8111**	**2.9700e-003**		**0.0708**	**0.0708**		**0.0708**	**0.0708**	**0.0000**	**281.4481**	**281.4481**	**0.0168**		**281.8690**

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	lb/day										lb/day					
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
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
Worker	0.3672	0.1856	2.8647	8.4100e-003	0.9128	4.6400e-003	0.9175	0.2421	4.2700e-003	0.2464		860.5506	860.5506	0.0226	0.0205	867.2368
Total	**0.3672**	**0.1856**	**2.8647**	**8.4100e-003**	**0.9128**	**4.6400e-003**	**0.9175**	**0.2421**	**4.2700e-003**	**0.2464**		**860.5506**	**860.5506**	**0.0226**	**0.0205**	**867.2368**

DiSC 2022 Constrution of Phase I - Yolo/Solano AQMD Air District, Summer

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

3.6 Architectural Coating - 2024

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	9.8922					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.1808	1.2188	1.8101	2.9700e-003		0.0609	0.0609		0.0609	0.0609		281.4481	281.4481	0.0159		281.8443
Total	**10.0729**	**1.2188**	**1.8101**	**2.9700e-003**		**0.0609**	**0.0609**		**0.0609**	**0.0609**		**281.4481**	**281.4481**	**0.0159**		**281.8443**

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	lb/day										lb/day					
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
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
Worker	0.3412	0.1654	2.6653	8.1300e-003	0.9128	4.4100e-003	0.9173	0.2421	4.0600e-003	0.2462		838.5894	838.5894	0.0204	0.0191	844.8034
Total	**0.3412**	**0.1654**	**2.6653**	**8.1300e-003**	**0.9128**	**4.4100e-003**	**0.9173**	**0.2421**	**4.0600e-003**	**0.2462**		**838.5894**	**838.5894**	**0.0204**	**0.0191**	**844.8034**

DiSC 2022 Constrution of Phase I - Yolo/Solano AQMD Air District, Summer

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

3.6 Architectural Coating - 2024

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	lb/day										lb/day					
Archit. Coating	9.8922					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.1808	1.2188	1.8101	2.9700e-003		0.0609	0.0609		0.0609	0.0609	0.0000	281.4481	281.4481	0.0159		281.8443
Total	**10.0729**	**1.2188**	**1.8101**	**2.9700e-003**		**0.0609**	**0.0609**		**0.0609**	**0.0609**	**0.0000**	**281.4481**	**281.4481**	**0.0159**		**281.8443**

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	lb/day										lb/day					
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
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
Worker	0.3412	0.1654	2.6653	8.1300e-003	0.9128	4.4100e-003	0.9173	0.2421	4.0600e-003	0.2462		838.5894	838.5894	0.0204	0.0191	844.8034
Total	**0.3412**	**0.1654**	**2.6653**	**8.1300e-003**	**0.9128**	**4.4100e-003**	**0.9173**	**0.2421**	**4.0600e-003**	**0.2462**		**838.5894**	**838.5894**	**0.0204**	**0.0191**	**844.8034**

DiSC 2022 Constrution of Phase I - Yolo/Solano AQMD Air District, Summer

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

3.6 Architectural Coating - 2025

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	9.8922					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.1709	1.1455	1.8091	2.9700e-003		0.0515	0.0515		0.0515	0.0515		281.4481	281.4481	0.0154		281.8319
Total	**10.0630**	**1.1455**	**1.8091**	**2.9700e-003**		**0.0515**	**0.0515**		**0.0515**	**0.0515**		**281.4481**	**281.4481**	**0.0154**		**281.8319**

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	lb/day										lb/day					
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
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
Worker	0.3186	0.1485	2.4931	7.8500e-003	0.9128	4.2100e-003	0.9171	0.2421	3.8800e-003	0.2460		817.8552	817.8552	0.0185	0.0179	823.6595
Total	**0.3186**	**0.1485**	**2.4931**	**7.8500e-003**	**0.9128**	**4.2100e-003**	**0.9171**	**0.2421**	**3.8800e-003**	**0.2460**		**817.8552**	**817.8552**	**0.0185**	**0.0179**	**823.6595**

DiSC 2022 Constrution of Phase I - Yolo/Solano AQMD Air District, Summer

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

3.6 Architectural Coating - 2025

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	lb/day										lb/day					
Archit. Coating	9.8922					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.1709	1.1455	1.8091	2.9700e-003		0.0515	0.0515		0.0515	0.0515	0.0000	281.4481	281.4481	0.0154		281.8319
Total	**10.0630**	**1.1455**	**1.8091**	**2.9700e-003**		**0.0515**	**0.0515**		**0.0515**	**0.0515**	**0.0000**	**281.4481**	**281.4481**	**0.0154**		**281.8319**

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	lb/day										lb/day					
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
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
Worker	0.3186	0.1485	2.4931	7.8500e-003	0.9128	4.2100e-003	0.9171	0.2421	3.8800e-003	0.2460		817.8552	817.8552	0.0185	0.0179	823.6595
Total	**0.3186**	**0.1485**	**2.4931**	**7.8500e-003**	**0.9128**	**4.2100e-003**	**0.9171**	**0.2421**	**3.8800e-003**	**0.2460**		**817.8552**	**817.8552**	**0.0185**	**0.0179**	**823.6595**

DiSC 2022 Constrution of Phase I - Yolo/Solano AQMD Air District, Summer

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

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	25.5817	28.0477	192.4244	0.4225	49.5378	0.2881	49.8259	13.2287	0.2705	13.4991		46,015.0991	46,015.0991	2.6453	2.3595	46,784.3507
Unmitigated	25.5817	28.0477	192.4244	0.4225	49.5378	0.2881	49.8259	13.2287	0.2705	13.4991		46,015.0991	46,015.0991	2.6453	2.3595	46,784.3507

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Apartments Mid Rise	995.52	898.53	748.47	2,483,523	2,483,523
Condo/Townhouse	673.44	748.88	577.76	1,759,692	1,759,692
Other Asphalt Surfaces	0.00	0.00	0.00		
Parking Lot	0.00	0.00	0.00		
Regional Shopping Center	3,020.00	3,689.60	1688.00	4,151,114	4,151,114
Research & Development	6,193.00	1,045.00	610.50	10,230,562	10,230,562
Unenclosed Parking with Elevator	0.00	0.00	0.00		
Total	10,881.96	6,382.01	3,624.73	18,624,891	18,624,891

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Apartments Mid Rise	10.00	5.00	7.00	46.00	13.00	41.00	86	11	3

DiSC 2022 Constrution of Phase I - Yolo/Solano AQMD Air District, Summer

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

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Condo/Townhouse	10.00	5.00	7.00	46.00	13.00	41.00	86	11	3
Other Asphalt Surfaces	10.00	5.00	7.00	0.00	0.00	0.00	0	0	0
Parking Lot	10.00	5.00	7.00	0.00	0.00	0.00	0	0	0
Regional Shopping Center	10.00	5.00	7.00	16.30	64.70	19.00	54	35	11
Research & Development	10.00	5.00	7.00	33.00	48.00	19.00	82	15	3
Unenclosed Parking with	10.00	5.00	7.00	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	0.534400	0.056822	0.179165	0.124517	0.023767	0.006150	0.026136	0.017163	0.000490	0.000694	0.027210	0.000627	0.002860
Condo/Townhouse	0.534400	0.056822	0.179165	0.124517	0.023767	0.006150	0.026136	0.017163	0.000490	0.000694	0.027210	0.000627	0.002860
Other Asphalt Surfaces	0.534400	0.056822	0.179165	0.124517	0.023767	0.006150	0.026136	0.017163	0.000490	0.000694	0.027210	0.000627	0.002860
Parking Lot	0.534400	0.056822	0.179165	0.124517	0.023767	0.006150	0.026136	0.017163	0.000490	0.000694	0.027210	0.000627	0.002860
Regional Shopping Center	0.534400	0.056822	0.179165	0.124517	0.023767	0.006150	0.026136	0.017163	0.000490	0.000694	0.027210	0.000627	0.002860
Research & Development	0.534400	0.056822	0.179165	0.124517	0.023767	0.006150	0.026136	0.017163	0.000490	0.000694	0.027210	0.000627	0.002860
Unenclosed Parking with Elevator	0.534400	0.056822	0.179165	0.124517	0.023767	0.006150	0.026136	0.017163	0.000490	0.000694	0.027210	0.000627	0.002860

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

DiSC 2022 Constrution of Phase I - Yolo/Solano AQMD Air District, Summer

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

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	0.4294	3.8479	2.8702	0.0234		0.2967	0.2967		0.2967	0.2967		4,684.3820	4,684.3820	0.0898	0.0859	4,712.2189
NaturalGas Unmitigated	0.4294	3.8479	2.8702	0.0234		0.2967	0.2967		0.2967	0.2967		4,684.3820	4,684.3820	0.0898	0.0859	4,712.2189

DiSC 2022 Constrution of Phase I - Yolo/Solano AQMD Air District, Summer

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

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Apartments Mid Rise	4721.01	0.0509	0.4351	0.1851	2.7800e-003		0.0352	0.0352		0.0352	0.0352		555.4134	555.4134	0.0107	0.0102	558.7140
Condo/Townhouse	4756.78	0.0513	0.4384	0.1865	2.8000e-003		0.0354	0.0354		0.0354	0.0354		559.6213	559.6213	0.0107	0.0103	562.9468
Other Asphalt Surfaces	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
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Regional Shopping Center	2538.08	0.0274	0.2488	0.2090	1.4900e-003		0.0189	0.0189		0.0189	0.0189		298.5979	298.5979	5.7200e-003	5.4700e-003	300.3723
Research & Development	27801.4	0.2998	2.7256	2.2895	0.0164		0.2072	0.2072		0.2072	0.2072		3,270.7494	3,270.7494	0.0627	0.0600	3,290.1858
Unenclosed 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
Total		**0.4294**	**3.8479**	**2.8702**	**0.0234**		**0.2967**	**0.2967**		**0.2967**	**0.2967**		**4,684.3820**	**4,684.3820**	**0.0898**	**0.0859**	**4,712.2189**

DiSC 2022 Constrution of Phase I - Yolo/Solano AQMD Air District, Summer

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

5.2 Energy by Land Use - NaturalGas

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	lb/day										lb/day					
Apartments Mid Rise	4.72101	0.0509	0.4351	0.1851	2.7800e-003		0.0352	0.0352		0.0352	0.0352		555.4134	555.4134	0.0107	0.0102	558.7140
Condo/Townhouse	4.75678	0.0513	0.4384	0.1865	2.8000e-003		0.0354	0.0354		0.0354	0.0354		559.6213	559.6213	0.0107	0.0103	562.9468
Other Asphalt Surfaces	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
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Regional Shopping Center	2.53808	0.0274	0.2488	0.2090	1.4900e-003		0.0189	0.0189		0.0189	0.0189		298.5979	298.5979	5.7200e-003	5.4700e-003	300.3723
Research & Development	27.8014	0.2998	2.7256	2.2895	0.0164		0.2072	0.2072		0.2072	0.2072		3,270.7494	3,270.7494	0.0627	0.0600	3,290.1858
Unenclosed 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
Total		**0.4294**	**3.8479**	**2.8702**	**0.0234**		**0.2967**	**0.2967**		**0.2967**	**0.2967**		**4,684.3820**	**4,684.3820**	**0.0898**	**0.0859**	**4,712.2189**

6.0 Area Detail

6.1 Mitigation Measures Area

DiSC 2022 Constrution of Phase I - Yolo/Solano AQMD Air District, Summer

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

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	645.1092	11.2559	793.3627	1.3931		108.1813	108.1813		108.1813	108.1813	11,352.3617	3,244.1810	14,596.5427	10.6496	0.8613	15,119.4505
Unmitigated	645.1092	11.2559	793.3627	1.3931		108.1813	108.1813		108.1813	108.1813	11,352.3617	3,244.1810	14,596.5427	10.6496	0.8613	15,119.4505

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	lb/day										lb/day					
Architectural Coating	1.6261					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	19.5381					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	623.2518	10.9934	770.5548	1.3919		108.0549	108.0549		108.0549	108.0549	11,352.3617	3,202.9412	14,555.3028	10.6096	0.8613	15,077.2126
Landscaping	0.6933	0.2625	22.8080	1.2100e-003		0.1265	0.1265		0.1265	0.1265		41.2398	41.2398	0.0399		42.2379
Total	**645.1092**	**11.2559**	**793.3627**	**1.3931**		**108.1813**	**108.1813**		**108.1813**	**108.1813**	**11,352.3617**	**3,244.1810**	**14,596.5427**	**10.6496**	**0.8613**	**15,119.4505**

DiSC 2022 Constrution of Phase I - Yolo/Solano AQMD Air District, Summer

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

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	lb/day										lb/day					
Architectural Coating	1.6261					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	19.5381					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	623.2518	10.9934	770.5548	1.3919		108.0549	108.0549		108.0549	108.0549	11,352.3617	3,202.9412	14,555.3028	10.6096	0.8613	15,077.2126
Landscaping	0.6933	0.2625	22.8080	1.2100e-003		0.1265	0.1265		0.1265	0.1265		41.2398	41.2398	0.0399		42.2379
Total	**645.1092**	**11.2559**	**793.3627**	**1.3931**		**108.1813**	**108.1813**		**108.1813**	**108.1813**	**11,352.3617**	**3,244.1810**	**14,596.5427**	**10.6496**	**0.8613**	**15,119.4505**

7.0 Water Detail

7.1 Mitigation Measures Water

DiSC 2022 Constrution of Phase I - Yolo/Solano AQMD Air District, Summer

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

8.0 Waste Detail

8.1 Mitigation Measures Waste

9.0 Operational Offroad

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

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

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

Boilers

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

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

DiSC 2022 Constrution of Phase I - Yolo/Solano AQMD Air District, Winter

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

DiSC 2022 Constrution of Phase I

Yolo/Solano AQMD Air District, Winter

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Research & Development	550.00	1000sqft	12.63	550,000.00	0
Other Asphalt Surfaces	0.60	Acre	0.60	26,136.00	0
Parking Lot	754.00	Space	6.79	301,600.00	0
Unenclosed Parking with Elevator	388.00	Space	3.49	155,200.00	0
Apartments Mid Rise	183.00	Dwelling Unit	4.82	183,000.00	523
Condo/Townhouse	92.00	Dwelling Unit	5.75	92,000.00	263
Regional Shopping Center	80.00	1000sqft	1.84	80,000.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	55
Climate Zone	2			**Operational Year**	2033
Utility Company	Pacific Gas and Electric Company				
CO2 Intensity (lb/MWhr)	203.98	**CH4 Intensity (lb/MWhr)**	0.033	**N2O Intensity (lb/MWhr)**	0.004

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use -

Construction Phase - Phase timing based on applicant-provided questionnaire.

Grading -

DiSC 2022 Constrution of Phase I - Yolo/Solano AQMD Air District, Winter

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

Table Name	Column Name	Default Value	New Value
tblConstructionPhase	NumDays	55.00	600.00
tblConstructionPhase	NumDays	740.00	600.00
tblConstructionPhase	NumDays	75.00	15.00
tblConstructionPhase	NumDays	55.00	5.00
tblConstructionPhase	NumDays	30.00	5.00
tblGrading	MaterialImported	0.00	30,000.00

2.0 Emissions Summary

DiSC 2022 Constrution of Phase I - Yolo/Solano AQMD Air District, Winter

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

2.1 Overall Construction (Maximum Daily Emission)

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	lb/day										lb/day					
2023	13.8812	67.0374	36.6152	0.2132	19.7939	1.7159	21.0607	10.1388	1.5893	11.3042	0.0000	22,006.1661	22,006.1661	1.9783	2.4976	22,799.9069
2024	13.6248	25.1156	35.4520	0.1138	6.8694	0.7560	7.6254	1.8534	0.7151	2.5684	0.0000	11,585.6056	11,585.6056	0.7756	0.7754	11,836.0634
2025	13.3838	23.8975	34.4201	0.1115	6.8693	0.6594	7.5287	1.8533	0.6237	2.4770	0.0000	11,388.9983	11,388.9983	0.7582	0.7539	11,632.6178
Maximum	**13.8812**	**67.0374**	**36.6152**	**0.2132**	**19.7939**	**1.7159**	**21.0607**	**10.1388**	**1.5893**	**11.3042**	**0.0000**	**22,006.1661**	**22,006.1661**	**1.9783**	**2.4976**	**22,799.9069**

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	lb/day										lb/day					
2023	13.8812	67.0374	36.6152	0.2132	19.7939	1.7159	21.0607	10.1388	1.5893	11.3042	0.0000	22,006.1661	22,006.1661	1.9783	2.4976	22,799.9069
2024	13.6248	25.1156	35.4520	0.1138	6.8694	0.7560	7.6254	1.8534	0.7151	2.5684	0.0000	11,585.6056	11,585.6056	0.7756	0.7754	11,836.0634
2025	13.3838	23.8975	34.4201	0.1115	6.8693	0.6594	7.5287	1.8533	0.6237	2.4770	0.0000	11,388.9983	11,388.9983	0.7582	0.7539	11,632.6178
Maximum	**13.8812**	**67.0374**	**36.6152**	**0.2132**	**19.7939**	**1.7159**	**21.0607**	**10.1388**	**1.5893**	**11.3042**	**0.0000**	**22,006.1661**	**22,006.1661**	**1.9783**	**2.4976**	**22,799.9069**

DiSC 2022 Constrution of Phase I - Yolo/Solano AQMD Air District, Winter

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

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

DiSC 2022 Constrution of Phase I - Yolo/Solano AQMD Air District, Winter

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

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	lb/day										lb/day					
Area	645.1092	11.2559	793.3627	1.3931		108.1813	108.1813		108.1813	108.1813	11,352.3617	3,244.1810	14,596.5427	10.6496	0.8613	15,119.4505
Energy	0.4294	3.8479	2.8702	0.0234		0.2967	0.2967		0.2967	0.2967		4,684.3820	4,684.3820	0.0898	0.0859	4,712.2189
Mobile	19.9703	32.0107	205.5857	0.3923	49.5378	0.2884	49.8263	13.2287	0.2708	13.4994		42,685.0533	42,685.0533	2.9894	2.5417	43,517.2266
Total	**665.5089**	**47.1145**	**1,001.8187**	**1.8088**	**49.5378**	**108.7665**	**158.3043**	**13.2287**	**108.7488**	**121.9775**	**11,352.3617**	**50,613.6162**	**61,965.9779**	**13.7287**	**3.4889**	**63,348.8959**

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	lb/day										lb/day					
Area	645.1092	11.2559	793.3627	1.3931		108.1813	108.1813		108.1813	108.1813	11,352.3617	3,244.1810	14,596.5427	10.6496	0.8613	15,119.4505
Energy	0.4294	3.8479	2.8702	0.0234		0.2967	0.2967		0.2967	0.2967		4,684.3820	4,684.3820	0.0898	0.0859	4,712.2189
Mobile	19.9703	32.0107	205.5857	0.3923	49.5378	0.2884	49.8263	13.2287	0.2708	13.4994		42,685.0533	42,685.0533	2.9894	2.5417	43,517.2266
Total	**665.5089**	**47.1145**	**1,001.8187**	**1.8088**	**49.5378**	**108.7665**	**158.3043**	**13.2287**	**108.7488**	**121.9775**	**11,352.3617**	**50,613.6162**	**61,965.9779**	**13.7287**	**3.4889**	**63,348.8959**

DiSC 2022 Constrution of Phase I - Yolo/Solano AQMD Air District, Winter

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

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Site Preparation	Site Preparation	6/1/2023	6/7/2023	5	5	
2	Grading	Grading	6/8/2023	6/28/2023	5	15	
3	Paving	Paving	6/29/2023	7/5/2023	5	5	
4	Building Construction	Building Construction	7/6/2023	10/22/2025	5	600	
5	Architectural Coating	Architectural Coating	7/20/2023	11/5/2025	5	600	

Acres of Grading (Site Preparation Phase): 7.5

Acres of Grading (Grading Phase): 45

Acres of Paving: 10.88

Residential Indoor: 556,875; Residential Outdoor: 185,625; Non-Residential Indoor: 945,000; Non-Residential Outdoor: 315,000; Striped Parking Area: 28,976 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Site Preparation	Rubber Tired Dozers	3	8.00	247	0.40
Site Preparation	Tractors/Loaders/Backhoes	4	8.00	97	0.37
Grading	Excavators	2	8.00	158	0.38
Grading	Graders	1	8.00	187	0.41
Grading	Rubber Tired Dozers	1	8.00	247	0.40
Grading	Scrapers	2	8.00	367	0.48

DiSC 2022 Constrution of Phase I - Yolo/Solano AQMD Air District, Winter

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

Grading	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Building Construction	Cranes	1	7.00	231	0.29
Building Construction	Forklifts	3	8.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes	3	7.00	97	0.37
Building Construction	Welders	1	8.00	46	0.45
Paving	Pavers	2	8.00	130	0.42
Paving	Paving Equipment	2	8.00	132	0.36
Paving	Rollers	2	8.00	80	0.38
Architectural Coating	Air Compressors	1	6.00	78	0.48

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Site Preparation	7	18.00	0.00	0.00	10.00	7.00	20.00	LD_Mix	HDT_Mix	HHDT
Grading	8	20.00	0.00	3,750.00	10.00	7.00	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	9	602.00	212.00	0.00	10.00	7.00	20.00	LD_Mix	HDT_Mix	HHDT
Paving	6	15.00	0.00	0.00	10.00	7.00	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	120.00	0.00	0.00	10.00	7.00	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

DiSC 2022 Constrution of Phase I - Yolo/Solano AQMD Air District, Winter

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

3.2 Site Preparation - 2023

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	lb/day										lb/day					
Fugitive Dust					19.6570	0.0000	19.6570	10.1025	0.0000	10.1025			0.0000			0.0000
Off-Road	2.6595	27.5242	18.2443	0.0381		1.2660	1.2660		1.1647	1.1647		3,687.3081	3,687.3081	1.1926		3,717.1219
Total	**2.6595**	**27.5242**	**18.2443**	**0.0381**	**19.6570**	**1.2660**	**20.9230**	**10.1025**	**1.1647**	**11.2672**		**3,687.3081**	**3,687.3081**	**1.1926**		**3,717.1219**

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	lb/day										lb/day					
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
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
Worker	0.0502	0.0348	0.3912	1.1300e-003	0.1369	7.0000e-004	0.1376	0.0363	6.4000e-004	0.0370		115.9565	115.9565	3.9600e-003	3.5800e-003	117.1211
Total	**0.0502**	**0.0348**	**0.3912**	**1.1300e-003**	**0.1369**	**7.0000e-004**	**0.1376**	**0.0363**	**6.4000e-004**	**0.0370**		**115.9565**	**115.9565**	**3.9600e-003**	**3.5800e-003**	**117.1211**

DiSC 2022 Constrution of Phase I - Yolo/Solano AQMD Air District, Winter

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

3.2 Site Preparation - 2023

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	lb/day										lb/day					
Fugitive Dust					19.6570	0.0000	19.6570	10.1025	0.0000	10.1025			0.0000			0.0000
Off-Road	2.6595	27.5242	18.2443	0.0381		1.2660	1.2660		1.1647	1.1647	0.0000	3,687.3081	3,687.3081	1.1926		3,717.1219
Total	**2.6595**	**27.5242**	**18.2443**	**0.0381**	**19.6570**	**1.2660**	**20.9230**	**10.1025**	**1.1647**	**11.2672**	**0.0000**	**3,687.3081**	**3,687.3081**	**1.1926**		**3,717.1219**

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	lb/day										lb/day					
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
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
Worker	0.0502	0.0348	0.3912	1.1300e-003	0.1369	7.0000e-004	0.1376	0.0363	6.4000e-004	0.0370		115.9565	115.9565	3.9600e-003	3.5800e-003	117.1211
Total	**0.0502**	**0.0348**	**0.3912**	**1.1300e-003**	**0.1369**	**7.0000e-004**	**0.1376**	**0.0363**	**6.4000e-004**	**0.0370**		**115.9565**	**115.9565**	**3.9600e-003**	**3.5800e-003**	**117.1211**

DiSC 2022 Constrution of Phase I - Yolo/Solano AQMD Air District, Winter

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

3.3 Grading - 2023

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	lb/day										lb/day					
Fugitive Dust					9.4298	0.0000	9.4298	3.6880	0.0000	3.6880			0.0000			0.0000
Off-Road	3.3217	34.5156	28.0512	0.0621		1.4245	1.4245		1.3105	1.3105		6,011.4777	6,011.4777	1.9442		6,060.0836
Total	**3.3217**	**34.5156**	**28.0512**	**0.0621**	**9.4298**	**1.4245**	**10.8543**	**3.6880**	**1.3105**	**4.9985**		**6,011.4777**	**6,011.4777**	**1.9442**		**6,060.0836**

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	lb/day										lb/day					
Hauling	0.5418	32.4832	7.0691	0.1499	4.3739	0.2907	4.6646	1.1990	0.2781	1.4771		15,865.8478	15,865.8478	0.0297	2.4936	16,609.6888
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
Worker	0.0558	0.0387	0.4346	1.2600e-003	0.1521	7.7000e-004	0.1529	0.0404	7.1000e-004	0.0411		128.8405	128.8405	4.4000e-003	3.9700e-003	130.1345
Total	**0.5976**	**32.5218**	**7.5037**	**0.1512**	**4.5261**	**0.2914**	**4.8175**	**1.2394**	**0.2788**	**1.5182**		**15,994.6883**	**15,994.6883**	**0.0341**	**2.4976**	**16,739.8234**

DiSC 2022 Constrution of Phase I - Yolo/Solano AQMD Air District, Winter

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

3.3 Grading - 2023

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	lb/day										lb/day					
Fugitive Dust					9.4298	0.0000	9.4298	3.6880	0.0000	3.6880			0.0000			0.0000
Off-Road	3.3217	34.5156	28.0512	0.0621		1.4245	1.4245		1.3105	1.3105	0.0000	6,011.4777	6,011.4777	1.9442		6,060.0836
Total	**3.3217**	**34.5156**	**28.0512**	**0.0621**	**9.4298**	**1.4245**	**10.8543**	**3.6880**	**1.3105**	**4.9985**	**0.0000**	**6,011.4777**	**6,011.4777**	**1.9442**		**6,060.0836**

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	lb/day										lb/day					
Hauling	0.5418	32.4832	7.0691	0.1499	4.3739	0.2907	4.6646	1.1990	0.2781	1.4771		15,865.8478	15,865.8478	0.0297	2.4936	16,609.6888
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
Worker	0.0558	0.0387	0.4346	1.2600e-003	0.1521	7.7000e-004	0.1529	0.0404	7.1000e-004	0.0411		128.8405	128.8405	4.4000e-003	3.9700e-003	130.1345
Total	**0.5976**	**32.5218**	**7.5037**	**0.1512**	**4.5261**	**0.2914**	**4.8175**	**1.2394**	**0.2788**	**1.5182**		**15,994.6883**	**15,994.6883**	**0.0341**	**2.4976**	**16,739.8234**

DiSC 2022 Constrution of Phase I - Yolo/Solano AQMD Air District, Winter

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

3.4 Paving - 2023

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	lb/day										lb/day					
Off-Road	1.0327	10.1917	14.5842	0.0228		0.5102	0.5102		0.4694	0.4694		2,207.5841	2,207.5841	0.7140		2,225.4336
Paving	3.8724					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**4.9051**	**10.1917**	**14.5842**	**0.0228**		**0.5102**	**0.5102**		**0.4694**	**0.4694**		**2,207.5841**	**2,207.5841**	**0.7140**		**2,225.4336**

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	lb/day										lb/day					
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
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
Worker	0.0418	0.0290	0.3260	9.4000e-004	0.1141	5.8000e-004	0.1147	0.0303	5.3000e-004	0.0308		96.6304	96.6304	3.3000e-003	2.9800e-003	97.6009
Total	**0.0418**	**0.0290**	**0.3260**	**9.4000e-004**	**0.1141**	**5.8000e-004**	**0.1147**	**0.0303**	**5.3000e-004**	**0.0308**		**96.6304**	**96.6304**	**3.3000e-003**	**2.9800e-003**	**97.6009**

DiSC 2022 Constrution of Phase I - Yolo/Solano AQMD Air District, Winter

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

3.4 Paving - 2023

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	lb/day										lb/day					
Off-Road	1.0327	10.1917	14.5842	0.0228		0.5102	0.5102		0.4694	0.4694	0.0000	2,207.5841	2,207.5841	0.7140		2,225.4336
Paving	3.8724					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**4.9051**	**10.1917**	**14.5842**	**0.0228**		**0.5102**	**0.5102**		**0.4694**	**0.4694**	**0.0000**	**2,207.5841**	**2,207.5841**	**0.7140**		**2,225.4336**

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	lb/day										lb/day					
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
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
Worker	0.0418	0.0290	0.3260	9.4000e-004	0.1141	5.8000e-004	0.1147	0.0303	5.3000e-004	0.0308		96.6304	96.6304	3.3000e-003	2.9800e-003	97.6009
Total	**0.0418**	**0.0290**	**0.3260**	**9.4000e-004**	**0.1141**	**5.8000e-004**	**0.1147**	**0.0303**	**5.3000e-004**	**0.0308**		**96.6304**	**96.6304**	**3.3000e-003**	**2.9800e-003**	**97.6009**

DiSC 2022 Constrution of Phase I - Yolo/Solano AQMD Air District, Winter

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

3.5 Building Construction - 2023

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	lb/day										lb/day					
Off-Road	1.5728	14.3849	16.2440	0.0269		0.6997	0.6997		0.6584	0.6584		2,555.2099	2,555.2099	0.6079		2,570.4061
Total	**1.5728**	**14.3849**	**16.2440**	**0.0269**		**0.6997**	**0.6997**		**0.6584**	**0.6584**		**2,555.2099**	**2,555.2099**	**0.6079**		**2,570.4061**

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	lb/day										lb/day					
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
Vendor	0.2114	9.2271	2.8701	0.0407	1.3772	0.0550	1.4323	0.3965	0.0527	0.4492		4,295.5342	4,295.5342	0.0118	0.6537	4,490.6434
Worker	1.6786	1.1644	13.0822	0.0379	4.5794	0.0233	4.6027	1.2147	0.0214	1.2362		3,878.0999	3,878.0999	0.1323	0.1196	3,917.0496
Total	**1.8900**	**10.3915**	**15.9524**	**0.0785**	**5.9566**	**0.0783**	**6.0350**	**1.6113**	**0.0741**	**1.6853**		**8,173.6341**	**8,173.6341**	**0.1442**	**0.7733**	**8,407.6930**

DiSC 2022 Constrution of Phase I - Yolo/Solano AQMD Air District, Winter

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

3.5 Building Construction - 2023

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	lb/day										lb/day					
Off-Road	1.5728	14.3849	16.2440	0.0269		0.6997	0.6997		0.6584	0.6584	0.0000	2,555.2099	2,555.2099	0.6079		2,570.4061
Total	**1.5728**	**14.3849**	**16.2440**	**0.0269**		**0.6997**	**0.6997**		**0.6584**	**0.6584**	**0.0000**	**2,555.2099**	**2,555.2099**	**0.6079**		**2,570.4061**

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	lb/day										lb/day					
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
Vendor	0.2114	9.2271	2.8701	0.0407	1.3772	0.0550	1.4323	0.3965	0.0527	0.4492		4,295.5342	4,295.5342	0.0118	0.6537	4,490.6434
Worker	1.6786	1.1644	13.0822	0.0379	4.5794	0.0233	4.6027	1.2147	0.0214	1.2362		3,878.0999	3,878.0999	0.1323	0.1196	3,917.0496
Total	**1.8900**	**10.3915**	**15.9524**	**0.0785**	**5.9566**	**0.0783**	**6.0350**	**1.6113**	**0.0741**	**1.6853**		**8,173.6341**	**8,173.6341**	**0.1442**	**0.7733**	**8,407.6930**

DiSC 2022 Constrution of Phase I - Yolo/Solano AQMD Air District, Winter

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

3.5 Building Construction - 2024

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.4716	13.4438	16.1668	0.0270		0.6133	0.6133		0.5769	0.5769		2,555.6989	2,555.6989	0.6044		2,570.8077
Total	**1.4716**	**13.4438**	**16.1668**	**0.0270**		**0.6133**	**0.6133**		**0.5769**	**0.5769**		**2,555.6989**	**2,555.6989**	**0.6044**		**2,570.8077**

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	lb/day										lb/day					
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
Vendor	0.2055	9.2096	2.8090	0.0399	1.3772	0.0552	1.4324	0.3965	0.0528	0.4493		4,214.8814	4,214.8814	0.0113	0.6418	4,406.4302
Worker	1.5632	1.0368	12.2285	0.0366	4.5794	0.0221	4.6015	1.2147	0.0204	1.2351		3,780.0741	3,780.0741	0.1202	0.1114	3,816.2642
Total	**1.7687**	**10.2464**	**15.0375**	**0.0765**	**5.9566**	**0.0773**	**6.0339**	**1.6112**	**0.0732**	**1.6844**		**7,994.9555**	**7,994.9555**	**0.1314**	**0.7532**	**8,222.6944**

DiSC 2022 Constrution of Phase I - Yolo/Solano AQMD Air District, Winter

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

3.5 Building Construction - 2024

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	lb/day										lb/day					
Off-Road	1.4716	13.4438	16.1668	0.0270		0.6133	0.6133		0.5769	0.5769	0.0000	2,555.6989	2,555.6989	0.6044		2,570.8077
Total	**1.4716**	**13.4438**	**16.1668**	**0.0270**		**0.6133**	**0.6133**		**0.5769**	**0.5769**	**0.0000**	**2,555.6989**	**2,555.6989**	**0.6044**		**2,570.8077**

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	lb/day										lb/day					
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
Vendor	0.2055	9.2096	2.8090	0.0399	1.3772	0.0552	1.4324	0.3965	0.0528	0.4493		4,214.8814	4,214.8814	0.0113	0.6418	4,406.4302
Worker	1.5632	1.0368	12.2285	0.0366	4.5794	0.0221	4.6015	1.2147	0.0204	1.2351		3,780.0741	3,780.0741	0.1202	0.1114	3,816.2642
Total	**1.7687**	**10.2464**	**15.0375**	**0.0765**	**5.9566**	**0.0773**	**6.0339**	**1.6112**	**0.0732**	**1.6844**		**7,994.9555**	**7,994.9555**	**0.1314**	**0.7532**	**8,222.6944**

DiSC 2022 Constrution of Phase I - Yolo/Solano AQMD Air District, Winter

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

3.5 Building Construction - 2025

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.3674	12.4697	16.0847	0.0270		0.5276	0.5276		0.4963	0.4963		2,556.4744	2,556.4744	0.6010		2,571.4981
Total	**1.3674**	**12.4697**	**16.0847**	**0.0270**		**0.5276**	**0.5276**		**0.4963**	**0.4963**		**2,556.4744**	**2,556.4744**	**0.6010**		**2,571.4981**

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	lb/day										lb/day					
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
Vendor	0.2007	9.1661	2.7583	0.0391	1.3771	0.0550	1.4321	0.3965	0.0526	0.4491		4,128.6096	4,128.6096	0.0108	0.6289	4,316.2868
Worker	1.4614	0.9307	11.4797	0.0354	4.5794	0.0211	4.6005	1.2147	0.0194	1.2342		3,687.4303	3,687.4303	0.1092	0.1043	3,721.2280
Total	**1.6621**	**10.0968**	**14.2380**	**0.0745**	**5.9565**	**0.0761**	**6.0326**	**1.6112**	**0.0720**	**1.6832**		**7,816.0400**	**7,816.0400**	**0.1201**	**0.7331**	**8,037.5148**

DiSC 2022 Constrution of Phase I - Yolo/Solano AQMD Air District, Winter

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

3.5 Building Construction - 2025

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	lb/day										lb/day					
Off-Road	1.3674	12.4697	16.0847	0.0270		0.5276	0.5276		0.4963	0.4963	0.0000	2,556.4744	2,556.4744	0.6010		2,571.4981
Total	**1.3674**	**12.4697**	**16.0847**	**0.0270**		**0.5276**	**0.5276**		**0.4963**	**0.4963**	**0.0000**	**2,556.4744**	**2,556.4744**	**0.6010**		**2,571.4981**

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	lb/day										lb/day					
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
Vendor	0.2007	9.1661	2.7583	0.0391	1.3771	0.0550	1.4321	0.3965	0.0526	0.4491		4,128.6096	4,128.6096	0.0108	0.6289	4,316.2868
Worker	1.4614	0.9307	11.4797	0.0354	4.5794	0.0211	4.6005	1.2147	0.0194	1.2342		3,687.4303	3,687.4303	0.1092	0.1043	3,721.2280
Total	**1.6621**	**10.0968**	**14.2380**	**0.0745**	**5.9565**	**0.0761**	**6.0326**	**1.6112**	**0.0720**	**1.6832**		**7,816.0400**	**7,816.0400**	**0.1201**	**0.7331**	**8,037.5148**

DiSC 2022 Constrution of Phase I - Yolo/Solano AQMD Air District, Winter

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

3.6 Architectural Coating - 2023

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	lb/day										lb/day					
Archit. Coating	9.8922					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.1917	1.3030	1.8111	2.9700e-003		0.0708	0.0708		0.0708	0.0708		281.4481	281.4481	0.0168		281.8690
Total	**10.0838**	**1.3030**	**1.8111**	**2.9700e-003**		**0.0708**	**0.0708**		**0.0708**	**0.0708**		**281.4481**	**281.4481**	**0.0168**		**281.8690**

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	lb/day										lb/day					
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
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
Worker	0.3346	0.2321	2.6078	7.5500e-003	0.9128	4.6400e-003	0.9175	0.2421	4.2700e-003	0.2464		773.0432	773.0432	0.0264	0.0238	780.8072
Total	**0.3346**	**0.2321**	**2.6078**	**7.5500e-003**	**0.9128**	**4.6400e-003**	**0.9175**	**0.2421**	**4.2700e-003**	**0.2464**		**773.0432**	**773.0432**	**0.0264**	**0.0238**	**780.8072**

DiSC 2022 Constrution of Phase I - Yolo/Solano AQMD Air District, Winter

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

3.6 Architectural Coating - 2023

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	lb/day										lb/day					
Archit. Coating	9.8922					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.1917	1.3030	1.8111	2.9700e-003		0.0708	0.0708		0.0708	0.0708	0.0000	281.4481	281.4481	0.0168		281.8690
Total	**10.0838**	**1.3030**	**1.8111**	**2.9700e-003**		**0.0708**	**0.0708**		**0.0708**	**0.0708**	**0.0000**	**281.4481**	**281.4481**	**0.0168**		**281.8690**

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	lb/day										lb/day					
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
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
Worker	0.3346	0.2321	2.6078	7.5500e-003	0.9128	4.6400e-003	0.9175	0.2421	4.2700e-003	0.2464		773.0432	773.0432	0.0264	0.0238	780.8072
Total	**0.3346**	**0.2321**	**2.6078**	**7.5500e-003**	**0.9128**	**4.6400e-003**	**0.9175**	**0.2421**	**4.2700e-003**	**0.2464**		**773.0432**	**773.0432**	**0.0264**	**0.0238**	**780.8072**

DiSC 2022 Constrution of Phase I - Yolo/Solano AQMD Air District, Winter

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

3.6 Architectural Coating - 2024

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	9.8922					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.1808	1.2188	1.8101	2.9700e-003		0.0609	0.0609		0.0609	0.0609		281.4481	281.4481	0.0159		281.8443
Total	**10.0729**	**1.2188**	**1.8101**	**2.9700e-003**		**0.0609**	**0.0609**		**0.0609**	**0.0609**		**281.4481**	**281.4481**	**0.0159**		**281.8443**

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	lb/day										lb/day					
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
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
Worker	0.3116	0.2067	2.4376	7.3000e-003	0.9128	4.4100e-003	0.9173	0.2421	4.0600e-003	0.2462		753.5031	753.5031	0.0240	0.0222	760.7171
Total	**0.3116**	**0.2067**	**2.4376**	**7.3000e-003**	**0.9128**	**4.4100e-003**	**0.9173**	**0.2421**	**4.0600e-003**	**0.2462**		**753.5031**	**753.5031**	**0.0240**	**0.0222**	**760.7171**

DiSC 2022 Constrution of Phase I - Yolo/Solano AQMD Air District, Winter

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

3.6 Architectural Coating - 2024

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	lb/day										lb/day					
Archit. Coating	9.8922					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.1808	1.2188	1.8101	2.9700e-003		0.0609	0.0609		0.0609	0.0609	0.0000	281.4481	281.4481	0.0159		281.8443
Total	**10.0729**	**1.2188**	**1.8101**	**2.9700e-003**		**0.0609**	**0.0609**		**0.0609**	**0.0609**	**0.0000**	**281.4481**	**281.4481**	**0.0159**		**281.8443**

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	lb/day										lb/day					
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
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
Worker	0.3116	0.2067	2.4376	7.3000e-003	0.9128	4.4100e-003	0.9173	0.2421	4.0600e-003	0.2462		753.5031	753.5031	0.0240	0.0222	760.7171
Total	**0.3116**	**0.2067**	**2.4376**	**7.3000e-003**	**0.9128**	**4.4100e-003**	**0.9173**	**0.2421**	**4.0600e-003**	**0.2462**		**753.5031**	**753.5031**	**0.0240**	**0.0222**	**760.7171**

DiSC 2022 Constrution of Phase I - Yolo/Solano AQMD Air District, Winter

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

3.6 Architectural Coating - 2025

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	9.8922					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.1709	1.1455	1.8091	2.9700e-003		0.0515	0.0515		0.0515	0.0515		281.4481	281.4481	0.0154		281.8319
Total	**10.0630**	**1.1455**	**1.8091**	**2.9700e-003**		**0.0515**	**0.0515**		**0.0515**	**0.0515**		**281.4481**	**281.4481**	**0.0154**		**281.8319**

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	lb/day										lb/day					
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
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
Worker	0.2913	0.1855	2.2883	7.0600e-003	0.9128	4.2100e-003	0.9171	0.2421	3.8800e-003	0.2460		735.0360	735.0360	0.0218	0.0208	741.7730
Total	**0.2913**	**0.1855**	**2.2883**	**7.0600e-003**	**0.9128**	**4.2100e-003**	**0.9171**	**0.2421**	**3.8800e-003**	**0.2460**		**735.0360**	**735.0360**	**0.0218**	**0.0208**	**741.7730**

DiSC 2022 Constrution of Phase I - Yolo/Solano AQMD Air District, Winter

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

3.6 Architectural Coating - 2025

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	lb/day										lb/day					
Archit. Coating	9.8922					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.1709	1.1455	1.8091	2.9700e-003		0.0515	0.0515		0.0515	0.0515	0.0000	281.4481	281.4481	0.0154		281.8319
Total	**10.0630**	**1.1455**	**1.8091**	**2.9700e-003**		**0.0515**	**0.0515**		**0.0515**	**0.0515**	**0.0000**	**281.4481**	**281.4481**	**0.0154**		**281.8319**

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	lb/day										lb/day					
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
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
Worker	0.2913	0.1855	2.2883	7.0600e-003	0.9128	4.2100e-003	0.9171	0.2421	3.8800e-003	0.2460		735.0360	735.0360	0.0218	0.0208	741.7730
Total	**0.2913**	**0.1855**	**2.2883**	**7.0600e-003**	**0.9128**	**4.2100e-003**	**0.9171**	**0.2421**	**3.8800e-003**	**0.2460**		**735.0360**	**735.0360**	**0.0218**	**0.0208**	**741.7730**

DiSC 2022 Constrution of Phase I - Yolo/Solano AQMD Air District, Winter

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

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	19.9703	32.0107	205.5857	0.3923	49.5378	0.2884	49.8263	13.2287	0.2708	13.4994		42,685.0533	42,685.0533	2.9894	2.5417	43,517.2266
Unmitigated	19.9703	32.0107	205.5857	0.3923	49.5378	0.2884	49.8263	13.2287	0.2708	13.4994		42,685.0533	42,685.0533	2.9894	2.5417	43,517.2266

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Apartments Mid Rise	995.52	898.53	748.47	2,483,523	2,483,523
Condo/Townhouse	673.44	748.88	577.76	1,759,692	1,759,692
Other Asphalt Surfaces	0.00	0.00	0.00		
Parking Lot	0.00	0.00	0.00		
Regional Shopping Center	3,020.00	3,689.60	1688.00	4,151,114	4,151,114
Research & Development	6,193.00	1,045.00	610.50	10,230,562	10,230,562
Unenclosed Parking with Elevator	0.00	0.00	0.00		
Total	10,881.96	6,382.01	3,624.73	18,624,891	18,624,891

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Apartments Mid Rise	10.00	5.00	7.00	46.00	13.00	41.00	86	11	3

DiSC 2022 Constrution of Phase I - Yolo/Solano AQMD Air District, Winter

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

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Condo/Townhouse	10.00	5.00	7.00	46.00	13.00	41.00	86	11	3
Other Asphalt Surfaces	10.00	5.00	7.00	0.00	0.00	0.00	0	0	0
Parking Lot	10.00	5.00	7.00	0.00	0.00	0.00	0	0	0
Regional Shopping Center	10.00	5.00	7.00	16.30	64.70	19.00	54	35	11
Research & Development	10.00	5.00	7.00	33.00	48.00	19.00	82	15	3
Unenclosed Parking with	10.00	5.00	7.00	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	0.534400	0.056822	0.179165	0.124517	0.023767	0.006150	0.026136	0.017163	0.000490	0.000694	0.027210	0.000627	0.002860
Condo/Townhouse	0.534400	0.056822	0.179165	0.124517	0.023767	0.006150	0.026136	0.017163	0.000490	0.000694	0.027210	0.000627	0.002860
Other Asphalt Surfaces	0.534400	0.056822	0.179165	0.124517	0.023767	0.006150	0.026136	0.017163	0.000490	0.000694	0.027210	0.000627	0.002860
Parking Lot	0.534400	0.056822	0.179165	0.124517	0.023767	0.006150	0.026136	0.017163	0.000490	0.000694	0.027210	0.000627	0.002860
Regional Shopping Center	0.534400	0.056822	0.179165	0.124517	0.023767	0.006150	0.026136	0.017163	0.000490	0.000694	0.027210	0.000627	0.002860
Research & Development	0.534400	0.056822	0.179165	0.124517	0.023767	0.006150	0.026136	0.017163	0.000490	0.000694	0.027210	0.000627	0.002860
Unenclosed Parking with Elevator	0.534400	0.056822	0.179165	0.124517	0.023767	0.006150	0.026136	0.017163	0.000490	0.000694	0.027210	0.000627	0.002860

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

DiSC 2022 Constrution of Phase I - Yolo/Solano AQMD Air District, Winter

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

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	0.4294	3.8479	2.8702	0.0234		0.2967	0.2967		0.2967	0.2967		4,684.3820	4,684.3820	0.0898	0.0859	4,712.2189
NaturalGas Unmitigated	0.4294	3.8479	2.8702	0.0234		0.2967	0.2967		0.2967	0.2967		4,684.3820	4,684.3820	0.0898	0.0859	4,712.2189

DiSC 2022 Constrution of Phase I - Yolo/Solano AQMD Air District, Winter

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

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Apartments Mid Rise	4721.01	0.0509	0.4351	0.1851	2.7800e-003		0.0352	0.0352		0.0352	0.0352		555.4134	555.4134	0.0107	0.0102	558.7140
Condo/Townhouse	4756.78	0.0513	0.4384	0.1865	2.8000e-003		0.0354	0.0354		0.0354	0.0354		559.6213	559.6213	0.0107	0.0103	562.9468
Other Asphalt Surfaces	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
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Regional Shopping Center	2538.08	0.0274	0.2488	0.2090	1.4900e-003		0.0189	0.0189		0.0189	0.0189		298.5979	298.5979	5.7200e-003	5.4700e-003	300.3723
Research & Development	27801.4	0.2998	2.7256	2.2895	0.0164		0.2072	0.2072		0.2072	0.2072		3,270.7494	3,270.7494	0.0627	0.0600	3,290.1858
Unenclosed 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
Total		**0.4294**	**3.8479**	**2.8702**	**0.0234**		**0.2967**	**0.2967**		**0.2967**	**0.2967**		**4,684.3820**	**4,684.3820**	**0.0898**	**0.0859**	**4,712.2189**

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

5.2 Energy by Land Use - NaturalGas

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	lb/day										lb/day					
Apartments Mid Rise	4.72101	0.0509	0.4351	0.1851	2.7800e-003		0.0352	0.0352		0.0352	0.0352		555.4134	555.4134	0.0107	0.0102	558.7140
Condo/Townhouse	4.75678	0.0513	0.4384	0.1865	2.8000e-003		0.0354	0.0354		0.0354	0.0354		559.6213	559.6213	0.0107	0.0103	562.9468
Other Asphalt Surfaces	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
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Regional Shopping Center	2.53808	0.0274	0.2488	0.2090	1.4900e-003		0.0189	0.0189		0.0189	0.0189		298.5979	298.5979	5.7200e-003	5.4700e-003	300.3723
Research & Development	27.8014	0.2998	2.7256	2.2895	0.0164		0.2072	0.2072		0.2072	0.2072		3,270.7494	3,270.7494	0.0627	0.0600	3,290.1858
Unenclosed 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
Total		**0.4294**	**3.8479**	**2.8702**	**0.0234**		**0.2967**	**0.2967**		**0.2967**	**0.2967**		**4,684.3820**	**4,684.3820**	**0.0898**	**0.0859**	**4,712.2189**

6.0 Area Detail

6.1 Mitigation Measures Area

DiSC 2022 Constrution of Phase I - Yolo/Solano AQMD Air District, Winter

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

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	645.1092	11.2559	793.3627	1.3931		108.1813	108.1813		108.1813	108.1813	11,352.3617	3,244.1810	14,596.5427	10.6496	0.8613	15,119.4505
Unmitigated	645.1092	11.2559	793.3627	1.3931		108.1813	108.1813		108.1813	108.1813	11,352.3617	3,244.1810	14,596.5427	10.6496	0.8613	15,119.4505

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	lb/day										lb/day					
Architectural Coating	1.6261					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	19.5381					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	623.2518	10.9934	770.5548	1.3919		108.0549	108.0549		108.0549	108.0549	11,352.3617	3,202.9412	14,555.3028	10.6096	0.8613	15,077.2126
Landscaping	0.6933	0.2625	22.8080	1.2100e-003		0.1265	0.1265		0.1265	0.1265		41.2398	41.2398	0.0399		42.2379
Total	**645.1092**	**11.2559**	**793.3627**	**1.3931**		**108.1813**	**108.1813**		**108.1813**	**108.1813**	**11,352.3617**	**3,244.1810**	**14,596.5427**	**10.6496**	**0.8613**	**15,119.4505**

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	lb/day										lb/day					
Architectural Coating	1.6261					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	19.5381					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	623.2518	10.9934	770.5548	1.3919		108.0549	108.0549		108.0549	108.0549	11,352.3617	3,202.9412	14,555.3028	10.6096	0.8613	15,077.2126
Landscaping	0.6933	0.2625	22.8080	1.2100e-003		0.1265	0.1265		0.1265	0.1265		41.2398	41.2398	0.0399		42.2379
Total	**645.1092**	**11.2559**	**793.3627**	**1.3931**		**108.1813**	**108.1813**		**108.1813**	**108.1813**	**11,352.3617**	**3,244.1810**	**14,596.5427**	**10.6496**	**0.8613**	**15,119.4505**

7.0 Water Detail

7.1 Mitigation Measures Water

DiSC 2022 Constrution of Phase I - Yolo/Solano AQMD Air District, Winter

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

8.0 Waste Detail

8.1 Mitigation Measures Waste

9.0 Operational Offroad

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

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

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

Boilers

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

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

DiSC 2022 Constrution of Phase I

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

Yolo/Solano AQMD Air District, Mitigation Report

Construction Mitigation Summary

Phase	ROG	NOx	CO	SO2	Exhaust PM10	Exhaust PM2.5	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction												
Architectural Coating	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Building Construction	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Grading	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Paving	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Site Preparation	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

OFFROAD Equipment Mitigation

DiSC 2022 Constrution of Phase I

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

Equipment Type	Fuel Type	Tier	Number Mitigated	Total Number of Equipment	DPF	Oxidation Catalyst
Air Compressors	Diesel	No Change	0	1	No Change	0.00
Cranes	Diesel	No Change	0	1	No Change	0.00
Excavators	Diesel	No Change	0	2	No Change	0.00
Forklifts	Diesel	No Change	0	3	No Change	0.00
Generator Sets	Diesel	No Change	0	1	No Change	0.00
Graders	Diesel	No Change	0	1	No Change	0.00
Pavers	Diesel	No Change	0	2	No Change	0.00
Paving Equipment	Diesel	No Change	0	2	No Change	0.00
Rollers	Diesel	No Change	0	2	No Change	0.00
Rubber Tired Dozers	Diesel	No Change	0	4	No Change	0.00
Scrapers	Diesel	No Change	0	2	No Change	0.00
Tractors/Loaders/Backhoes	Diesel	No Change	0	9	No Change	0.00
Welders	Diesel	No Change	0	1	No Change	0.00

DiSC 2022 Constrution of Phase I

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

Equipment Type	ROG	NOx	CO	SO2	Exhaust PM10	Exhaust PM2.5	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
	Unmitigated tons/yr						Unmitigated mt/yr					
Air Compressors	5.37700E-002	3.62470E-001	5.42990E-001	8.90000E-004	1.78100E-002	1.78100E-002	0.00000E+000	7.65976E+001	7.65976E+001	4.32000E-003	0.00000E+000	7.67055E+001
Cranes	8.64300E-002	9.06120E-001	4.65650E-001	1.51000E-003	3.80000E-002	3.49600E-002	0.00000E+000	1.33074E+002	1.33074E+002	4.30400E-002	0.00000E+000	1.34150E+002
Excavators	2.83000E-003	2.32300E-002	4.88700E-002	8.00000E-005	1.14000E-003	1.05000E-003	0.00000E+000	6.80532E+000	6.80532E+000	2.20000E-003	0.00000E+000	6.86035E+000
Forklifts	8.40500E-002	7.89110E-001	1.02466E+000	1.38000E-003	4.52200E-002	4.16000E-002	0.00000E+000	1.20862E+002	1.20862E+002	3.90900E-002	0.00000E+000	1.21839E+002
Generator Sets	8.48700E-002	7.58490E-001	1.09905E+000	1.97000E-003	3.27100E-002	3.27100E-002	0.00000E+000	1.69562E+002	1.69562E+002	6.78000E-003	0.00000E+000	1.69732E+002
Graders	2.88000E-003	3.49000E-002	1.26900E-002	5.00000E-005	1.13000E-003	1.04000E-003	0.00000E+000	4.36031E+000	4.36031E+000	1.41000E-003	0.00000E+000	4.39556E+000
Pavers	9.60000E-004	9.41000E-003	1.44200E-002	2.00000E-005	4.40000E-004	4.10000E-004	0.00000E+000	2.06483E+000	2.06483E+000	6.70000E-004	0.00000E+000	2.08153E+000
Paving Equipment	8.50000E-004	8.01000E-003	1.27800E-002	2.00000E-005	3.90000E-004	3.60000E-004	0.00000E+000	1.78927E+000	1.78927E+000	5.80000E-004	0.00000E+000	1.80374E+000
Rollers	7.70000E-004	8.05000E-003	9.26000E-003	1.00000E-005	4.40000E-004	4.10000E-004	0.00000E+000	1.15261E+000	1.15261E+000	3.70000E-004	0.00000E+000	1.16193E+000
Rubber Tired Dozers	1.02700E-002	1.06910E-001	4.66000E-002	1.30000E-004	4.81000E-003	4.43000E-003	0.00000E+000	1.12536E+001	1.12536E+001	3.64000E-003	0.00000E+000	1.13446E+001
Scrapers	1.18000E-002	1.24250E-001	9.20600E-002	2.30000E-004	4.87000E-003	4.48000E-003	0.00000E+000	2.00052E+001	2.00052E+001	6.47000E-003	0.00000E+000	2.01669E+001
Tractors/Loaders/ Backhoes	1.15100E-001	1.16213E+000	1.81396E+000	2.53000E-003	5.23700E-002	4.81800E-002	0.00000E+000	2.22468E+002	2.22468E+002	7.19500E-002	0.00000E+000	2.24267E+002
Welders	7.02400E-002	4.12670E-001	4.98740E-001	7.70000E-004	1.40300E-002	1.40300E-002	0.00000E+000	5.64662E+001	5.64662E+001	5.71000E-003	0.00000E+000	5.66089E+001

DiSC 2022 Constrution of Phase I

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

Equipment Type	ROG	NOx	CO	SO2	Exhaust PM10	Exhaust PM2.5	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
	Mitigated tons/yr						Mitigated mt/yr					
Air Compressors	5.37700E-002	3.62470E-001	5.42990E-001	8.90000E-004	1.78100E-002	1.78100E-002	0.00000E+000	7.65975E+001	7.65975E+001	4.32000E-003	0.00000E+000	7.67054E+001
Cranes	8.64300E-002	9.06120E-001	4.65650E-001	1.51000E-003	3.80000E-002	3.49600E-002	0.00000E+000	1.33074E+002	1.33074E+002	4.30400E-002	0.00000E+000	1.34150E+002
Excavators	2.83000E-003	2.32300E-002	4.88700E-002	8.00000E-005	1.14000E-003	1.05000E-003	0.00000E+000	6.80531E+000	6.80531E+000	2.20000E-003	0.00000E+000	6.86034E+000
Forklifts	8.40500E-002	7.89110E-001	1.02466E+000	1.38000E-003	4.52200E-002	4.16000E-002	0.00000E+000	1.20862E+002	1.20862E+002	3.90900E-002	0.00000E+000	1.21839E+002
Generator Sets	8.48700E-002	7.58490E-001	1.09905E+000	1.97000E-003	3.27100E-002	3.27100E-002	0.00000E+000	1.69562E+002	1.69562E+002	6.78000E-003	0.00000E+000	1.69732E+002
Graders	2.88000E-003	3.49000E-002	1.26900E-002	5.00000E-005	1.13000E-003	1.04000E-003	0.00000E+000	4.36030E+000	4.36030E+000	1.41000E-003	0.00000E+000	4.39556E+000
Pavers	9.60000E-004	9.41000E-003	1.44200E-002	2.00000E-005	4.40000E-004	4.10000E-004	0.00000E+000	2.06483E+000	2.06483E+000	6.70000E-004	0.00000E+000	2.08152E+000
Paving Equipment	8.50000E-004	8.01000E-003	1.27800E-002	2.00000E-005	3.90000E-004	3.60000E-004	0.00000E+000	1.78927E+000	1.78927E+000	5.80000E-004	0.00000E+000	1.80374E+000
Rollers	7.70000E-004	8.05000E-003	9.26000E-003	1.00000E-005	4.40000E-004	4.10000E-004	0.00000E+000	1.15261E+000	1.15261E+000	3.70000E-004	0.00000E+000	1.16193E+000
Rubber Tired Dozers	1.02700E-002	1.06910E-001	4.66000E-002	1.30000E-004	4.81000E-003	4.43000E-003	0.00000E+000	1.12536E+001	1.12536E+001	3.64000E-003	0.00000E+000	1.13446E+001
Scrapers	1.18000E-002	1.24250E-001	9.20600E-002	2.30000E-004	4.87000E-003	4.48000E-003	0.00000E+000	2.00052E+001	2.00052E+001	6.47000E-003	0.00000E+000	2.01669E+001
Tractors/Loaders/Backhoes	1.15100E-001	1.16212E+000	1.81396E+000	2.53000E-003	5.23700E-002	4.81800E-002	0.00000E+000	2.22468E+002	2.22468E+002	7.19500E-002	0.00000E+000	2.24267E+002
Welders	7.02400E-002	4.12670E-001	4.98740E-001	7.70000E-004	1.40300E-002	1.40300E-002	0.00000E+000	5.64661E+001	5.64661E+001	5.71000E-003	0.00000E+000	5.66088E+001

DiSC 2022 Constrution of Phase I

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

Equipment Type	ROG	NOx	CO	SO2	Exhaust PM10	Exhaust PM2.5	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction												
Air Compressors	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	1.17497E-006	1.17497E-006	0.00000E+000	0.00000E+000	1.17332E-006
Cranes	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	1.12719E-006	1.12719E-006	0.00000E+000	0.00000E+000	1.19269E-006
Excavators	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	1.46944E-006	1.46944E-006	0.00000E+000	0.00000E+000	1.45765E-006
Forklifts	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	1.15834E-006	1.15834E-006	0.00000E+000	0.00000E+000	1.14905E-006
Generator Sets	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	1.23848E-006	1.23848E-006	0.00000E+000	0.00000E+000	1.17833E-006
Graders	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	2.29341E-006	2.29341E-006	0.00000E+000	0.00000E+000	0.00000E+000
Pavers	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	4.80416E-006
Paving Equipment	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000
Rollers	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000
Rubber Tired Dozers	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	1.77720E-006	1.77720E-006	0.00000E+000	0.00000E+000	1.76295E-006
Scrapers	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	1.49961E-006	1.49961E-006	0.00000E+000	0.00000E+000	1.48758E-006
Tractors/Loaders/Backhoes	0.00000E+000	8.60489E-006	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	1.16871E-006	1.16871E-006	0.00000E+000	0.00000E+000	1.20392E-006
Welders	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	1.23968E-006	1.23968E-006	0.00000E+000	0.00000E+000	1.23656E-006

Fugitive Dust Mitigation

Yes/No	Mitigation Measure	Mitigation Input		Mitigation Input		Mitigation Input	
No	Soil Stabilizer for unpaved Roads	PM10 Reduction		PM2.5 Reduction			

DiSC 2022 Constrution of Phase I

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

No	Replace Ground Cover of Area Disturbed	PM10 Reduction		PM2.5 Reduction			
No	Water Exposed Area	PM10 Reduction		PM2.5 Reduction		Frequency (per day)	
No	Unpaved Road Mitigation	Moisture Content %		Vehicle Speed (mph)	0.00		
No	Clean Paved Road	% PM Reduction	0.00				

		Unmitigated		Mitigated		Percent Reduction	
Phase	Source	PM10	PM2.5	PM10	PM2.5	PM10	PM2.5
Architectural Coating	Fugitive Dust	0.00	0.00	0.00	0.00	0.00	0.00
Architectural Coating	Roads	0.26	0.07	0.26	0.07	0.00	0.00
Building Construction	Fugitive Dust	0.00	0.00	0.00	0.00	0.00	0.00
Building Construction	Roads	1.73	0.47	1.73	0.47	0.00	0.00
Grading	Fugitive Dust	0.07	0.03	0.07	0.03	0.00	0.00
Grading	Roads	0.03	0.01	0.03	0.01	0.00	0.00
Paving	Fugitive Dust	0.00	0.00	0.00	0.00	0.00	0.00
Paving	Roads	0.00	0.00	0.00	0.00	0.00	0.00
Site Preparation	Fugitive Dust	0.05	0.03	0.05	0.03	0.00	0.00
Site Preparation	Roads	0.00	0.00	0.00	0.00	0.00	0.00

Operational Percent Reduction Summary

DiSC 2022 Constrution of Phase I

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

Category	ROG	NOx	CO	SO2	Exhaust PM10	Exhaust PM2.5	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction												
Architectural Coating	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Consumer Products	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hearth	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Landscaping	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Mobile	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Natural Gas	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Water Indoor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Water Outdoor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Operational Mobile Mitigation

Project Setting:

Mitigation	Category	Measure	% Reduction	Input Value 1	Input Value 2	Input Value 3
No	Land Use	Increase Density	0.00			
No	Land Use	Increase Diversity	0.20	0.48		
No	Land Use	Improve Walkability Design	0.00			
No	Land Use	Improve Destination Accessibility	0.00			
No	Land Use	Increase Transit Accessibility	0.25			
No	Land Use	Integrate Below Market Rate Housing	0.00			
	Land Use	Land Use SubTotal	0.00			

DiSC 2022 Constrution of Phase I

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

No	Neighborhood Enhancements	Improve Pedestrian Network				
No	Neighborhood Enhancements	Provide Traffic Calming Measures				
No	Neighborhood Enhancements	Implement NEV Network	0.00			
	Neighborhood Enhancements	Neighborhood Enhancements Subtotal	0.00			
No	Parking Policy Pricing	Limit Parking Supply	0.00			
No	Parking Policy Pricing	Unbundle Parking Costs	0.00			
No	Parking Policy Pricing	On-street Market Pricing	0.00			
	Parking Policy Pricing	Parking Policy Pricing Subtotal	0.00			
No	Transit Improvements	Provide BRT System	0.00			
No	Transit Improvements	Expand Transit Network	0.00			
No	Transit Improvements	Increase Transit Frequency	0.00			
	Transit Improvements	Transit Improvements Subtotal	0.00			
		Land Use and Site Enhancement Subtotal	0.00			
No	Commute	Implement Trip Reduction Program				
No	Commute	Transit Subsidy				
No	Commute	Implement Employee Parking "Cash Out"				
No	Commute	Workplace Parking Charge				
No	Commute	Encourage Telecommuting and Alternative Work Schedules	0.00			
No	Commute	Market Commute Trip Reduction Option	0.00			
No	Commute	Employee Vanpool/Shuttle	0.00		2.00	

DiSC 2022 Constrution of Phase I

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

No	Commute	Provide Ride Sharing Program				
	Commute	Commute Subtotal	0.00			
No	School Trip	Implement School Bus Program	0.00			
		Total VMT Reduction	0.00			

Area Mitigation

Measure Implemented	Mitigation Measure	Input Value
No	Only Natural Gas Hearth	
No	No Hearth	
No	Use Low VOC Cleaning Supplies	
No	Use Low VOC Paint (Residential Interior)	50.00
No	Use Low VOC Paint (Residential Exterior)	100.00
No	Use Low VOC Paint (Non-residential Interior)	50.00
No	Use Low VOC Paint (Non-residential Exterior)	100.00
No	Use Low VOC Paint (Parking)	100.00
No	% Electric Lawnmower	
No	% Electric Leafblower	
No	% Electric Chainsaw	

Energy Mitigation Measures

Measure Implemented	Mitigation Measure	Input Value 1	Input Value 2
No	Exceed Title 24		

DiSC 2022 Constrution of Phase I

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

No	Install High Efficiency Lighting		
No	On-site Renewable		

Appliance Type	Land Use Subtype	% Improvement
ClothWasher		30.00
DishWasher		15.00
Fan		50.00
Refrigerator		15.00

Water Mitigation Measures

Measure Implemented	Mitigation Measure	Input Value 1	Input Value 2
No	Apply Water Conservation on Strategy		
No	Use Reclaimed Water		
No	Use Grey Water		
No	Install low-flow bathroom faucet	32.00	
No	Install low-flow Kitchen faucet	18.00	
No	Install low-flow Toilet	20.00	
No	Install low-flow Shower	20.00	
No	Turf Reduction		
No	Use Water Efficient Irrigation Systems	6.10	
No	Water Efficient Landscape		

Solid Waste Mitigation

DiSC 2022 Constrution of Phase I

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

Mitigation Measures	Input Value
Institute Recycling and Composting Services Percent Reduction in Waste Disposed	

DiSC 2022 - Operations, Existing Plus Project VMT - Yolo/Solano AQMD Air District, Annual

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

DiSC 2022 - Operations, Existing Plus Project VMT

Yolo/Solano AQMD Air District, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Research & Development	550.00	1000sqft	25.80	550,000.00	0
Manufacturing	550.00	1000sqft	32.40	550,000.00	0
Other Asphalt Surfaces	0.60	Acre	0.60	26,136.00	0
Parking Lot	1,590.00	Space	9.40	636,000.00	0
Unenclosed Parking with Elevator	690.00	Space	1.60	276,000.00	0
Hotel	150.00	Room	0.00	217,800.00	0
Apartments Mid Rise	300.00	Dwelling Unit	7.93	300,000.00	858
Condo/Townhouse	160.00	Dwelling Unit	3.97	160,000.00	458
Regional Shopping Center	80.00	1000sqft	0.00	80,000.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	55
Climate Zone	2			**Operational Year**	2033
Utility Company	Pacific Gas and Electric Company				
CO2 Intensity (lb/MWhr)	203.98	**CH4 Intensity (lb/MWhr)**	0.033	**N2O Intensity (lb/MWhr)**	0.004

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - Lot acreages adjusted per Master Plan.

