Appendix L1 VMT Memorandum

Appendices

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FEHR PEERS

Memorandum

Date: February 12, 2024

To: Jay Bautista, P.E., T.E., City of Ontario

From: Paul Herrmann, T.E.
Brian Wolfe

Subject: DRAFT Ontario Ranch Sports Complex Vehicle Miles Traveled (VMT) Analysis

OC20-0741

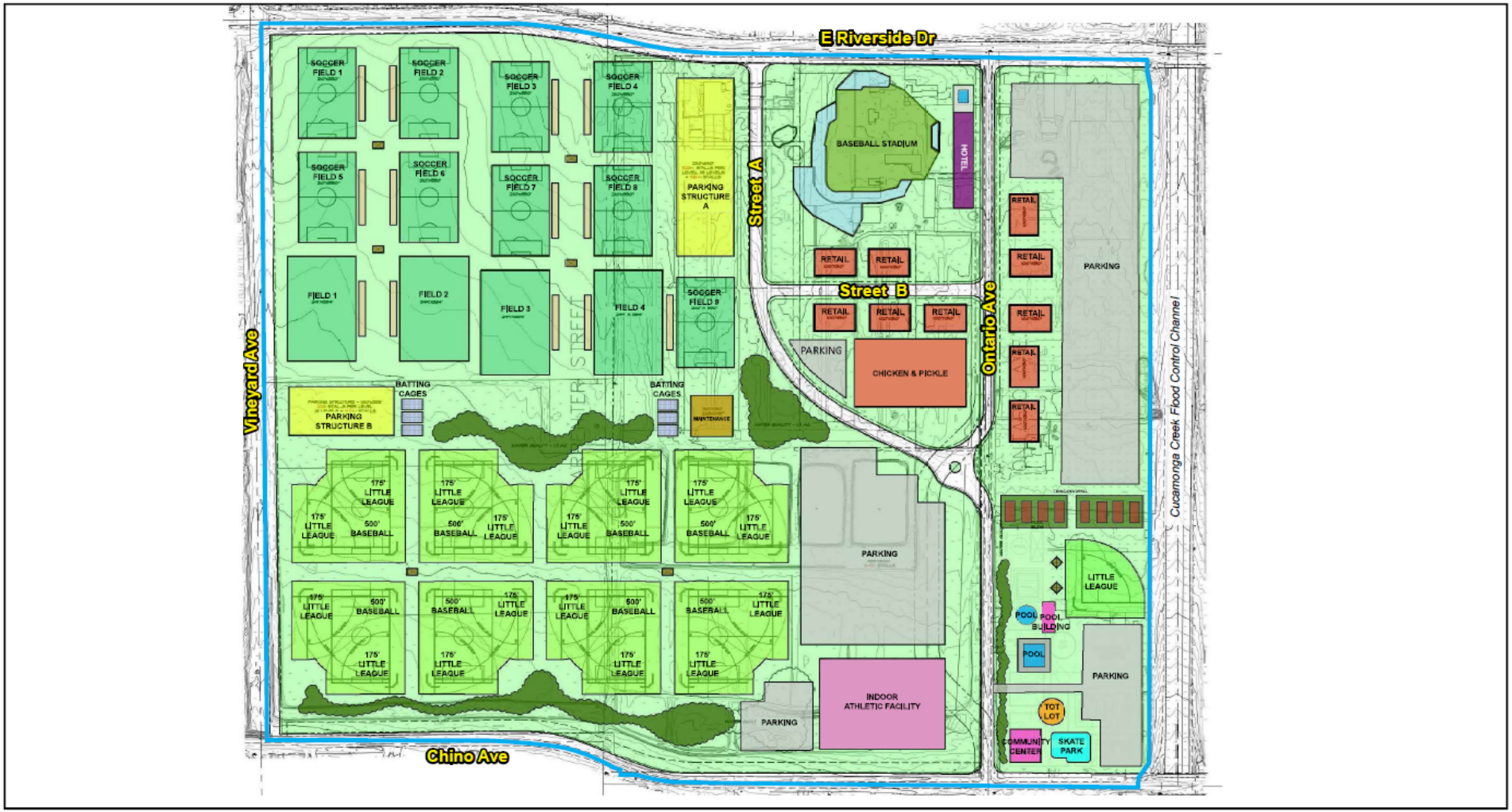
Fehr & Peers has completed quantifying Vehicle Miles Traveled (VMT) for the Ontario Ranch Sports Complex project ("Project") in Ontario, California. This VMT analysis is consistent with requirements of Senate Bill 743 (SB 743), the Office of Planning and Research's (OPR's) Technical Advisory, and the City of Ontario's adopted VMT Impact Analysis Resolution (No. 2020-071).

The remainder of this memorandum is divided into seven sections:

- Project Description
- Terminology
- Analysis Methodology
- VMT Estimates
- VMT Impact Assessment
- Mitigation Measures
- Conclusions

Project Description

The proposed Project is a 199-acre sports complex with an associated mixture of uses. The Project site is bounded by Riverside Drive to the north, Chino Avenue to the south, Cucamonga Creek Flood Control Channel to the east, and Vineyard Avenue to the west, as shown in **Figure 1**. There is an active dairy farm and nursery onsite while the fields on the western and southern portion of the site are currently fallow.



Project Boundary

0 500
Scale (Feet)

Source: RUM Design Group 2023; Ontario 2023.

Figure 1

Proposed Site Plan

The Project will consist of the following land uses:

- Planning Area (PA) 1: Semi-professional Minor League Baseball Stadium (6,000-person capacity)
- PA 2-4: Commercial Retail, Baseball Stadium Retail, Retail and Hospitality Areas
- PA 5: City Park (Outdoor Baseball/Softball, Soccer, and Multi-use Fields)
- PA 6: City Park (Indoor Athletic Facility)
- PA 7: Community Recreation Center

The Project will convert approximately 134.42 acres of Low Density Residential (LDR) and Medium Density Residential (MDR) zoning to Open Space-Parkland (OS-R) and approximately 51.57 acres of LDR zoning to Hospitality for a baseball stadium, ancillary/supportive retail, and lodging uses. The Project will comply with Senate Bill (SB) 330 and SB 166 by relocating the zoned units to adjacent parcels to the southwest on Vineyard Avenue (Vineyard Corridor) in the form of increased allowed density. The Project also includes onsite roadway/driveway improvements, site improvements, and landscaping and utility improvements.

Fehr & Peers was provided with information on proposed uses and events at the Project from the City of Ontario, developing a range of event/use scenarios for weekdays and weekends. While daily operations will vary depending on the scale of hosted sports tournaments and stadium events, it is expected that the recreational sports fields will be used regularly for weekday practices and weekend games or tournaments. The Minor Leage Baseball Stadium will primarily be used for minor league semi-professional baseball games; however, it is also assumed to serve as a major event space for the City that will hold concerts and other non-baseball events. The proposed event types, attendance projections, and event frequency were used to annualize Project trips and estimate VMT.

Development of the Project will be completed over multiple phases, with Project components opening between Spring 2025 and Fall 2027. The Project site can be accessed through Vineyard Avenue, Riverside Drive, and Chino Avenue. Vineyard Avenue and Ontario Avenue will extend through the Project site to provide access and internal circulation.

Terminology

The following are definitions for terms used throughout this document:

- **Vehicles Miles Traveled (VMT).** VMT measures the number of trips and the lengths of those trips for the total number of miles that vehicles will travel on a roadway system. It is used to better assess transportation impacts on greenhouse gas emissions, air quality, and energy. The number of miles of vehicle travel is an indicator of the travel levels on the roadway system by motor vehicles.

