
APPENDIX J.1: VMT Assessment



Memo

Date: January 27, 2026

To: Karen Gulley, Placeworks

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Subject: Fairview Development Center Specific Plan VMT Assessment

Fehr & Peers completed a Vehicle Miles Traveled (VMT) assessment for the Fairview Development Center Specific Plan (Project) in the City of Costa Mesa (City), California. This VMT analysis is consistent with requirements of Senate Bill 743 (SB 743), the California Governor's Office of Land Use and Climate Innovation's¹ (LCI's) *Technical Advisory on Evaluating Transportation Impacts in CEQA* (December 2018), and City of Costa Mesa's *Transportation Impact Analysis Guidelines* (October 2020) (City's TIA Guidelines).

As determined in the assessment below, **the Project is anticipated to result in a less-than-significant transportation impact.**

Project Description

The Project is located in the northwest quadrant of the Harbor Boulevard and Wilson Street intersection, bounded by Shelley Circle in the City of Costa Mesa, California. Existing access to the Project is provided by Fair Drive Street.

From 1959 to 2021, the Project site was occupied by a State-operated residential care facility dedicated to serving individuals with developmental disabilities. The site is currently maintained by 66 employees, supporting several residents living in the neighboring housing. No patients are actively living in the facility buildings.

The Project area is supported by an existing and planned active transportation network. The City's Active Transportation Plan identifies improvements to close bicycle network gaps near the Project site along Harbor Boulevard, Adams Avenue, and Merrimac Way. In addition, the Pedestrian Opportunity Zones map (Attachment A) designates the Harbor Boulevard corridor north of Merrimac Way and south of Wilson Street as a Pedestrian Opportunity Zone. These planned improvements would promote walking and bicycling for short trips and internal circulation, thereby contributing to a reduction in VMT.

¹ This office was previously known as the Office of Planning and Research.

The Project proposes redeveloping the site as a housing opportunity site which is consistent with the City's 6th Cycle Housing Element Rezoning. **Table 1** presents the proposed land use mix:

Table 1: Project Land Use

Land Use Description	Quantity	Units
Multi-Family	4,000	Dwelling Units
Commercial	35,000	Square Feet
Open Space	14	Acres

Source: City of Coast Mesa, 2025.

The Project would include a total of 4,000 multi-family residential units, of which 920 units would be designated as affordable housing. Of the affordable units, 820 would be reserved for low-income households, with the remaining 100 units intended to serve residents with special needs. The site plan is included as **Figure 1**.

Transportation Impact Analysis

This assessment answers the following four questions from the CEQA Guidelines Appendix G. A project would normally have a significant effect on the environment if the project would:

- T-1 Conflict with a program, plan, ordinance, or policy addressing the circulation system, including transit, roadway, bicycle, and pedestrian facilities.
- T-2 Conflict or be inconsistent with CEQA Guidelines § 15064.3, subdivision (b) regarding policies to reduce vehicle miles travelled (VMT).
- T-3 Substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment).
- T-4 Result in inadequate emergency access.

T-1 Assessment

Costa Mesa Goals, Policies, and Actions related to Circulation

Under CEQA, a project's inconsistency with programs, plans, ordinances, or policies addressing the circulation system, including transit, roadway, bicycle, and pedestrian facilities aimed at reducing environmental impacts can itself signal a significant cumulative impact. In this case, the applicable plan is the Costa Mesa General Plan Circulation Element and Housing Element 6th Cycle, which addresses the city's housing needs while strategically locating housing relative to job centers to reduce VMT and associated emissions. The Project is consistent with the spirit of these plans and does not conflict with the General Plan's goals. Key goals of the plan related to transportation were reviewed to verify consistency:

- Goal C-1: Implement "Complete Streets" policies on roadways in Costa Mesa.