Construction Phase - Construction not modeled.

Off-road Equipment - Construction not modeled.

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

Grading -

Vehicle Trips - Trip generation rate, trip lengths, and trip purpose adjusted per project-specific traffic report.

Mobile Land Use Mitigation -

Area Mitigation -

Energy Mitigation -

Water Mitigation -

Stationary Sources - Emergency Generators and Fire Pumps -

Table Name	Column Name	Default Value	New Value
tblConstructionPhase	NumDays	60.00	1.00
tblLandUse	LotAcreage	12.63	25.80
tblLandUse	LotAcreage	12.63	32.40
tblLandUse	LotAcreage	14.31	9.40
tblLandUse	LotAcreage	6.21	1.60
tblLandUse	LotAcreage	5.00	0.00
tblLandUse	LotAcreage	7.89	7.93
tblLandUse	LotAcreage	10.00	3.97
tblLandUse	LotAcreage	1.84	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	4.00	0.00
tblStationaryGeneratorsPumpsUse	HorsePowerValue	0.00	89.00
tblStationaryGeneratorsPumpsUse	HoursPerYear	0.00	6.00
tblStationaryGeneratorsPumpsUse	NumberOfEquipment	0.00	1.00
tblVehicleTrips	CC_TL	5.00	8.30
tblVehicleTrips	CC_TL	5.00	8.30
tblVehicleTrips	CC_TL	5.00	8.30
tblVehicleTrips	CNW_TL	7.00	11.63
tblVehicleTrips	CNW_TL	7.00	11.63
tblVehicleTrips	CNW_TL	7.00	11.63

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

tblVehicleTrips	CW_TL	10.00	16.61
tblVehicleTrips	CW_TL	10.00	16.61
tblVehicleTrips	CW_TL	10.00	16.61
tblVehicleTrips	DV_TP	11.00	0.00
tblVehicleTrips	DV_TP	11.00	0.00
tblVehicleTrips	DV_TP	38.00	0.00
tblVehicleTrips	DV_TP	5.00	0.00
tblVehicleTrips	DV_TP	35.00	0.00
tblVehicleTrips	DV_TP	15.00	0.00
tblVehicleTrips	HO_TL	7.00	11.63
tblVehicleTrips	HO_TL	7.00	11.63
tblVehicleTrips	HS_TL	5.00	8.30
tblVehicleTrips	HS_TL	5.00	8.30
tblVehicleTrips	HW_TL	10.00	16.61
tblVehicleTrips	HW_TL	10.00	16.61
tblVehicleTrips	PB_TP	3.00	0.00
tblVehicleTrips	PB_TP	3.00	0.00
tblVehicleTrips	PB_TP	4.00	0.00
tblVehicleTrips	PB_TP	3.00	0.00
tblVehicleTrips	PB_TP	11.00	0.00
tblVehicleTrips	PB_TP	3.00	0.00
tblVehicleTrips	PR_TP	86.00	100.00
tblVehicleTrips	PR_TP	86.00	100.00
tblVehicleTrips	PR_TP	58.00	100.00
tblVehicleTrips	PR_TP	92.00	100.00
tblVehicleTrips	PR_TP	54.00	100.00
tblVehicleTrips	PR_TP	82.00	100.00
tblVehicleTrips	ST_TR	4.91	4.84
tblVehicleTrips	ST_TR	8.14	6.50

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

tblVehicleTrips	ST_TR	8.19	7.51
tblVehicleTrips	ST_TR	6.42	3.50
tblVehicleTrips	ST_TR	46.12	0.00
tblVehicleTrips	ST_TR	1.90	10.44
tblVehicleTrips	SU_TR	4.09	4.84
tblVehicleTrips	SU_TR	6.28	6.50
tblVehicleTrips	SU_TR	5.95	7.51
tblVehicleTrips	SU_TR	5.09	3.50
tblVehicleTrips	SU_TR	21.10	0.00
tblVehicleTrips	SU_TR	1.11	10.44
tblVehicleTrips	WD_TR	5.44	4.84
tblVehicleTrips	WD_TR	7.32	6.50
tblVehicleTrips	WD_TR	8.36	7.51
tblVehicleTrips	WD_TR	3.93	3.50
tblVehicleTrips	WD_TR	37.75	0.00
tblVehicleTrips	WD_TR	11.26	10.44

2.0 Emissions Summary

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

2.1 Overall Construction

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2023	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Maximum	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2023	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Maximum	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)

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

		Highest		

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	50.7628	0.7935	56.2856	0.0956		7.4297	7.4297		7.4297	7.4297	706.3028	204.9192	911.2220	0.6656	0.0536	943.8304
Energy	0.1770	1.5921	1.2257	9.6600e-003		0.1223	0.1223		0.1223	0.1223	0.0000	3,058.5108	3,058.5108	0.2450	0.0577	3,081.8417
Mobile	5.8174	9.9360	62.3034	0.1527	18.8265	0.1066	18.9331	5.0410	0.1002	5.1412	0.0000	15,083.7710	15,083.7710	0.8174	0.7601	15,330.7070
Stationary	4.4000e-004	1.4300e-003	1.5900e-003	0.0000		6.0000e-005	6.0000e-005		6.0000e-005	6.0000e-005	0.0000	0.2034	0.2034	3.0000e-005	0.0000	0.2041
Waste						0.0000	0.0000		0.0000	0.0000	223.6006	0.0000	223.6006	13.2144	0.0000	553.9611
Water						0.0000	0.0000		0.0000	0.0000	138.7417	226.3748	365.1165	14.2867	0.3409	823.8774
Total	**56.7576**	**12.3230**	**119.8163**	**0.2580**	**18.8265**	**7.6586**	**26.4851**	**5.0410**	**7.6522**	**12.6932**	**1,068.6452**	**18,573.7790**	**19,642.4242**	**29.2291**	**1.2123**	**20,734.4216**

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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	7.4766	0.0396	3.4395	1.8000e-004		0.0191	0.0191		0.0191	0.0191	0.0000	5.6438	5.6438	5.4800e-003	0.0000	5.7808
Energy	0.1516	1.3629	1.0464	8.2700e-003		0.1047	0.1047		0.1047	0.1047	0.0000	2,137.4690	2,137.4690	0.1319	0.0400	2,152.6854
Mobile	5.8174	9.9360	62.3034	0.1527	18.8265	0.1066	18.9331	5.0410	0.1002	5.1412	0.0000	15,083.7710	15,083.7710	0.8174	0.7601	15,330.7070
Stationary	4.4000e-004	1.4300e-003	1.5900e-003	0.0000		6.0000e-005	6.0000e-005		6.0000e-005	6.0000e-005	0.0000	0.2034	0.2034	3.0000e-005	0.0000	0.2041
Waste						0.0000	0.0000		0.0000	0.0000	223.6006	0.0000	223.6006	13.2144	0.0000	553.9611
Water						0.0000	0.0000		0.0000	0.0000	110.9934	179.6135	290.6068	11.4291	0.2727	657.6009
Total	**13.4460**	**11.3399**	**66.7910**	**0.1612**	**18.8265**	**0.2304**	**19.0569**	**5.0410**	**0.2240**	**5.2650**	**334.5940**	**17,406.7005**	**17,741.2945**	**25.5983**	**1.0728**	**18,700.9392**

	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	**76.31**	**7.98**	**44.26**	**37.53**	**0.00**	**96.99**	**28.05**	**0.00**	**97.07**	**58.52**	**68.69**	**6.28**	**9.68**	**12.42**	**11.51**	**9.81**

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Site Preparation	Site Preparation	6/1/2023	6/1/2023	5	1	

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Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 0

Acres of Paving: 11.6

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

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Site Preparation	Rubber Tired Dozers	0	8.00	247	0.40
Site Preparation	Tractors/Loaders/Backhoes	0	8.00	97	0.37

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Site Preparation	0	0.00	0.00	0.00	10.00	7.00	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

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3.2 Site Preparation - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

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3.2 Site Preparation - 2023

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

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

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	5.8174	9.9360	62.3034	0.1527	18.8265	0.1066	18.9331	5.0410	0.1002	5.1412	0.0000	15,083.7710	15,083.7710	0.8174	0.7601	15,330.7070
Unmitigated	5.8174	9.9360	62.3034	0.1527	18.8265	0.1066	18.9331	5.0410	0.1002	5.1412	0.0000	15,083.7710	15,083.7710	0.8174	0.7601	15,330.7070

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Apartments Mid Rise	1,452.00	1,452.00	1452.00	7,128,733	7,128,733
Condo/Townhouse	1,040.00	1,040.00	1040.00	5,105,979	5,105,979
Hotel	1,126.50	1,126.50	1126.50	4,323,869	4,323,869
Manufacturing	1,925.00	1,925.00	1925.00	9,554,605	9,554,605
Other Asphalt Surfaces	0.00	0.00	0.00		
Parking Lot	0.00	0.00	0.00		
Regional Shopping Center	0.00	0.00	0.00		
Research & Development	5,742.00	5,742.00	5742.00	24,401,777	24,401,777
Unenclosed Parking with Elevator	0.00	0.00	0.00		
Total	11,285.50	11,285.50	11,285.50	50,514,964	50,514,964

4.3 Trip Type Information

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

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Apartments Mid Rise	16.61	8.30	11.63	46.00	13.00	41.00	100	0	0
Condo/Townhouse	16.61	8.30	11.63	46.00	13.00	41.00	100	0	0
Hotel	16.61	8.30	11.63	19.40	61.60	19.00	100	0	0
Manufacturing	16.61	8.30	11.63	59.00	28.00	13.00	100	0	0
Other Asphalt Surfaces	10.00	5.00	7.00	0.00	0.00	0.00	0	0	0
Parking Lot	10.00	5.00	7.00	0.00	0.00	0.00	0	0	0
Regional Shopping Center	10.00	5.00	7.00	16.30	64.70	19.00	100	0	0
Research & Development	16.61	8.30	11.63	33.00	48.00	19.00	100	0	0
Unenclosed Parking with	10.00	5.00	7.00	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	0.534400	0.056822	0.179165	0.124517	0.023767	0.006150	0.026136	0.017163	0.000490	0.000694	0.027210	0.000627	0.002860
Condo/Townhouse	0.534400	0.056822	0.179165	0.124517	0.023767	0.006150	0.026136	0.017163	0.000490	0.000694	0.027210	0.000627	0.002860
Hotel	0.534400	0.056822	0.179165	0.124517	0.023767	0.006150	0.026136	0.017163	0.000490	0.000694	0.027210	0.000627	0.002860
Manufacturing	0.534400	0.056822	0.179165	0.124517	0.023767	0.006150	0.026136	0.017163	0.000490	0.000694	0.027210	0.000627	0.002860
Other Asphalt Surfaces	0.534400	0.056822	0.179165	0.124517	0.023767	0.006150	0.026136	0.017163	0.000490	0.000694	0.027210	0.000627	0.002860
Parking Lot	0.534400	0.056822	0.179165	0.124517	0.023767	0.006150	0.026136	0.017163	0.000490	0.000694	0.027210	0.000627	0.002860
Regional Shopping Center	0.534400	0.056822	0.179165	0.124517	0.023767	0.006150	0.026136	0.017163	0.000490	0.000694	0.027210	0.000627	0.002860
Research & Development	0.534400	0.056822	0.179165	0.124517	0.023767	0.006150	0.026136	0.017163	0.000490	0.000694	0.027210	0.000627	0.002860
Unenclosed Parking with Elevator	0.534400	0.056822	0.179165	0.124517	0.023767	0.006150	0.026136	0.017163	0.000490	0.000694	0.027210	0.000627	0.002860

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

Exceed Title 24

Percent of Electricity Use Generated with Renewable Energy

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

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Electricity Mitigated						0.0000	0.0000		0.0000	0.0000	0.0000	637.2747	637.2747	0.1031	0.0125	643.5762
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	1,306.6422	1,306.6422	0.2114	0.0256	1,319.5625
NaturalGas Mitigated	0.1516	1.3629	1.0464	8.2700e-003		0.1047	0.1047		0.1047	0.1047	0.0000	1,500.1943	1,500.1943	0.0288	0.0275	1,509.1092
NaturalGas Unmitigated	0.1770	1.5921	1.2257	9.6600e-003		0.1223	0.1223		0.1223	0.1223	0.0000	1,751.8687	1,751.8687	0.0336	0.0321	1,762.2791

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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	2.82487e+006	0.0152	0.1302	0.0554	8.3000e-004		0.0105	0.0105		0.0105	0.0105	0.0000	150.7458	150.7458	2.8900e-003	2.7600e-003	151.6416
Condo/Townhouse	3.01952e+006	0.0163	0.1391	0.0592	8.9000e-004		0.0113	0.0113		0.0113	0.0113	0.0000	161.1332	161.1332	3.0900e-003	2.9500e-003	162.0907
Hotel	5.76299e+006	0.0311	0.2825	0.2373	1.6900e-003		0.0215	0.0215		0.0215	0.0215	0.0000	307.5350	307.5350	5.8900e-003	5.6400e-003	309.3625
Manufacturing	1.01475e+007	0.0547	0.4974	0.4178	2.9800e-003		0.0378	0.0378		0.0378	0.0378	0.0000	541.5092	541.5092	0.0104	9.9300e-003	544.7272
Other Asphalt Surfaces	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
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Regional Shopping Center	926400	5.0000e-003	0.0454	0.0382	2.7000e-004		3.4500e-003	3.4500e-003		3.4500e-003	3.4500e-003	0.0000	49.4362	49.4362	9.5000e-004	9.1000e-004	49.7300
Research & Development	1.01475e+007	0.0547	0.4974	0.4178	2.9800e-003		0.0378	0.0378		0.0378	0.0378	0.0000	541.5092	541.5092	0.0104	9.9300e-003	544.7272
Unenclosed 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		**0.1770**	**1.5921**	**1.2257**	**9.6400e-003**		**0.1223**	**0.1223**		**0.1223**	**0.1223**	**0.0000**	**1,751.8686**	**1,751.8686**	**0.0336**	**0.0321**	**1,762.2791**

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5.2 Energy by Land Use - NaturalGas

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Apartments Mid Rise	2.52205e+006	0.0136	0.1162	0.0495	7.4000e-004		9.4000e-003	9.4000e-003		9.4000e-003	9.4000e-003	0.0000	134.5864	134.5864	2.5800e-003	2.4700e-003	135.3862
Condo/Townhouse	2.63108e+006	0.0142	0.1212	0.0516	7.7000e-004		9.8000e-003	9.8000e-003		9.8000e-003	9.8000e-003	0.0000	140.4045	140.4045	2.6900e-003	2.5700e-003	141.2389
Hotel	4.90703e+006	0.0265	0.2405	0.2021	1.4400e-003		0.0183	0.0183		0.0183	0.0183	0.0000	261.8580	261.8580	5.0200e-003	4.8000e-003	263.4141
Manufacturing	8.63033e+006	0.0465	0.4231	0.3554	2.5400e-003		0.0322	0.0322		0.0322	0.0322	0.0000	460.5470	460.5470	8.8300e-003	8.4400e-003	463.2838
Other Asphalt Surfaces	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
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Regional Shopping Center	791760	4.2700e-003	0.0388	0.0326	2.3000e-004		2.9500e-003	2.9500e-003		2.9500e-003	2.9500e-003	0.0000	42.2513	42.2513	8.1000e-004	7.7000e-004	42.5024
Research & Development	8.63033e+006	0.0465	0.4231	0.3554	2.5400e-003		0.0322	0.0322		0.0322	0.0322	0.0000	460.5470	460.5470	8.8300e-003	8.4400e-003	463.2838
Unenclosed 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		**0.1516**	**1.3629**	**1.0464**	**8.2600e-003**		**0.1047**	**0.1047**		**0.1047**	**0.1047**	**0.0000**	**1,500.1943**	**1,500.1943**	**0.0288**	**0.0275**	**1,509.1092**

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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	1.16812e+006	108.0785	0.0175	2.1200e-003	109.1472
Condo/Townhouse	780200	72.1871	0.0117	1.4200e-003	72.9009
Hotel	1.39828e+006	129.3738	0.0209	2.5400e-003	130.6531
Manufacturing	4.554e+006	421.3533	0.0682	8.2600e-003	425.5197
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Parking Lot	222600	20.5958	3.3300e-003	4.0000e-004	20.7995
Regional Shopping Center	909600	84.1596	0.0136	1.6500e-003	84.9918
Research & Development	4.554e+006	421.3533	0.0682	8.2600e-003	425.5197
Unenclosed Parking with Elevator	535440	49.5409	8.0100e-003	9.7000e-004	50.0308
Total		**1,306.6422**	**0.2114**	**0.0256**	**1,319.5625**

5.3 Energy by Land Use - Electricity

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Apartments Mid Rise	581849	53.8349	8.7100e-003	1.0600e-003	54.3672
Condo/Townhouse	389138	36.0046	5.8200e-003	7.1000e-004	36.3606
Hotel	671859	62.1629	0.0101	1.2200e-003	62.7776
Manufacturing	2.21595e+006	205.0281	0.0332	4.0200e-003	207.0554
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Parking Lot	111300	10.2979	1.6700e-003	2.0000e-004	10.3997
Regional Shopping Center	433920	40.1479	6.5000e-003	7.9000e-004	40.5449
Research & Development	2.21595e+006	205.0281	0.0332	4.0200e-003	207.0554
Unenclosed Parking with Elevator	267720	24.7705	4.0100e-003	4.9000e-004	25.0154
Total		**637.2747**	**0.1031**	**0.0125**	**643.5762**

6.0 Area Detail

6.1 Mitigation Measures Area

No Hearths Installed

Use Low VOC Cleaning Supplies

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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	7.4766	0.0396	3.4395	1.8000e-004		0.0191	0.0191		0.0191	0.0191	0.0000	5.6438	5.6438	5.4800e-003	0.0000	5.7808
Unmitigated	50.7628	0.7935	56.2856	0.0956		7.4297	7.4297		7.4297	7.4297	706.3028	204.9192	911.2220	0.6656	0.0536	943.8304

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	0.5979					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	7.3163					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth	42.7437	0.7540	52.8461	0.0955		7.4106	7.4106		7.4106	7.4106	706.3028	199.2754	905.5782	0.6601	0.0536	938.0496
Landscaping	0.1049	0.0396	3.4395	1.8000e-004		0.0191	0.0191		0.0191	0.0191	0.0000	5.6438	5.6438	5.4800e-003	0.0000	5.7808
Total	**50.7628**	**0.7935**	**56.2856**	**0.0956**		**7.4297**	**7.4297**		**7.4297**	**7.4297**	**706.3028**	**204.9192**	**911.2220**	**0.6656**	**0.0536**	**943.8304**

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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	0.5979					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	6.7738					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	0.1049	0.0396	3.4395	1.8000e-004		0.0191	0.0191		0.0191	0.0191	0.0000	5.6438	5.6438	5.4800e-003	0.0000	5.7808
Total	**7.4766**	**0.0396**	**3.4395**	**1.8000e-004**		**0.0191**	**0.0191**		**0.0191**	**0.0191**	**0.0000**	**5.6438**	**5.6438**	**5.4800e-003**	**0.0000**	**5.7808**

7.0 Water Detail

7.1 Mitigation Measures Water

Apply Water Conservation Strategy

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	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	290.6068	11.4291	0.2727	657.6009
Unmitigated	365.1165	14.2867	0.3409	823.8774

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

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Apartments Mid Rise	19.5462 / 12.3226	19.9773	0.6391	0.0153	40.5180
Condo/Townhouse	10.4246 / 6.57206	10.6546	0.3409	8.1600e-003	21.6096
Hotel	3.80502 / 0.422779	3.2490	0.1243	2.9700e-003	7.2413
Manufacturing	127.188 / 0	104.0267	4.1547	0.0991	237.4283
Other Asphalt Surfaces	0 / 0	0.0000	0.0000	0.0000	0.0000
Parking Lot	0 / 0	0.0000	0.0000	0.0000	0.0000
Regional Shopping Center	5.9258 / 3.63194	6.0229	0.1938	4.6400e-003	12.2498
Research & Development	270.432 / 0	221.1861	8.8339	0.2107	504.8305
Unenclosed Parking with Elevator	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		**365.1165**	**14.2867**	**0.3409**	**823.8774**

7.2 Water by Land Use

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Apartments Mid Rise	15.637 / 7.39357	15.1838	0.5112	0.0122	31.6084
Condo/Townhouse	8.33972 / 3.94323	8.0980	0.2726	6.5200e-003	16.8578
Hotel	3.04401 / 0.253668	2.5718	0.0995	2.3700e-003	5.7654
Manufacturing	101.75 / 0	83.2213	3.3238	0.0793	189.9426
Other Asphalt Surfaces	0 / 0	0.0000	0.0000	0.0000	0.0000
Parking Lot	0 / 0	0.0000	0.0000	0.0000	0.0000
Regional Shopping Center	4.74064 / 2.17917	4.5831	0.1550	3.7100e-003	9.5623
Research & Development	216.345 / 0	176.9489	7.0671	0.1686	403.8644
Unenclosed Parking with Elevator	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		**290.6068**	**11.4291**	**0.2727**	**657.6009**

8.0 Waste Detail

8.1 Mitigation Measures Waste

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Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	223.6006	13.2144	0.0000	553.9611
Unmitigated	223.6006	13.2144	0.0000	553.9611

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

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Apartments Mid Rise	138	28.0128	1.6555	0.0000	69.4004
Condo/Townhouse	73.6	14.9401	0.8829	0.0000	37.0136
Hotel	82.13	16.6717	0.9853	0.0000	41.3033
Manufacturing	682	138.4398	8.1816	0.0000	342.9788
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Parking Lot	0	0.0000	0.0000	0.0000	0.0000
Regional Shopping Center	84	17.0512	1.0077	0.0000	42.2437
Research & Development	41.8	8.4850	0.5015	0.0000	21.0213
Unenclosed Parking with Elevator	0	0.0000	0.0000	0.0000	0.0000
Total		**223.6006**	**13.2144**	**0.0000**	**553.9611**

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

8.2 Waste by Land Use

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Apartments Mid Rise	138	28.0128	1.6555	0.0000	69.4004
Condo/Townhouse	73.6	14.9401	0.8829	0.0000	37.0136
Hotel	82.13	16.6717	0.9853	0.0000	41.3033
Manufacturing	682	138.4398	8.1816	0.0000	342.9788
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Parking Lot	0	0.0000	0.0000	0.0000	0.0000
Regional Shopping Center	84	17.0512	1.0077	0.0000	42.2437
Research & Development	41.8	8.4850	0.5015	0.0000	21.0213
Unenclosed Parking with Elevator	0	0.0000	0.0000	0.0000	0.0000
Total		**223.6006**	**13.2144**	**0.0000**	**553.9611**

9.0 Operational Offroad

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

10.0 Stationary Equipment

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Fire Pumps and Emergency Generators

Equipment Type	Number	Hours/Day	Hours/Year	Horse Power	Load Factor	Fuel Type
Emergency Generator	1	0	6	89	0.73	Diesel

Boilers

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

User Defined Equipment

Equipment Type	Number

10.1 Stationary Sources

Unmitigated/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
Equipment Type	tons/yr										MT/yr					
Emergency Generator - Diesel (75 - 100 HP)	4.4000e-004	1.4300e-003	1.5900e-003	0.0000		6.0000e-005	6.0000e-005		6.0000e-005	6.0000e-005	0.0000	0.2034	0.2034	3.0000e-005	0.0000	0.2041
Total	**4.4000e-004**	**1.4300e-003**	**1.5900e-003**	**0.0000**		**6.0000e-005**	**6.0000e-005**		**6.0000e-005**	**6.0000e-005**	**0.0000**	**0.2034**	**0.2034**	**3.0000e-005**	**0.0000**	**0.2041**

11.0 Vegetation

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DiSC 2022 - Operations, Existing Plus Project VMT

Yolo/Solano AQMD Air District, Summer

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Research & Development	550.00	1000sqft	25.80	550,000.00	0
Manufacturing	550.00	1000sqft	32.40	550,000.00	0
Other Asphalt Surfaces	0.60	Acre	0.60	26,136.00	0
Parking Lot	1,590.00	Space	9.40	636,000.00	0
Unenclosed Parking with Elevator	690.00	Space	1.60	276,000.00	0
Hotel	150.00	Room	0.00	217,800.00	0
Apartments Mid Rise	300.00	Dwelling Unit	7.93	300,000.00	858
Condo/Townhouse	160.00	Dwelling Unit	3.97	160,000.00	458
Regional Shopping Center	80.00	1000sqft	0.00	80,000.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	55
Climate Zone	2			**Operational Year**	2033
Utility Company	Pacific Gas and Electric Company				
CO2 Intensity (lb/MWhr)	203.98	**CH4 Intensity (lb/MWhr)**	0.033	**N2O Intensity (lb/MWhr)**	0.004

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - Lot acreages adjusted per Master Plan.

Construction Phase - Construction not modeled.

Off-road Equipment - Construction not modeled.

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Grading -

Vehicle Trips - Trip generation rate, trip lengths, and trip purpose adjusted per project-specific traffic report.

Mobile Land Use Mitigation -

Area Mitigation -

Energy Mitigation -

Water Mitigation -

Stationary Sources - Emergency Generators and Fire Pumps -

Table Name	Column Name	Default Value	New Value
tblConstructionPhase	NumDays	60.00	1.00
tblLandUse	LotAcreage	12.63	25.80
tblLandUse	LotAcreage	12.63	32.40
tblLandUse	LotAcreage	14.31	9.40
tblLandUse	LotAcreage	6.21	1.60
tblLandUse	LotAcreage	5.00	0.00
tblLandUse	LotAcreage	7.89	7.93
tblLandUse	LotAcreage	10.00	3.97
tblLandUse	LotAcreage	1.84	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	4.00	0.00
tblStationaryGeneratorsPumpsUse	HorsePowerValue	0.00	89.00
tblStationaryGeneratorsPumpsUse	HoursPerYear	0.00	6.00
tblStationaryGeneratorsPumpsUse	NumberOfEquipment	0.00	1.00
tblVehicleTrips	CC_TL	5.00	8.30
tblVehicleTrips	CC_TL	5.00	8.30
tblVehicleTrips	CC_TL	5.00	8.30
tblVehicleTrips	CNW_TL	7.00	11.63
tblVehicleTrips	CNW_TL	7.00	11.63
tblVehicleTrips	CNW_TL	7.00	11.63

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tblVehicleTrips	CW_TL	10.00	16.61
tblVehicleTrips	CW_TL	10.00	16.61
tblVehicleTrips	CW_TL	10.00	16.61
tblVehicleTrips	DV_TP	11.00	0.00
tblVehicleTrips	DV_TP	11.00	0.00
tblVehicleTrips	DV_TP	38.00	0.00
tblVehicleTrips	DV_TP	5.00	0.00
tblVehicleTrips	DV_TP	35.00	0.00
tblVehicleTrips	DV_TP	15.00	0.00
tblVehicleTrips	HO_TL	7.00	11.63
tblVehicleTrips	HO_TL	7.00	11.63
tblVehicleTrips	HS_TL	5.00	8.30
tblVehicleTrips	HS_TL	5.00	8.30
tblVehicleTrips	HW_TL	10.00	16.61
tblVehicleTrips	HW_TL	10.00	16.61
tblVehicleTrips	PB_TP	3.00	0.00
tblVehicleTrips	PB_TP	3.00	0.00
tblVehicleTrips	PB_TP	4.00	0.00
tblVehicleTrips	PB_TP	3.00	0.00
tblVehicleTrips	PB_TP	11.00	0.00
tblVehicleTrips	PB_TP	3.00	0.00
tblVehicleTrips	PR_TP	86.00	100.00
tblVehicleTrips	PR_TP	86.00	100.00
tblVehicleTrips	PR_TP	58.00	100.00
tblVehicleTrips	PR_TP	92.00	100.00
tblVehicleTrips	PR_TP	54.00	100.00
tblVehicleTrips	PR_TP	82.00	100.00
tblVehicleTrips	ST_TR	4.91	4.84
tblVehicleTrips	ST_TR	8.14	6.50

DiSC 2022 - Operations, Existing Plus Project VMT - Yolo/Solano AQMD Air District, Summer

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

tblVehicleTrips	ST_TR	8.19	7.51
tblVehicleTrips	ST_TR	6.42	3.50
tblVehicleTrips	ST_TR	46.12	0.00
tblVehicleTrips	ST_TR	1.90	10.44
tblVehicleTrips	SU_TR	4.09	4.84
tblVehicleTrips	SU_TR	6.28	6.50
tblVehicleTrips	SU_TR	5.95	7.51
tblVehicleTrips	SU_TR	5.09	3.50
tblVehicleTrips	SU_TR	21.10	0.00
tblVehicleTrips	SU_TR	1.11	10.44
tblVehicleTrips	WD_TR	5.44	4.84
tblVehicleTrips	WD_TR	7.32	6.50
tblVehicleTrips	WD_TR	8.36	7.51
tblVehicleTrips	WD_TR	3.93	3.50
tblVehicleTrips	WD_TR	37.75	0.00
tblVehicleTrips	WD_TR	11.26	10.44

2.0 Emissions Summary

DiSC 2022 - Operations, Existing Plus Project VMT - Yolo/Solano AQMD Air District, Summer

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

2.1 Overall Construction (Maximum Daily Emission)

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	lb/day										lb/day					
2023	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Maximum	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2023	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Maximum	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

DiSC 2022 - Operations, Existing Plus Project VMT - Yolo/Solano AQMD Air District, Summer

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

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	lb/day										lb/day					
Area	1,087.0611	18.8287	1,327.1450	2.3303		180.9581	180.9581		180.9581	180.9581	18,989.4050	5,426.7713	24,416.1763	17.8142	1.4407	25,290.8675
Energy	0.9700	8.7236	6.7163	0.0529		0.6702	0.6702		0.6702	0.6702		10,581.3952	10,581.3952	0.2028	0.1940	10,644.2751
Mobile	36.3920	50.3165	363.0504	0.8932	106.8981	0.5862	107.4843	28.5463	0.5508	29.0971		97,277.5934	97,277.5934	4.8223	4.4545	98,725.5869
Stationary	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	**1,124.4230**	**77.8688**	**1,696.9117**	**3.2763**	**106.8981**	**182.2145**	**289.1126**	**28.5463**	**182.1791**	**210.7254**	**18,989.4050**	**113,285.7599**	**132,275.1648**	**22.8392**	**6.0892**	**134,660.7295**

DiSC 2022 - Operations, Existing Plus Project VMT - Yolo/Solano AQMD Air District, Summer

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

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	lb/day										lb/day					
Area	41.5584	0.4397	38.2171	2.0300e-003		0.2118	0.2118		0.2118	0.2118	0.0000	69.1243	69.1243	0.0671	0.0000	70.8028
Energy	0.8306	7.4680	5.7339	0.0453		0.5739	0.5739		0.5739	0.5739		9,061.2664	9,061.2664	0.1737	0.1661	9,115.1130
Mobile	36.3920	50.3165	363.0504	0.8932	106.8981	0.5862	107.4843	28.5463	0.5508	29.0971		97,277.5934	97,277.5934	4.8223	4.4545	98,725.5869
Stationary	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	**78.7810**	**58.2242**	**407.0013**	**0.9405**	**106.8981**	**1.3719**	**108.2700**	**28.5463**	**1.3365**	**29.8828**	**0.0000**	**106,407.9840**	**106,407.9840**	**5.0631**	**4.6206**	**107,911.5027**

	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	**92.99**	**25.23**	**76.02**	**71.29**	**0.00**	**99.25**	**62.55**	**0.00**	**99.27**	**85.82**	**100.00**	**6.07**	**19.56**	**77.83**	**24.12**	**19.86**

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Site Preparation	Site Preparation	6/1/2023	6/1/2023	5	1	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 0

DiSC 2022 - Operations, Existing Plus Project VMT - Yolo/Solano AQMD Air District, Summer

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

Acres of Paving: 11.6

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

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Site Preparation	Rubber Tired Dozers	0	8.00	247	0.40
Site Preparation	Tractors/Loaders/Backhoes	0	8.00	97	0.37

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Site Preparation	0	0.00	0.00	0.00	10.00	7.00	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

3.2 Site Preparation - 2023

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	lb/day										lb/day					
Fugitive Dust					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000			0.0000
Off-Road	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**		**0.0000**

DiSC 2022 - Operations, Existing Plus Project VMT - Yolo/Solano AQMD Air District, Summer

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

3.2 Site Preparation - 2023

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	lb/day										lb/day					
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
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
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

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	lb/day										lb/day					
Fugitive Dust					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000			0.0000
Off-Road	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**

DiSC 2022 - Operations, Existing Plus Project VMT - Yolo/Solano AQMD Air District, Summer

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

3.2 Site Preparation - 2023

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	lb/day										lb/day					
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
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
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

DiSC 2022 - Operations, Existing Plus Project VMT - Yolo/Solano AQMD Air District, Summer

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

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	36.3920	50.3165	363.0504	0.8932	106.8981	0.5862	107.4843	28.5463	0.5508	29.0971		97,277.5934	97,277.5934	4.8223	4.4545	98,725.5869
Unmitigated	36.3920	50.3165	363.0504	0.8932	106.8981	0.5862	107.4843	28.5463	0.5508	29.0971		97,277.5934	97,277.5934	4.8223	4.4545	98,725.5869

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Apartments Mid Rise	1,452.00	1,452.00	1452.00	7,128,733	7,128,733
Condo/Townhouse	1,040.00	1,040.00	1040.00	5,105,979	5,105,979
Hotel	1,126.50	1,126.50	1126.50	4,323,869	4,323,869
Manufacturing	1,925.00	1,925.00	1925.00	9,554,605	9,554,605
Other Asphalt Surfaces	0.00	0.00	0.00		
Parking Lot	0.00	0.00	0.00		
Regional Shopping Center	0.00	0.00	0.00		
Research & Development	5,742.00	5,742.00	5742.00	24,401,777	24,401,777
Unenclosed Parking with Elevator	0.00	0.00	0.00		
Total	11,285.50	11,285.50	11,285.50	50,514,964	50,514,964

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Apartments Mid Rise	16.61	8.30	11.63	46.00	13.00	41.00	100	0	0
Condo/Townhouse	16.61	8.30	11.63	46.00	13.00	41.00	100	0	0
Hotel	16.61	8.30	11.63	19.40	61.60	19.00	100	0	0

DiSC 2022 - Operations, Existing Plus Project VMT - Yolo/Solano AQMD Air District, Summer

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

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Manufacturing	16.61	8.30	11.63	59.00	28.00	13.00	100	0	0
Other Asphalt Surfaces	10.00	5.00	7.00	0.00	0.00	0.00	0	0	0
Parking Lot	10.00	5.00	7.00	0.00	0.00	0.00	0	0	0
Regional Shopping Center	10.00	5.00	7.00	16.30	64.70	19.00	100	0	0
Research & Development	16.61	8.30	11.63	33.00	48.00	19.00	100	0	0
Unenclosed Parking with	10.00	5.00	7.00	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	0.534400	0.056822	0.179165	0.124517	0.023767	0.006150	0.026136	0.017163	0.000490	0.000694	0.027210	0.000627	0.002860
Condo/Townhouse	0.534400	0.056822	0.179165	0.124517	0.023767	0.006150	0.026136	0.017163	0.000490	0.000694	0.027210	0.000627	0.002860
Hotel	0.534400	0.056822	0.179165	0.124517	0.023767	0.006150	0.026136	0.017163	0.000490	0.000694	0.027210	0.000627	0.002860
Manufacturing	0.534400	0.056822	0.179165	0.124517	0.023767	0.006150	0.026136	0.017163	0.000490	0.000694	0.027210	0.000627	0.002860
Other Asphalt Surfaces	0.534400	0.056822	0.179165	0.124517	0.023767	0.006150	0.026136	0.017163	0.000490	0.000694	0.027210	0.000627	0.002860
Parking Lot	0.534400	0.056822	0.179165	0.124517	0.023767	0.006150	0.026136	0.017163	0.000490	0.000694	0.027210	0.000627	0.002860
Regional Shopping Center	0.534400	0.056822	0.179165	0.124517	0.023767	0.006150	0.026136	0.017163	0.000490	0.000694	0.027210	0.000627	0.002860
Research & Development	0.534400	0.056822	0.179165	0.124517	0.023767	0.006150	0.026136	0.017163	0.000490	0.000694	0.027210	0.000627	0.002860
Unenclosed Parking with Elevator	0.534400	0.056822	0.179165	0.124517	0.023767	0.006150	0.026136	0.017163	0.000490	0.000694	0.027210	0.000627	0.002860

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

Exceed Title 24

Percent of Electricity Use Generated with Renewable Energy

DiSC 2022 - Operations, Existing Plus Project VMT - Yolo/Solano AQMD Air District, Summer

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

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	0.8306	7.4680	5.7339	0.0453		0.5739	0.5739		0.5739	0.5739		9,061.2664	9,061.2664	0.1737	0.1661	9,115.1130
NaturalGas Unmitigated	0.9700	8.7236	6.7163	0.0529		0.6702	0.6702		0.6702	0.6702		10,581.3952	10,581.3952	0.2028	0.1940	10,644.2751

DiSC 2022 - Operations, Existing Plus Project VMT - Yolo/Solano AQMD Air District, Summer

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

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Apartments Mid Rise	7739.37	0.0835	0.7132	0.3035	4.5500e-003		0.0577	0.0577		0.0577	0.0577		910.5138	910.5138	0.0175	0.0167	915.9245
Condo/Townhouse	8272.66	0.0892	0.7624	0.3244	4.8700e-003		0.0616	0.0616		0.0616	0.0616		973.2543	973.2543	0.0187	0.0178	979.0379
Hotel	15789	0.1703	1.5479	1.3003	9.2900e-003		0.1176	0.1176		0.1176	0.1176		1,857.5304	1,857.5304	0.0356	0.0341	1,868.5688
Manufacturing	27801.4	0.2998	2.7256	2.2895	0.0164		0.2072	0.2072		0.2072	0.2072		3,270.7494	3,270.7494	0.0627	0.0600	3,290.1858
Other Asphalt Surfaces	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
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Regional Shopping Center	2538.08	0.0274	0.2488	0.2090	1.4900e-003		0.0189	0.0189		0.0189	0.0189		298.5979	298.5979	5.7200e-003	5.4700e-003	300.3723
Research & Development	27801.4	0.2998	2.7256	2.2895	0.0164		0.2072	0.2072		0.2072	0.2072		3,270.7494	3,270.7494	0.0627	0.0600	3,290.1858
Unenclosed 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
Total		**0.9700**	**8.7236**	**6.7163**	**0.0529**		**0.6702**	**0.6702**		**0.6702**	**0.6702**		**10,581.3952**	**10,581.3952**	**0.2028**	**0.1940**	**10,644.2751**

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

5.2 Energy by Land Use - NaturalGas

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	lb/day										lb/day					
Apartments Mid Rise	6.90974	0.0745	0.6368	0.2710	4.0600e-003		0.0515	0.0515		0.0515	0.0515		812.9101	812.9101	0.0156	0.0149	817.7408
Condo/Townhouse	7.20844	0.0777	0.6643	0.2827	4.2400e-003		0.0537	0.0537		0.0537	0.0537		848.0520	848.0520	0.0163	0.0156	853.0916
Hotel	13.4439	0.1450	1.3180	1.1072	7.9100e-003		0.1002	0.1002		0.1002	0.1002		1,581.6387	1,581.6387	0.0303	0.0290	1,591.0376
Manufacturing	23.6447	0.2550	2.3181	1.9472	0.0139		0.1762	0.1762		0.1762	0.1762		2,781.7325	2,781.7325	0.0533	0.0510	2,798.2629
Other Asphalt Surfaces	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
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Regional Shopping Center	2.16921	0.0234	0.2127	0.1786	1.2800e-003		0.0162	0.0162		0.0162	0.0162		255.2006	255.2006	4.8900e-003	4.6800e-003	256.7172
Research & Development	23.6447	0.2550	2.3181	1.9472	0.0139		0.1762	0.1762		0.1762	0.1762		2,781.7325	2,781.7325	0.0533	0.0510	2,798.2629
Unenclosed 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
Total		**0.8306**	**7.4680**	**5.7339**	**0.0453**		**0.5739**	**0.5739**		**0.5739**	**0.5739**		**9,061.2664**	**9,061.2664**	**0.1737**	**0.1661**	**9,115.1130**

6.0 Area Detail

6.1 Mitigation Measures Area

No Hearths Installed

Use Low VOC Cleaning Supplies

DiSC 2022 - Operations, Existing Plus Project VMT - Yolo/Solano AQMD Air District, Summer

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

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	41.5584	0.4397	38.2171	2.0300e-003		0.2118	0.2118		0.2118	0.2118	0.0000	69.1243	69.1243	0.0671	0.0000	70.8028
Unmitigated	1,087.0611	18.8287	1,327.1450	2.3303		180.9581	180.9581		180.9581	180.9581	18,989.4050	5,426.7713	24,416.1763	17.8142	1.4407	25,290.8675

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	lb/day										lb/day					
Architectural Coating	3.2760					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	40.0892					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	1,042.5302	18.3890	1,288.9280	2.3282		180.7463	180.7463		180.7463	180.7463	18,989.4050	5,357.6471	24,347.0520	17.7470	1.4407	25,220.0647
Landscaping	1.1657	0.4397	38.2171	2.0300e-003		0.2118	0.2118		0.2118	0.2118		69.1243	69.1243	0.0671		70.8028
Total	**1,087.0611**	**18.8287**	**1,327.1450**	**2.3303**		**180.9581**	**180.9581**		**180.9581**	**180.9581**	**18,989.4050**	**5,426.7713**	**24,416.1763**	**17.8142**	**1.4407**	**25,290.8676**

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

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	lb/day										lb/day					
Architectural Coating	3.2760					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	37.1167					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	1.1657	0.4397	38.2171	2.0300e-003		0.2118	0.2118		0.2118	0.2118		69.1243	69.1243	0.0671		70.8028
Total	**41.5584**	**0.4397**	**38.2171**	**2.0300e-003**		**0.2118**	**0.2118**		**0.2118**	**0.2118**	**0.0000**	**69.1243**	**69.1243**	**0.0671**	**0.0000**	**70.8028**

7.0 Water Detail

7.1 Mitigation Measures Water

Apply Water Conservation Strategy

8.0 Waste Detail

8.1 Mitigation Measures Waste

9.0 Operational Offroad

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

DiSC 2022 - Operations, Existing Plus Project VMT - Yolo/Solano AQMD Air District, Summer

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

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

Equipment Type	Number	Hours/Day	Hours/Year	Horse Power	Load Factor	Fuel Type
Emergency Generator	1	0	6	89	0.73	Diesel

Boilers

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

User Defined Equipment

Equipment Type	Number

10.1 Stationary Sources

Unmitigated/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
Equipment Type	lb/day										lb/day					
Emergency Generator - Diesel (75 - 100 HP)	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**		**0.0000**

11.0 Vegetation

DiSC 2022 - Operations, Existing Plus Project VMT - Yolo/Solano AQMD Air District, Winter

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

DiSC 2022 - Operations, Existing Plus Project VMT

Yolo/Solano AQMD Air District, Winter

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Research & Development	550.00	1000sqft	25.80	550,000.00	0
Manufacturing	550.00	1000sqft	32.40	550,000.00	0
Other Asphalt Surfaces	0.60	Acre	0.60	26,136.00	0
Parking Lot	1,590.00	Space	9.40	636,000.00	0
Unenclosed Parking with Elevator	690.00	Space	1.60	276,000.00	0
Hotel	150.00	Room	0.00	217,800.00	0
Apartments Mid Rise	300.00	Dwelling Unit	7.93	300,000.00	858
Condo/Townhouse	160.00	Dwelling Unit	3.97	160,000.00	458
Regional Shopping Center	80.00	1000sqft	0.00	80,000.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	55
Climate Zone	2			**Operational Year**	2033
Utility Company	Pacific Gas and Electric Company				
CO2 Intensity (lb/MWhr)	203.98	**CH4 Intensity (lb/MWhr)**	0.033	**N2O Intensity (lb/MWhr)**	0.004

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - Lot acreages adjusted per Master Plan.

Construction Phase - Construction not modeled.

Off-road Equipment - Construction not modeled.

DiSC 2022 - Operations, Existing Plus Project VMT - Yolo/Solano AQMD Air District, Winter

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

Grading -

Vehicle Trips - Trip generation rate, trip lengths, and trip purpose adjusted per project-specific traffic report.

Mobile Land Use Mitigation -

Area Mitigation -

Energy Mitigation -

Water Mitigation -

Stationary Sources - Emergency Generators and Fire Pumps -

Table Name	Column Name	Default Value	New Value
tblConstructionPhase	NumDays	60.00	1.00
tblLandUse	LotAcreage	12.63	25.80
tblLandUse	LotAcreage	12.63	32.40
tblLandUse	LotAcreage	14.31	9.40
tblLandUse	LotAcreage	6.21	1.60
tblLandUse	LotAcreage	5.00	0.00
tblLandUse	LotAcreage	7.89	7.93
tblLandUse	LotAcreage	10.00	3.97
tblLandUse	LotAcreage	1.84	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	4.00	0.00
tblStationaryGeneratorsPumpsUse	HorsePowerValue	0.00	89.00
tblStationaryGeneratorsPumpsUse	HoursPerYear	0.00	6.00
tblStationaryGeneratorsPumpsUse	NumberOfEquipment	0.00	1.00
tblVehicleTrips	CC_TL	5.00	8.30
tblVehicleTrips	CC_TL	5.00	8.30
tblVehicleTrips	CC_TL	5.00	8.30
tblVehicleTrips	CNW_TL	7.00	11.63
tblVehicleTrips	CNW_TL	7.00	11.63
tblVehicleTrips	CNW_TL	7.00	11.63

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

tblVehicleTrips	CW_TL	10.00	16.61
tblVehicleTrips	CW_TL	10.00	16.61
tblVehicleTrips	CW_TL	10.00	16.61
tblVehicleTrips	DV_TP	11.00	0.00
tblVehicleTrips	DV_TP	11.00	0.00
tblVehicleTrips	DV_TP	38.00	0.00
tblVehicleTrips	DV_TP	5.00	0.00
tblVehicleTrips	DV_TP	35.00	0.00
tblVehicleTrips	DV_TP	15.00	0.00
tblVehicleTrips	HO_TL	7.00	11.63
tblVehicleTrips	HO_TL	7.00	11.63
tblVehicleTrips	HS_TL	5.00	8.30
tblVehicleTrips	HS_TL	5.00	8.30
tblVehicleTrips	HW_TL	10.00	16.61
tblVehicleTrips	HW_TL	10.00	16.61
tblVehicleTrips	PB_TP	3.00	0.00
tblVehicleTrips	PB_TP	3.00	0.00
tblVehicleTrips	PB_TP	4.00	0.00
tblVehicleTrips	PB_TP	3.00	0.00
tblVehicleTrips	PB_TP	11.00	0.00
tblVehicleTrips	PB_TP	3.00	0.00
tblVehicleTrips	PR_TP	86.00	100.00
tblVehicleTrips	PR_TP	86.00	100.00
tblVehicleTrips	PR_TP	58.00	100.00
tblVehicleTrips	PR_TP	92.00	100.00
tblVehicleTrips	PR_TP	54.00	100.00
tblVehicleTrips	PR_TP	82.00	100.00
tblVehicleTrips	ST_TR	4.91	4.84
tblVehicleTrips	ST_TR	8.14	6.50

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

tblVehicleTrips	ST_TR	8.19	7.51
tblVehicleTrips	ST_TR	6.42	3.50
tblVehicleTrips	ST_TR	46.12	0.00
tblVehicleTrips	ST_TR	1.90	10.44
tblVehicleTrips	SU_TR	4.09	4.84
tblVehicleTrips	SU_TR	6.28	6.50
tblVehicleTrips	SU_TR	5.95	7.51
tblVehicleTrips	SU_TR	5.09	3.50
tblVehicleTrips	SU_TR	21.10	0.00
tblVehicleTrips	SU_TR	1.11	10.44
tblVehicleTrips	WD_TR	5.44	4.84
tblVehicleTrips	WD_TR	7.32	6.50
tblVehicleTrips	WD_TR	8.36	7.51
tblVehicleTrips	WD_TR	3.93	3.50
tblVehicleTrips	WD_TR	37.75	0.00
tblVehicleTrips	WD_TR	11.26	10.44

2.0 Emissions Summary

DiSC 2022 - Operations, Existing Plus Project VMT - Yolo/Solano AQMD Air District, Winter

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

2.1 Overall Construction (Maximum Daily Emission)

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	lb/day										lb/day					
2023	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Maximum	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2023	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Maximum	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

DiSC 2022 - Operations, Existing Plus Project VMT - Yolo/Solano AQMD Air District, Winter

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

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	lb/day										lb/day					
Area	1,087.0611	18.8287	1,327.1450	2.3303		180.9581	180.9581		180.9581	180.9581	18,989.4050	5,426.7713	24,416.1763	17.8142	1.4407	25,290.8675
Energy	0.9700	8.7236	6.7163	0.0529		0.6702	0.6702		0.6702	0.6702		10,581.3952	10,581.3952	0.2028	0.1940	10,644.2751
Mobile	31.6372	57.6167	366.6974	0.8273	106.8981	0.5865	107.4846	28.5463	0.5511	29.0974		90,025.1377	90,025.1377	5.2082	4.7647	91,575.2109
Stationary	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	**1,119.6683**	**85.1690**	**1,700.5587**	**3.2105**	**106.8981**	**182.2148**	**289.1129**	**28.5463**	**182.1794**	**210.7257**	**18,989.4050**	**106,033.3042**	**125,022.7092**	**23.2252**	**6.3994**	**127,510.3536**

DiSC 2022 - Operations, Existing Plus Project VMT - Yolo/Solano AQMD Air District, Winter

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

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	lb/day										lb/day					
Area	41.5584	0.4397	38.2171	2.0300e-003		0.2118	0.2118		0.2118	0.2118	0.0000	69.1243	69.1243	0.0671	0.0000	70.8028
Energy	0.8306	7.4680	5.7339	0.0453		0.5739	0.5739		0.5739	0.5739		9,061.2664	9,061.2664	0.1737	0.1661	9,115.1130
Mobile	31.6372	57.6167	366.6974	0.8273	106.8981	0.5865	107.4846	28.5463	0.5511	29.0974		90,025.1377	90,025.1377	5.2082	4.7647	91,575.2109
Stationary	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	**74.0263**	**65.5243**	**410.6484**	**0.8747**	**106.8981**	**1.3722**	**108.2703**	**28.5463**	**1.3368**	**29.8830**	**0.0000**	**99,155.5284**	**99,155.5284**	**5.4490**	**4.9308**	**100,761.1267**

	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	**93.39**	**23.07**	**75.85**	**72.76**	**0.00**	**99.25**	**62.55**	**0.00**	**99.27**	**85.82**	**100.00**	**6.49**	**20.69**	**76.54**	**22.95**	**20.98**

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Site Preparation	Site Preparation	6/1/2023	6/1/2023	5	1	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 0

DiSC 2022 - Operations, Existing Plus Project VMT - Yolo/Solano AQMD Air District, Winter

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

Acres of Paving: 11.6

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

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Site Preparation	Rubber Tired Dozers	0	8.00	247	0.40
Site Preparation	Tractors/Loaders/Backhoes	0	8.00	97	0.37

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Site Preparation	0	0.00	0.00	0.00	10.00	7.00	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

3.2 Site Preparation - 2023

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	lb/day										lb/day					
Fugitive Dust					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000			0.0000
Off-Road	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**		**0.0000**

DiSC 2022 - Operations, Existing Plus Project VMT - Yolo/Solano AQMD Air District, Winter

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

3.2 Site Preparation - 2023

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	lb/day										lb/day					
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
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
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

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	lb/day										lb/day					
Fugitive Dust					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000			0.0000
Off-Road	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**

DiSC 2022 - Operations, Existing Plus Project VMT - Yolo/Solano AQMD Air District, Winter

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

3.2 Site Preparation - 2023

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	lb/day										lb/day					
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
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
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

DiSC 2022 - Operations, Existing Plus Project VMT - Yolo/Solano AQMD Air District, Winter

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

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	31.6372	57.6167	366.6974	0.8273	106.8981	0.5865	107.4846	28.5463	0.5511	29.0974		90,025.1377	90,025.1377	5.2082	4.7647	91,575.2109
Unmitigated	31.6372	57.6167	366.6974	0.8273	106.8981	0.5865	107.4846	28.5463	0.5511	29.0974		90,025.1377	90,025.1377	5.2082	4.7647	91,575.2109

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Apartments Mid Rise	1,452.00	1,452.00	1452.00	7,128,733	7,128,733
Condo/Townhouse	1,040.00	1,040.00	1040.00	5,105,979	5,105,979
Hotel	1,126.50	1,126.50	1126.50	4,323,869	4,323,869
Manufacturing	1,925.00	1,925.00	1925.00	9,554,605	9,554,605
Other Asphalt Surfaces	0.00	0.00	0.00		
Parking Lot	0.00	0.00	0.00		
Regional Shopping Center	0.00	0.00	0.00		
Research & Development	5,742.00	5,742.00	5742.00	24,401,777	24,401,777
Unenclosed Parking with Elevator	0.00	0.00	0.00		
Total	11,285.50	11,285.50	11,285.50	50,514,964	50,514,964

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Apartments Mid Rise	16.61	8.30	11.63	46.00	13.00	41.00	100	0	0
Condo/Townhouse	16.61	8.30	11.63	46.00	13.00	41.00	100	0	0
Hotel	16.61	8.30	11.63	19.40	61.60	19.00	100	0	0

DiSC 2022 - Operations, Existing Plus Project VMT - Yolo/Solano AQMD Air District, Winter

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

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Manufacturing	16.61	8.30	11.63	59.00	28.00	13.00	100	0	0
Other Asphalt Surfaces	10.00	5.00	7.00	0.00	0.00	0.00	0	0	0
Parking Lot	10.00	5.00	7.00	0.00	0.00	0.00	0	0	0
Regional Shopping Center	10.00	5.00	7.00	16.30	64.70	19.00	100	0	0
Research & Development	16.61	8.30	11.63	33.00	48.00	19.00	100	0	0
Unenclosed Parking with	10.00	5.00	7.00	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	0.534400	0.056822	0.179165	0.124517	0.023767	0.006150	0.026136	0.017163	0.000490	0.000694	0.027210	0.000627	0.002860
Condo/Townhouse	0.534400	0.056822	0.179165	0.124517	0.023767	0.006150	0.026136	0.017163	0.000490	0.000694	0.027210	0.000627	0.002860
Hotel	0.534400	0.056822	0.179165	0.124517	0.023767	0.006150	0.026136	0.017163	0.000490	0.000694	0.027210	0.000627	0.002860
Manufacturing	0.534400	0.056822	0.179165	0.124517	0.023767	0.006150	0.026136	0.017163	0.000490	0.000694	0.027210	0.000627	0.002860
Other Asphalt Surfaces	0.534400	0.056822	0.179165	0.124517	0.023767	0.006150	0.026136	0.017163	0.000490	0.000694	0.027210	0.000627	0.002860
Parking Lot	0.534400	0.056822	0.179165	0.124517	0.023767	0.006150	0.026136	0.017163	0.000490	0.000694	0.027210	0.000627	0.002860
Regional Shopping Center	0.534400	0.056822	0.179165	0.124517	0.023767	0.006150	0.026136	0.017163	0.000490	0.000694	0.027210	0.000627	0.002860
Research & Development	0.534400	0.056822	0.179165	0.124517	0.023767	0.006150	0.026136	0.017163	0.000490	0.000694	0.027210	0.000627	0.002860
Unenclosed Parking with Elevator	0.534400	0.056822	0.179165	0.124517	0.023767	0.006150	0.026136	0.017163	0.000490	0.000694	0.027210	0.000627	0.002860

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

Exceed Title 24

Percent of Electricity Use Generated with Renewable Energy

DiSC 2022 - Operations, Existing Plus Project VMT - Yolo/Solano AQMD Air District, Winter

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

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	0.8306	7.4680	5.7339	0.0453		0.5739	0.5739		0.5739	0.5739		9,061.2664	9,061.2664	0.1737	0.1661	9,115.1130
NaturalGas Unmitigated	0.9700	8.7236	6.7163	0.0529		0.6702	0.6702		0.6702	0.6702		10,581.3952	10,581.3952	0.2028	0.1940	10,644.2751

DiSC 2022 - Operations, Existing Plus Project VMT - Yolo/Solano AQMD Air District, Winter

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

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Apartments Mid Rise	7739.37	0.0835	0.7132	0.3035	4.5500e-003		0.0577	0.0577		0.0577	0.0577		910.5138	910.5138	0.0175	0.0167	915.9245
Condo/Townhouse	8272.66	0.0892	0.7624	0.3244	4.8700e-003		0.0616	0.0616		0.0616	0.0616		973.2543	973.2543	0.0187	0.0178	979.0379
Hotel	15789	0.1703	1.5479	1.3003	9.2900e-003		0.1176	0.1176		0.1176	0.1176		1,857.5304	1,857.5304	0.0356	0.0341	1,868.5688
Manufacturing	27801.4	0.2998	2.7256	2.2895	0.0164		0.2072	0.2072		0.2072	0.2072		3,270.7494	3,270.7494	0.0627	0.0600	3,290.1858
Other Asphalt Surfaces	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
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Regional Shopping Center	2538.08	0.0274	0.2488	0.2090	1.4900e-003		0.0189	0.0189		0.0189	0.0189		298.5979	298.5979	5.7200e-003	5.4700e-003	300.3723
Research & Development	27801.4	0.2998	2.7256	2.2895	0.0164		0.2072	0.2072		0.2072	0.2072		3,270.7494	3,270.7494	0.0627	0.0600	3,290.1858
Unenclosed 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
Total		**0.9700**	**8.7236**	**6.7163**	**0.0529**		**0.6702**	**0.6702**		**0.6702**	**0.6702**		**10,581.3952**	**10,581.3952**	**0.2028**	**0.1940**	**10,644.2751**

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

5.2 Energy by Land Use - NaturalGas

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	lb/day										lb/day					
Apartments Mid Rise	6.90974	0.0745	0.6368	0.2710	4.0600e-003		0.0515	0.0515		0.0515	0.0515		812.9101	812.9101	0.0156	0.0149	817.7408
Condo/Townhouse	7.20844	0.0777	0.6643	0.2827	4.2400e-003		0.0537	0.0537		0.0537	0.0537		848.0520	848.0520	0.0163	0.0156	853.0916
Hotel	13.4439	0.1450	1.3180	1.1072	7.9100e-003		0.1002	0.1002		0.1002	0.1002		1,581.6387	1,581.6387	0.0303	0.0290	1,591.0376
Manufacturing	23.6447	0.2550	2.3181	1.9472	0.0139		0.1762	0.1762		0.1762	0.1762		2,781.7325	2,781.7325	0.0533	0.0510	2,798.2629
Other Asphalt Surfaces	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
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Regional Shopping Center	2.16921	0.0234	0.2127	0.1786	1.2800e-003		0.0162	0.0162		0.0162	0.0162		255.2006	255.2006	4.8900e-003	4.6800e-003	256.7172
Research & Development	23.6447	0.2550	2.3181	1.9472	0.0139		0.1762	0.1762		0.1762	0.1762		2,781.7325	2,781.7325	0.0533	0.0510	2,798.2629
Unenclosed 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
Total		**0.8306**	**7.4680**	**5.7339**	**0.0453**		**0.5739**	**0.5739**		**0.5739**	**0.5739**		**9,061.2664**	**9,061.2664**	**0.1737**	**0.1661**	**9,115.1130**

6.0 Area Detail

6.1 Mitigation Measures Area

No Hearths Installed

Use Low VOC Cleaning Supplies

DiSC 2022 - Operations, Existing Plus Project VMT - Yolo/Solano AQMD Air District, Winter

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

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	41.5584	0.4397	38.2171	2.0300e-003		0.2118	0.2118		0.2118	0.2118	0.0000	69.1243	69.1243	0.0671	0.0000	70.8028
Unmitigated	1,087.0611	18.8287	1,327.1450	2.3303		180.9581	180.9581		180.9581	180.9581	18,989.4050	5,426.7713	24,416.1763	17.8142	1.4407	25,290.8675

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	lb/day										lb/day					
Architectural Coating	3.2760					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	40.0892					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	1,042.5302	18.3890	1,288.9280	2.3282		180.7463	180.7463		180.7463	180.7463	18,989.4050	5,357.6471	24,347.0520	17.7470	1.4407	25,220.0647
Landscaping	1.1657	0.4397	38.2171	2.0300e-003		0.2118	0.2118		0.2118	0.2118		69.1243	69.1243	0.0671		70.8028
Total	**1,087.0611**	**18.8287**	**1,327.1450**	**2.3303**		**180.9581**	**180.9581**		**180.9581**	**180.9581**	**18,989.4050**	**5,426.7713**	**24,416.1763**	**17.8142**	**1.4407**	**25,290.8676**

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

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	lb/day										lb/day					
Architectural Coating	3.2760					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	37.1167					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	1.1657	0.4397	38.2171	2.0300e-003		0.2118	0.2118		0.2118	0.2118		69.1243	69.1243	0.0671		70.8028
Total	**41.5584**	**0.4397**	**38.2171**	**2.0300e-003**		**0.2118**	**0.2118**		**0.2118**	**0.2118**	**0.0000**	**69.1243**	**69.1243**	**0.0671**	**0.0000**	**70.8028**

7.0 Water Detail

7.1 Mitigation Measures Water

Apply Water Conservation Strategy

8.0 Waste Detail

8.1 Mitigation Measures Waste

9.0 Operational Offroad

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

DiSC 2022 - Operations, Existing Plus Project VMT - Yolo/Solano AQMD Air District, Winter

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

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

Equipment Type	Number	Hours/Day	Hours/Year	Horse Power	Load Factor	Fuel Type
Emergency Generator	1	0	6	89	0.73	Diesel

Boilers

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

User Defined Equipment

Equipment Type	Number

10.1 Stationary Sources

Unmitigated/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
Equipment Type	lb/day										lb/day					
Emergency Generator - Diesel (75 - 100 HP)	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**		**0.0000**

11.0 Vegetation

DiSC 2022 - Operations, Existing Plus Project VMT

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

Yolo/Solano AQMD Air District, Mitigation Report

Construction Mitigation Summary

Phase	ROG	NOx	CO	SO2	Exhaust PM10	Exhaust PM2.5	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction												
Site Preparation	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

OFFROAD Equipment Mitigation

Equipment Type	Fuel Type	Tier	Number Mitigated	Total Number of Equipment	DPF	Oxidation Catalyst
Rubber Tired Dozers	Diesel	No Change	0	0	No Change	0.00
Tractors/Loaders/Backhoes	Diesel	No Change	0	0	No Change	0.00

Equipment Type	ROG	NOx	CO	SO2	Exhaust PM10	Exhaust PM2.5	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
	Unmitigated tons/yr						Unmitigated mt/yr					
Rubber Tired Dozers	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000
Tractors/Loaders/ Backhoes	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000

Equipment Type	ROG	NOx	CO	SO2	Exhaust PM10	Exhaust PM2.5	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
	Mitigated tons/yr						Mitigated mt/yr					
Rubber Tired Dozers	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000
Tractors/Loaders/Backhoes	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000

DiSC 2022 - Operations, Existing Plus Project VMT

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

Equipment Type	ROG	NOx	CO	SO2	Exhaust PM10	Exhaust PM2.5	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction												
Rubber Tired Dozers	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000
Tractors/Loaders/Backhoes	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000

Fugitive Dust Mitigation

Yes/No	Mitigation Measure	Mitigation Input		Mitigation Input		Mitigation Input	
No	Soil Stabilizer for unpaved Roads	PM10 Reduction		PM2.5 Reduction			
No	Replace Ground Cover of Area Disturbed	PM10 Reduction		PM2.5 Reduction			
No	Water Exposed Area	PM10 Reduction		PM2.5 Reduction		Frequency (per day)	
No	Unpaved Road Mitigation	Moisture Content %		Vehicle Speed (mph)	0.00		
No	Clean Paved Road	% PM Reduction	0.00				

		Unmitigated		Mitigated		Percent Reduction	
Phase	Source	PM10	PM2.5	PM10	PM2.5	PM10	PM2.5
Site Preparation	Fugitive Dust	0.00	0.00	0.00	0.00	0.00	0.00
Site Preparation	Roads	0.00	0.00	0.00	0.00	0.00	0.00

DiSC 2022 - Operations, Existing Plus Project VMT

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

Operational Percent Reduction Summary

Category	ROG	NOx	CO	SO2	Exhaust PM10	Exhaust PM2.5	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction												
Architectural Coating	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Consumer Products	7.41	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hearth	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Landscaping	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Mobile	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Natural Gas	14.36	14.39	14.63	14.40	14.37	14.37	0.00	14.37	14.37	14.38	14.38	14.37
Water Indoor	0.00	0.00	0.00	0.00	0.00	0.00	20.00	20.66	20.41	20.00	20.01	20.18
Water Outdoor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Operational Mobile Mitigation

Project Setting: Suburban Center

Mitigation	Category	Measure	% Reduction	Input Value 1	Input Value 2	Input Value 3
No	Land Use	Increase Density	0.00	0.00	0.00	
No	Land Use	Increase Diversity	0.30	0.69		
No	Land Use	Improve Walkability Design	0.00	0.00		
No	Land Use	Improve Destination Accessibility	0.00	0.00		
No	Land Use	Increase Transit Accessibility	0.25	0.00		

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

No	Land Use	Integrate Below Market Rate Housing	0.00	0.00		
	Land Use	Land Use SubTotal	0.00			
No	Neighborhood Enhancements	Improve Pedestrian Network	2.00	Project Site and Connecting Off-Site		
No	Neighborhood Enhancements	Provide Traffic Calming Measures				
No	Neighborhood Enhancements	Implement NEV Network	0.00			
	Neighborhood Enhancements	Neighborhood Enhancements Subtotal	0.00			
No	Parking Policy Pricing	Limit Parking Supply	0.00	0.00		
No	Parking Policy Pricing	Unbundle Parking Costs	0.00	0.00		
No	Parking Policy Pricing	On-street Market Pricing	0.00	0.00		
	Parking Policy Pricing	Parking Policy Pricing Subtotal	0.00			
No	Transit Improvements	Provide BRT System	0.00	0.00		
No	Transit Improvements	Expand Transit Network	0.00	0.00		
No	Transit Improvements	Increase Transit Frequency	0.00		0.00	
	Transit Improvements	Transit Improvements Subtotal	0.00			
		Land Use and Site Enhancement Subtotal	0.00			
No	Commute	Implement Trip Reduction Program				
No	Commute	Transit Subsidy				
No	Commute	Implement Employee Parking "Cash Out"	4.50			
No	Commute	Workplace Parking Charge		0.00		
No	Commute	Encourage Telecommuting and Alternative Work Schedules	0.00			

DiSC 2022 - Operations, Existing Plus Project VMT

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

No	Commute	Market Commute Trip Reduction Option	0.00			
No	Commute	Employee Vanpool/Shuttle	0.00		2.00	
No	Commute	Provide Ride Sharing Program	10.00			
	Commute	Commute Subtotal	0.00			
No	School Trip	Implement School Bus Program	0.00			
		Total VMT Reduction	0.00			

Area Mitigation

Measure Implemented	Mitigation Measure	Input Value
No	Only Natural Gas Hearth	
Yes	No Hearth	
Yes	Use Low VOC Cleaning Supplies	
No	Use Low VOC Paint (Residential Interior)	50.00
No	Use Low VOC Paint (Residential Exterior)	100.00
No	Use Low VOC Paint (Non-residential Interior)	50.00
No	Use Low VOC Paint (Non-residential Exterior)	100.00
No	Use Low VOC Paint (Parking)	100.00
No	% Electric Lawnmower	0.00
No	% Electric Leafblower	0.00
No	% Electric Chainsaw	0.00

Energy Mitigation Measures

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

Measure Implemented	Mitigation Measure	Input Value 1	Input Value 2
Yes	Exceed Title 24	15.00	
No	Install High Efficiency Lighting		
Yes	On-site Renewable		50.00

Appliance Type	Land Use Subtype	% Improvement
ClothWasher		30.00
DishWasher		15.00
Fan		50.00
Refrigerator		15.00

Water Mitigation Measures

Measure Implemented	Mitigation Measure	Input Value 1	Input Value 2
Yes	Apply Water Conservation on Strategy	20.00	40.00
No	Use Reclaimed Water	0.00	0.00
No	Use Grey Water	0.00	
No	Install low-flow bathroom faucet	32.00	
No	Install low-flow Kitchen faucet	18.00	
No	Install low-flow Toilet	20.00	
No	Install low-flow Shower	20.00	
No	Turf Reduction	0.00	
No	Use Water Efficient Irrigation Systems	6.10	

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

No	Water Efficient Landscape	0.00	0.00

Solid Waste Mitigation

Mitigation Measures	Input Value
Institute Recycling and Composting Services Percent Reduction in Waste Disposed	

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

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1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Research & Development	550.00	1000sqft	25.80	550,000.00	0
Manufacturing	550.00	1000sqft	32.40	550,000.00	0
Other Asphalt Surfaces	0.60	Acre	0.60	26,136.00	0
Parking Lot	1,590.00	Space	9.40	636,000.00	0
Unenclosed Parking with Elevator	690.00	Space	1.60	276,000.00	0
Hotel	150.00	Room	0.00	217,800.00	0
Apartments Mid Rise	300.00	Dwelling Unit	7.93	300,000.00	858
Condo/Townhouse	160.00	Dwelling Unit	3.97	160,000.00	458
Regional Shopping Center	80.00	1000sqft	0.00	80,000.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	55
Climate Zone	2			**Operational Year**	2033
Utility Company	Pacific Gas and Electric Company				
CO2 Intensity (lb/MWhr)	203.98	**CH4 Intensity (lb/MWhr)**	0.033	**N2O Intensity (lb/MWhr)**	0.004

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - Lot acreages adjusted per Master Plan.