- **Total (Daily/Weekday/Weekend) VMT.** Total VMT represents all VMT generated by a project or in a defined area, such as a Traffic Analysis Zone (TAZ) or City boundary,on a typical day, weekday, or weekend.
- **VMT per Service Population.** Service population (SP) counts residents and employees. VMT/SP measures the transportation "efficiency" of a project or plan and is defined as VMT generated on a typical weekday/weekend per person who lives and/or works in a designated area.
- **VMT per Visitor.** An alternative metric provided for the unique land uses for the Project that generate a substantial amount of visitor traffic relative to the number of employees. This metric measures the approximate VMT generated per user of the Project, including players, coaches, spectators, etc. This metric is not used to determine significant impacts; however, it is provided for additional context and more accurately reflects expected project VMT per capita.
- **Origin-Destination (OD) VMT Method.** The OD method for calculating VMT sums all VMT generated by trips with at least one trip end in the study area and tracks those trips from their estimated origins to their estimated destinations. Origins are all vehicle trips that start in a defined area, and destinations are all vehicle trips that end in that defined area. The OD method accounts for special generator trips (e.g. Ontario Airport) and truck trips and provides a complete estimate of all VMT within the study area. The assessment below compares the Project OD VMT/SP to the Citywide average OD VMT/SP to assess potential project-level VMT impacts.
- **Boundary VMT Method.** The boundary method for calculating VMT sums all VMT on a roadway network within a designated boundary. Boundary method VMT estimates VMT by multiplying the number of trips on each roadway segment by the length of that segment. This approach includes all trips, including those trips that do not begin or end in the designated boundary and therefore captures the effect of cut-through and/or displaced traffic. The boundary utilized in the assessment below is the Ontario City Limits Boundary. The assessment below compares Citywide Boundary VMT with and without the Project to assess potential effect on VMT impacts.
- **Streetlight Data.** A digitally available data source that utilizes annonymous cell phone GPS and connected vehicle data to develop generalized trip characteristics for user-selected roadway segments or areas. This includes information on daily/hourly number of vehicles, average trip length, average speed, and vehicle type. This information was used to refine trip generation rates for various use scenarios and determine average trip length for recreation, entertainment, and hospitality uses.

Analysis Methodology

VMT for a project is calculated by multiplying the total trips generated by the project by the full length of those trips. The number of trips and the vehicle trip length can be estimated using different tools; travel surveys, Institute of Transportation Engineers (ITE) *Trip Generation Manual*, GPS data, travel demand forecasting models, air quality/GHG models, etc.; but the established best practice for estimating VMT as identified in the City of Ontario's VMT Impact Resolution is with a calibrated and validated travel demand forecasting model. The local validated and calibrated model for City of Ontario is the San Bernardino County Transportation Agency's (SBCTA) travel demand model (SBTAM).

Fehr & Peers tested SBTAM for sensitivity for use in this assessment specifically to verify if the model accurately projected the number of vehicle trips as well as whether the model accurately estimated vehicle trip lengths. Our review summary is noted below:

- **Trip Generation Review –** The unique land uses of the project (baseball stadium and active sports park uses) and variation in programming cannot be modeled in SBTAM without oversimplifying operational assumptions within the Project. Trips would be underestimated by the model as compared to empirically collected data at similar multi-purpose sports complexes as described in the next section.
- **Trip Length Review –** The unique land uses and region-wide draw of events proposed for the Project suggests that trip length is expected to be longer than the trip length modeled for recreation in SBTAM. Utilizing Streetlight's anonymous connected vehicle data for average trip length at sports and entertainment facilities in Southern California provides a more accurate representation of average trip length for this Project under various programming scenarios. The retail and office uses are expected to function similar to existing similar uses in the City; therefore, trip lengths for these uses can be estimated using SBTAM. Thus, a hybrid approach was chosen to estimate trip lengths as described below.

Since the Project recreation and entertainment uses are unique uses that our review identified are not accurately reflected by the SBTAM model, VMT was estimated off-model using more conservative, project-specific traffic count and GPS data to estimate trip generation and trip distance information. Moreover, VMT was annualized to determine average daily VMT estimates. Typically, VMT is considered on a per weekday basis; however, the variability of operations between weekday and weekend days, tournament and non-tournament weekends, and event sizes suggests that VMT generated will vary day-to-day. To compare the full potential impacts of the project against the City's threshold of significance, total annual VMT for the project was estimated and then divided by 365 days to generate an average daily VMT estimate.

The off-model estimations of the Project recreation, entertainment, and hospitality uses were added to the results from the SBTAM model that estimated VMT for the Project retail and office employment, resulting in a final estimation that reflects the entire Project.

Trip Generation

The number of weekday and weekend daily trips for each Project land use were estimated for the by using one of three methods:

1. **ITE Trip Generation Manual** – rates published in *Trip Generation, 11th Edition (Institute of Transportation Engineers [ITE], 2021)* were used for typical land uses with robust data in the ITE manual.
2. **Custom Trip Generation Rates Derived from Traffic Counts** – rates for various sports activity and stadium events were developed from 24-hour traffic counts collected at comparable facilities in San Bernardino, Riverside, and Orange Counties. These rates more accurately reflect local travel patterns for events as compared to rates published by ITE, as described in more detail below. Traffic counts were also collected at the Chicken 'n Pickle facility in San Antonio, Texas to develop a specific trip generation rate for the proposed entertainment use.
3. **Custom Trip Generation Rates Derived from Streetlight Zone Activity Data** – Fehr & Peers utilized Streetlight data (anonymous cell phone and GPS data) to collect traffic counts at driveways of comparable facilities in San Bernardino, Riverside, and Orange Counties. This data was compared against actual traffic count data to validate the big data counts. Streetlight data allowed for the development of tournament and non-tournament trip generation rates from a wider sample size than one-day counts. Streetlight data was also used to supplement land uses without ITE rates and for rates with outdated or limited data.

Fehr & Peers selected sites for Streetlight assessment with exclusive parking lots to ensure trips for separate land uses were not included; however, limited parking at some of these facilities may undercount overall demand. Physical traffic counts were used as the basis for rate development when Streetlight data appeared inconsistent with expected attendee projections.

Project land uses were grouped into the following four categories to estimate trip generations for the Project scenarios:

- Hospitality (Hotel and Shopping Plaza)
- Open Field/Recreation Uses
- Public Park Uses
- Minor League Baseball Stadium

Hospitality (Hotel and Shopping Plaza)

The Project includes a hotel and commercial buildings adjacent to the stadium. While most of the retail use is unknown and assumed to be partially restaurant and partially commercial retail, the

only known use is a proposed "Chicken 'n Pickle" restaurant and pickleball entertainment complex. This use is located in PA-4 and was grouped into the hospitality land uses.

Estimations for the "Chicken 'n Pickle" restaurant and entertainment complex were developed using driveway traffic count data at the existing Chicken 'n Pickle in San Antonio, Texas. This facility most closely matches the proposed use case for the Project compared to traditional ITE trip generation rates for restaurants and tennis courts.

The remaining 80 KSF[1] is assumed to be represented by 50 percent (40 KSF[1]) fast casual (quick service) restaurant and 50 percent (40 KSF[1]) retail plaza and will rely on traditional ITE rates for trip generation.

