



Date: November 1, 2024

To: Victor Ledua, Engineer Technician, Town of Yucca Valley

From: George Ghossain, Principal Engineer, Integrated Engineering Group

Subject: TRIP GENERATION ASSESSMENT MEMO FOR FIRE STATION 41, TOWN OF YUCCA VALLEY

Integrated Engineering Group (IEG) is pleased to submit this Trip Generation Assessment memorandum (memo) for the Fire Station 41 Project located at the southeast corner of Twentynine Palms Outer Highway South and Joshua Lane South intersection in the Town of Yucca Valley, California. The Project will be developed on a vacant 1.72-acre lot owned by San Bernardino County with construction of a 13,230 square feet fire station and associated facilities. The Project will house 5 personnel, 1 fire engine, and 1 paramedic truck.

Our goal is to obtain comments from City of San Bernardino staff, to ensure that this memo fully addresses the analysis requirements per the San Bernardino County Transportation Authority *Recommended Traffic Impact Analysis Guidelines for Vehicle Miles Traveled and Level of Service Assessment* (Guidelines, February 2020).

The preliminary site plan for the Project is shown in **Attachment 1**. Access to the Project site will be provided via one access point along Twentynine Palms Outer Highway South (public) and one access point along Joshua Lane South (emergency vehicles).

TRIP GENERATION

Trip generation is a measure or forecast of the number of trips that begin or end at the project site. The traffic generated is a function of the extent and type of development proposed for the site. These trips will result in some traffic increases on the streets where they occur. Per the Guidelines, Project vehicular traffic generation characteristics are estimated based on established rates contained in the *Trip Generation Manual, 11th Edition*, published by the Institute of Transportation Engineers (ITE). The Project ITE average trip generation rates and trip calculations summary are presented in **Tables 1** and **2**, respectively.

Table 1
Project Trip Generation Rate

Land Use ¹	Units ²	ITE LU Code	AM Peak Hour Trips per Unit ³			PM Peak Hour Trips per Unit			Daily Trips/Unit
			In	Out	Total	In	Out	Total	
Fire Station/Emergency Communication Center	TSF	575	29%	71%	0.48	29%	71%	0.48	-

¹ Trip Generation Source: Institute of Transportation Engineers (ITE), Trip Generation Manual, Eleventh Edition (2021).

² TSF = Thousand Square Feet

³ AM peak hour trip rate is assumed to be equal to PM trip rate with the reversed trip split of 71% inbound and 29% outbound



Table 2
Project Trip Generation

Land Use ¹	Intensity	Units ²	AM Peak Hour			PM Peak Hour			Daily
			In	Out	Total	In	Out	Total	
Fire Station/Emergency Communication Center	13.32-	TSF	5	2	7	2	5	7	-
Total			5	2	7	2	5	7	-

¹ Trip Generation Source: Institute of Transportation Engineers (ITE), Trip Generation Manual, Eleventh Edition (2021).

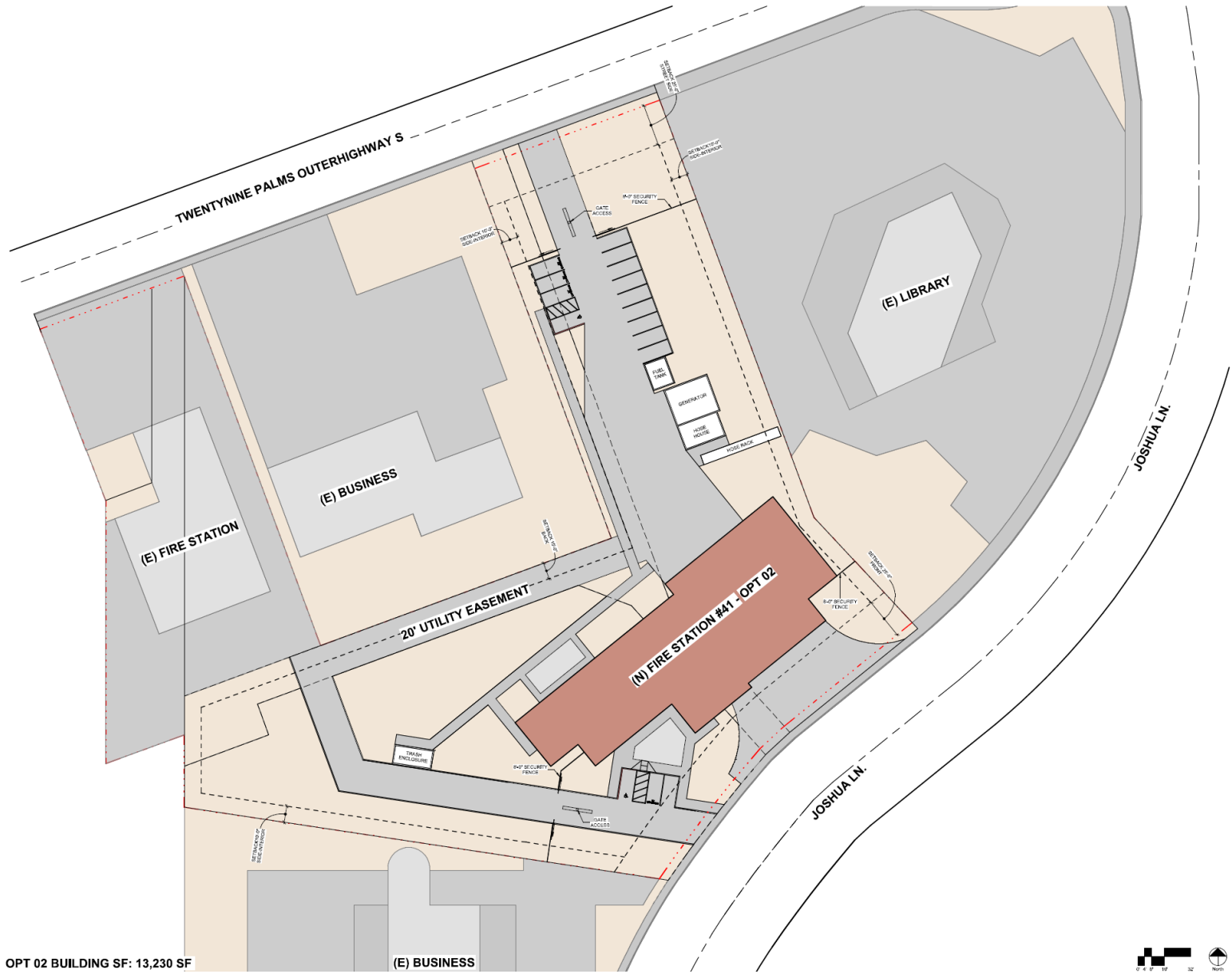
² TSF = Thousand Square Feet

As shown, the Project is anticipated to generate a total of 7 AM peak hour and 7 PM peak hour trips.

LEVEL OF SERVICE TRAFFIC STUDY EXEMPTION

Per the Guidelines, a TIA must be prepared when a Project generates greater than 250 two-way peak hour trips. **Table 2** demonstrated that the Project would generate less than this threshold. Therefore, this memo is considered sufficient, and no additional level of service traffic analysis is necessary.

Attachments: 1 - Preliminary Project Site Plan



OPT 02 BUILDING SF: 13,230 SF

(E) BUSINESS