Appendix C

Transportation Memo

Kimley»Horn

Memorandum

To: Brad Stoneman

From: Chris Gregerson, P.E., T.E., PTOE, PTP

Re: ***Oasis Farms – DRAFT VMT Analysis***
Rio Vista, California

Date: December 20, 2021

This memorandum documents a Vehicle Miles Traveled (VMT) analysis completed for the proposed Oasis Farms development (the "Project" or "proposed Project") in Rio Vista, California. The Proposed Project is expected to construct two, 69,452 square-foot buildings to be used for cannabis cultivation and processing. With the passage of Senate Bill 743 (SB 743), VMT has become an important indicator for determining if new development will result in a "significant transportation impact" under the California Environmental Quality Act (CEQA). This memorandum summarizes the VMT analysis and resultant findings for the proposed Oasis Farms development.

Purpose of Analysis

Senate Bill 743 (2013) changed the focus of transportation impact analyses in CEQA from measuring impacts to drivers, to measuring the impact of driving. The change was made by replacing Level of Service (LOS) with VMT. This shift in transportation impact focus was intended to better align transportation impact analyses and mitigation outcomes with the State's goals to reduce greenhouse gas (GHG) emissions, encourage infill development, and improve public health through more active transportation. Level of service or other delay metrics may still be used to evaluate the impact of projects on drivers as part of land use entitlement review and impact fee programs.

In January 2019, the Natural Resources Agency finalized updates to the CEQA Guidelines including the incorporation of SB 743 modifications. The Guidelines' changes were approved by the Office of Administrative Law and are now in effect. The provisions apply statewide as of July 1, 2020.

To aid lead agencies with SB 743 implementation, the Governor's Office of Planning and Research (OPR) produced the *Technical Advisory on Evaluating Transportation Impacts in CEQA* (December 2018) that provides guidance regarding the variety of implementation questions they face with respect to shifting to a VMT metric. Key guidance from this document includes:

- VMT is the most appropriate metric to evaluate a project's transportation impact.
- OPR recommends tour- and trip-based travel models to estimate VMT, but ultimately defers to local agencies to determine the appropriate tools.
- OPR recommends measuring VMT for residential and employment projects on a "per rate" basis.
- OPR recommends that a per capita or per employee VMT that is fifteen percent below that of existing development may be a reasonable threshold. In other words, an industrial project that generates VMT per employee that is more than 85 percent of the regional VMT per employee could result in a significant impact. OPR notes that this threshold is supported by evidence that connects this level of reduction to the State's emissions goals.
- Lead agencies have the discretion to set or apply their own significance thresholds.

Currently, for purposes of analyzing transportation impacts under CEQA, neither the City of Rio Vista or Solano County have adopted methodologies or thresholds. Therefore, the guidelines produced by OPR were used to complete the VMT analysis for the proposed Project.

Methodology and Assumptions

While Travel Demand Models (TDMs) are broadly considered to be amongst the most accurate of available tools to assess VMT, their use is not without limitations. This was determined to be the case for a VMT evaluation for the proposed Project for two principal reasons: (1) When assessing cannabis cultivation and processing facilities, such as the proposed Project, a more targeted approach must be undertaken to more accurately quantify the impact of the proposed project in terms of VMT; and (2) using a Big Data source (Replica) allows for a more accurate measurement of their VMT rather than an estimation that would be provided with a TDM.

To determine VMT per employee for both the proposed Project and Solano County as a whole, the Replica platform was used. Replica uses anonymized cell phone data combined with or sources of location-based data such as credit card transactions to estimate trips down to the network link and Census block group level. The data used for this analysis is based on the average weekdays occurring between September and November 2019 to remove the influence of COVID. Each trip recorded includes the distance of the trip, the length (in seconds) of the trip, the mode used (drive alone, passenger, transit, walk, bike, other), the travel purpose (work, school, home, shopping, eating, etc.), the origin type (home, work, shopping, food, etc.), the time of day, the origin block group, and the destination block group.

Based on the State's guidelines and thresholds, a project is considered to result in a significant impact if the addition of the project results in a VMT per employee that is exceeds the threshold, defined as 15-percent below the Countywide average.