The following ITE trip generation rates were used to estimate trips for these land uses:

- ITE Code 310 – Hotel
- ITE Code 821 – Retail Plaza (40k-150k GSF, No Grocery Store)
- ITE Code 930 – Fast Casual Restaurant

There is expected to be a high rate of internalization between the hotel and recreation fields as the primary purpose of the hotel is to serve visiting teams for sports tournaments. Fehr & Peers estimated a weekend internalization rate of 50 percent for the hotel, based on the assumption that half of all hotel trips will stay onsite within the Project (i.e., accessing adjacent sports fields, Minor League Baseball Stadium and supportive entertainment uses). This rate is similar to the rates used for comparable mixed-use entertainment and sports complexes throughout California including the Acrisure Arena in Palm Desert and the proposed Major Leage Soccer Stadium in Sacramento. The weekday internalization rate is expected to be lower as there are typically no regional tournaments scheduled on weekdays. As such, Fehr & Peers assumed a weekday internalization rate of 20 percent (assuming one fifth of all hotel trips are to access on-site uses).

Internalization was also applied to the retail uses on the Project Site, as the retail is intended to support the Minor League Baseball Complex and sports fields. It is anticipated that most customers will be visiting the retail plaza before or after games, tournaments, and events. Therefore, an internalization rate of 33 percent was applied to all retail trips during the weekend. Similar to the hotel, internalization is expected to be lower during the weekday, with a rate of ten percent applied. Internalization was not applied to the Chicken 'n Pickle use as this is expected to be a large entertainment complex that will draw visitors regionally.

Fehr & Peers did not apply a pass-by reduction for the retail plaza, as the retail uses are expected to be largely contained within the Sports Complex and include services that specifically cater to Sports Complex visitors.

[1] KSF: Thousand Square Feet

Open Field/Recreation Uses

Trip generation rates for the various sporting uses will vary depending on programming (practices, games and tournaments). While the ITE Manual contains some trip generation information for sports fields/courts, it does not contain detailed daily rates for weekdays and weekends differentiated by practices, games and tournaments. It also does not have rates for most of the sports fields/courts proposed in this project. Therefore, Fehr & Peers developed custom trip generation rates for use in this study.

To account for the variation in activity, Fehr & Peers gathered data for each type of sporting event and type of field/court. Fehr & Peers collected 24-hour driveway counts and peak-hour field/court usage rates at the following facilities while practices, games, and tournaments were occurring:

- Soccer Fields: Silverlakes Sports Complex in Norco, CA (September 2023)
- Baseball Fields: Big League Dreams Baseball Fields in Jurupa Valley, CA (October 2023)
- Basketball Courts: Open Gym Premier in Ladera Ranch, CA (October 2023)

These counts were also compared against zone activity at the same facilities from big data vendor Streetlight. Several tournament and non-tournament dates were chosen in 2022, focusing on the time period before and after scheduled programming. Data from Streetlight for similar events in September and October 2022 at the Silverlakes Sports Complex, Big League Dreams in Jurupa Valley, and Open Gym Premier in Ladera Ranch show nearly identical driveway volumes for both daily and midday peak hours. In cases where Streetlight data significantly over or underestimated volumes compared to traffic counts, traffic counts were used due to their level of precision.

This data was used to develop trip generation estimates for each sport for the following scenarios:

- Weekday with Practices
- Weekend with Typcial Games (Baseball/Softball and Soccer Only)
- Weekend with a Tournament

Public Park and Other Recreational Uses

The Public Park and Other Recreational Uses are assumed to follow more regular scheduling without the seasonal variability seen in the sports fields/courts. Fehr & Peers referenced both ITE trip generation rates and Streetlight Zone Activity data to develop trip generation estimates for the following land uses:

- Tennis/Pickleball Courts
- Swimming Pool
- Recreation Community Center
- Skate Park
- Tot Lot

- Picnic Area
- Batting Cages

The following ITE trip generation rates were used to estimate trips for the corresponding land uses documented above:

- ITE Code 495 – Recreational Community Center
- ITE Code 433 – Batting Cages

To better reflect the other public park uses, Fehr & Peers referenced Streetlight Zone Activity data for several tennis/pickleball court complexes and public swimming pools throughout San Bernardino, Riverside, and Orange Counties. The intent of this data collection was to develop more current and locally specific trip generation rates compared to the ITE Trip Generation Manual. Trip generation rates for tennis/pickleball court facilities were found to be slightly higher than the rates reported by ITE Code 490 (Tennis Courts). No directly comparable ITE rate is available for swimming pools. As such, Fehr & Peers used the trip generation rates derived from Streetlight data as they more accurately reflect the characteristics of the proposed project.

Fehr & Peers grouped all remaining public park amenities (skate park, tot lot, picnic area) which total 11.21 acres and reviewed the ITE Code 411 for a public park. Applying this rate would only generate nine daily trips, far lower than anticipated given the density of amenities found in the project area. Fehr & Peers reviewed other established trip generation rates for public parks and used the Trip Generation Rate for a "City Developed Park" derived by the San Diego County Association of Governments (SANDAG). Using this rate results in an estimated 561 daily trips, commensurate with the park's densely planned amenities.

Minor League Baseball Stadium

Fehr & Peers reviewed ITE Code 462 (Professional Baseball Stadium) and determined the rate is not representative of the Project as it is based only on two major league baseball events during spring training. Therefore, Fehr & Peers developed custom trip generation rates for the minor league baseball stadium.

Driveway counts were collected at an Inland Empire 66ers home baseball game on a Saturday in September 2023. These counts were then converted into a per attendee daily trip generation rate. Fehr & Peers compared this custom trip generation rate to rates derived from Streetlight Zone Activity Data for the Rancho Cucamonga Quakes and Inland Empire 66ers during Spring 2022 home games (mid-April to mid-June). The per attendee rates were found to be almost identical between the two methods. Since the Streetlight data references two stadiums over a longer observation period, Fehr & Peers used the rates developed from Streetlight data.

The stadium will also employ 37 full-time and 6 part-time office workers (43 total employees). While the gameday trip generation estimates described above account for these workers, it is

assumed that the stadium will function most like a typical 43-employee office building on non-game days. Non-gameday trip generation considerations were included for daily trip generation estimates, utilizing ITE Code 710 (General Office Building).

Trip Length

Retail and Office Uses

Trip lengths for commercial retail uses (including Chicken 'n Pickle) and stadium employees were estimated by referencing average trip length data from the San Bernardino Transportation Analysis Model (SBTAM), consistent with recommendations in the City's adopted VMT Impact Analysis Resolution and determined to be the best available source for estimating potential automobile trip lengths to/from the site.

Modeling Methodology

The latest version of SBTAM was run to extract trip length data noted above for automobile trips. Retail employment and Office employment were coded into separate TAZs to represent the Project site in the base and future year models. The future year model included the housing relocation to the TAZs along the Vineyard Corridor, consistent with SB 330 and SB 166 requirements.

The SBTAM roadway network and socio-economic data within the City of Ontario were updated to be consistent with The Ontario Plan (TOP) Environmental Impact Report (EIR) scenario modeling for Base Year (2019) and General Plan Buildout (2050). Outside of the City of Ontario, this model assumes datasets consistent with the 2016 Southern California Association of Governments (SCAG) Regional Transportation Plan and Sustainable Communities Strategy (RTP/SCS) with a base year of 2012 and future year of 2040[2].

As recommended in the SBTAM model documentation, model assignment parameters were set to run up-to five loops with a minimum convergence criterion[3] of 0.01.

