

APPENDIX B
Transportation Technical Memorandum

TRANSPORTATION TECHNICAL MEMORANDUM

To: Elizabeth Ocampo Vivero and Charles Dellinger, RRM Design Group
From: Sabita Tewani, AICP, PTP, Senior Transportation Planner
Subject: Trip Generation and Vehicle Miles Traveled Screening Analysis for the Fairmount Avenue Fire Station, City of San Diego
Date: October 1, 2024
cc: Carey Fernandes, Dudek
Mollie Brogdon, Dudek
Christine Kronenberg, Dudek
Attachments: Figure 1 Location Map
A Project Information Form
B Site Plan

The following technical memorandum provides a trip generation and vehicle miles traveled (VMT) screening analysis of the proposed Fairmount Avenue Fire Station (project), located in the City of San Diego (City) in San Diego County (County). The proposed project site is located in the City Heights neighborhood of the Mid-City Community in the City. This analysis has been prepared consistent with the City of San Diego Transportation Study Manual (TSM, September 2022) which provide the guidelines and methodology for assessing transportation impacts for development and transportation projects based on the updated California Environmental Quality Act (CEQA) guidelines. The memorandum also incorporates comments received from the Fire Rescue Response to Technical Draft #1 and uses the information provided to estimate the project's trip generation for crew members and emergency response.

Per Senate Bill 743, the Governor's Office of Planning and Research was directed to amend the CEQA Guidelines to provide an alternative to level of service (LOS) for evaluating transportation impacts. CEQA Guidelines Section 15064.3(b) focuses on specific criteria (vehicle miles traveled or VMT) for determining the significance of transportation impacts. Under the new transportation guidelines, LOS, or vehicle delay, does not constitute an environmental impact. VMT has been adopted as the most appropriate measure of transportation impacts under CEQA.

This analysis was conducted to provide the trip generation estimates of the project to determine whether a detailed transportation analysis would be required for the proposed project. As shown in the analysis below, the proposed project would not require a detailed VMT analysis. The project's trip generation would be below the City's threshold for requiring an operational analysis. The City's Project Information Form (PIF) to support the VMT and LOS screening is also attached to this memorandum (Attachment A).

1 Project Description

The project proposes a 4-story fire station on a 1.28-acre site, located north of the intersection of 47th Street and Fairmount Avenue, on the west side of 47th Street. The site is bounded by Fairmount Avenue to the southwest, 47th Street to the north and east, and Chollas Creek to the northwest. Access to the project site would be provided by one standard driveway off 47th Street and one larger driveway connected to the apparatus bay, also off 47th Street, both located on the east side of the project site. The standard driveway would provide access to the parking area, which consists of 15 passenger vehicle spaces, including two Americans with Disabilities (ADA) accessible spaces.

The fire station features two apparatus bay (approximately 5,200 sq ft), an exercise room, a kitchen, and 10 bunk rooms. It would be equipped with a trash enclosure, an emergency generator, and a fuel tank.

Figure 1 illustrates the project's location. Attachment B includes the project's site plan.

2 Trip Generation

2.1 Proposed Project

The proposed project would construct an approximately 22,443 square foot building and associated site improvements including driveways, parking, emergency diesel generator and fuel storage areas, and landscaping. During project operation, the fire station would support a total of 12 firefighters and rescue staff (two [2] crews of four [4] firefighters and one [1] ambulance crew of two [2]). The firefighters work 24-hour shifts, and the ambulance crew works either 12 or 24-hour shifts per day. When a call is received, and fire trucks are dispatched vehicles would exit onto 47th Street and head towards the 47th Street and Fairmount Avenue intersection. The traffic signal at the 47th Street and Fairmount Avenue intersection would be controlled by the engine operator so all vehicles would be required to stop to allow access.

The San Diego Association of Governments (SANDAG) *Brief Guide of Vehicular Trip Generation Rates for the San Diego Region*, April 2002 does not include a trip rate for a Fire Station. The trip rate for a Fire Station in the Institute of Transportation Engineers (ITE) Trip Generation Manual provides only a PM peak hour rate. Since no published trip rate is available for fire stations, the project's trip generation estimates were developed based on operational data for crew members, vehicles, and projected emergency responses provided by the City's Fire Rescue Team.