Construction Phase - Construction not modeled.

Off-road Equipment - Construction not modeled.

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

Grading -

Vehicle Trips - Trip generation rate, trip lengths, and trip purpose adjusted per project-specific traffic report.

Mobile Land Use Mitigation -

Area Mitigation -

Energy Mitigation -

Water Mitigation -

Stationary Sources - Emergency Generators and Fire Pumps -

Table Name	Column Name	Default Value	New Value
tblConstructionPhase	NumDays	60.00	1.00
tblLandUse	LotAcreage	12.63	25.80
tblLandUse	LotAcreage	12.63	32.40
tblLandUse	LotAcreage	14.31	9.40
tblLandUse	LotAcreage	6.21	1.60
tblLandUse	LotAcreage	5.00	0.00
tblLandUse	LotAcreage	7.89	7.93
tblLandUse	LotAcreage	10.00	3.97
tblLandUse	LotAcreage	1.84	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	4.00	0.00
tblStationaryGeneratorsPumpsUse	HorsePowerValue	0.00	89.00
tblStationaryGeneratorsPumpsUse	HoursPerYear	0.00	6.00
tblStationaryGeneratorsPumpsUse	NumberOfEquipment	0.00	1.00
tblVehicleTrips	CC_TL	5.00	6.97
tblVehicleTrips	CC_TL	5.00	6.97
tblVehicleTrips	CC_TL	5.00	6.97
tblVehicleTrips	CNW_TL	7.00	9.76
tblVehicleTrips	CNW_TL	7.00	9.76
tblVehicleTrips	CNW_TL	7.00	9.76

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tblVehicleTrips	CW_TL	10.00	13.94
tblVehicleTrips	CW_TL	10.00	13.94
tblVehicleTrips	CW_TL	10.00	13.94
tblVehicleTrips	DV_TP	11.00	0.00
tblVehicleTrips	DV_TP	11.00	0.00
tblVehicleTrips	DV_TP	38.00	0.00
tblVehicleTrips	DV_TP	5.00	0.00
tblVehicleTrips	DV_TP	35.00	0.00
tblVehicleTrips	DV_TP	15.00	0.00
tblVehicleTrips	HO_TL	7.00	9.76
tblVehicleTrips	HO_TL	7.00	9.76
tblVehicleTrips	HS_TL	5.00	6.97
tblVehicleTrips	HS_TL	5.00	6.97
tblVehicleTrips	HW_TL	10.00	13.94
tblVehicleTrips	HW_TL	10.00	13.94
tblVehicleTrips	PB_TP	3.00	0.00
tblVehicleTrips	PB_TP	3.00	0.00
tblVehicleTrips	PB_TP	4.00	0.00
tblVehicleTrips	PB_TP	3.00	0.00
tblVehicleTrips	PB_TP	11.00	0.00
tblVehicleTrips	PB_TP	3.00	0.00
tblVehicleTrips	PR_TP	86.00	100.00
tblVehicleTrips	PR_TP	86.00	100.00
tblVehicleTrips	PR_TP	58.00	100.00
tblVehicleTrips	PR_TP	92.00	100.00
tblVehicleTrips	PR_TP	54.00	100.00
tblVehicleTrips	PR_TP	82.00	100.00
tblVehicleTrips	ST_TR	4.91	4.84
tblVehicleTrips	ST_TR	8.14	6.50

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

tblVehicleTrips	ST_TR	8.19	7.51
tblVehicleTrips	ST_TR	6.42	3.50
tblVehicleTrips	ST_TR	46.12	0.00
tblVehicleTrips	ST_TR	1.90	10.44
tblVehicleTrips	SU_TR	4.09	4.84
tblVehicleTrips	SU_TR	6.28	6.50
tblVehicleTrips	SU_TR	5.95	7.51
tblVehicleTrips	SU_TR	5.09	3.50
tblVehicleTrips	SU_TR	21.10	0.00
tblVehicleTrips	SU_TR	1.11	10.44
tblVehicleTrips	WD_TR	5.44	4.84
tblVehicleTrips	WD_TR	7.32	6.50
tblVehicleTrips	WD_TR	8.36	7.51
tblVehicleTrips	WD_TR	3.93	3.50
tblVehicleTrips	WD_TR	37.75	0.00
tblVehicleTrips	WD_TR	11.26	10.44

2.0 Emissions Summary

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

2.1 Overall Construction

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2023	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Maximum	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2023	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Maximum	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)

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

		Highest		

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	50.7628	0.7935	56.2856	0.0956		7.4297	7.4297		7.4297	7.4297	706.3028	204.9192	911.2220	0.6656	0.0536	943.8304
Energy	0.1770	1.5921	1.2257	9.6600e-003		0.1223	0.1223		0.1223	0.1223	0.0000	3,058.5108	3,058.5108	0.2450	0.0577	3,081.8417
Mobile	5.1936	8.5958	53.7843	0.1287	15.8025	0.0903	15.8928	4.2313	0.0849	4.3162	0.0000	12,705.2480	12,705.2480	0.7088	0.6525	12,917.4062
Stationary	4.4000e-004	1.4300e-003	1.5900e-003	0.0000		6.0000e-005	6.0000e-005		6.0000e-005	6.0000e-005	0.0000	0.2034	0.2034	3.0000e-005	0.0000	0.2041
Waste						0.0000	0.0000		0.0000	0.0000	223.6006	0.0000	223.6006	13.2144	0.0000	553.9611
Water						0.0000	0.0000		0.0000	0.0000	138.7417	226.3748	365.1165	14.2867	0.3409	823.8774
Total	**56.1338**	**10.9828**	**111.2972**	**0.2340**	**15.8025**	**7.6423**	**23.4448**	**4.2313**	**7.6369**	**11.8682**	**1,068.6452**	**16,195.2561**	**17,263.9013**	**29.1206**	**1.1047**	**18,321.1208**

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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	7.4766	0.0396	3.4395	1.8000e-004		0.0191	0.0191		0.0191	0.0191	0.0000	5.6438	5.6438	5.4800e-003	0.0000	5.7808
Energy	0.1516	1.3629	1.0464	8.2700e-003		0.1047	0.1047		0.1047	0.1047	0.0000	2,137.4690	2,137.4690	0.1319	0.0400	2,152.6854
Mobile	5.1936	8.5958	53.7843	0.1287	15.8025	0.0903	15.8928	4.2313	0.0849	4.3162	0.0000	12,705.2480	12,705.2480	0.7088	0.6525	12,917.4062
Stationary	4.4000e-004	1.4300e-003	1.5900e-003	0.0000		6.0000e-005	6.0000e-005		6.0000e-005	6.0000e-005	0.0000	0.2034	0.2034	3.0000e-005	0.0000	0.2041
Waste						0.0000	0.0000		0.0000	0.0000	223.6006	0.0000	223.6006	13.2144	0.0000	553.9611
Water						0.0000	0.0000		0.0000	0.0000	110.9934	179.6135	290.6068	11.4291	0.2727	657.6009
Total	**12.8222**	**9.9997**	**58.2718**	**0.1371**	**15.8025**	**0.2142**	**16.0166**	**4.2313**	**0.2087**	**4.4400**	**334.5940**	**15,028.1775**	**15,362.7716**	**25.4898**	**0.9652**	**16,287.6384**

	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	**77.16**	**8.95**	**47.64**	**41.40**	**0.00**	**97.20**	**31.68**	**0.00**	**97.27**	**62.59**	**68.69**	**7.21**	**11.01**	**12.47**	**12.63**	**11.10**

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Site Preparation	Site Preparation	6/1/2023	6/1/2023	5	1	

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Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 0

Acres of Paving: 11.6

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

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Site Preparation	Rubber Tired Dozers	0	8.00	247	0.40
Site Preparation	Tractors/Loaders/Backhoes	0	8.00	97	0.37

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Site Preparation	0	0.00	0.00	0.00	10.00	7.00	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

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3.2 Site Preparation - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

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3.2 Site Preparation - 2023

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

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4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	5.1936	8.5958	53.7843	0.1287	15.8025	0.0903	15.8928	4.2313	0.0849	4.3162	0.0000	12,705.2480	12,705.2480	0.7088	0.6525	12,917.4062
Unmitigated	5.1936	8.5958	53.7843	0.1287	15.8025	0.0903	15.8928	4.2313	0.0849	4.3162	0.0000	12,705.2480	12,705.2480	0.7088	0.6525	12,917.4062

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Apartments Mid Rise	1,452.00	1,452.00	1452.00	5,982,990	5,982,990
Condo/Townhouse	1,040.00	1,040.00	1040.00	4,285,337	4,285,337
Hotel	1,126.50	1,126.50	1126.50	3,629,842	3,629,842
Manufacturing	1,925.00	1,925.00	1925.00	8,019,512	8,019,512
Other Asphalt Surfaces	0.00	0.00	0.00		
Parking Lot	0.00	0.00	0.00		
Regional Shopping Center	0.00	0.00	0.00		
Research & Development	5,742.00	5,742.00	5742.00	20,483,280	20,483,280
Unenclosed Parking with Elevator	0.00	0.00	0.00		
Total	11,285.50	11,285.50	11,285.50	42,400,961	42,400,961

4.3 Trip Type Information

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	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Apartments Mid Rise	13.94	6.97	9.76	46.00	13.00	41.00	100	0	0
Condo/Townhouse	13.94	6.97	9.76	46.00	13.00	41.00	100	0	0
Hotel	13.94	6.97	9.76	19.40	61.60	19.00	100	0	0
Manufacturing	13.94	6.97	9.76	59.00	28.00	13.00	100	0	0
Other Asphalt Surfaces	10.00	5.00	7.00	0.00	0.00	0.00	0	0	0
Parking Lot	10.00	5.00	7.00	0.00	0.00	0.00	0	0	0
Regional Shopping Center	10.00	5.00	7.00	16.30	64.70	19.00	100	0	0
Research & Development	13.94	6.97	9.76	33.00	48.00	19.00	100	0	0
Unenclosed Parking with	10.00	5.00	7.00	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	0.534400	0.056822	0.179165	0.124517	0.023767	0.006150	0.026136	0.017163	0.000490	0.000694	0.027210	0.000627	0.002860
Condo/Townhouse	0.534400	0.056822	0.179165	0.124517	0.023767	0.006150	0.026136	0.017163	0.000490	0.000694	0.027210	0.000627	0.002860
Hotel	0.534400	0.056822	0.179165	0.124517	0.023767	0.006150	0.026136	0.017163	0.000490	0.000694	0.027210	0.000627	0.002860
Manufacturing	0.534400	0.056822	0.179165	0.124517	0.023767	0.006150	0.026136	0.017163	0.000490	0.000694	0.027210	0.000627	0.002860
Other Asphalt Surfaces	0.534400	0.056822	0.179165	0.124517	0.023767	0.006150	0.026136	0.017163	0.000490	0.000694	0.027210	0.000627	0.002860
Parking Lot	0.534400	0.056822	0.179165	0.124517	0.023767	0.006150	0.026136	0.017163	0.000490	0.000694	0.027210	0.000627	0.002860
Regional Shopping Center	0.534400	0.056822	0.179165	0.124517	0.023767	0.006150	0.026136	0.017163	0.000490	0.000694	0.027210	0.000627	0.002860
Research & Development	0.534400	0.056822	0.179165	0.124517	0.023767	0.006150	0.026136	0.017163	0.000490	0.000694	0.027210	0.000627	0.002860
Unenclosed Parking with Elevator	0.534400	0.056822	0.179165	0.124517	0.023767	0.006150	0.026136	0.017163	0.000490	0.000694	0.027210	0.000627	0.002860

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

Exceed Title 24

Percent of Electricity Use Generated with Renewable Energy

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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					
Electricity Mitigated						0.0000	0.0000		0.0000	0.0000	0.0000	637.2747	637.2747	0.1031	0.0125	643.5762
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	1,306.6422	1,306.6422	0.2114	0.0256	1,319.5625
NaturalGas Mitigated	0.1516	1.3629	1.0464	8.2700e-003		0.1047	0.1047		0.1047	0.1047	0.0000	1,500.1943	1,500.1943	0.0288	0.0275	1,509.1092
NaturalGas Unmitigated	0.1770	1.5921	1.2257	9.6600e-003		0.1223	0.1223		0.1223	0.1223	0.0000	1,751.8687	1,751.8687	0.0336	0.0321	1,762.2791

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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	2.82487e+006	0.0152	0.1302	0.0554	8.3000e-004		0.0105	0.0105		0.0105	0.0105	0.0000	150.7458	150.7458	2.8900e-003	2.7600e-003	151.6416
Condo/Townhouse	3.01952e+006	0.0163	0.1391	0.0592	8.9000e-004		0.0113	0.0113		0.0113	0.0113	0.0000	161.1332	161.1332	3.0900e-003	2.9500e-003	162.0907
Hotel	5.76299e+006	0.0311	0.2825	0.2373	1.6900e-003		0.0215	0.0215		0.0215	0.0215	0.0000	307.5350	307.5350	5.8900e-003	5.6400e-003	309.3625
Manufacturing	1.01475e+007	0.0547	0.4974	0.4178	2.9800e-003		0.0378	0.0378		0.0378	0.0378	0.0000	541.5092	541.5092	0.0104	9.9300e-003	544.7272
Other Asphalt Surfaces	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
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Regional Shopping Center	926400	5.0000e-003	0.0454	0.0382	2.7000e-004		3.4500e-003	3.4500e-003		3.4500e-003	3.4500e-003	0.0000	49.4362	49.4362	9.5000e-004	9.1000e-004	49.7300
Research & Development	1.01475e+007	0.0547	0.4974	0.4178	2.9800e-003		0.0378	0.0378		0.0378	0.0378	0.0000	541.5092	541.5092	0.0104	9.9300e-003	544.7272
Unenclosed 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		**0.1770**	**1.5921**	**1.2257**	**9.6400e-003**		**0.1223**	**0.1223**		**0.1223**	**0.1223**	**0.0000**	**1,751.8686**	**1,751.8686**	**0.0336**	**0.0321**	**1,762.2791**

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5.2 Energy by Land Use - NaturalGas

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Apartments Mid Rise	2.52205e+006	0.0136	0.1162	0.0495	7.4000e-004		9.4000e-003	9.4000e-003		9.4000e-003	9.4000e-003	0.0000	134.5864	134.5864	2.5800e-003	2.4700e-003	135.3862
Condo/Townhouse	2.63108e+006	0.0142	0.1212	0.0516	7.7000e-004		9.8000e-003	9.8000e-003		9.8000e-003	9.8000e-003	0.0000	140.4045	140.4045	2.6900e-003	2.5700e-003	141.2389
Hotel	4.90703e+006	0.0265	0.2405	0.2021	1.4400e-003		0.0183	0.0183		0.0183	0.0183	0.0000	261.8580	261.8580	5.0200e-003	4.8000e-003	263.4141
Manufacturing	8.63033e+006	0.0465	0.4231	0.3554	2.5400e-003		0.0322	0.0322		0.0322	0.0322	0.0000	460.5470	460.5470	8.8300e-003	8.4400e-003	463.2838
Other Asphalt Surfaces	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
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Regional Shopping Center	791760	4.2700e-003	0.0388	0.0326	2.3000e-004		2.9500e-003	2.9500e-003		2.9500e-003	2.9500e-003	0.0000	42.2513	42.2513	8.1000e-004	7.7000e-004	42.5024
Research & Development	8.63033e+006	0.0465	0.4231	0.3554	2.5400e-003		0.0322	0.0322		0.0322	0.0322	0.0000	460.5470	460.5470	8.8300e-003	8.4400e-003	463.2838
Unenclosed 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		**0.1516**	**1.3629**	**1.0464**	**8.2600e-003**		**0.1047**	**0.1047**		**0.1047**	**0.1047**	**0.0000**	**1,500.1943**	**1,500.1943**	**0.0288**	**0.0275**	**1,509.1092**

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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	1.16812e+006	108.0785	0.0175	2.1200e-003	109.1472
Condo/Townhouse	780200	72.1871	0.0117	1.4200e-003	72.9009
Hotel	1.39828e+006	129.3738	0.0209	2.5400e-003	130.6531
Manufacturing	4.554e+006	421.3533	0.0682	8.2600e-003	425.5197
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Parking Lot	222600	20.5958	3.3300e-003	4.0000e-004	20.7995
Regional Shopping Center	909600	84.1596	0.0136	1.6500e-003	84.9918
Research & Development	4.554e+006	421.3533	0.0682	8.2600e-003	425.5197
Unenclosed Parking with Elevator	535440	49.5409	8.0100e-003	9.7000e-004	50.0308
Total		**1,306.6422**	**0.2114**	**0.0256**	**1,319.5625**

5.3 Energy by Land Use - Electricity

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Apartments Mid Rise	581849	53.8349	8.7100e-003	1.0600e-003	54.3672
Condo/Townhouse	389138	36.0046	5.8200e-003	7.1000e-004	36.3606
Hotel	671859	62.1629	0.0101	1.2200e-003	62.7776
Manufacturing	2.21595e+006	205.0281	0.0332	4.0200e-003	207.0554
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Parking Lot	111300	10.2979	1.6700e-003	2.0000e-004	10.3997
Regional Shopping Center	433920	40.1479	6.5000e-003	7.9000e-004	40.5449
Research & Development	2.21595e+006	205.0281	0.0332	4.0200e-003	207.0554
Unenclosed Parking with Elevator	267720	24.7705	4.0100e-003	4.9000e-004	25.0154
Total		**637.2747**	**0.1031**	**0.0125**	**643.5762**

6.0 Area Detail

6.1 Mitigation Measures Area

No Hearths Installed

Use Low VOC Cleaning Supplies

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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	7.4766	0.0396	3.4395	1.8000e-004		0.0191	0.0191		0.0191	0.0191	0.0000	5.6438	5.6438	5.4800e-003	0.0000	5.7808
Unmitigated	50.7628	0.7935	56.2856	0.0956		7.4297	7.4297		7.4297	7.4297	706.3028	204.9192	911.2220	0.6656	0.0536	943.8304

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	0.5979					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	7.3163					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth	42.7437	0.7540	52.8461	0.0955		7.4106	7.4106		7.4106	7.4106	706.3028	199.2754	905.5782	0.6601	0.0536	938.0496
Landscaping	0.1049	0.0396	3.4395	1.8000e-004		0.0191	0.0191		0.0191	0.0191	0.0000	5.6438	5.6438	5.4800e-003	0.0000	5.7808
Total	**50.7628**	**0.7935**	**56.2856**	**0.0956**		**7.4297**	**7.4297**		**7.4297**	**7.4297**	**706.3028**	**204.9192**	**911.2220**	**0.6656**	**0.0536**	**943.8304**

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	0.5979					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	6.7738					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	0.1049	0.0396	3.4395	1.8000e-004		0.0191	0.0191		0.0191	0.0191	0.0000	5.6438	5.6438	5.4800e-003	0.0000	5.7808
Total	**7.4766**	**0.0396**	**3.4395**	**1.8000e-004**		**0.0191**	**0.0191**		**0.0191**	**0.0191**	**0.0000**	**5.6438**	**5.6438**	**5.4800e-003**	**0.0000**	**5.7808**

7.0 Water Detail

7.1 Mitigation Measures Water

Apply Water Conservation Strategy

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	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	290.6068	11.4291	0.2727	657.6009
Unmitigated	365.1165	14.2867	0.3409	823.8774

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7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Apartments Mid Rise	19.5462 / 12.3226	19.9773	0.6391	0.0153	40.5180
Condo/Townhouse	10.4246 / 6.57206	10.6546	0.3409	8.1600e-003	21.6096
Hotel	3.80502 / 0.422779	3.2490	0.1243	2.9700e-003	7.2413
Manufacturing	127.188 / 0	104.0267	4.1547	0.0991	237.4283
Other Asphalt Surfaces	0 / 0	0.0000	0.0000	0.0000	0.0000
Parking Lot	0 / 0	0.0000	0.0000	0.0000	0.0000
Regional Shopping Center	5.9258 / 3.63194	6.0229	0.1938	4.6400e-003	12.2498
Research & Development	270.432 / 0	221.1861	8.8339	0.2107	504.8305
Unenclosed Parking with Elevator	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		**365.1165**	**14.2867**	**0.3409**	**823.8774**

7.2 Water by Land Use

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Apartments Mid Rise	15.637 / 7.39357	15.1838	0.5112	0.0122	31.6084
Condo/Townhouse	8.33972 / 3.94323	8.0980	0.2726	6.5200e-003	16.8578
Hotel	3.04401 / 0.253668	2.5718	0.0995	2.3700e-003	5.7654
Manufacturing	101.75 / 0	83.2213	3.3238	0.0793	189.9426
Other Asphalt Surfaces	0 / 0	0.0000	0.0000	0.0000	0.0000
Parking Lot	0 / 0	0.0000	0.0000	0.0000	0.0000
Regional Shopping Center	4.74064 / 2.17917	4.5831	0.1550	3.7100e-003	9.5623
Research & Development	216.345 / 0	176.9489	7.0671	0.1686	403.8644
Unenclosed Parking with Elevator	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		**290.6068**	**11.4291**	**0.2727**	**657.6009**

8.0 Waste Detail

8.1 Mitigation Measures Waste

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Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	223.6006	13.2144	0.0000	553.9611
Unmitigated	223.6006	13.2144	0.0000	553.9611

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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	138	28.0128	1.6555	0.0000	69.4004
Condo/Townhouse	73.6	14.9401	0.8829	0.0000	37.0136
Hotel	82.13	16.6717	0.9853	0.0000	41.3033
Manufacturing	682	138.4398	8.1816	0.0000	342.9788
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Parking Lot	0	0.0000	0.0000	0.0000	0.0000
Regional Shopping Center	84	17.0512	1.0077	0.0000	42.2437
Research & Development	41.8	8.4850	0.5015	0.0000	21.0213
Unenclosed Parking with Elevator	0	0.0000	0.0000	0.0000	0.0000
Total		**223.6006**	**13.2144**	**0.0000**	**553.9611**

8.2 Waste by Land Use

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Apartments Mid Rise	138	28.0128	1.6555	0.0000	69.4004
Condo/Townhouse	73.6	14.9401	0.8829	0.0000	37.0136
Hotel	82.13	16.6717	0.9853	0.0000	41.3033
Manufacturing	682	138.4398	8.1816	0.0000	342.9788
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Parking Lot	0	0.0000	0.0000	0.0000	0.0000
Regional Shopping Center	84	17.0512	1.0077	0.0000	42.2437
Research & Development	41.8	8.4850	0.5015	0.0000	21.0213
Unenclosed Parking with Elevator	0	0.0000	0.0000	0.0000	0.0000
Total		**223.6006**	**13.2144**	**0.0000**	**553.9611**

9.0 Operational Offroad

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

10.0 Stationary Equipment

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

Fire Pumps and Emergency Generators

Equipment Type	Number	Hours/Day	Hours/Year	Horse Power	Load Factor	Fuel Type
Emergency Generator	1	0	6	89	0.73	Diesel

Boilers

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

User Defined Equipment

Equipment Type	Number

10.1 Stationary Sources

Unmitigated/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
Equipment Type	tons/yr										MT/yr					
Emergency Generator - Diesel (75 - 100 HP)	4.4000e-004	1.4300e-003	1.5900e-003	0.0000		6.0000e-005	6.0000e-005		6.0000e-005	6.0000e-005	0.0000	0.2034	0.2034	3.0000e-005	0.0000	0.2041
Total	**4.4000e-004**	**1.4300e-003**	**1.5900e-003**	**0.0000**		**6.0000e-005**	**6.0000e-005**		**6.0000e-005**	**6.0000e-005**	**0.0000**	**0.2034**	**0.2034**	**3.0000e-005**	**0.0000**	**0.2041**

11.0 Vegetation

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

DiSC 2022 - Operations, Cumulative Plus Project VMT

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1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Research & Development	550.00	1000sqft	25.80	550,000.00	0
Manufacturing	550.00	1000sqft	32.40	550,000.00	0
Other Asphalt Surfaces	0.60	Acre	0.60	26,136.00	0
Parking Lot	1,590.00	Space	9.40	636,000.00	0
Unenclosed Parking with Elevator	690.00	Space	1.60	276,000.00	0
Hotel	150.00	Room	0.00	217,800.00	0
Apartments Mid Rise	300.00	Dwelling Unit	7.93	300,000.00	858
Condo/Townhouse	160.00	Dwelling Unit	3.97	160,000.00	458
Regional Shopping Center	80.00	1000sqft	0.00	80,000.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	55
Climate Zone	2			**Operational Year**	2033
Utility Company	Pacific Gas and Electric Company				
CO2 Intensity (lb/MWhr)	203.98	**CH4 Intensity (lb/MWhr)**	0.033	**N2O Intensity (lb/MWhr)**	0.004

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - Lot acreages adjusted per Master Plan.

Construction Phase - Construction not modeled.

Off-road Equipment - Construction not modeled.

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

Grading -

Vehicle Trips - Trip generation rate, trip lengths, and trip purpose adjusted per project-specific traffic report.

Mobile Land Use Mitigation -

Area Mitigation -

Energy Mitigation -

Water Mitigation -

Stationary Sources - Emergency Generators and Fire Pumps -

Table Name	Column Name	Default Value	New Value
tblConstructionPhase	NumDays	60.00	1.00
tblLandUse	LotAcreage	12.63	25.80
tblLandUse	LotAcreage	12.63	32.40
tblLandUse	LotAcreage	14.31	9.40
tblLandUse	LotAcreage	6.21	1.60
tblLandUse	LotAcreage	5.00	0.00
tblLandUse	LotAcreage	7.89	7.93
tblLandUse	LotAcreage	10.00	3.97
tblLandUse	LotAcreage	1.84	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	4.00	0.00
tblStationaryGeneratorsPumpsUse	HorsePowerValue	0.00	89.00
tblStationaryGeneratorsPumpsUse	HoursPerYear	0.00	6.00
tblStationaryGeneratorsPumpsUse	NumberOfEquipment	0.00	1.00
tblVehicleTrips	CC_TL	5.00	6.97
tblVehicleTrips	CC_TL	5.00	6.97
tblVehicleTrips	CC_TL	5.00	6.97
tblVehicleTrips	CNW_TL	7.00	9.76
tblVehicleTrips	CNW_TL	7.00	9.76
tblVehicleTrips	CNW_TL	7.00	9.76

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

tblVehicleTrips	CW_TL	10.00	13.94
tblVehicleTrips	CW_TL	10.00	13.94
tblVehicleTrips	CW_TL	10.00	13.94
tblVehicleTrips	DV_TP	11.00	0.00
tblVehicleTrips	DV_TP	11.00	0.00
tblVehicleTrips	DV_TP	38.00	0.00
tblVehicleTrips	DV_TP	5.00	0.00
tblVehicleTrips	DV_TP	35.00	0.00
tblVehicleTrips	DV_TP	15.00	0.00
tblVehicleTrips	HO_TL	7.00	9.76
tblVehicleTrips	HO_TL	7.00	9.76
tblVehicleTrips	HS_TL	5.00	6.97
tblVehicleTrips	HS_TL	5.00	6.97
tblVehicleTrips	HW_TL	10.00	13.94
tblVehicleTrips	HW_TL	10.00	13.94
tblVehicleTrips	PB_TP	3.00	0.00
tblVehicleTrips	PB_TP	3.00	0.00
tblVehicleTrips	PB_TP	4.00	0.00
tblVehicleTrips	PB_TP	3.00	0.00
tblVehicleTrips	PB_TP	11.00	0.00
tblVehicleTrips	PB_TP	3.00	0.00
tblVehicleTrips	PR_TP	86.00	100.00
tblVehicleTrips	PR_TP	86.00	100.00
tblVehicleTrips	PR_TP	58.00	100.00
tblVehicleTrips	PR_TP	92.00	100.00
tblVehicleTrips	PR_TP	54.00	100.00
tblVehicleTrips	PR_TP	82.00	100.00
tblVehicleTrips	ST_TR	4.91	4.84
tblVehicleTrips	ST_TR	8.14	6.50

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

tblVehicleTrips	ST_TR	8.19	7.51
tblVehicleTrips	ST_TR	6.42	3.50
tblVehicleTrips	ST_TR	46.12	0.00
tblVehicleTrips	ST_TR	1.90	10.44
tblVehicleTrips	SU_TR	4.09	4.84
tblVehicleTrips	SU_TR	6.28	6.50
tblVehicleTrips	SU_TR	5.95	7.51
tblVehicleTrips	SU_TR	5.09	3.50
tblVehicleTrips	SU_TR	21.10	0.00
tblVehicleTrips	SU_TR	1.11	10.44
tblVehicleTrips	WD_TR	5.44	4.84
tblVehicleTrips	WD_TR	7.32	6.50
tblVehicleTrips	WD_TR	8.36	7.51
tblVehicleTrips	WD_TR	3.93	3.50
tblVehicleTrips	WD_TR	37.75	0.00
tblVehicleTrips	WD_TR	11.26	10.44

2.0 Emissions Summary

DiSC 2022 - Operations, Cumulative Plus Project VMT - Yolo/Solano AQMD Air District, Summer

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

2.1 Overall Construction (Maximum Daily Emission)

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	lb/day										lb/day					
2023	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Maximum	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2023	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Maximum	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

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

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	lb/day										lb/day					
Area	1,087.0611	18.8287	1,327.1450	2.3303		180.9581	180.9581		180.9581	180.9581	18,989.4050	5,426.7713	24,416.1763	17.8142	1.4407	25,290.8675
Energy	0.9700	8.7236	6.7163	0.0529		0.6702	0.6702		0.6702	0.6702		10,581.3952	10,581.3952	0.2028	0.1940	10,644.2751
Mobile	33.0166	43.5748	311.5877	0.7521	89.7275	0.4967	90.2242	23.9610	0.4667	24.4277		81,917.4106	81,917.4106	4.1640	3.8226	83,160.6554
Stationary	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	**1,121.0477**	**71.1271**	**1,645.4490**	**3.1353**	**89.7275**	**182.1250**	**271.8525**	**23.9610**	**182.0949**	**206.0559**	**18,989.4050**	**97,925.5771**	**116,914.9820**	**22.1810**	**5.4574**	**119,095.7981**

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

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	lb/day										lb/day					
Area	41.5584	0.4397	38.2171	2.0300e-003		0.2118	0.2118		0.2118	0.2118	0.0000	69.1243	69.1243	0.0671	0.0000	70.8028
Energy	0.8306	7.4680	5.7339	0.0453		0.5739	0.5739		0.5739	0.5739		9,061.2664	9,061.2664	0.1737	0.1661	9,115.1130
Mobile	33.0166	43.5748	311.5877	0.7521	89.7275	0.4967	90.2242	23.9610	0.4667	24.4277		81,917.4106	81,917.4106	4.1640	3.8226	83,160.6554
Stationary	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	**75.4057**	**51.4825**	**355.5387**	**0.7995**	**89.7275**	**1.2824**	**91.0099**	**23.9610**	**1.2523**	**25.2133**	**0.0000**	**91,047.8012**	**91,047.8012**	**4.4048**	**3.9888**	**92,346.5712**

	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	**93.27**	**27.62**	**78.39**	**74.50**	**0.00**	**99.30**	**66.52**	**0.00**	**99.31**	**87.76**	**100.00**	**7.02**	**22.12**	**80.14**	**26.91**	**22.46**

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Site Preparation	Site Preparation	6/1/2023	6/1/2023	5	1	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 0

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Acres of Paving: 11.6

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

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Site Preparation	Rubber Tired Dozers	0	8.00	247	0.40
Site Preparation	Tractors/Loaders/Backhoes	0	8.00	97	0.37

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Site Preparation	0	0.00	0.00	0.00	10.00	7.00	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

3.2 Site Preparation - 2023

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	lb/day										lb/day					
Fugitive Dust					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000			0.0000
Off-Road	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**		**0.0000**

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

3.2 Site Preparation - 2023

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	lb/day										lb/day					
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
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
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

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	lb/day										lb/day					
Fugitive Dust					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000			0.0000
Off-Road	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**

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

3.2 Site Preparation - 2023

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	lb/day										lb/day					
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
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
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

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

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	33.0166	43.5748	311.5877	0.7521	89.7275	0.4967	90.2242	23.9610	0.4667	24.4277		81,917.4106	81,917.4106	4.1640	3.8226	83,160.6554
Unmitigated	33.0166	43.5748	311.5877	0.7521	89.7275	0.4967	90.2242	23.9610	0.4667	24.4277		81,917.4106	81,917.4106	4.1640	3.8226	83,160.6554

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Apartments Mid Rise	1,452.00	1,452.00	1452.00	5,982,990	5,982,990
Condo/Townhouse	1,040.00	1,040.00	1040.00	4,285,337	4,285,337
Hotel	1,126.50	1,126.50	1126.50	3,629,842	3,629,842
Manufacturing	1,925.00	1,925.00	1925.00	8,019,512	8,019,512
Other Asphalt Surfaces	0.00	0.00	0.00		
Parking Lot	0.00	0.00	0.00		
Regional Shopping Center	0.00	0.00	0.00		
Research & Development	5,742.00	5,742.00	5742.00	20,483,280	20,483,280
Unenclosed Parking with Elevator	0.00	0.00	0.00		
Total	11,285.50	11,285.50	11,285.50	42,400,961	42,400,961

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Apartments Mid Rise	13.94	6.97	9.76	46.00	13.00	41.00	100	0	0
Condo/Townhouse	13.94	6.97	9.76	46.00	13.00	41.00	100	0	0
Hotel	13.94	6.97	9.76	19.40	61.60	19.00	100	0	0

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	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Manufacturing	13.94	6.97	9.76	59.00	28.00	13.00	100	0	0
Other Asphalt Surfaces	10.00	5.00	7.00	0.00	0.00	0.00	0	0	0
Parking Lot	10.00	5.00	7.00	0.00	0.00	0.00	0	0	0
Regional Shopping Center	10.00	5.00	7.00	16.30	64.70	19.00	100	0	0
Research & Development	13.94	6.97	9.76	33.00	48.00	19.00	100	0	0
Unenclosed Parking with	10.00	5.00	7.00	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	0.534400	0.056822	0.179165	0.124517	0.023767	0.006150	0.026136	0.017163	0.000490	0.000694	0.027210	0.000627	0.002860
Condo/Townhouse	0.534400	0.056822	0.179165	0.124517	0.023767	0.006150	0.026136	0.017163	0.000490	0.000694	0.027210	0.000627	0.002860
Hotel	0.534400	0.056822	0.179165	0.124517	0.023767	0.006150	0.026136	0.017163	0.000490	0.000694	0.027210	0.000627	0.002860
Manufacturing	0.534400	0.056822	0.179165	0.124517	0.023767	0.006150	0.026136	0.017163	0.000490	0.000694	0.027210	0.000627	0.002860
Other Asphalt Surfaces	0.534400	0.056822	0.179165	0.124517	0.023767	0.006150	0.026136	0.017163	0.000490	0.000694	0.027210	0.000627	0.002860
Parking Lot	0.534400	0.056822	0.179165	0.124517	0.023767	0.006150	0.026136	0.017163	0.000490	0.000694	0.027210	0.000627	0.002860
Regional Shopping Center	0.534400	0.056822	0.179165	0.124517	0.023767	0.006150	0.026136	0.017163	0.000490	0.000694	0.027210	0.000627	0.002860
Research & Development	0.534400	0.056822	0.179165	0.124517	0.023767	0.006150	0.026136	0.017163	0.000490	0.000694	0.027210	0.000627	0.002860
Unenclosed Parking with Elevator	0.534400	0.056822	0.179165	0.124517	0.023767	0.006150	0.026136	0.017163	0.000490	0.000694	0.027210	0.000627	0.002860

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

Exceed Title 24

Percent of Electricity Use Generated with Renewable Energy

DiSC 2022 - Operations, Cumulative Plus Project VMT - Yolo/Solano AQMD Air District, Summer

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

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	0.8306	7.4680	5.7339	0.0453		0.5739	0.5739		0.5739	0.5739		9,061.2664	9,061.2664	0.1737	0.1661	9,115.1130
NaturalGas Unmitigated	0.9700	8.7236	6.7163	0.0529		0.6702	0.6702		0.6702	0.6702		10,581.3952	10,581.3952	0.2028	0.1940	10,644.2751

DiSC 2022 - Operations, Cumulative Plus Project VMT - Yolo/Solano AQMD Air District, Summer

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

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Apartments Mid Rise	7739.37	0.0835	0.7132	0.3035	4.5500e-003		0.0577	0.0577		0.0577	0.0577		910.5138	910.5138	0.0175	0.0167	915.9245
Condo/Townhouse	8272.66	0.0892	0.7624	0.3244	4.8700e-003		0.0616	0.0616		0.0616	0.0616		973.2543	973.2543	0.0187	0.0178	979.0379
Hotel	15789	0.1703	1.5479	1.3003	9.2900e-003		0.1176	0.1176		0.1176	0.1176		1,857.5304	1,857.5304	0.0356	0.0341	1,868.5688
Manufacturing	27801.4	0.2998	2.7256	2.2895	0.0164		0.2072	0.2072		0.2072	0.2072		3,270.7494	3,270.7494	0.0627	0.0600	3,290.1858
Other Asphalt Surfaces	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
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Regional Shopping Center	2538.08	0.0274	0.2488	0.2090	1.4900e-003		0.0189	0.0189		0.0189	0.0189		298.5979	298.5979	5.7200e-003	5.4700e-003	300.3723
Research & Development	27801.4	0.2998	2.7256	2.2895	0.0164		0.2072	0.2072		0.2072	0.2072		3,270.7494	3,270.7494	0.0627	0.0600	3,290.1858
Unenclosed 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
Total		**0.9700**	**8.7236**	**6.7163**	**0.0529**		**0.6702**	**0.6702**		**0.6702**	**0.6702**		**10,581.3952**	**10,581.3952**	**0.2028**	**0.1940**	**10,644.2751**

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

5.2 Energy by Land Use - NaturalGas

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	lb/day										lb/day					
Apartments Mid Rise	6.90974	0.0745	0.6368	0.2710	4.0600e-003		0.0515	0.0515		0.0515	0.0515		812.9101	812.9101	0.0156	0.0149	817.7408
Condo/Townhouse	7.20844	0.0777	0.6643	0.2827	4.2400e-003		0.0537	0.0537		0.0537	0.0537		848.0520	848.0520	0.0163	0.0156	853.0916
Hotel	13.4439	0.1450	1.3180	1.1072	7.9100e-003		0.1002	0.1002		0.1002	0.1002		1,581.6387	1,581.6387	0.0303	0.0290	1,591.0376
Manufacturing	23.6447	0.2550	2.3181	1.9472	0.0139		0.1762	0.1762		0.1762	0.1762		2,781.7325	2,781.7325	0.0533	0.0510	2,798.2629
Other Asphalt Surfaces	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
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Regional Shopping Center	2.16921	0.0234	0.2127	0.1786	1.2800e-003		0.0162	0.0162		0.0162	0.0162		255.2006	255.2006	4.8900e-003	4.6800e-003	256.7172
Research & Development	23.6447	0.2550	2.3181	1.9472	0.0139		0.1762	0.1762		0.1762	0.1762		2,781.7325	2,781.7325	0.0533	0.0510	2,798.2629
Unenclosed 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
Total		**0.8306**	**7.4680**	**5.7339**	**0.0453**		**0.5739**	**0.5739**		**0.5739**	**0.5739**		**9,061.2664**	**9,061.2664**	**0.1737**	**0.1661**	**9,115.1130**

6.0 Area Detail

6.1 Mitigation Measures Area

No Hearths Installed

Use Low VOC Cleaning Supplies

DiSC 2022 - Operations, Cumulative Plus Project VMT - Yolo/Solano AQMD Air District, Summer

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

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	41.5584	0.4397	38.2171	2.0300e-003		0.2118	0.2118		0.2118	0.2118	0.0000	69.1243	69.1243	0.0671	0.0000	70.8028
Unmitigated	1,087.0611	18.8287	1,327.1450	2.3303		180.9581	180.9581		180.9581	180.9581	18,989.4050	5,426.7713	24,416.1763	17.8142	1.4407	25,290.8675

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	lb/day										lb/day					
Architectural Coating	3.2760					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	40.0892					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	1,042.5302	18.3890	1,288.9280	2.3282		180.7463	180.7463		180.7463	180.7463	18,989.4050	5,357.6471	24,347.0520	17.7470	1.4407	25,220.0647
Landscaping	1.1657	0.4397	38.2171	2.0300e-003		0.2118	0.2118		0.2118	0.2118		69.1243	69.1243	0.0671		70.8028
Total	**1,087.0611**	**18.8287**	**1,327.1450**	**2.3303**		**180.9581**	**180.9581**		**180.9581**	**180.9581**	**18,989.4050**	**5,426.7713**	**24,416.1763**	**17.8142**	**1.4407**	**25,290.8676**

DiSC 2022 - Operations, Cumulative Plus Project VMT - Yolo/Solano AQMD Air District, Summer

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

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	lb/day										lb/day					
Architectural Coating	3.2760					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	37.1167					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	1.1657	0.4397	38.2171	2.0300e-003		0.2118	0.2118		0.2118	0.2118		69.1243	69.1243	0.0671		70.8028
Total	**41.5584**	**0.4397**	**38.2171**	**2.0300e-003**		**0.2118**	**0.2118**		**0.2118**	**0.2118**	**0.0000**	**69.1243**	**69.1243**	**0.0671**	**0.0000**	**70.8028**

7.0 Water Detail

7.1 Mitigation Measures Water

Apply Water Conservation Strategy

8.0 Waste Detail

8.1 Mitigation Measures Waste

9.0 Operational Offroad

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

DiSC 2022 - Operations, Cumulative Plus Project VMT - Yolo/Solano AQMD Air District, Summer

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

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

Equipment Type	Number	Hours/Day	Hours/Year	Horse Power	Load Factor	Fuel Type
Emergency Generator	1	0	6	89	0.73	Diesel

Boilers

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

User Defined Equipment

Equipment Type	Number

10.1 Stationary Sources

Unmitigated/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
Equipment Type	lb/day										lb/day					
Emergency Generator - Diesel (75 - 100 HP)	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**		**0.0000**

11.0 Vegetation

DiSC 2022 - Operations, Cumulative Plus Project VMT - Yolo/Solano AQMD Air District, Winter

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

DiSC 2022 - Operations, Cumulative Plus Project VMT

Yolo/Solano AQMD Air District, Winter

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Research & Development	550.00	1000sqft	25.80	550,000.00	0
Manufacturing	550.00	1000sqft	32.40	550,000.00	0
Other Asphalt Surfaces	0.60	Acre	0.60	26,136.00	0
Parking Lot	1,590.00	Space	9.40	636,000.00	0
Unenclosed Parking with Elevator	690.00	Space	1.60	276,000.00	0
Hotel	150.00	Room	0.00	217,800.00	0
Apartments Mid Rise	300.00	Dwelling Unit	7.93	300,000.00	858
Condo/Townhouse	160.00	Dwelling Unit	3.97	160,000.00	458
Regional Shopping Center	80.00	1000sqft	0.00	80,000.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	55
Climate Zone	2			**Operational Year**	2033
Utility Company	Pacific Gas and Electric Company				
CO2 Intensity (lb/MWhr)	203.98	**CH4 Intensity (lb/MWhr)**	0.033	**N2O Intensity (lb/MWhr)**	0.004

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - Lot acreages adjusted per Master Plan.

Construction Phase - Construction not modeled.

Off-road Equipment - Construction not modeled.

DiSC 2022 - Operations, Cumulative Plus Project VMT - Yolo/Solano AQMD Air District, Winter

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

Grading -

Vehicle Trips - Trip generation rate, trip lengths, and trip purpose adjusted per project-specific traffic report.

Mobile Land Use Mitigation -

Area Mitigation -

Energy Mitigation -

Water Mitigation -

Stationary Sources - Emergency Generators and Fire Pumps -

Table Name	Column Name	Default Value	New Value
tblConstructionPhase	NumDays	60.00	1.00
tblLandUse	LotAcreage	12.63	25.80
tblLandUse	LotAcreage	12.63	32.40
tblLandUse	LotAcreage	14.31	9.40
tblLandUse	LotAcreage	6.21	1.60
tblLandUse	LotAcreage	5.00	0.00
tblLandUse	LotAcreage	7.89	7.93
tblLandUse	LotAcreage	10.00	3.97
tblLandUse	LotAcreage	1.84	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	4.00	0.00
tblStationaryGeneratorsPumpsUse	HorsePowerValue	0.00	89.00
tblStationaryGeneratorsPumpsUse	HoursPerYear	0.00	6.00
tblStationaryGeneratorsPumpsUse	NumberOfEquipment	0.00	1.00
tblVehicleTrips	CC_TL	5.00	6.97
tblVehicleTrips	CC_TL	5.00	6.97
tblVehicleTrips	CC_TL	5.00	6.97
tblVehicleTrips	CNW_TL	7.00	9.76
tblVehicleTrips	CNW_TL	7.00	9.76
tblVehicleTrips	CNW_TL	7.00	9.76

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

tblVehicleTrips	CW_TL	10.00	13.94
tblVehicleTrips	CW_TL	10.00	13.94
tblVehicleTrips	CW_TL	10.00	13.94
tblVehicleTrips	DV_TP	11.00	0.00
tblVehicleTrips	DV_TP	11.00	0.00
tblVehicleTrips	DV_TP	38.00	0.00
tblVehicleTrips	DV_TP	5.00	0.00
tblVehicleTrips	DV_TP	35.00	0.00
tblVehicleTrips	DV_TP	15.00	0.00
tblVehicleTrips	HO_TL	7.00	9.76
tblVehicleTrips	HO_TL	7.00	9.76
tblVehicleTrips	HS_TL	5.00	6.97
tblVehicleTrips	HS_TL	5.00	6.97
tblVehicleTrips	HW_TL	10.00	13.94
tblVehicleTrips	HW_TL	10.00	13.94
tblVehicleTrips	PB_TP	3.00	0.00
tblVehicleTrips	PB_TP	3.00	0.00
tblVehicleTrips	PB_TP	4.00	0.00
tblVehicleTrips	PB_TP	3.00	0.00
tblVehicleTrips	PB_TP	11.00	0.00
tblVehicleTrips	PB_TP	3.00	0.00
tblVehicleTrips	PR_TP	86.00	100.00
tblVehicleTrips	PR_TP	86.00	100.00
tblVehicleTrips	PR_TP	58.00	100.00
tblVehicleTrips	PR_TP	92.00	100.00
tblVehicleTrips	PR_TP	54.00	100.00
tblVehicleTrips	PR_TP	82.00	100.00
tblVehicleTrips	ST_TR	4.91	4.84
tblVehicleTrips	ST_TR	8.14	6.50

DiSC 2022 - Operations, Cumulative Plus Project VMT - Yolo/Solano AQMD Air District, Winter

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

tblVehicleTrips	ST_TR	8.19	7.51
tblVehicleTrips	ST_TR	6.42	3.50
tblVehicleTrips	ST_TR	46.12	0.00
tblVehicleTrips	ST_TR	1.90	10.44
tblVehicleTrips	SU_TR	4.09	4.84
tblVehicleTrips	SU_TR	6.28	6.50
tblVehicleTrips	SU_TR	5.95	7.51
tblVehicleTrips	SU_TR	5.09	3.50
tblVehicleTrips	SU_TR	21.10	0.00
tblVehicleTrips	SU_TR	1.11	10.44
tblVehicleTrips	WD_TR	5.44	4.84
tblVehicleTrips	WD_TR	7.32	6.50
tblVehicleTrips	WD_TR	8.36	7.51
tblVehicleTrips	WD_TR	3.93	3.50
tblVehicleTrips	WD_TR	37.75	0.00
tblVehicleTrips	WD_TR	11.26	10.44

2.0 Emissions Summary

DiSC 2022 - Operations, Cumulative Plus Project VMT - Yolo/Solano AQMD Air District, Winter

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

2.1 Overall Construction (Maximum Daily Emission)

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	lb/day										lb/day					
2023	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Maximum	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2023	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Maximum	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

DiSC 2022 - Operations, Cumulative Plus Project VMT - Yolo/Solano AQMD Air District, Winter

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

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	lb/day										lb/day					
Area	1,087.0611	18.8287	1,327.1450	2.3303		180.9581	180.9581		180.9581	180.9581	18,989.4050	5,426.7713	24,416.1763	17.8142	1.4407	25,290.8675
Energy	0.9700	8.7236	6.7163	0.0529		0.6702	0.6702		0.6702	0.6702		10,581.3952	10,581.3952	0.2028	0.1940	10,644.2751
Mobile	28.0599	49.8667	317.8995	0.6970	89.7275	0.4970	90.2245	23.9610	0.4669	24.4280		75,838.6208	75,838.6208	4.5348	4.0939	77,171.9740
Stationary	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	**1,116.0910**	**77.4190**	**1,651.7608**	**3.0801**	**89.7275**	**182.1253**	**271.8528**	**23.9610**	**182.0952**	**206.0562**	**18,989.4050**	**91,846.7873**	**110,836.1922**	**22.5518**	**5.7286**	**113,107.1167**

DiSC 2022 - Operations, Cumulative Plus Project VMT - Yolo/Solano AQMD Air District, Winter

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

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	lb/day										lb/day					
Area	41.5584	0.4397	38.2171	2.0300e-003		0.2118	0.2118		0.2118	0.2118	0.0000	69.1243	69.1243	0.0671	0.0000	70.8028
Energy	0.8306	7.4680	5.7339	0.0453		0.5739	0.5739		0.5739	0.5739		9,061.2664	9,061.2664	0.1737	0.1661	9,115.1130
Mobile	28.0599	49.8667	317.8995	0.6970	89.7275	0.4970	90.2245	23.9610	0.4669	24.4280		75,838.6208	75,838.6208	4.5348	4.0939	77,171.9740
Stationary	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	**70.4490**	**57.7744**	**361.8504**	**0.7443**	**89.7275**	**1.2827**	**91.0102**	**23.9610**	**1.2526**	**25.2136**	**0.0000**	**84,969.0114**	**84,969.0114**	**4.7756**	**4.2600**	**86,357.8898**

	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	**93.69**	**25.37**	**78.09**	**75.84**	**0.00**	**99.30**	**66.52**	**0.00**	**99.31**	**87.76**	**100.00**	**7.49**	**23.34**	**78.82**	**25.64**	**23.65**

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Site Preparation	Site Preparation	6/1/2023	6/1/2023	5	1	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 0

DiSC 2022 - Operations, Cumulative Plus Project VMT - Yolo/Solano AQMD Air District, Winter

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

Acres of Paving: 11.6

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

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Site Preparation	Rubber Tired Dozers	0	8.00	247	0.40
Site Preparation	Tractors/Loaders/Backhoes	0	8.00	97	0.37

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Site Preparation	0	0.00	0.00	0.00	10.00	7.00	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

3.2 Site Preparation - 2023

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	lb/day										lb/day					
Fugitive Dust					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000			0.0000
Off-Road	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**		**0.0000**

DiSC 2022 - Operations, Cumulative Plus Project VMT - Yolo/Solano AQMD Air District, Winter

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

3.2 Site Preparation - 2023

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	lb/day										lb/day					
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
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
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

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	lb/day										lb/day					
Fugitive Dust					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000			0.0000
Off-Road	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**

DiSC 2022 - Operations, Cumulative Plus Project VMT - Yolo/Solano AQMD Air District, Winter

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

3.2 Site Preparation - 2023

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	lb/day										lb/day					
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
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
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

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

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	28.0599	49.8667	317.8995	0.6970	89.7275	0.4970	90.2245	23.9610	0.4669	24.4280		75,838.6208	75,838.6208	4.5348	4.0939	77,171.9740
Unmitigated	28.0599	49.8667	317.8995	0.6970	89.7275	0.4970	90.2245	23.9610	0.4669	24.4280		75,838.6208	75,838.6208	4.5348	4.0939	77,171.9740

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Apartments Mid Rise	1,452.00	1,452.00	1452.00	5,982,990	5,982,990
Condo/Townhouse	1,040.00	1,040.00	1040.00	4,285,337	4,285,337
Hotel	1,126.50	1,126.50	1126.50	3,629,842	3,629,842
Manufacturing	1,925.00	1,925.00	1925.00	8,019,512	8,019,512
Other Asphalt Surfaces	0.00	0.00	0.00		
Parking Lot	0.00	0.00	0.00		
Regional Shopping Center	0.00	0.00	0.00		
Research & Development	5,742.00	5,742.00	5742.00	20,483,280	20,483,280
Unenclosed Parking with Elevator	0.00	0.00	0.00		
Total	11,285.50	11,285.50	11,285.50	42,400,961	42,400,961

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Apartments Mid Rise	13.94	6.97	9.76	46.00	13.00	41.00	100	0	0
Condo/Townhouse	13.94	6.97	9.76	46.00	13.00	41.00	100	0	0
Hotel	13.94	6.97	9.76	19.40	61.60	19.00	100	0	0

DiSC 2022 - Operations, Cumulative Plus Project VMT - Yolo/Solano AQMD Air District, Winter

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

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Manufacturing	13.94	6.97	9.76	59.00	28.00	13.00	100	0	0
Other Asphalt Surfaces	10.00	5.00	7.00	0.00	0.00	0.00	0	0	0
Parking Lot	10.00	5.00	7.00	0.00	0.00	0.00	0	0	0
Regional Shopping Center	10.00	5.00	7.00	16.30	64.70	19.00	100	0	0
Research & Development	13.94	6.97	9.76	33.00	48.00	19.00	100	0	0
Unenclosed Parking with	10.00	5.00	7.00	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	0.534400	0.056822	0.179165	0.124517	0.023767	0.006150	0.026136	0.017163	0.000490	0.000694	0.027210	0.000627	0.002860
Condo/Townhouse	0.534400	0.056822	0.179165	0.124517	0.023767	0.006150	0.026136	0.017163	0.000490	0.000694	0.027210	0.000627	0.002860
Hotel	0.534400	0.056822	0.179165	0.124517	0.023767	0.006150	0.026136	0.017163	0.000490	0.000694	0.027210	0.000627	0.002860
Manufacturing	0.534400	0.056822	0.179165	0.124517	0.023767	0.006150	0.026136	0.017163	0.000490	0.000694	0.027210	0.000627	0.002860
Other Asphalt Surfaces	0.534400	0.056822	0.179165	0.124517	0.023767	0.006150	0.026136	0.017163	0.000490	0.000694	0.027210	0.000627	0.002860
Parking Lot	0.534400	0.056822	0.179165	0.124517	0.023767	0.006150	0.026136	0.017163	0.000490	0.000694	0.027210	0.000627	0.002860
Regional Shopping Center	0.534400	0.056822	0.179165	0.124517	0.023767	0.006150	0.026136	0.017163	0.000490	0.000694	0.027210	0.000627	0.002860
Research & Development	0.534400	0.056822	0.179165	0.124517	0.023767	0.006150	0.026136	0.017163	0.000490	0.000694	0.027210	0.000627	0.002860
Unenclosed Parking with Elevator	0.534400	0.056822	0.179165	0.124517	0.023767	0.006150	0.026136	0.017163	0.000490	0.000694	0.027210	0.000627	0.002860

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

Exceed Title 24

Percent of Electricity Use Generated with Renewable Energy

DiSC 2022 - Operations, Cumulative Plus Project VMT - Yolo/Solano AQMD Air District, Winter

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

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	0.8306	7.4680	5.7339	0.0453		0.5739	0.5739		0.5739	0.5739		9,061.2664	9,061.2664	0.1737	0.1661	9,115.1130
NaturalGas Unmitigated	0.9700	8.7236	6.7163	0.0529		0.6702	0.6702		0.6702	0.6702		10,581.3952	10,581.3952	0.2028	0.1940	10,644.2751

DiSC 2022 - Operations, Cumulative Plus Project VMT - Yolo/Solano AQMD Air District, Winter

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

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Apartments Mid Rise	7739.37	0.0835	0.7132	0.3035	4.5500e-003		0.0577	0.0577		0.0577	0.0577		910.5138	910.5138	0.0175	0.0167	915.9245
Condo/Townhouse	8272.66	0.0892	0.7624	0.3244	4.8700e-003		0.0616	0.0616		0.0616	0.0616		973.2543	973.2543	0.0187	0.0178	979.0379
Hotel	15789	0.1703	1.5479	1.3003	9.2900e-003		0.1176	0.1176		0.1176	0.1176		1,857.5304	1,857.5304	0.0356	0.0341	1,868.5688
Manufacturing	27801.4	0.2998	2.7256	2.2895	0.0164		0.2072	0.2072		0.2072	0.2072		3,270.7494	3,270.7494	0.0627	0.0600	3,290.1858
Other Asphalt Surfaces	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
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Regional Shopping Center	2538.08	0.0274	0.2488	0.2090	1.4900e-003		0.0189	0.0189		0.0189	0.0189		298.5979	298.5979	5.7200e-003	5.4700e-003	300.3723
Research & Development	27801.4	0.2998	2.7256	2.2895	0.0164		0.2072	0.2072		0.2072	0.2072		3,270.7494	3,270.7494	0.0627	0.0600	3,290.1858
Unenclosed 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
Total		**0.9700**	**8.7236**	**6.7163**	**0.0529**		**0.6702**	**0.6702**		**0.6702**	**0.6702**		**10,581.3952**	**10,581.3952**	**0.2028**	**0.1940**	**10,644.2751**

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

5.2 Energy by Land Use - NaturalGas

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	lb/day										lb/day					
Apartments Mid Rise	6.90974	0.0745	0.6368	0.2710	4.0600e-003		0.0515	0.0515		0.0515	0.0515		812.9101	812.9101	0.0156	0.0149	817.7408
Condo/Townhouse	7.20844	0.0777	0.6643	0.2827	4.2400e-003		0.0537	0.0537		0.0537	0.0537		848.0520	848.0520	0.0163	0.0156	853.0916
Hotel	13.4439	0.1450	1.3180	1.1072	7.9100e-003		0.1002	0.1002		0.1002	0.1002		1,581.6387	1,581.6387	0.0303	0.0290	1,591.0376
Manufacturing	23.6447	0.2550	2.3181	1.9472	0.0139		0.1762	0.1762		0.1762	0.1762		2,781.7325	2,781.7325	0.0533	0.0510	2,798.2629
Other Asphalt Surfaces	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
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Regional Shopping Center	2.16921	0.0234	0.2127	0.1786	1.2800e-003		0.0162	0.0162		0.0162	0.0162		255.2006	255.2006	4.8900e-003	4.6800e-003	256.7172
Research & Development	23.6447	0.2550	2.3181	1.9472	0.0139		0.1762	0.1762		0.1762	0.1762		2,781.7325	2,781.7325	0.0533	0.0510	2,798.2629
Unenclosed 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
Total		**0.8306**	**7.4680**	**5.7339**	**0.0453**		**0.5739**	**0.5739**		**0.5739**	**0.5739**		**9,061.2664**	**9,061.2664**	**0.1737**	**0.1661**	**9,115.1130**

6.0 Area Detail

6.1 Mitigation Measures Area

No Hearths Installed

Use Low VOC Cleaning Supplies

DiSC 2022 - Operations, Cumulative Plus Project VMT - Yolo/Solano AQMD Air District, Winter

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

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	41.5584	0.4397	38.2171	2.0300e-003		0.2118	0.2118		0.2118	0.2118	0.0000	69.1243	69.1243	0.0671	0.0000	70.8028
Unmitigated	1,087.0611	18.8287	1,327.1450	2.3303		180.9581	180.9581		180.9581	180.9581	18,989.4050	5,426.7713	24,416.1763	17.8142	1.4407	25,290.8675

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	lb/day										lb/day					
Architectural Coating	3.2760					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	40.0892					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	1,042.5302	18.3890	1,288.9280	2.3282		180.7463	180.7463		180.7463	180.7463	18,989.4050	5,357.6471	24,347.0520	17.7470	1.4407	25,220.0647
Landscaping	1.1657	0.4397	38.2171	2.0300e-003		0.2118	0.2118		0.2118	0.2118		69.1243	69.1243	0.0671		70.8028
Total	**1,087.0611**	**18.8287**	**1,327.1450**	**2.3303**		**180.9581**	**180.9581**		**180.9581**	**180.9581**	**18,989.4050**	**5,426.7713**	**24,416.1763**	**17.8142**	**1.4407**	**25,290.8676**

DiSC 2022 - Operations, Cumulative Plus Project VMT - Yolo/Solano AQMD Air District, Winter

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

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	lb/day										lb/day					
Architectural Coating	3.2760					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	37.1167					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	1.1657	0.4397	38.2171	2.0300e-003		0.2118	0.2118		0.2118	0.2118		69.1243	69.1243	0.0671		70.8028
Total	**41.5584**	**0.4397**	**38.2171**	**2.0300e-003**		**0.2118**	**0.2118**		**0.2118**	**0.2118**	**0.0000**	**69.1243**	**69.1243**	**0.0671**	**0.0000**	**70.8028**

7.0 Water Detail

7.1 Mitigation Measures Water

Apply Water Conservation Strategy

8.0 Waste Detail

8.1 Mitigation Measures Waste

9.0 Operational Offroad

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

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

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

Equipment Type	Number	Hours/Day	Hours/Year	Horse Power	Load Factor	Fuel Type
Emergency Generator	1	0	6	89	0.73	Diesel

Boilers

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

User Defined Equipment

Equipment Type	Number

10.1 Stationary Sources

Unmitigated/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
Equipment Type	lb/day										lb/day					
Emergency Generator - Diesel (75 - 100 HP)	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**		**0.0000**

11.0 Vegetation

DiSC 2022 - Operations, Cumulative Plus Project VMT

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

Yolo/Solano AQMD Air District, Mitigation Report

Construction Mitigation Summary

Phase	ROG	NOx	CO	SO2	Exhaust PM10	Exhaust PM2.5	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction												
Site Preparation	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

OFFROAD Equipment Mitigation

Equipment Type	Fuel Type	Tier	Number Mitigated	Total Number of Equipment	DPF	Oxidation Catalyst
Rubber Tired Dozers	Diesel	No Change	0	0	No Change	0.00
Tractors/Loaders/Backhoes	Diesel	No Change	0	0	No Change	0.00

Equipment Type	ROG	NOx	CO	SO2	Exhaust PM10	Exhaust PM2.5	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
	Unmitigated tons/yr						Unmitigated mt/yr					
Rubber Tired Dozers	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000
Tractors/Loaders/ Backhoes	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000

Equipment Type	ROG	NOx	CO	SO2	Exhaust PM10	Exhaust PM2.5	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
	Mitigated tons/yr						Mitigated mt/yr					
Rubber Tired Dozers	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000
Tractors/Loaders/Backhoes	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000

DiSC 2022 - Operations, Cumulative Plus Project VMT

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

Equipment Type	ROG	NOx	CO	SO2	Exhaust PM10	Exhaust PM2.5	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction												
Rubber Tired Dozers	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000
Tractors/Loaders/Backhoes	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000

Fugitive Dust Mitigation

Yes/No	Mitigation Measure	Mitigation Input		Mitigation Input		Mitigation Input	
No	Soil Stabilizer for unpaved Roads	PM10 Reduction		PM2.5 Reduction			
No	Replace Ground Cover of Area Disturbed	PM10 Reduction		PM2.5 Reduction			
No	Water Exposed Area	PM10 Reduction		PM2.5 Reduction		Frequency (per day)	
No	Unpaved Road Mitigation	Moisture Content %		Vehicle Speed (mph)	0.00		
No	Clean Paved Road	% PM Reduction	0.00				

		Unmitigated		Mitigated		Percent Reduction	
Phase	Source	PM10	PM2.5	PM10	PM2.5	PM10	PM2.5
Site Preparation	Fugitive Dust	0.00	0.00	0.00	0.00	0.00	0.00
Site Preparation	Roads	0.00	0.00	0.00	0.00	0.00	0.00

DiSC 2022 - Operations, Cumulative Plus Project VMT

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

Operational Percent Reduction Summary

Category	ROG	NOx	CO	SO2	Exhaust PM10	Exhaust PM2.5	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction												
Architectural Coating	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Consumer Products	7.41	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hearth	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Landscaping	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Mobile	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Natural Gas	14.36	14.39	14.63	14.40	14.37	14.37	0.00	14.37	14.37	14.38	14.38	14.37
Water Indoor	0.00	0.00	0.00	0.00	0.00	0.00	20.00	20.66	20.41	20.00	20.01	20.18
Water Outdoor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Operational Mobile Mitigation

Project Setting: Suburban Center

Mitigation	Category	Measure	% Reduction	Input Value 1	Input Value 2	Input Value 3
No	Land Use	Increase Density	0.00	0.00	0.00	
No	Land Use	Increase Diversity	0.30	0.69		
No	Land Use	Improve Walkability Design	0.00	0.00		
No	Land Use	Improve Destination Accessibility	0.00	0.00		
No	Land Use	Increase Transit Accessibility	0.25	0.00		

DiSC 2022 - Operations, Cumulative Plus Project VMT

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

No	Land Use	Integrate Below Market Rate Housing	0.00	0.00		
	Land Use	Land Use SubTotal	0.00			
No	Neighborhood Enhancements	Improve Pedestrian Network	2.00	Project Site and Connecting Off-Site		
No	Neighborhood Enhancements	Provide Traffic Calming Measures				
No	Neighborhood Enhancements	Implement NEV Network	0.00			
	Neighborhood Enhancements	Neighborhood Enhancements Subtotal	0.00			
No	Parking Policy Pricing	Limit Parking Supply	0.00	0.00		
No	Parking Policy Pricing	Unbundle Parking Costs	0.00	0.00		
No	Parking Policy Pricing	On-street Market Pricing	0.00	0.00		
	Parking Policy Pricing	Parking Policy Pricing Subtotal	0.00			
No	Transit Improvements	Provide BRT System	0.00	0.00		
No	Transit Improvements	Expand Transit Network	0.00	0.00		
No	Transit Improvements	Increase Transit Frequency	0.00		0.00	
	Transit Improvements	Transit Improvements Subtotal	0.00			
		Land Use and Site Enhancement Subtotal	0.00			
No	Commute	Implement Trip Reduction Program				
No	Commute	Transit Subsidy				
No	Commute	Implement Employee Parking "Cash Out"	4.50			
No	Commute	Workplace Parking Charge		0.00		
No	Commute	Encourage Telecommuting and Alternative Work Schedules	0.00			

DiSC 2022 - Operations, Cumulative Plus Project VMT

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

No	Commute	Market Commute Trip Reduction Option	0.00			
No	Commute	Employee Vanpool/Shuttle	0.00		2.00	
No	Commute	Provide Ride Sharing Program	10.00			
	Commute	Commute Subtotal	0.00			
No	School Trip	Implement School Bus Program	0.00			
		Total VMT Reduction	0.00			

Area Mitigation

Measure Implemented	Mitigation Measure	Input Value
No	Only Natural Gas Hearth	
Yes	No Hearth	
Yes	Use Low VOC Cleaning Supplies	
No	Use Low VOC Paint (Residential Interior)	50.00
No	Use Low VOC Paint (Residential Exterior)	100.00
No	Use Low VOC Paint (Non-residential Interior)	50.00
No	Use Low VOC Paint (Non-residential Exterior)	100.00
No	Use Low VOC Paint (Parking)	100.00
No	% Electric Lawnmower	0.00
No	% Electric Leafblower	0.00
No	% Electric Chainsaw	0.00

Energy Mitigation Measures

DiSC 2022 - Operations, Cumulative Plus Project VMT

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

Measure Implemented	Mitigation Measure	Input Value 1	Input Value 2
Yes	Exceed Title 24	15.00	
No	Install High Efficiency Lighting		
Yes	On-site Renewable		50.00

Appliance Type	Land Use Subtype	% Improvement
ClothWasher		30.00
DishWasher		15.00
Fan		50.00
Refrigerator		15.00

Water Mitigation Measures

Measure Implemented	Mitigation Measure	Input Value 1	Input Value 2
Yes	Apply Water Conservation on Strategy	20.00	40.00
No	Use Reclaimed Water	0.00	0.00
No	Use Grey Water	0.00	
No	Install low-flow bathroom faucet	32.00	
No	Install low-flow Kitchen faucet	18.00	
No	Install low-flow Toilet	20.00	
No	Install low-flow Shower	20.00	
No	Turf Reduction	0.00	
No	Use Water Efficient Irrigation Systems	6.10	

DiSC 2022 - Operations, Cumulative Plus Project VMT

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

No	Water Efficient Landscape	0.00	0.00

Solid Waste Mitigation

Mitigation Measures	Input Value
Institute Recycling and Composting Services Percent Reduction in Waste Disposed	

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

Mace Triangle - Existing Plus Project VMT

Yolo/Solano AQMD Air District, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Research & Development	45.90	1000sqft	1.05	45,901.00	0
Parking Lot	170.00	Space	1.53	68,000.00	0
Regional Shopping Center	25.16	1000sqft	0.58	25,155.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	55
Climate Zone	2			**Operational Year**	2033
Utility Company	Pacific Gas and Electric Company				
CO2 Intensity (lb/MWhr)	203.98	**CH4 Intensity (lb/MWhr)**	0.033	**N2O Intensity (lb/MWhr)**	0.004

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use -

Construction Phase - Construction not modeled.