Recreation, Entertainment, and Hospitality Uses

For recreation, entertainment, and hospitality land uses where SBTAM trip length data is not available, average trip length was referenced from the big data vendor Streetlight which uses

[2] Please note that SBTAM does not have an available dataset consistent with the SCAG 2020 RTP/SCS. At the time of this analysis, SBTAM was in the process of being updated with the SCAG 2020 RTP/SCS data, but the data was not available. This analysis uses the most current, available SBTAM model version consistent with the City of Ontario's VMT Impact Resolution.

[3] Convergence criteria refers to the acceptable difference in the traffic volumes produced by different loops of the vehicle assignment. A convergence criteria of 0.01 indicates that the model is producing similar outputs with an allowance of 1% difference between each loop. This criterion is outlined in the model documentation as the recommended convergence criteria for the model.

anonymous connected vehicle GPS data to summarize trip characteristics for road and driveway segments. Daily vehicle activity data was pulled for the same comparable facilities used in the trip generation rate development process. Additional comparable facilities in the surrounding project area were collected for land uses that had trip generation estimates derived from ITE Trip Generation Rates or traffic counts. Most data were collected in 2022 to ensure a robust data set as, at the time of the analysis, Streetlight data only reported information up to April 2023. A list of comparable facilities and time periods analyzed for each of the Project's land uses is provided in **Appendix A.**

Annualization

Typically, VMT estimates are analyzed at the daily level. However, the significant variation in event programming and site attendance levels over the course of a year requires VMT estimations to be annualized to effectively evaluate the potential impacts of the Project. Fehr & Peers developed a range of use conditions for each Project land use, consistent with the information provided in the Project description and discussions with City and Recreation staff. Fehr & Peers also determined the expected number of occurrences for each use condition (**Table 1**). This information was used to calculate total annual VMT generation, which was divided by 365 days to estimate average daily VMT. Weekday and weekend averages were also developed to provide additional information on expected VMT.

Table 1: Project Land Use Scenario Frequency

Venue/Land Use	Use Type(s)	Usage Level	Number of Days/Year
Stadium	Baseball	Low (Weekday)	30
		Medium (Sunday)	11
		High (Fri/Sat/Holiday)	25
		Post-Season Games (High)	5
	Events	Low (100-500 Attendees)	13
		Medium (500-4,000 Attendees)	29
		High (4,000-6,000 Attendees)	4
	Office	Non-Game Weekdays	206
Soccer Fields	Practice	13 Fields (4 teams/field/day)	160
	Game	13 Fields (10 teams/field/day)	48
	Tournament	13 Fields (14 teams/field/day)	16
Baseball/Softball Fields	Practice	9 Fields (4 teams/field/day)	165
	Game	9 Fields (10 teams/field/day)	50
	Tournament	9 Fields (14 teams/field/day)	16
Indoor Athletic Gym	Basketball	Open Gym/Practice (8 courts)	75
		Tournament (8 courts)	20
	Volleyball	Open Gym/Practice (16 courts)	195
		Tournament (16 courts)	54
Public Park	Aquatics Facility Community Rec Center Tennis/Pickleball Tot Lot Skate Park	Weekday	261
		Weekend	104
Hotel	N/A	Weekday	261
		Weekend	104
Retail	Chicken 'n Pickle Other Retail Other Restaurant	Weekday	261
		Weekend	104

Source: Ontario Ranch Sports Complex Project Description, 2023.

VMT Estimates

Daily trip generation estimates for each land use scenario were multiplied by average trip lengths and the number of occurrences of each scenario per year to estimate the total annual VMT generated for each scenario. This information is provided in **Table 2**.

Table 2: Total Annual VMT Generated By Project, Cumulative Year (2050)

Venue/ Land Use	Use Type	Usage Level	No. of Days/Year	Daily Trip Generation Estimates	Average Trip Length (mi.)	Annual Total VMT Generated
Stadium	Baseball	Low (Weekday)	30	803	12.16	292,868
		Medium (Sunday)	11	1,115	13	159,467
		High (Friday/Holiday/Weekday Post Season)	15	2,038	13.24	404,803
		High (Saturday/Weekend Post Season)	15	2,038	13.24	404,803
	Events	Small (100 Attendees)	4	58	13	3,008
		Small (200 Attendees)	2	116	13	3,008
		Small (500 Attendees)	7	289	13	26,317
		Medium (2,000 Attendees)	9	1,157	24.75	257,677
		Medium (3,000 Attendees)	4	1,735	24.75	171,785
		Medium (4,000 Attendees)	16	2,314	24.75	916,186
		High (5,000 Attendees)	2	2,892	24.75	143,154
		High (6,000 Attendees)	2	3,470	24.75	171,785
	Office	Non-Game Weekdays	206	270	14.91	829,369
					Total Stadium:	**3,784,229**
Soccer Fields	Practice	13 Fields (4 teams/field)	160	1,993	7.47	2,382,380
	Game	13 Fields (10 teams/field)	48	4,549	11.01	2,404,034
	Tournament	13 Fields (14 teams/field)	16	6,755	21.05	2,274,929
					Total Soccer Fields:	**7,061,344**
Baseball/ Softball Fields	Practice	9 Fields (4 teams/field)	165	1,008	16.05	2,669,674
	Game	9 Fields (10 teams/field)	50	3,055	22.95	3,505,463
	Tournament	9 Fields (14 teams/field)	16	3,727	24.00	1,431,130
					Total Baseball/Softball Fields:	**7,606,267**
Indoor Athletic Gym	Basketball	Practice/Open Gym	75	612	10.00	458,700
		Tournament	20	1,112	27.43	610,043
	Volleyball	Practice/Open Gym	195	734	10.00	1,431,144
		Tournament	54	1,334	28.67	2,065,891
					Total Indoor Athletic Gym:	**4,565,779**
Public Park	Aquatics Facility	Weekday	261	289	5.80	438,033
		Weekend	104	370	7.80	299,820

Venue/ Land Use	Use Type	Usage Level	No. of Days/Year	Daily Trip Generation Estimates	Average Trip Length (mi.)	Annual Total VMT Generated
	Community Rec Center	Weekday	261	2,738	6.15	4,394,740
		Weekend	104	865	12.06	1,084,290
	Tennis/ Pickleball	Weekday	261	290	7.30	552,537
		Weekend	104	292	11.00	333,865
	Public Park Uses	Weekday	261	561	6.15	899,687
		Weekend	104	561	12.06	703,002
					Total Public Park:	**8,705,973**
Hotel	Weekday		261	799	12.80	2,135,439
	Weekend		104	807	13.70	574,907
					Total Hotel:	**2,710,346**
Retail	Chicken 'n Pickle	Weekday	261	1,493	10.38	4,044,264
		Weekend	104	2,856	10.38	3,083,109
	Other Retail	Weekday	261	2,701	10.38	6,585,258
		Weekend	104	3,243	10.38	1,155,220
	Other Restaurant	Weekday	261	3,886	10.38	9,474,111
		Weekend	104	3,886	10.38	1,384,212
					Total Retail:	**25,726,174**
					Annual Weekday VMT:	**36,993,008**
					Annual Weekend VMT:	**23,167,105**
					Total Annual VMT:	**60,160,113**

Notes:
1. Daily Trip Generation Estimates Include Internalization for Hotel and Retail Land Uses.
2. Assumes 261 weekday days and 104 weekend days per year.