- The Project will design new on-site bike and pedestrian facilities to promote multi-modal travel and connect to the external pedestrian, bike and transit network.
- Goal C-2: Effectively manage and improve the roadway system.
 - The Project evaluates the influence of project traffic on adjacent roadway system and identifies appropriate improvements to ensure travel efficiency.
- Goal C-3: Enhance regional mobility and coordination.
 - The Project would be implemented in coordination with the City of Costa Mesa and the Orange County Transportation Authority (OCTA) to ensure compliance with the Orange County Congestion Management Plan (CMP), including application of adopted level of service standards and the identification of deficiency plans for intersections that do not meet performance standards. In addition, the Project would address regional mobility needs for all travel modes and enhance safety.
- Goal C-4: Promote Transportation Demand Management (TDM), transit, and efficiency.
 - The Project would implement TDM strategies to reduce single-occupancy vehicle trips and coordinate with the OCTA to maintain and potentially enhance transit service adjacent to the Project site to encourage transit ridership.
- Goal C-5: Ensure coordination between the land use and circulation systems.
 - The Project's traffic impacts have been evaluated and context appropriate design related to transit oriented development, bike and pedestrian connections and TDM measures have all been recommended as part of the Project.
- Goal C-6: Fund and evaluate the City's transportation network.
 - The Project completed an evaluation of affected roadways and recommended improvements to ensure efficiency. Funding of the improvements is provided by the Development Impact Fees and developer contributions towards identified improvements, to be further evaluated on a project-by-project basis as the Project develops.
 - The Project also completed a safety assessment to identify high-collision locations and prevailing collision trends. The findings would support the development of appropriate countermeasures and the pursuit of funding from all available sources to implement those improvements. Additional fund opportunities will be led by the city as part of the overall transportation network enhancement.
- Goal C-7: Promote a friendly active transportation system in Costa Mesa.
 - The Project includes attractive on-site bike and pedestrian facilities designed to promote and improve connectivity with the citywide active transportation network.
- Goal C-8: Create a safer place to walk and ride a bicycle.
 - The Project proposes median design features and traffic calming strategies to reduce vehicle speeds and minimize conflicts among vehicles, bicyclists, and pedestrians. Class I trails and Class II buffered bicycle lanes are proposed along key roadways, a pedestrian promenade is proposed bisecting the Project, and paved sidewalks would be provided along major on-site roadways.

T-2 Assessment

According to the City's TIA Guidelines, various project types or sizes, or projects that fall within a Transit Priority Area (TPA) or Low VMT Area can be screened from VMT analysis under the presumption that they would result in a less-than-significant transportation impact. Projects that are ineligible for any screening criteria are required to complete a VMT analysis utilizing the Orange

County Transportation Analysis Model (OCTAM) to determine if they would result in a significant VMT impact.

Project VMT Screening

The City's TIA Guidelines state the following criteria can be applied to effectively screen projects from project-level VMT assessment under the presumption that they would result in a less-than-significant transportation impact:

- Transit Priority Area (TPA) Screening
- Low VMT Area Screening
- Project Type Screening

TPA Screening

A TPA is defined by areas within a half mile around an existing major transit stop² or an existing stop along a high-quality transit corridor³. The Orange County Transportation Authority (OCTA) operates Bus Route 43 along Harbor Boulevard, adjacent to the Project, with 20-minute headways during the AM peak period (7:00–9:00 AM) and PM peak period (4:00–6:00 PM). As shown in **Figure 1**, most of the Project area falls within the TPA.

According to the City's Guidelines, in order to qualify for TPA screening, the Project must satisfy the four requirements below to be presumed to have a less-than-significant impact on VMT:

1. Has a Floor Area Ratio (FAR) of greater than 0.75;
2. Includes less parking for use by residents, customers, or employees of the project than required by the City (if the City requires the project to supply parking);
3. Is consistent with the applicable Sustainable Communities Strategy (SCS) (as determined by the lead agency, with input from the Metropolitan Planning Organization); or
4. Does not replace affordable residential units with a smaller number of moderate or high-income residential units.