Off-road Equipment - Construction not modeled.

Grading -

Vehicle Trips - Trip generation rate, trip length, and trip purpose percentages adjusted per F&P report.

Area Mitigation -

Water Mitigation -

Mace Triangle - Existing Plus Project VMT - Yolo/Solano AQMD Air District, Annual

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

Table Name	Column Name	Default Value	New Value
tblConstructionPhase	NumDays	5.00	1.00
tblConstructionPhase	PhaseEndDate	6/7/2023	6/1/2023
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	4.00	0.00
tblVehicleTrips	CC_TL	5.00	10.11
tblVehicleTrips	CNW_TL	7.00	14.15
tblVehicleTrips	CW_TL	10.00	20.22
tblVehicleTrips	DV_TP	35.00	0.00
tblVehicleTrips	DV_TP	15.00	0.00
tblVehicleTrips	PB_TP	11.00	0.00
tblVehicleTrips	PB_TP	3.00	0.00
tblVehicleTrips	PR_TP	54.00	100.00
tblVehicleTrips	PR_TP	82.00	100.00
tblVehicleTrips	ST_TR	46.12	0.00
tblVehicleTrips	ST_TR	1.90	16.60
tblVehicleTrips	SU_TR	21.10	0.00
tblVehicleTrips	SU_TR	1.11	16.60
tblVehicleTrips	WD_TR	37.75	0.00
tblVehicleTrips	WD_TR	11.26	16.60

2.0 Emissions Summary

Mace Triangle - Existing Plus Project VMT - Yolo/Solano AQMD Air District, Annual

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

2.1 Overall Construction

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2023	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Maximum	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2023	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Maximum	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)

Mace Triangle - Existing Plus Project VMT - Yolo/Solano AQMD Air District, Annual

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

		Highest		

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	0.3036	2.0000e-005	2.2000e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	4.3100e-003	4.3100e-003	1.0000e-005	0.0000	4.5900e-003
Energy	6.1400e-003	0.0558	0.0469	3.3000e-004		4.2400e-003	4.2400e-003		4.2400e-003	4.2400e-003	0.0000	124.5666	124.5666	0.0115	2.3700e-003	125.5587
Mobile	0.4336	0.7587	4.7647	0.0119	1.4692	8.2600e-003	1.4775	0.3934	7.7600e-003	0.4012	0.0000	1,174.2540	1,174.2540	0.0623	0.0584	1,193.2051
Waste						0.0000	0.0000		0.0000	0.0000	6.0715	0.0000	6.0715	0.3588	0.0000	15.0418
Water						0.0000	0.0000		0.0000	0.0000	7.7513	12.6019	20.3532	0.7982	0.0191	45.9830
Total	**0.7434**	**0.8145**	**4.8138**	**0.0122**	**1.4692**	**0.0125**	**1.4818**	**0.3934**	**0.0120**	**0.4054**	**13.8227**	**1,311.4268**	**1,325.2496**	**1.2308**	**0.0798**	**1,379.7931**

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

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	0.2829	2.0000e-005	2.2000e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	4.3100e-003	4.3100e-003	1.0000e-005	0.0000	4.5900e-003
Energy	6.1400e-003	0.0558	0.0469	3.3000e-004		4.2400e-003	4.2400e-003		4.2400e-003	4.2400e-003	0.0000	124.5666	124.5666	0.0115	2.3700e-003	125.5587
Mobile	0.4336	0.7587	4.7647	0.0119	1.4692	8.2600e-003	1.4775	0.3934	7.7600e-003	0.4012	0.0000	1,174.2540	1,174.2540	0.0623	0.0584	1,193.2051
Waste						0.0000	0.0000		0.0000	0.0000	6.0715	0.0000	6.0715	0.3588	0.0000	15.0418
Water						0.0000	0.0000		0.0000	0.0000	6.2010	10.1555	16.3565	0.6386	0.0152	36.8611
Total	**0.7227**	**0.8145**	**4.8138**	**0.0122**	**1.4692**	**0.0125**	**1.4818**	**0.3934**	**0.0120**	**0.4054**	**12.2725**	**1,308.9804**	**1,321.2529**	**1.0712**	**0.0760**	**1,370.6712**

	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	**2.79**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**11.22**	**0.19**	**0.30**	**12.97**	**4.78**	**0.66**

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Site Preparation	Site Preparation	6/1/2023	6/1/2023	5	1	

Acres of Grading (Site Preparation Phase): 0

Mace Triangle - Existing Plus Project VMT - Yolo/Solano AQMD Air District, Annual

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

Acres of Grading (Grading Phase): 0

Acres of Paving: 1.53

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

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Site Preparation	Rubber Tired Dozers	0	8.00	247	0.40
Site Preparation	Tractors/Loaders/Backhoes	0	8.00	97	0.37

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Site Preparation	0	0.00	0.00	0.00	10.00	7.00	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Mace Triangle - Existing Plus Project VMT - Yolo/Solano AQMD Air District, Annual

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

3.2 Site Preparation - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

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

3.2 Site Preparation - 2023

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

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

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.4336	0.7587	4.7647	0.0119	1.4692	8.2600e-003	1.4775	0.3934	7.7600e-003	0.4012	0.0000	1,174.2540	1,174.2540	0.0623	0.0584	1,193.2051
Unmitigated	0.4336	0.7587	4.7647	0.0119	1.4692	8.2600e-003	1.4775	0.3934	7.7600e-003	0.4012	0.0000	1,174.2540	1,174.2540	0.0623	0.0584	1,193.2051

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Parking Lot	0.00	0.00	0.00		
Regional Shopping Center	0.00	0.00	0.00		
Research & Development	761.96	761.96	761.96	3,942,256	3,942,256
Total	761.96	761.96	761.96	3,942,256	3,942,256

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Parking Lot	10.00	5.00	7.00	0.00	0.00	0.00	0	0	0
Regional Shopping Center	10.00	5.00	7.00	16.30	64.70	19.00	100	0	0
Research & Development	20.22	10.11	14.15	33.00	48.00	19.00	100	0	0

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

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Parking Lot	0.534400	0.056822	0.179165	0.124517	0.023767	0.006150	0.026136	0.017163	0.000490	0.000694	0.027210	0.000627	0.002860
Regional Shopping Center	0.534400	0.056822	0.179165	0.124517	0.023767	0.006150	0.026136	0.017163	0.000490	0.000694	0.027210	0.000627	0.002860
Research & Development	0.534400	0.056822	0.179165	0.124517	0.023767	0.006150	0.026136	0.017163	0.000490	0.000694	0.027210	0.000627	0.002860

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Electricity Mitigated						0.0000	0.0000		0.0000	0.0000	0.0000	63.8296	63.8296	0.0103	1.2500e-003	64.4608
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	63.8296	63.8296	0.0103	1.2500e-003	64.4608
NaturalGas Mitigated	6.1400e-003	0.0558	0.0469	3.3000e-004		4.2400e-003	4.2400e-003		4.2400e-003	4.2400e-003	0.0000	60.7370	60.7370	1.1600e-003	1.1100e-003	61.0979
NaturalGas Unmitigated	6.1400e-003	0.0558	0.0469	3.3000e-004		4.2400e-003	4.2400e-003		4.2400e-003	4.2400e-003	0.0000	60.7370	60.7370	1.1600e-003	1.1100e-003	61.0979

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

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Regional Shopping Center	291295	1.5700e-003	0.0143	0.0120	9.0000e-005		1.0900e-003	1.0900e-003		1.0900e-003	1.0900e-003	0.0000	15.5446	15.5446	3.0000e-004	2.8000e-004	15.6370
Research & Development	846873	4.5700e-003	0.0415	0.0349	2.5000e-004		3.1600e-003	3.1600e-003		3.1600e-003	3.1600e-003	0.0000	45.1924	45.1924	8.7000e-004	8.3000e-004	45.4610
Total		**6.1400e-003**	**0.0558**	**0.0469**	**3.4000e-004**		**4.2500e-003**	**4.2500e-003**		**4.2500e-003**	**4.2500e-003**	**0.0000**	**60.7370**	**60.7370**	**1.1700e-003**	**1.1100e-003**	**61.0979**

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

5.2 Energy by Land Use - NaturalGas

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					
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Regional Shopping Center	291295	1.5700e-003	0.0143	0.0120	9.0000e-005		1.0900e-003	1.0900e-003		1.0900e-003	1.0900e-003	0.0000	15.5446	15.5446	3.0000e-004	2.8000e-004	15.6370
Research & Development	846873	4.5700e-003	0.0415	0.0349	2.5000e-004		3.1600e-003	3.1600e-003		3.1600e-003	3.1600e-003	0.0000	45.1924	45.1924	8.7000e-004	8.3000e-004	45.4610
Total		**6.1400e-003**	**0.0558**	**0.0469**	**3.4000e-004**		**4.2500e-003**	**4.2500e-003**		**4.2500e-003**	**4.2500e-003**	**0.0000**	**60.7370**	**60.7370**	**1.1700e-003**	**1.1100e-003**	**61.0979**

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

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Parking Lot	23800	2.2021	3.6000e-004	4.0000e-005	2.2238
Regional Shopping Center	286012	26.4629	4.2800e-003	5.2000e-004	26.7246
Research & Development	380060	35.1646	5.6900e-003	6.9000e-004	35.5123
Total		**63.8296**	**0.0103**	**1.2500e-003**	**64.4608**

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

5.3 Energy by Land Use - Electricity

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Parking Lot	23800	2.2021	3.6000e-004	4.0000e-005	2.2238
Regional Shopping Center	286012	26.4629	4.2800e-003	5.2000e-004	26.7246
Research & Development	380060	35.1646	5.6900e-003	6.9000e-004	35.5123
Total		**63.8296**	**0.0103**	**1.2500e-003**	**64.4608**

6.0 Area Detail

6.1 Mitigation Measures Area

Use Low VOC Cleaning Supplies

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

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.2829	2.0000e-005	2.2000e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	4.3100e-003	4.3100e-003	1.0000e-005	0.0000	4.5900e-003
Unmitigated	0.3036	2.0000e-005	2.2000e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	4.3100e-003	4.3100e-003	1.0000e-005	0.0000	4.5900e-003

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.0215					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.2819					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	2.0000e-004	2.0000e-005	2.2000e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	4.3100e-003	4.3100e-003	1.0000e-005	0.0000	4.5900e-003
Total	**0.3036**	**2.0000e-005**	**2.2000e-003**	**0.0000**		**1.0000e-005**	**1.0000e-005**		**1.0000e-005**	**1.0000e-005**	**0.0000**	**4.3100e-003**	**4.3100e-003**	**1.0000e-005**	**0.0000**	**4.5900e-003**

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

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	0.0215					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.2612					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	2.0000e-004	2.0000e-005	2.2000e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	4.3100e-003	4.3100e-003	1.0000e-005	0.0000	4.5900e-003
Total	**0.2829**	**2.0000e-005**	**2.2000e-003**	**0.0000**		**1.0000e-005**	**1.0000e-005**		**1.0000e-005**	**1.0000e-005**	**0.0000**	**4.3100e-003**	**4.3100e-003**	**1.0000e-005**	**0.0000**	**4.5900e-003**

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

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

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	16.3565	0.6386	0.0152	36.8611
Unmitigated	20.3532	0.7982	0.0191	45.9830

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Parking Lot	0 / 0	0.0000	0.0000	0.0000	0.0000
Regional Shopping Center	1.86366 / 1.14225	1.8942	0.0609	1.4600e-003	3.8526
Research & Development	22.5688 / 0	18.4590	0.7372	0.0176	42.1304
Total		**20.3532**	**0.7982**	**0.0191**	**45.9830**

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

7.2 Water by Land Use

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Parking Lot	0 / 0	0.0000	0.0000	0.0000	0.0000
Regional Shopping Center	1.49093 / 1.14225	1.5893	0.0488	1.1700e-003	3.1568
Research & Development	18.055 / 0	14.7672	0.5898	0.0141	33.7043
Total		**16.3565**	**0.6385**	**0.0152**	**36.8611**

8.0 Waste Detail

8.1 Mitigation Measures Waste

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

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	6.0715	0.3588	0.0000	15.0418
Unmitigated	6.0715	0.3588	0.0000	15.0418

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Parking Lot	0	0.0000	0.0000	0.0000	0.0000
Regional Shopping Center	26.42	5.3630	0.3170	0.0000	13.2867
Research & Development	3.49	0.7084	0.0419	0.0000	1.7551
Total		**6.0715**	**0.3588**	**0.0000**	**15.0418**

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

8.2 Waste by Land Use

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Parking Lot	0	0.0000	0.0000	0.0000	0.0000
Regional Shopping Center	26.42	5.3630	0.3170	0.0000	13.2867
Research & Development	3.49	0.7084	0.0419	0.0000	1.7551
Total		**6.0715**	**0.3588**	**0.0000**	**15.0418**

9.0 Operational Offroad

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

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

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

Boilers

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

User Defined Equipment

Equipment Type	Number

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

11.0 Vegetation

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

Mace Triangle - Existing Plus Project VMT

Yolo/Solano AQMD Air District, Summer

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Research & Development	45.90	1000sqft	1.05	45,901.00	0
Parking Lot	170.00	Space	1.53	68,000.00	0
Regional Shopping Center	25.16	1000sqft	0.58	25,155.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	55
Climate Zone	2			**Operational Year**	2033
Utility Company	Pacific Gas and Electric Company				
CO2 Intensity (lb/MWhr)	203.98	**CH4 Intensity (lb/MWhr)**	0.033	**N2O Intensity (lb/MWhr)**	0.004

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use -

Construction Phase - Construction not modeled.

Off-road Equipment - Construction not modeled.

Grading -

Vehicle Trips - Trip generation rate, trip length, and trip purpose percentages adjusted per F&P report.

Area Mitigation -

Water Mitigation -

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

Table Name	Column Name	Default Value	New Value
tblConstructionPhase	NumDays	5.00	1.00
tblConstructionPhase	PhaseEndDate	6/7/2023	6/1/2023
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	4.00	0.00
tblVehicleTrips	CC_TL	5.00	10.11
tblVehicleTrips	CNW_TL	7.00	14.15
tblVehicleTrips	CW_TL	10.00	20.22
tblVehicleTrips	DV_TP	35.00	0.00
tblVehicleTrips	DV_TP	15.00	0.00
tblVehicleTrips	PB_TP	11.00	0.00
tblVehicleTrips	PB_TP	3.00	0.00
tblVehicleTrips	PR_TP	54.00	100.00
tblVehicleTrips	PR_TP	82.00	100.00
tblVehicleTrips	ST_TR	46.12	0.00
tblVehicleTrips	ST_TR	1.90	16.60
tblVehicleTrips	SU_TR	21.10	0.00
tblVehicleTrips	SU_TR	1.11	16.60
tblVehicleTrips	WD_TR	37.75	0.00
tblVehicleTrips	WD_TR	11.26	16.60

2.0 Emissions Summary

Mace Triangle - Existing Plus Project VMT - Yolo/Solano AQMD Air District, Summer

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

2.1 Overall Construction (Maximum Daily Emission)

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	lb/day										lb/day					
2023	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Maximum	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2023	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Maximum	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

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

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	lb/day										lb/day					
Area	1.6649	2.2000e-004	0.0245	0.0000		9.0000e-005	9.0000e-005		9.0000e-005	9.0000e-005		0.0528	0.0528	1.4000e-004		0.0562
Energy	0.0336	0.3057	0.2568	1.8300e-003		0.0232	0.0232		0.0232	0.0232		366.8552	366.8552	7.0300e-003	6.7300e-003	369.0353
Mobile	2.6782	3.8389	27.8839	0.0695	8.3425	0.0454	8.3879	2.2278	0.0427	2.2705		7,574.3049	7,574.3049	0.3687	0.3422	7,685.4843
Total	**4.3767**	**4.1449**	**28.1652**	**0.0714**	**8.3425**	**0.0688**	**8.4112**	**2.2278**	**0.0660**	**2.2938**		**7,941.2129**	**7,941.2129**	**0.3759**	**0.3489**	**8,054.5757**

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	lb/day										lb/day					
Area	1.5512	2.2000e-004	0.0245	0.0000		9.0000e-005	9.0000e-005		9.0000e-005	9.0000e-005		0.0528	0.0528	1.4000e-004		0.0562
Energy	0.0336	0.3057	0.2568	1.8300e-003		0.0232	0.0232		0.0232	0.0232		366.8552	366.8552	7.0300e-003	6.7300e-003	369.0353
Mobile	2.6782	3.8389	27.8839	0.0695	8.3425	0.0454	8.3879	2.2278	0.0427	2.2705		7,574.3049	7,574.3049	0.3687	0.3422	7,685.4843
Total	**4.2631**	**4.1449**	**28.1652**	**0.0714**	**8.3425**	**0.0688**	**8.4112**	**2.2278**	**0.0660**	**2.2938**		**7,941.2129**	**7,941.2129**	**0.3759**	**0.3489**	**8,054.5757**

Mace Triangle - Existing Plus Project VMT - Yolo/Solano AQMD Air District, Summer

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

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**2.60**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Site Preparation	Site Preparation	6/1/2023	6/1/2023	5	1	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 0

Acres of Paving: 1.53

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

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Site Preparation	Rubber Tired Dozers	0	8.00	247	0.40
Site Preparation	Tractors/Loaders/Backhoes	0	8.00	97	0.37

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Site Preparation	0	0.00	0.00	0.00	10.00	7.00	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Mace Triangle - Existing Plus Project VMT - Yolo/Solano AQMD Air District, Summer

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

3.2 Site Preparation - 2023

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	lb/day										lb/day					
Fugitive Dust					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000			0.0000
Off-Road	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**		**0.0000**

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	lb/day										lb/day					
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
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
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mace Triangle - Existing Plus Project VMT - Yolo/Solano AQMD Air District, Summer

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

3.2 Site Preparation - 2023

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	lb/day										lb/day					
Fugitive Dust					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000			0.0000
Off-Road	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**

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	lb/day										lb/day					
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
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
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mace Triangle - Existing Plus Project VMT - Yolo/Solano AQMD Air District, Summer

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

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	2.6782	3.8389	27.8839	0.0695	8.3425	0.0454	8.3879	2.2278	0.0427	2.2705		7,574.3049	7,574.3049	0.3687	0.3422	7,685.4843
Unmitigated	2.6782	3.8389	27.8839	0.0695	8.3425	0.0454	8.3879	2.2278	0.0427	2.2705		7,574.3049	7,574.3049	0.3687	0.3422	7,685.4843

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Parking Lot	0.00	0.00	0.00		
Regional Shopping Center	0.00	0.00	0.00		
Research & Development	761.96	761.96	761.96	3,942,256	3,942,256
Total	761.96	761.96	761.96	3,942,256	3,942,256

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Parking Lot	10.00	5.00	7.00	0.00	0.00	0.00	0	0	0
Regional Shopping Center	10.00	5.00	7.00	16.30	64.70	19.00	100	0	0
Research & Development	20.22	10.11	14.15	33.00	48.00	19.00	100	0	0

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

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Parking Lot	0.534400	0.056822	0.179165	0.124517	0.023767	0.006150	0.026136	0.017163	0.000490	0.000694	0.027210	0.000627	0.002860
Regional Shopping Center	0.534400	0.056822	0.179165	0.124517	0.023767	0.006150	0.026136	0.017163	0.000490	0.000694	0.027210	0.000627	0.002860
Research & Development	0.534400	0.056822	0.179165	0.124517	0.023767	0.006150	0.026136	0.017163	0.000490	0.000694	0.027210	0.000627	0.002860

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	0.0336	0.3057	0.2568	1.8300e-003		0.0232	0.0232		0.0232	0.0232		366.8552	366.8552	7.0300e-003	6.7300e-003	369.0353
NaturalGas Unmitigated	0.0336	0.3057	0.2568	1.8300e-003		0.0232	0.0232		0.0232	0.0232		366.8552	366.8552	7.0300e-003	6.7300e-003	369.0353

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

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Regional Shopping Center	798.068	8.6100e-003	0.0782	0.0657	4.7000e-004		5.9500e-003	5.9500e-003		5.9500e-003	5.9500e-003		93.8904	93.8904	1.8000e-003	1.7200e-003	94.4483
Research & Development	2320.2	0.0250	0.2275	0.1911	1.3600e-003		0.0173	0.0173		0.0173	0.0173		272.9649	272.9649	5.2300e-003	5.0000e-003	274.5869
Total		**0.0336**	**0.3057**	**0.2568**	**1.8300e-003**		**0.0232**	**0.0232**		**0.0232**	**0.0232**		**366.8552**	**366.8552**	**7.0300e-003**	**6.7200e-003**	**369.0353**

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

5.2 Energy by Land Use - NaturalGas

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	lb/day										lb/day					
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Regional Shopping Center	0.798068	8.6100e-003	0.0782	0.0657	4.7000e-004		5.9500e-003	5.9500e-003		5.9500e-003	5.9500e-003		93.8904	93.8904	1.8000e-003	1.7200e-003	94.4483
Research & Development	2.3202	0.0250	0.2275	0.1911	1.3600e-003		0.0173	0.0173		0.0173	0.0173		272.9649	272.9649	5.2300e-003	5.0000e-003	274.5869
Total		**0.0336**	**0.3057**	**0.2568**	**1.8300e-003**		**0.0232**	**0.0232**		**0.0232**	**0.0232**		**366.8552**	**366.8552**	**7.0300e-003**	**6.7200e-003**	**369.0353**

6.0 Area Detail

6.1 Mitigation Measures Area

Use Low VOC Cleaning Supplies

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

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	1.5512	2.2000e-004	0.0245	0.0000		9.0000e-005	9.0000e-005		9.0000e-005	9.0000e-005		0.0528	0.0528	1.4000e-004		0.0562
Unmitigated	1.6649	2.2000e-004	0.0245	0.0000		9.0000e-005	9.0000e-005		9.0000e-005	9.0000e-005		0.0528	0.0528	1.4000e-004		0.0562

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	lb/day										lb/day					
Architectural Coating	0.1180					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	1.5447					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	2.2400e-003	2.2000e-004	0.0245	0.0000		9.0000e-005	9.0000e-005		9.0000e-005	9.0000e-005		0.0528	0.0528	1.4000e-004		0.0562
Total	**1.6649**	**2.2000e-004**	**0.0245**	**0.0000**		**9.0000e-005**	**9.0000e-005**		**9.0000e-005**	**9.0000e-005**		**0.0528**	**0.0528**	**1.4000e-004**		**0.0562**

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

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	lb/day										lb/day					
Architectural Coating	0.1180					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	1.4310					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	2.2400e-003	2.2000e-004	0.0245	0.0000		9.0000e-005	9.0000e-005		9.0000e-005	9.0000e-005		0.0528	0.0528	1.4000e-004		0.0562
Total	**1.5512**	**2.2000e-004**	**0.0245**	**0.0000**		**9.0000e-005**	**9.0000e-005**		**9.0000e-005**	**9.0000e-005**		**0.0528**	**0.0528**	**1.4000e-004**		**0.0562**

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

Mace Triangle - Existing Plus Project VMT - Yolo/Solano AQMD Air District, Summer

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

8.0 Waste Detail

8.1 Mitigation Measures Waste

9.0 Operational Offroad

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

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

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

Boilers

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

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

Mace Triangle - Existing Plus Project VMT - Yolo/Solano AQMD Air District, Winter

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

Mace Triangle - Existing Plus Project VMT

Yolo/Solano AQMD Air District, Winter

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Research & Development	45.90	1000sqft	1.05	45,901.00	0
Parking Lot	170.00	Space	1.53	68,000.00	0
Regional Shopping Center	25.16	1000sqft	0.58	25,155.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	55
Climate Zone	2			**Operational Year**	2033
Utility Company	Pacific Gas and Electric Company				
CO2 Intensity (lb/MWhr)	203.98	**CH4 Intensity (lb/MWhr)**	0.033	**N2O Intensity (lb/MWhr)**	0.004

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use -

Construction Phase - Construction not modeled.

Off-road Equipment - Construction not modeled.

Grading -

Vehicle Trips - Trip generation rate, trip length, and trip purpose percentages adjusted per F&P report.

Area Mitigation -

Water Mitigation -

Mace Triangle - Existing Plus Project VMT - Yolo/Solano AQMD Air District, Winter

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

Table Name	Column Name	Default Value	New Value
tblConstructionPhase	NumDays	5.00	1.00
tblConstructionPhase	PhaseEndDate	6/7/2023	6/1/2023
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	4.00	0.00
tblVehicleTrips	CC_TL	5.00	10.11
tblVehicleTrips	CNW_TL	7.00	14.15
tblVehicleTrips	CW_TL	10.00	20.22
tblVehicleTrips	DV_TP	35.00	0.00
tblVehicleTrips	DV_TP	15.00	0.00
tblVehicleTrips	PB_TP	11.00	0.00
tblVehicleTrips	PB_TP	3.00	0.00
tblVehicleTrips	PR_TP	54.00	100.00
tblVehicleTrips	PR_TP	82.00	100.00
tblVehicleTrips	ST_TR	46.12	0.00
tblVehicleTrips	ST_TR	1.90	16.60
tblVehicleTrips	SU_TR	21.10	0.00
tblVehicleTrips	SU_TR	1.11	16.60
tblVehicleTrips	WD_TR	37.75	0.00
tblVehicleTrips	WD_TR	11.26	16.60

2.0 Emissions Summary

Mace Triangle - Existing Plus Project VMT - Yolo/Solano AQMD Air District, Winter

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

2.1 Overall Construction (Maximum Daily Emission)

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	lb/day										lb/day					
2023	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Maximum	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2023	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Maximum	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

Mace Triangle - Existing Plus Project VMT - Yolo/Solano AQMD Air District, Winter

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

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	lb/day										lb/day					
Area	1.6649	2.2000e-004	0.0245	0.0000		9.0000e-005	9.0000e-005		9.0000e-005	9.0000e-005		0.0528	0.0528	1.4000e-004		0.0562
Energy	0.0336	0.3057	0.2568	1.8300e-003		0.0232	0.0232		0.0232	0.0232		366.8552	366.8552	7.0300e-003	6.7300e-003	369.0353
Mobile	2.3704	4.3979	27.9556	0.0644	8.3425	0.0455	8.3879	2.2278	0.0427	2.2705		7,007.7411	7,007.7411	0.3958	0.3656	7,126.5969
Total	**4.0690**	**4.7038**	**28.2369**	**0.0662**	**8.3425**	**0.0688**	**8.4113**	**2.2278**	**0.0660**	**2.2938**		**7,374.6490**	**7,374.6490**	**0.4029**	**0.3724**	**7,495.6884**

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	lb/day										lb/day					
Area	1.5512	2.2000e-004	0.0245	0.0000		9.0000e-005	9.0000e-005		9.0000e-005	9.0000e-005		0.0528	0.0528	1.4000e-004		0.0562
Energy	0.0336	0.3057	0.2568	1.8300e-003		0.0232	0.0232		0.0232	0.0232		366.8552	366.8552	7.0300e-003	6.7300e-003	369.0353
Mobile	2.3704	4.3979	27.9556	0.0644	8.3425	0.0455	8.3879	2.2278	0.0427	2.2705		7,007.7411	7,007.7411	0.3958	0.3656	7,126.5969
Total	**3.9553**	**4.7038**	**28.2369**	**0.0662**	**8.3425**	**0.0688**	**8.4113**	**2.2278**	**0.0660**	**2.2938**		**7,374.6490**	**7,374.6490**	**0.4029**	**0.3724**	**7,495.6884**

Mace Triangle - Existing Plus Project VMT - Yolo/Solano AQMD Air District, Winter

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

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	2.79	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Site Preparation	Site Preparation	6/1/2023	6/1/2023	5	1	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 0

Acres of Paving: 1.53

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

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Site Preparation	Rubber Tired Dozers	0	8.00	247	0.40
Site Preparation	Tractors/Loaders/Backhoes	0	8.00	97	0.37

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Site Preparation	0	0.00	0.00	0.00	10.00	7.00	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Mace Triangle - Existing Plus Project VMT - Yolo/Solano AQMD Air District, Winter

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

3.2 Site Preparation - 2023

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	lb/day										lb/day					
Fugitive Dust					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000			0.0000
Off-Road	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**		**0.0000**

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	lb/day										lb/day					
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
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
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mace Triangle - Existing Plus Project VMT - Yolo/Solano AQMD Air District, Winter

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

3.2 Site Preparation - 2023

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	lb/day										lb/day					
Fugitive Dust					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000			0.0000
Off-Road	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**

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	lb/day										lb/day					
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
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
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mace Triangle - Existing Plus Project VMT - Yolo/Solano AQMD Air District, Winter

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

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	2.3704	4.3979	27.9556	0.0644	8.3425	0.0455	8.3879	2.2278	0.0427	2.2705		7,007.7411	7,007.7411	0.3958	0.3656	7,126.5969
Unmitigated	2.3704	4.3979	27.9556	0.0644	8.3425	0.0455	8.3879	2.2278	0.0427	2.2705		7,007.7411	7,007.7411	0.3958	0.3656	7,126.5969

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Parking Lot	0.00	0.00	0.00		
Regional Shopping Center	0.00	0.00	0.00		
Research & Development	761.96	761.96	761.96	3,942,256	3,942,256
Total	761.96	761.96	761.96	3,942,256	3,942,256

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Parking Lot	10.00	5.00	7.00	0.00	0.00	0.00	0	0	0
Regional Shopping Center	10.00	5.00	7.00	16.30	64.70	19.00	100	0	0
Research & Development	20.22	10.11	14.15	33.00	48.00	19.00	100	0	0

Mace Triangle - Existing Plus Project VMT - Yolo/Solano AQMD Air District, Winter

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

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Parking Lot	0.534400	0.056822	0.179165	0.124517	0.023767	0.006150	0.026136	0.017163	0.000490	0.000694	0.027210	0.000627	0.002860
Regional Shopping Center	0.534400	0.056822	0.179165	0.124517	0.023767	0.006150	0.026136	0.017163	0.000490	0.000694	0.027210	0.000627	0.002860
Research & Development	0.534400	0.056822	0.179165	0.124517	0.023767	0.006150	0.026136	0.017163	0.000490	0.000694	0.027210	0.000627	0.002860

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	0.0336	0.3057	0.2568	1.8300e-003		0.0232	0.0232		0.0232	0.0232		366.8552	366.8552	7.0300e-003	6.7300e-003	369.0353
NaturalGas Unmitigated	0.0336	0.3057	0.2568	1.8300e-003		0.0232	0.0232		0.0232	0.0232		366.8552	366.8552	7.0300e-003	6.7300e-003	369.0353

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

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Regional Shopping Center	798.068	8.6100e-003	0.0782	0.0657	4.7000e-004		5.9500e-003	5.9500e-003		5.9500e-003	5.9500e-003		93.8904	93.8904	1.8000e-003	1.7200e-003	94.4483
Research & Development	2320.2	0.0250	0.2275	0.1911	1.3600e-003		0.0173	0.0173		0.0173	0.0173		272.9649	272.9649	5.2300e-003	5.0000e-003	274.5869
Total		**0.0336**	**0.3057**	**0.2568**	**1.8300e-003**		**0.0232**	**0.0232**		**0.0232**	**0.0232**		**366.8552**	**366.8552**	**7.0300e-003**	**6.7200e-003**	**369.0353**

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

5.2 Energy by Land Use - NaturalGas

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	lb/day										lb/day					
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Regional Shopping Center	0.798068	8.6100e-003	0.0782	0.0657	4.7000e-004		5.9500e-003	5.9500e-003		5.9500e-003	5.9500e-003		93.8904	93.8904	1.8000e-003	1.7200e-003	94.4483
Research & Development	2.3202	0.0250	0.2275	0.1911	1.3600e-003		0.0173	0.0173		0.0173	0.0173		272.9649	272.9649	5.2300e-003	5.0000e-003	274.5869
Total		**0.0336**	**0.3057**	**0.2568**	**1.8300e-003**		**0.0232**	**0.0232**		**0.0232**	**0.0232**		**366.8552**	**366.8552**	**7.0300e-003**	**6.7200e-003**	**369.0353**

6.0 Area Detail

6.1 Mitigation Measures Area

Use Low VOC Cleaning Supplies

Mace Triangle - Existing Plus Project VMT - Yolo/Solano AQMD Air District, Winter

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

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	1.5512	2.2000e-004	0.0245	0.0000		9.0000e-005	9.0000e-005		9.0000e-005	9.0000e-005		0.0528	0.0528	1.4000e-004		0.0562
Unmitigated	1.6649	2.2000e-004	0.0245	0.0000		9.0000e-005	9.0000e-005		9.0000e-005	9.0000e-005		0.0528	0.0528	1.4000e-004		0.0562

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	lb/day										lb/day					
Architectural Coating	0.1180					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	1.5447					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	2.2400e-003	2.2000e-004	0.0245	0.0000		9.0000e-005	9.0000e-005		9.0000e-005	9.0000e-005		0.0528	0.0528	1.4000e-004		0.0562
Total	**1.6649**	**2.2000e-004**	**0.0245**	**0.0000**		**9.0000e-005**	**9.0000e-005**		**9.0000e-005**	**9.0000e-005**		**0.0528**	**0.0528**	**1.4000e-004**		**0.0562**

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

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	lb/day										lb/day					
Architectural Coating	0.1180					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	1.4310					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	2.2400e-003	2.2000e-004	0.0245	0.0000		9.0000e-005	9.0000e-005		9.0000e-005	9.0000e-005		0.0528	0.0528	1.4000e-004		0.0562
Total	**1.5512**	**2.2000e-004**	**0.0245**	**0.0000**		**9.0000e-005**	**9.0000e-005**		**9.0000e-005**	**9.0000e-005**		**0.0528**	**0.0528**	**1.4000e-004**		**0.0562**

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

Mace Triangle - Existing Plus Project VMT - Yolo/Solano AQMD Air District, Winter

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

8.0 Waste Detail

8.1 Mitigation Measures Waste

9.0 Operational Offroad

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

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

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

Boilers

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

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

Mace Triangle - Existing Plus Project VMT

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

Yolo/Solano AQMD Air District, Mitigation Report

Construction Mitigation Summary

Phase	ROG	NOx	CO	SO2	Exhaust PM10	Exhaust PM2.5	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction												
Site Preparation	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

OFFROAD Equipment Mitigation

Equipment Type	Fuel Type	Tier	Number Mitigated	Total Number of Equipment	DPF	Oxidation Catalyst
Rubber Tired Dozers	Diesel	No Change	0	0	No Change	0.00
Tractors/Loaders/Backhoes	Diesel	No Change	0	0	No Change	0.00

Equipment Type	ROG	NOx	CO	SO2	Exhaust PM10	Exhaust PM2.5	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
	Unmitigated tons/yr						Unmitigated mt/yr					
Rubber Tired Dozers	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000
Tractors/Loaders/ Backhoes	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000

Equipment Type	ROG	NOx	CO	SO2	Exhaust PM10	Exhaust PM2.5	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
	Mitigated tons/yr						Mitigated mt/yr					
Rubber Tired Dozers	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000
Tractors/Loaders/Backhoes	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000

Mace Triangle - Existing Plus Project VMT

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

Equipment Type	ROG	NOx	CO	SO2	Exhaust PM10	Exhaust PM2.5	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction												
Rubber Tired Dozers	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000
Tractors/Loaders/Backhoes	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000

Fugitive Dust Mitigation

Yes/No	Mitigation Measure	Mitigation Input		Mitigation Input		Mitigation Input	
No	Soil Stabilizer for unpaved Roads	PM10 Reduction		PM2.5 Reduction			
No	Replace Ground Cover of Area Disturbed	PM10 Reduction		PM2.5 Reduction			
No	Water Exposed Area	PM10 Reduction		PM2.5 Reduction		Frequency (per day)	
No	Unpaved Road Mitigation	Moisture Content %		Vehicle Speed (mph)	0.00		
No	Clean Paved Road	% PM Reduction	0.00				

		Unmitigated		Mitigated		Percent Reduction	
Phase	Source	PM10	PM2.5	PM10	PM2.5	PM10	PM2.5
Site Preparation	Fugitive Dust	0.00	0.00	0.00	0.00	0.00	0.00
Site Preparation	Roads	0.00	0.00	0.00	0.00	0.00	0.00

Mace Triangle - Existing Plus Project VMT

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

Operational Percent Reduction Summary

Category	ROG	NOx	CO	SO2	Exhaust PM10	Exhaust PM2.5	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction												
Architectural Coating	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Consumer Products	7.36	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hearth	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Landscaping	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Mobile	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Natural Gas	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Water Indoor	0.00	0.00	0.00	0.00	0.00	0.00	20.00	19.41	19.64	20.00	20.00	19.84
Water Outdoor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Operational Mobile Mitigation

Project Setting:

Mitigation	Category	Measure	% Reduction	Input Value 1	Input Value 2	Input Value 3
No	Land Use	Increase Density	0.00			
No	Land Use	Increase Diversity	0.10	0.32		
No	Land Use	Improve Walkability Design	0.00			
No	Land Use	Improve Destination Accessibility	0.00			
No	Land Use	Increase Transit Accessibility	0.25			

Mace Triangle - Existing Plus Project VMT

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

No	Land Use	Integrate Below Market Rate Housing	0.00			
	Land Use	Land Use SubTotal	0.00			
No	Neighborhood Enhancements	Improve Pedestrian Network				
No	Neighborhood Enhancements	Provide Traffic Calming Measures				
No	Neighborhood Enhancements	Implement NEV Network	0.00			
	Neighborhood Enhancements	Neighborhood Enhancements Subtotal	0.00			
No	Parking Policy Pricing	Limit Parking Supply	0.00			
No	Parking Policy Pricing	Unbundle Parking Costs	0.00			
No	Parking Policy Pricing	On-street Market Pricing	0.00			
	Parking Policy Pricing	Parking Policy Pricing Subtotal	0.00			
No	Transit Improvements	Provide BRT System	0.00			
No	Transit Improvements	Expand Transit Network	0.00			
No	Transit Improvements	Increase Transit Frequency	0.00			
	Transit Improvements	Transit Improvements Subtotal	0.00			
		Land Use and Site Enhancement Subtotal	0.00			
No	Commute	Implement Trip Reduction Program				
No	Commute	Transit Subsidy				
No	Commute	Implement Employee Parking "Cash Out"				
No	Commute	Workplace Parking Charge				
No	Commute	Encourage Telecommuting and Alternative Work Schedules	0.00			

Mace Triangle - Existing Plus Project VMT

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

No	Commute	Market Commute Trip Reduction Option	0.00			
No	Commute	Employee Vanpool/Shuttle	0.00		2.00	
No	Commute	Provide Ride Sharing Program				
	Commute	Commute Subtotal	0.00			
No	School Trip	Implement School Bus Program	0.00			
		Total VMT Reduction	0.00			

Area Mitigation

Measure Implemented	Mitigation Measure	Input Value
No	Only Natural Gas Hearth	
No	No Hearth	
Yes	Use Low VOC Cleaning Supplies	
No	Use Low VOC Paint (Residential Interior)	50.00
No	Use Low VOC Paint (Residential Exterior)	100.00
No	Use Low VOC Paint (Non-residential Interior)	50.00
No	Use Low VOC Paint (Non-residential Exterior)	100.00
No	Use Low VOC Paint (Parking)	100.00
No	% Electric Lawnmower	0.00
No	% Electric Leafblower	0.00
No	% Electric Chainsaw	0.00

Energy Mitigation Measures

Mace Triangle - Existing Plus Project VMT

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

Measure Implemented	Mitigation Measure	Input Value 1	Input Value 2
No	Exceed Title 24		
No	Install High Efficiency Lighting		
No	On-site Renewable		

Appliance Type	Land Use Subtype	% Improvement
ClothWasher		30.00
DishWasher		15.00
Fan		50.00
Refrigerator		15.00

Water Mitigation Measures

Measure Implemented	Mitigation Measure	Input Value 1	Input Value 2
No	Apply Water Conservation on Strategy	0.00	0.00
No	Use Reclaimed Water	0.00	0.00
No	Use Grey Water	0.00	
Yes	Install low-flow bathroom faucet	32.00	
Yes	Install low-flow Kitchen faucet	18.00	
Yes	Install low-flow Toilet	20.00	
Yes	Install low-flow Shower	20.00	
No	Turf Reduction	0.00	
No	Use Water Efficient Irrigation Systems	6.10	

Mace Triangle - Existing Plus Project VMT

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

No	Water Efficient Landscape	0.00	0.00

Solid Waste Mitigation

Mitigation Measures	Input Value
Institute Recycling and Composting Services Percent Reduction in Waste Disposed	

Mace Triangle - Cumulative Plus Project VMT - Yolo/Solano AQMD Air District, Annual

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

Mace Triangle - Cumulative Plus Project VMT

Yolo/Solano AQMD Air District, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Research & Development	45.90	1000sqft	1.05	45,901.00	0
Parking Lot	170.00	Space	1.53	68,000.00	0
Regional Shopping Center	25.16	1000sqft	0.58	25,155.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	55
Climate Zone	2			**Operational Year**	2033
Utility Company	Pacific Gas and Electric Company				
CO2 Intensity (lb/MWhr)	203.98	**CH4 Intensity (lb/MWhr)**	0.033	**N2O Intensity (lb/MWhr)**	0.004

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use -

Construction Phase - Construction not modeled.

Off-road Equipment - Construction not modeled.

Grading -

Vehicle Trips - Trip generation rate, trip length, and trip purpose percentages adjusted per F&P report.

Area Mitigation -

Water Mitigation -

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

Table Name	Column Name	Default Value	New Value
tblConstructionPhase	NumDays	5.00	1.00
tblConstructionPhase	PhaseEndDate	6/7/2023	6/1/2023
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	4.00	0.00
tblVehicleTrips	CC_TL	5.00	7.96
tblVehicleTrips	CNW_TL	7.00	11.14
tblVehicleTrips	CW_TL	10.00	15.91
tblVehicleTrips	DV_TP	35.00	0.00
tblVehicleTrips	DV_TP	15.00	0.00
tblVehicleTrips	PB_TP	11.00	0.00
tblVehicleTrips	PB_TP	3.00	0.00
tblVehicleTrips	PR_TP	54.00	100.00
tblVehicleTrips	PR_TP	82.00	100.00
tblVehicleTrips	ST_TR	46.12	0.00
tblVehicleTrips	ST_TR	1.90	16.60
tblVehicleTrips	SU_TR	21.10	0.00
tblVehicleTrips	SU_TR	1.11	16.60
tblVehicleTrips	WD_TR	37.75	0.00
tblVehicleTrips	WD_TR	11.26	16.60

2.0 Emissions Summary

Mace Triangle - Cumulative Plus Project VMT - Yolo/Solano AQMD Air District, Annual

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

2.1 Overall Construction

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2023	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Maximum	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2023	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Maximum	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)

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

		Highest		

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	0.3036	2.0000e-005	2.2000e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	4.3100e-003	4.3100e-003	1.0000e-005	0.0000	4.5900e-003
Energy	6.1400e-003	0.0558	0.0469	3.3000e-004		4.2400e-003	4.2400e-003		4.2400e-003	4.2400e-003	0.0000	124.5666	124.5666	0.0115	2.3700e-003	125.5587
Mobile	0.3691	0.6200	3.8835	9.4000e-003	1.1564	6.5800e-003	1.1630	0.3097	6.1800e-003	0.3158	0.0000	928.2165	928.2165	0.0511	0.0472	943.5700
Waste						0.0000	0.0000		0.0000	0.0000	6.0715	0.0000	6.0715	0.3588	0.0000	15.0418
Water						0.0000	0.0000		0.0000	0.0000	7.7513	12.6019	20.3532	0.7982	0.0191	45.9830
Total	**0.6789**	**0.6758**	**3.9326**	**9.7300e-003**	**1.1564**	**0.0108**	**1.1673**	**0.3097**	**0.0104**	**0.3201**	**13.8227**	**1,065.3893**	**1,079.2120**	**1.2196**	**0.0687**	**1,130.1581**

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

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	0.2829	2.0000e-005	2.2000e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	4.3100e-003	4.3100e-003	1.0000e-005	0.0000	4.5900e-003
Energy	6.1400e-003	0.0558	0.0469	3.3000e-004		4.2400e-003	4.2400e-003		4.2400e-003	4.2400e-003	0.0000	124.5666	124.5666	0.0115	2.3700e-003	125.5587
Mobile	0.3691	0.6200	3.8835	9.4000e-003	1.1564	6.5800e-003	1.1630	0.3097	6.1800e-003	0.3158	0.0000	928.2165	928.2165	0.0511	0.0472	943.5700
Waste						0.0000	0.0000		0.0000	0.0000	6.0715	0.0000	6.0715	0.3588	0.0000	15.0418
Water						0.0000	0.0000		0.0000	0.0000	6.2010	10.1555	16.3565	0.6386	0.0152	36.8611
Total	**0.6581**	**0.6758**	**3.9326**	**9.7300e-003**	**1.1564**	**0.0108**	**1.1673**	**0.3097**	**0.0104**	**0.3201**	**12.2725**	**1,062.9429**	**1,075.2154**	**1.0599**	**0.0649**	**1,121.0362**

	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	**3.06**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**11.22**	**0.23**	**0.37**	**13.09**	**5.55**	**0.81**

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Site Preparation	Site Preparation	6/1/2023	6/1/2023	5	1	

Acres of Grading (Site Preparation Phase): 0

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

Acres of Grading (Grading Phase): 0

Acres of Paving: 1.53

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

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Site Preparation	Rubber Tired Dozers	0	8.00	247	0.40
Site Preparation	Tractors/Loaders/Backhoes	0	8.00	97	0.37

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Site Preparation	0	0.00	0.00	0.00	10.00	7.00	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

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

3.2 Site Preparation - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

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

3.2 Site Preparation - 2023

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

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

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.3691	0.6200	3.8835	9.4000e-003	1.1564	6.5800e-003	1.1630	0.3097	6.1800e-003	0.3158	0.0000	928.2165	928.2165	0.0511	0.0472	943.5700
Unmitigated	0.3691	0.6200	3.8835	9.4000e-003	1.1564	6.5800e-003	1.1630	0.3097	6.1800e-003	0.3158	0.0000	928.2165	928.2165	0.0511	0.0472	943.5700

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Parking Lot	0.00	0.00	0.00		
Regional Shopping Center	0.00	0.00	0.00		
Research & Development	761.96	761.96	761.96	3,102,933	3,102,933
Total	761.96	761.96	761.96	3,102,933	3,102,933

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Parking Lot	10.00	5.00	7.00	0.00	0.00	0.00	0	0	0
Regional Shopping Center	10.00	5.00	7.00	16.30	64.70	19.00	100	0	0
Research & Development	15.91	7.96	11.14	33.00	48.00	19.00	100	0	0

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

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Parking Lot	0.534400	0.056822	0.179165	0.124517	0.023767	0.006150	0.026136	0.017163	0.000490	0.000694	0.027210	0.000627	0.002860
Regional Shopping Center	0.534400	0.056822	0.179165	0.124517	0.023767	0.006150	0.026136	0.017163	0.000490	0.000694	0.027210	0.000627	0.002860
Research & Development	0.534400	0.056822	0.179165	0.124517	0.023767	0.006150	0.026136	0.017163	0.000490	0.000694	0.027210	0.000627	0.002860

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Electricity Mitigated						0.0000	0.0000		0.0000	0.0000	0.0000	63.8296	63.8296	0.0103	1.2500e-003	64.4608
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	63.8296	63.8296	0.0103	1.2500e-003	64.4608
NaturalGas Mitigated	6.1400e-003	0.0558	0.0469	3.3000e-004		4.2400e-003	4.2400e-003		4.2400e-003	4.2400e-003	0.0000	60.7370	60.7370	1.1600e-003	1.1100e-003	61.0979
NaturalGas Unmitigated	6.1400e-003	0.0558	0.0469	3.3000e-004		4.2400e-003	4.2400e-003		4.2400e-003	4.2400e-003	0.0000	60.7370	60.7370	1.1600e-003	1.1100e-003	61.0979

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

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Regional Shopping Center	291295	1.5700e-003	0.0143	0.0120	9.0000e-005		1.0900e-003	1.0900e-003		1.0900e-003	1.0900e-003	0.0000	15.5446	15.5446	3.0000e-004	2.8000e-004	15.6370
Research & Development	846873	4.5700e-003	0.0415	0.0349	2.5000e-004		3.1600e-003	3.1600e-003		3.1600e-003	3.1600e-003	0.0000	45.1924	45.1924	8.7000e-004	8.3000e-004	45.4610
Total		**6.1400e-003**	**0.0558**	**0.0469**	**3.4000e-004**		**4.2500e-003**	**4.2500e-003**		**4.2500e-003**	**4.2500e-003**	**0.0000**	**60.7370**	**60.7370**	**1.1700e-003**	**1.1100e-003**	**61.0979**

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

5.2 Energy by Land Use - NaturalGas

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					
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Regional Shopping Center	291295	1.5700e-003	0.0143	0.0120	9.0000e-005		1.0900e-003	1.0900e-003		1.0900e-003	1.0900e-003	0.0000	15.5446	15.5446	3.0000e-004	2.8000e-004	15.6370
Research & Development	846873	4.5700e-003	0.0415	0.0349	2.5000e-004		3.1600e-003	3.1600e-003		3.1600e-003	3.1600e-003	0.0000	45.1924	45.1924	8.7000e-004	8.3000e-004	45.4610
Total		**6.1400e-003**	**0.0558**	**0.0469**	**3.4000e-004**		**4.2500e-003**	**4.2500e-003**		**4.2500e-003**	**4.2500e-003**	**0.0000**	**60.7370**	**60.7370**	**1.1700e-003**	**1.1100e-003**	**61.0979**

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

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Parking Lot	23800	2.2021	3.6000e-004	4.0000e-005	2.2238
Regional Shopping Center	286012	26.4629	4.2800e-003	5.2000e-004	26.7246
Research & Development	380060	35.1646	5.6900e-003	6.9000e-004	35.5123
Total		**63.8296**	**0.0103**	**1.2500e-003**	**64.4608**

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

5.3 Energy by Land Use - Electricity

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Parking Lot	23800	2.2021	3.6000e-004	4.0000e-005	2.2238
Regional Shopping Center	286012	26.4629	4.2800e-003	5.2000e-004	26.7246
Research & Development	380060	35.1646	5.6900e-003	6.9000e-004	35.5123
Total		**63.8296**	**0.0103**	**1.2500e-003**	**64.4608**

6.0 Area Detail

6.1 Mitigation Measures Area

Use Low VOC Cleaning Supplies

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

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.2829	2.0000e-005	2.2000e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	4.3100e-003	4.3100e-003	1.0000e-005	0.0000	4.5900e-003
Unmitigated	0.3036	2.0000e-005	2.2000e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	4.3100e-003	4.3100e-003	1.0000e-005	0.0000	4.5900e-003

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.0215					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.2819					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	2.0000e-004	2.0000e-005	2.2000e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	4.3100e-003	4.3100e-003	1.0000e-005	0.0000	4.5900e-003
Total	**0.3036**	**2.0000e-005**	**2.2000e-003**	**0.0000**		**1.0000e-005**	**1.0000e-005**		**1.0000e-005**	**1.0000e-005**	**0.0000**	**4.3100e-003**	**4.3100e-003**	**1.0000e-005**	**0.0000**	**4.5900e-003**

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

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	0.0215					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.2612					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	2.0000e-004	2.0000e-005	2.2000e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	4.3100e-003	4.3100e-003	1.0000e-005	0.0000	4.5900e-003
Total	**0.2829**	**2.0000e-005**	**2.2000e-003**	**0.0000**		**1.0000e-005**	**1.0000e-005**		**1.0000e-005**	**1.0000e-005**	**0.0000**	**4.3100e-003**	**4.3100e-003**	**1.0000e-005**	**0.0000**	**4.5900e-003**

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

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

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	16.3565	0.6386	0.0152	36.8611
Unmitigated	20.3532	0.7982	0.0191	45.9830

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Parking Lot	0 / 0	0.0000	0.0000	0.0000	0.0000
Regional Shopping Center	1.86366 / 1.14225	1.8942	0.0609	1.4600e-003	3.8526
Research & Development	22.5688 / 0	18.4590	0.7372	0.0176	42.1304
Total		**20.3532**	**0.7982**	**0.0191**	**45.9830**

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

7.2 Water by Land Use

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Parking Lot	0 / 0	0.0000	0.0000	0.0000	0.0000
Regional Shopping Center	1.49093 / 1.14225	1.5893	0.0488	1.1700e-003	3.1568
Research & Development	18.055 / 0	14.7672	0.5898	0.0141	33.7043
Total		**16.3565**	**0.6385**	**0.0152**	**36.8611**

8.0 Waste Detail

8.1 Mitigation Measures Waste

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

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	6.0715	0.3588	0.0000	15.0418
Unmitigated	6.0715	0.3588	0.0000	15.0418

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Parking Lot	0	0.0000	0.0000	0.0000	0.0000
Regional Shopping Center	26.42	5.3630	0.3170	0.0000	13.2867
Research & Development	3.49	0.7084	0.0419	0.0000	1.7551
Total		**6.0715**	**0.3588**	**0.0000**	**15.0418**

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

8.2 Waste by Land Use

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Parking Lot	0	0.0000	0.0000	0.0000	0.0000
Regional Shopping Center	26.42	5.3630	0.3170	0.0000	13.2867
Research & Development	3.49	0.7084	0.0419	0.0000	1.7551
Total		**6.0715**	**0.3588**	**0.0000**	**15.0418**

9.0 Operational Offroad

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

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

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

Boilers

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

User Defined Equipment

Equipment Type	Number

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

11.0 Vegetation

Mace Triangle - Cumulative Plus Project VMT - Yolo/Solano AQMD Air District, Summer

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

Mace Triangle - Cumulative Plus Project VMT

Yolo/Solano AQMD Air District, Summer

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Research & Development	45.90	1000sqft	1.05	45,901.00	0
Parking Lot	170.00	Space	1.53	68,000.00	0
Regional Shopping Center	25.16	1000sqft	0.58	25,155.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	55
Climate Zone	2			**Operational Year**	2033
Utility Company	Pacific Gas and Electric Company				
CO2 Intensity (lb/MWhr)	203.98	**CH4 Intensity (lb/MWhr)**	0.033	**N2O Intensity (lb/MWhr)**	0.004

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use -

Construction Phase - Construction not modeled.

Off-road Equipment - Construction not modeled.

Grading -

Vehicle Trips - Trip generation rate, trip length, and trip purpose percentages adjusted per F&P report.

Area Mitigation -

Water Mitigation -

Mace Triangle - Cumulative Plus Project VMT - Yolo/Solano AQMD Air District, Summer

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

Table Name	Column Name	Default Value	New Value
tblConstructionPhase	NumDays	5.00	1.00
tblConstructionPhase	PhaseEndDate	6/7/2023	6/1/2023
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	4.00	0.00
tblVehicleTrips	CC_TL	5.00	7.96
tblVehicleTrips	CNW_TL	7.00	11.14
tblVehicleTrips	CW_TL	10.00	15.91
tblVehicleTrips	DV_TP	35.00	0.00
tblVehicleTrips	DV_TP	15.00	0.00
tblVehicleTrips	PB_TP	11.00	0.00
tblVehicleTrips	PB_TP	3.00	0.00
tblVehicleTrips	PR_TP	54.00	100.00
tblVehicleTrips	PR_TP	82.00	100.00
tblVehicleTrips	ST_TR	46.12	0.00
tblVehicleTrips	ST_TR	1.90	16.60
tblVehicleTrips	SU_TR	21.10	0.00
tblVehicleTrips	SU_TR	1.11	16.60
tblVehicleTrips	WD_TR	37.75	0.00
tblVehicleTrips	WD_TR	11.26	16.60

2.0 Emissions Summary

Mace Triangle - Cumulative Plus Project VMT - Yolo/Solano AQMD Air District, Summer

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

2.1 Overall Construction (Maximum Daily Emission)

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	lb/day										lb/day					
2023	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Maximum	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2023	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Maximum	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

Mace Triangle - Cumulative Plus Project VMT - Yolo/Solano AQMD Air District, Summer

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

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	lb/day										lb/day					
Area	1.6649	2.2000e-004	0.0245	0.0000		9.0000e-005	9.0000e-005		9.0000e-005	9.0000e-005		0.0528	0.0528	1.4000e-004		0.0562
Energy	0.0336	0.3057	0.2568	1.8300e-003		0.0232	0.0232		0.0232	0.0232		366.8552	366.8552	7.0300e-003	6.7300e-003	369.0353
Mobile	2.3291	3.1416	22.5606	0.0550	6.5663	0.0362	6.6025	1.7535	0.0340	1.7875		5,985.4273	5,985.4273	0.3006	0.2768	6,075.4272
Total	**4.0276**	**3.4475**	**22.8419**	**0.0568**	**6.5663**	**0.0595**	**6.6258**	**1.7535**	**0.0573**	**1.8108**		**6,352.3353**	**6,352.3353**	**0.3078**	**0.2835**	**6,444.5187**

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	lb/day										lb/day					
Area	1.5512	2.2000e-004	0.0245	0.0000		9.0000e-005	9.0000e-005		9.0000e-005	9.0000e-005		0.0528	0.0528	1.4000e-004		0.0562
Energy	0.0336	0.3057	0.2568	1.8300e-003		0.0232	0.0232		0.0232	0.0232		366.8552	366.8552	7.0300e-003	6.7300e-003	369.0353
Mobile	2.3291	3.1416	22.5606	0.0550	6.5663	0.0362	6.6025	1.7535	0.0340	1.7875		5,985.4273	5,985.4273	0.3006	0.2768	6,075.4272
Total	**3.9139**	**3.4475**	**22.8419**	**0.0568**	**6.5663**	**0.0595**	**6.6258**	**1.7535**	**0.0573**	**1.8108**		**6,352.3353**	**6,352.3353**	**0.3078**	**0.2835**	**6,444.5187**

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

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	2.82	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Site Preparation	Site Preparation	6/1/2023	6/1/2023	5	1	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 0

Acres of Paving: 1.53

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

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Site Preparation	Rubber Tired Dozers	0	8.00	247	0.40
Site Preparation	Tractors/Loaders/Backhoes	0	8.00	97	0.37

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Site Preparation	0	0.00	0.00	0.00	10.00	7.00	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Mace Triangle - Cumulative Plus Project VMT - Yolo/Solano AQMD Air District, Summer

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

3.2 Site Preparation - 2023

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	lb/day										lb/day					
Fugitive Dust					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000			0.0000
Off-Road	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**		**0.0000**

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	lb/day										lb/day					
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
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
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

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

3.2 Site Preparation - 2023

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	lb/day										lb/day					
Fugitive Dust					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000			0.0000
Off-Road	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**

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	lb/day										lb/day					
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
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
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mace Triangle - Cumulative Plus Project VMT - Yolo/Solano AQMD Air District, Summer

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

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	2.3291	3.1416	22.5606	0.0550	6.5663	0.0362	6.6025	1.7535	0.0340	1.7875		5,985.4273	5,985.4273	0.3006	0.2768	6,075.4272
Unmitigated	2.3291	3.1416	22.5606	0.0550	6.5663	0.0362	6.6025	1.7535	0.0340	1.7875		5,985.4273	5,985.4273	0.3006	0.2768	6,075.4272

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Parking Lot	0.00	0.00	0.00		
Regional Shopping Center	0.00	0.00	0.00		
Research & Development	761.96	761.96	761.96	3,102,933	3,102,933
Total	761.96	761.96	761.96	3,102,933	3,102,933

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Parking Lot	10.00	5.00	7.00	0.00	0.00	0.00	0	0	0
Regional Shopping Center	10.00	5.00	7.00	16.30	64.70	19.00	100	0	0
Research & Development	15.91	7.96	11.14	33.00	48.00	19.00	100	0	0

Mace Triangle - Cumulative Plus Project VMT - Yolo/Solano AQMD Air District, Summer

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

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Parking Lot	0.534400	0.056822	0.179165	0.124517	0.023767	0.006150	0.026136	0.017163	0.000490	0.000694	0.027210	0.000627	0.002860
Regional Shopping Center	0.534400	0.056822	0.179165	0.124517	0.023767	0.006150	0.026136	0.017163	0.000490	0.000694	0.027210	0.000627	0.002860
Research & Development	0.534400	0.056822	0.179165	0.124517	0.023767	0.006150	0.026136	0.017163	0.000490	0.000694	0.027210	0.000627	0.002860

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	0.0336	0.3057	0.2568	1.8300e-003		0.0232	0.0232		0.0232	0.0232		366.8552	366.8552	7.0300e-003	6.7300e-003	369.0353
NaturalGas Unmitigated	0.0336	0.3057	0.2568	1.8300e-003		0.0232	0.0232		0.0232	0.0232		366.8552	366.8552	7.0300e-003	6.7300e-003	369.0353

Mace Triangle - Cumulative Plus Project VMT - Yolo/Solano AQMD Air District, Summer

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

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Regional Shopping Center	798.068	8.6100e-003	0.0782	0.0657	4.7000e-004		5.9500e-003	5.9500e-003		5.9500e-003	5.9500e-003		93.8904	93.8904	1.8000e-003	1.7200e-003	94.4483
Research & Development	2320.2	0.0250	0.2275	0.1911	1.3600e-003		0.0173	0.0173		0.0173	0.0173		272.9649	272.9649	5.2300e-003	5.0000e-003	274.5869
Total		**0.0336**	**0.3057**	**0.2568**	**1.8300e-003**		**0.0232**	**0.0232**		**0.0232**	**0.0232**		**366.8552**	**366.8552**	**7.0300e-003**	**6.7200e-003**	**369.0353**

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

5.2 Energy by Land Use - NaturalGas

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	lb/day										lb/day					
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Regional Shopping Center	0.798068	8.6100e-003	0.0782	0.0657	4.7000e-004		5.9500e-003	5.9500e-003		5.9500e-003	5.9500e-003		93.8904	93.8904	1.8000e-003	1.7200e-003	94.4483
Research & Development	2.3202	0.0250	0.2275	0.1911	1.3600e-003		0.0173	0.0173		0.0173	0.0173		272.9649	272.9649	5.2300e-003	5.0000e-003	274.5869
Total		**0.0336**	**0.3057**	**0.2568**	**1.8300e-003**		**0.0232**	**0.0232**		**0.0232**	**0.0232**		**366.8552**	**366.8552**	**7.0300e-003**	**6.7200e-003**	**369.0353**

6.0 Area Detail

6.1 Mitigation Measures Area

Use Low VOC Cleaning Supplies

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

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	1.5512	2.2000e-004	0.0245	0.0000		9.0000e-005	9.0000e-005		9.0000e-005	9.0000e-005		0.0528	0.0528	1.4000e-004		0.0562
Unmitigated	1.6649	2.2000e-004	0.0245	0.0000		9.0000e-005	9.0000e-005		9.0000e-005	9.0000e-005		0.0528	0.0528	1.4000e-004		0.0562

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	lb/day										lb/day					
Architectural Coating	0.1180					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	1.5447					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	2.2400e-003	2.2000e-004	0.0245	0.0000		9.0000e-005	9.0000e-005		9.0000e-005	9.0000e-005		0.0528	0.0528	1.4000e-004		0.0562
Total	**1.6649**	**2.2000e-004**	**0.0245**	**0.0000**		**9.0000e-005**	**9.0000e-005**		**9.0000e-005**	**9.0000e-005**		**0.0528**	**0.0528**	**1.4000e-004**		**0.0562**

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

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	lb/day										lb/day					
Architectural Coating	0.1180					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	1.4310					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	2.2400e-003	2.2000e-004	0.0245	0.0000		9.0000e-005	9.0000e-005		9.0000e-005	9.0000e-005		0.0528	0.0528	1.4000e-004		0.0562
Total	**1.5512**	**2.2000e-004**	**0.0245**	**0.0000**		**9.0000e-005**	**9.0000e-005**		**9.0000e-005**	**9.0000e-005**		**0.0528**	**0.0528**	**1.4000e-004**		**0.0562**

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

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

8.0 Waste Detail

8.1 Mitigation Measures Waste

9.0 Operational Offroad

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

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

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

Boilers

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

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

Mace Triangle - Cumulative Plus Project VMT - Yolo/Solano AQMD Air District, Winter

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

Mace Triangle - Cumulative Plus Project VMT

Yolo/Solano AQMD Air District, Winter

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Research & Development	45.90	1000sqft	1.05	45,901.00	0
Parking Lot	170.00	Space	1.53	68,000.00	0
Regional Shopping Center	25.16	1000sqft	0.58	25,155.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	55
Climate Zone	2			**Operational Year**	2033
Utility Company	Pacific Gas and Electric Company				
CO2 Intensity (lb/MWhr)	203.98	**CH4 Intensity (lb/MWhr)**	0.033	**N2O Intensity (lb/MWhr)**	0.004

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use -

Construction Phase - Construction not modeled.