Sources:
1. *ITE Trip Generation Manual, 11th Edition*.
2. Streetlight Zone Activity Data, 2023; Fehr & Peers, 2023.
3. Streetlight Average Trip Length Data, 2023.
4. SBTAM Future Year Plus Project Model Run, 2023.

To develop a daily average VMT forecast, annual VMT for each land use scenario was summed and divided by 365 days. Weekday average and weekend average forecasts were also developed by summing all weekday scenarios and all weekend scenarios and dividing by 261 days and 104 days, respectively. This information is provided in **Table 3.**

Table 3: Average Daily VMT Generated By Project, Cumulative Year (2050)

	Annual VMT	Number of Days	Daily Average VMT
Weekdays Only	36,993,008	261	**141,736**
Weekends Only	23,167,105	104	**222,761**
All Days	60,160,113	365	**164,822**

Source: Fehr & Peers, 2023.

VMT Impact Assessment

Fehr & Peers compared the Project VMT forecasts against the City's significance criteria to disclose potential significant impacts. Additionally, due to the unique nature of the recreation and entertainment land uses, an alternative metric (VMT per visitor) was developed for these uses to evaluate the potential VMT reduction of mitigation measures and to provide comparative context of the nature of travel to and from the Project.

City of Ontario Significant Criteria

The City of Ontario VMT Impact Resolution defines the following thresholds of significance for identifying significant transportation impacts related to VMT for land use projects:

- Project Threshold: A significant impact would occur if the project VMT/SP[4] exceeds the Citywide average for VMT/SP under General Plan Buildout Conditions.
- Cumulative Threshold:
    - A significant impact would occur if the project causes total daily VMT within the City to be higher than the no project alternative under cumulative conditions (i.e. a net increase in city-wide VMT). This analysis should be performed using the 'project effect' or 'boundary' method.
    - A significant impact would occur if the project is determined to be inconsistent with the RTP/SCS

Because the Project land use is not accounted for in the SBTAM model and the Project has no residential population and low employment, the City numeric cumulative threshold is substantially lower than the Project VMT impacts. As such, estimates on VMT per visitor are presented to further quantify potential impacts.

[4] SP = Service Population; the sum of population and employment in a given area.

Project-Level Analysis

SBTAM was utilized to estimate the Citywide average for VMT/SP under General Plan Buildout Conditions. VMT forecasts for the Project and Citywide average are presented in **Table 4**. As shown in the table, the Project is forecast to generate VMT/SP higher than the Citywide average for baseline and cumulative conditions. Therefore, **Project-Level VMT impacts are significant under the City's criteria.** VMT/SP for each land use is provided in **Appendix B.**

Table 4: Project Daily VMT Estimates Per Service Population

	Baseline Year (2023)	Cumulative Year (2050)	General Plan Buildout (2050) Citywide Average (Threshold of Significance)
Population	-	-	406,438
Weekday Avg. Employment	597	597	312,523
Weekend Avg. Employment	828	828	-
Total Avg. Employment	648	648	-
Weekday Avg. VMT	162,622	141,736	20,908,966
Weekend Avg. VMT	236,771	222,761	-
Total Avg. VMT	183,749	164,822	-
Weekday VMT/SP	**272.40**	**237.41**	29.1
Weekend VMT/SP	**285.96**	**269.03**	-
Total VMT/SP	**277.15**	**248.60**	-

Notes:
1. **Bold** indicates that the total VMT/SP is above the General Plan Buildout Citywide average (threshold of significance).
2. The threshold of significance (General Plan Buildout Citywide Average VMT/SP) is based on typical weekday VMT.
Source: SBTAM, 2023; Fehr & Peers, 2023.

It should be noted that the Citywide average was estimated in accordance with the City's VMT analysis requirements using the most current and available version of SBTAM consistent with the City's General Plan Buildout, while the Project VMT was estimated off-model using more conservative, Project-specific information. Furthermore, the project does not include any residential population and a relatively low employment population compared to the number of VMT generated (i.e. high level of visitors) and therefore results in a very high VMT/SP estimate.

To provide an additional perspective on the Project's VMT generation, an alternative metric, VMT per visitor, was developed for each major recreation and entertainment land use that had visitor estimates available. While this metric should not be used to determine if the Project does or does not have a significant impact, it provides useful information on expected VMT per user of the site.

Table 5 shows the VMT/Visitor for weekdays, weekends, and all days. Note that while average VMT is higher on weekends, the higher number of visitors and higher average vehicle occupancy on weekends results in a lower VMT per visitor. VMT/Visitor for each land use is provided in **Appendix B.** Information on how visitor rates were developed is provided in **Appendix C.**

Table 5: Project Daily VMT Estimates Per Visitor

	Baseline (2023)	Cumulative Year (2050)
Weekday Avg. Visitors	3,732	3,732
Weekend Avg. Visitors	13,718	13,718
Total Avg. Visitors	6,577	6,577
Weekday Avg. VMT	162,622	141,736
Weekend Avg. VMT	236,771	222,761
Total Avg. VMT	183,749	164,822
Weekday VMT/Visitor	**43.58**	**37.98**
Weekend VMT/Visitor	17.26	16.24
Total VMT/Visitor	27.94	25.06

Notes:
1. Bold indicates that the total VMT/Visitor is above the General Plan Buildout Citywide average VMT/SP (threshold of significance).
Source: SBTAM, 2023; Fehr & Peers, 2023.

Cumulative VMT Analysis

Project Effect on VMT Analysis

As noted in the development of Project VMT estimates, the available travel demand models for the region (SBTAM and the SCAG Model) are not appropriate for estimating trips, trip length or VMT associated with the Project's unique land uses and programming. While the best way to perform Boundary Method VMT forecasts consistent with the City's Adopted VMT Resolution would be with a travel demand model, given the model limitations noted above, the value in the results of the boundary method assessment to understand the project's effect on VMT would be erroneous for this project.

The OPR Technical Advisory recommends that, under certain circumstances, qualitative VMT assessments supported by substantial evidence may be acceptable. Generally, qualitative analyses should only be conducted when methods do not exist for undertaking a quantitative analysis, such as for the entertainment and recreation land uses of this Project.

A qualitative assessment of VMT is a compilation of substantial evidence that describes why the project would or would not have a significant impact on VMT. Qualitative assessments may be used for projects that have unique characteristics that cannot be accurately analyzed using SBTAM or the SCAG RTP/SCS model. Qualitative assessments can include economic or market analysis, socioeconomic or demographic data, or other substantial evidence to support the significance finding.

Fehr & Peers considered the three busiest typical trip generation scenarios – Weekday with Stadium Event, Weekend with Tournament, and Weekend with Stadium Event – and determined that significant modeling is not required to conclude that the Project would increase Citywide VMT on a daily level in the City of Ontario. The total daily trips and boundary VMT for each scenario is provided in **Table 6.**

Table 6: Project Daily VMT Within City Limits (Boundary VMT)

Scenario	Total Daily Trips	Total Added Daily VMT Within City Limits
Weekday with Stadium Event	16,477	**70,128**
Weekend with Tournament	21,286	**92,086**
Weekend with Stadium Event	20,956	**89,991**
City Threshold (net-zero VMT)	-	0

Notes:
1. Bold indicates that the total added daily VMT is above the City's threshold of significance.
Source: Fehr & Peers, 2023.

A project that would potentially add between 70,000 and 92,000 daily VMT will increase total cumulative year VMT in the City, and therefore has a **significant impact on cumulative VMT** according to the City's 2020 VMT guidelines.