Analysis

To determine the average trip distance and occupancy for Solano County, the total trips were refined to only include trips that are from a job in Solano County that are headed home. The trips were refined further to isolate only those trips that occurred within an automobile rather than by another mode such as transit or biking, as required by State guidelines. Two trip types remain within the Replica data, private auto trips and carpool trips. Replica trips are person trips rather than vehicle trips and private auto trips are defined as trips made by someone driving a vehicle, excluding passengers. Carpool trips are defined as trips across the network by people who were passengers within a private auto. Within the analysis period there were 59,261 private auto trips and 12,604 carpool trips traveling from work to home. The total distance traveled by these trips was 1,054,191 miles for an average trip distance of 14.7 miles. As all trips were person trips, the occupancy was calculated by dividing the total number of trips by the number of private auto trips as these trips represent one vehicle per driver. This resulted in a calculated occupancy of 1.21 persons per vehicle.

The average trip distance for the proposed project was calculated by using the trips originating within the two block groups with employment within the City of Rio Vista. The trips were refined in an identical manner to those within Solano County with only trips traveling from work to home by private auto or carpool included. For the two block groups, 274 private auto trips and 61 carpool trips were used for this analysis. The total distance traveled by these trips was 5,733 miles for an average trip distance of 17.11 miles.

As cannabis cultivation and processing employment is closely related to agricultural employment compared to other types of employment, Replica was not used to determine the average occupancy for the project. Occupancy was calculated using surveys of cannabis cultivation and processing sites throughout Monterey County[1] to provide the most relevant data. While this data does not contain occupancy data directly, it was calculated based on employment data provided by the proposed Project

[1] *Multiple Cannabis Cultivation Facilities Traffic Impact Study*. Rick Engineering Company. June 12, 2020.

applicant and the trip generation characteristics developed based on driveway surveys at 45 different sites within Monterey County. The proposed Project is expected to employee 32 people per shift per building with a total of two shifts per day (5 A.M. to 2 P.M. and 2 P.M to 9 P.M.) and two total buildings for a total daily employee count of 128 employees. The proposed Project is estimated to generate 146 daily trips, conservatively assumed to all be commute trips with other trips considered to be negligible and not occurring every day. This results in an estimated occupancy of 1.76 persons per vehicle for the proposed Project.

To determine the total VMT produced by the proposed Project, the number of daily trips was multiplied by the average trip distance for a total daily VMT of 2,496. This results in an average VMT per employee of 19.5 when the total daily VMT (2,496) is divided by the total daily employees (128).

The calculated occupancy information was used to estimate the average VMT per Employee for Solano County and set a Countywide threshold 15-percent below the average. The total number of jobs within Solano County (138,100[2]) was multiplied by two to represent daily commute trips within the County. This was divided by the occupancy to determine the total number of vehicle trips, resulting in 227,759 total commute trips. This was then multiplied by the average commute trip distance calculated previously, resulting in a total daily VMT of 3,341,006. The total daily VMT was then divided by the total number of employees to calculate an average daily VMT per Employee of 24.2. The Countywide VMT per Employee threshold was calculated by taking 85-percent of the average VMT per Employee, or 20.6 VMT per Employee.

Table 1 summarizes the VMT per Employee for the proposed Project and compares it to the calculated Countywide threshold. As shown in Table 1, the Project results in a VMT per Employee below the County's threshold.

Table 1 – Vehicle Miles Traveled (VMT) by Land Use and Scenario

Scenario	VMT/Employee
Calculated VMT per Capita by Scenario	
County Average	**24.2**
County Threshold	**20.6**
Proposed Project	19.5
VMT per Employee as a Percent of Threshold by Scenario	
Proposed Project	95%
Over Threshold?	
Proposed Project	**No**

Findings

Based on the results of this analysis, the following findings are made:

- The proposed Project results in a VMT per Employee that is below the County threshold. **Therefore, the proposed Project is determined to not have a significant transportation impact**

[2] *Solano County Profile*. State of California Employment Development Department. Data based on November 2021. Accessed December 20, 2021. https://www.labormarketinfo.edd.ca.gov/cgi/databrowsing/localAreaProfileQSResults.asp?selectedarea=Solano+County&selectedindex=48&menuChoice=localAreaPro&state=true&geogArea=0604000095&countyName=&submit1=View+Local+Area+Profile