



## 1.2 Purpose and Need for Project

The main purpose of this IOAR is to document the safety, operational, engineering (SO&E) performance of signaling the I-10 eastbound at Garcon Point Road ramp terminal intersection. In this report, both ramp terminal intersections will be analyzed to evaluate the traffic operations at the I-10 and Garcon Point Road interchange.

As part of this study, the existing operational analysis revealed operational deficiency at the I-10 eastbound ramp terminal intersection. The existing analysis results revealed that the left-turn and right-turn traffic from the I-10 eastbound off-ramp would operate at LOS F in the PM peak hour. By signaling the I-10 eastbound ramp terminal intersection, the eastbound traffic volume will be metered, which will mitigate the simultaneous release of traffic volume onto Garcon Point Road by creating a platooning effect through the ramp terminal signal control. The I-10 eastbound ramp terminal intersection also requires additional geometric improvements to accommodate future traffic. The geometric improvement on southbound Garcon Point Road is the change of shared through/left lane to left-turn lane only at the I-10 eastbound ramp terminal intersection.

The need for this project derives from the PTAR. As part of this study, the existing and future traffic volumes along Garcon Point Road were studied and utilized in the analysis of existing and future traffic conditions. Recent traffic projections completed in the region identified increased traffic congestion and potential deficiencies in the vicinity of the interchange. Currently, the daily traffic volume on Garcon Point Road varies between 2,200 and 10,300 vehicles per day, with a daily truck factor of 7.9% at the vicinity of the interchange. By the year 2045, the daily traffic volume is expected to increase to a range of 2,800 to 13,300 vehicles per day. With this increase in traffic along Garcon Point Road, the operating conditions at the intersections are expected to deteriorate.

A review of the crash data provided in **Section 3** shows a total of 22 crashes for the five-year period (2013-2017), of which 7 were injury crashes. No fatal crashes occurred during the five-year period. The actual crash rate at the I-10 eastbound ramp terminal intersection is 2.845 crashes per million entering vehicles, which is higher than the average statewide crash rate for similar facilities. Analysis of the crashes revealed the following notable characteristics.

- Angle crashes (54%) were the predominant crash type, followed by Sideswipe crashes (23%).
- Angle crashes were most concentrated at the I-10 eastbound ramp terminal intersection.

# INTERCHANGE OPERATIONAL ANALYSIS REPORT (IOAR)

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I-10 at Garcon Point Road  
FPID: 413062-4-22-01 and 413062-5-22-01



If no improvements are made at the I-10 eastbound and Garcon Point Road ramp terminal intersection, traffic operations within the study area will continue to deteriorate as traffic continues to grow.

## 1.3 Project Location

The I-10 at Garcon Point Road interchange is located in Santa Rosa County at Milepost 9.309, Section number 58002000. The I-10 at Garcon Point Road interchange is located between the Avalon Boulevard interchange and the Ward Basin Road interchange. Garcon Point Road is approximately 4.23 miles east of Avalon Boulevard and 2.46 miles west of Ward Basin Road. The project location and the study area are shown in **Figure 1-1**.