RTP/SCS Review

Fehr & Peers conducted a review of SCAG land use forecasts consistent with the RTP/SCS in the Project area. Both SBTAM (consistent with the adopted City of Ontario General Plan land use forecast) and the SCAG Model (consistent with the 2020 RTP/SCS) show the Project site zoned for a mixture of single- and multi-family housing. Accounting for the shift in housing units to the Vineyard Corridor, the Project results in a net increase in the housing zoned. The Open Space-Recreation, Commercial, Stadium, and Hospitality land uses as part of the Project were not considered in the RTP. Therefore, **the project is not consistent with RTP/SCS land use projections**.

CEQA Guidelines Appendix G Discussion

CEQA Guidelines identify additional considerations that should be evaluated to determine overall Project environmental impact. These considerations are outlined in the *CEQA Appendix G Environmental Checklist Form*. For transportation/traffic, the following are to be considered for this Project:

- Would the project conflict with an applicable plan, ordinance, or policy addressing the circulation system including transit, roadway, bicycle, and pedestrian facilities?
- Would the project substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g. farm equipment)?
- Would the project result in inadequate emergency access?

Consistency With Plans, Ordinances and Policies

Less than significant impact. The Project is consistent with all goals and policies outlined in the Mobility Element of *The Ontario Plan*. Specifically, the Level of Service (LOS) Study for the Project addresses development-related traffic congestion by identifying needed improvements for affected roadways and intersections per the City's LOS criteria. The project also strives to reduce VMT to the extent possible through mitigation measures described below. The Project will be in alignment with the City-wide Active Transportation Master Plan, with a series of on- and off-street bike and pedestrian facilities proposed for the Project area. The Project will continue to be served by Omnitrans public transit, consistent with General Plan goals and policies regarding public transit. Finally, goods movement will be supported by the City's existing truck network. The low volume of freight for the Project does not necessitate changes to the freight network.

Geometric Design Hazards

Less than significant impact with mitigation incorporated. The Project and all study intersections are located on flat ground and generally follow a grid pattern with intersections that meet at 90 degrees. The LOS Study identifies existing unsignalized intersections that warrant the installation of a traffic signal to improve safety and access. Roadway and intersection design, including pavement markings and signange, will be consistent with City, State, and Federal guidelines and be reviewed by City engineering staff,

Potential safety concerns, including event traffic queueing and passenger pick-up/drop-off, will be accommodated for with additional turn lane pockets and on-site passenger pick-up/drop-off zones, as identified in the LOS Study. The Event Traffic Management Plan will also assist in managing queuing traffic and exiting vehicles after events. Proposed fencing along the perimeter of the outdoor athletic fields will discourage passenger drop-off/pick-up along perimeter roads.

Emergency Access

Less than significant impact with mitigation incorporated. The Project will provide multiple access points from Riverside Drive, Vineyard Avenue, and Chino Avenue. Ontario Avenue will also extend through the Project site to improve connectivity and maintain a through traffic route for emergency vehicles. Fire lanes and emergency vehicle staging areas will be provided and reviewed by the Ontario Fire Department and Ontario Police Department, ensuring access to all portions of the Project site.

Potential event congestion and traffic circulating for parking may impact emergency vehicle access. Additionally, vehicles may illegally park in fire lanes. To address this, the proposed Parking Study will ensure an adequate number of parking spaces are provided and appropriately distributed throughout the Project site, minimizing parking-related congestion. The Event Traffic Management Plan will also incorporate provisions for emergency vehicle access, consistent with the City's emergency response and evacuation plans. The Ontario Police Department shall enforce no parking zones during events to maintain emergency vehicle access.

Mitigation Measures

Fehr & Peers reviewed potential mitigation strategies that can be adopted for this project, recognizing that the most effective strategies will target Project employees and home-based-work VMT. Additionally, project-specific strategies were developed, focusing on promoting shared rides of event attendees and encouraging mode shift to the extent feasible.

The Project includes constructing pedestrian and bicycle facilities on adjacent streets and within the Project site to promote non-motorized access and internal circulation. While it is anticipated that these features and the active nature of the park will result in many visitors choosing to walk and bike to and within the site, no meaningful VMT reduction is anticipated due the regional nature of the project.

Mitigation strategies and their maximum VMT reduction are listed in **Table 8**.

Table 8: Potential Project VMT Impact Mitigation Measures by Land Use				
Strategy	**Description**	**Maximum VMT Reduction**		
		Stadium	**Recreation Uses**	**Retail/ Hospitality**
Home-Based-Work (HBW) Measures				
Implement Voluntary Commute Trip Reduction Program for Employees	A series of employer-provided services, infrastructure, and incentives to encourage alternative commute modes such as rideshare, discounted transit, bicycling, vanpool, and guaranteed ride home programs.	4% of Home-Based-Work VMT		
Implement Employee Parking Cash out	Employees who choose not to drive and utilize on-site parking are eligible to receive a cash-out equivalent to the cost of the parking space. This is designed to discourage single occupancy vehicles.	12% of Home-Based-Work VMT	N/A	12% of Home-Based-Work VMT
Home-Based-Other (HBO) and Non-Home-Based (NHB) Measures				
Implement Market Price Public Parking for Visitors[1]	Manage parking supply and discourage driving by charging higher prices during periods of high demand (i.e. tournament and game weekends). Increasing the cost of parking increases the total cost of driving, which incentivizes mode shift. Requires enforcement and mitigation of neighborhood impacts, to be addressed in TMP.	30% of Home-Based-Other and Non-Home-Based VMT	13% of Home-Based-Other and Non-Home-Based VMT	N/A

Table 8: Potential Project VMT Impact Mitigation Measures by Land Use				
Strategy	**Description**	**Maximum VMT Reduction**		
		Stadium	**Recreation Uses**	**Retail/ Hospitality**
Lower Parking Fees for Ultra-HOV Vehicles (HOV 5+)	Provide discounted parking rate for vehicles with five or more occupants during games, tournaments, and stadium events to encourage ride sharing between multiple households. HOV threshold must be set at 5+ to have any significant impact on VMT reduction.	2% of Home-Based-Other and Non-Home-Based VMT		N/A
Discounted Vanpool/Bus Rental Program for Tournament Attendees	Partner with area van rental companies/vanpool providers to rent passenger vans and other high-capacity vehicles to sports teams attending Sports Complex at a discounted rate. Discount can be set such that total cost of rental is less than the cost of each team member driving to the site separately.	N/A	2% of Home-Based-Other and Non-Home-Based VMT	N/A
All VMT Measures				
Extend Transit Network Coverage or Hours	Adding or modifying existing Omnitrans bus service to serve project site, particularly during events.	0.4% of all VMT		
Reduce Transit Fares[2]	Reduce transit fares on transit lines serving the Project. A reduction in transit fares creates incentives to shift travel to transit from single-occupancy vehicles. This could include bundling the cost of transit fares into admission tickets for stadium events and/or tournaments.	0.1% of all VMT	N/A	N/A

Table 8: Potential Project VMT Impact Mitigation Measures by Land Use				
Strategy	**Description**	**Maximum VMT Reduction**		
		Stadium	**Recreation Uses**	**Retail/ Hospitality**
Transportation Demand Management (TDM) Plan	The TDM plan will provide details on how selected TDM measures will be applied at each use, tracked, monitored, and adjusted throughout the life of the project.	No additional VMT reduction assumed. However, this measure ensures that the TDM measures will be implemented in an effective manner.		
Parking Management Plan	The development of a Parking Management Plan will provide details on parking cost structure, lot allocation, violation management, and retail policies to implement the parking TDM measures described above.	No additional VMT reduction assumed. However, this measure ensures that the TDM measures will be implemented in an effective manner.		