Off-road Equipment - Construction not modeled.

Grading -

Vehicle Trips - Trip generation rate, trip length, and trip purpose percentages adjusted per F&P report.

Area Mitigation -

Water Mitigation -

Mace Triangle - Cumulative Plus Project VMT - Yolo/Solano AQMD Air District, Winter

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

Table Name	Column Name	Default Value	New Value
tblConstructionPhase	NumDays	5.00	1.00
tblConstructionPhase	PhaseEndDate	6/7/2023	6/1/2023
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	4.00	0.00
tblVehicleTrips	CC_TL	5.00	7.96
tblVehicleTrips	CNW_TL	7.00	11.14
tblVehicleTrips	CW_TL	10.00	15.91
tblVehicleTrips	DV_TP	35.00	0.00
tblVehicleTrips	DV_TP	15.00	0.00
tblVehicleTrips	PB_TP	11.00	0.00
tblVehicleTrips	PB_TP	3.00	0.00
tblVehicleTrips	PR_TP	54.00	100.00
tblVehicleTrips	PR_TP	82.00	100.00
tblVehicleTrips	ST_TR	46.12	0.00
tblVehicleTrips	ST_TR	1.90	16.60
tblVehicleTrips	SU_TR	21.10	0.00
tblVehicleTrips	SU_TR	1.11	16.60
tblVehicleTrips	WD_TR	37.75	0.00
tblVehicleTrips	WD_TR	11.26	16.60

2.0 Emissions Summary

Mace Triangle - Cumulative Plus Project VMT - Yolo/Solano AQMD Air District, Winter

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

2.1 Overall Construction (Maximum Daily Emission)

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	lb/day										lb/day					
2023	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Maximum	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2023	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Maximum	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

Mace Triangle - Cumulative Plus Project VMT - Yolo/Solano AQMD Air District, Winter

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

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	lb/day										lb/day					
Area	1.6649	2.2000e-004	0.0245	0.0000		9.0000e-005	9.0000e-005		9.0000e-005	9.0000e-005		0.0528	0.0528	1.4000e-004		0.0562
Energy	0.0336	0.3057	0.2568	1.8300e-003		0.0232	0.0232		0.0232	0.0232		366.8552	366.8552	7.0300e-003	6.7300e-003	369.0353
Mobile	2.0004	3.5962	22.9078	0.0509	6.5663	0.0362	6.6025	1.7535	0.0340	1.7875		5,540.2690	5,540.2690	0.3261	0.2963	5,636.7071
Total	**3.6989**	**3.9022**	**23.1891**	**0.0527**	**6.5663**	**0.0595**	**6.6259**	**1.7535**	**0.0573**	**1.8108**		**5,907.1770**	**5,907.1770**	**0.3333**	**0.3030**	**6,005.7985**

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	lb/day										lb/day					
Area	1.5512	2.2000e-004	0.0245	0.0000		9.0000e-005	9.0000e-005		9.0000e-005	9.0000e-005		0.0528	0.0528	1.4000e-004		0.0562
Energy	0.0336	0.3057	0.2568	1.8300e-003		0.0232	0.0232		0.0232	0.0232		366.8552	366.8552	7.0300e-003	6.7300e-003	369.0353
Mobile	2.0004	3.5962	22.9078	0.0509	6.5663	0.0362	6.6025	1.7535	0.0340	1.7875		5,540.2690	5,540.2690	0.3261	0.2963	5,636.7071
Total	**3.5852**	**3.9022**	**23.1891**	**0.0527**	**6.5663**	**0.0595**	**6.6259**	**1.7535**	**0.0573**	**1.8108**		**5,907.1770**	**5,907.1770**	**0.3333**	**0.3030**	**6,005.7985**

Mace Triangle - Cumulative Plus Project VMT - Yolo/Solano AQMD Air District, Winter

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

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	3.07	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Site Preparation	Site Preparation	6/1/2023	6/1/2023	5	1	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 0

Acres of Paving: 1.53

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

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Site Preparation	Rubber Tired Dozers	0	8.00	247	0.40
Site Preparation	Tractors/Loaders/Backhoes	0	8.00	97	0.37

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Site Preparation	0	0.00	0.00	0.00	10.00	7.00	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Mace Triangle - Cumulative Plus Project VMT - Yolo/Solano AQMD Air District, Winter

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

3.2 Site Preparation - 2023

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	lb/day										lb/day					
Fugitive Dust					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000			0.0000
Off-Road	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**		**0.0000**

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	lb/day										lb/day					
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
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
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mace Triangle - Cumulative Plus Project VMT - Yolo/Solano AQMD Air District, Winter

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

3.2 Site Preparation - 2023

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	lb/day										lb/day					
Fugitive Dust					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000			0.0000
Off-Road	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**

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	lb/day										lb/day					
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
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
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

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

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	2.0004	3.5962	22.9078	0.0509	6.5663	0.0362	6.6025	1.7535	0.0340	1.7875		5,540.2690	5,540.2690	0.3261	0.2963	5,636.7071
Unmitigated	2.0004	3.5962	22.9078	0.0509	6.5663	0.0362	6.6025	1.7535	0.0340	1.7875		5,540.2690	5,540.2690	0.3261	0.2963	5,636.7071

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Parking Lot	0.00	0.00	0.00		
Regional Shopping Center	0.00	0.00	0.00		
Research & Development	761.96	761.96	761.96	3,102,933	3,102,933
Total	761.96	761.96	761.96	3,102,933	3,102,933

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Parking Lot	10.00	5.00	7.00	0.00	0.00	0.00	0	0	0
Regional Shopping Center	10.00	5.00	7.00	16.30	64.70	19.00	100	0	0
Research & Development	15.91	7.96	11.14	33.00	48.00	19.00	100	0	0

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

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Parking Lot	0.534400	0.056822	0.179165	0.124517	0.023767	0.006150	0.026136	0.017163	0.000490	0.000694	0.027210	0.000627	0.002860
Regional Shopping Center	0.534400	0.056822	0.179165	0.124517	0.023767	0.006150	0.026136	0.017163	0.000490	0.000694	0.027210	0.000627	0.002860
Research & Development	0.534400	0.056822	0.179165	0.124517	0.023767	0.006150	0.026136	0.017163	0.000490	0.000694	0.027210	0.000627	0.002860

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	0.0336	0.3057	0.2568	1.8300e-003		0.0232	0.0232		0.0232	0.0232		366.8552	366.8552	7.0300e-003	6.7300e-003	369.0353
NaturalGas Unmitigated	0.0336	0.3057	0.2568	1.8300e-003		0.0232	0.0232		0.0232	0.0232		366.8552	366.8552	7.0300e-003	6.7300e-003	369.0353

Mace Triangle - Cumulative Plus Project VMT - Yolo/Solano AQMD Air District, Winter

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

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Regional Shopping Center	798.068	8.6100e-003	0.0782	0.0657	4.7000e-004		5.9500e-003	5.9500e-003		5.9500e-003	5.9500e-003		93.8904	93.8904	1.8000e-003	1.7200e-003	94.4483
Research & Development	2320.2	0.0250	0.2275	0.1911	1.3600e-003		0.0173	0.0173		0.0173	0.0173		272.9649	272.9649	5.2300e-003	5.0000e-003	274.5869
Total		**0.0336**	**0.3057**	**0.2568**	**1.8300e-003**		**0.0232**	**0.0232**		**0.0232**	**0.0232**		**366.8552**	**366.8552**	**7.0300e-003**	**6.7200e-003**	**369.0353**

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

5.2 Energy by Land Use - NaturalGas

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	lb/day										lb/day					
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Regional Shopping Center	0.798068	8.6100e-003	0.0782	0.0657	4.7000e-004		5.9500e-003	5.9500e-003		5.9500e-003	5.9500e-003		93.8904	93.8904	1.8000e-003	1.7200e-003	94.4483
Research & Development	2.3202	0.0250	0.2275	0.1911	1.3600e-003		0.0173	0.0173		0.0173	0.0173		272.9649	272.9649	5.2300e-003	5.0000e-003	274.5869
Total		**0.0336**	**0.3057**	**0.2568**	**1.8300e-003**		**0.0232**	**0.0232**		**0.0232**	**0.0232**		**366.8552**	**366.8552**	**7.0300e-003**	**6.7200e-003**	**369.0353**

6.0 Area Detail

6.1 Mitigation Measures Area

Use Low VOC Cleaning Supplies

Mace Triangle - Cumulative Plus Project VMT - Yolo/Solano AQMD Air District, Winter

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

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	1.5512	2.2000e-004	0.0245	0.0000		9.0000e-005	9.0000e-005		9.0000e-005	9.0000e-005		0.0528	0.0528	1.4000e-004		0.0562
Unmitigated	1.6649	2.2000e-004	0.0245	0.0000		9.0000e-005	9.0000e-005		9.0000e-005	9.0000e-005		0.0528	0.0528	1.4000e-004		0.0562

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	lb/day										lb/day					
Architectural Coating	0.1180					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	1.5447					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	2.2400e-003	2.2000e-004	0.0245	0.0000		9.0000e-005	9.0000e-005		9.0000e-005	9.0000e-005		0.0528	0.0528	1.4000e-004		0.0562
Total	**1.6649**	**2.2000e-004**	**0.0245**	**0.0000**		**9.0000e-005**	**9.0000e-005**		**9.0000e-005**	**9.0000e-005**		**0.0528**	**0.0528**	**1.4000e-004**		**0.0562**

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

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	lb/day										lb/day					
Architectural Coating	0.1180					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	1.4310					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	2.2400e-003	2.2000e-004	0.0245	0.0000		9.0000e-005	9.0000e-005		9.0000e-005	9.0000e-005		0.0528	0.0528	1.4000e-004		0.0562
Total	**1.5512**	**2.2000e-004**	**0.0245**	**0.0000**		**9.0000e-005**	**9.0000e-005**		**9.0000e-005**	**9.0000e-005**		**0.0528**	**0.0528**	**1.4000e-004**		**0.0562**

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

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

8.0 Waste Detail

8.1 Mitigation Measures Waste

9.0 Operational Offroad

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

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

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

Boilers

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

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

Mace Triangle - Cumulative Plus Project VMT

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

Yolo/Solano AQMD Air District, Mitigation Report

Construction Mitigation Summary

Phase	ROG	NOx	CO	SO2	Exhaust PM10	Exhaust PM2.5	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction												
Site Preparation	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

OFFROAD Equipment Mitigation

Equipment Type	Fuel Type	Tier	Number Mitigated	Total Number of Equipment	DPF	Oxidation Catalyst
Rubber Tired Dozers	Diesel	No Change	0	0	No Change	0.00
Tractors/Loaders/Backhoes	Diesel	No Change	0	0	No Change	0.00

Equipment Type	ROG	NOx	CO	SO2	Exhaust PM10	Exhaust PM2.5	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
	Unmitigated tons/yr						Unmitigated mt/yr					
Rubber Tired Dozers	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000
Tractors/Loaders/ Backhoes	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000

Equipment Type	ROG	NOx	CO	SO2	Exhaust PM10	Exhaust PM2.5	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
	Mitigated tons/yr						Mitigated mt/yr					
Rubber Tired Dozers	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000
Tractors/Loaders/Backhoes	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000

Mace Triangle - Cumulative Plus Project VMT

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

Equipment Type	ROG	NOx	CO	SO2	Exhaust PM10	Exhaust PM2.5	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction												
Rubber Tired Dozers	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000
Tractors/Loaders/Backhoes	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000

Fugitive Dust Mitigation

Yes/No	Mitigation Measure	Mitigation Input		Mitigation Input		Mitigation Input	
No	Soil Stabilizer for unpaved Roads	PM10 Reduction		PM2.5 Reduction			
No	Replace Ground Cover of Area Disturbed	PM10 Reduction		PM2.5 Reduction			
No	Water Exposed Area	PM10 Reduction		PM2.5 Reduction		Frequency (per day)	
No	Unpaved Road Mitigation	Moisture Content %		Vehicle Speed (mph)	0.00		
No	Clean Paved Road	% PM Reduction	0.00				

		Unmitigated		Mitigated		Percent Reduction	
Phase	Source	PM10	PM2.5	PM10	PM2.5	PM10	PM2.5
Site Preparation	Fugitive Dust	0.00	0.00	0.00	0.00	0.00	0.00
Site Preparation	Roads	0.00	0.00	0.00	0.00	0.00	0.00

Mace Triangle - Cumulative Plus Project VMT

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

Operational Percent Reduction Summary

Category	ROG	NOx	CO	SO2	Exhaust PM10	Exhaust PM2.5	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction												
Architectural Coating	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Consumer Products	7.36	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hearth	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Landscaping	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Mobile	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Natural Gas	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Water Indoor	0.00	0.00	0.00	0.00	0.00	0.00	20.00	19.41	19.64	20.00	20.00	19.84
Water Outdoor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Operational Mobile Mitigation

Project Setting:

Mitigation	Category	Measure	% Reduction	Input Value 1	Input Value 2	Input Value 3
No	Land Use	Increase Density	0.00			
No	Land Use	Increase Diversity	0.10	0.32		
No	Land Use	Improve Walkability Design	0.00			
No	Land Use	Improve Destination Accessibility	0.00			
No	Land Use	Increase Transit Accessibility	0.25			

Mace Triangle - Cumulative Plus Project VMT

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

No	Land Use	Integrate Below Market Rate Housing	0.00			
	Land Use	Land Use SubTotal	0.00			
No	Neighborhood Enhancements	Improve Pedestrian Network				
No	Neighborhood Enhancements	Provide Traffic Calming Measures				
No	Neighborhood Enhancements	Implement NEV Network	0.00			
	Neighborhood Enhancements	Neighborhood Enhancements Subtotal	0.00			
No	Parking Policy Pricing	Limit Parking Supply	0.00			
No	Parking Policy Pricing	Unbundle Parking Costs	0.00			
No	Parking Policy Pricing	On-street Market Pricing	0.00			
	Parking Policy Pricing	Parking Policy Pricing Subtotal	0.00			
No	Transit Improvements	Provide BRT System	0.00			
No	Transit Improvements	Expand Transit Network	0.00			
No	Transit Improvements	Increase Transit Frequency	0.00			
	Transit Improvements	Transit Improvements Subtotal	0.00			
		Land Use and Site Enhancement Subtotal	0.00			
No	Commute	Implement Trip Reduction Program				
No	Commute	Transit Subsidy				
No	Commute	Implement Employee Parking "Cash Out"				
No	Commute	Workplace Parking Charge				
No	Commute	Encourage Telecommuting and Alternative Work Schedules	0.00			

Mace Triangle - Cumulative Plus Project VMT

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

No	Commute	Market Commute Trip Reduction Option	0.00			
No	Commute	Employee Vanpool/Shuttle	0.00		2.00	
No	Commute	Provide Ride Sharing Program				
	Commute	Commute Subtotal	0.00			
No	School Trip	Implement School Bus Program	0.00			
		Total VMT Reduction	0.00			

Area Mitigation

Measure Implemented	Mitigation Measure	Input Value
No	Only Natural Gas Hearth	
No	No Hearth	
Yes	Use Low VOC Cleaning Supplies	
No	Use Low VOC Paint (Residential Interior)	50.00
No	Use Low VOC Paint (Residential Exterior)	100.00
No	Use Low VOC Paint (Non-residential Interior)	50.00
No	Use Low VOC Paint (Non-residential Exterior)	100.00
No	Use Low VOC Paint (Parking)	100.00
No	% Electric Lawnmower	0.00
No	% Electric Leafblower	0.00
No	% Electric Chainsaw	0.00

Energy Mitigation Measures

Mace Triangle - Cumulative Plus Project VMT

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

Measure Implemented	Mitigation Measure	Input Value 1	Input Value 2
No	Exceed Title 24		
No	Install High Efficiency Lighting		
No	On-site Renewable		

Appliance Type	Land Use Subtype	% Improvement
ClothWasher		30.00
DishWasher		15.00
Fan		50.00
Refrigerator		15.00

Water Mitigation Measures

Measure Implemented	Mitigation Measure	Input Value 1	Input Value 2
No	Apply Water Conservation on Strategy	0.00	0.00
No	Use Reclaimed Water	0.00	0.00
No	Use Grey Water	0.00	
Yes	Install low-flow bathroom faucet	32.00	
Yes	Install low-flow Kitchen faucet	18.00	
Yes	Install low-flow Toilet	20.00	
Yes	Install low-flow Shower	20.00	
No	Turf Reduction	0.00	
No	Use Water Efficient Irrigation Systems	6.10	

Mace Triangle - Cumulative Plus Project VMT

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

No	Water Efficient Landscape	0.00	0.00

Solid Waste Mitigation

Mitigation Measures	Input Value
Institute Recycling and Composting Services Percent Reduction in Waste Disposed	

APPENDIX B

2021 BIOLOGICAL SURVEY UPDATE FOR THE DAVIS DISC PROJECT, YOLO COUNTY, CA

SYCAMORE
ENVIRONMENTAL CONSULTANTS, INC.

NOW PART OF
SWCA
ENVIRONMENTAL CONSULTANTS

5 October 2021

Troy Estacio, SVP Acquisitions & Development Services
Buzz Oates Group of Companies
555 Capitol Mall, Suite 900
Sacramento, CA 95814
Phone: (916) 379-3800

Subject: 2021 Biological Survey Update for the Davis DISC Project, Yolo County, CA

Dear Troy,

This letter provides a biological resource update for the Davis DISC Project located immediately east of the City of Davis in Yolo County, CA. SWCA Environmental Consultants (SWCA) completed a biological and botanical survey of the Davis DISC Project site on 27 July 2021. The survey supplements the results of the previous surveys documented in a previously prepared biological resources evaluation (BRE; Sycamore Environmental 2020a) and protocol burrowing owl survey report (Sycamore Environmental 2020b). Since 2014, Sycamore Environmental / SWCA biologists have completed over 20 surveys, including biological surveys, protocol botanical surveys, wetland/hydrology study fieldwork, an arborist survey, and a full set of protocol burrowing owl surveys (see survey summaries in Table 1 in the 2020 BRE and Table 1 in the burrowing owl survey report). This update includes a determination that the Subsequent Environmental Impact Report (SEIR) prepared for the Aggie Research Campus (ARC) Project in 2020 (City of Davis 2020) adequately addresses potential impacts to biological resources for the smaller footprint of the Davis DISC Project.

SUMMARY

Current site conditions are similar to those documented in the 2020 BRE. Land use and land cover types within the footprint are unchanged. As a result of the reduced footprint of the Davis DISC Project, two occupied burrowing owl sites (Sites A and B, both known breeding sites) and two elderberry shrubs (EB 1 and 5) no longer occur within 500 feet of the Project. Based on the results of the 27 July 2021 survey, the Davis DISC Project will not result in any new or increased impacts to biological resources compared to the ARC Project analyzed in the 2020 SEIR. No changes to mitigation measures for biological resources would be required for the Davis DISC Project.

STUDY AREA

The Biological Study Area (BSA) for the Davis DISC Project is shown on attached maps and includes two components: 1) the 156.74-acre main site study area located northeast of the intersection of Mace Boulevard and Interstate 80 and encapsulating the 102-acre Davis DISC footprint, the city annexation area south of County Road 32A, and two off-site sewer line alternatives that extend from the Davis DISC site to the east and north, and 2) the 100-acre stormwater capacity area consisting of agricultural fields located approximately 1.5 miles east of the main site, adjacent to the Yolo Bypass. An aerial photograph of the BSA is in Attachment A. A land cover type map for the BSA and buffer is in Attachment B. Both

the main site and stormwater capacity study areas were previously evaluated for biological resources (Sycamore Environmental 2020a) and surveyed for burrowing owl (Sycamore Environmental 2020b).

METHODS

Updated Database Queries

Updated database queries from the United States Fish and Wildlife Service (USFWS) Information for Planning and Consultation (IPAC), the California Natural Diversity Database (CNDDB), and the California Native Plant Society (CNPS) Inventory of Rare and Endangered Plants were reviewed (Attachment C). The updated queries were compared with the queries analyzed previously in the 2020 BRE. This letter includes an evaluation of two special-status species that were not previously considered (Table 1). Additional sources of special-status species occurrence information reviewed include records of special-status birds from eBird (2021).

Biological and Botanical Survey

SWCA biologists Mike Bower, M.S., Elliot Maldonado, B.S., and Alex Jamal, B.S., conducted a biological and botanical survey on 27 July 2021, from approximately 7:00 AM to 4:30 PM. Mr. Bower and Ms. Maldonado are formally approved qualified biologists under the Yolo Habitat Conservation Plan / Natural Community Conservation Plan (Yolo HCP). The survey consisted of walking through the BSA while searching for special-status plant and wildlife species and their habitat/sign. The survey focused on the areas outside active agricultural cultivation (i.e., the edges of agricultural fields, and fallow fields). Plants and wildlife species were identified and recorded (Attachment D). Areas within 200 feet of the BSA were searched for elderberry (*Sambucus* sp.) shrubs. Areas within 500 feet of the BSA were searched for burrowing owl (*Athene cunicularia*) and potentially suitable burrows. Areas within 1,320 feet of the BSA were searched for potential Swainson's hawk (*Buteo swainsoni*) nests, and other sensitive habitats as required under the Yolo HCP (YHC 2018). The occupancy status of potential burrowing owl burrows was determined based on the presence of owls, or sign consisting of whitewash, feathers, pellets, etc. The *Staff Report on Burrowing Owl Mitigation* (CDFW 2012) considers burrow sites to be occupied if a burrowing owl has been observed occupying a burrow, or burrowing owl sign has been observed at a burrow, within the last three years. Within the last three years, Sycamore Environmental biologists have conducted numerous burrowing owl surveys and monitoring events covering the areas within 500 feet of the BSA, including a full set of breeding season surveys in 2020 (Sycamore Environmental 2020b).

Mapping & Land Cover Type Map

Coverage under the Yolo HCP requires evaluation of habitat within up to 1,320 feet of the Project, and preparation of a Land Cover Type Map. The 27 July 2021 survey confirmed that land cover types did not change since the 2020 BRE surveys and mapping. An updated Land Cover Type Map covering the smaller footprint of the Davis DISC Project is in Attachment B.

RESULTS

Existing Conditions

Within the BSA, there have been no noteworthy changes to biological communities and land use documented in the 2020 BRE and 2020 SEIR. Soils and vegetation communities present in the BSA are described in the Biological Resources Evaluation (BRE; Sycamore Environmental 2020a). The BSA is heavily disturbed by existing development (Ikeda's Market and Park & Ride in the annexation area) and ongoing agricultural uses (primarily agricultural row crops). Field crops in the actively farmed agricultural fields north of County Road 32A had already been harvested at the time of the 27 July 2021 survey. In the

past these fields have been planted with tomatoes, safflower, sunflower, and corn. Undeveloped areas south of County Road 32A remain fallow and dominated by nonnative weeds (mostly yellow star-thistle; *Centaurea solstitialis*).

Updated Land Cover Type Mapping

An updated land cover type map is in Appendix C. Yolo HCP land cover types in the BSA include Bulrush-Cattail Wetland (in the Mace Drainage Channel)[1], Field Crops, Deciduous Fruit/Nuts, Semiagricultural/Incidental to Agriculture, Urban Ruderal, and Urban or Built Up. Within 1,320 feet of the BSA, the same land cover types are present, plus Eucalyptus Groves, and Vegetated Corridor.

Special-status Species not Previously Evaluated

The updated database queries (Attachment D) include two special-status species not previously evaluated: Western spadefoot (*Spea* [=*Scaphiopus*] *hammondi*; Species of Special Concern) and cotula navarretia (*Navarretia cotulifolia*; California Rare Plant Rank 4.2). These species are listed and evaluated in Table 1 below. The BSA does not provide potential habitat for western spadefoot or cotula navarretia. Neither species was observed in the BSA during the 27 July 2021 survey, or during any previous surveys covering this site.

Table 1. Evaluation of Special-status Species Not Previously Considered.

Special-Status Species/ Common Name	Federal Status[a]	State Status[a]	Source[b]	Habitat Requirements	Potential to Occur in the BSA?
Reptiles					
Spea (=Scaphiopus) hammondi Western spadefoot	--	SSC	1	Ranges throughout the Central Valley and adjacent foothills. Occurs primarily in grasslands; occasionally in valley-foothill hardwood woodlands (CWHR 2021). Found primarily in the lowland washes, floodplains of rivers, alluvial fans, playas, and alkali flats. Prefers areas of open vegetation and short grasses with sandy or gravelly soil (Stebbins 2003). Spends most of the year in underground burrows ≤36 inches deep, which they generally construct themselves. Breeding and egg laying occur almost exclusively in shallow, temporary pools formed by heavy winter rains (CWHR 2021).	No. There is no suitable breeding habitat for this species in or adjacent to the BSA. No washes, river floodplains, alluvial fans, playas, or alkali flats occur in the BSA.
Plants					
Navarretia cotulifolia Cotula navarretia	--	--/4.2	2	Annual herb found in chaparral, cismontane woodland, valleys and foothill grasslands from 15 to 6,005 feet. Occurs primarily on adobe clay soils. Known from Lake, Marin, Napa, Sonoma, and Yolo cos. Blooms May through June (CNPS 2021).	No. There are no adobe clays in the BSA. This species was not observed during botanical surveys conducted on 19 May 2015, 11 September 2015, 7 August 2019, and 27 July 2021.

[a] **Status Code Notes:** Neither species is listed under the federal or state endangered species acts. Western spadefoot is a State Species of Special Concern (SSC). Cotula navarretia is a CNPS California Rare Plant Rank 4.2 species (of limited distribution / watch list, fairly endangered in California, with 20-80% of occurrences threatened).

[b] **Sources**: 1 = CNDDB (2021) query of the Davis Quad and surrounding quads; 2 = CNPS (2021) query of the Davis Quad and surrounding quads.

[1] As mentioned in Note 4 of the BRE, a portion of the Mace Drainage Channel in the BSA may be classified as bulrush cattail wetland when vegetation is present. The City of Davis regularly removes vegetation from the Mace Drainage Channel for stormwater management pursuant to an existing agreement with CDFW.

Updates to CNDDB Records

The 2020 BRE included an analysis of known records of special-status species within the nine-quad area encompassing the BSA. The only special-status species with CNDDB records in or adjacent to the BSA were Swainson's hawk (Occurrence #111, #409, #465, and #1466) and burrowing owl (Occurrence #614, #695, #734, and #994). This remains the case in October 2021. There are no new CNDDB records of special-status species mapped overlapping the BSA. The Swainson's hawk and burrowing owl records that overlap the site do not note any more recent activity (but, see below for discussion of active Swainson's hawk nest observed 300 feet east of the BSA in 2020). The results of a CNDDB query for species records updated between January 1, 2020, and October 4, 2021, are in Attachment E. The nearest of these updated records is located approximately 4.4 miles south of the BSA (an update to Occurrence #49 for Colusa grass, which does not have potential to occur in the BSA). There are no updates to CNDDB records that indicate new or increased project impacts.

Biological and Botanical Survey

No potential raptor nests were observed in the trees in the BSA during the 27 July 2021 survey. In 2020, an active Swainson's hawk nest was detected in a eucalyptus grove outside the BSA, approximately 300 feet east of the Davis DISC Project site (Sycamore Environmental 2020b). The nest occurs in the same grove associated with CNDDB Swainson's hawk Occurrence #409. The nest was monitored during the July 2021 survey and showed no sign of activity. It is unknown if the nest was active earlier in 2021. One juvenile Swainson's hawk was observed perched in a Fremont's cottonwood tree in the northeast corner of the BSA, approximately 50 feet south of the Mace Drainage Canal and 1,200 feet northwest of the off-site nest that was active in 2020. Approximately 18 Swainson's hawks were observed soaring over the fields north and south of the Mace Drainage Channel. Several Swainson's hawks were observed foraging over the stormwater capacity area. No active nests of Swainson's hawk or other tree-nesting raptors were observed in the study area or within 1,320 feet during the survey.

During the 27 July 2021 survey, one additional elderberry shrub (EB 6) was observed on the railroad berm just outside the BSA to the south. EB 6 is still a sapling and is growing close to the railroad tracks where vegetation is managed. EB 6 and the five other previously documented elderberry shrubs (EB 1-5) were surveyed for evidence of Valley elderberry longhorn beetle (VELB) exit holes. No evidence of VELB was observed on any of the elderberry shrubs. The locations of the six elderberry shrubs are shown on the map in Attachment B. As a result of the reduced project footprint, EB 1 and EB 5 no longer occur within 500 feet of the Project.

During the 27 July 2021 survey, Parry's rough tarplant (*Centromadia parryi* ssp. *rudis*; CNPS California Rare Plant Rank 4.2) was observed growing in approximately the same location as documented previously (within a shallow depression adjacent to the gravel parking lot serving Ikeda's Market). No additional Parry's rough tarplant populations were observed in 2021. A total of 13 plants were observed in the BSA on 27 July 2021, down from approximately 93 plants documented previously. The map in Attachment B shows the greatest extent and number of Parry's rough tarplant observed across surveys on 19 May 2015, 11 September 2015, 7 August 2019, and 27 July 2021. As described in the 2020 SEIR, the Parry's rough tarplant observed in the BSA does not meet the definition of Rare or Endangered under CEQA Guidelines §15125 (c) or §15380. No other potential special-status plants occur in the BSA.

Discussion of Burrowing Owl

No additional occupied burrowing owl sites were detected during the 27 July 2021 survey. Known occupied burrowing owl burrow complexes in and near the BSA occur at 6 sites (Sites A through F, as detailed in the burrowing owl survey report; Sycamore Environmental 2020b). The occupied sites are shown on the map in Attachment C. The sites were mapped during 10 surveys (1 breeding season survey in 2019, 1 non-breeding season survey in 2020, and 8 breeding season surveys in 2020).

During the 27 July 2021 survey, Sites A through F were surveyed for burrowing owl and sign thereof. Additional suitable burrows were observed among the complexes at each site, indicating continued ground squirrel activity. One burrowing owl with a blue band on the left leg was observed within Site E near a culvert opening, approximately 400 feet south of the Mace Boulevard / 2nd Street Intersection, on the west side of Mace Boulevard. The band ID # was difficult to discern and was likely either 82 or F2. Two other burrows at Site E (roughly 300 to 400 feet south of the Mace Boulevard / 2nd Street Intersection, on the west side of Mace Boulevard) displayed recent burrowing owl sign including molted down feathers and prey bones. Burrowing owls were not observed at any of the other sites during the July 2021 survey. No sign of burrowing owls was observed at any of the other sites within the BSA and 500-foot buffer during the July 2021 survey. Some faded whitewash was observed at a burrow entrance at Site B, beyond the 500-foot buffer.

Due to the reduction of footprint for the Davis DISC Project, occupied burrowing owl sites A and B are no longer within 500 feet of the project. Of the sites within the 500-foot buffer, only Site E is known or suspected to include breeding within the last three years. No occupied burrowing owl sites occur within the 102-acre Davis DISC project footprint. One site (Site F) occurs within the city annexation area south of County Road 32A.

Since the last burrowing owl survey in June of 2020, there have been burrowing owl observations documented on eBird.org within the 500-foot buffer (eBird 2021). One burrowing owl observation occurs at the edge of the buffer, near Site C in a disked field. Another was recorded near County Road 104A near the northern-most tip of the project. Both of these locations were checked during the 27 July 2021 survey. No owls or sign of owl were observed at either location. No new or additional observations or records of burrowing owl occur in the CNDDB.

Discussion of Biological Resource Impacts and Mitigation

The SEIR included mitigation measures for special-status plants (Measure 3-15), Valley elderberry longhorn beetle (Measure 3-16), giant garter snake (Measure 3-17), burrowing owl (Measure 3-18), Swainson's hawk (Measure 3-19), other nesting birds (Measure 3-20), riparian/sensitive habitat (Measure 3-21), and a City design review of buffer/drainage features (Measure 3-26). The SEIR measures include implementation of Yolo HCP avoidance and minimization measures, and require payment of applicable Yolo HCP fees for impacts to covered species habitat.

No new potentially significant impacts to biological resources have been identified in this biological resource evaluation update. The 2020 SEIR measures remain feasible and mitigate potential Project impacts to biological resources to less-than-significant levels.

Please contact me if you have any questions.

Yours truly,

Mike Bower, M.S.
Botanist/Biologist

Attachment A. Updated Aerial Photograph of the Study Area
Attachment B. Updated Yolo HCP Land Cover Type Map
Attachment C. Updated Database Queries (USFWS, CNDDB, CNPS)
Attachment D. Plant and Wildlife Species Observed in the Study Area
Attachment E. CNDDB Query for Record Updates Between January 1, 2020 and October 4, 2021

Literature Cited

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Yolo Habitat Conservancy (YHC). April 2018. Yolo County Conservation Plan/ Natural Community Conservation Plan (Yolo HCP/NCCP) Volume 1, Final. Prepared by ICF International, Sacramento, CA.

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Attachment A.

Updated Aerial Photograph

Davis DISC Project
Yolo County, CA
30 July 2021

Aerial Photograph

Davis DISC Biological Study Area (DISC BSA; 156.74 ac)

Stormwater Capacity Biological Study Area (Stormwater BSA)

1,500 750 0 1,500 Feet

Scale: 1 inch = 1,500 feet

N

Aerial Photograph: 23 October 2020
Google Earth Imagery

Attachment B.

Updated Yolo HCP Land Cover Type Map

Land Cover Types (In DISC BSA)	Acreage
Field Crops	105.94
Deciduous Fruit/Nut	13.51
Semiagricultural/Incidental to Agriculture	16.77
Mace Drainage Channel	1.66
Urban or Built Up	8.36
Urban Ruderal	10.50
Total	**156.74**

Field Crops
Eucalyptus Grove
COUNTY ROAD 30
EB2
COUNTY ROAD 104A
Field Crops
Field Crops
Northern Sewer Alignment Alternative
Deciduous Fruit/Nut
SITE A
COUNTY ROAD 30B
Deciduous Fruit/Nut
Field Crops
SITE B
COVELL BLVD
COUNTY ROAD 104
Field Crops
Eastern Sewer Alignment Alternative
COUNTY ROAD 105
EB5
SITE C
EB1
Field Crops
Field Crops
Deciduous Fruit/Nut
Field Crops
Mace Drainage Channel
CEPA (4 plants)
FLOW
(to Yolo Bypass)
ALHAMBRA DR
Deciduous Fruit/Nut
Mace Drainage Channel
Urban or Built Up / Vegetated Corridor / Urban Ruderal
MACE BLVD
EB3
Eucalyptus Grove and New Agricultural Facility Constructed in 2020
Ikeda's Market
Field Crops
EB4
SITE D
SITE F
SECOND ST
COUNTY ROAD 32A
UNION PACIFIC RAILROAD (UPRR)
Urban Ruderal
SITE E
EB6
CEPA (87 plants)
CEPA (2 plants)
INTERSTATE 80
CHILES RD
Park & Ride
Urban or Built Up / Vegetated Corridor / Urban Ruderal

Davis DISC Project
Yolo County, CA
30 July 2021

Davis DISC Biological Study Area (DISC BSA; 156.74 ac)
500-foot Buffer
1,320-foot Buffer
Elderberry Shrub Location (EB)
Burrow Complex With Owl Occupancy
Parry's Rough Tarplant (*Centromadia parryi* ssp. *rudis* CNPS Rank 4.2)(CEPA)

Field Crops
Deciduous Fruit/Nut
Mace Drainage Channel
Semiagricultural/Incidental to Agriculture
Urban or Built Up
Urban Ruderal

800 400 0 800 Feet
Scale: 1 inch = 800 feet
N

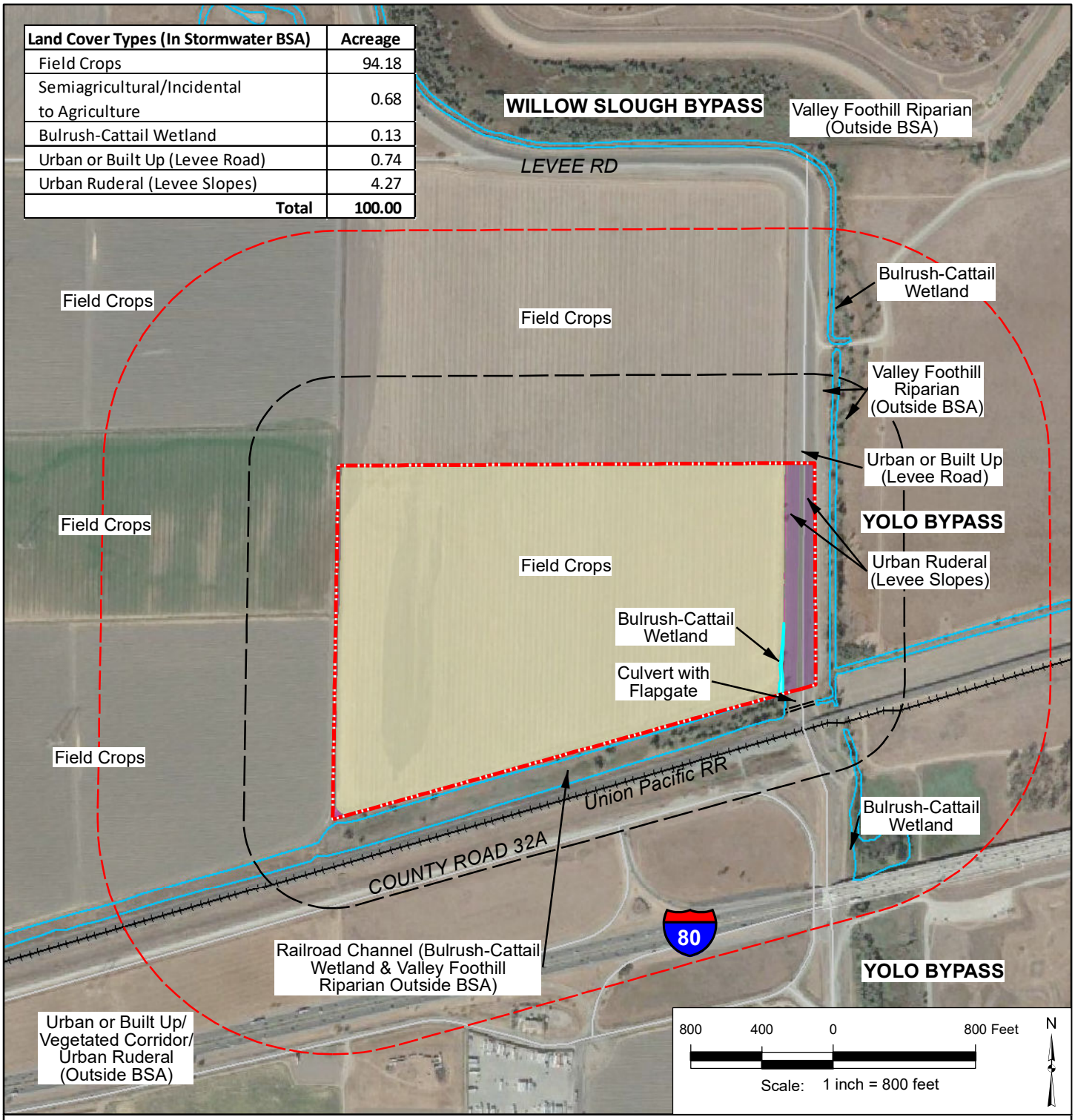
Aerial Photograph: 23 October 2020
Google Earth Imagery

Notes:
1) Occupied burrowing owl sites reflect protocol burrowing owl survey results in 2020. No additional occupied sites were detected during the July 2021 survey.
2) Parry's rough tarplant locations and plant counts reflect the greatest extent and number of plants recorded across surveys in September 2015, August 2020, and July 2021. No new populations of rare plants were observed during the July 2021 survey.

Biological Resources Map
Sheet 1 of 2

68328DavisDISC_Fig4BioresMap(11x17)_Sht1of2.mxd

Land Cover Types (In Stormwater BSA)	Acreage
Field Crops	94.18
Semiagricultural/Incidental to Agriculture	0.68
Bulrush-Cattail Wetland	0.13
Urban or Built Up (Levee Road)	0.74
Urban Ruderal (Levee Slopes)	4.27
Total	**100.00**



Davis DISC Project
Yolo County, CA
30 July 2021

Biological Resources Map
Sheet 2 of 2, Off-site
Stormwater Capacity Area

- Stormwater Capacity Biological Study Area (Stormwater BSA; 100 ac)
- 500-foot Buffer
- 1,320-foot Buffer
- Bulrush-Cattail Wetland
- Bulrush-Cattail Wetland (Outside Stormwater BSA)
- Field Crops
- Semiagricultural/Incidental to Agriculture
- Urban Ruderal
- Urban or Built Up

Aerial Photograph: 23 October 2020
Google Earth Imagery

Attachment C.

Updated Database Queries
(USFWS, CNDDB, CNPS)

IPaC **U.S. Fish & Wildlife Service**

IPaC resource list

This report is an automatically generated list of species and other resources such as critical habitat (collectively referred to as *trust resources*) under the U.S. Fish and Wildlife Service's (USFWS) jurisdiction that are known or expected to be on or near the project area referenced below. The list may also include trust resources that occur outside of the project area, but that could potentially be directly or indirectly affected by activities in the project area. However, determining the likelihood and extent of effects a project may have on trust resources typically requires gathering additional site-specific (e.g., vegetation/species surveys) and project-specific (e.g., magnitude and timing of proposed activities) information.

Below is a summary of the project information you provided and contact information for the USFWS office(s) with jurisdiction in the defined project area. Please read the introduction to each section that follows (Endangered Species, Migratory Birds, USFWS Facilities, and NWI Wetlands) for additional information applicable to the trust resources addressed in that section.

Location

Yolo County, California

Local office

Sacramento Fish And Wildlife Office

(916) 414-6600
(916) 414-6713

Federal Building
2800 Cottage Way, Room W-2605
Sacramento, CA 95825-1846

Endangered species

This resource list is for informational purposes only and does not constitute an analysis of project level impacts.

The primary information used to generate this list is the known or expected range of each species. Additional areas of influence (AOI) for species are also considered. An AOI includes areas outside of the species range if the species could be indirectly affected by activities in that area (e.g., placing a dam upstream of a fish population even if that fish does not occur at the dam site, may indirectly impact the species by reducing or eliminating water flow downstream). Because species can move, and site conditions can change, the species on this list are not guaranteed to be found on or near the project area. To fully determine any potential effects to species, additional site-specific and project-specific information is often required.

Section 7 of the Endangered Species Act **requires** Federal agencies to "request of the Secretary information whether any species which is listed or proposed to be listed may be present in the area of such proposed action" for any project that is conducted, permitted, funded, or licensed by any Federal agency. A letter from the local office and a species list which fulfills this requirement can **only** be obtained by requesting an official species list from either the Regulatory Review section in IPaC (see directions below) or from the local field office directly.

For project evaluations that require USFWS concurrence/review, please return to the IPaC website and request an official species list by doing the following:

1. Draw the project location and click CONTINUE.
2. Click DEFINE PROJECT.
3. Log in (if directed to do so).
4. Provide a name and description for your project.
5. Click REQUEST SPECIES LIST.

Listed species[1] and their critical habitats are managed by the Ecological Services Program of the U.S. Fish and Wildlife Service (USFWS) and the fisheries division of the National Oceanic and Atmospheric Administration (NOAA Fisheries[2]).

Species and critical habitats under the sole responsibility of NOAA Fisheries are **not** shown on this list. Please contact NOAA Fisheries for species under their jurisdiction.

1. Species listed under the Endangered Species Act are threatened or endangered; IPaC also shows species that are candidates, or proposed, for listing. See the listing status page for more information. IPaC only shows species that are regulated by USFWS (see FAQ).
2. NOAA Fisheries, also known as the National Marine Fisheries Service (NMFS), is an office of the National Oceanic and Atmospheric Administration within the Department of Commerce.

The following species are potentially affected by activities in this location:

Birds

NAME	STATUS

Western Snowy Plover Charadrius nivosus nivosus — Threatened

There is **final** critical habitat for this species. The location of the critical habitat is not available.
https://ecos.fws.gov/ecp/species/8035

Reptiles

NAME	STATUS

Giant Garter Snake Thamnophis gigas — Threatened

Wherever found

No critical habitat has been designated for this species.
https://ecos.fws.gov/ecp/species/4482

Amphibians

NAME	STATUS

California Red-legged Frog Rana draytonii — Threatened

Wherever found

There is **final** critical habitat for this species. The location of the critical habitat is not available.
https://ecos.fws.gov/ecp/species/2891

California Tiger Salamander Ambystoma californiense — Threatened

There is **final** critical habitat for this species. The location of the critical habitat is not available.
https://ecos.fws.gov/ecp/species/2076

Fishes

NAME	STATUS

Delta Smelt Hypomesus transpacificus — Threatened

Wherever found

There is **final** critical habitat for this species. The location of the critical habitat is not available.
https://ecos.fws.gov/ecp/species/321

Insects

NAME	STATUS

Valley Elderberry Longhorn Beetle Desmocerus californicus dimorphus — Threatened

Wherever found

There is **final** critical habitat for this species. The location of the critical habitat is not available.
https://ecos.fws.gov/ecp/species/7850

Crustaceans

NAME	STATUS
Conservancy Fairy Shrimp Branchinecta conservatio Wherever found There is **final** critical habitat for this species. The location of the critical habitat is not available. https://ecos.fws.gov/ecp/species/8246	Endangered
Vernal Pool Fairy Shrimp Branchinecta lynchi Wherever found There is **final** critical habitat for this species. The location of the critical habitat is not available. https://ecos.fws.gov/ecp/species/498	Threatened
Vernal Pool Tadpole Shrimp Lepidurus packardi Wherever found There is **final** critical habitat for this species. The location of the critical habitat is not available. https://ecos.fws.gov/ecp/species/2246	Endangered

Critical habitats

Potential effects to critical habitat(s) in this location must be analyzed along with the endangered species themselves.

THERE ARE NO CRITICAL HABITATS AT THIS LOCATION.

Migratory birds

Certain birds are protected under the Migratory Bird Treaty Act[1] and the Bald and Golden Eagle Protection Act[2].

Any person or organization who plans or conducts activities that may result in impacts to migratory birds, eagles, and their habitats should follow appropriate regulations and consider implementing appropriate conservation measures, as described below.

1. The Migratory Birds Treaty Act of 1918.
2. The Bald and Golden Eagle Protection Act of 1940.

Additional information can be found using the following links:

- Birds of Conservation Concern http://www.fws.gov/birds/management/managed-species/birds-of-conservation-concern.php
- Measures for avoiding and minimizing impacts to birds http://www.fws.gov/birds/management/project-assessment-tools-and-guidance/

conservation-measures.php

- Nationwide conservation measures for birds http://www.fws.gov/migratorybirds/pdf/management/nationwidestandardconservationmeasures.pdf

The birds listed below are birds of particular concern either because they occur on the USFWS Birds of Conservation Concern (BCC) list or warrant special attention in your project location. To learn more about the levels of concern for birds on your list and how this list is generated, see the FAQ below. This is not a list of every bird you may find in this location, nor a guarantee that every bird on this list will be found in your project area. To see exact locations of where birders and the general public have sighted birds in and around your project area, visit the E-bird data mapping tool (Tip: enter your location, desired date range and a species on your list). For projects that occur off the Atlantic Coast, additional maps and models detailing the relative occurrence and abundance of bird species on your list are available. Links to additional information about Atlantic Coast birds, and other important information about your migratory bird list, including how to properly interpret and use your migratory bird report, can be found below.

For guidance on when to schedule activities or implement avoidance and minimization measures to reduce impacts to migratory birds on your list, click on the PROBABILITY OF PRESENCE SUMMARY at the top of your list to see when these birds are most likely to be present and breeding in your project area.

NAME	BREEDING SEASON (IF A BREEDING SEASON IS INDICATED FOR A BIRD ON YOUR LIST, THE BIRD MAY BREED IN YOUR PROJECT AREA SOMETIME WITHIN THE TIMEFRAME SPECIFIED, WHICH IS A VERY LIBERAL ESTIMATE OF THE DATES INSIDE WHICH THE BIRD BREEDS ACROSS ITS ENTIRE RANGE. "BREEDS ELSEWHERE" INDICATES THAT THE BIRD DOES NOT LIKELY BREED IN YOUR PROJECT AREA.)
Bald Eagle *Haliaeetus leucocephalus* This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the Eagle Act or for potential susceptibilities in offshore areas from certain types of development or activities. https://ecos.fws.gov/ecp/species/1626	Breeds Jan 1 to Aug 31
Burrowing Owl *Athene cunicularia* This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA https://ecos.fws.gov/ecp/species/9737	Breeds Mar 15 to Aug 31

Clark's Grebe Aechmophorus clarkii — Breeds Jan 1 to Dec 31
This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.

Common Yellowthroat Geothlypis trichas sinuosa — Breeds May 20 to Jul 31
This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA
https://ecos.fws.gov/ecp/species/2084

Costa's Hummingbird Calypte costae — Breeds Jan 15 to Jun 10
This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA
https://ecos.fws.gov/ecp/species/9470

Golden Eagle Aquila chrysaetos — Breeds Jan 1 to Aug 31
This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the Eagle Act or for potential susceptibilities in offshore areas from certain types of development or activities.
https://ecos.fws.gov/ecp/species/1680

Lawrence's Goldfinch Carduelis lawrencei — Breeds Mar 20 to Sep 20
This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.
https://ecos.fws.gov/ecp/species/9464

Lewis's Woodpecker Melanerpes lewis — Breeds Apr 20 to Sep 30
This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.
https://ecos.fws.gov/ecp/species/9408

Long-billed Curlew Numenius americanus — Breeds elsewhere
This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.
https://ecos.fws.gov/ecp/species/5511

Marbled Godwit Limosa fedoa — Breeds elsewhere
This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.
https://ecos.fws.gov/ecp/species/9481

Nuttall's Woodpecker Picoides nuttallii — Breeds Apr 1 to Jul 20
This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA
https://ecos.fws.gov/ecp/species/9410

Oak Titmouse Baeolophus inornatus — Breeds Mar 15 to Jul 15
This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.
https://ecos.fws.gov/ecp/species/9656

Rufous Hummingbird selasphorus rufus — Breeds elsewhere
This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.
https://ecos.fws.gov/ecp/species/8002

Short-billed Dowitcher Limnodromus griseus — Breeds elsewhere
This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.
https://ecos.fws.gov/ecp/species/9480

Song Sparrow Melospiza melodia — Breeds Feb 20 to Sep 5
This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA

Spotted Towhee Pipilo maculatus clementae — Breeds Apr 15 to Jul 20
This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA
https://ecos.fws.gov/ecp/species/4243

Tricolored Blackbird Agelaius tricolor — Breeds Mar 15 to Aug 10
This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.
https://ecos.fws.gov/ecp/species/3910

Whimbrel Numenius phaeopus — Breeds elsewhere
This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.
https://ecos.fws.gov/ecp/species/9483

Willet Tringa semipalmata — Breeds elsewhere
This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.

Wrentit Chamaea fasciata — Breeds Mar 15 to Aug 10
This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.

Yellow-billed Magpie Pica nuttalli — Breeds Apr 1 to Jul 31
This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.
https://ecos.fws.gov/ecp/species/9726

Probability of Presence Summary

The graphs below provide our best understanding of when birds of concern are most likely to be present in your project area. This information can be used to tailor and schedule your project activities to avoid or minimize impacts to birds. Please make sure you read and understand the FAQ "Proper Interpretation and Use of Your Migratory Bird Report" before using or attempting to interpret this report.

Probability of Presence (■)

Each green bar represents the bird's relative probability of presence in the 10km grid cell(s) your project overlaps during a particular week of the year. (A year is represented as 12 4-week months.) A taller bar indicates a higher probability of species presence. The survey effort (see below) can be used to establish a level of confidence in the presence score. One can have higher confidence in the presence score if the corresponding survey effort is also high.

How is the probability of presence score calculated? The calculation is done in three steps:

1. The probability of presence for each week is calculated as the number of survey events in the week where the species was detected divided by the total number of survey events for that week. For example, if in week 12 there were 20 survey events and the Spotted Towhee was found in 5 of them, the probability of presence of the Spotted Towhee in week 12 is 0.25.
2. To properly present the pattern of presence across the year, the relative probability of presence is calculated. This is the probability of presence divided by the maximum probability of presence across all weeks. For example, imagine the probability of presence in week 20 for the Spotted Towhee is 0.05, and that the probability of presence at week 12 (0.25) is the maximum of any week of the year. The relative probability of presence on week 12 is 0.25/0.25 = 1; at week 20 it is 0.05/0.25 = 0.2.
3. The relative probability of presence calculated in the previous step undergoes a statistical conversion so that all possible values fall between 0 and 10, inclusive. This is the probability of presence score.

To see a bar's probability of presence score, simply hover your mouse cursor over the bar.

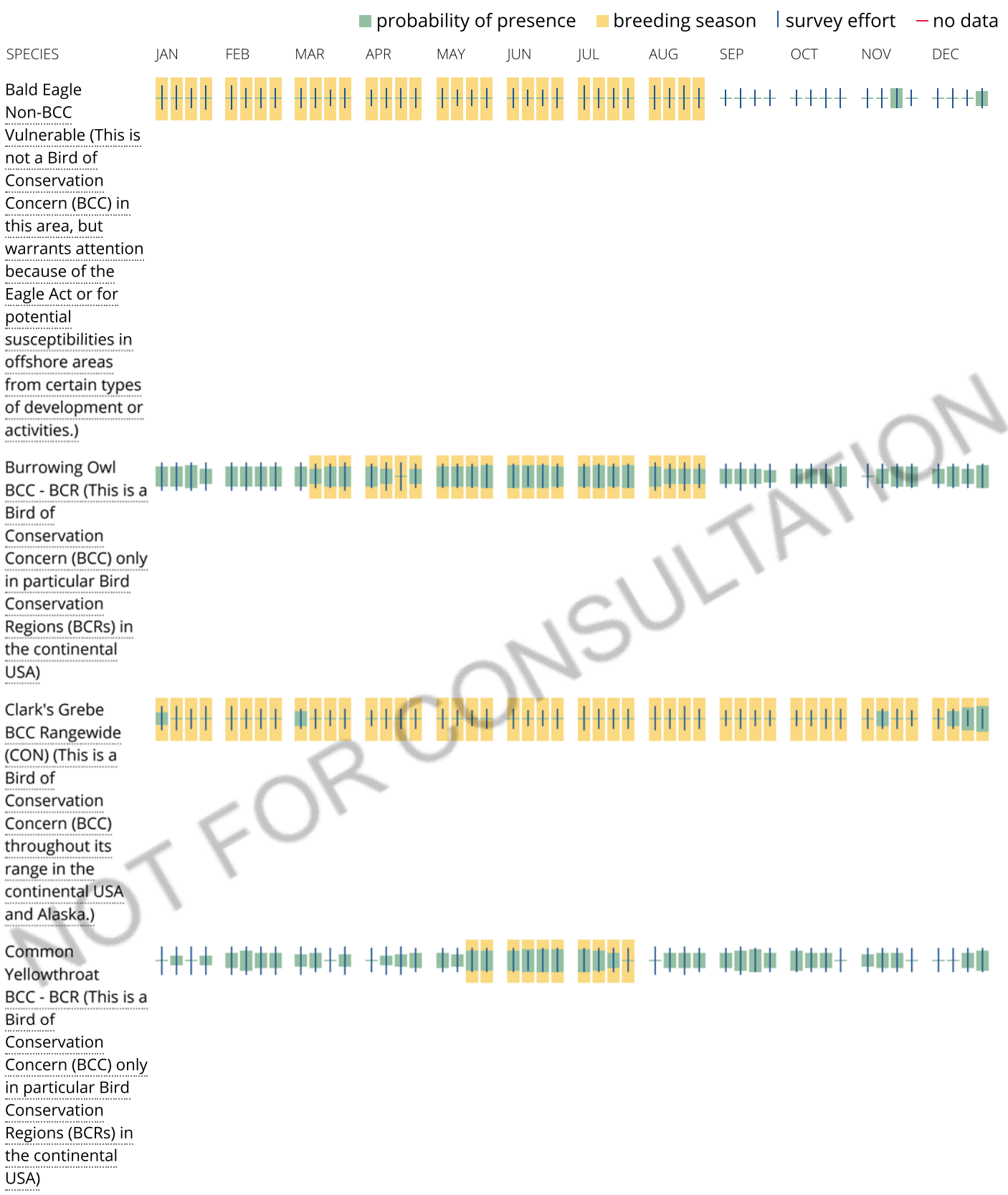
Breeding Season (■)
Yellow bars denote a very liberal estimate of the time-frame inside which the bird breeds across its entire range. If there are no yellow bars shown for a bird, it does not breed in your project area.

Survey Effort (|)
Vertical black lines superimposed on probability of presence bars indicate the number of surveys performed for that species in the 10km grid cell(s) your project area overlaps. The number of surveys is expressed as a range, for example, 33 to 64 surveys.

To see a bar's survey effort range, simply hover your mouse cursor over the bar.

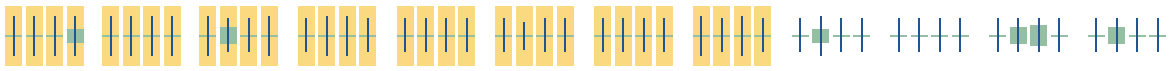
No Data (–)
A week is marked as having no data if there were no survey events for that week.

Survey Timeframe
Surveys from only the last 10 years are used in order to ensure delivery of currently relevant information. The exception to this is areas off the Atlantic coast, where bird returns are based on all years of available data, since data in these areas is currently much more sparse.



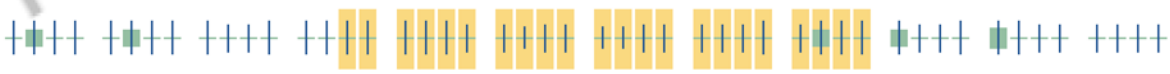
Costa's Hummingbird BCC - BCR (This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA)

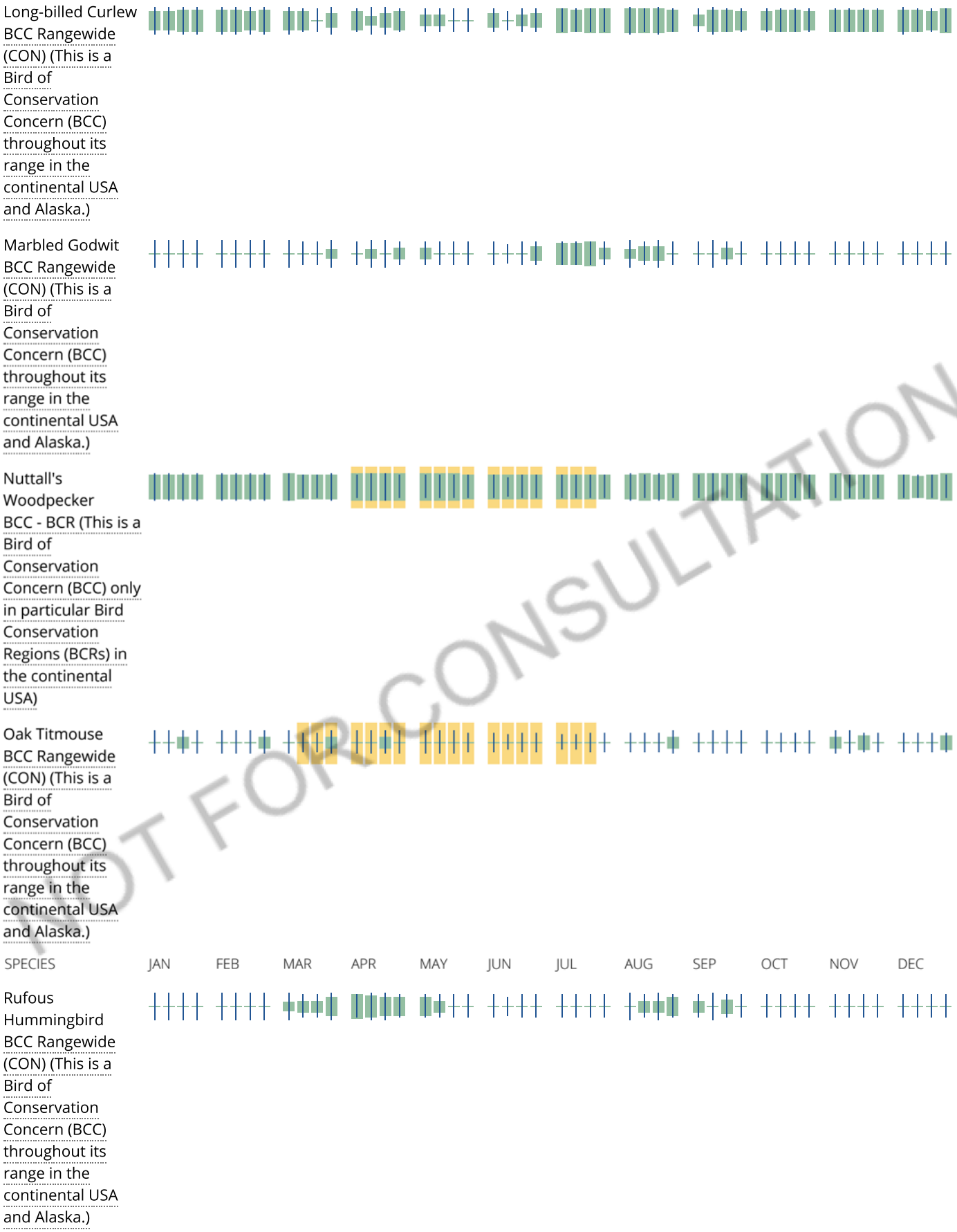
Golden Eagle Non-BCC Vulnerable (This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the Eagle Act or for potential susceptibilities in offshore areas from certain types of development or activities.)



Lawrence's Goldfinch BCC Rangewide (CON) (This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.)

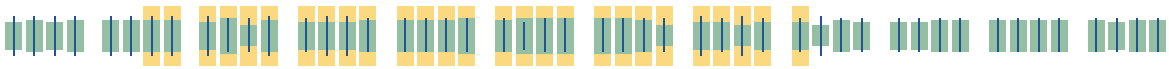
Lewis's Woodpecker BCC Rangewide (CON) (This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.)





