Appendix L

Transportation Assessment Letter

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INTERNATIONAL

We Make a Difference

October 13, 2021

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Re: Lockhart Solar PV II Project – Transportation Assessment Letter

Introduction

Michael Baker International (Michael Baker) has prepared this transportation assessment letter for the Lockhart Solar PV II Project (Project) located within the County of San Bernardino (County), California in support of the Transportation component of the California Environmental Quality Act (CEQA) process for the Environmental Impact Report (EIR). The purpose of this letter is to document the Project's estimated trip generation and vehicle miles traveled (VMT) associated with Project construction and operation.

Project Location

The Project Site is in unincorporated Hinkley, CA, approximately 7 miles north of the intersection of Harper Lake Road and Mojave-Barstow Highway 58. **Exhibit 1** provides a regional context map with the Project location identified. The Project Site consists of three parcels, each of which contains vacant, previously disturbed land or miscellaneous concrete foundations and various electrical lines and poles. The Project Site is bordered on the south by the existing Solar Energy Generating System (SEGS) VIII and IX Solar Thermal Power Plants, which the County approved for repowering to photovoltaic (PV) solar and battery storage in 2019 as part of the Lockhart Solar I Facility (CUP Project #201900125 approved in 2019); Harper Lake Road to the east; Hoffman Road to the west; and vacant land to the north. Vehicular access is currently provided via existing access gates off of Hoffman Road at the southern end of the Shared Facilities Area, as well as an existing access gate off of Harper Lake Road at the eastern end of the Project Site. **Exhibit 2** illustrates the surrounding roadway network.

Project Description

The Project includes development of a utility scale, solar PV electricity generation and energy storage facility that would produce up to 150 megawatts (MW) of solar power and include up to 4 gigawatt hours (GWh) of energy storage capacity rate in a battery energy storage system (BESS) within the approximately 755-acre Project Site. The Project is bordered on the south by the approved Lockhart Solar I Facility. The Project would share existing operations and maintenance (O&M) facilities (i.e., O&M building, warehouse and employee building), water and septic systems, switchyard and electrical transmission infrastructure, and a new collector substation (approved

and to be constructed) within the Lockhart Solar I Facility site to connect the Project to the existing transmission line which runs to the Southern California Edison (SCE)-owned Kramer Junction substation. Existing O&M buildings, warehouse and the employee building within the Lockhart Solar I Facility would be shared by Project operations staff. These shared facilities are located within the approximately 110-acre "Shared Facilities Area" within the Lockhart Solar I Facility site.

The Project is largely sited on land previously approved by the California Energy Commission (CEC) for development of SEGS X, a solar thermal power facility which was never fully constructed. The Project Site has been subject to near complete surface disturbance associated with past agricultural use, grading during partial construction of the SEGS X facility, as well as construction of the shared facilities area for the existing SEGS VIII and IX Solar Thermal Power Plants. The previously installed SEGS X concrete foundations will be removed if the foundations conflict with installation of Project facilities; they will otherwise be left in place. Concrete from SEGS X foundations would be demolished and exported from the Project Site for proper disposal at a licensed landfill. Previously constructed concrete solar racking piers in the southwest portion of the Project Site will remain in place as newer steel foundation piles can be driven around the old piers further reducing soil disturbance and offsite hauling and landfilling of debris.