1. FAR greater than 0.75

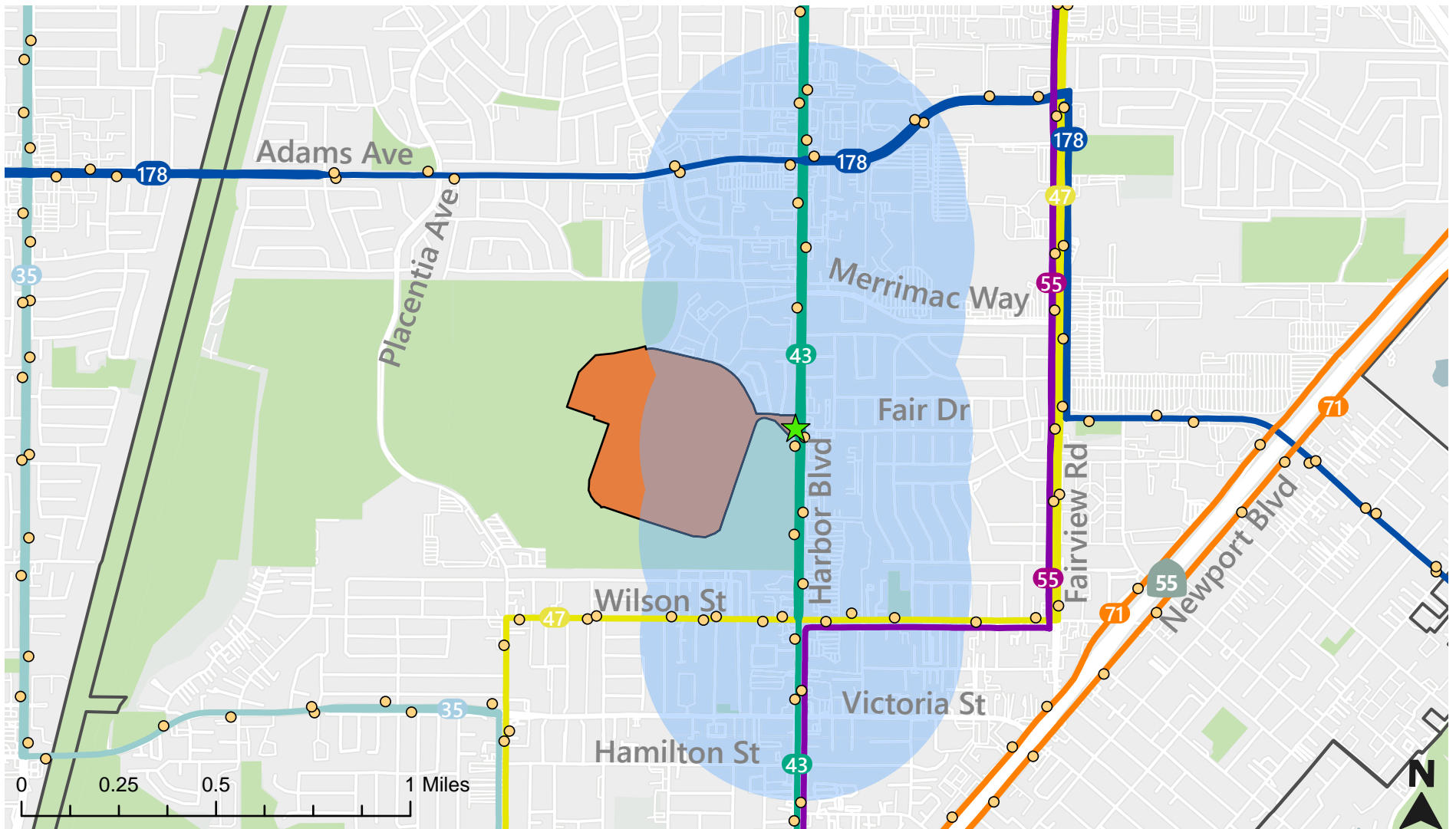
While the Project is currently at the systematic planning stage with a conceptual plan, the number of stories per building proposed is anticipated to result in FAR above 0.75. Therefore, the Project is anticipated to meet this criteria.

2. Includes less parking than required

While the Project is currently at the systematic planning stage with a conceptual plan, the nature of the Project (affordable and supportive housing, higher density than the rest of the City, and proximity to transit) will justify parking ratios below the City's municipal code minimum. Therefore, the Project

² Pub. Resources Code, § 21064.3 – 'Major transit stop' means a site containing an existing rail transit station, a ferry terminal served by either a bus or rail transit service, or the intersection of two or more major bus routes with a frequency of service interval of 20 minutes or less during the morning and afternoon peak commute periods.

³ Pub. Resources Code, § 21155 – For purposes of this section, a 'high-quality transit corridor' means a corridor with fixed route bus service with service intervals no longer than 15 minutes during peak commute hours.






-  Site Access Point Bus
-  Stops
-  Transit Priority Area
-  Area Project Site



Figure 1

TPA Screening Map

is anticipated to meet this criteria.