Short-billed Dowitcher BCC Rangewide (CON) (This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.)

Song Sparrow BCC - BCR (This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA)



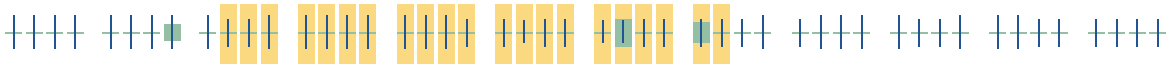
Spotted Towhee BCC - BCR (This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA)

Tricolored Blackbird BCC Rangewide (CON) (This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.)

Whimbrel BCC Rangewide (CON) (This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.)

Willet
BCC Rangewide (CON) (This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.)

Wrentit
BCC Rangewide (CON) (This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.)



Yellow-billed Magpie
BCC Rangewide (CON) (This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.)

Tell me more about conservation measures I can implement to avoid or minimize impacts to migratory birds.

Nationwide Conservation Measures describes measures that can help avoid and minimize impacts to all birds at any location year round. Implementation of these measures is particularly important when birds are most likely to occur in the project area. When birds may be breeding in the area, identifying the locations of any active nests and avoiding their destruction is a very helpful impact minimization measure. To see when birds are most likely to occur and be breeding in your project area, view the Probability of Presence Summary. Additional measures or permits may be advisable depending on the type of activity you are conducting and the type of infrastructure or bird species present on your project site.

What does IPaC use to generate the migratory birds potentially occurring in my specified location?

The Migratory Bird Resource List is comprised of USFWS Birds of Conservation Concern (BCC) and other species that may warrant special attention in your project location.

The migratory bird list generated for your project is derived from data provided by the Avian Knowledge Network (AKN). The AKN data is based on a growing collection of survey, banding, and citizen science datasets and is queried and filtered to return a list of those birds reported as occurring in the 10km grid cell(s) which your project intersects, and that have been identified as warranting special attention because they are a BCC species in that area, an eagle (Eagle Act requirements may apply), or a species that has a particular vulnerability to offshore activities or development.

Again, the Migratory Bird Resource list includes only a subset of birds that may occur in your project area. It is not representative of all birds that may occur in your project area. To get a list of all birds potentially present in your project area, please visit the AKN Phenology Tool.

What does IPaC use to generate the probability of presence graphs for the migratory birds potentially occurring in my specified location?

The probability of presence graphs associated with your migratory bird list are based on data provided by the Avian Knowledge Network (AKN). This data is derived from a growing collection of survey, banding, and citizen science datasets .

Probability of presence data is continuously being updated as new and better information becomes available. To learn more about how the probability of presence graphs are produced and how to interpret them, go the Probability of Presence Summary and then click on the "Tell me about these graphs" link.

How do I know if a bird is breeding, wintering, migrating or present year-round in my project area?

To see what part of a particular bird's range your project area falls within (i.e. breeding, wintering, migrating or year-round), you may refer to the following resources: The Cornell Lab of Ornithology All About Birds Bird Guide, or (if you are unsuccessful in locating the bird of interest there), the Cornell Lab of Ornithology Neotropical Birds guide. If a bird on your migratory bird species list has a breeding season associated with it, if that bird does occur in your project area, there may be nests present at some point within the timeframe specified. If "Breeds elsewhere" is indicated, then the bird likely does not breed in your project area.

What are the levels of concern for migratory birds?

Migratory birds delivered through IPaC fall into the following distinct categories of concern:

1. "BCC Rangewide" birds are Birds of Conservation Concern (BCC) that are of concern throughout their range anywhere within the USA (including Hawaii, the Pacific Islands, Puerto Rico, and the Virgin Islands);
2. "BCC - BCR" birds are BCCs that are of concern only in particular Bird Conservation Regions (BCRs) in the continental USA; and
3. "Non-BCC - Vulnerable" birds are not BCC species in your project area, but appear on your list either because of the Eagle Act requirements (for eagles) or (for non-eagles) potential susceptibilities in offshore areas from certain types of development or activities (e.g. offshore energy development or longline fishing).

Although it is important to try to avoid and minimize impacts to all birds, efforts should be made, in particular, to avoid and minimize impacts to the birds on this list, especially eagles and BCC species of rangewide concern. For more information on conservation measures you can implement to help avoid and minimize migratory bird impacts and requirements for eagles, please see the FAQs for these topics.

Details about birds that are potentially affected by offshore projects

For additional details about the relative occurrence and abundance of both individual bird species and groups of bird species within your project area off the Atlantic Coast, please visit the Northeast Ocean Data Portal. The Portal also offers data and information about other taxa besides birds that may be helpful to you in your project review. Alternately, you may download the bird model results files underlying the portal maps through the NOAA NCCOS Integrative Statistical Modeling and Predictive Mapping of Marine Bird Distributions and Abundance on the Atlantic Outer Continental Shelf project webpage.

Bird tracking data can also provide additional details about occurrence and habitat use throughout the year, including migration. Models relying on survey data may not include this information. For additional information on marine bird tracking data, see the Diving Bird Study and the nanotag studies or contact Caleb Spiegel or Pam Loring.

What if I have eagles on my list?

If your project has the potential to disturb or kill eagles, you may need to obtain a permit to avoid violating the Eagle Act should such impacts occur.

Proper Interpretation and Use of Your Migratory Bird Report

The migratory bird list generated is not a list of all birds in your project area, only a subset of birds of priority concern. To learn more about how your list is generated, and see options for identifying what other birds may be in your project area, please see the FAQ "What does IPaC use to generate the migratory birds potentially occurring in my specified location". Please be aware this report provides the "probability of presence" of birds within the 10 km grid cell(s) that overlap your project; not your exact project footprint. On the graphs provided, please also look carefully at the survey effort (indicated by the black vertical bar) and for the existence of the "no data" indicator (a red horizontal bar). A high survey effort is the key component. If the survey effort is high, then the probability of presence score can be viewed as more dependable. In contrast, a low survey effort bar or no data bar means a lack of data and, therefore, a lack of certainty about presence of the species. This list is not perfect; it is simply a starting point for identifying what birds of concern have the potential to be in your project area, when they might be there, and if they might be breeding (which means nests might be present). The list helps you know what to look for to confirm presence, and helps guide you in knowing when to implement conservation measures to avoid or minimize potential impacts from your project activities, should presence be confirmed. To learn more about conservation measures, visit the FAQ "Tell me about conservation measures I can implement to avoid or minimize impacts to migratory birds" at the bottom of your migratory bird trust resources page.

Facilities

Wildlife refuges and fish hatcheries

REFUGE AND FISH HATCHERY INFORMATION IS NOT AVAILABLE AT THIS TIME

Wetlands in the National Wetlands Inventory

Impacts to NWI wetlands and other aquatic habitats may be subject to regulation under Section 404 of the Clean Water Act, or other State/Federal statutes.

For more information please contact the Regulatory Program of the local U.S. Army Corps of Engineers District.

Please note that the NWI data being shown may be out of date. We are currently working to update our NWI data set. We recommend you verify these results with a site visit to determine the actual extent of wetlands on site.

This location overlaps the following wetlands:

FRESHWATER EMERGENT WETLAND

PEM1C

A full description for each wetland code can be found at the National Wetlands Inventory website

Data limitations

The Service's objective of mapping wetlands and deepwater habitats is to produce reconnaissance level information on the location, type and size of these resources. The maps are prepared from the analysis of high altitude imagery. Wetlands are identified based on vegetation, visible hydrology and geography. A margin of error

is inherent in the use of imagery; thus, detailed on-the-ground inspection of any particular site may result in revision of the wetland boundaries or classification established through image analysis.

The accuracy of image interpretation depends on the quality of the imagery, the experience of the image analysts, the amount and quality of the collateral data and the amount of ground truth verification work conducted. Metadata should be consulted to determine the date of the source imagery used and any mapping problems.

Wetlands or other mapped features may have changed since the date of the imagery or field work. There may be occasional differences in polygon boundaries or classifications between the information depicted on the map and the actual conditions on site.

Data exclusions

Certain wetland habitats are excluded from the National mapping program because of the limitations of aerial imagery as the primary data source used to detect wetlands. These habitats include seagrasses or submerged aquatic vegetation that are found in the intertidal and subtidal zones of estuaries and nearshore coastal waters. Some deepwater reef communities (coral or tuberficid worm reefs) have also been excluded from the inventory. These habitats, because of their depth, go undetected by aerial imagery.

Data precautions

Federal, state, and local regulatory agencies with jurisdiction over wetlands may define and describe wetlands in a different manner than that used in this inventory. There is no attempt, in either the design or products of this inventory, to define the limits of proprietary jurisdiction of any Federal, state, or local government or to establish the geographical scope of the regulatory programs of government agencies. Persons intending to engage in activities involving modifications within or adjacent to wetland areas should seek the advice of appropriate federal, state, or local agencies concerning specified agency regulatory programs and proprietary jurisdictions that may affect such activities.

Selected Elements by Scientific Name

California Department of Fish and Wildlife

California Natural Diversity Database

Query Criteria: Quad IS (Davis (3812156) OR Merritt (3812157) OR Woodland (3812167) OR Grays Bend (3812166) OR Taylor Monument (3812165) OR Sacramento West (3812155) OR Clarksburg (3812145) OR Saxon (3812146) OR Dixon (3812147))

Species	Element Code	Federal Status	State Status	Global Rank	State Rank	Rare Plant Rank/CDFW SSC or FP
Agelaius tricolor tricolored blackbird	ABPBXB0020	None	Threatened	G1G2	S1S2	SSC
Ambystoma californiense pop. 1 California tiger salamander - central California DPS	AAAAA01181	Threatened	Threatened	G2G3	S2S3	WL
Ammodramus savannarum grasshopper sparrow	ABPBXA0020	None	None	G5	S3	SSC
Antrozous pallidus pallid bat	AMACC10010	None	None	G4	S3	SSC
Archoplites interruptus Sacramento perch	AFCQB07010	None	None	G2G3	S1	SSC
Ardea alba great egret	ABNGA04040	None	None	G5	S4	
Ardea herodias great blue heron	ABNGA04010	None	None	G5	S4	
Astragalus tener var. ferrisiae Ferris' milk-vetch	PDFAB0F8R3	None	None	G2T1	S1	1B.1
Astragalus tener var. tener alkali milk-vetch	PDFAB0F8R1	None	None	G2T1	S1	1B.2
Athene cunicularia burrowing owl	ABNSB10010	None	None	G4	S3	SSC
Atriplex cordulata var. cordulata heartscale	PDCHE040B0	None	None	G3T2	S2	1B.2
Atriplex depressa brittlescale	PDCHE042L0	None	None	G2	S2	1B.2
Bombus crotchii Crotch bumble bee	IIHYM24480	None	Candidate Endangered	G3G4	S1S2	
Bombus occidentalis western bumble bee	IIHYM24250	None	Candidate Endangered	G2G3	S1	
Branchinecta conservatio Conservancy fairy shrimp	ICBRA03010	Endangered	None	G2	S2	
Branchinecta lynchi vernal pool fairy shrimp	ICBRA03030	Threatened	None	G3	S3	
Branchinecta mesovallensis midvalley fairy shrimp	ICBRA03150	None	None	G2	S2S3	
Buteo swainsoni Swainson's hawk	ABNKC19070	None	Threatened	G5	S3	
Carex comosa bristly sedge	PMCYP032Y0	None	None	G5	S2	2B.1

Species	Element Code	Federal Status	State Status	Global Rank	State Rank	Rare Plant Rank/CDFW SSC or FP
Centromadia parryi ssp. parryi pappose tarplant	PDAST4R0P2	None	None	G3T2	S2	1B.2
Charadrius montanus mountain plover	ABNNB03100	None	None	G3	S2S3	SSC
Charadrius nivosus nivosus western snowy plover	ABNNB03031	Threatened	None	G3T3	S2	SSC
Chloropyron palmatum palmate-bracted bird's-beak	PDSCR0J0J0	Endangered	Endangered	G1	S1	1B.1
Cicindela hirticollis abrupta Sacramento Valley tiger beetle	IICOL02106	None	None	G5TH	SH	
Circus hudsonius northern harrier	ABNKC11011	None	None	G5	S3	SSC
Coccyzus americanus occidentalis western yellow-billed cuckoo	ABNRB02022	Threatened	Endangered	G5T2T3	S1	
Desmocerus californicus dimorphus valley elderberry longhorn beetle	IICOL48011	Threatened	None	G3T2	S3	
Egretta thula snowy egret	ABNGA06030	None	None	G5	S4	
Elanus leucurus white-tailed kite	ABNKC06010	None	None	G5	S3S4	FP
Elderberry Savanna Elderberry Savanna	CTT63440CA	None	None	G2	S2.1	
Emys marmorata western pond turtle	ARAAD02030	None	None	G3G4	S3	SSC
Eryngium jepsonii Jepson's coyote-thistle	PDAPI0Z130	None	None	G2	S2	1B.2
Extriplex joaquinana San Joaquin spearscale	PDCHE041F3	None	None	G2	S2	1B.2
Falco columbarius merlin	ABNKD06030	None	None	G5	S3S4	WL
Fritillaria pluriflora adobe-lily	PMLIL0V0F0	None	None	G2G3	S2S3	1B.2
Gonidea angulata western ridged mussel	IMBIV19010	None	None	G3	S1S2	
Great Valley Cottonwood Riparian Forest Great Valley Cottonwood Riparian Forest	CTT61410CA	None	None	G2	S2.1	
Hibiscus lasiocarpos var. occidentalis woolly rose-mallow	PDMAL0H0R3	None	None	G5T3	S3	1B.2
Hypomesus transpacificus Delta smelt	AFCHB01040	Threatened	Endangered	G1	S1	
Lasionycteris noctivagans silver-haired bat	AMACC02010	None	None	G3G4	S3S4	

Species	Element Code	Federal Status	State Status	Global Rank	State Rank	Rare Plant Rank/CDFW SSC or FP
Lasiurus cinereus hoary bat	AMACC05030	None	None	G3G4	S4	
Laterallus jamaicensis coturniculus California black rail	ABNME03041	None	Threatened	G3G4T1	S1	FP
Lepidium latipes var. heckardii Heckard's pepper-grass	PDBRA1M0K1	None	None	G4T1	S1	1B.2
Lepidurus packardi vernal pool tadpole shrimp	ICBRA10010	Endangered	None	G4	S3S4	
Lilaeopsis masonii Mason's lilaeopsis	PDAPI19030	None	Rare	G2	S2	1B.1
Linderiella occidentalis California linderiella	ICBRA06010	None	None	G2G3	S2S3	
Melospiza melodia song sparrow ("Modesto" population)	ABPBXA3010	None	None	G5	S3?	SSC
Myrmosula pacifica Antioch multilid wasp	IIHYM15010	None	None	GH	SH	
Navarretia leucocephala ssp. bakeri Baker's navarretia	PDPLM0C0E1	None	None	G4T2	S2	1B.1
Neostapfia colusana Colusa grass	PMPOA4C010	Threatened	Endangered	G1	S1	1B.1
Nycticorax nycticorax black-crowned night heron	ABNGA11010	None	None	G5	S4	
Oncorhynchus mykiss irideus pop. 11 steelhead - Central Valley DPS	AFCHA0209K	Threatened	None	G5T2Q	S2	
Oncorhynchus tshawytscha pop. 11 chinook salmon - Central Valley spring-run ESU	AFCHA0205L	Threatened	Threatened	G5T1T2Q	S2	
Oncorhynchus tshawytscha pop. 7 chinook salmon - Sacramento River winter-run ESU	AFCHA0205B	Endangered	Endangered	G5T1Q	S1	
Plagiobothrys hystriculus bearded popcornflower	PDBOR0V0H0	None	None	G2	S2	1B.1
Plegadis chihi white-faced ibis	ABNGE02020	None	None	G5	S3S4	WL
Pogonichthys macrolepidotus Sacramento splittail	AFCJB34020	None	None	GNR	S3	SSC
Progne subis purple martin	ABPAU01010	None	None	G5	S3	SSC
Puccinellia simplex California alkali grass	PMPOA53110	None	None	G3	S2	1B.2
Sidalcea keckii Keck's checkerbloom	PDMAL110D0	Endangered	None	G2	S2	1B.1
Spea hammondii western spadefoot	AAABF02020	None	None	G2G3	S3	SSC

Species	Element Code	Federal Status	State Status	Global Rank	State Rank	Rare Plant Rank/CDFW SSC or FP
Spirinchus thaleichthys longfin smelt	AFCHB03010	Candidate	Threatened	G5	S1	
Symphyotrichum lentum Suisun Marsh aster	PDASTE8470	None	None	G2	S2	1B.2
Taxidea taxus American badger	AMAJF04010	None	None	G5	S3	SSC
Thamnophis gigas giant gartersnake	ARADB36150	Threatened	Threatened	G2	S2	
Trifolium hydrophilum saline clover	PDFAB400R5	None	None	G2	S2	1B.2
Tuctoria mucronata Crampton's tuctoria or Solano grass	PMPOA6N020	Endangered	Endangered	G1	S1	1B.1
Valley Oak Woodland Valley Oak Woodland	CTT71130CA	None	None	G3	S2.1	
Vireo bellii pusillus least Bell's vireo	ABPBW01114	Endangered	Endangered	G5T2	S2	
Xanthocephalus xanthocephalus yellow-headed blackbird	ABPBXB3010	None	None	G5	S3	SSC

Record Count: 70

Search Results

Back Export Results

28 matches found. Click on scientific name for details

Search Criteria: CRPR is one of [**1A,1B,2A,2B,3,4**], Quad is one of [**3812156,3812157,3812147,3812146,3812145,3812155,3812165,3812166,3812167**]

Scientific Name | Common Name | Family | Lifeform | Blooming Period | Fed List | State List | Global Rank | State Rank | CA Rare Plant Rank | General Habitats | Micro Habitats | Lowest Elevation | Highest Elevation | CA Endemic | Date Added | Photo

Search:

▲ SCIENTIFIC NAME	COMMON NAME	FAMILY	LIFEFORM	BLOOMING PERIOD	FED LIST	STATE LIST	GLOBAL RANK	STATE RANK	CA RARE PLANT RANK	PHOTO
Astragalus pauperculus	depauperate milk-vetch	Fabaceae	annual herb	Mar-Jun	None	None	G4	S4	4.3	No Photo Available
Astragalus tener var. *ferrisiae*	Ferris' milk-vetch	Fabaceae	annual herb	Apr-May	None	None	G2T1	S1	1B.1	No Photo Available
Astragalus tener var. *tener*	alkali milk-vetch	Fabaceae	annual herb	Mar-Jun	None	None	G2T1	S1	1B.2	No Photo Available
Atriplex cordulata var. *cordulata*	heartscale	Chenopodiaceae	annual herb	Apr-Oct	None	None	G3T2	S2	1B.2	No Photo Available
Atriplex depressa	brittlescale	Chenopodiaceae	annual herb	Apr-Oct	None	None	G2	S2	1B.2	No Photo Available
Carex comosa	bristly sedge	Cyperaceae	perennial rhizomatous herb	May-Sep	None	None	G5	S2	2B.1	 Dean Wm. Taylor 1997
Centromadia parryi ssp. *parryi*	pappose tarplant	Asteraceae	annual herb	May-Nov	None	None	G3T2	S2	1B.2	No Photo Available
Centromadia parryi ssp. *rudis*	Parry's rough tarplant	Asteraceae	annual herb	May-Oct	None	None	G3T3	S3	4.2	No Photo Available
Chloropyron palmatum	palmate-bracted bird's-beak	Orobanchaceae	annual herb (hemiparasitic)	May-Oct	FE	CE	G1	S1	1B.1	No Photo Available
Eryngium jepsonii	Jepson's coyote-	Apiaceae	perennial herb	Apr-Aug	None	None	G2	S2	1B.2	

▲ SCIENTIFIC NAME	COMMON NAME	FAMILY	LIFEFORM	BLOOMING PERIOD	FED LIST	STATE LIST	GLOBAL RANK	STATE RANK	CA RARE PLANT RANK	PHOTO
Eryngium jepsonii	Jepson's coyote thistle	Apiaceae	perennial herb	Apr-Aug	None	None	G2	S2	1B.2	No Photo Available
Extriplex joaquinana	San Joaquin spearscale	Chenopodiaceae	annual herb	Apr-Oct	None	None	G2	S2	1B.2	No Photo Available
Fritillaria agrestis	stinkbells	Liliaceae	perennial bulbiferous herb	Mar-Jun	None	None	G3	S3	4.2	No Photo Available
Fritillaria pluriflora	adobe-lily	Liliaceae	perennial bulbiferous herb	Feb-Apr	None	None	G2G3	S2S3	1B.2	No Photo Available
Hesperevax caulescens	hogwallow starfish	Asteraceae	annual herb	Mar-Jun	None	None	G3	S3	4.2	No Photo Available
Hibiscus lasiocarpos var. *occidentalis*	woolly rose-mallow	Malvaceae	perennial rhizomatous herb (emergent)	Jun-Sep	None	None	G5T3	S3	1B.2	No Photo Available
Lepidium latipes var. *heckardii*	Heckard's pepper-grass	Brassicaceae	annual herb	Mar-May	None	None	G4T1	S1	1B.2	No Photo Available
Lessingia hololeuca	woolly-headed lessingia	Asteraceae	annual herb	Jun-Oct	None	None	G2G3	S2S3	3	No Photo Available
Lilaeopsis masonii	Mason's lilaeopsis	Apiaceae	perennial rhizomatous herb	Apr-Nov	None	CR	G2	S2	1B.1	No Photo Available
Myosurus minimus ssp. *apus*	little mousetail	Ranunculaceae	annual herb	Mar-Jun	None	None	G5T2Q	S2	3.1	No Photo Available
Navarretia cotulifolia	cotula navarretia	Polemoniaceae	annual herb	May-Jun	None	None	G4	S4	4.2	No Photo Available
Navarretia leucocephala ssp. *bakeri*	Baker's navarretia	Polemoniaceae	annual herb	Apr-Jul	None	None	G4T2	S2	1B.1	No Photo Available
Neostapfia colusana	Colusa grass	Poaceae	annual herb	May-Aug	FT	CE	G1	S1	1B.1	No Photo Available
Plagiobothrys hystriculus	bearded popcornflower	Boraginaceae	annual herb	Apr-May	None	None	G2	S2	1B.1	No Photo Available
Puccinellia simplex	California alkali grass	Poaceae	annual herb	Mar-May	None	None	G3	S2	1B.2	No Photo Available
Sidalcea keckii	Keck's checkerbloom	Malvaceae	annual herb	Apr-May(Jun)	FE	None	G2	S2	1B.1	No Photo Available

▲ SCIENTIFIC NAME	COMMON NAME	FAMILY	LIFEFORM	BLOOMING PERIOD	FED LIST	STATE LIST	GLOBAL RANK	STATE RANK	CA RARE PLANT RANK	PHOTO
Symphyotrichum lentum	Suisun Marsh aster	Asteraceae	perennial rhizomatous herb	(Apr)May-Nov	None	None	G2	S2	1B.2	No Photo Available
Trifolium hydrophilum	saline clover	Fabaceae	annual herb	Apr-Jun	None	None	G2	S2	1B.2	No Photo Available
Tuctoria mucronata	Crampton's tuctoria or Solano grass	Poaceae	annual herb	Apr-Aug	FE	CE	G1	S1	1B.1	No Photo Available

Showing 1 to 28 of 28 entries

Attachment D.

Plant and Wildlife Species Observed

Plant and Wildlife Species Observed

***Note**: This list of species is cumulative. It includes species observed on the Project site during all biological and botanical surveys conducted by Sycamore Environmental/SWCA 2015-2021)*

Plant Species Observed. Taxonomy follows Baldwin et al. (2012).

Family	Scientific Name	Common Name	N/I[1]	Cal-IPC Rating[2]
FERNS				
Azollaceae	*Azolla filiculoides*	Mosquito fern	N	
EUDICOTS				
Adoxaceae	*Sambucus nigra* ssp. *caerulea*	Blue elderberry	N	
Amaranthaceae	*Amaranthus albus*	Tumbleweed	I	
	Amaranthus blitoides	Procumbent pigweed	N	
	Amaranthus retroflexus	Redroot pigweed	I	
Anacardiaceae	*Pistacia chinensis* [3]	Chinese pistache	I	
Apiaceae	*Ammi visnaga*	Bisnaga	I	
	Anethum graveolens	Dill	I	
	Conium maculatum	Poison hemlock	I	Moderate
	Daucus carota	Carrot, Queen Anne's lace	I	
	Torilis arvensis	Tall sock-destroyer	I	Moderate
Apocynaceae	*Asclepias fascicularis*	Narrow-leaf milkweed	N	
	Nerium oleander [3]	Common oleander	I	
Asteraceae	*Anthemis cotula*	Mayweed	I	
	Baccharis pilularis	Coyote brush	N	
	Carduus pycnocephalus ssp. *pycnocephalus*	Italian thistle	I	Moderate
	Carthamnus tinctorium [3]	Safflower	I	
	Centaurea solstitialis	Yellow star-thistle	I	High
	Centromadia parryi ssp. *rudis*	Parry's rough tarplant	N	
	Centromadia pungens ssp. *pungens*	Common spikeweed	N	
	Cichorium intybus	Chicory	I	
	Cirsium vulgare	Bull thistle	I	Moderate
	Dittrichia graveolens	Stinkwort	I	Moderate
	Erigeron bonariensis	Flax-leaved horseweed	I	
	Erigeron canadensis	Horseweed	N	
	Grindelia sp.	Gumplant	--	
	Helianthus sp. (crop)	Sunflower	--	
	Helianthus annuus	Sunflower	N	
	Heterotheca grandiflora	Telegraph weed	N	
	Helminthotheca echioides	Bristly ox-tongue	I	Limited
	Hypochaeris glabra	Smooth cat's-ear	I	Limited
	Lactuca saligna	Lettuce	I	
	Lactuca serriola	Prickly lettuce	I	
	Leontodon saxatilis	Hairy hawkbit	I	
	Matricaria discoidea	Pineapple weed, rayless chamomile	I	
	Senecio vulgaris	Common groundsel	I	
	Silybum marianum	Milk thistle	I	Limited
	Sonchus asper ssp. *asper*	Prickly sow thistle	I	

	Sonchus oleraceus	Common sow thistle	I	
	Symphyotrichum subulatum	Annual saltmarsh aster	--	
	Tragopogon porrifolius	Salsify, oyster plant	I	
	Xanthium strumarium	Cocklebur	N	
Bignoniaceae	*Catalpa bignonioides*	Southern catalpa	I	
Boraginaceae	*Heliotropium curassavicum* var. *oculatum*	Seaside heliotrope, alkali heliotrope	N	
	Amsinckia menziesii	Common fiddleneck, small-flowered fiddleneck	N	
	Plagiobothrys sp.	Popcornflower	N	
Brassicaceae	*Brassica nigra*	Black mustard	I	Moderate
	Capsella bursa-pastoris	Shepherd's purse	I	
	Cardamine oligosperma	Bitter-cress	N	
	Hirschfeldia incana	Perennial, shortpod, or summer mustard	I	Moderate
	Raphanus sativus	Radish	I	Limited
	Lepidium latifolium	Perennial pepperweed	I	High
Cannabaceae	*Celtis* sp. [3]	Hackberry	I	
Caryophyllaceae	*Spergularia rubra*	Red sand-spurrey	I	
Chenopodiaceae	*Atriplex prostrata*	Fat-hen	I	
	Atriplex sp. [4]	Saltbush, orach	--	
	Chenopodium album	Lamb's quarters	I	
	Salsola tragus	Russion thistle, tumbleweed	I	Limited
Convolvulaceae	*Convolvulus arvensis*	Bindweed, orchard morning-glory	I	
	Cressa truxillensis	Alkali weed	N	
Ericaceae	*Arctostaphylos* sp. [3]	Manzanita	N	
Euphorbiaceae	*Chamaesyce maculata*	Spotted spurge	I	
	Chamaesyce serpens	Prostrate spurge	I	
	Croton setigerus	Turkey-mullein	N	
	Triadica sebifera	Chinese tallowtree	I	Moderate
Fabaceae	*Acmispon americanus* var. *americanus*	Deervetch, deerweed	N	
	Medicago polymorpha	California burclover	I	Limited
	Medicago sativa	Alfalfa	I	
	Melilotus albus	White sweetclover	I	
	Melilotus indicus	Sourclover	I	
	Prosopis sp.	Mesquite	--	
	Trifolium sp. (growing in disturbed upland; likely *T. subterraneum*)	Clover	--	
	Trifolium hirtum	Rose clover	I	Limited
	Vicia sativa	Vetch	I	
	Vicia villosa ssp. *villosa*	Hairy vetch, winter vetch	I	
Fagaceae	*Quercus agrifolia* [3]	Coast live oak, encina	N	
	Quercus lobata	Valley oak, roble	N	
	Quercus suber [3]	Cork oak	I	
Frankeniaceae	*Frankenia salina*	Alkali heath	N	
Geraniaceae	*Erodium cicutarium*	Redstem filaree	I	Limited
	Erodium botrys	Storksbill, filaree	I	
	Erodium moschatum	Greenstem filaree	I	
	Geranium dissectum	Cranesbill, geranium	I	Limited

	Geranium molle	Cranesbill, geranium	I	
Lamiaceae	*Lavandula* sp. [3]	Lavender	I	
	Rosmarinus sp. [3]	Rosemary	I	
Lythraceae	*Lythrum hyssopifolia*	Loosestrife	I	Limited
	Lagerstroemia sp.	Crapemyrtle	I	
Malvaceae	*Abutilon theophrasti*	Velvet-leaf	I	
	Malva nicaeensis	Bull mallow	I	
	Malva parviflora	Cheeseweed, little mallow	I	
	Malvella leprosa	Alkali-mallow, white-weed	N	
Martyniaceae	*Proboscidea lutea*	Unicorn-plant	I	
Oleaceae	*Fraxinus latifolia*	Oregon ash	N	
Onagraceae	*Epilobium ciliatum*	Willowherb	N	
Papaveraceae	*Eschscholzia californica*	California poppy	N	
Plantaginaceae	*Kickxia elatine*	Kickxia	I	
Platanaceae	*Platanus* x *acerifolia*	London plane tree	I	
	Veronica sp.	Speedwell, brooklime	--	
Polygonaceae	*Persicaria* sp.	Smartweed	--	
	Polygonum aviculare ssp. *depressum*	Knotweed, knotgrass	I	
	Rumex crispus	Curly dock	I	Limited
Portulacaceae	*Portulaca oleracea*	Purslane	I	
Rosaceae	*Malus* sp. (seedling)	Apple	I	
	Heteromeles arbutifolia [3]	Christmas berry, toyon	N	
	Prunus sp. [3]	Prunus	--	
	Pyrus communis	Common pear	I	
	Rubus armeniacus	Himalayan blackberry	I	High
Rubiaceae	*Galium aparine*	Goose grass	N	
Salicaceae	*Populus fremontii* ssp. *fremontii*	Freemont cottonwood	N	
	Salix gooddingii	Goodding's black willow	N	
Solanaceae	*Datura wrightii*	Jimson weed	N	
	Lycopersicon sp. [3]	Tomato	I	
	Solanum nigrum	Black nightshade	I	
	Solanum sp.	Nightshade	--	
Tamaricaceae	*Tamarix* sp. (likely *parviflora* or *ramosissima*)	Tamarisk, saltcedar	I	High
Ulmaceae	*Ulmus parvifolia*	Chinese elm	I	
	Zelkova sp. [3]	Zelkova	I	
Zygophyllaceae	*Tribulus terrestris*	Puncture vine, caltrop	I	
MONOCOTS				
Araceae	*Lemna* sp.	Duckweed	N	
Arecaceae	*Phoenix* sp. (fan palm seedlings)	Palm	I	
Asparagaceae	*Asparagus* sp.	Asparagus	I	
Cyperaceae	*Cyperus eragrostis*	Nutsedge	N	
	Schoenoplectus acutus var. *occidentalis*	Common tule	N	
Poaceae	*Avena fatua*	Wild oat	I	Moderate
	Avena barbata	Slender wild oat	I	Moderate
	Bromus diandrus	Ripgut grass	I	Moderate
	Bromus hordeaceus	Soft chess	I	Moderate
	Crypsis sp.	Prickle grass	I	
	Cynodon dactylon	Bermuda grass	I	Moderate
	Distichlis spicata	Salt grass	N	
	Elymus caput-medusae	Medusa head	I	High

	Elymus glaucus	Blue or western wild-rye	N	
	Elymus triticoides	Beardless wild rye	N	
	Festuca perennis	Rye grass	I	Moderate
	Festuca myuros	Rattail sixweeks grass	I	Moderate
	Hordeum marinum ssp. *gussoneanum*	Mediterranean barley	I	Moderate
	Hordeum murinum ssp. *leporinum*	Hare barley	I	Moderate
	Muhlenbergia rigens [3]	Deer grass	N	
	Phalaris sp.	Canary grass	--	
	Pennisetum sp.	Fountain grass	I	
	Polypogon monspeliensis	Annual beard grass, rabbitfoot grass	I	Limited
	Setaria sp.	Bristle grass	--	
	Sorghum halepense	Johnson grass	I	
	Stipa pulchra	Purple needle grass	N	
	Triticum aestivum	Wheat, goat grass	I	
	Zea mays [3]	Corn	I	
Typhaceae	*Typha domingensis*	Southern cattail	N	

[1] N = Native to CA; I = Introduced.

[2] Degree of negative ecological impact according to the California Invasive Plant Council (Cal-IPC 2021).

[3] Observed only as a horticultural planting or agricultural crop.

[4] Specimen could not be identified to species. Specimen was not *A. cordulata* ssp. *cordulata, A. depressa,* or *A. joaquinana* based on plant height, inflorescence, and fruit bract characteristics. Specimen observed in a recently tilled agricultural field and most likely a nonnative agricultural weed.

Wildlife Species Observed

COMMON NAME	SCIENTIFIC NAME
BIRDS	
American crow	*Corvus brachyrhynchos*
American goldfinch	*Spinus tristis*
American kestrel	*Falco sparverius*
Anna's hummingbird	*Calypte anna*
Black phoebe	*Sayornis nigricans*
Brewer's blackbird	*Euphagus cyanocephalus*
Burrowing owl [1]	*Athene cunicularia*
Cattle egret	*Bubulcus ibis*
Cliff swallow	*Petrochelidon pyrrhonota*
Common raven	*Corvus corax*
Cooper's hawk	*Accipiter cooperii*
Eurasian collared dove	*Streptopelia decaocto*
European starling	*Sturnus vulgaris*
Great horned owl	*Bubo virginianus*
House finch	*Carpodacus mexicanus*
Killdeer	*Charadrius vociferus*
Mourning dove	*Zenaida macroura*
Northern flicker	*Colaptes auratus*
Northern harrier	*Circus hudsonius*
Northern mockingbird	*Mimus polyglottos*
Red-tailed hawk	*Buteo jamaicensis*
Red-winged blackbird	*Agelaius phoeniceus*
Rock dove	*Columbia livia*
Swainson's Hawk	*Buteo swainsoni*
Tree swallow	*Tachycineta bicolor*
Turkey vulture	*Cathartes aura*
Western meadowlark	*Sturnella neglecta*
Western kingbird	*Tyrannus verticalis*
Western tanager	*Piranga ludoviciana*
White-crowned sparrow	*Zonotrichia leucophrys*
White-tailed kite	*Elanus leucurus*
Yellow-billed magpie	*Pica nuttalli*
FISH	
Mosquitofish	*Gambusia affinis*
REPTILES	
Western fence lizard	*Sceloporus occidentalis*
MAMMALS	
California ground squirrel	*Otospermophilus beecheyi*
Coyote (sign)	*Canis latrans*
Jackrabbit	*Lepus californicus*

[1] See burrowing owl survey report (Sycamore Environmental 2020) for dates/locations observed.

Attachment E.

CNDDB Query for Record Updates Between January 1, 2020 and October 4, 2021

CALIFORNIA DEPARTMENT OF FISH and WILDLIFE **RareFind**

Query Summary:
Quad IS (Woodland (3812167) OR Grays Bend (3812166) OR Taylor Monument (3812165) OR Merritt (3812157) OR Davis (3812156) OR Sacramento West (3812155) OR Dixon (3812147) OR Saxon (3812146) OR Clarksburg (3812145))
AND Last Updated Date IS between "01/01/2020" AND "10/04/2021"

Print Close

CNDDB Element Query Results

Scientific Name	Common Name	Taxonomic Group	Element Code	Total Occs	Returned Occs	Federal Status	State Status	Global Rank	State Rank	CA Rare Plant Rank	Other Status	Habitats
Buteo swainsoni	Swainson's hawk	Birds	ABNKC19070	2541	1	None	Threatened	G5	S3	null	BLM_S-Sensitive, IUCN_LC-Least Concern, USFWS_BCC-Birds of Conservation Concern	Great Basin grassland, Riparian forest, Riparian woodland, Valley & foothill grassland
Gonidea angulata	western ridged mussel	Mollusks	IMBIV19010	157	1	None	None	G3	S1S2	null	null	Aquatic
Hypomesus transpacificus	Delta smelt	Fish	AFCHB01040	29	1	Threatened	Endangered	G1	S1	null	AFS_TH-Threatened, IUCN_EN-Endangered	Aquatic, Estuary
Neostapfia colusana	Colusa grass	Monocots	PMPOA4C010	66	1	Threatened	Endangered	G1	S1	1B.1	null	Vernal pool, Wetland
Plagiobothrys hystriculus	bearded popcornflower	Dicots	PDBOR0V0H0	15	1	None	None	G2	S2	1B.1	null	Valley & foothill grassland, Vernal pool, Wetland
Spea hammondii	western spadefoot	Amphibians	AAABF02020	1422	1	None	None	G2G3	S3	null	BLM_S-Sensitive, CDFW_SSC-Species of Special Concern, IUCN_NT-Near Threatened	Cismontane woodland, Coastal scrub, Valley & foothill grassland, Vernal pool, Wetland
Trifolium hydrophilum	saline clover	Dicots	PDFAB400R5	56	1	None	None	G2	S2	1B.2	null	Marsh & swamp, Valley & foothill grassland, Vernal pool, Wetland

APPENDIX C

APPLICABILITY OF MRIC DRAINAGE STUDY (2015) FOR THE DAVIS INNOVATION AND SUSTAINABILITY CAMPUS 2022

Watermark Engineering, Inc.

DATE: August 11, 2021

TO: Troy Estacio, SVP Acquisitions & Development Services
Buzz Oates Group of Companies
555 Capitol Mall, Suite 900
Sacramento, CA 95814
Phone: (916) 379-3800

CC: Matt Keasling

FROM: Patrick Stiehr, PE

RE: Applicability of MRIC Drainage Study (2015) for the Davis Innovation and Sustainability Campus 2022

OVERVIEW

The Mace Ranch Innovation Center (MRIC) was in the development process in early 2015. The project covered 212 acres east of Mace Boulevard and north of County Road 32A. During the development and review process, a mixed-use alternative (MRIC-MU) was added. Watermark Engineering, Inc. prepared the drainage study for MRIC and subsequently added a second drainage study for the MRIC-MU. The studies were very similar in the configuration of drainage facilities, and design criteria were the same. The differences were minor due to configuration changes of the land use and minor changes to the location and size of the proposed drainage facilities.

At its most basic, MRIC was designed to drain impervious areas to roadside shallow ditches and landscaped gentle swales with minimal use of storm drain piping. The design would maximize infiltration, address water quality, and convey stormwater runoff to a peripheral system of detention and conveyance. The MRIC and MRIC-MU were designed to drain in two distinct halves: the area north of the Mace Drainage Channel would drain to the north and the area south of the channel would drain to the south. All water would eventually enter into peripheral, landscaped gentle swales. The swales were designed to gradually increase in capacity and release runoff to local detention areas before entering into the Mace Drainage Channel for conveyance to the Yolo Causeway. After considerable analysis, the project was put on hold later in 2016.

Planning activity restarted in 2019 with two notable changes. From a drainage perspective, the new development proposal, identified as the Aggie Research Campus (ARC) was to be 25 acres smaller because the northwest corner (City of Davis property) had been removed. The second, less significant change was that a housing element was added to the project this modification was similar to the MRIC-MU alternative presented in 2015 which had already been fully analyzed. The ARC project received unanimous support from the Davis City Council but was ultimately unsuccessful at the polls.

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The applicants are now proposing a revised and reduced project called the Davis Innovation and Sustainability Campus 2022 (DiSC 2022). DiSC 2022 is effectively the southern 102 acres of ARC, comprised of all of the project area located south of the Mace Drainage Channel. Watermark Engineering has been tasked with providing a professional opinion of the adequacy of the previous drainage study to the revised and smaller DiSC 2022 project.

PURPOSE

The purpose of this document is to provide a comparison between the 2015 project and DiSC 2022 in relation to existing drainage study and compliance with environmental documents. Additionally, this document analyzes whether there are any new or modified drainage impacts that may be associated with DiSC 2022 that were not previously identified and considered in the context of the MRIC drainage analysis.

It is noted here that the 2015 drainage study was complete and included as part of the prior certified EIR, but it is not a design level document. The base-level configuration and sizing of the drainage improvements had been established in the 2015 study, with the understanding that the design would be refined as more of the development details were finalized. This continues to be true for DiSC 2022.

DRAINAGE CONSIDERATIONS

There are six main drainage-related matters that were addressed in the 2015 study. A discussion of each of the topics follows with information that supports the conclusion that the 2015 study is adequate for analyzing the potential impacts of the proposed DiSC 2022.

Regulatory Floodplain

The 2015 study indicated that the project area is not within the FEMA regulatory floodplain. There are no changes to that information, and the information is applicable to the DiSC 2022.

Local Flooding

With MRIC, the onsite drainage facilities were planned to drain impervious areas to roadside shallow ditches and landscaped gentle swales that gradually increased in capacity and release runoff to local detention areas within the agricultural buffer before entering into the Mace Drainage Channel. That overall drainage concept remains and is applicable to the DiSC 2022.

Most of the local runoff will be managed along surface facilities with minimal use of storm drain piping. The drainage facilities details for the DiSC 2022 will be designed based on the 2015 study. Therefore, just as MRIC was shown to not result in localized flooding, DiSC 2022 will also avoid any such impacts through the implementation of the same drainage features.

Water Quality

Water quality is based on different criteria compared to the other considerations. The criteria provide means and methods to treat runoff from developed lands. More development would mean more treatment. With about half as much developed land, there will be a corresponding and commensurate reduction of water quality features needed to treat the runoff. The surface water quality features will be resized and designed to meet current standards. The 2015 study remains applicable to DiSC 2022.

Upstream Impacts

The modeling analysis within the 2015 study demonstrated that upstream water levels would not increase as a result of the proposed MRIC development. No significant changes to the proposed drainage facilities are proposed or expected for DiSC 2022. As development details become available, the existing modeling and analysis will be updated to confirm no upstream impacts. This is the same approach that was planned for the MRIC in 2015.

The computer modeling of MRIC had separate subsystems on the north and south sides of the Mace Drainage Channel. There was no impact to upstream water levels as a result of MRIC, and the new development is half as large. I can say with confidence that the potential for upstream impacts will not increase.

Downstream Impacts – Conveyance

The 2015 study included onsite detention areas to attenuate peak runoff from the site to meet design capacity criteria in the downstream receiving channel. The north side detention area would attenuate development runoff from the north side of the Mace Channel. The south side detention area would attenuate the south side developed runoff. With DiSC 2022 the north side will remain as agriculture. The south side will provide detention storage to attenuate the south side developed runoff. Similar to the upstream impacts assessment, it is hard to envision a scenario where a 50% reduction of development runoff would create new or increased impacts on the existing conveyance facilities.

Downstream Ponding Impacts – Increased Volume of Runoff

It was previously determined that there is adequate capacity within the Mace Drainage Channel to convey all runoff that would come from MRIC. As such, there is unquestionably adequate capacity to convey the reduced runoff from DiSC 2022. During infrequent storm events, the outfall from the Mace Drainage Channel into the Yolo Bypass can be blocked due to infrequent backwater within the Causeway. At such times, stormwater within the Mace Drainage Channel cannot drain into the bypass and ponds on the adjacent agricultural fields. Aware of this issue under the current condition, the City purchased the impacted agricultural properties years ago and then placed flood easements on those properties. The land is leased to a farmer who cultivates subject to the flood easement.

Previous analysis concluded that because MRIC would increase the overall volume of runoff in the Channel, the project would increase this localized flooding – though by a nominal amount and only when there was backwater in the bypass. Similarly, DiSC 2022 would contribute to the volume of runoff in the Channel but, compared to MRIC, DiSC 2022 would reduce this impact with stormwater volume of roughly half of that identified for MRIC.

To account for the increased runoff from the impervious portions of MRIC, two mitigation measures were presented in the 2015 study. The first was a replacement storage option where a field could be lowered to store the incremental increased runoff volume. The recommended field was the southeastern parcel adjacent to the Yolo Bypass levee and the drainage channel. The plan was to lower the field a foot or two by first removing the topsoil, then lowering the field and moving the dirt out of the floodplain, and finally putting the topsoil back in place for continued farming.

The second proposed mitigation measure was to install a small permanent or portable pump to be used when the bypass water level is higher than the ponding level in the adjacent land-side fields. This measure was less attractive because of the ongoing effort needed to ensure the facility is fully functional when needed, which would only average about once every three to five years.

The prior drainage analysis determined that either measure met the goal of no increased ponding depth as a result of the increased runoff from development. In fact, either measure would result in a net benefit by mitigating for potential flood impacts that exceed the project's incremental increase in volume. With roughly half of the runoff volume of MRIC, it is irrefutable that either solution would more than adequately mitigate for the impacts of increased volume of stormwater emanating from DiSC 2022.

Given the reduced volumes from DiSC 2022 to near imperceptible levels, there is a third alternative that was not included in the original analysis. That would be to redraw the flood easement line on a map that shows the approximate limits of ponding with the increased volume. This would clearly be the most cost-effective and logical mitigation measure of the three described herein. In reality, with the 50% decrease of increased runoff volume as a result of DiSC 2022, and depending on the map scale, the drawing of the new easement line may still be within the pencil width of the existing easement line. Put another way, the runoff volume contribution of DiSC 2022 to the existing condition is so miniscule that it would be functionally imperceptible.

SUMMARY

In my professional opinion, there are no significant differences between the MRIC project and the DiSC2022 project that would materially or significantly impact the drainage facilities as set forth in the 2015 study. Because the southern half of MRIC was designed to operate independently from the north half, there is a high degree of confidence that the analysis performed for MRIC is adequate and appropriate for DiSC 2022 utilization. DiSC 2022 will result in reduced impacts in all six areas of drainage consideration that were previously analyzed for MRIC.

APPENDIX D

DAVIS INNOVATION & SUSTAINABILITY CAMPUS 2022 (DISC 2022) VOLUME 1 – TRANSPORTATION IMPACT STUDY

Davis Innovation & Sustainability Campus 2022 (DiSC 2022)

Volume 1 – Transportation Impact Study

DRAFT

Prepared for:
Raney Planning & Management, Inc.

November 2021

RS21-4085

FEHR & PEERS

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1. Introduction

This study describes existing transportation conditions (environmental and regulatory) and analyzes the potential of the proposed Davis Innovation & Sustainability Campus 2022 (DiSC 2022) to affect the surrounding transportation environment in accordance with current CEQA Guidelines. The analysis evaluates potential impacts to vehicle miles traveled (VMT) and transit, bicycle, and pedestrian components of the transportation system that may result from the proposed project, as well as impacts during project construction. Where necessary and feasible, mitigation measures are identified to reduce these impacts.

An accompanying document, the DiSC 2022 Traffic Operations Analysis (Volume 2) presents an analysis of the potential effects of the proposed project with respect to traffic operations (i.e., vehicle delay) on roadway facilities within the vicinity of the project site. This analysis is deliberately separate from the transportation impact study in Volume 1 in accordance with the CEQA Guidelines, which no longer permit the use of vehicle delay or level of service (LOS) for the purposes of identifying environmental impacts for land use projects. This analysis has been prepared for two primary reasons. First, it informs other components of the transportation impact analysis (e.g., potential impacts to transit services) and other topics addressed in the DiSC 2022 EIR Addendum (e.g., air quality, noise, GHG, etc.). Second, it directly addresses the proposed project's consistency with City of Davis General Plan policies related to traffic operations and level of service.

Purpose

In July 2021, the project applicant submitted a revised application to the City of Davis for the DISC project (formerly known as the Aggie Research Campus project and the Mace Ranch Innovation Center project). The new project, DiSC 2022, represents a reduced size project from the original DISC project both in terms of the overall project size and the quantity of on-site uses.

The City of Davis certified a Subsequent EIR for the original DISC project in July 2020. Fehr & Peers prepared a transportation impact study in support of the DISC Subsequent EIR. The City of Davis is in the process of preparing an EIR Addendum for the DiSC 2022 project to describe minor technical changes and additions to the certified DISC Subsequent EIR. This transportation impact study supports the EIR Addendum by addressing the extent to which the DiSC 2022 project would result in changes to the transportation impacts identified in the transportation impact study prepared for the original DISC project.

Analysis Scenarios

The following scenarios are analyzed in this study:

- **Existing Conditions –** Establishes the existing setting, which is used to measure the significance of project impacts.
- **Existing Plus Project Conditions –** Adds changes to travel demand resulting from buildout of the proposed project to existing conditions.
- **Cumulative No Project Conditions –** Represents cumulative travel demand based on reasonably foreseeable local and regional land use and transportation system changes. For the purposes of this study, the cumulative year is 2040. This scenario assumes the project site remains vacant.
- **Cumulative Plus Project Conditions –** Adds changes to travel demand resulting from buildout of the proposed project to Cumulative No Project conditions.

Evaluations are performed for each element of the transportation system for each of these scenarios.

2. Analysis Methodology

This section describes the methods utilized to analyze the transportation system.

Travel Demand Forecasting

This study utilized several tools to forecast travel demand changes associated with the proposed project as well as planned local and regional land use development and transportation system modifications.

The local UC Davis/City of Davis travel demand model was used for the purposes of forecasting travel demand within the City of Davis and UC Davis vicinity. This model has a base year of 2016 and forecast years of 2030 and 2036. The model was developed in close coordination with the City of Davis and UC Davis in order to incorporate planned land use and transportation system changes both within the City and its sphere of influence and on the UC Davis campus. The coordination effort included the following elements of model development:

- **TAZ system –** The traffic analysis zone (TAZ) development included review by City and UC Davis staff to ensure sufficient detail for both existing and new growth areas.
- **Land use inputs –** Inputs were initially obtained from the SACOG 2012 parcel database used in developing regional model inputs for the 2016 SACOG MTP/SCS. These inputs were reviewed for each TAZ with City and UC Davis staff to develop a complete inventory representing 2016 conditions, which is the model's base year. Similarly, land use forecasts for 2030 and 2036 conditions were developed in cooperation with City staff and UC Davis staff. Land use forecasts for 2030 and 2036 were based on future land use changes throughout the region projected in the 2016 SACOG MTP/SCS. The land use forecasts were refined based on input from City staff and UC Davis staff according to planned City of Davis General Plan growth, planned UC Davis 2018 Long Range Development Plan (LRDP) growth, approved development projects, pipeline development projects, and other reasonably foreseeable land development activities.
- **Roadway network inputs –** The local model roadway network was developed from GIS data representing local, collector, arterial, and freeway functional classifications. Input data included the number of travel lanes and free-flow travel speeds based on the previous UC Davis/City of Davis model developed for the 2003 LRDP update, plus new data from field observations and Google Maps imagery. Capacity inputs for each roadway classification were estimated from reference documents including the HCM 6th Edition and the *Travel Demand Forecasting: Parameters and Techniques, National Cooperative Highway Research Program, Report 716*,

(Transportation Research Board, 2012). Changes to the roadway networks for future year scenarios were provided by City and UC Davis staff as noted above.

- **Vehicle trip rates –** The vehicle trip rates were derived from a variety of sources including the UC Davis Campus Travel Survey, the California Household Travel Survey, local residential trip generation estimates based on observed traffic counts, and the *Trip Generation Manual*, 10th Edition. The rates were estimated for the following trip purposes.
    - Home-Based Work (HBW): trips between a residence and a workplace
    - Home-Based Shop (HBS): trips between a residence and a retail destination
    - Home-Based School (HBK): trips between a residence and a school (K-12)
    - Home-Based Other (HBO): trips between a residence and any other destination
    - Non-Home-Based (OO): trips that do not begin or end at a residence, such as traveling from a workplace to a restaurant, or from a retail store to a bank
    - College (COLL): trips to and from a Community College
    - UC Davis (UCD): trips to and from UC Davis
    - Highway Commercial (HC): trips to and from highway commercial destinations
- **Vehicle trip lengths and external trip patterns –** The vehicle trip lengths and the proportion of vehicle trips that occur exclusively within the model area versus those that have origins or destinations external to the model area were obtained from the UC Davis Campus Travel Survey, the California Household Travel Survey, and the American Community Survey. This information was extracted for each trip purpose above. Trips traveling through the model area without stopping such as those on I-80, were estimated from the regional SACOG SACSIM model developed for the 2016 SACOG MTP/SCS.
- **Trip assignment –** Trip assignment relies on conventional algorithms that assign trips between origin and destination zones based on travel times that reflect the influence of roadway capacity and speeds. A unique aspect of the assignment process is that UC Davis generated trips had to be associated with parking areas on and off-campus since that is where trips start and end. These parking areas were mapped in collaboration with UC Davis staff and iterative testing of the assignment results was used to refine the association.

Consistent with standard practice, the base year model was calibrated and then validated against actual travel conditions present in 2016. The model passed all applicable validation tests.

Emerging Trends and SACSIM Model Limitations

Transportation and mobility are being transformed through a number of forces ranging from new technologies, different personal preferences, and the unique effects of the COVID-19 pandemic, the combination of which could alter traditional travel demand relationships in the near- and long-term. These disruptive trends increase uncertainty in forecasting future travel conditions, especially considering that new technologies such as automated vehicles (AVs) may be operating on future transportation networks once the project would be complete and operational. Information about how technology is affecting and will affect travel is accumulating over time.

Furthermore, the COVID-19 pandemic and subsequent actions by federal, state, and local governments to curtail mobility and encourage physical distancing (i.e., limit in-person economic and social interactions) has temporarily but profoundly changed travel conditions. While travel activity will likely return to some form of normality after the pandemic has subsided, it is possible that some of these temporary changes will influence people's travel choices into the future, including either accelerating or diminishing some of the emerging trends in transportation that were already underway prior to the pandemic. Some of the emergent changes already influencing travel behavior that could accelerate in the future include the following.

- Substituting telework for in-office work/commute travel.
- Substituting internet shopping and home delivery for some shopping or meal-related travel.
- Substituting participating on social media platforms for social/recreational travel.
- Substituting telemedicine appointments for eligible in-person medical appointments.
- Using new travel modes and choices. Transportation network companies such as Uber and Lyft, car sharing, bicycle/scooter sharing, and on-demand microtransit services have increased the options available to travelers in the Sacramento area, and have contributed to changes in traditional travel demand relationships. For example, combined bus and rail ridership on SacRT has declined by approximately 19 percent between 2016 and 2019. The SACSIM model was calibrated to 2016 conditions and may not fully capture all the factors influencing transit ridership declines today or in the future.
- Automation of vehicles. Both passenger vehicles and commercial vehicles and trucks are evolving to include more automation. Research, development, and deployment testing is proceeding on AVs; AVs do not require an operator and navigate roadways autonomously. Forecasts of how quickly research, development, and deployment testing will transition to full deployment and marketing of AVs vary widely both on the pace of the transition and the market acceptance of fully automated operation. More uncertainty exists around the behavioral response to AVs. In

terms of VMT impacts on the transportation system and the environment, the worst-case scenario would be one in which AVs are privately owned, as they are now, but the automated function of AVs would cause them to be used more as described below.

- AVs could be repositioned to serve different members of a household (e.g., have an AV drop a worker at their workplace, then drive back home empty to serve another trip such as taking a student to school). The repositioning of AVs could add significantly to traffic volumes and VMT.
- AVs could reduce the value travelers place on time spent in a vehicle, resulting in an increase in willingness to make longer trips. For example, if a person could read or do work in an AV instead of focusing on driving, they might be willing to commute longer distances to work. Conversely, a worker who would prefer to live in a rural area but is unwilling to drive far enough to act on that preference in a conventional vehicle may be willing to do so using an AV.
- AVs could increase willingness to drive more to avoid parking costs or tolls. For example, a person going to a sporting event in an area that charges for parking might use an AV to be dropped off at the venue, and then re-position and park the AV in an area that does not charge for parking.
- Connected vehicles (CVs) can communicate wirelessly with its surroundings, including other vehicles, bicyclists, pedestrians, roadway infrastructure (i.e., traffic signals, toll facilities, and traffic management facilities), and the internet. The influence that CVs may have is still speculative but includes potential for reductions in collisions and congestion and greater overall network performance optimization.

While the SACSIM model represents state of the practice or advance practice, travel behavior and the transportation systems are changing quickly in response to emerging trends, new technologies, and different preferences. The trajectory of deployment, market acceptance, and government regulation of these new travel options and technologies is difficult to predict, and these elements directly influence the inputs and algorithms for the SACSIM model. As such, SACSIM as a travel forecasting model has limitations in the ability to capture the full range of potential travel effects from emerging travel options and technologies.

The SACSIM model does include some scenario testing capabilities that can begin to test different hypotheses of these impacts, but until more research is done about the likely behavioral responses to new modes and technologies is completed, travel models cannot fully capture these changes in a reliable way. Initial testing of automated vehicles effects using SACSIM, such as lowering costs to use vehicles and making them more convenient by eliminating parking at trip ends, does generate increases in overall vehicle travel and reductions in transit ridership with all else being equal. The information suggests the model is sensitive to how cost and convenience influence travel behavior but within the limits of the observed data used to develop the model.

Vehicle Miles Traveled (VMT)

This study uses vehicles miles traveled (VMT) as the primary metric for transportation impacts. By definition, one VMT is defined as a motor vehicle being driven one mile. VMT is expressed on a daily basis, and in this context, for a typical weekday. VMT values in this study represent the full length of a given trip, and are not truncated at city, county, or region boundaries.

This analysis uses the VMT per service population metric for the purposes of analyzing potential impacts to VMT. This methodology calculates VMT by summing the "VMT from" and "VMT to" a specified area. The VMT accounting is:

$$VMT = (II + IX) + (II + XI) = (2 \times II) + IX + XI$$

- Internal-internal (II): The full length of all trips made entirely within the geographic area limits is counted.
- Internal-external (IX): The full length of all trips with an origin within the geographic area and destination outside of the area is counted.
- External-internal (XI): The full length of all trips with an origin outside of the geographic area and destination within the area is counted.

The intra-zonal VMT and VMT between traffic analysis zones, or TAZs, that are both in the study area are double counted. To cancel out the double counting, the VMT is divided by the service population (residential population plus employment population), the generators of both trip ends of the VMT. This is necessary when expressing VMT as an efficiency metric that also represents the VMT generation rate of the service population. The resulting VMT is then compared to the existing VMT and a determination made as to whether the project VMT exceeds the applicable thresholds.

VMT estimates were prepared utilizing the UC Davis/City of Davis travel demand model, SACOG's SACSIM travel demand model, and the California Statewide Travel Demand Model. For project-generated VMT calculations, the following calculations were performed:

- Project-Generated VMT = project's estimated weekday external vehicle trips x average trip length

The average trip lengths were derived from the UC Davis/City of Davis travel demand model, with extra distance appended to project trips with trip ends outside of that local model's boundaries using the SACMET travel demand model and the California Statewide Travel Demand Model (e.g., to capture longer trips to/from the Bay Area that would not otherwise be reflected in the local model).

The following process was employed to prepare estimates for VMT generated at the local and regional level:

- **Local VMT generated by the City of Davis and UC Davis –** The UC Davis/City of Davis travel demand model was used to estimate VMT associated with trips ends within the model boundaries (i.e., the City of Davis sphere of influence and the UC Davis campus). This model was selected for this purpose due to its smaller TAZ structure relative to other available travel demand models, which allows for a more granular evaluation of trips internal to the model boundaries (i.e., to avoid underreporting VMT associated with internal-internal trips associated with a given TAZ). Extra distance was added to trips with trip ends outside of the local model boundaries using the SACSIM travel demand model and the California Statewide Travel Demand Model. Land use inputs for the TAZ containing the project site were calibrated to match the estimated (for Existing Plus Project and Cumulative Plus Project conditions) daily trip generation associated with the project site based on the project trip generation estimates described in the Project Travel Characteristics section.
- **Regional VMT generated by the SACOG region –** The SACSIM travel demand model, prepared by SACOG for regional travel demand forecasting purposes, was utilized to estimate VMT associated with trips with trip ends within the model boundaries (i.e., the SACOG region). Extra distance was added to trips with trip ends outside of the SACSIM model boundaries (e.g., based on actual distance from edge of model to destinations within Solano or Napa Counties, for instance) using the California Statewide Travel Demand Model. VMT associated with SACSIM trips with trip ends within the City of Davis sphere of influence or the UC Davis campus were deleted and replaced with the VMT calculated from the UC Davis/City of Davis travel demand model as described in the previous step.

3. Environmental Setting

This section describes the existing environmental setting, which is the baseline scenario upon which project-specific impacts are evaluated. The environmental setting components include roadway, pedestrian, bicycle, and transit networks in the vicinity of the project site.

Project Location

The proposed project site is located in unincorporated Yolo County immediately east of the City of Davis city limits. The project site is situated east of Mace Boulevard and north of Interstate 80 (I-80) near the "Mace Curve". The project site is located approximately three miles east of Downtown Davis and the University of California, Davis (UC Davis) campus and approximately ten miles west of Downtown Sacramento. The project site is bordered on the west by Mace Boulevard, on the south by County Road 32A (CR 32A), and agricultural fields on the north and east. **Figure 1** displays the project site and surrounding roadway network.

Roadway System

Mace Boulevard, Alhambra Drive, and CR 32A provide vehicular access to the project site. Other key roadways in the project vicinity include East Covell Boulevard, Second Street, and Interstate 80. These roadways are described below.

Interstate 80 (I-80) is an east-west interstate freeway near the southern boundary of the project site. From Davis, I-80 connects with the San Francisco Bay Area to the west and Sacramento and the Lake Tahoe Basin to the east. I-80 provides three travel lanes per direction in the vicinity of the project site. I-80 serves Davis via interchanges at Mace Boulevard and Richards Boulevard, as well as a westbound off-ramp at Olive Drive. Additional I-80 interchanges within the vicinity of Davis include the Old Davis Road interchange at the UC Davis campus and the County Road 32A interchange in Yolo County. I-80 and its interchanges are owned and operated by Caltrans.

Mace Boulevard is a two- to four-lane north-south major arterial that borders the west edge of the project site. The roadway provides four lanes south of Alhambra Drive and transitions to two lanes separated by a striped median north of Alhambra Drive, where it becomes East Covell Boulevard. The speed limit is 40 miles per hour (mph).

East Covell Boulevard is a four-lane east-west major arterial that connects Mace Boulevard at Alhambra Drive to State Route 113 and points west. West of the project site, East Covell Boulevard has a posted speed limit of 40 mph from Mace Boulevard to Wright Boulevard.

Alhambra Drive is a two-lane minor arterial that connects Mace Boulevard to East Covell Boulevard. The speed limit is 30 mph.

County Road 32A (CR 32A) is a two-lane east-west minor arterial that borders the south side of the project site. There is an advisory 35 mph speed signed along the curve adjacent to the project site; on the rest of the roadway, the speed limit is 55 mph except for the curve near the railroad grade crossing. The roadway has soft shoulders and bike lanes. West of Mace Boulevard, CR 32A becomes Second Street. CR 32A is owned and operated by Yolo County.

Second Street is a two- to four-lane east-west minor arterial connecting Mace Boulevard to L Street and Downtown Davis. The speed limit in the project vicinity is 35 mph.

Refer to Volume 2 (Traffic Operations Analysis) for an analysis of the existing peak hour operations of these roadway facilities.