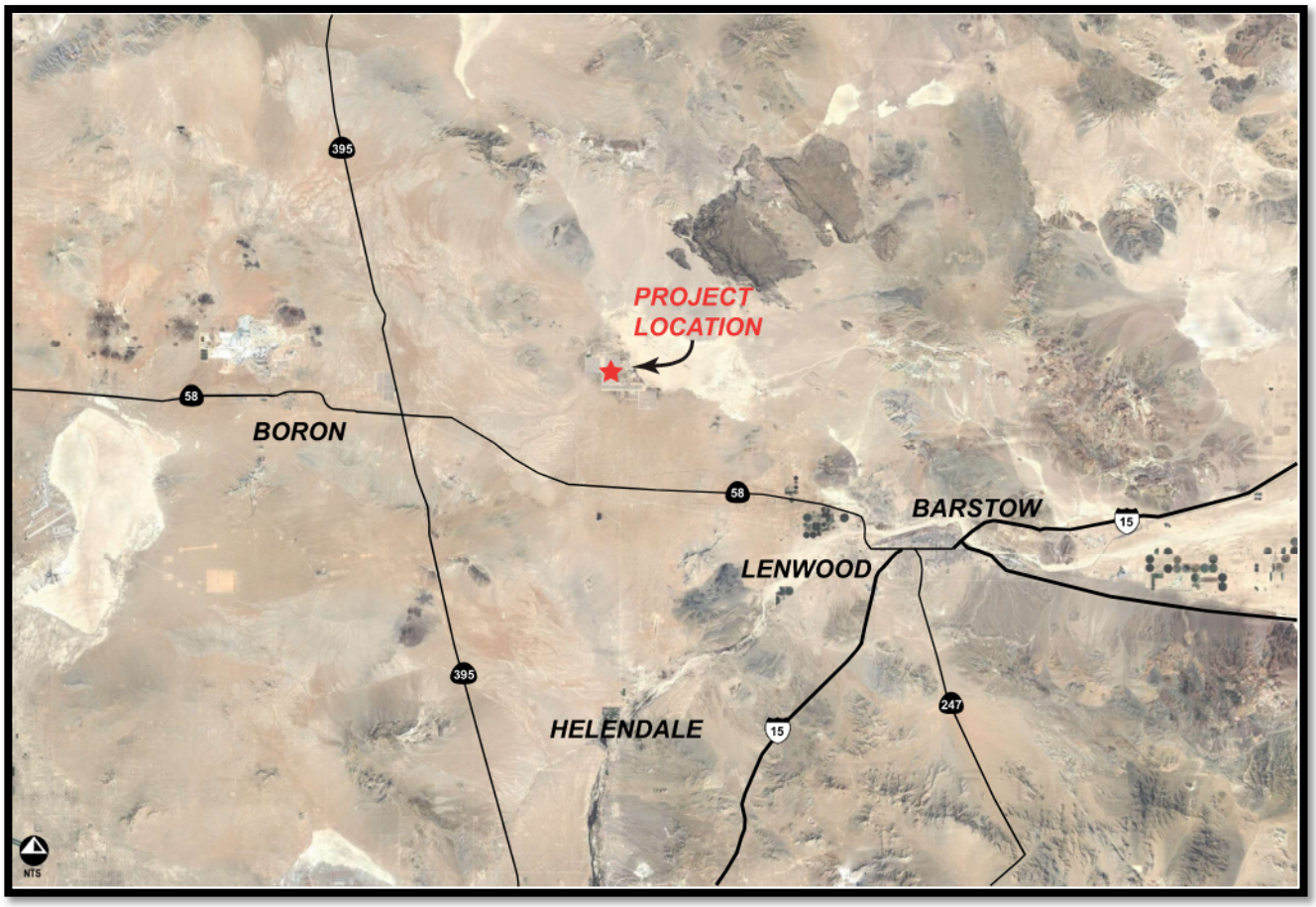


Exhibit 1: Regional Context Map

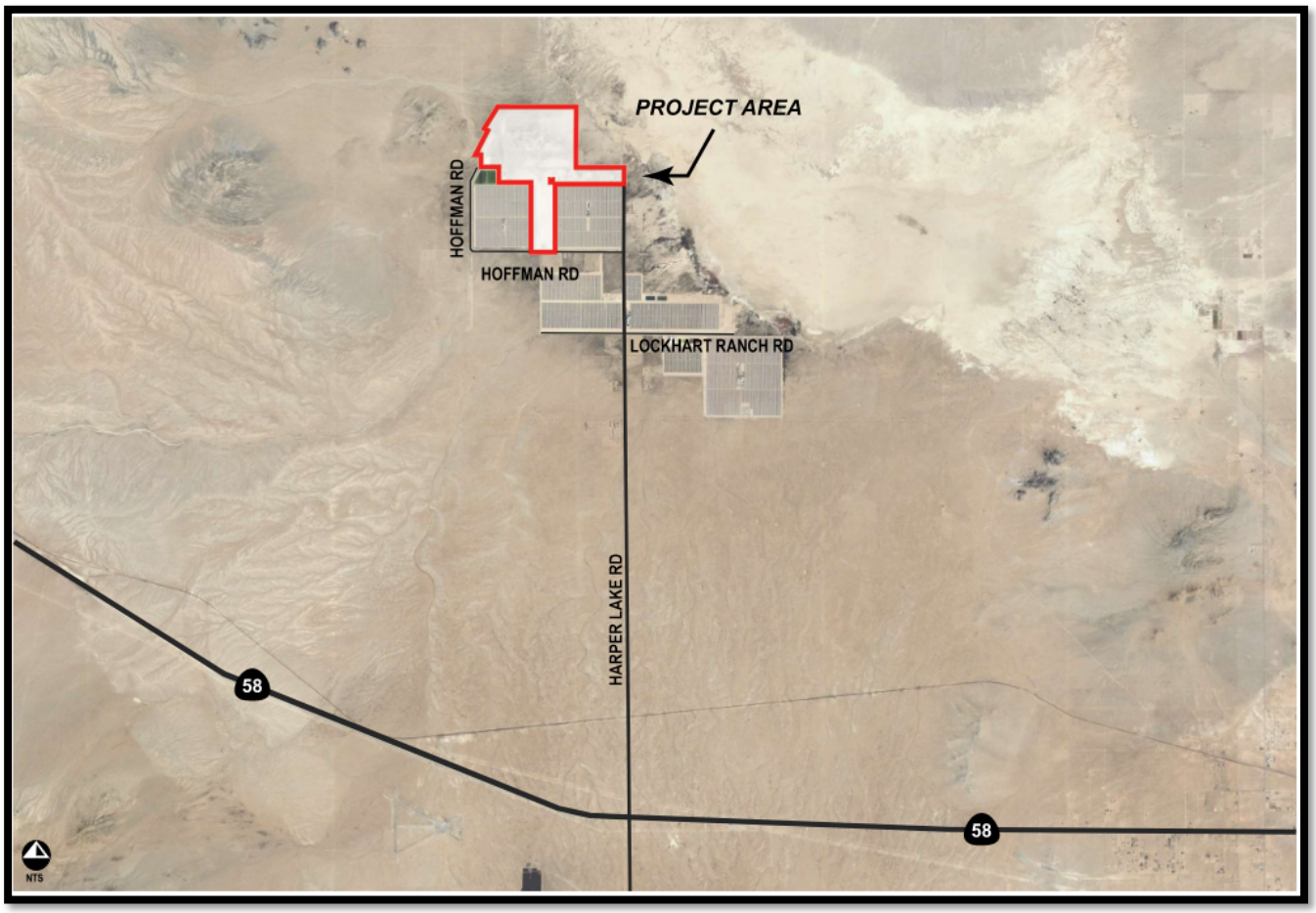


Exhibit 2: Project Location Map

Project Operations - Trip Generation

Typical O&M activities for the Project include but are not limited to, facility monitoring; administration and reporting; remote operations of inverters, BESS system and other equipment; site security and management; communication protocol; repair and maintenance of solar facilities, substation, electrical transmission lines, and periodic panel washing. The existing employees serving the SEGS VIII and IX facilities will continue O&M for the Project. Therefore, the Project would not generate additional daily and peak hour vehicle trips on the surrounding roadway network as a result of routine O&M.

Solar panel washing is expected to occur one to four times per year and general labor (up to 10 individuals) may assist in the panel cleaning. Therefore, it was assumed that the Project would generate approximately 40 trips per year associated with solar panel washing activities. From a daily and peak hour perspective, these trips are considered nominal and would not be expected to impact the existing road network near the Project Site including Highway 58.

Project Construction – Trip Generation

Project construction is anticipated to be completed over a period of up to approximately 14 months. For the purpose of estimating construction trips, Project construction activities include site preparation and demolition, grading, and facilities installation. The on-site construction workforce is expected to peak at approximately 340 individuals; however, the average daily workforce on-site is expected to be between 225 and 250 construction, supervisory, support, and construction management personnel. For the purposes of preparing a conservative analysis, an average of 250 construction personnel was assumed to be on-site throughout the duration of Project construction which, according to the Applicant, is a conservative estimate as employee trips are anticipated to fluctuate throughout Project construction. Construction would primarily occur Monday through Friday between 7:00 AM and 6:00 PM, as required to meet the construction schedule. Any construction work performed outside of the normal work schedule would be coordinated with the appropriate agencies and would conform to the County Noise Ordinance.

Table 1 provides a summary of estimated Project construction-related trips. During site preparation and demolition activities over a period of approximately 44 working days, a total of 638 one-way truck loads transporting material to a disposal site is assumed. A standard passenger car equivalent (PCE) factor of 2.0 was used to account for the Project's truck and delivery vehicle traffic and provide a more realistic measurement in terms of the potential impact of Project-related truck traffic. In addition to truck traffic, an average of 250 employees was assumed on-site during site preparation and demolition. As shown in **Table 1**, site preparation and demolition is estimated to generate approximately 558 daily PCE trips with 256 AM and 256 PM peak hour trips.