3. SCS Consistency

The city's Housing Element approved 2,300 housing units, while the Project proposes 4,000 units. The Project is proposing a higher number of units at this specific location than analyzed in the SCS and Housing Element, while remaining within the City's overall housing growth forecast. Therefore, the Project is considered potentially consistent with the SCS.

4. Replacing Affordable Units

The Project is not replacing any affordable residential units and therefore satisfies this requirement.

Low VMT Area Screening

Projects located in transportation analysis zones (TAZs) that generate VMT per service population 15% below the City Baseline average can be screened out. As shown in **Figure 3** in the City's guidelines, the project is not located in a low VMT generating area. Therefore, the project cannot be screened out of a complete VMT impact analysis under the Low VMT Area Screening.

Project Type Screening

Affordable housing projects and local-serving projects can be screened out if the project type/land-use is explicitly listed in the City's guidelines. Although the affordable housing portion of the residential uses and the retail uses (less than 50 KSF) meet the Project Type Screening, the rest of the regular housing units are not qualified for screening; therefore the full project cannot be screened out of a VMT impact analysis under the Project Type Screening.

VMT Screening Conclusion

While the project is generally within a TPA and parts of the project are eligible for project type screening, this assessment does not conclude that screening is appropriate and a full VMT assessment was prepared to justify the VMT impact conclusion.

VMT Methodology

As required in the City's TIA guidelines, this transportation impact analysis presents 'project-generated VMT' and evaluates the 'project effect on VMT'.

Project-Generated VMT

Consistent with the methodologies outlined in the City's TIA Guidelines, project-generated VMT was estimated using the Origin/Destination (OD) method, which sums weekday VMT generated by all vehicles across all trip purposes. Project-generated VMT is presented for mixed uses, normalized by the total service population (residents and employees), and compared to the City's adopted threshold of significance to determine potential transportation impacts.

Net Effect on VMT

Consistent with the methodologies outlined in the City's TIA Guidelines, the net effect on VMT was estimated using the Boundary Method, which calculates the sum of all weekday VMT on the roadway network within a designated boundary. The City's TIA Guidelines recommend that the appropriate boundary is the City limits. 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 city boundary. This is the only VMT method that captures the effect of cut-through and/or displaced traffic.

Boundary VMT estimates were normalized by the service population for comparative purposes and to determine potential transportation impacts.

VMT Forecasting

OCTAM was utilized to prepare VMT forecasts. OCTAM is a trip-based (four-step) travel demand forecasting model calibrated and validated for traffic forecasting in Orange County. Trip-based models use origin-destination pairing between geographical locations, designated as Transportation Analysis Zones (TAZs), according to the following sequence:

1. Trip Generation,
2. Trip Distribution,
3. Mode Choice
4. Network Assignment

OCTAM Version 5.1 is the latest version that consistent with *Connect SoCal 2024*, Southern California Association of Government’s (SCAG’s) 2024 Regional Transportation Plan and Sustainable Communities Strategy (RTP/SCS). OCTAM uses a model base year of 2019 and model future year of 2050.

The future-year model land use dataset was reviewed against the City’s 6th Cycle Housing Element Rezoning to ensure that all proposed housing and commercial development are reflected in the future assumptions.

Project Socio-Economic Assumptions

The City’s Housing Element Rezoning proposed land use updates were reviewed and compared with the OCTAM future-year socio-economic data (SED) inputs. The OCTAM model was updated to incorporate the proposed development within the City but outside the Project area, as well as the Project-specific SED consistent with the Project description. As shown in **Table 2**, the Housing Element Rezoning anticipates a total of 61,411 households and 114,247 jobs without the Project in the Project Cumulative Year (2045). Table 2 also summarizes the OCTAM SED inputs that represent the Project:

Table 2: Citywide and Project SED Assumptions (2045)

Input	City (Without Project)	Project
Households	61,411	4,000
Total Population	149,632	9,926
Retail Employment	18,075	74
Total Employment	114,247	74

Note: Residents were estimated based on 2.6 residents per dwelling unit from American Community Survey 2023. Retail employment was estimated using 475 square feet per employee factor, consistent with the City’s 6th Cycle Housing Element Rezoning.