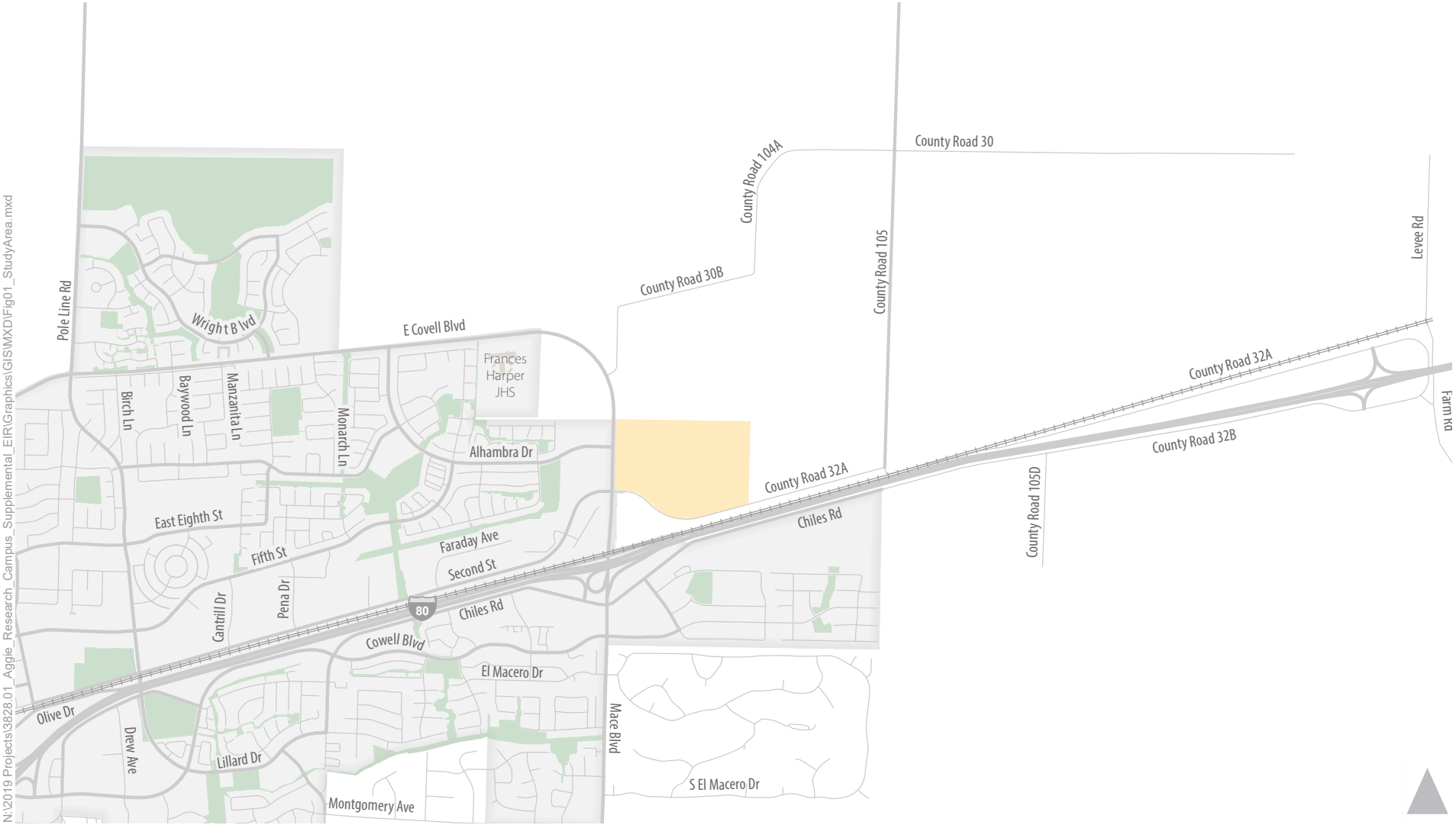


Figure 1

Study Area

Pedestrian Facilities

The City of Davis has an extensive system of off-street shared-use paths, sidewalks, and crosswalks available for use by pedestrians. Sidewalk coverage on the key roadways in the project vicinity is discussed in the Roadway System section above. In addition, the following shared-use paths are located in the vicinity of the proposed project site:

- East-west path situated between I-80 and the Union Pacific main line, beginning at the eastern terminus of Olive Drive and terminating at CR 105. Users of this path continue east to the causeway bike path;
- East-west path on the south side of East Covell Boulevard to an eastern terminus point at the eastern boundary of Harper Junior High School, approximately 2,500 feet north of the Mace Boulevard/Alhambra Drive intersection. A grade-separated bicycle crossing underneath East Covell Boulevard east of Monarch Lane connects this path to a complementary path on the north side of East Covell Boulevard towards Wildhorse;
- East-west path on both sides of Alhambra Drive between Mace Boulevard and Fifth Street;
- East-west path paralleling Arroyo Avenue with connections to the Fifth Street path to the west and the Alhambra Drive path (via John Barovetto Park) to the east. This path also provides a connection to the Dave Pelz Bicycle Overcrossing, which connects Mace Ranch and South Davis over I-80 and the Union Pacific main line;
- East-west and north-south paths on the Alhambra Drive and Mace Boulevard frontages, respectively, of the Offices @ Mace Ranch site (located at the northwest corner of the Mace Boulevard/Alhambra Drive intersection);
- The approximately 12-mile Davis Bike Loop, which passes through Mace Ranch Park. The City-wide bike loop is a combination of on-street bicycle facilities and off-street shared-use paths; and
- Several internal paths in the Mace Ranch neighborhood.

Pedestrian facilities do not exist along the proposed project site boundaries as the land is currently undeveloped. The signalized intersection of Mace Boulevard/Second Street/CR 32A, located at the southwest corner of the proposed project site, has crosswalks with pedestrian push buttons on all four legs, but there is no connecting sidewalk on the site frontages to the north and east. The signalized intersection of Mace Boulevard/Alhambra Drive, located on the proposed project's western edge, has a crosswalk only on the west leg (crossing Alhambra Drive). There are no pedestrian facilities on the access road to the Park-and-Ride lot southwest of the proposed project site.

Bicycle Facilities

The project site is situated on the edge of the City of Davis bicycle network, which is comprised of an extensive network of on- and off-street bicycle facilities. Bicycle facilities are typically categorized in the following classifications:

- **Class I Multi-Use Off-Street Paths** (also known as shared-use paths) are paved trails that are separated from roadways and allow for shared use by both cyclists and pedestrians.
- **Class II On-Street Bike Lanes** are designated for use by bicycles by striping, pavement legends, and signs.
- **Class III On-Street Bike Routes** are designated by signage for shared bicycle use with vehicles but do not necessarily include any additional pavement width for bicyclists.
- **Class IV Separated Bikeways** (also known as protected bikeways or cycle tracks) are separated bikeways improve upon buffered bike lanes by providing vertical separation between bike lanes and the adjacent travel lanes. Vertical separation can be provided with concrete curb and gutter, bollards or on-street parking.

Figure 2 displays existing bicycle facilities in the proposed project vicinity. In addition to the previously discussed shared-use paths, on-street bicycle facilities are located on the following roadways near the proposed project site:

- Class II Bike Lanes
    - Mace Boulevard in both directions from East Covell Boulevard to Cowell Boulevard;
    - East Covell Boulevard from Mace Boulevard to the westerly city limits;
    - Alhambra Boulevard in both directions from Mace Boulevard to East Covell Boulevard;
    - CR 32A in both directions from Mace Boulevard to CR 32B; and
    - Second Street from Mace Boulevard to L Street.
- Class IV Separated Bikeways
    - Mace Boulevard from Cowell Boulevard to Redbud Drive, including one-way separated bikeways on both sides of the roadway between Cowell Boulevard San Marino Drive and a two-way separated bikeway on the west side of the roadway between San Marino Drive and Redbud Drive.

East Covell Boulevard, which becomes Mace Boulevard along the proposed project frontage, is the only continuous east-west arterial that traverses the entire City of Davis. To facilitate bicycle and pedestrian travel across this high-volume facility, the City of Davis has required the construction of bicycle/pedestrian grade separations for new developments located on the north side of Covell Boulevard. Existing grade separations on Covell Boulevard are located west of F Street, east of F Street (to/from The Cannery), and east of Monarch Lane. A future facility is planned on West Covell east of Denali Drive, as shown in the *City of Davis General Plan*.

Transit Service and Facilities

Transit serving the project site includes local bus service connecting the project site to destinations throughout the City of Davis (e.g., Downtown Davis, the Davis Train Depot, etc.) and the UC Davis campus. Additionally, the project site is served by intercity bus service that is primarily oriented towards serving Davis residents commuting to and from work in Downtown Sacramento.

Transit service in the City of Davis is provided by Unitrans (local bus), Yolobus (intercity bus), Amtrak (intercity rail), and Davis Community Transit (local paratransit):

- **Unitrans** provides local fixed route bus service to the project site. Jointly operated between the Associated Students, UC Davis (ASUCD) and the City of Davis, Unitrans offers 19 routes serving the UC Davis campus and City of Davis neighborhoods, shopping centers, schools, and medical centers. Unitrans operates as a radial bus system with the UC Davis campus serving as the central hub. The main terminals on the UC Davis campus are at the Memorial Union on Howard Way and at the Silo along Hutchison Drive.

  Specific service spans and frequencies vary by route. Generally, Unitrans operates from 6:30 a.m. to 11:30 p.m. Monday through Thursday and until 9:00 p.m. on Fridays. Weekend service is available from 8:30 a.m. to 7:00 p.m. Unitrans routes operate every 15 or 30 minutes during weekdays and every 60 minutes during weekends and evenings. **Table 1** summarizes the weekday and weekend frequency and span for Unitrans bus routes serving the project site.

  The current Unitrans one-way fare is $1.25, with monthly, quarterly, and annual passes available at a discounted price. Free rides are available to UC Davis undergraduate students (fee assessed quarterly with registration), seniors, disabled passengers, City of Davis employees, and transferring Sacramento Regional Transit, Yolobus, Capitol Corridor, and Fairfield Transit passengers.

Table 1: Unitrans Route Summary – Project Site Vicinity

Route	Weekday (M-Th)		Friday		Weekend	
	Peak Frequency (min)	Span	Peak Frequency (min)	Span	Peak Frequency (min)	Span
A – Silo/Amtrak/5th/Alhambra	30	7 a.m. to 11 p.m.	30	7 a.m. to 9 p.m.	--	--
O – MU/Amtrak/5th/Alhambra/Target	--	--	--	--	60	9 a.m. to 7 p.m.
P – MU/Davis Perimeter Counter Clockwise	30	6 a.m. to 11 p.m.	30	6 a.m. to 9 p.m.	60	8 a.m. to 7 p.m.
Q – MU/Davis Perimeter Clockwise	30	6 a.m. to 11 p.m.	30	6 a.m. to 9 p.m.	60	8 a.m. to 7 p.m.
Z – MU/Amtrak/Cantrill/5th	30	7 a.m. to 7 p.m.	30	7 a.m. to 7 p.m.	--	--

Source: Unitrans, 2020.

- **Yolobus** provides fixed route bus and paratransit service throughout Yolo County, as well as commuter bus service to downtown Sacramento. Single rides are available for $2.25 and $3.25 for local and express services, respectively. Discounted daily and monthly passes are also available.

  Local bus routes serving the project site include Routes 42A and 42B, which provide clockwise/counterclockwise loop service between Davis, Woodland, Sacramento International Airport, Downtown Sacramento, and West Sacramento on hourly headways. Express bus routes serving the project site include Routes 43 and 232, both of which are oriented towards serving Davis residents working in Downtown Sacramento (i.e., morning service is eastbound-only and afternoon/evening service is westbound-only).

- **Amtrak** serves the Davis Transit Depot near Second and G Streets in downtown Davis, approximately three miles west of the project site. Amtrak Capitol Corridor service is available at the depot, connecting passengers to Sacramento and Roseville to the east and the Bay Area to the west. Currently, 15 daily Capitol Corridor round-trips are available at the station during regular weekday service. In addition to regular Capitol Corridor service, Amtrak serves the Davis Transit Depot with daily Coast Starlight service (to Los Angeles and Seattle) and intercity bus connections to other Amtrak rail lines (e.g., the Amtrak San Joaquin lines at Sacramento Valley Station).

UC Davis, together with operating partners Yolobus and the Sacramento Regional Transit District, launched the Causeway Connection bus service in April 2020. This service connects the UC Davis main campus in Davis and the UC Davis Health Campus in Sacramento, replacing the previous inter-campus

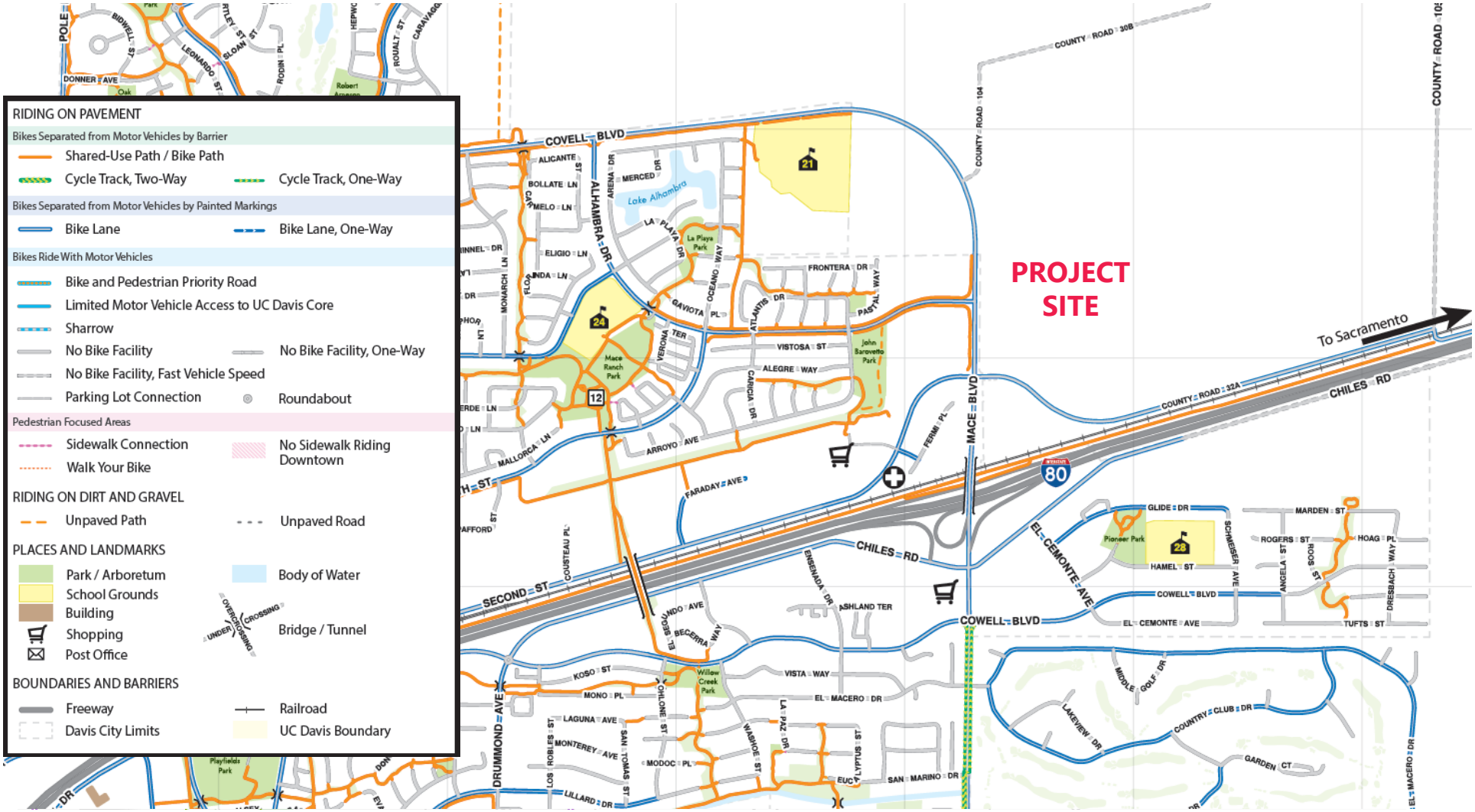
shuttle. The service operates Monday through Friday between 6:30 a.m. and 7 p.m. and Saturday and Sunday from 7 a.m. to 4 p.m. with hourly headways in both the eastbound and westbound directions.

Figure 3 displays the bus stops and routes serving the project site vicinity. The primary bus stops serving the project site are located at the Mace park-and-ride, on southbound Mace Boulevard midblock between Alhambra Drive and Second Street, and on northbound Mace Boulevard immediately north of Second Street.

Rail Transportation

Union Pacific Railroad Company (UPRR) operates a railroad line that runs east-west through the City of Davis. The railroad tracks border the western edge of the project site and are grade-separated with Mace Boulevard. At-grade crossings exist to the south within the study area at County Road 105. The rail crossing includes advanced warning signs, pavement markings, and highway stop signs. According to the Federal Railroad Administration[1], this line is used by an average of 53 trains per day, including freight trains and Amtrak passenger trains. Yolo County, together with UPRR and the City of Davis, is currently evaluating potential modifications to the County Road 105 at-grade crossing to reduce the potential for conflicts with rail operations.

[1] http://safetydata.fra.dot.gov/officeofsafety/publicsite/crossing/xingqryloc.aspx



Source: Davis Bike Map, City of Davis

Figure 2

Existing Bicycle Facilities

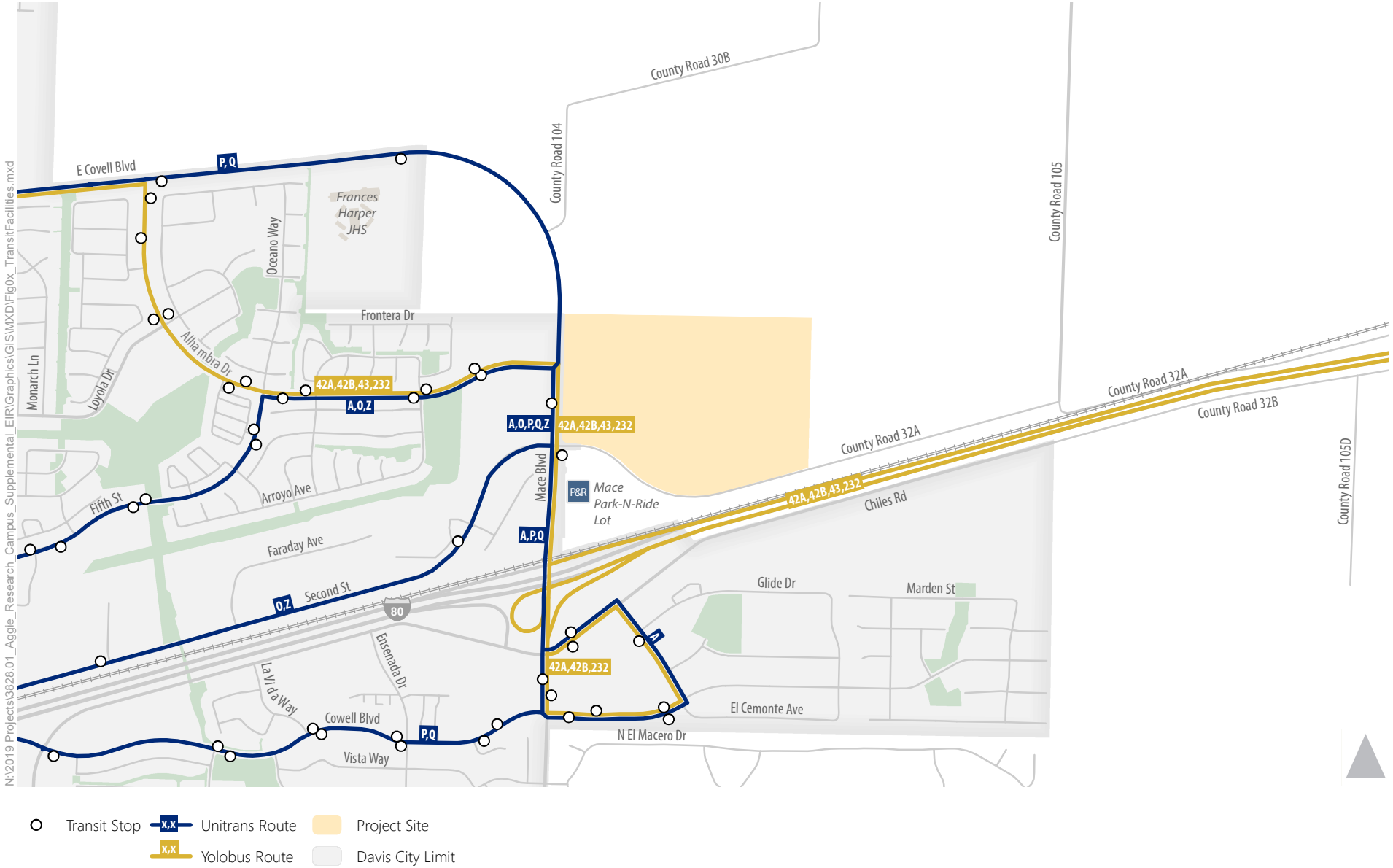


Figure 3

Existing Transit Service and Facilities

4. Regulatory Setting

Existing transportation policies, laws, and regulations that would apply to the project are summarized below. This information provides a context for the impact discussion related to the project's consistency with applicable regulatory conditions and development of significance criteria for evaluating project impacts.

State

California Department of Transportation

The California Department of Transportation (Caltrans) is responsible for planning, designing, constructing, operating, and maintaining the State Highway System (SHS). Federal highway standards are implemented in California by Caltrans. Any improvements or modifications to the SHS would need to be approved by Caltrans. The following Caltrans planning documents emphasize the State of California's focus on transportation infrastructure that supports mobility choice through multimodal options, smart growth, and efficient development.

- *Smart Mobility 2010: A Call to Action for the New Decade* (Caltrans, 2010a).
- *Complete Streets Implementation Action Plan* (Caltrans, 2010b).
- *California Transportation Plan 2040* (Caltrans, 2016a).
- *Strategic Management Plan 2015-2020—2019 Update* (Caltrans, 2019a).

Within the project vicinity, Caltrans has developed the following plans and studies that set expectations for the performance of I-80.

- *District System Management and Development Plan, Caltrans District 3* (Caltrans, 2013).
- *Transportation Concept Report Interstate 80, District 3* (Caltrans, 2017).

Caltrans' Local Development – Intergovernmental Review Program (LD-IGR) provides guidance on the evaluation of traffic impacts to State highway facilities. The *Vehicle Miles Traveled-Focused Transportation Impact Study Guide* (Caltrans, May 20, 2020) provides guidance on the evaluation of traffic impacts to State highway facilities. This study guide provides guidance to Caltrans Districts, lead agencies, tribal governments, developers, and consultants based on changes to the agency's review process for transportation analysis of land use projects and plans under the updated State CEQA Guidelines. The guide outlines how Caltrans will review land use projects with a focus on supporting state land use goals,

state planning priorities, and GHG emission reduction goals. It also identifies the possible transportation impacts on the SHS and potential non-capacity increasing mitigation measures for land use projects. The guide also emphasizes that VMT analysis is the primary review focus of Caltrans and references OPR's Technical Advisory as a basis for its guidance, referencing screening thresholds that would identify projects presumed to have a less-than-significant transportation impact. Notably, it recommends use of the thresholds in the Technical Advisory for land use projects. Caltrans supports streamlining for projects that meet these screening thresholds because they help achieve VMT reduction and mode shift goals.

The *Interim Local Development Intergovernmental Review Safety Review Practitioners Guidance* (Caltrans, December 18, 2020) provides updated guidance to Caltrans Districts, lead agencies, developers, and consultants conducting safety review for proposed land use projects and plans that would affect the State Highway System. The interim guidance recommends that safety analyses include a review of three primary elements related to transportation safety—design standard compliance, collision history, and collision risk (consistent with the Federal Highway Administration's Systemic Approach to Safety). The interim guidance does not establish specific analysis methods or significance thresholds for determining safety impacts under CEQA. Additionally, Caltrans notes that local agencies may use the interim guidance at their own discretion as a guide for review of local facilities. Finally, the interim guidance states that Caltrans District traffic safety staff will use available data to determine if the proposed project may influence or contribute to significant impacts to the State Highway System.

Senate Bill 743

SB 743 creates or encourages several statewide changes to the evaluation of transportation and traffic impacts under CEQA. First, it directs the Governor's Office of Planning and Research (OPR) to amend the State CEQA Guidelines to establish new metrics for determining the significance of transportation impacts of projects within transit priority areas (TPAs) and allows OPR to extend use of the new metrics beyond TPAs. In the amended State CEQA Guidelines, OPR selected VMT as the preferred transportation impact metric and applied its discretion to recommend the use of VMT statewide. The California Natural Resources Agency certified and adopted the amended State CEQA Guidelines in December 2018. The amended State CEQA Guidelines state that "generally, VMT is the most appropriate measure of transportation impacts" and required the use of VMT statewide as of July 1, 2020. The amended State CEQA Guidelines further state that land use "projects within 0.5 mile of either an existing major transit stop or a stop along an existing high quality transit corridor should be presumed to cause a less-than-significant transportation impact."

Second, SB 743 establishes that aesthetic and parking impacts of a residential, mixed-use residential, or employment center projects on an infill site within a TPA shall not be considered significant impacts on the environment.

Third, SB 743 added Section 21099 to the Public Resources Code, which states that automobile delay, as described by level of service (LOS) or similar measures of vehicular capacity or traffic congestion, shall not be considered a significant impact on the environment upon certification of the State CEQA Guidelines by the California Natural Resources Agency. Since the amended State CEQA Guidelines were certified in December 2018, changes in LOS or similar measures of vehicular capacity or traffic congestion are not considered a significant impact on the environment.

Lastly, SB 743 establishes a new CEQA exemption for a residential, mixed-use, and employment center project (a) within a TPA, (b) consistent with a specific plan for which an EIR has been certified, and (c) consistent with an SCS. This exemption requires further review if the project or circumstances changes significantly.

Technical Advisory on Evaluating Transportation Impacts in CEQA

To aid in SB 743 implementation, OPR released a Technical Advisory on Evaluating Transportation Impacts in CEQA (Technical Advisory) in December 2018. The Technical Advisory provides advice and recommendations to CEQA lead agencies on how to implement SB 743 changes. This includes technical recommendations regarding the assessment of VMT, thresholds of significance, VMT mitigation measures, and screening thresholds for certain land use projects. Lead agencies may consider and use these recommendations at their discretion.

The Technical Advisory identifies screening thresholds to quickly identify when a project should be expected to cause a less-than-significant impact without conducting a detailed study. The Technical Advisory suggests that projects meeting one or more of the following criteria should be expected to have a less-than-significant impact on VMT.

- Small projects—projects consistent with a SCS and local general plan that generate or attract fewer than 110 trips per day.
- Projects near major transit stops—certain projects (residential, retail, office, or a mix of these uses) proposed within 0.5 mile of an existing major transit stop or an existing stop along a high-quality transit corridor.
- Affordable residential development—a project consisting of a high percentage of affordable housing may be a basis to find a less-than-significant impact on VMT.
- Local-serving retail—local-serving retail development tends to shorten trips and reduce VMT. The Technical Advisory encourages lead agencies to decide when a project will likely be local-serving, but generally acknowledges that retail development including stores larger than 50,000 square feet might be considered regional-serving. The Technical Advisory suggests lead agencies analyze

whether regional-serving retail would increase or decrease VMT (i.e., not presume a less-than-significant impact).

- Projects in low-VMT areas—residential and office projects that incorporate similar features (i.e., density, mix of uses, transit accessibility) as existing development in areas with low VMT will tend to exhibit similarly low VMT.
- The Technical Advisory also identifies recommended numeric VMT thresholds for residential, office, and retail projects, as described below.
- Residential development that would generate vehicle travel exceeding 15 percent below existing residential VMT per capita may indicate a significant transportation impact. Existing VMT per capita may be measured as a regional VMT per capita or as city VMT per capita.
- Office projects that would generate vehicle travel exceeding 15 percent below existing regional VMT per employee may indicate a significant transportation impact.
- Retail projects that result in a net increase in total VMT may indicate a significant transportation impact.

The Technical Advisory also provides guidance on impacts to transit. Specifically, the Technical Advisory suggests that lead agencies generally should not treat the addition of new transit users as an adverse impact. As an example, the Technical Advisory suggests the following.

> [An] infill development may add riders to transit systems and the additional boarding and alighting may slow transit vehicles, but it also adds destinations, improving proximity and accessibility. Such development also improves regional vehicle flow by adding less vehicle travel onto the regional network. (Governor's Office of Planning and Research, 2018).

Local

City of Davis General Plan

The *City of Davis General Plan* Transportation Element was last updated in 2013. The following goals and policies related to transportation and circulation are applicable to the project. Most of the listed goals and policies are relevant at a project-level scale, versus City-wide.

Goal #1: Davis will provide a comprehensive, integrated, connected transportation system that provides choices between different modes of transportation.

Performance Objective #1.1: Achieve at least the following mode share distribution for all trips by 2035:

- 10% of trips by walking
- 10% of trips by public transportation
- 30% of trips by bicycle

Performance Objective #1.2: Increase use of walking, bicycling, and public transportation to and from the following places:

- Work
- Schools (elementary, junior high, and senior high)
- UC Davis,
- Downtown

Goal #2: The Davis transportation system will evolve to improve air quality, reduce carbon emissions, and improve public health by encouraging usage of clean, energy-efficient, active (i.e. human powered), and economically sustainable means of travel.

Performance Objective #2.1: Reduce carbon emissions from the transportation sector 61 percent by 2035.

Performance Objective #2.2: Reduce vehicle miles traveled (VMT) by 39 percent by 2035.

Performance Objective #2.3: Annually increase funding for maintenance and operation needs of the transportation system, until fully funded.

Goal #3: Davis will provide a safe and convenient Complete Streets network that meets the needs of all users, including children, families, older adults, and people with disabilities.

Performance Objective #3.1: Improve the quality of service for all users of the transportation system.

Performance Objective #3.2: Reduce the total number of collisions between motor vehicles and bicyclists or pedestrians by 50% by 2035.

Goal #4: Davis will strengthen its status as a premier bicycling community in the nation by continuing to encourage bicycling as a healthy, affordable, efficient, and low-impact mode of transportation accessible to riders of all abilities, and by continuously improving the bicycling infrastructure.

Performance Objective #4.1: Commit a minimum amount of funding for bicycle programming and infrastructure as identified in the "Beyond Platinum – Bicycle Action Plan".

Policy TRANS 1.6: Reduce carbon emissions from the transportation system in Davis by encouraging the use of non-motorized and low carbon transportation modes.

Policy TRANS 1.7: Promote the use of electric vehicles and other low-polluting vehicles, including Neighborhood Electric Vehicles (NEV).

Policy TRANS 2.1: Provide Complete Streets to meet the needs of drivers, public transportation vehicles and riders, bicyclists, and pedestrians of all ages and abilities in all transportation planning, programming, design, construction, reconstruction, retrofit, operations, and maintenance activities and products. The City shall view all transportation improvements as opportunities to improve safety, access, and mobility for all travelers in Davis, and recognizes bicycle, pedestrian, fixed-route transit, and demand-response para-transit modes as integral elements of the transportation system along with motor vehicles. This policy also includes the following language pertaining to automobile level of service:

- LOS D or better is acceptable during non-peak traffic hours.
- LOS E or better is acceptable during peak traffic hours.
- LOS F is acceptable during peak traffic hours in the Core Area and Richards Boulevard/Olive Drive area.
- LOS F is acceptable during peak traffic hours in other areas if approved by City Council.

Action TRANS 2.1(i): Establish a multi-modal Level of Service (LOS) standard to address the needs of all users of the street, including bicyclists and pedestrians, at intersections.

Action TRANS 2.1(k): Work with citizens and technical experts to review the street width and "Greenstreet" standards to reflect pedestrian and bicycle friendly policies in this chapter, including but not limited to the following:

- Design/redesign residential and collector streets to slow vehicular traffic to 25 mph or less.
- Design travel lanes to prioritize pedestrians and bicycles, including provisions for a marked "buffer space" to further separate bicycles from both moving and parked motor vehicles, where right-of-way allows.
- Eliminate intersection standards that allow high speed right turns for motor vehicles.
- Adjust intersection signal operations to smooth traffic flow, reduce automobile idle time, and to adequately service bicycles and pedestrians by giving priority and to maintain momentum.

Roadways within the study area with a Greenstreet designation include Mace Boulevard, Covell Boulevard, Second Street, Chiles Road, Cowell Boulevard, and Pole Line Road.

Action TRANS 2.1(l): Preserve rights-of-way for future transportation use.

Action TRANS 2.1(m): Ensure transit stops have adequate curb space for loading and unloading passengers.

Policy TRANS 2.2: Implement state-of-the-art street design solutions to improve bicycle/pedestrian access, comfort, and safety that may include:

- Bicycle boxes at intersections
- Cycletracks
- Shared lane markings (sharrows)
- Contraflow bicycle lanes
- Improved bicycle detection at intersections
- Two-stage turn queue boxes
- Colored bicycle lanes
- Bicycle route wayfinding

Policy TRANS 2.3: Apply best practices in sustainability to new streets and redesigns of existing streets/corridors.

Policy TRANS 2.4: As part of the initial project review for any new project, a project-specific traffic study may be required. Studies shall identify impacted transportation modes and recommend mitigation measures designed to reduce these impacts to acceptable levels.

Policy TRANS 2.5: Create a network of street and bicycle facilities that provides for multiple routes between various origins and destinations.

Policy TRANS 2.7: Minimize impacts of vehicle traffic on local streets to maintain or enhance livability of the neighborhoods. Consider traffic calming measures along collector and minor arterial streets, where appropriate and feasible, to slow speeds.

Policy TRANS 2.8: Improve the function, safety, and appearance of selected corridors as illustrated.

Action: Develop "corridor plans" for selected streets which warrant special treatment because of existing impact problems or operational issues. Corridor plans should take into consideration adjacent land uses and result in streets that are both functional and aesthetic. The plans should utilize innovative means of slowing traffic, where appropriate, and provide safe access for pedestrians and bicyclists. Mitigation shall be incorporated to protect residences and sensitive receptors from noise, air

pollution and other traffic related impacts. The corridor plans may deviate from the standards established in the General Plan, if deviates improve the livability of the area. Covell Boulevard from SR 113 to the west City limit is included in this program.

Policy TRANS 2.10: Prohibit through truck traffic on streets other than identified truck routes shown in the Transportation Element.

Policy TRANS 3.1: Facilitate the provision of convenient, reliable, safe, and attractive fixed route, commuter, and demand responsive public transportation that meets the needs of the Davis community, including exploring innovative methods to meet specialized transportation needs.

Policy TRANS 3.3: Require new development to be designed to maximize transit potential.

Policy TRANS 4.2: Develop a continuous trails and bikeway network for both recreation and transportation that serves the Core, neighborhoods, neighborhood shopping centers, employment centers, schools and other institutions; minimize conflicts between pedestrians, bicyclists, equestrians, and automobiles; and minimize impacts on wildlife. Greenbelts and separated bike paths on arterials should serve as the backbone of much of this network.

Policy TRANS 4.3: Continue to build transportation improvements specifically targeted at bicycles. Refer to Bicycle Plan and Transportation Implementation Plan for list of bicycle-related projects.

Policy TRANS 4.5: Establish and implement bicycle parking standards for new developments and significant redevelopment.

Policy TRANS 4.7: Develop a system of trails around the edge of the city and within the city for recreational use and to allow pedestrians and bicyclists to reach open space and natural areas.

Policy TRANS 5.1: Use parking management techniques to efficiently manage motor vehicle parking supply and promote sustainability.

Policy TRANS 5.2: Existing and future off-street parking lots in development should contribute to the quality of the urban environment and support the goals of this chapter to the greatest extent possible.

Beyond Platinum – City of Davis Bicycle Action Plan

This document included discussions regarding goals and objectives, bicycle facility guidelines, engineering standards, and implementation and funding. The Plan was heard before and adopted by the City Council in February 2014. This document includes numerous goals and policies regarding enforcement, education, and engineering design. The following policies are particularly relevant to this study:

Goal: Provide bike lanes along arterial and collector streets. Provide separated bike paths adjacent to arterial and collector streets only where justified, with full consideration of the potential safety problems this type of facility can create.

Goal: Consider bicycle-operating characteristics in the design of bikeways, intersections, and traffic control systems.

In addition, Appendix C of this document shows a variety of proposed bicycle facilities throughout the City, including the following proposed bicycle facility enhancements within the vicinity of the project site:

- Buffered bike lanes on Second Street between Mace Boulevard and L Street
- Bike lane conflict markings and bike intersection crossing markings on Mace Boulevard at the I-80 interchange ramps

Sacramento Area Council of Governments

The Sacramento Area Council of Governments (SACOG) is responsible for the preparation of, and updates to, its Metropolitan Transportation Plan/Sustainable Communities Strategy (MTP/SCS) and the corresponding Metropolitan Transportation Improvement Program (MTIP) for the six-county Sacramento region. The MTP/SCS provides a 20-year transportation vision and corresponding list of projects. The MTIP identifies short-term projects (seven-year horizon) in more detail. The current 2020 MTP/SCS was adopted by the SACOG board in 2019. The previous MTP/SCS was adopted by the SACOG board in 2016.

5. Project Travel Characteristics

This chapter describes the expected travel characteristics of the proposed project. These characteristics will be used in the development of the Existing Plus Project condition. The Cumulative Plus Project condition will also use many of these same estimates, but will additionally consider changed conditions in the vicinity of the project site (e.g., buildout of nearby planned and approved development) between the two scenarios.

Project Description

The proposed project would consist of a mix of land uses including office/R&D, advanced manufacturing, ancillary retail, residential, and a hotel on 102 acres. The project is anticipated to be built out gradually in four phases over ten to fifteen years. **Table 2** presents the buildout development program for the project as proposed by the project applicant.

Table 2: DiSC 2022 Project – Proposed Land Use Program

Land Use	Units[1]	Buildout Quantities
Office/R&D	KSF	550
Advanced Manufacturing	KSF	550
Hotel/Conference	Rooms/KSF	150/160
Ancillary Retail[2]	KSF	80
Total Non-Residential Development	**KSF**	**1,340**
Single-Family Residential	DU	160
Multi-Family Residential	DU	300
Total Residential Development	**DU**	**460**

Notes: [1] KSF = Thousand Square Feet of floor space. DU = Dwelling Unit.
[2] Ancillary retail, as defined in the project description, is intended to provide employees, residents, and visitors with basic conveniences such as: lodging/accommodations, health and fitness center, convenient coffee, and dining opportunities all located within walking distance of the project's primary businesses and workforce housing uses.
Source: DiSC 2022 Project Description, July 2021.

This analysis also assumes the development of the Mace Triangle located on the property bounded by Mace Boulevard, CR 32A, and the Union Pacific railroad tracks. The Mace Triangle development would include 46,000 square feet of office/R&D and 25,000 square feet of ancillary retail.

The proposed project would include the following vehicular access points:

- Full access via existing signalized intersection at Mace Boulevard/Alhambra Drive. The project would construct a new fourth leg (east leg) at the intersection. The project site plan shows the construction of channelized right-turns for the northbound and westbound approaches.
- Full access on County Road 32A at the existing unsignalized intersection with the existing driveway to the Mace park-and-ride. The project would construct a new fourth leg) north leg at the intersection.
- Full access on County Road 32A at a new project roadway located east of the existing driveway to the Mace park-and-ride. This would be a new unsignalized intersection with a north leg serving the project site.

According to the DiSC 2022 Project Description, the project would also include the following on- and off-site transportation infrastructure and programs:

- One east-west and two north-south internal roadways.
- Construction of a landscaped pedestrian connection between the project site and the existing Mace park-and-ride.
- Construct a Transit Plaza on northbound Mace Boulevard south of Alhambra Drive. The Transit Plaza would accommodate Unitrans and Yolobus services, ridehailing services (e.g., Uber and Lyft, electric bike-share and scooter programs, and a potential future shuttle between the project site and downtown Davis, UC Davis, and the Sacramento Airport.
- Redesigned and enhanced intersections at Mace Boulevard/Second Street and Mace Boulevard/Alhambra Drive to focus on multi-modal travel.
- Construction of a new Class I shared-use path on the inside of the Mace Curve between the Mace Drainage Channel and Harper Junior High School.
- Acquisition and dedication of land to accommodate a future grade-separated bicycle and pedestrian crossing of Mace Boulevard located north of the Mace Drainage Channel.
- Approximately 1.5 mile bike path and adjacent pedestrian trail encircling the project site within the 50-foot transition zone of the agricultural buffer and on landscaped buffers.
- Up to 2,050 on-site vehicle parking spaces, to be built gradually as warranted by on-site parking demand. This would include 1,590 vehicle parking spaces for on-site commercial uses and 460 vehicle parking spaces for on-site residential uses. Parking associated with multifamily rental housing will be unbundled.
- Residential property managers and future employer tenants will be required to join the Yolo TMA and designate a Transportation Coordinator to better assist residents and employees with trip planning.

- Provision of bicycle support facilities such as bicycle racks, storage lockers, a repair station, and showers to encourage and help establish the use of bicycles as a predominant mode of transportation to the site.

Methodology

MXD+

Prior to 2007, conventional methods available to transportation engineers systematically overestimated the trips generated by and impacts of mixed-use development because they did not accurately reflect the amount of internal trip linking or the level of external trips made by transit, biking, and/or walking. This resulted in increased development costs, due to oversized infrastructure, skewed public perception, and resistance to approving smart growth. While the Institute of Transportation Engineers (ITE) Trip Generation Handbook does include a methodology for estimating internal trips, it only applies to AM and PM peak hour conditions and does not provide guidance for estimating daily internal trips.

In the early 2000's, two significant research studies provided the opportunity to improve the state of practice. One study sponsored by the US EPA (MXD) and another by the Transportation Research Board (NCHRP 684) have developed means to improve trip generation estimation for mixed-use development (MXD). The two studies examined over 240 mixed-use development sites throughout the U.S. and, using different approaches, developed new quantification methods. Fehr & Peers has reviewed the two methods, including the basis, capabilities, and appropriate uses of each, to produce a new method (MXD+) that combines the strengths of the two individual tools to establish a new best practice. MXD+ recognizes that traffic generation by mixed-use and other forms of sustainable development relate closely to the density, diversity, design, destination accessibility, transit proximity, and scale of development.

The MXD+ method explains 97 percent of the variation in trip generation among mixed-use developments, compared to 65 percent for the methods previously recommended by ITE. While remaining slightly (2 to 4 percent) conservative to avoid systematically understating impacts, it substantially reduces the 35 to 37 percent average overestimate of traffic generation produced by conventional ITE methods.

MXD+ improves the accuracy of impact estimation and gives planners a tool to rationally balance land use mix and to incorporate urban design, context compatibility, and transit orientation to create lower impact development. Fehr & Peers has applied MXD+ on hundreds of EIRs throughout California over the past decade, including EIRs for several projects in the City of Davis such as The Cannery and the West Davis Active Adult Community.

Transportation Demand Management (TDM) Strategies

The DiSC 2022 project identifies several transportation demand management (TDM) strategies intended to reduce vehicle travel to and from the project site. Of the strategies proposed by the project applicant, City staff provided feedback to Fehr & Peers regarding those that should be considered reasonably foreseeable and suitable for inclusion in the project trip generation estimation process. Generally, these include strategies that are wholly within the control of the project applicant (e.g., design features within the project site) and exclude strategies that require actions by other entities and/or new funding sources that are not yet identified (e.g., public transit service expansion to the project site).

The TDM strategies proposed by the project applicant that are included in this trip generation analysis include the following:

- Residential property managers and future employer tenants will be required to join the Yolo TMA and designate a Transportation Coordinator to better assist residents and employees with trip planning.
- Unbundled parking for residential units
- Reduction of residential parking supply

Recent research published in the California Air Pollution Control Officers Association (CAPCOA) *Draft Handbook for Assessing GHG Emission Reductions, Climate Vulnerabilities, and Health and Equity* (the Handbook) quantifies the vehicle trip reduction effects of comparable TDM strategies. This analysis incorporates the following strategies and associated trip reduction effects for the residential and commercial components of the DiSC 2022 project:

- Residential Component – Total 5.6% reduction in resident vehicle travel. Resident vehicle travel represents an estimated 80% of all vehicle travel generated by residential land uses.
    - Limit Residential Parking Supply (CAPCOA Handbook Strategy T-14) – 3% reduction in resident vehicle travel.[2] Limiting the amount of parking available creates scarcity and adds additional time and inconvenience to trips made by private auto, thus disincentivizing driving as a mode of travel. Trip reduction quantification for this strategy considers the proposed residential parking supply relative to the unconstrained residential parking demand using parking generation rates from the Institute of Transportation Engineers (ITE) *Parking Generation Manual*. Unconstrained parking demand represents the parking demand generated by land uses in instances where the surrounding parking system does

[2] Calculated using CAPCOA Handbook Strategy T-14 as follows:
((587 parking spaces of demand – 460 parking spaces of supply) / 587 parking spaces of demand) x 100% of project residential component vehicle travel generated by residents x 37% of household VMT that is commute based x 37% reduction in commute mode share by driving among households in areas with scarce parking = 3% vehicle trip reduction from project residential component

not constrain supply such that parking demand is diminished (i.e., people who choose to drive and park are able to do so without consideration of parking supply constraints). The residential component of the project would provide 460 parking spaces compared to unconstrained demand of 587 parking spaces.[3]

- Unbundle Residential Parking Costs from Property Cost (CAPCOA Handbook Strategy T-15) – 2.6% reduction in resident vehicle travel.[4] This measure would unbundle, or separate, a residential project's parking costs from property costs, requiring those who wish to purchase parking spaces to do so at an additional cost from the property cost. On the assumption that parking costs are passed through to the vehicle owners/drivers utilizing the parking spaces, this measure would result in decreased vehicle ownership and, therefore, a reduction in VMT and GHG emissions. For the purposes of this analysis, it is assumed that unbundled parking costs would be equivalent to $50 per month.

- Commercial Component – Total 8% reduction in vehicle travel from employee commute trips. The project applicant would join the Yolo TMA and hire a Transportation Coordinator to better assist residents and employees with trip planning. Typically, the role of a Transportation Coordinator (often referred to as a TDM coordinator) for employment uses is to oversee the implementation of a commute trip reduction program. Therefore, the CAPCOA Handbook strategies listed below include those that involve the implementation of a commute trip reduction program. Home-based-work employee commute trips[5] represent an estimated 35% of all vehicle trips generated by project commercial uses.
  - Implement Commute Trip Reduction Program (CAPCOA Handbook Strategy T-4) – 4% reduction in employee commute trips.[6] This measure would implement a voluntary commute trip reduction program with employers. Such programs discourage single-occupancy vehicle trips and encourage other modes of transportation such as carpooling, taking transit, walking, and biking, thereby reducing vehicle travel.
  - Implement Commute Trip Reduction Marketing (CAPCOA Handbook Strategy T-6) – 4% reduction in employee commute trips.[7] This measure would implement a marketing

[3] Unconstrained parking demand for the project residential component estimated as follows based on parking generation rates from the ITE *Parking Generation Manual*:
(160 single-family dwelling units x 1.21 parking spaces/DU) + (300 multi-family dwelling units x 1.31 parking spaces/DU) = 587 parking spaces

[4] Calculated using CAPCOA Handbook Strategy T-15 as follows:
($600 annual parking cost per space / $9,282 average annual vehicle cost) x -0.4 elasticity of vehicle ownership with respect to total vehicle cost x 1.01 adjustment factor from vehicle ownership to VMT = 2.6% vehicle trip reduction from project residential component

[5] Home-based-work trips represent trips directly between a home location and a work location. Research indicates that home-based-work trips associated with employment land uses exhibit the greatest vehicle trip reduction potential with the implementation of commute trip reduction strategies.

[6] Calculated using CAPCOA Handbook Strategy T-4 as follows:
100% of employees eligible for program x -4% reduction in commute VMT from eligible employees = 4% vehicle trip reduction from project commercial component employee commute trips

[7] Calculated using CAPCOA Handbook Strategy T-6 as follows:

strategy to promote the project site employers' commute trip reduction program. Information sharing and marketing promote and educate employees about their travel choices to the employment location beyond driving such as carpooling, taking transit, walking, and biking, thereby reducing vehicle travel.

Bicycle, Walking, and Transit Trip Reductions

This analysis utilizes the following data sources to estimate project external vehicle trip reductions attributable to bicycle, pedestrian, and transit trips:

- Residential Component – A total of 1,148 residents[8] would live at the project site. US Census American Community Survey (ACS) commute mode share data for existing residential neighborhoods near the project site[9] was utilized to estimate the following bicycle, pedestrian, and transit commute mode share associated with project residents:
    - Public transportation: 1.7%
    - Walking: 1.7%
    - Bicycle: 5.5%

  These percentages were utilized to estimate bicycle, walk, and transit commute trips for project site residents traveling to employment locations both on- and off-site.
- Commercial Component – A total of 2,800 employees[10] would work at the project site. City staff instructed Fehr & Peers to assume that project employees would reside in the City of Davis at a comparable rate as existing employees who work in the City of Davis who also live in the City of Davis. According to US Census Longitudinal Employer-Household Dynamics (LEHD) data, in 2019, 26% of employees who work in the City of Davis also live in the City of Davis. Assuming this same rate for DiSC 2022 project employees, an estimated 728 DiSC 2022 employees would reside within Davis. According to US Census ACS commute mode share data, employees who reside in the City of Davis exhibit the following commute mode share characteristics (adjusted to exclude UC Davis employees who reside in Davis):
    - Public transportation: 8.7%
    - Walking: 4.2%

100% of employees eligible for program x -4% reduction in commute VMT from eligible employees x 1 adjustment from vehicle trips to VMT = 4% vehicle trip reduction from project commercial component employee commute trips

[8] Project residents estimated as follows based on dwelling unit occupancy rates from the US Census ACS:
(160 single-family dwelling units x 2.6 occupants/DU) + (300 multi-family dwelling units x 2.44 occupants/DU) = 1,148 residents

[9] Journey to work commute mode share data derived from ACS 2019 5-year estimates. Non-motorized mode share estimates represent the weighted averages for Census Tracts 104.01, 106.05, and 106.07, which include Mace Ranch and South Davis east of Drummond Avenue.

[10] Project employees estimated as follows:
(1,100,000 sf office/R&D/manufacturing space / 425 square feet/employee) + (160 ancillary retail employees) + (50 hotel employees) = 2,800 employees

- Bicycle: 9.8%

These percentages were utilized to estimate bicycle, walk, and transit commute trips for project site employees traveling to the project site from residential areas elsewhere in Davis.

Project Trip Generation

Table 3 summarizes the estimated weekday and peak hour trip generation for the DiSC 2022 project the methods described previously. As shown in Table 3, the project would generate an estimated 11,284 net new daily trips, 1,052 net AM peak hour trips, and 1,155 net PM peak hour trips during a typical weekday.

The following factors influence the estimated trip reductions resulting from internalization and shifts to transit, walk, and bike trips:

- Suburban location on the edge of the developed area
- Low-density surroundings
- Walk/bike access to off-site trip generators/activity centers
- Intercity/commuter transit access
- High jobs/population ratio, which would result in the project attracting a large number of commute trips without producing a commensurate number of commute trips (i.e., these must be fulfilled by external trips)
- Lack of uses complementary to residential land uses (e.g., neighborhood commercial)

Table 3: DiSC 2022 Project – Vehicle Trip Generation

Land Use	Units	ITE Code	Quantity	Daily	AM In	AM Out	AM Total	PM In	PM Out	PM Total
DiSC 2022 Project Component										
Net New Uses										
Office/R&D	1,000 Sq. Ft. GLA	710[1]	630	6,458	555	90	645	109	568	677
Manufacturing	1,000 Sq. Ft. GLA	140[2]	550	2,162	263	78	341	114	255	369
Hotel	Rooms	310[3]	150	1,267	41	29	70	44	42	86
Multifamily Housing Low Rise	Dwelling Units	220[4]	160	1,169	17	58	75	57	33	90
Multifamily Housing Mid Rise	Dwelling Units	221[5]	300	1,633	26	74	100	77	50	127
Raw External Project Trips				12,689	902	329	1,231	401	948	1,349
Reductions										
Internal Capture				-764	-67	-25	-92	-18	-44	-62
External Walk and Bike				-120	-4	-16	-20	-28	-24	-52
External Transit				-166	-26	-8	-34	-10	-32	-42
TDM Reductions				-355	-24	-9	-33	-12	-26	-38
Total Reductions				*-1,405*	*-121*	*-58*	*-179*	*-68*	*-126*	*-194*
Net New External Project Trips				**11,284**	**781**	**271**	**1,052**	**333**	**822**	**1,155**
Mace Triangle Project Component										
Office/R&D	1,000 Sq. Ft. GLA	710[1]	81	762	80	13	93	13	69	82
Project Total (DiSC 2022 + Mace Triangle)										
Net New External Project Trips				**12,046**	**861**	**284**	**1,145**	**346**	**891**	**1,237**

Notes:

[1] ITE Trip Generation land use category (710) – General Office Building (Adj Streets, 7-9A, 4-6P). Includes 80,000 sq. ft. of proposed ancillary retail space for DiSC 2022 and 25,000 sq. ft. of proposed ancillary retail space for the Mace Triangle, as permitted by ITE for this land use category.

- Daily: Ln(T) = 0.97 * ln(X) + 2.50
- AM Peak Hour: T = 0.94(X) + 26.49 (88% in, 12% out)
- PM Peak Hour: Ln(T) = 0.95 * ln(X) + 0.36 (17% in, 83% out)

[2] ITE Trip Generation land use category (140) - Manufacturing (Adj Streets, 7-9A, 4-6P)

- Daily: T = 3.93(X)
- AM Peak Hour: T = 0.62(X) (73% in, 27% out)
- PM Peak Hour: T = 0.67(X) (44% in, 56% out)

[3] ITE Trip Generation land use category (310) - Hotel (Adj Streets, 7-9A, 4-6P)

- Daily: T = 11.29(X) + -426.97
- AM Peak Hour: T = 0.50(X) + -5.34 (59% in, 41% out)
- PM Peak Hour: T = 0.75(X) + -26.02 (51% in, 49% out)

[4] ITE Trip Generation land use category (220) - Multifamily Housing Low Rise (Adj Streets, 7-9A, 4-6P). This land use category was selected for use for the proposed 160 dwelling units of single-family housing. ITE indicates that this land use category is appropriate for use for attached housing between one and three stories in height, which is aligned with the proposed single-family housing product as described in the project description. Alternative options identified by ITE include detached single-family housing and mid-rise multi-family housing, neither of which align with the proposed single-family housing product as described in the project description.

- Daily: T = 7.56(X) + -40.86
- AM Peak Hour: Ln(T) = 0.95 * ln(X) + -0.51 (20% in, 80% out)
- PM Peak Hour: Ln(T) = 0.89 * ln(X) + -0.02 (65% in, 35% out

[5] ITE Trip Generation land use category (221) - Multifamily Housing Mid-Rise (Adj Streets, 7-9A, 4-6P)

- Daily: T = 5.45(X) + -1.75
- AM Peak Hour: Ln(T) = 0.98 * ln(X) + -0.98 (21% in, 79% out)
- PM Peak Hour: Ln(T) = 0.96 * ln(X) + -0.63 (65% in, 35% out)

Sources: Institute of Transportation Engineers (ITE) *Trip Generation Manual, 10th Edition*, 2017; Fehr & Peers, 2021.

Vehicle Miles Traveled (VMT)

In this study, vehicle miles traveled (VMT) estimates were prepared for the purposes of identifying potential transportation impacts, as well as to inform other EIR sections including air quality, noise, energy, and greenhouse gas emissions. Project-generated VMT estimates were derived from the process previously described in the Analysis Methodology section.

The proposed DiSC 2022 project is estimated to generate 138,400 VMT under existing conditions and 116,200 VMT under cumulative conditions on a typical weekday. The Mace Triangle project component is estimated to generate 10,800 VMT under existing conditions and 8,500 VMT under cumulative conditions on a typical weekday.

Changes to project-generated VMT estimates between Existing Plus Project and Cumulative Plus Project can be primarily attributed to changes in travel distances made by project residents and employees. They occur because of different local and regional land use patterns that would alter travel behavior within and between the City of Davis and neighboring jurisdictions (e.g., planned residential development within the City of Davis and on the UC Davis campus would enable a greater number of project employees to live locally, thereby reducing their work commute trip distance).

6. Significance Criteria

This section describes the thresholds or criteria that determine whether the project would cause an adverse effect to the roadway system (via its VMT contribution) as well as to the bicycle, pedestrian, and transit systems. These thresholds are based on policies from the *City of Davis General Plan*, policies from owner/operators of affected transportation facilities (e.g., Caltrans), criteria utilized in previous transportation studies prepared by the City, and professional judgment.

Roadway System VMT Criteria

The project is considered to result in a significant impact to the roadway system (via its VMT contribution) if the project-generated VMT per service population exceeds any of the following thresholds relative to existing local or regional VMT per service population averages:

- VMT Threshold #1: Project-generated VMT per service population would be less than or equal to local or regional VMT per service population averages, as analyzed for recent City of Davis CEQA documents;
- VMT Threshold #2: Project-generated VMT per service population would be less than or equal to 15 percent lower than the local or regional VMT per service population averages, as recommended by OPR in the Technical Advisory on Evaluating Transportation Impacts in CEQA; and
- VMT Threshold #3: Project-generated VMT per service population would be less than or equal to 14.3 percent lower than the local or regional VMT per service population averages, the threshold needing to be met in order to be consistent with the 2017 Scoping Plan Update and to achieve State climate goals as defined by the California Air Resources Board (CARB) in the Technical Advisory on Evaluating Transportation Impacts in CEQA.

Bicycle Facility Criteria

The project is considered to result in a significant impact to bicycle facilities if:

- The project conflicts with existing, planned, or possible future bicycle facilities; or
- The project otherwise decreases the performance or safety of such facilities.

Pedestrian Facility Criteria

The project is considered to result in a significant impact to pedestrian facilities if:

- The project conflicts with existing, planned, or possible future pedestrian facilities; or
- The project otherwise decreases the performance or safety of such facilities.

Transit Service and Facilities Criteria

The project is considered to result in a significant impact to transit facilities and services if:

- The project conflicts with existing, planned, or possible future transit facilities and services; or
- The project otherwise decreases the performance or safety of such facilities and services.

Other Transportation Considerations

The project is considered to result in a significant impact if any of the following conditions occur:

- The project does not provide for adequate emergency vehicle access and on-site circulation;
- Construction-related traffic causes adverse effects as defined by the transportation system criteria described above; or
- The project would conflict with a program, plan ordinance, or policy addressing the circulation system.

7. Impacts and Mitigation Measures

This section describes the evaluation of potential transportation impacts associated with the construction of the project and, in instances where the project would cause a significant impact, identifies potential mitigation measures that would lessen the severity of the impact.

Project Impacts and Mitigation Measures

Impact 1: Impacts to vehicle miles traveled (VMT) on the roadway system.

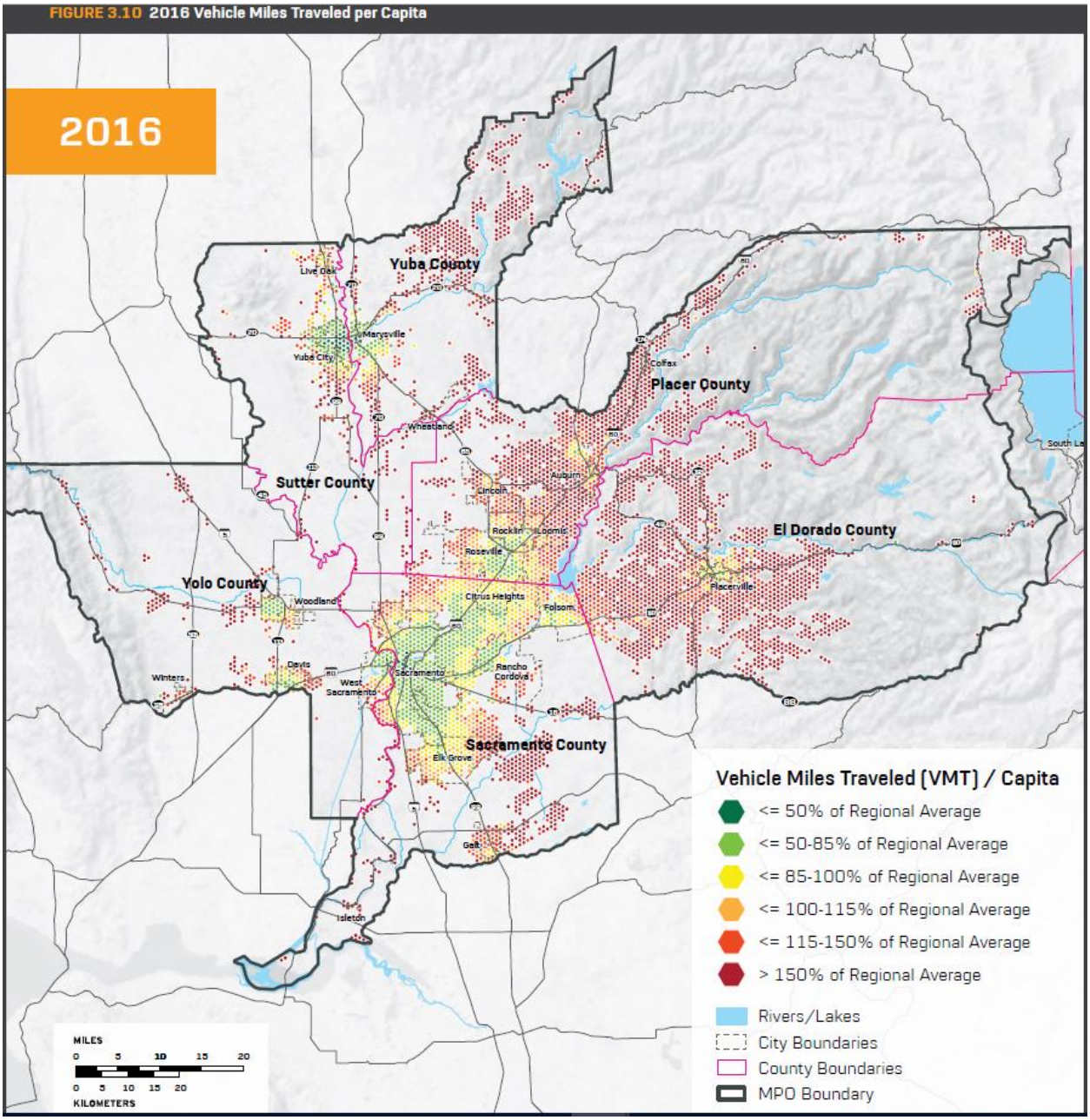
Implementation of the proposed project would change local and regional VMT per service population in a manner that would exceed relevant local and State thresholds. This impact would therefore be **significant**.

The potential impact to VMT was evaluated by comparing the estimated VMT per service population (defined as project residents plus employees) that would be generated by the project to the local and regional VMT per service population averages. For the purposes of this study, the DiSC 2022 project is considered to result in a significant impact if the project-generated VMT per service population exceeds any of the following thresholds relative to the existing local or regional VMT per service population averages:

- VMT Threshold #1: Project-generated VMT per service population would be less than or equal to the existing local or regional VMT per service population averages, as analyzed for recent City of Davis CEQA documents;
- VMT Threshold #2: Project-generated VMT per service population would be less than or equal to 15 percent lower than the local or regional VMT per service population averages, as recommended by OPR in the Technical Advisory on Evaluating Transportation Impacts in CEQA; and
- VMT Threshold #3: Project-generated VMT per service population would be less than or equal to 14.3 percent lower than the local or regional VMT per service population averages, the threshold needing to be met in order to be consistent with the 2017 Scoping Plan Update and to achieve State climate goals as defined by the California Air Resources Board (CARB) in the Technical Advisory on Evaluating Transportation Impacts in CEQA.

Table 4 presents the results of the VMT analysis. The proposed DiSC 2022 project and future buildout of the Mace Triangle are estimated to generate 138,400 VMT and 10,800 VMT, respectively, under Existing Plus Project conditions on a typical weekday. The project would generate an estimated 36.34 VMT per service population (i.e., residents plus employees) under Existing Plus Project conditions. The total VMT that would be generated by the DiSC 2022 is equal to four percent of the total VMT generated by the City of Davis under existing conditions.

The 2020 SACOG MTP/SCS analyzed existing (2016) and future (2040) VMT per capita for geographic areas throughout the SACOG region. The image on the following page illustrates the VMT per capita of the DiSC 2022 project vicinity relative to the regional VMT per capita average in 2016. According to the SACOG analysis, the DiSC 2022 project is located within a high VMT generating area, where VMT per capita levels measure between 115 and 150 percent of the regional average.



Analyses were performed using US Census OnTheMap database for 2017 conditions. The analysis determined that there is a sizeable number of persons residing in the Sacramento metropolitan area that commute long distances to work destinations west of Davis, including many in the Bay Area. If the employment component of the DiSC 2022 project could induce some of these employers to relocate their operations or operate satellite work centers at the project site, many of these trips could be 'intercepted',

resulting in considerably shortened trip distances. This would reduce the project-generated VMT and VMT per service population below the estimates presented in this analysis.

Data currently does not exist to enable quantification of the expected number of 'regional commute' employees that would shift their work destination to the DiSC 2022 project. Thus, the VMT estimates presented herein are reasonable, if not somewhat conservative, so as to ensure impacts are not understated. Potential information that would provide supporting evidence on this topic would include, but is not limited to, surveys of prospective DISC 2022 employers, employees, and residents and a detailed economic analysis of existing and anticipated future local and regional housing and employment trends (specifically those related to the City of Davis and UC Davis).

As shown in the Table 4, using this methodology, project-generated VMT per service population would measure below the average VMT per service population generated by the City of Davis, by the City of Davis with UC Davis, and by the SACOG region. However, the DiSC 2022 project would exceed thresholds #2 and #3 listed above, and a **significant** impact would occur.

Table 4: Weekday VMT per Service Population – Existing Plus Project Conditions

Metric	Project Site[1]	City of Davis[2]	City of Davis & UC Davis[3]	SACOG Region[4]
Total VMT	149,200	3,411,358	4,268,554	123,034,634
Residents	1,148	71,755	80,794	2,374,910
Employees	2,958	13,987	26,365	940,683
Service Population	4,106	85,742	106,159	3,315,593
Total VMT per Service Population	36.34	39.79	40.21	37.11
VMT Significance Criteria Comparison				
% Difference between DiSC 2022 project-generated VMT per service population and existing local/regional VMT per service population		-8.67%	-9.62%	-2.07%
Exceed VMT Threshold #1 (+0%)?		No	No	No
Exceed VMT Threshold #2 (-15%)?		Yes	Yes	Yes
Exceed VMT Threshold #3 (-14.3%)?		Yes	Yes	Yes

Notes: [1] Includes both the DiSC 2022 and the Mace Triangle. DiSC 2022 and Mace Triangle employee estimates derived from *City of Davis Economic Evaluation of Innovation Park Proposals* (BAE, July 2015) as follows: 2,800 DiSC 2022 employees + 158 Mace Triangle employees = 2,957 total project employees. DiSC 2022 resident estimates derived from American Community Survey unit occupancy estimates for the City of Davis as follows: (300 multi-family units x 2.44 occupants per unit) + (160 single-family units x 2.6 occupants per unit) = 1,148 total project residents.
[2] Resident and employee totals derived from the UC Davis/City of Davis Travel Demand Model land use inputs. Includes UC Davis residential uses located off-campus in the City of Davis (e.g., 8th and Wake Apartments).
[3] Resident and employee totals derived from the UC Davis/City of Davis Travel Demand Model land use inputs. Includes both City of Davis residents and employees and UC Davis on-campus residents and employees.
[4] Resident and employee totals derived from the UC Davis/City of Davis Travel Demand Model and SACSIM travel demand model land use inputs.
City of Davis, City of Davis with UC Davis, and SACOG region VMT per service population represent existing conditions. Service population defined as residents plus employees.
Source: Fehr & Peers, 2021.

Mitigation Measure 1.1. Develop a TDM program and implement TDM strategies to reduce project-generated VMT.

Prior to issuance of the first building permit in the first phase of development, the applicant shall develop a TDM program for the entire DiSC 2022 project, including any anticipated phasing, and shall submit the TDM program to the City Department of Public Works for review and approval. To the extent feasible, the TDM program should be designed to accomplish the following goals:

1) Reduce project-generated VMT such that the project achieves all three VMT-related significance thresholds; and

2) Achieve an average vehicle ridership (AVR) of 1.5 for peak period commute trips in accordance with Davis Municipal Code Section 22.15.060.