During Project grading, 1,250 one-way truck loads importing engineered materials (road base, cement stabilization materials, rock surfacing, riprap, engineered trench backfill, etc.) is assumed for approximately 65 working days. An average of 250 employees was assumed to be on-site during grading activities. As shown in **Table 1**, approximately 577 daily PCE trips, with approximately 258 AM and 258 PM peak hour trips, are estimated during Project grading activities.

During facilities installation, 350 deliveries are expected to arrive on-site over a period of 35 working days. This translates to approximately 10 deliveries per day, or 20 delivery trips per day when accounting for inbound and outbound trips. As stated, an average of 250 construction employees was assumed to be on-site during facility installation. As shown in **Table 1**, the estimated trip generation for this phase is approximately 540 daily PCE trips with 254 AM and 254 PM peak hour trips.

Traffic associated with each of the construction phases is considered temporary and is not expected to negatively affect the current operations of the surrounding roadway network.

Table 1: Estimated Project Construction Trip Generation

Description	Quantity	PCE[1]	Duration[2]	Daily Trip Rate (In & Out)[3]	Daily PCE Trips[4]	AM Peak Hour[5]		PM Peak Hour[5]	
						Total	In / Out	Total	In / Out
Site Preparation & Demolition									
Employees	250 Average Employees	1.0	44 Days	2 / Employee	500	250	250 / 0	250	0 / 250
Truck Hauling	638 Loads (1-way)	2.0		29 Truck Trips / Day	58	6	3 / 3	6	3 / 3
Estimated Trip Generation - Site Preparation & Demolition					**558**	**256**	**253 / 3**	**256**	**3 / 253**
Grading									
Employees	250 Average Employees	1.0	65 Days	2 / Employee	500	250	250 / 0	250	0 / 250
Truck Hauling	1,250 Loads (1-way)	2.0		38 Truck Trips / Day	77	8	4 / 4	8	4 / 4
Estimated Trip Generation - Grading					**577**	**258**	**254 / 4**	**258**	**4 / 254**
Facilities Installation									
Employees	250 Average Employees	1.0	35 Days	2 / Employee	500	250	250 / 0	250	0 / 250
Truck Delivery	350 Deliveries (1-way)	2.0		20 Delivery Trips / Day	40	4	2 / 2	4	2 / 2
Estimated Trip Generation – Facilities Installation					**540**	**254**	**252 / 2**	**254**	**2 / 252**

[1] *Passenger Cars have a Passenger Car Equivalency (PCE) of 1.0 and Large Trucks have a PCE of 2.0.*
[2] *Duration refers to the number of working days (Mon – Fri), not calendar days.*
[3] *Daily trip rates were derived by multiplying the number of truck loads per day by 2 to account for inbound and outbound trips and then dividing by the estimated number of working days. Daily trip rates for employees were based on one inbound and one outbound trip for a total of 2 per day.*
[4] *Daily trips were calculated by multiplying the Daily Trip Rate by the PCE factor (2.0) with the exception of the Construction Employees which were calculated by multiplying the number of employees by the assumed Daily Trip Rate.*
[5] *Truck trips are expected to be spreadout throughout the workday which is from 7 AM to 6 PM., Therefore, the AM and PM peak hour volumes assumed 20% of the daily trips occurred during the peak hours.*

Vehicle Miles Traveled (VMT)

The San Bernardino County *Transportation Impact Study Guidelines* (TISG) dated July 9, 2019 was used as a resource for determining whether a VMT analysis is required for the Project. According to the County's TISG, land use projects that meet certain screening criteria, listed in **Table 2** below, are assumed to result in a less-than-significant transportation impact under CEQA and do not require a detailed quantitative VMT assessment. Each of the screening criteria identified in the

County's TISG and an evaluation of the screening criteria for the Project are discussed below in **Table 2**.