City of Costa Mesa Thresholds of Significance

The City's TIA Guidelines list the following thresholds of significance to apply to VMT analysis:

A project would have a significant VMT impact if result in either of the following conditions:

- 1. The baseline project-generated VMT per service population exceeds 15% below City of Costa Mesa baseline VMT per service population (85% of the Coast Mesa baseline VMT per service population), or*
- 2. The cumulative project generated VMT per service population exceeds 15% below City of Costa Mesa baseline VMT per service population (85% of the Coast Mesa baseline VMT per service population).*

The project's effect on VMT would be considered significant if it resulted in either of the following conditions:

- 1. The baseline link-level Citywide VMT per service population increases under the plus project condition compared to the no project condition, or*
- 2. The cumulative link-level Citywide VMT per service population increases under the plus project condition compared to the no project condition.*

VMT Scenarios

Based on the City's thresholds of significance, Project VMT metrics were forecasted under the following scenarios:

- Baseline (2025)
- Baseline (2025) Plus Project
- Cumulative (2045) No Project
- Cumulative (2045) Plus Project

Since the OCTAM is reflective of 2019 base and 2050 future conditions, 2025 and 2045 conditions were forecasted by interpolating between 2019 and 2050 model forecasts.

VMT Assessment

The Project VMT modeling and forecasting analysis shows how the VMT generated by the Project compares to current and forecast travel characteristics in the area. **Table 3** shows the OD VMT per service population of the Project, which evaluates the potential transportation impact related to the Project.

As shown, the Project is forecast to generate lower OD VMT per service population than the adopted threshold in Baseline Year 2025 and Cumulative Year 2045 conditions.

Table 3: VMT Forecasts & Impact Assessment

Area	OD VMT	Service Population	OD VMT per Service Population
Baseline (2025)			
Project	138,120	10,000	13.8
Citywide Average	6,786,444	227,111	29.9
Threshold of Significance (15% Below Citywide VMT/SP)			25.4
VMT Exceeds Threshold?		No	
Cumulative (2045)			
Project	139,173	10,000	13.9
Citywide Average	7,779,136	263,879	29.5
Threshold of Significance (15% Below Citywide VMT/SP)			25.1
VMT Exceeds Threshold?		No	

Note: SP = Service Population
Source: Fehr & Peers, 2026

The Project net effect on VMT estimates are provided in **Table 4**. As shown, the VMT with the Project is anticipated to increase within the City boundary. When normalized by the service population, the Project results in a lower VMT per service population within the City boundary.

Table 4: Net Effect on VMT Forecasts & Impact Assessment

Metric	City Boundary	
	No Project	With Project
Base Year 2025		
Boundary VMT	4,350,607	4,394,636
Service Population	227,111	237,111
Boundary VMT/SP	19.2	18.5
VMT Exceeds Threshold?		No
Cumulative Year 2045		
Boundary VMT	4,596,437	4,638,876
Service Population	263,879	273,879
Boundary VMT/SP	17.4	16.9
VMT Exceeds Threshold?		No

Note: SP = Service Population
Source: Fehr & Peers, 2026

T-3 Assessment

The City of Costa Mesa has adopted engineering standards to ensure consistency in the geometric design of their mobility facilities. The Project would not substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment). Given that all future projects will be subject to these reviews, the Project would be consistent with the City design standards.

T-4 Assessment

The City of Costa Mesa has reviewed and approved emergency access with the fire department's participation. The Project provides multiple points of access and an emergency access route along Merrimac Way. Therefore, the Project would not result in inadequate emergency access.

Conclusion

The Project represents a housing opportunity site which is consistent with the City's 6th Cycle Housing Element Rezoning and contains a significant affordable housing component. The Project features would promote walking and bicycling for short trips and internal circulation, thereby contributing to a reduction in VMT. Elements of the project are eligible for screening but a full VMT forecasting assessment was performed to support the impact assessment.

The Project VMT modeling and forecasting analysis shows the Project is forecast to generate lower OD VMT per service population than the adopted threshold in Baseline Year 2025 and Cumulative Year 2045 conditions. The Project net effect on VMT assessment also shows that the VMT with the Project results in a lower VMT per service population within the City boundary in Baseline Year 2025 and Cumulative Year 2045 conditions. **Therefore, the Project would result in a less-than-significant transportation impact.**