In 2023, the San Diego Fire-Rescue Department¹ reported 183,350 responses within the city and aid to other agencies/cities which included fire, rescue, life-threatening and non-life threatening, urgent, hazard, service, events and other categories of responses. Based on information provided by Fire Rescue Response, an average of fifteen emergency response calls per day were assumed for the project (City of San Diego Fire-Rescue Department 2024). The project's trip generation has been estimated assuming eight calls would be fire-related and require two vehicles to respond to the emergency and seven calls would be non-fire related emergencies and require only one vehicle.

¹ <https://www.sandiego.gov/fire/about/firestations>

Table 1 presents the trip generation for the project. As shown in the table, the project would generate 78 daily trips, 15 AM peak hour trips and 15 PM peak hour trips. Applying a passenger care equivalency factor of 1.5 (to account for truck trips), the project would generate 103 daily PCE trips, 17 AM peak hour PCE trips and 17 PM peak hour PCE trips.

Table 1. Project Trip Generation Summary

Land Use	Numbers/Units	Daily	AM Peak Hour			PM Peak Hour		
			In	Out	Total	In	Out	Total
Crew Member ¹	10 members	20	5	5	10	5	5	10
Ambulance Crew ¹	2 members	8	1	1	2	1	1	2
Emergency Responses ²	8 incidents	32	1	1	2	1	1	2
Emergency Responses – Non Fire ²	7 incidents	14	1	0	1	0	1	1
Non-Emergency ³	2 members	4	0	0	0	0	0	0
Deliveries ³	2 trucks	4	0	0	0	0	0	0
Total Employee Trips		28	6	6	12	6	6	12
Total Truck Trips		50	2	1	3	1	2	3
Total Trip Generation		78	8	7	15	7	8	15
Total Truck Trips in PCE (using a factor of 1.5)		75	3	2	5	2	3	5
Total Trip Generation in PCE		103	9	8	17	8	9	17

Notes: PCE = Passenger Care Equivalent

- ¹ Per project description, there would be a maximum of 12 crew members (2 crews of 6 members each) including fire fighters and rescue staff and one ambulance crew of two (2), at the Fire Station. Firefighters work 24-hour shifts, and the ambulance crew works 12 hour shifts per day. Crew members would generate two daily trips (one inbound and one outbound). Some crew members were assumed to commute in the AM and PM peak hour.
- ² The projections for the number of emergency calls were provided in Fire Rescue Response to Technical Draft #1. Therefore, a maximum of 15 emergency responses per day of which 8 have been assumed to be fire-related responses per Fire Rescue. Emergency responses would require two vehicles i.e. an engine, and a ladder truck or an engine and an ambulance. Therefore, two vehicles and two trips per vehicle (one inbound and one outbound) are assumed to estimate daily trips per fire related emergency response. Other incidents or non-fire emergencies would require only one vehicle. Therefore, two trips per vehicle (one inbound and one outbound) are assumed to estimate daily trips per non-fire emergency or incident. It is not possible to estimate how many emergencies would occur during the peak hours, therefore, the daily trips for emergency responses are distributed evenly over the duration of 24-hour to estimate the AM and PM peak hour trips.
- ³ A small number of non-emergency and delivery trips would occur on a daily basis. No trips were assumed to occur during the peak hour.

3 LOS Screening Analysis

Per the City's TSM, a Local Mobility Analysis (LMA) would be required if a project generates more than 500 daily trips and is inconsistent with the community plan or zoning or the project generates more than 1,000 daily trips and is consistent with the community plan and zoning. Based on the estimate of project trips shown in Table 1, a LMA would not be required. Per the City's guidelines, a VMT screening analysis has been provided in this section, see below. A Project Information Form (PIF) showing the project's VMT and LOS screening is provided as Attachment A.

4 VMT Screening Analysis

The Governor's Office of Planning and Research prepared a comprehensive update to the CEQA Guidelines in 2017 that was approved by the California Natural Resources Agency in December 2018, requiring that lead agencies use VMT for analyzing transportation impacts (OPR 2018). CEQA Guidelines Section 15064.3 states that "generally, vehicle miles traveled (VMT) is the most appropriate measure of transportation impacts," and define VMT as "the amount and distance of automobile travel attributable to a project." It should be noted "automobile" refers to on-road passenger vehicles, specifically cars and light trucks. Heavy-duty truck VMT does not need to be included in the analysis, per Senate Bill 743 requirements. Other relevant considerations may include the effects of the project on transit and non-motorized traveled (e.g., pedestrians and bicyclists).