Exhibit 3 presents the results of the San Bernardino County Transportation Authority VMT Screening Tool for the Project. This tool is a web-based application that enables users to determine whether or not a development project meets the screening criteria required through VMT analysis. As shown in Exhibit 3, the Project is not located within a Transit Priority Area (TPA) and is not located within a Low VMT Area. However, the Project would generate less than 110 daily vehicle trips. As such, the Project would meet one of the screening criteria identified in the County's TISG, and a detailed quantitative VMT assessment is not required. **Therefore, the Project is considered to have a less-than-significant transportation impact.**

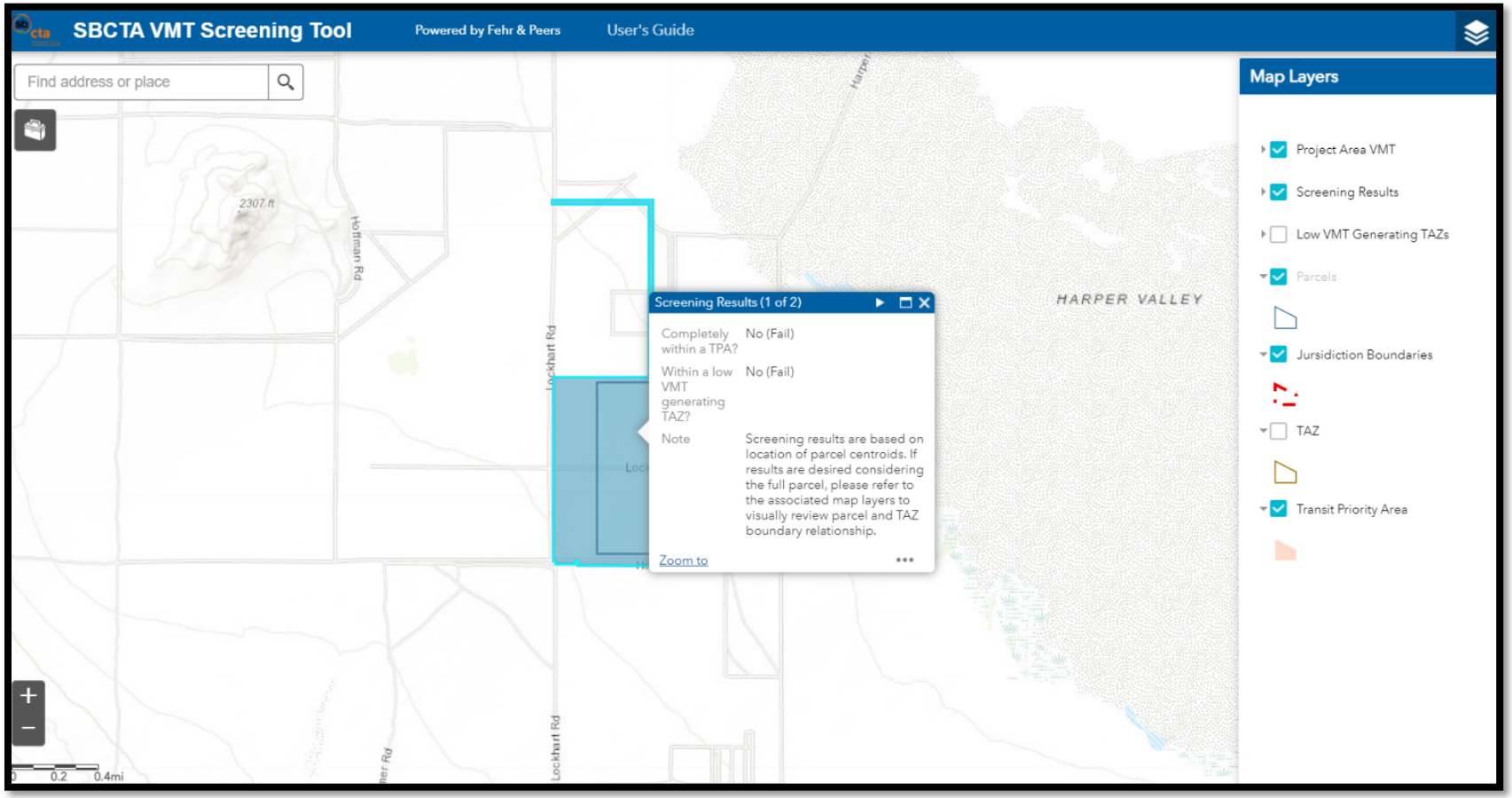
Existing Traffic Conditions

According to Caltrans Traffic Census Program, Highway 58 east and west of Harper Lake Road carries approximately 12,500 vehicles per day in 2019 or 1,400 vehicles during the peak hour. Highway 58 is a four-lane facility with a level of service (LOS) C capacity of 1,430 passenger cars per hour per lane (pc/hr/ln) according to *Caltrans Guide For The Preparation of Traffic Impact Studies*, December 2002. As a four-lane roadway, Highway 58 would have a capacity of 5,720 (4 lanes x 1,430) pc/hr/ln. With 258 additional peak hour vehicles during construction, the total peak hour volume on Highway 58 during construction would be 1,658 (1,400 + 258). This translates to a volume to capacity ratio of 0.29 (1,658 / 5,720) which would represent an acceptable level of service i.e. LOS C or better. Daily traffic volumes on Harper Lake Road are assumed to be very low (approx. 100 daily vehicles) since this roadway primarily serves the current Lockhart Solar site. Therefore, the additional traffic during construction is not expected to negatively affect existing traffic operations near the Project site.

At the two-way stop-controlled intersection of Highway 58 and Harper Lake Road, an approximately 650-foot left-turn lane is provided for the eastbound to northbound left-turn movement onto Harper Lake Road. In addition, the intersection provides an approximately 500-foot acceleration lane for traffic making a southbound to eastbound left-turn movement. Existing peak hour traffic on Harper Lake Road turning left or right onto Highway 58 is assumed to be low and thus traffic operations are expected to operate acceptably (LOS C or better). The additional 258 peak hour trips during construction are considered temporary and not expected to negatively affect the traffic operations near the Project site.

Table 2: VMT Screening Criteria and Project Evaluation

Screening	Screening Criteria	Project Evaluation	Result
Local Community Projects	The following list of projects would be screened out: • K-12 Schools • Local-serving retail less than 50,000 SF • Local parks • Day care centers • Local serving gas stations • Local serving banks • Student housing projects • Local serving community colleges that are consistent with the assumptions noted in the RTP/SCS	Project is a solar and energy storage facility and is not considered a local community project.	Does Not Meet Criteria