The Master Owners' Association (MOA) shall be responsible for implementing the TDM program:

1) The MOA shall be responsible for funding and overseeing the delivery of trip reduction/TDM proposed programs and strategies to achieve the project-generated VMT and AVR targets, which may include, but are not limited to, the following:
    a. Establishment of carpool, buspool, or vanpool programs;
    b. Vanpool purchase incentives;
    c. Cash allowances, passes, or other public transit subsidies and purchase incentives;
    d. Low emission vehicle purchase incentives/subsidies;
    e. Parking management strategies including limiting parking supply, charging parking fees, unbundling parking costs, and providing parking cash-out programs;
    f. Full or partial parking subsidies for ridesharing vehicles;
    g. Preferential parking locations for ridesharing vehicles;
    h. Computerized commuter rideshare matching service;
    i. Guaranteed ride-home program for ridesharing;
    j. Alternative workweek and flex-time schedules;
    k. Telecommuting or work-at-home programs;
    l. On-site lunch rooms/cafeterias;
    m. On-site commercial services such as banks, restaurants, groceries, and small retail;
    n. On-site day care facilities;
    o. Bicycle programs including bike purchase incentives, storage, maintenance programs, and on-site education program;
    p. Car share and bike share services;
    q. Enhancements to Unitrans, Yolobus, or other regional bus service;
    r. Enhancements to Capitol Corridor or other regional rail service;
    s. Enhancements to the citywide bicycle network;
    t. Dedicated employee housing located either on-site or elsewhere in the City of Davis;
    u. Designation of an on-site transportation coordinator for the project;
    v. Implement a fair value commuting program where fees charged to SOV commuters (e.g., through parking pricing) are tied to project vehicle trip reduction targets and

fee revenue is rebated to non-SOV commuters, or other pricing of vehicle travel and parking;

w. Support management strategies (e.g., pricing, vehicle occupancy requirements) on roadways or roadway lanes, particularly I-80 over the causeway;

x. Contribute to a VMT mitigation bank or exchange to support VMT reductions elsewhere in the City or region;

y. Change the project to increase project trip internalization (e.g., decrease employment uses and/or increase residential uses).

2) Single-phase development projects shall achieve project-generated VMT and AVR targets within five (5) years of issuance of any certificate of occupancy. Multi-phased projects shall achieve the project-generated VMT and AVR targets for each phase within three (3) years of the issuance of any certificate of occupancy.

3) In conjunction with final map approval, recorded codes, covenants and restrictions (CC&Rs) shall include provisions to guarantee adherence to the TDM objectives and perpetual operation of the TDM program regardless of property ownership, inform all subsequent property owners of the requirements imposed herein, and identify potential consequences of nonperformance.

   Each space use agreement (i.e., lease document) shall also include TDM provisions for the site as a means to inform and commit tenants to, and participate in, helping specific applicable developments meet TDM performance requirements.

4) Mace Triangle businesses shall implement a TDM program, which could be fulfilled by participation within the DiSC 2022 TDM program.

5) Ongoing reporting:

   1) Annual TDM Report. The MOA for the Project shall submit an annual status report on the TDM program to the City Department of Public Works beginning a year after the issuance of any certificate of occupancy. Data shall be collected in October of each year and the Annual Report submitted by December 31 of each year. The report shall be prepared in the form and format designated by the City, which must either approve or disapprove the program.

      i. The TDM performance reports shall focus on the trip reduction incentives offered by the project, their effectiveness, the estimated greenhouse gas (GHG) emissions generated by the project, and the methods by which a continued trajectory towards carbon neutrality in 2050 can be achieved consistent with Mitigation Measure 1.1. The report shall:

- Report the project-generated VMT levels attained;
- Report the AVR levels attained;
- Verify the TDM plan incentives that have been offered;
- Describe the use of those incentives offered by employers;
- Evaluate why the plan did or did not work to achieve the project-generated VMT and AVR targets and explain why the revised plan is more likely to achieve the project-generated VMT and AVR target levels;
- List additional incentives which can be reasonably expected to correct deficiencies;
- Evaluate the feasibility and effectiveness of trip reduction/TDM program and strategies, as implemented;
- Estimate the greenhouse gas emissions generated by project transportation operations; and
- Identify off-setting GHG credits to be secured by the project to achieve carbon neutrality.

ii. The MOA shall develop and implement an annual monitoring program to determine if project-generated VMT and AVR targets are being met. The monitoring program could include employee travel surveys, traffic counts at project site ingress/egress points, and other relevant information.

iii. If the project-generated VMT and/or AVR targets are not met for any two consecutive years, the applicant or current owner of the site will contribute funding to be determined in a separate study toward the provision of additional or more intensive travel demand management programs, such as enhanced regional transit service to the site, employee shuttles, and other potential measures.

iv. In the event that other TDM objectives are not met as documented in the Annual Monitoring Report submitted by December 31 of each year, the MOA shall:

- Submit to the City within thirty (30) days of submittal of the annual report, a list of TDM measures that will be implemented to meet the TDM objectives within one hundred eighty (180) days of submittal of annual report. At the end of the one-hundred-eighty-day period, the MOA shall submit a revised performance report to determine

compliance with TDM objectives. No further measures will be necessary if the TDM objectives are met.

Should the TDM objectives not be satisfied by the end of the one-hundred-eighty-day period, the MOA shall pay a TDM penalty fee to the City in an amount determined by resolution of the City Council. Said penalty fee may be used to provide new transit service and/or subsidize existing transit service, construct bicycle facilities, and/or improve street capacity through construction of physical improvements to be selected by the City of Davis from the list of area-wide improvements identified in the City's CIP.

Significance after Mitigation

Implementation of Mitigation Measure 1.1 would reduce project-generated VMT per service population by instituting a TDM program to reduce external vehicle trips generated by the project. However, the effectiveness of the TDM strategies is not known and subsequent vehicle trip reduction effects cannot be guaranteed. Existing evidence indicates that the effectiveness of TDM strategies with regards to vehicle trip reduction can vary based on a variety of factors, including the context of the surrounding built environment (e.g., urban versus suburban) and the aggregate effect of multiple TDM strategies deployed together. Moreover, many TDM strategies are not just site specific, but also rely on implementation and/or adoption by private entities (e.g., elective use of carpool program by office building tenants).

As noted above, due to uncertainties regarding the ability for the aforementioned mitigation measure to reduce VMT impacts to less-than-significant levels, VMT impacts would be considered **significant and unavoidable**.

Comparison to DISC Subsequent EIR

This impact determination remains unchanged from that identified in the DISC Subsequent EIR. As it relates to VMT, the DiSC 2022 project would not result in new significant environmental effects or a substantial increase in the severity of significant effects previously identified in the DISC Subsequent EIR.

Impact 2: Impacts to bicycle and pedestrian facilities.

Implementation of the proposed project would increase bicycle, pedestrian, and vehicle trips within the vicinity of the project site, which could increase the competition for physical space between modes and increase the potential for conflicts involving bicyclists and pedestrians. This impact would therefore be **significant**.

Existing facilities adjacent to the project include Class II bike lanes on Mace Boulevard and Alhambra Drive, and a shared-use path on Alhambra Drive. Existing intersections near the project site are typical of suburban roadway systems in that they were designed and constructed to prioritize the movement of

vehicles over other modes of travel. Defining features of these intersections include channelized right-turn lanes, multiple travel lanes for each approach, long crossing distances for bicyclists and pedestrians, and uncontrolled mixing areas between bicyclists, pedestrians, and high-speed vehicular traffic. Altogether, these intersection characteristics can diminish the safety and comfort of bicycle and pedestrian facilities and discourage walking and biking as a mode of travel.

The project description states that the project would modify the Mace Boulevard/Second Street and Mace Boulevard/Alhambra Drive intersections to improve multi-modal travel. However, the precise nature of these improvements has not been identified at this time and thus cannot be evaluated with respect to their effect on the safety, comfort, and performance of bicycle and pedestrian facilities.

The project would provide a bike path within the 50-foot transition zone of the on-site agricultural buffer, which would connect to the existing Class II bike lane on County Road 32A at the project's southeastern corner. Elsewhere within the project site, the project would provide bicycle support facilities such as bicycle racks, storage lockers, a repair station, and showers.

The project would construct a Class I shared-use path on the west side of Mace Boulevard from the Mace Drainage Channel to Harper Junior High School. This path improvement along the inside of the Mace Curve would close an existing gap in the off-street path network in the project vicinity. In addition to facilitating bicycle and pedestrian travel to/from the project site, this gap closure project would accommodate students walking and biking to/from Harper Junior High School along Mace Boulevard with a bicycle and pedestrian facility separated from vehicular traffic.

Project-generated bicycle and pedestrian trips would primarily utilize the following facilities for travel to and from the project site:

- Proposed Class I shared-use path on the west side of the Mace Curve and existing Class I shared-use path on the south side of Covell Boulevard to/from Harper Junior High School, Wildhorse, Oak Tree Plaza, and North Davis
- Existing Class I shared-use paths throughout Mace Ranch and Class II bike lanes on Alhambra Drive to/from Mace Ranch, East Davis, Central Davis, Downtown Davis, and UC Davis
- Existing Class II bike lanes on Second Street to/from Target Shopping Center, Second Street employment centers, Downtown Davis, and UC Davis
- Existing Class II bike lanes on Mace Boulevard to/from the El Macero Shopping Center and South Davis
- Existing Class II bike lanes on County Road 32A to/from Sacramento
- Existing sidewalks, paths, bike lanes, marked crosswalks, and/or crossings at the following intersections:

- Mace Boulevard/Alhambra Drive
- Mace Boulevard/Second Street/County Road 32A
- Mace Boulevard/I-80 WB Ramps
- Mace Boulevard/I-80 EB Ramps
- Mace Boulevard/Chiles Road

The substantial amount of project-generated vehicle trips would largely utilize the same roadway facilities for travel to and from the project site. Therefore, due to increases in bicycle, pedestrian, and vehicle trips generated by the project within the vicinity of the project site, transportation facilities that require mixing of vehicles, bicyclists, and pedestrians would experience increases in the competition for physical space between the modes and, in turn, an increase in the potential for conflicts involving bicyclists and pedestrians. These conditions could diminish the safety and performance of bicycle and pedestrian facilities, particularly at locations where bicyclists and pedestrians experience long crossing distances, long exposure times, uncontrolled conflicts with high-speed vehicular traffic, or blockages due to queued vehicles. The project's contributions to these conditions would be substantial at the following locations:

- Mace Boulevard/Alhambra Drive
  - Existing southbound channelized right-turn lane due to project increases to bicycle and pedestrian crossings (bicycle-vehicle and pedestrian-vehicle conflicts)
  - Existing eastbound channelized right-turn lane due to project increases to diverted traffic from eastbound Covell Boulevard to Alhambra Drive and increases in bicycle and pedestrian crossings. Moreover, the inability for eastbound vehicles to turn right onto Mace Boulevard (due to worsened traffic congestion on southbound Mace Boulevard caused by the project) could cause queue spillbacks that block the crosswalk (bicycle-vehicle and pedestrian-vehicle conflicts)
  - Proposed northbound and westbound channelized right-turn lanes due to project increases to vehicle traffic and bicycle and pedestrian crossings. Moreover, the inability for westbound vehicles to turn right onto Mace Boulevard (due to worsened traffic congestion on northbound Mace Boulevard caused by the project) could cause queue spillbacks that block the crosswalk in the westbound channelized right-turn lane (bicycle-vehicle and pedestrian-vehicle conflicts)
- Mace Boulevard/Second Street/County Road 32A
  - Existing southbound channelized right-turn lane due to project increases to vehicle traffic and bicycle and pedestrian crossings (bicycle-vehicle and pedestrian-vehicle conflicts)
  - Existing eastbound channelized right-turn lane due to project increases to bicycle and pedestrian crossings. Moreover, the inability for eastbound vehicles to turn right onto Mace Boulevard (due to worsened traffic congestion on southbound Mace Boulevard

caused by the project) could cause queue spillbacks that block the crosswalk (bicycle-vehicle and pedestrian-vehicle conflicts)

- Mace Boulevard/I-80 WB Ramps
    - Existing westbound channelized right-turn lane due to project increases to vehicle traffic and bicycle and pedestrian crossings. Moreover, the inability for westbound vehicles to turn right onto Mace Boulevard (due to worsened traffic congestion on northbound Mace Boulevard caused by the project) could cause queue spillbacks that block the crosswalk (bicycle-vehicle and pedestrian-vehicle conflicts)
    - Existing southbound approach bike lane and upstream unmarked bicycle-vehicle mixing zone due project increases to vehicle queue spillbacks into mixing zone (bicycle-vehicle conflict)
- Mace Boulevard/I-80 EB Ramps
    - Existing southbound slip ramp due to lengthy unmarked bicycle-vehicle mixing zones and project increases to vehicle traffic and bicycle crossings (bicycle-vehicle conflict)
    - Existing northbound slip ramp due to lengthy unmarked bicycle-vehicle mixing zones, unmarked pedestrian crosswalks, and project increases to vehicle traffic and bicycle and pedestrian crossings (bicycle-vehicle and pedestrian-vehicle conflicts)
- Mace Boulevard/Chiles Road
    - Existing southbound channelized right-turn lane due to project increases to vehicle traffic and bicycle crossings (bicycle-vehicle conflict)
    - Existing eastbound channelized right-turn lane due to project increases to bicycle and pedestrian crossings (bicycle-vehicle and pedestrian-vehicle conflicts)
    - Existing northbound channelized right-turn lane due to project increases to vehicle traffic and bicycle and pedestrian crossings (bicycle-vehicle and pedestrian-vehicle conflicts)
- County Road 32A
    - The increase in vehicle trips on County Road 32A could adversely affect bicycle flow along County Road 32A between County Road 105 and the access to the causeway bicycle path. The combination of the existing lane width (11 feet in each direction), high travel speeds, and soft shoulders plus the addition of project vehicle trips could disrupt bicycle flows on County Road 32A. Bicycle flows could also be disrupted for westbound bicycle traffic on County Road 32A that continues onto the path west of County Road 105. These cyclists must cross vehicle traffic on County Road 32A just southeast of the at-grade rail crossing where County Road 32A has a sharp curve. Similarly, eastbound bicyclists accessing the causeway shared-use path must cross oncoming vehicle traffic on County Road 32A just east of the I-80 off-ramp where County Road 32A has a curve. The addition of project

peak hour vehicle trips to County Road 32A has the potential to negatively affect bicyclists making these uncontrolled movements.

Note that except for the proposed westbound and northbound channelized right-turn lanes at the Mace Boulevard/Alhambra Drive intersection, all of the locations described above are existing features of the transportation system. Therefore, while the project would exacerbate the detrimental effects of these features, portions or all of these facilities may be considered existing deficiencies with respect to the bicycle and pedestrian environment.

As described previously, the project would be built-out over a ten to fifteen year time period. Since this analysis examines the hypothetical scenario where the project at buildout would be added to the existing transportation setting, it cannot reasonably identify the associated bicycle and pedestrian impacts of each phase of development based on the timing of the development phase and the surrounding transportation circumstances at that time.

The project would neither construct nor interfere with the implementation of planned bicycle facilities identified in the *City of Davis General Plan* or the *Beyond Platinum Bicycle Action Plan*. Proposed bicycle enhancements in the *City of Davis Beyond Platinum Bicycle Action Plan* include buffered bike lanes along Second Street between Mace Boulevard and L Street, as well as bike lane conflict markings and bike intersection crossing markings on Mace Boulevard at the I-80 interchange ramps. Several of the roadways near the project site, including Mace Boulevard, Covell Boulevard, Second Street, and Chiles Road are designated as Greenstreets in the *City of Davis General Plan*. Action TRANS 2.1(k) calls for the City to review standards for these roadways to reflect other bicycle and pedestrian friendly policies in the Circulation Element, including the elimination of intersection standards that allow high speed right turns for motor vehicles.

The project also would not interfere with planned regional bicycle projects identified in the SACOG MTP/SCS.

Altogether, these factors would constitute a **significant** impact to bicycle facilities.

Mitigation Measure 2.1. Construct proposed off-site bicycle and pedestrian facilities.

Prior to issuance of the first certificate of occupancy of the DiSC 2022 project, the applicant shall construct the following proposed off-site bicycle and pedestrian facilities as described in the project description and shown on the project site plan:

1) Class I shared-use path on the west side of Mace Boulevard between the Mace Drainage Channel and Harper Junior High School
2) Pedestrian and landscaping improvements on the access road between the Mace park-and-ride and County Road 32A

Implementation of these improvements would improve bicycle and pedestrian facilities on Mace Boulevard by reducing the potential for bicycle-vehicle and pedestrian-vehicle conflicts.

Mitigation Measure 2.2. Improve bicycle facilities on County Road 32A.

Prior to issuance of the first certificate of occupancy of the DiSC 2022 project, the applicant shall contribute fair share funding to cover their proportionate cost of the following improvements:

- Widen County Road 32A between County Road 105 and the causeway shared-use path access point to meet Yolo County standards for a two-lane arterial (14-foot travel lanes and 6-foot shoulder/on-street bike lanes).
- Westbound bicycle crossing improvements at the existing at-grade railroad crossing at County Road 32A and County Road 105. Potential improvements include a marked bicycle crossing for westbound bicyclists with advanced warning devices for vehicle traffic. These improvements would facilitate westbound bicyclists continuing west onto the shared-use path located between the Union Pacific Railroad mainline and I-80 (e.g., to the west of County Road 105). As noted earlier, Yolo County, together with Union Pacific and the City of Davis, are currently evaluating potential modifications to this at-grade crossing to reduce the potential for conflicts with rail operations. Therefore, the ultimate improvements constructed at this crossing should be consistent with the preferred modifications identified in this County-led study.
- Eastbound bicycle crossing improvements for bicyclists turning left from County Road 32A onto the causeway shared-use path. Potential improvements include the installation of a marked crossing on the east leg of the County Road 32A/I-80 WB off-ramp intersection and construction of a two-way path on the north side of County Road 32A between the County Road 32A/I-80 WB off-ramp intersection and the entrance to the causeway path.

Implementation of these improvements, or a set of improvements of equal effectiveness, would improve bicycle facilities on County Road 32A by reducing the potential for bicycle-vehicle conflicts.

Mitigation Measure 2.3. Identify and construct complete streets improvements on the Mace Boulevard corridor.

The applicant shall identify and construct complete streets improvements on the Mace Boulevard corridor, including the following actions:

1) Prior to issuance of the first building permit for the DiSC 2022 project, the applicant shall fund and complete (in conjunction with City staff) a corridor plan for the Mace Boulevard corridor between Harper Junior High School and Cowell Boulevard.[11] At a minimum, the corridor plan shall identify complete streets improvements that achieve the following goals:
    1) Provide safe and comfortable access for pedestrian and bicyclists
    2) Minimize the potential for bicycle-vehicle and pedestrian-vehicle conflicts
    3) Provide fast and efficient transit operations
    4) Minimize cut-through traffic on residential roadways
    5) Avoid operating conditions that degrade roadway safety (e.g., off-ramp queue spillback to freeway mainline)

    The corridor plan shall be prepared to the satisfaction of the City of Davis Public Works Department and be approved by the City of Davis City Council. The corridor plan should also include a thorough public engagement process to understand the transportation priorities of the surrounding community. This should include an initial hearing before the Planning Commission and the Bicycling, Transportation, and Street Safety Commission (BTSSC) to solicit initial input and a second hearing for review of the draft plan.
2) In conjunction with submittal of a final planned development or tentative map, whichever occurs first, for each DiSC 2022 project phase, the MOA for the project shall submit a focused transportation impact study for the phase under review. The study shall document current conditions at the time and identify the anticipated transportation system effects associated with the development proposed for the phase under review and the necessary transportation system improvements to ameliorate these effects in accordance with the methods and significance thresholds used in this transportation impact analysis. Improvements should be

[11] Policy TRANS 2.8 of the *City of Davis General Plan* calls for the preparation of corridor plans for selected corridors throughout the City. The segment of Mace Boulevard referenced in Mitigation Measure 2.3-3 includes all of corridor #15 (Mace Boulevard – Harper Junior High School to Interstate 80) and portions of corridors #2 (Chiles Road – Drummond Avenue to East City Limit) and #16 (Mace Boulevard – Interstate 80 to South City Limit) as shown in Map 5 of the *General Plan* Circulation Element. Corridors #2 and #15 do not currently have corridor plans. Corridor #16 south of Cowell Boulevard was recently modified based on prior corridor planning efforts. The segment of Corridor #16 between Cowell Boulevard and Interstate 80 was excluded from those efforts and does not currently have a corridor plan.

consistent with the complete streets goals and improvements identified in the Mace Boulevard corridor plan to be funded and completed by the applicant as described above. The study should also address the degree to which improvements would address any significant impacts caused by the project at buildout as identified in this transportation impact analysis. Potential improvements include, but are not limited to, the following:

1) Improvements to on- and off-street bicycle facilities on Mace Boulevard and connecting roadways, including Covell Boulevard, Alhambra Drive, Second Street, County Road 32A, and Chiles Road.
2) Improvements to bicycle and pedestrian crossings at the following intersections:

    a. Mace Boulevard/Alhambra Drive
    b. Mace Boulevard/Second Street/County Road 32A
    c. Mace Boulevard/I-80 WB Ramps
    d. Mace Boulevard/I-80 EB Ramps
    e. Mace Boulevard/Chiles Road

    Crossing improvements should reduce the potential for bicycle-vehicle and pedestrian-vehicle conflicts and provide for safe and comfortable access for pedestrians and bicyclists. Potential crossing improvements include, but are not limited to bike lane conflict markings, intersection crossing markings, reductions to crossing distances, and physically separating bicyclists from vehicles (e.g., conversion to a protected intersection). Additionally, crossing improvements should include the modification of existing channelized right-turn lanes to either a) remove and replace the lanes with standard right-turn lanes, or b) retrofit the lanes to reduce vehicles speeds and increase yield compliance rates.

3) Construction of a grade-separated bicycle and pedestrian crossing of Mace Boulevard within the project site vicinity.
4) Roadway capacity and operations improvements, as described below. In particular, roadway capacity and operations improvements should address any adverse project effects to transit travel times and on-time performance, as well as operating conditions that degrade roadway safety (e.g., off-ramp queue spillback to freeway mainline).

    a. Southbound Mace Boulevard: Extend the second eastbound/southbound lane from Harper Junior High School to Alhambra Drive. Add a third southbound lane from Second Street to connect with the dedicated right-turn lane onto the I-80 WB on-ramps.

b. Northbound Mace Boulevard: Extend the third northbound lane from the I-80 WB off-ramps to connect with a new northbound "trap" right-turn lane at the Mace Boulevard/Second Street/County Road 32A intersection. Add a second northbound/westbound lane from Alhambra Drive to the Harper Junior High School signalized intersection.

c. Mace Boulevard/Chiles Road and Chiles Road/I-80 EB Off-Ramp Intersections: This pair of tightly spaced intersections (situated 450 feet apart) requires signal coordination/timing adjustments due to the heavy project-related off-ramp volume during the a.m. peak hour. The east and west approaches would be modified to operate with split phasing. Signal coordination (particularly critical during the a.m. peak hour) would synchronize the green interval for the I-80 off-ramp movement with the eastbound approach on Chiles Road at Mace Boulevard to facilitate the flow of motorists off of I-80. The signal would be modified to operate the southbound left-turn and westbound right-turn during a shared overlap phase. This modification would also require the prohibition of southbound U-turns.

d. Mace Boulevard/Second Street/County Road 32A Intersection: Modify the northbound approach to add a "trap" right-turn lane. Modify the westbound approach to two left-turn lanes and a shared through-right lane. Modify westbound County Road 32A between this intersection and the adjacent County Road 32A/Mace park-and-ride/West Project Driveway intersection to two through lanes.

e. County Road 32A/Mace park-and-ride/West Project Driveway Intersection: Install a traffic signal. Provide a southbound left-turn lane and a shared through-right lane.

f. I-80/CR 32A Interchange: Construct capacity improvements at the CR 32 interchange and along CR 32A to allow this interchange to serve more project traffic.

Improvements identified in the focused transportation impact study should achieve the following performance measures:

1) Reduce the number and/or severity of bicycle-vehicle and pedestrian-vehicle conflict points at intersections and intersection approaches.
2) Eliminate otherwise anticipated increases in transit travel times and/or adverse changes to transit on-time performance that would be caused by the project in

accordance with standards established by Unitrans, Yolobus, and other potential future transit operators.

3) Eliminate otherwise anticipated adverse effects to emergency vehicle response times that would be caused by the project in accordance with standards established by the City of Davis Fire Chief.
4) Eliminate otherwise anticipated increases in cut-through traffic on residential roadways that would be caused by the project.
5) Eliminate otherwise anticipated vehicle queuing that would be caused by the project that would adversely affect roadway safety, including off-ramp queue spillbacks to the freeway mainline, queue spillbacks that block bicycle and/or pedestrian facilities, and queue spillbacks that exceed available turn pocket storage and block adjacent through travel lanes.

The focused transportation impact study should also identify the funding and implementing responsibilities for each improvement, including whether the improvement should be constructed by the applicant or if the applicant should contribute fair share funding to cover their proportionate cost for the improvements. The applicant shall construct the improvement and/or contribute fair share funding prior to the issuance of the first certificate of occupancy for each project phase under review.

Secondary Impacts After Mitigation

Elements of Mitigation Measure 2.3, particularly the potential for roadway operations and capacity improvements along the Mace Boulevard corridor, have the potential to exacerbate impacts to VMT described in Impact 1. Existing evidence indicates that Covell Boulevard, Mace Boulevard, and connecting roadways such as Second Street and Chiles Road are utilized as regional cut-through routes when I-80 experiences significant speed reductions and delays during p.m. peak periods. Therefore, improving operations and reducing delays along these local roadways could increase the attractiveness of these routes as alternatives to I-80 and induce additional regional cut-through activity on local roadways. Parallel local routes require longer trip distances than remaining on I-80, therefore, regional travel demand use of local routes would yield more VMT than use of I-80.

Significance after Mitigation

Implementation of Mitigation Measures 2.1, 2.2, and 2.3 would reduce potential significant impacts associated with bicycle facilities to a less-than-significant level by supporting bicycling to and from the project site and reducing conflicts between bicycles and other travel modes.

However, elements of each mitigation measure would occur within Caltrans, Yolo County, and/or UPRR rights-of-way and would be subject to final approval and actions by others. Moreover, since the remaining

fair share contributions needed for the construction of those mitigation measure elements requiring the project's fair share contribution have not been identified by the relevant lead agency, fair share payment by the project applicant would not ensure construction. Finally, the ultimate improvements resulting from Mitigation Measure 2.3 are subject to change pending the outcome of the Mace Boulevard Corridor Plan process described in Mitigation Measure 2.3. Therefore, the implementation and effectiveness of these mitigation measures cannot be guaranteed. As noted above, due to uncertainties regarding the ability for the aforementioned mitigation measures to reduce impacts to bicycle and pedestrian facilities, bicycle and pedestrian facility impacts would be considered **significant and unavoidable**.

Comparison to DISC Subsequent EIR

This impact determination remains unchanged from that identified in the DISC Subsequent EIR. As it relates to bicycle and pedestrian facilities, the DiSC 2022 project would not result in new significant environmental effects or a substantial increase in the severity of significant effects previously identified in the DISC Subsequent EIR.

Impact 3: Impacts to transit service and facilities.

Implementation of the proposed project would increase the number of passengers utilizing transit service and facilities. New transit passenger demand would be accommodated by existing transit services. However, increases to transit travel times caused by the project would adversely affect the on-time performance and service quality of existing transit services. This impact would therefore be **significant**.

The DiSC 2022 project would introduce new office, manufacturing, and retail land uses that are situated in close proximity to the current transit stops (near Mace Boulevard/Second Street) for the A, O, P, Q, and Z bus routes operated by Unitrans. These routes serve a variety of retail, employment, medical, institutional, and recreational destinations throughout the City, and operate with 30-minute headways, and long service hours. The *City of Davis Short Range Transit Plan* indicates that 91 to 95 percent of all riders are UC Davis undergraduate students, three to six percent of riders are UC Davis graduate students, and just over 5 percent of riders are not UC Davis affiliates.

The *Unitrans General Manager's Report for Fiscal Year 2018-19* indicates that Unitrans experiences high levels of crowding (i.e., more than 60 passengers on standard bus or more than 100 passengers on a double-decker bus) on 3.5 percent of all bus trips. Note that while more recent versions of the Unitrans General Manager's Report are available, the 2018-19 version of the report is the most recent version available that represents pre-COVID-19 conditions.

Table 5 summarizes route-level ridership, productivity (passengers per revenue hour), and on-time performance for Unitrans routes serving the project site. Unitrans policy is to increase daily headways

from 30 minutes to 15 minutes on routes with more than 60 passengers per hour. The five routes that serve the project site have ridership levels that are well under the 60 passenger per hour threshold and the project would not result in an increase above that threshold. While the project is expected to increase transit ridership on Unitrans, given the expected number of project transit riders and existing transit patronage, the project would not cause a demand above that which is provided or planned.

Table 5: Unitrans Route Performance Summary – Project Site Vicinity

Route	Annual Ridership	Passengers per Revenue Hour	On-Time Performance
A – Silo/Amtrak/5th/Alhambra	231,493	41.1	85%
O – MU/Amtrak/5th/Alhambra/Target	30,541	37.8	Not Reported
P – MU/Davis Perimeter Counter Clockwise	252,649	30.9	80%
Q – MU/Davis Perimeter Clockwise	259,039	32.6	68%
Z – MU/Amtrak/Cantrill/5th	105,990	26.2	90%

Source: *Unitrans General Manager's Report for Fiscal Year 2018-19.*

On-time performance is defined by Unitrans as a as a bus arriving at the terminal before the scheduled time or within five minutes of the scheduled time. Arriving more than five minutes late is defined as "late". Unitrans has a systemwide on-time performance target of 90 percent. Systemwide, Unitrans on-time performance was 88 percent during the 2018-19 fiscal year, and thus failed to meet their on-time performance target. This constitutes a five percent drop in systemwide on-time performance from four years prior. Unitrans indicates that they may consider significant route changes on the A, P, Q, and Z lines in FY 2020 to help reduce travel time and improve on-time performance in East Davis. The project would cause substantial increases to vehicle travel demand and peak hour delay on roadways within the project site vicinity. Affected roadways include Mace Boulevard, Alhambra Drive, and Second Street, all of which are utilized by Unitrans routes serving the study area. Since Unitrans service would experience increases to peak hour delays at a level commensurate with general vehicle traffic, the project would cause adverse effects to Unitrans travel times and on-time performance. Reductions to route-level and systemwide on-time performance caused by the project would require Unitrans to restructure service or increase operating costs in order to maintain acceptable on-time performance thresholds.

Yolobus currently operates both intercity and express bus service in the City of Davis. Routes 42A and 42B are intercity routes that provide hourly service between downtown Sacramento, West Sacramento, Davis, Woodland, and the Sacramento International Airport. The routes have a scheduled bus stop at the intersection of Mace Boulevard and Second Street. The express bus routes operated by Yolobus in Davis are currently programmed to serve inbound commute trips to Sacramento in the morning peak period

and return trips to Davis in the evening commute peak period. Since the project is an employment center expected to serve trips in the reverse direction, project employees are not expected to use the existing express bus routes. While the project is expected to result in a small increase in transit ridership on Yolobus, given the expected number of project transit riders and existing transit patronage, the DiSC 2022 project would not cause demand to exceed provided or planned Yolobus capacity. Similar to Unitrans routes serving the study area, Yolobus routes serving the study area would be subject to delay increases due to project-generated vehicle traffic and peak hour delay increases.

The DiSC 2022 project proposes the construction of a Transit Plaza on northbound Mace Boulevard south of Alhambra Drive. Existing Unitrans and Yolobus routes would be able to access the Transit Plaza without requiring deviation from their existing route alignments on northbound Mace Boulevard. The design details of the Transit Plaza are not known at this time, therefore, the Transit Plaza cannot be evaluated for its effect on transit operations. The project would not modify transit facilities on southbound Mace Boulevard near the project site.

Because the DiSC 2022 project would adversely affect transit operations, particularly along the Mace Boulevard corridor, a **significant** impact to transit service and operations would occur as a result of the DiSC 2022 project.

Mitigation Measure 3.1. Construct enhanced bus stops on Mace Boulevard near Alhambra Drive.

Prior to the issuance of the first certificate of occupancy of the first DiSC 2022 project phase, the project applicant shall fund and construct new bus stops with turnouts on both sides of Mace Boulevard at the new primary project access point at Alhambra Drive. The project applicant shall prepare design plans, to be reviewed and approved by the City of Davis Public Works Department, and construct bus stops with shelters, paved pedestrian waiting areas, lighting, real time transit information signage, and pedestrian connections between the new bus stops and all buildings on the project site. Responsibility for implementation of this mitigation measure shall be assigned to the DiSC 2022 project and Mace Triangle on a fair share basis.

Mitigation Measure 3.2. Identify and construct complete streets improvements on the Mace Boulevard corridor.

Implement Mitigation Measure 2.3 (Identify and construct complete streets improvements on the Mace Boulevard corridor).

Significance after Mitigation

Implementation of Mitigation Measures 3.1 and 3.2 would reduce potential significant impacts associated with transit service and facilities by supporting transit use to and from the project site and minimizing adverse effects to transit operations that would be caused by the project.

However, elements of Mitigation Measure 3.2 would occur within Caltrans rights-of-way and would be subject to final approval and actions by others. Moreover, since the remaining fair share contributions needed for the construction of mitigation measure elements requiring the project's fair share contribution have not been identified by the relevant lead agency, fair share payment by the project applicant would not ensure construction. Finally, the ultimate improvements resulting from Mitigation Measure 3.2 are subject to change pending the outcome of the Mace Boulevard Corridor Plan process described in Mitigation Measure 3.2. Therefore, the implementation of these mitigation measures and their effectiveness cannot be guaranteed.

As noted above, due to uncertainties regarding the ability for the aforementioned mitigation measures to reduce impacts to transit service and facilities, transit service and facility impacts would be considered **significant and unavoidable**.

Comparison to DISC Subsequent EIR

This impact determination remains unchanged from that identified in the DISC Subsequent EIR. As it relates to transit services and facilities, the DiSC 2022 project would not result in new significant environmental effects or a substantial increase in the severity of significant effects previously identified in the DISC Subsequent EIR.

Impact 4: Impacts to emergency vehicle access.

Implementation of the proposed project would not impede emergency vehicle access. This impact would therefore be **less than significant**.

The proposed project would include one vehicular access point on Mace Boulevard (full access) and two vehicular access points on County Road 32A (both full access). Altogether, these connections would provide multiple opportunities and routes for emergency vehicles to access the site from multiple directions.

Fire access from the South Davis fire station (located one-half mile south of the project site on Mace Boulevard) would be available via northbound Mace Boulevard. Fire access from the Downtown Davis fire station (located nearly three miles west of the project site) would be available via eastbound Fifth Street and Alhambra Drive. Medical emergency service access to/from Sutter Davis Hospital (located over four miles west of the project site) would be available via Covell Boulevard. Each of these corridors have traffic

signals equipped with emergency vehicle pre-emption, providing signal priority to emergency vehicles in the event of an emergency.

The design of the on-site roadways and intersections will be subject to City of Davis code and Public Works Department staff review and approval.

Therefore, this impact is considered **less-than-significant**.

Mitigation Measures

None required.

Impact 5: Construction-related impacts.

Implementation of the proposed project would result in construction activities that would disrupt the surrounding multi-modal transportation system. This impact would therefore be **significant**.

Construction of the project, including site preparation and construction, and delivery activities, would generate employee trips and a variety of construction-related vehicles. Construction activities would include disruptions to the transportation network near the project site, including the possibility of temporary lane closures, street closures, sidewalk closures, and bikeway closures. Bicycle and transit access may also be disrupted.

These activities could also result in degraded roadway conditions. Altogether, these factors would result in a significant impact related to project construction.

Mitigation Measure 5.1. Prepare a Construction Traffic Control Plan.

Prior to any construction activities for the project site, the project applicant shall prepare a detailed Construction Traffic Control Plan and submit it for review and approval by the City Department of Public Works. The applicant and the City shall consult with Yolo County, Caltrans, Unitrans, Yolobus, and local emergency service providers for their input prior to approving the Plan. The plan shall ensure that acceptable operating conditions on local roadways and freeway facilities are maintained during construction. At a minimum, the plan shall include:

- The number of truck trips, time, and day of street closures
- Time of day of arrival and departure of trucks
- Limitations on the size and type of trucks, provision of a staging area with a limitation on the number of trucks that can be waiting

- Provision of a truck circulation pattern that minimizes effects on existing vehicle traffic during peak travel periods and maintains safe bicycle circulation
- Minimize use of County Road 32A by construction traffic during peak travel periods
- Resurface and/or repair any damage to roadways that occurs as a result of construction traffic
- Provision of driveway access plan so that safe vehicular, pedestrian, and bicycle movements are maintained (e.g., steel plates, minimum distances of open trenches, and private vehicle pick up and drop off areas)
- Maintain safe and efficient access routes for emergency vehicles
- Manual traffic control when necessary
- Proper advance warning and posted signage concerning street closures
- Provisions for pedestrian safety

A copy of the construction traffic control plan shall be submitted to local emergency response agencies and these agencies shall be notified at least 14 days before the commencement of construction that would partially or fully obstruct roadways.

Significance after Mitigation

Implementation of Mitigation Measure 5.1 would reduce potential significant impacts associated with project construction activity to a **less-than-significant** level by minimizing the effects of project construction to the surrounding multi-modal transportation system.

Impact 6: Conflicts with a program, plan ordinance, or policy addressing the circulation system under Existing Plus Project conditions.

Implementation of the proposed project would increase vehicle travel activity within the project vicinity. Increases to vehicle travel activity would increase the potential for conflicts at the Chiles Road/I-80 EB Off-Ramp and at the UPRR at-grade rail crossing of County Road 32A. This impact would therefore be **significant**.

Peak hour traffic operations were analyzed to determine the extent to which the project would cause off-ramp queues to spill back to the I-80 mainline. To the extent possible, Caltrans strives to prevent off-ramp queues from extending to the freeway mainline in order to minimize the potential for associated adverse operational and safety effects (e.g., speed differentials between vehicle traffic on the freeway mainline and stopped/queued off-ramp vehicle traffic that could increase the potential for conflicts).

Table 6 displays the 95th percentile freeway off-ramp queue at the I-80/Mace Boulevard/Chiles Road and I-80/County Road 32A interchanges under Existing Plus Project conditions. Technical calculations are

provided in the Appendix. This table indicates that the 95th percentile vehicle queues at the Chiles Road off-ramp would spill back onto the freeway mainline during the a.m. peak hour, which would conflict with Caltrans performance expectations for the State Highway System.

Table 6: Freeway Off-Ramp Queuing – Existing Plus Project Conditions

Off-Ramp	Off-Ramp Distance[1]	95th Percentile Queue Length[2]			
		Existing Conditions		Existing Plus Project Conditions[3]	
		A.M. Peak Hour	P.M. Peak Hour	A.M. Peak Hour	P.M. Peak Hour
Mace Boulevard/I-80 WB Off-Ramp	1,200 feet	175 feet	175 feet	175 feet	225 feet
Chiles Road/I-80 EB Off-Ramp	1,100 feet	100 feet	100 feet	1,125 feet	225 feet
CR 32A/I-80 WB Off-Ramp	1,200 feet	25 feet	25 feet	50 feet	50 feet
Chiles Road/CR 32B/I-80 EB Off-Ramp	1,000 feet	25 feet	75 feet	25 feet	25 feet

Notes: [1] Measured from the intersection stop bar to the gore point of the freeway off-ramp. Does not include auxiliary lane on freeway mainline.
[2] Results at the Mace Boulevard/Chiles Road interchange are based on results from SimTraffic micro-simulation model. Results at the County Road 32A interchange are based on results from Synchro traffic operations analysis software. Queues are maximum per lane, rounded up to the nearest 25 feet.
[3] Shaded cells represent conditions in which the queue would spill onto the freeway mainline.
Source: Fehr & Peers, 2021.

The proposed project would add approximately 250 new peak hour vehicle trips between the project site and the I-80/County Road 32A interchange located to the east of the project site. These trips would be generated by project employees and residents traveling between the project site and Sacramento (and surrounding communities) via the I-80 causeway. These trips are expected to utilize the I-80/County Road 32A interchange instead of the I-80/Mace Boulevard interchange due to delays on I-80 east of Mace Boulevard and on Mace Boulevard within the interchange vicinity that would make use of the I-80/County Road 32A interchange more attractive from a travel time standpoint.

These additional project vehicle trips would primarily use County Road 32A to travel between the project site and the I-80/County Road 32A interchange. This would have an adverse effect on the existing UPRR at-grade rail crossing of County Road 32A immediately south of the County Road 32A/County Road 105 stop-controlled intersection. It is not uncommon for trespassing events (i.e., vehicles on the tracks) and vehicle-train collisions to occur at this location due to the current physical configuration of the crossing. Yolo County, together with UPRR and the City of Davis, is currently evaluating potential modifications to this at-grade crossing to reduce the potential for conflicts with rail operations. The addition of approximately 250 peak hour project vehicle trips could increase the potential for conflicts with rail operations at this location.

Altogether, this impact is considered **significant**.

Mitigation Measure 6.1. Identify and construct complete streets improvements on the Mace Boulevard corridor.

Implement Mitigation Measure 2.3 (Identify and construct complete streets improvements on the Mace Boulevard corridor).

Mitigation Measure 6.2. Construct crossing improvements at the UPRR at-grade crossing with County Road 32A.

Prior to the issuance of the first certificate of occupancy of the first DiSC 2022 project phase, the project applicant shall make a fair-share contribution towards crossing improvements at the UPRR at-grade crossing with County Road 32A. The UPRR track/County Road 32A crossing should be converted from an at-grade crossing to a grade-separated crossing. A near-term improvement prior to provision of the grade separation would consist of relocating the County Road 32A/County Road 105 intersection about 200 feet to the north and installing double gates on the south approach to the grade crossing in order to improve safety and traffic functionality at the grade crossing. Responsibility for implementation of this mitigation measure shall be assigned to the DiSC 2022 project and Mace Triangle on a fair share basis.

Secondary Impacts After Mitigation

Elements of Mitigation Measure 6.1, particularly the potential for roadway operations and capacity improvements along the Mace Boulevard corridor, have the potential to exacerbate impacts to VMT described in Impact 1. Existing evidence indicates that Covell Boulevard, Mace Boulevard, and connecting roadways such as Second Street and Chiles Road are utilized as regional cut-through routes when I-80 experiences significant speed reductions and delays during p.m. peak periods. Therefore, improving operations and reducing delays along these local roadways could increase the attractiveness of these routes as alternatives to I-80 and induce additional regional cut-through activity on local roadways. Parallel local routes require longer trip distances than remaining on I-80, therefore, regional travel demand use of local routes would yield more VMT than use of I-80.

Significance after Mitigation

Implementation of Mitigation Measure 6.1 would reduce potential significant impacts associated with freeway off-ramp queues by preventing queues at the Chiles Road off-ramp from spilling back onto the I-80 mainline. **Table 7** illustrates how the operational enhancements identified in Mitigation Measure 2.3 would benefit freeway off-ramp queuing at the I-80/Mace Boulevard interchange. As shown, vehicle queues would no longer spill back onto the I-80 mainline with implementation of these enhancements.

Table 7: Freeway Off-Ramp Queuing – Existing Plus Project Conditions with Potential Operational Enhancements

Off-Ramp	Off-Ramp Distance[1]	95th Percentile Queue Length[2]					
		Existing Conditions		Existing Plus Project Conditions[3]		Existing Plus Project Conditions with Potential Operational Enhancements[3]	
		A.M. Peak Hour	P.M. Peak Hour	A.M. Peak Hour	P.M. Peak Hour	A.M. Peak Hour	P.M. Peak Hour
Mace Boulevard/ I-80 WB Off-Ramp	1,200 feet	175 feet	175 feet	175 feet	225 feet	175 feet	175 feet
Chiles Road/I-80 EB Off-Ramp	1,100 feet	100 feet	100 feet	1,125 feet	225 feet	125 feet	100 feet

Notes: [1] Measured from the intersection stop bar to the gore point of the freeway off-ramp. Does not include auxiliary lane on freeway mainline.
[2] Results at the Mace Boulevard/Chiles Road interchange are based on results from SimTraffic micro-simulation model.
[3] Shaded cells represent conditions in which the queue would spill onto the freeway mainline.
Source: Fehr & Peers, 2021.

Implementation of Mitigation Measure 6.2 would reduce the potential for conflicts at the UPRR at-grade crossing with County Road 32A that would otherwise occur due to the implementation of the project.

However, elements of both mitigation measures would occur within Caltrans, Yolo County, and/or UPRR rights-of-way and would be subject to final approval and actions by others. Moreover, since the remaining fair share contributions needed for the construction of those mitigation measure elements requiring the project's fair share contribution have not been identified by the relevant lead agency, fair share payment by the project applicant would not ensure construction. Finally, the ultimate improvements resulting from Mitigation Measure 6.1 are subject to change pending the outcome of the Mace Boulevard Corridor Plan process described in Mitigation Measure 2.3. Therefore, the implementation and effectiveness of these mitigation measures cannot be guaranteed and this impact would be considered **significant and unavoidable**.

Comparison to DISC Subsequent EIR

This impact determination remains unchanged from that identified in the DISC Subsequent EIR. As it relates to conflicts with a program, plan ordinance, or policy addressing the circulation system, the DiSC 2022 project would not result in new significant environmental effects or a substantial increase in the severity of significant effects previously identified in the DISC Subsequent EIR.

Cumulative Impacts and Mitigation Measures

Cumulative transportation impacts consider those that would result from the construction of the proposed project combined with other future land use and transportation system changes anticipated to occur by 2040. The project's contribution to cumulative impacts may be considerable if it worsens or results in a significant cumulative impact. Under cumulative conditions, the project would cause an impact if both of the following criteria are met:

- An unacceptable condition would exist; and
- The project would have a cumulatively considerable contribution to the unacceptable condition.

The proposed project is anticipated to be constructed over a ten to fifteen year time period. Under cumulative conditions, the proposed project site plan and off-site transportation system modifications would not differ from those described in the project-specific impact analysis provided above.

The cumulative transportation impact analysis considered reasonably foreseeable land use and transportation system changes expected to occur by the 2040 analysis year, including the completion of the proposed DiSC 2022 project. These changes include, but are not limited to, the following planned, approved, or under construction land use and transportation projects relevant to the proposed project:

- Land Use Projects
    - UC Davis 2018 Long Range Development Plan (LRDP) – The LRDP anticipates the addition of 5,175 students, 2,135 employees, and 10,958 residents (9,050 students, 485 employees, and 1,423 dependents) on the UC Davis campus between 2016 and 2030. Individual components of the LRDP include the following:
        - West Village Expansion – located west of SR-113 and south of Russell Boulevard, will include an additional 3,300 student beds and 485 employee residents. The student housing portion of the project has been approved by the UC Regents and is currently under construction.
        - Orchard Park Redevelopment – located east of SR-113 and south of Russell Boulevard, will include an additional 200 student family housing units and up to 1,200 student beds.
        - Emerson Hall Replacement (Shasta Hall) – located on Oxford Circle west of Sycamore Lane and north of Russell Boulevard, will include the demolition of an existing 500-bed dormitory and the construction of a new dormitory with capacity for up to 800 student beds.
    - Other mid- to large-sized planned or approved development projects within the City of Davis located over one mile from the project site, including University Commons, the

West Davis Active Adult Community, the Nishi Residential Project, Plaza 2555, and the 3820 Chiles Road Apartments.
    - Including the City of Davis development projects listed above, residential and employment growth anticipated within the City of Davis by 2040, as identified in consultation with City of Davis staff.
- Transportation System Projects
    - I-80 HOV lanes from Richards Boulevard to Sacramento.
    - I-80/Richards Boulevard interchange improvements.
    - Anderson Road four-to-two lane reduction between West Covell Boulevard and Villanova Drive.
    - Fifth Street four-to-two lane reduction between L Street and Pole Line Road.

Impact 7: Cumulative impacts to vehicle miles traveled (VMT) on the roadway system.

Under cumulative conditions, implementation of the proposed project would change local and regional VMT per service population in a manner that would exceed relevant local and State thresholds. This impact would therefore be **significant**.

Impact 1 provides an evaluation of potential project impacts to VMT under Existing Plus Project conditions. Under Existing Plus Project conditions, the project would cause a significant impact to VMT by virtue of resulting in project-generated VMT per service population measuring above the applicable significance thresholds relative to existing local and regional VMT per service population averages. The VMT impact analysis for Existing Plus Project conditions applies to Cumulative Plus Project conditions for the following reasons:

- The VMT significance threshold compares project-generated VMT per service population to that of existing local and regional development. This comparison is useful because it provides information regarding how the project aligns with long-term environmental goals related to VMT established based on existing development levels. Use of VMT significance thresholds based on existing development levels is recommended in the OPR Technical Advisory on Evaluating Transportation Impacts in CEQA.
- The OPR Technical Advisory on Evaluating Transportation Impacts in CEQA indicates that VMT efficiency metrics, such as VMT per service population, are not appropriate for CEQA cumulative analysis. Instead, the Technical Advisory recommends that an impact finding from an efficiency-based project-specific VMT analysis (i.e., Existing Plus Project conditions) would imply an identical impact finding for a cumulative VMT analysis. An example provided by OPR explains that a project

that falls below an efficiency-based threshold that is aligned with long-term environmental goals and relevant plans would have no cumulative impact distinct from the project impact.

Based on the above, the DiSC 2022 project's cumulative VMT impact would be considered **significant**.

Mitigation Measure 7.1. Develop a TDM program and implement TDM strategies to reduce project-generated VMT.

Implement Mitigation Measure 1.1 (Develop a TDM program and implement TDM strategies to reduce project-generated VMT).

Significance after Mitigation

Implementation of Mitigation Measure 7.1 would reduce project-generated VMT per service population by instituting a TDM program to reduce external vehicle trips generated by the project. However, the effectiveness of the TDM strategies is not known and subsequent vehicle trip reduction effects cannot be guaranteed. Existing evidence indicates that the effectiveness of TDM strategies with regards to vehicle trip reduction can vary based on a variety of factors, including the context of the surrounding built environment (e.g., urban versus suburban) and the aggregate effect of multiple TDM strategies deployed together. Moreover, many TDM strategies are not just site specific, but also rely on implementation and/or adoption by private entities (e.g., elective use of carpool program by office building tenants).

As noted above, due to uncertainties regarding the ability for the aforementioned mitigation measure to reduce cumulative VMT impacts to less-than-significant levels, cumulative VMT impacts would be considered **significant and unavoidable**.

Comparison to DISC Subsequent EIR

This impact determination remains unchanged from that identified in the DISC Subsequent EIR. As it relates to VMT, the DiSC 2022 project would not result in new significant environmental effects or a substantial increase in the severity of significant effects previously identified in the DISC Subsequent EIR.

Impact 8: Cumulative impacts to bicycle and pedestrian facilities.

Together with increases vehicle traffic caused by reasonably foreseeable land use growth, implementation of the proposed project would increase bicycle, pedestrian, and vehicle trips within the vicinity of the project site, which could increase the competition for physical space between modes and increase the potential for conflicts involving bicyclists and pedestrians. This impact would therefore be **significant**.

No reasonably foreseeable new bicycle or pedestrian facilities would be constructed within the vicinity of the project site under cumulative conditions. Under cumulative conditions, given the limited amount of

reasonably foreseeable land use development near the project site, only modest increases in background bicycle and pedestrian activity would occur within the vicinity of the project site. More substantial increases in background vehicle traffic would occur on study area roadways due to growth elsewhere in and around Davis. However, growth in background vehicle traffic would not materially change the adverse effects to bicycle and pedestrian that would be attributable to the project. Therefore, the project-specific bicycle and pedestrian impact analysis provided in Impact 2 would similarly apply to cumulative plus project conditions.

This would constitute a significant impact to bicycle and pedestrian facilities under cumulative conditions.

Mitigation Measure 8.1. Construct proposed off-site bicycle and pedestrian facilities.

Implement Mitigation Measure 2.1 (Construct proposed off-site bicycle and pedestrian facilities).

Mitigation Measure 8.2. Improve bicycle facilities on County Road 32A.

Implement Mitigation Measure 2.2 (Improve bicycle facilities on County Road 32A).

Mitigation Measure 8.3. Identify and construct complete streets improvements on the Mace Boulevard corridor.

Mitigation Measure 2.3 (Identify and construct complete streets improvements on the Mace Boulevard corridor).

Secondary Impacts After Mitigation

Elements of Mitigation Measure 8.3, particularly the potential for roadway operations and capacity improvements along the Mace Boulevard corridor, have the potential to exacerbate impacts to VMT described in Impact 7. Existing evidence indicates that Covell Boulevard, Mace Boulevard, and connecting roadways such as Second Street and Chiles Road are utilized as regional cut-through routes when I-80 experiences significant speed reductions and delays during p.m. peak periods. Therefore, improving operations and reducing delays along these local roadways could increase the attractiveness of these routes as alternatives to I-80 and induce additional regional cut-through activity on local roadways. Parallel local routes require longer trip distances than remaining on I-80, therefore, regional travel demand use of local routes would yield more VMT than use of I-80.

Significance after Mitigation

Implementation of Mitigation Measures 8.1, 8.2, and 8.3 would reduce potential significant impacts associated with bicycle facilities to a less-than-significant level by supporting bicycling to and from the project site and minimizing conflicts between bicycles and other travel modes.

However, elements of each mitigation measure would occur within Caltrans, Yolo County, and/or UPRR rights-of-way and would be subject to final approval and actions by others. Moreover, since the remaining fair share contributions needed for the construction of mitigation measure elements requiring the project's fair share contribution have not been identified by the relevant lead agency, fair share payment by the project applicant would not ensure construction. Finally, the ultimate improvements resulting from Mitigation Measure 8.3 are subject to change pending the outcome of the Mace Boulevard Corridor Plan process described in Mitigation Measure 2.3. Therefore, the implementation of these mitigation measures cannot be guaranteed.

As noted above, due to uncertainties regarding the ability for the aforementioned mitigation measures to reduce impacts to bicycle and pedestrian facilities, cumulative impacts to bicycle and pedestrian facilities would be considered **significant and unavoidable**.

Comparison to DISC Subsequent EIR

This impact determination remains unchanged from that identified in the DISC Subsequent EIR. As it relates to bicycle and pedestrian facilities, the DiSC 2022 project would not result in new significant environmental effects or a substantial increase in the severity of significant effects previously identified in the DISC Subsequent EIR.

Impact 9: Cumulative impacts to transit service and facilities.

Implementation of the proposed project would increase the number of passengers utilizing transit service and facilities. New transit passenger demand would be accommodated by transit services anticipated to be in service under cumulative conditions. However, increases to transit travel times caused by the project as well as reasonably foreseeable land use growth would adversely affect the on-time performance and service quality of transit services under cumulative conditions. This impact would therefore be **significant**.

Under cumulative conditions, substantial increases in background vehicle traffic would occur on study area roadways due to growth elsewhere in and around Davis. Together with the substantial increase in vehicle traffic caused by the project, this would cause adverse effects to transit operations by increasing transit service delay and running times. However, growth in background vehicle traffic would not materially change the adverse effects to transit services that would be attributable to the project.

Therefore, the project-specific transit service and facility impact analysis provided in Impact 3 would similarly apply to cumulative plus project conditions.

This would constitute a significant impact to transit service and facilities under cumulative conditions.

Mitigation Measure 9.1. Construct enhanced bus stops on Mace Boulevard near Alhambra Drive.

Implement Mitigation Measure 3.1 (Construct enhanced bus stops on Mace Boulevard near Alhambra Drive).

Mitigation Measure 9.2. Identify and construct complete streets improvements on the Mace Boulevard corridor.

Implement Mitigation Measure 2.3 (Identify and construct complete streets improvements on the Mace Boulevard corridor).

Secondary Impacts After Mitigation

Elements of Mitigation Measure 9.2, particularly the potential for roadway operations and capacity improvements along the Mace Boulevard corridor, have the potential to exacerbate impacts to VMT described in Impact 7. Existing evidence indicates that Covell Boulevard, Mace Boulevard, and connecting roadways such as Second Street and Chiles Road are utilized as regional cut-through routes when I-80 experiences significant speed reductions and delays during p.m. peak periods. Therefore, improving operations and reducing delays along these local roadways could increase the attractiveness of these routes as alternatives to I-80 and induce additional regional cut-through activity on local roadways. Parallel local routes require longer trip distances than remaining on I-80, therefore, regional travel demand use of local routes would yield more VMT than use of I-80.

Significance after Mitigation

Implementation of Mitigation Measures 9.1 and 9.2 would reduce potential significant impacts associated with transit service and facilities to a less-than-significant level by supporting transit use to and from the project site and minimizing adverse effects to transit operations that would be caused by the project.

However, elements of Mitigation Measure 9.2 would occur within Caltrans rights-of-way and would be subject to final approval and actions by others. Moreover, since the remaining fair share contributions needed for the construction of mitigation measure elements requiring the project's fair share contribution have not been identified by the relevant lead agency, fair share payment by the project applicant would not ensure construction. Finally, the ultimate improvements resulting from Mitigation Measure 9.2 are subject to change pending the outcome of the Mace Boulevard Corridor Plan process described in

Mitigation Measure 2.3. Therefore, the implementation of these mitigation measures cannot be guaranteed.

As noted above, due to uncertainties regarding the ability for the aforementioned mitigation measures to reduce impacts to transit service and facilities, cumulative impacts to transit service and facility would be considered **significant and unavoidable**.

Comparison to DISC Subsequent EIR

This impact determination remains unchanged from that identified in the DISC Subsequent EIR. As it relates to transit service and facilities, the DiSC 2022 project would not result in new significant environmental effects or a substantial increase in the severity of significant effects previously identified in the DISC Subsequent EIR.

Impact 10: Cumulative impacts to emergency vehicle access.

Implementation of the proposed project would not impede emergency vehicle access. This impact would therefore be **less than significant**.

The proposed project would include one vehicular access point on Mace Boulevard (full access) and two vehicular access points on County Road 32A (both full access). Altogether, these connections would provide multiple opportunities and routes for emergency vehicles to access the site from multiple directions.

Fire access from the South Davis fire station (located one-half mile south of the project site on Mace Boulevard) would be available via northbound Mace Boulevard. Fire access from the Downtown Davis fire station (located nearly three miles west of the project site) would be available via eastbound Fifth Street and Alhambra Drive. Medical emergency service access to/from Sutter Davis Hospital (located over four miles west of the project site) would be available via Covell Boulevard. Each of these corridors have traffic signals equipped with emergency vehicle pre-emption, providing signal priority to emergency vehicle in the event of an emergency.

The design of the on-site roadways and intersections will be subject to City of Davis code and Public Works Department staff review and approval.

Therefore, this is considered a **less-than-significant** impact.

Mitigation Measures

None required.

Impact 11: Cumulative construction-related impacts.

Implementation of the proposed project would result in construction activities that would disrupt the surrounding multi-modal transportation system. This impact would therefore be **significant**.

Construction of the project, including site preparation and construction, and delivery activities, would generate employee trips and a variety of construction-related vehicles. Construction activities would include disruptions to the transportation network near the project site, including the possibility of temporary lane closures, street closures, sidewalk closures, and bikeway closures. Bicycle and transit access may also be disrupted. The project is planned for construction in four phases over a ten to fifteen year timeframe. Thus, the construction activities related to the project could occur during the cumulative analysis year.

These activities could also result in degraded roadway conditions. Altogether, these factors would result in a significant impact related to project construction.

Mitigation Measure 11.1. Prepare a Construction Traffic Control Plan.

Implement Mitigation Measure 5.1 (Prepare a Construction Traffic Control Plan).

Significance after Mitigation

Implementation of Mitigation Measure 11.1 would reduce potential cumulative impacts associated with project construction activity to a **less-than-significant** level by minimizing the effects of project construction to the surrounding multi-modal transportation system.

Impact 12: Conflicts with a program, plan ordinance, or policy addressing the circulation system under Cumulative Plus Project conditions.

Implementation of the proposed project would increase vehicle travel activity within the project vicinity. Increases to vehicle travel activity would increase the potential for conflicts at the Chiles Road/I-80 EB Off-Ramp and at the UPRR at-grade rail crossing of County Road 32A. This impact would therefore be **significant**.

Peak hour traffic operations were analyzed to determine the extent to which the project would cause off-ramp queues to spill back to the I-80 mainline. To the extent possible, Caltrans strives to prevent off-ramp queues from extending to the freeway mainline in order to minimize the potential for associated adverse operational and safety effects (e.g., speed differentials between vehicle traffic on the freeway mainline and stopped/queued off-ramp vehicle traffic that could increase the potential for conflicts).

Table 8 displays the 95th percentile freeway off-ramp queue at the I-80/Mace Boulevard interchange off-ramps under cumulative conditions, without and with the project. This table indicates that vehicle queues would spill back out of both off-ramps onto I-80 under cumulative no project conditions during the a.m. peak hour. The project would exacerbate these queue spillbacks during the a.m. peak hour and also cause the queue to spill back to the freeway during the p.m. peak hour, which would conflict with Caltrans performance expectations for the State Highway System.

Table 8: Freeway Off-Ramp Queuing – Cumulative Plus Project Conditions

Off-Ramp	Off-Ramp Distance[1]	95th Percentile Queue Length[2]			
		Cumulative Conditions		Cumulative Plus Project Conditions[3]	
		A.M. Peak Hour	P.M. Peak Hour	A.M. Peak Hour	P.M. Peak Hour
Mace Boulevard/I-80 WB Off-Ramp	1,200 feet	2,600 feet	475 feet	2,725 feet	975 feet
Chiles Road/I-80 EB Off-Ramp	1,100 feet	2,175 feet	1,075 feet	3,270 feet	1,300 feet

Notes: [1] Measured from the intersection stop bar to the gore point of the freeway off-ramp. Does not include auxiliary lane on freeway mainline.
[2] Results at the Mace Boulevard/Chiles Road interchange are based on results from SimTraffic micro-simulation model.
[3] Shaded cells represent conditions in which the queue would spill onto the freeway mainline.
Source: Fehr & Peers, 2021.

The proposed project would add approximately 250 new peak hour vehicle trips between the project site and the I-80/County Road 32A interchange located to the east of the project site. These trips would be generated by project employees and residents traveling between the project site and Sacramento (and surrounding communities) via the I-80 causeway. These trips are expected to utilize the I-80/County Road 32A interchange instead of the I-80/Mace Boulevard interchange due to delays on I-80 east of Mace Boulevard and on Mace Boulevard within the interchange vicinity that would make use of the I-80/County Road 32A interchange more attractive from a travel time standpoint.

These additional project vehicle trips would primarily use County Road 32A to travel between the project site and the I-80/County Road 32A interchange. This would have an adverse effect on the existing UPRR at-grade rail crossing of County Road 32A immediately south of the County Road 32A/County Road 105 stop-controlled intersection. It is not uncommon for trespassing events (i.e., vehicles on the tracks) and vehicle-train collisions to occur at this location due to the current physical configuration of the crossing. Yolo County, together with UPRR and the City of Davis, is currently evaluating potential modifications to this at-grade crossing to reduce the potential for conflicts with rail operations. The addition of approximately 250 peak hour project vehicle trips could increase the potential for conflicts with rail operations at this location.

Altogether, this impact is considered **significant**.

Mitigation Measure 12.1. Identify and construct complete streets improvements on the Mace Boulevard corridor.

Implement Mitigation Measure 2.3 (Identify and construct complete streets improvements on the Mace Boulevard corridor).

Mitigation Measure 12.2. Construct crossing improvements at the UPRR at-grade crossing with County Road 32A.

Implement Mitigation Measure 6.2 (Identify and construct complete streets improvements on the Mace Boulevard corridor).

Secondary Impacts After Mitigation

Elements of Mitigation Measure 12.1, particularly the potential for roadway operations and capacity improvements along the Mace Boulevard corridor, have the potential to exacerbate impacts to VMT described in Impact 1. Existing evidence indicates that Covell Boulevard, Mace Boulevard, and connecting roadways such as Second Street and Chiles Road are utilized as regional cut-through routes when I-80 experiences significant speed reductions and delays during p.m. peak periods. Therefore, improving operations and reducing delays along these local roadways could increase the attractiveness of these routes as alternatives to I-80 and induce additional regional cut-through activity on local roadways. Parallel local routes require longer trip distances than remaining on I-80, therefore, regional travel demand use of local routes would yield more VMT than use of I-80.

Significance after Mitigation

Implementation of Mitigation Measure 12.1 would reduce potential significant impacts associated with freeway off-ramp queues by preventing queues at the Chiles Road off-ramp from spilling back onto the I-80 mainline during the a.m. and p.m. peak hours. However, queue spillbacks onto the I-80 mainline would still occur during the a.m. peak hour at the Mace Boulevard/I-80 WB Off-Ramp. **Table 9** illustrates how the operational enhancements identified in Mitigation Measure 2.3 would benefit freeway off-ramp queuing at the I-80/Mace Boulevard interchange.

Table 9: Freeway Off-Ramp Queuing – Cumulative Plus Project Conditions with Potential Operational Enhancements

Off-Ramp	Off-Ramp Distance[1]	95th Percentile Queue Length[2]					
		Cumulative Conditions		Cumulative Plus Project Conditions[3]		Cumulative Plus Project Conditions with Potential Operational Enhancements[3]	
		A.M. Peak Hour	P.M. Peak Hour	A.M. Peak Hour	P.M. Peak Hour	A.M. Peak Hour	P.M. Peak Hour
Mace Boulevard/ I-80 WB Off-Ramp	1,200 feet	2,600 feet	475 feet	2,725 feet	975 feet	2,750 feet	300 feet
Chiles Road/I-80 EB Off-Ramp	1,100 feet	2,175 feet	1,075 feet	3,270 feet	1,300 feet	475 feet	125 feet

Notes: [1] Measured from the intersection stop bar to the gore point of the freeway off-ramp. Does not include auxiliary lane on freeway mainline.
[2] Results at the Mace Boulevard/Chiles Road interchange are based on results from SimTraffic micro-simulation model.
[3] Shaded cells represent conditions in which the queue would spill onto the freeway mainline.
Source: Fehr & Peers, 2021.

Implementation of Mitigation Measure 12.2 would reduce the potential for conflicts at the UPRR at-grade crossing with County Road 32A that would otherwise occur due to the implementation of the project.

However, elements of both mitigation measures would occur within Caltrans, Yolo County, and/or UPRR rights-of-way and would be subject to final approval and actions by others. Moreover, since the remaining fair share contributions needed for the construction of those mitigation measure elements requiring the project's fair share contribution have not been identified by the relevant lead agency, fair share payment by the project applicant would not ensure construction. Finally, the ultimate improvements resulting from Mitigation Measure 12.1 are subject to change pending the outcome of the Mace Boulevard Corridor Plan process described in Mitigation Measure 12.1. Therefore, the implementation and effectiveness of these mitigation measures cannot be guaranteed and this impact would be considered **significant and unavoidable**.

Comparison to DISC Subsequent EIR

This impact determination remains unchanged from that identified in the DISC Subsequent EIR. As it relates to conflicts with a program, plan ordinance, or policy addressing the circulation system, the DiSC 2022 project would not result in new significant environmental effects or a substantial increase in the severity of significant effects previously identified in the DISC Subsequent EIR.