The methodology and significance criteria for determining VMT transportation impacts in the city is contained in the City's TSM, which was approved by City Council on November 9, 2020. The TSM outlines the following process for performing the analysis:

1. Determine if VMT analysis is necessary by comparing project characteristics to the City's screening criteria.
2. If the project does not meet any of the screening criteria, perform VMT analysis to determine the project's VMT.
3. Compare the project VMT to the significance criteria to determine if there is VMT transportation impact.
4. If there is an impact, identify mitigation measures to reduce the project impact.

Based on OPR's Technical Advisory, the City's adopted TSM has VMT specific guidelines, screening criteria and thresholds. A project that meets at least one of the screening criteria would be presumed to have a less-than-significant VMT impact due to project characteristics and/or location. Per screening criteria included in the TSM, a local serving public facility (such as transit centers, public schools, libraries, post offices, park-and-ride lots, police and fire facilities, and government offices) are presumed to have a less-than-significant VMT impact. The project is a fire station and is considered a local serving public facility/service because it primarily serves the community. Therefore, using the City's local serving public facility screening criteria, the project would not be required to evaluate VMT and impacts can be presumed to be **less than significant**.

5 Conclusions

Based on the project's operational data and characteristics, a total of 78 daily trips would be generated, 15 AM peak hour trips and 15 PM peak hour trips. Applying a passenger care equivalency factor of 1.5 (to account for truck trips), the proposed project would generate 103 daily PCE trips, 17 AM peak hour PCE trips and 17 PM peak hour PCE trips.

Based on the trip generation analysis above, the project would not generate 300 or more new daily trips; therefore, the project would not require a LOS analysis. The proposed project would be screened out from conducting further VMT analysis and is presumed to have a less-than-significant VMT impact. Thus, the project would not require any mitigation.

6 References

City of San Diego. 2022. Transportation Study Manual (TSM). September 19, 2022. Accessed at <https://www.sandiego.gov/sites/default/files/10-transportation-study-manual.pdf>.

City of San Diego Fire-Rescue Department. 2024. Fire Rescue Response to Technical Drafts #1. Accessed May 2024.

OPR (California Governor's Office of Planning and Research). 2018. *Technical Advisory on Evaluating Transportation Impacts in CEQA*. December 2018. Accessed at http://opr.ca.gov/docs/20190122-743_Technical_Advisory.pdf.

Attachment A

Project information Form



City of San Diego
Project Information Form

Project Information

Project Name:		Fairmount Avenue Fire Station			
Project Applicant					
Name:		Dudek/RRM Design			
Address:					
Contact Information	Phone Number:	760-479-4109	Email:	stewani@dudek.com	
Project Location and Context					
Project Address:		North of the intersection of 47th Street and Fairmount Avenue & on the west side of 47th Street			
APN:		541-190-16			
Driveway Cross Streets:		47th Street and Fairmount Avenue			
Please attach a Project Location Map that clearly identifies project driveways and access points.					
Community Plan Area:	Mid Cities: City Heights	Land Use Designation:	Open Space & Residential	Zoning Designation:	OP-2-1, RS-1-7
Is any portion of the project located in an RTIP Transit Priority Area?: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No					
Project Description (with Proposed Land Uses and Intensities): A 4-story fire station, approximately 22,443 square feet, with one garage, two apparatus bay (approximately 5,200 sq ft), an exercise room, a kitchen, and 10 bunk rooms . It would also include 15 parking spaces, a trash enclosure, an emergency generator, and a fuel tank.					
Number of Parking Spaces:	Vehicle Spaces	Accessible Spaces	Bicycle Spaces (racks and secure Storage)	Motorcycle Spaces	
	13	2			
Identify any project features related to TDM and Identify any transportation amenities or travel demand management measures that are required based on the San Diego Municipal Code Section 142.0528 (transportation amenities) or the Climate Action Plan Consistency Checklist. For example: transit pass subsidies, unbundled parking, shuttle services, car share, bicycle supportive features (bike repair station, bike lockers, etc.).					
Please attach a project site plan that clearly identifies the following: <ul style="list-style-type: none">• Land use types and quantities, and number of parking spaces provided (vehicle and bicycle) clearly identified.• Driveway locations and type (full access, partial access, right in/out only) identified.• Pedestrian access, bicycle access and on-site pedestrian circulation clearly identified.• Location/distance of closest existing transit stop and proposed transit stops identified in RTIP (measured as walking distance to project entrance/or middle of parcel).					