Trip Generation Threshold	Projects generating less than 110 daily vehicle trips such as: • 11 single family housing units • 16 multi-family, condominiums, or townhouse units • 10,000 SF of office • 15,000 SF of light industrial • 63,000 SF of warehouse • 79,000 SF of high cube transload and short-term storage warehouse • 12 hotel rooms	Project generates less than 110 daily vehicle trips since the new trips generated by the Project is estimated at 40 trips per year for washing solar panels.	**Criteria Is Met**
Transit Priority Area	Projects located within a Transit Priority Area (TPA) as determined by the most recent SCAG RTP/SCS.	As shown in **Exhibit 3**, the Project is not located within a TPA.	Does Not Meet Criteria
Low VMT Area	Projects located within a low VMT generating area as determined by the analyst based on the County's VMT efficient area maps online at https://www.arcgis.com/apps/webappviewer/index.html?id=779a71bc659041ad995cd48d9ef4052b	As shown in **Exhibit 3**, the Project is not located within a low VMT generating area.	Does Not Meet Criteria



Source: https://www.arcgis.com

Exhibit 3: San Bernardino County VMT Screening Map

Summary and Conclusion

Project operations would generate approximately 40 new vehicle trips per year for solar panel washing activities. Existing employees serving the SEGS VIII and IX facilities, will continue O&M activities associated with the Project. Therefore, no new daily vehicle trips would be generated by Project operations.

Project construction is anticipated to be completed over a period of up to approximately 14 months, during which it was conservatively assumed that an average of 250 employees would travel to and from the Project Site on a daily basis Monday through Friday. This translates to approximately 500 daily vehicle trips during Project construction. The highest volume of construction-related traffic is expected during Project grading activities generating approximately 577 daily trips (500 employee trips and 77 truck trips) with 258 AM peak hour trips and 258 PM peak hour trips. The roadway network in the vicinity of the Project Site is characterized by free-flowing traffic conditions, with limited existing traffic. Furthermore, the Project Site is not located within 300 feet of an intersection of two Collector streets or higher, or any impacted intersections as determined by the Traffic Division. Construction traffic is considered temporary (approximately 14 months) and therefore is not expected to negatively affect existing roadway operations near the Project Site.

The results of the VMT screening analysis show that the Project meets one of the screening criteria (i.e., trip generation threshold). Therefore, the Project is considered to have a less-than-significant transportation impact, and a detailed quantitative VMT assessment is not required.

If you have any questions pertaining to the results summarized in the letter, please contact me at (619) 456-1410 or by email at jacob.swim@mbakerintl.com.

Sincerely,

Jacob Swim, TE
Michael Baker International