Notes: 1.) Paid parking applied only to stadium event attendees and weekend recreational sports game/tournament attendees. 2.) Reduced transit fares applied only to stadium event trips.
Source: California Air Pollution Control Officers Association (CAPCOA), 2022. Fehr & Peers, 2024.

Following consultation with City staff, Fehr & Peers has identified several mitigation measures to be implemented or overseen by the City, impacting the stadium, recreation, and retail/hospitality uses of the Project. Further evaluation and implementation guidance will be provided as part of the Transportation Demand Management Plan (TDM) and Parking and Event Traffic Management Plan (TMP) prepared for the Final Environmental Impact Report.

The City shall:

1. Implement a voluntary commute trip reduction program for recreation employees.
2. Implement paid public parking for visitors during soccer, baseball, softball, basketball, and volleyball games and tournaments. Cost structure, enforcement, and implementation will be detailed in the Parking Management Plan.
3. Incentivize carpooling by providing a discounted parking rate for vehicles with five or more occupants.
4. Incentivize vanpooling to and from sports games and tournaments by implementing a vanpooling program for recreational sports attendees that provides affordable van rentals for visiting sports teams.
5. Collaborate with Omnitrans to increase transit service in the Project area and reduce transit fares for stadium attendees.

The City shall require the baseball stadium operator to:

1. Implement a voluntary commute trip reduction program for stadium employees.
2. Implement an employee parking cash-out program for stadium employees.
3. Implement paid public parking for visitors during stadium events. Cost structure, enforcement, and implementation will be detailed in the Parking Management Plan.
4. Incentivize carpooling by providing a discounted parking rate for vehicles with five or more occupants.
5. Collaborate with the City to support transit service expansion and support efforts to lower transit fares for stadium attendees.

The City shall require the retail/hospitality developer to:

1. Implement a voluntary commute trip reduction program for stadium employees.
2. Implement an employee parking cash-out program for stadium employees.
3. Collaborate with the City to support transit service expansion.
4. Comply with requirements detailed in the Parking Management Plan, including providing parking validation for retail and hospitality visitors.

Table 9 shows the maximum reduction in VMT expected per mitigation measure by land use on an annual basis. **Table 10** shows the expected VMT/SP and VMT/Visitor with mitigation measures in place. As shown below, the proposed measures are anticipated to reduce VMT but not to a level that would reduce the Project VMT/SP below the City's threshold of significance.

Table 9: Maximum Reduction in VMT By Mitigation Measure and Land Use

Strategy	Percent Reduction in VMT	Annual Total VMT Reduction	Share of Total Project VMT
Stadium Use			
Implement Voluntary Commute Trip Reduction Program for Employees	4.0% of HBW VMT	51,258	0.09%
Implement Employee Parking Cash-Out	12.0% of HBW VMT	153,773	0.26%
Implement Market Price Public Parking for Visitors	30.0% of HBO and NHB VMT	750,837	1.25%
Lower Parking Fees for Ultra-HOV Vehicles (HOV 5+)	2.0% of HBO and NHB VMT	50,056	0.08%
Extend Transit Network Coverage or Hours	0.4% of all VMT	15,317	0.03%
Reduce Transit Fares	0.1% of all VMT	3,784	0.01%

Strategy	Percent Reduction in VMT	Annual Total VMT Reduction	Share of Total Project VMT
Duplicative Dampening:	*-0.5% of all VMT*	(18,921)	(0.03%)
Total Stadium VMT Reduction:	*26.6% of all VMT*	*1,005,923*	*1.67%*
Recreation/Sports Field Uses			
Implement Voluntary Commute Trip Reduction Program for Employees	4.0% of HBW VMT	39,848	0.07%
Implement Market Price Public Parking for Visitors[1]	13.0% of HBO and NHB VMT	3,502,611	5.82%
Lower Parking Fees for Ultra-HOV Vehicles (HOV 5+)[1]	2.0% of HBO and NHB VMT	538,863	0.90%
Discounted Vanpool/Bus Rental Program for Tournament Attendees	2.0% of HBO and NHB VMT	538,683	0.90%
Extend Transit Network Coverage or Hours	0.4% of all VMT	111,757	0.19%
Duplicative Dampening:	*-0.96% of all VMT*	*(269,432)*	*(0.45%)*
Total Recreation VMT Reduction:	*16.0% of all VMT*	*4,462,511*	*7.42%*
Retail/Hospitality Uses			
Implement Voluntary Commute Trip Reduction Program for Employees	4.0% of HBW VMT	133,968	0.22%
Implement Employee Parking Cash-Out	12% of HBW VMT	401,905	0.67%
Extend Transit Network Coverage or Hours	0.4% of all VMT	113,746	0.19%
Duplicative Dampening:	*-0.06% of all VMT*	*(16,746)*	*(0.03%)*
Total Retail/Hospitality VMT Reduction:	*2.2% of all VMT*	*632,874*	*1.05%*
	Total VMT Reduction:	**6,101,308**	**10.14%**

Notes: [1]Paid parking for recreation events will only be in effect during weekend events and not include community recreation uses (i.e. public park, community recreation center).
Source: California Air Pollution Control Officers Association, 2022; Fehr & Peers, 2024.

Table 10: Project with Mitigation VMT Estimates per Service Population and Visitor

	Annual Average Daily	Annual Average Weekday	Annual Average Weekend
Pre-Mitigation Daily VMT	164,822	141,736	222,761
Daily Reduction in VMT from Mitigation	(16,716)	(3,573)	(47,371)
Post-Mitigation Daily VMT	148,106	138,163	175,390
Pre-Mitigation Daily VMT/SP	**248.60**	**237.41**	**269.03**
Post-Mitigation Daily VMT/SP	**223.39**	**231.43**	**211.82**
Pre-Mitigation Daily VMT/Visitor	25.06	**37.98**	16.24
Post-Mitigation Daily VMT/Visitor	22.52	**37.02**	12.79
Citywide Threshold of Significance (VMT/SP)	29.10	-	-

Note: **Bolded** text indicates VMT estimate exceeds city threshold.
Source: Fehr & Peers, 2024

Conclusions

VMT forecasts for the unique Project land use were prepared using empirical data collected at a nearby similar uses, ITE Trip Generation Rates, SBTAM trip length information, and Streetlight Connected Vehicle average trip length information.

The Project-level VMT/SP is forecasted to be higher than the Citywide average (threshold of significance) under Baseline (2023), and Cumulative Conditions (2050).

For the cumulative VMT assessment, the Project is anticipated to increase Citywide daily VMT within the City boundary. The Project is also inconsistent with the SCAG RTP/SCS and General Plan land use forecasts as the entirety of the project is not assumed in the future land use growth forecasts. Therefore, cumulative VMT impacts are also considered significant.

Recommended mitigation measures focus on reducing single-occupancy-vehicle trips to the Project site. However, given the maximum reduction potential associated with the recommended mitigation measures, it is not anticipated that the Project will be able to reduce the impact to a less-than-significant level. For these reasons noted above, the Project is expected to result in a **significant and unavoidable** transportation impact related to VMT.