**See attached Figure 1 Location Map
and Attachment B Site Plan**



City of San Diego Project Information Form

See Table 1
Project Trip Generation

Trip Generation Estimates (calculated using the process described in the TSM):	Unadjusted Driveway Trips		Total Net New Trips	
	Daily:	78 Non-PCE/103 PCE	Daily:	78 Non-PCE/103 PCE
	AM Peak Hour:	15 Non-PCE/17 PCE	AM Peak Hour:	15 Non-PCE/17 PCE
	PM Peak Hour:	15 Non-PCE/17 PCE	PM Peak Hour:	15 Non-PCE/17 PCE

Preliminary Screening Criteria

CEQA Transportation Analysis Screening		Screened Out	Not Screened Out
1) Select the Land Uses that apply to your project 2) Answer the questions for each Land Use that applies to your project <i>(if "Yes" in any land use category below then that land use (or a portion of the land use) is screened from CEQA Transportation Analysis)</i>		Yes	No
<input type="checkbox"/>	1. Redevelopment Project:		
	a. Does the project result in a net decrease in total Project VMT?	<input type="radio"/>	<input checked="" type="radio"/>
	b. Answer if yes to 1a. If the project replaces affordable housing with market rate housing, are there more market rate units planned than existing affordable units being replaced.	<input type="radio"/>	<input checked="" type="radio"/>
<input type="checkbox"/>	2. Residential Project:		
	a. Is the project in a VMT/Capita Efficient Area (per SANDAG screening maps)?	<input type="radio"/>	<input checked="" type="radio"/>
	b. Does the project include Affordable Housing?	<input type="radio"/>	<input checked="" type="radio"/>
	$\frac{\text{Affordable Units}}{\text{Total Units}} + \frac{\text{Market Rate Units}}{\text{Total Units}} = \frac{\text{Total Units}}{\text{Total Units}}$ All affordable units are screened out.	<input type="radio"/>	<input checked="" type="radio"/>
<input type="checkbox"/>	3. Commercial Employment Project:		
	• Is the project in a VMT/Employee Efficient Area? (per SANDAG screening maps?)	<input type="radio"/>	<input checked="" type="radio"/>
<input type="checkbox"/>	4. Industrial Employment Project		
	• Is the project in a VMT/Industrial Employee Efficient Area?	<input type="radio"/>	<input checked="" type="radio"/>
<input checked="" type="checkbox"/>	5. Retail/Public Facility/Recreational		
	• Is the project locally serving: - Retail OR Public Facility OR Recreational	<input checked="" type="radio"/>	<input type="radio"/>
<input checked="" type="checkbox"/>	6. Small Project		
	• For all components of a project that are not screened out above (all 'Yes' in a land use category), what is the daily unadjusted driveway trip generation?	<input checked="" type="radio"/>	<input type="radio"/>
	_____ Is it less than 300 daily trips?	<input checked="" type="radio"/>	<input type="radio"/>

Local Mobility Analysis			
Is your project consistent with the community plan and zoning?	<input checked="" type="radio"/> Consistent <input checked="" type="checkbox"/> Generates less than 1,000 daily trips (unadjusted driveway trips)	<input type="radio"/> Inconsistent <input type="checkbox"/> Generates less than 500 daily trips (unadjusted driveway trips)	
Will project development be phased?	No	In what month are traffic counts planned to be conducted?	Not applicable

Public Service/Facility land use is exempt from zoning consistency, therefore, consistent with community plan and zoning option is chosen.



**City of San Diego
Project Information Form**

If a project generates 1,000 or more daily trips (consistent with community plan and zoning) or 500 or more daily trips (inconsistent with community plan or zoning), attach an exhibit showing the project's trip distribution percentages and project trip assignment using the process described in the TSM.

Attachment B

Site Plan