Appendix A: List of Comparable Facilities Where Streetlight Trip Length Data Was Collected

Project Land Use	Comparable Facility/Facilities	Dates of Data Collection
Baseball Stadium (Minor League Baseball Games)	Loan Mart Stadium, Rancho Cucamonga	4/12/22-6/5/22 (Home Games)
Baseball Stadium (Other Events/Concerts)	Loan Mart Stadium, Rancho Cucamonga Toyota Arena, Ontario	4/12/22-6/5/22 (Home Games) 11/12/22 (Concert)
Soccer Fields	SilverLakes Sports Complex, Norco	8/30/22 (Practice) 9/3/22 (Tournament) 10/8/2022 (Regular Games)
Baseball/Softball Fields	Big League Dreams, Jurupa Valley	Tuesdays 1/10/22-3/31/22 (Practice) 10/23/22 (Tournament) 11/6/22 (Regular Games)
Indoor Athletic Gym	Open Gym Premier, Ladera Ranch Momentous Sports Center, Irvine	3/9/22 (Tournament) 4/1/22-4/29/22 (Practice) 11/7/22-12/14/22 (Practice) 1/7/23 (Tournament)
Aquatics Facility	Heritage Pool, Fontana Palm Desert Aquatics Center, Palm Desert	4/1/22-4/30/22 1/2/22-3/31/22
Community Recreation Center	De Anza Park, Ontario	4/1/22-4/30/22
Tennis/Pickleball Courts	iTennis Andulka Park, Riverside Anaheim Tennis Center, Anaheim Tustin Hills Raquet Club, Santa Ana	4/1/22-4/30/22
Public Park Uses (tot lot, skate park, etc.)	De Anza Park, Ontario	4/1/22-4/30/22

Hotel	Hampton Inn, Ontario/Rancho Cucamonga	4/1/23-4/30/23

Appendix B: VMT/SP and VMT/Visitor By Land Use

Venue/Land Use	Weekday Avg Visitor	Weekend Avg Visitor	Annual Daily Avg Visitor	Weekday Avg Employees	Weekend Avg Employees	Annual Daily Avg Employees	Weekday Total VMT	Weekend Total VMT	Annual Total VMT	Weekday VMT/SP	Weekend VMT/SP	Avg Daily VMT/SP	Weekday VMT/Visitor	Weekend VMT/Visitor	Avg Daily VMT/Visitor
Baseball Stadium (Games)	322	644	414	68	60	66	1,458,158	510,296	1,968,454	81.97	82.27	82.05	17.37	7.61	13.04
Baseball Stadium (Events)	-	1,157	330	-	116	33	-	1,692,919	1,692,919	-	140.72	140.72	-	14.07	14.07
Baseball Stadium (ALL)	322	1,801	743	68	175	99	1,458,158	2,203,215	3,661,373	81.97	120.84	101.64	17.37	11.76	13.50
Soccer Fields	988	4,620	2,023	-	50	14	2,382,380	4,678,963	7,061,344	-	899.80	1,357.95	9.24	9.74	9.56
Baseball Fields	933	4,386	1,917	-	36	14	2,669,674	4,936,593	7,606,267	-	1,331.34	1,462.74	10.96	10.82	10.87
Indoor Athletic Gym	404	1,683	768	-	35	10	1,889,844	2,675,935	4,565,779	-	737.99	1,259.18	17.92	15.29	16.28
Public Park	1,044	1,160	1,077	83	83	83	6,284,997	2,420,976	8,705,973	290.13	280.47	287.37	-	-	-
Hotel	-	-	-	50	50	50	2,135,439	574,907	2,710,346	163.64	110.56	148.51	-	-	-
Retail	-	-	-	392	392	392	20,103,633	5,622,542	25,726,174	196.49	137.92	179.80	-	-	-
TOTAL	3,692	13,650	6,529	594	821	663	36,924,125	23,113,131	60,037,257	238.17	270.70	248.09	38.32	16.28	25.19

*Grayed cells indicate that VMT/Attendee was not calculated due to missing attendee/visitor information and/or the data not being useful for determining project impact or potential mitigation measures.

Appendix C: Visitor and Employee Assumptions Development

The total number of visitors and employees by land use were developed following consultation with City and Recreation staff and a review of typical youth and adult recreational sports organizations. **Table C1** provides details on how many teams, attendees, and employees are anticipated to utilize each land use. While operations will vary depending on the unique nature of each event, estimates were developed conservatively to ensure all typical events are accurately accounted for.

Table C1: Visitor and Employee Assumptions by Land Use and Event Type

Venue/ Land Use	Use Type	Usage Level	No. of Visitors/ Day	No. of Employees/ Day	Notes/Sources
Stadium	Baseball	Low (Weekday)	1,388	155	2023 Rancho Cucamonga Quakes Average Attendance Figures; Project Description
		Medium (Sunday)	1,928	155	
		High (Friday/ Holiday/Weekday Post Season)	3,524	346	
		High (Saturday/ Weekend Post Season)	3,524	346	
	Events	Small (100 Attendees)	100	10	Project Description; Assumed 10:1 Ratio of Visitors to Employees (consistent with Baseball Game ratio)
		Small (200 Attendees)	200	20	
		Small (500 Attendees)	500	50	
		Medium (2,000 Attendees)	2,000	200	
		Medium (3,000 Attendees)	3,000	300	
		Medium (4,000 Attendees)	4,000	400	
		High (5,000 Attendees)	5,000	500	

		High (6,000 Attendees)	6,000	600	
	Office	Non-Game Weekdays	-	43	Project Description
Soccer Fields	Practice	13 Fields (4 teams/field)	1,612	-	15 players/team 1 coach/team 1 spectator/player 4 teams/field/day
	Game	13 Fields (10 teams/field)	6,825	78	15 players/team 1 coach/team 2.5 spectators/player 10 teams/field/day (5 games) 6 employees/field/day
	Tournament	13 Fields (14 teams/field)	9,555	91	15 players/team 1 coach/team 2.5 spectators/player 14 teams/field/day (7 games) 7 employees/field/day
Baseball/ Softball Fields	Practice	9 Fields (4 teams/field)	1,476	-	20 players/team 1 coach/team 1 spectator/player 4 teams/field/day

	Game	9 Fields (10 teams/field)	6,300	54	20 players/team 1 coach/team 2.5 spectators/player 10 teams/field/day (5 games) 6 employees/field/day
	Tournament	9 Fields (14 teams/field)	8,820	63	20 players/team 1 coach/team 2.5 spectators/player 14 teams/field/day (7 games) 7 employees/field/day
Indoor Athletic Gym	Basketball	Practice/ Open Gym	200	-	12 players/team 1 coach/team 1 spectator/player 1 team/court/day
		Tournament	2,000	49	Project Description
	Volleyball	Practice/ Open Gym	464	-	14 players/team 1 coach/team 1 spectator/player 1 team/court/day
		Tournament	2,500	49	Project Description
Public Park Uses	Weekday		1,044	83	Project Description
	Weekend		1,160	83	
Hotel	Weekday		-	50	Project Description Visitor Info Not Available
	Weekend		-	50	
Retail	Chicken 'n Pickle	Weekday	-	285	Project Description Visitor Info Not Available
		Weekend	-	285	
	Other Retail	Weekday	-	54	

		Weekend	-	54	
	Other Restaurant	Weekday	-	53	
		Weekend	-	53	
		Weekday Average:	**3,692**	**594**	
		Weekend Average:	**13,650**	**821**	
		Daily Average:	**6,259**	**643**	