FEHR PEERS

# MEMORANDUM

Date: July 24, 2018

To: Richard James, EMC Planning Group

From: Franziska Church, Fehr & Peers

**Subject: Intersection Turning Movement Data Comparison for Moss Landing Community Plan in Moss Landing, California**

*SJ11-1242*

This memorandum documents Fehr & Peers' evaluation of the validity of the findings and mitigation measures reported in the Moss Landing Community Plan Transportation Impact Analysis (TIA) and the related Highway 1 corridor analysis that was completed in 2015. Both the TIA and the corridor study used traffic volumes collected in 2011. The Moss Landing Community Plan project has been on hold since 2016 and Monterey County now wants to finalize it and the associated Environmental Impact Report (EIR). To determine if the 2015 TIA results are still valid for use in the pending EIR, new intersection turning movement counts were conducted in 2018 and are compared to those conducted in 2011 to determine whether there have been substantial changes in peak hour traffic volumes which would affect the TIA results.

## SUMMARY OF RESULTS

On average, the turning movement volumes at the study intersections have increased by more than 10 percent between 2011 and 2018. There is 13 percent and 11 percent average increase in total volume at all the intersections during AM peak period and PM peak period, respectively. Increases greater than 10 percent are considered substantial. Therefore the Moss Landing Community Plan TIA should be updated with the 2018 count data, instead of relying on the volumes from counts conducted in 2011, to ensure that the results are defensible.

## DATA COLLECTION

Fehr & Peers collected morning (7:00 to 9:00 AM) and evening (4:00 to 6:00 PM) peak period vehicle turning movement counts in March 2011 at the four intersections evaluated as part of the 2015 TIA:

1. SR-1 / Dolan Road
2. SR-1 / Moss Landing Road (North)
3. SR-1 / Moss Landing Road (S) – Potrero Road
4. SR-1 / Merritt St (SR 183)

New AM and PM peak period counts were collected at all of the intersections on Wednesday, April 11, 2018.

## VOLUME COMPARISON

Fehr & Peers compared the peak hour volumes from the 2018 counts with those from counts conducted in 2011. The comparison was done in two ways. First, the through movement traffic volumes on the Highway 1 approaches at each intersection are compared. Second, the total intersection volumes (sum of all the turning movements) at each intersection are compared.

### Highway 1 Approaches

The through movements on the Highway 1 approaches of the four study intersections were compared as they represent the major movements along the Highway 1 corridor**. Table 1** presents the volumes, volume differences and percent change for the AM and PM peak hours. The net volume differences and percent changes are also summarized in **Figure 1** and **Figure 2,** respectively. Overall, the Highway 1 approach volumes have increased at the four study intersections as compared to the data collected in 2011. In terms of total volume change, the intersections at Dolan Road and Moss Landing Road-Potrero Road have the greatest net increase in volume during AM peak period (270 vehicles at each intersection) and the Highway 1/Dolan Road intersection has the greatest net increase in volume during PM peak period (300 vehicles). In terms of percent change, the average growth for all four intersections between 2011 and 2018 is about 13 percent during both the AM and PM peak hours. In terms of percent growth the intersections at Dolan Road and Moss Landing Road-Potrero Road have highest percent growth during AM peak hour (15 percent) and the Highway 1/Meritt Street intersection has the highest percent growth during PM peak hour (16 percent).

**Table 1: Through Volumes on Highway 1 Approaches**

| Year | Highway 1 / Dolan Road | Highway 1 / Merritt Street | Highway 1 / Moss Landing Road | Highway 1 / Moss Landing Road – Potrero Road | Total |
|---|---|---|---|---|---|
| ***AM*** | | | | | |
| 2011 | 1,778 | 1,116 | 1,812 | 1,754 | 6,460 |
| 2018 | 2,048 | 1,213 | 1,991 | 2,024 | 7,276 |
| Net Difference (2018 – 2011) | 270 | 97 | 179 | 270 | 816 |
| Percent Growth | 15% | 9% | 10% | 15% | 13% |
| ***PM*** | | | | | |
| 2011 | 2,006 | 1,268 | 2,032 | 2,043 | 7,349 |
| 2018 | 2,306 | 1,475 | 2,252 | 2,240 | 8,273 |
| Net Difference (2018 – 2011) | 300 | 207 | 220 | 197 | 924 |
| Percent Growth | 15% | 16% | 11% | 10% | 13% |

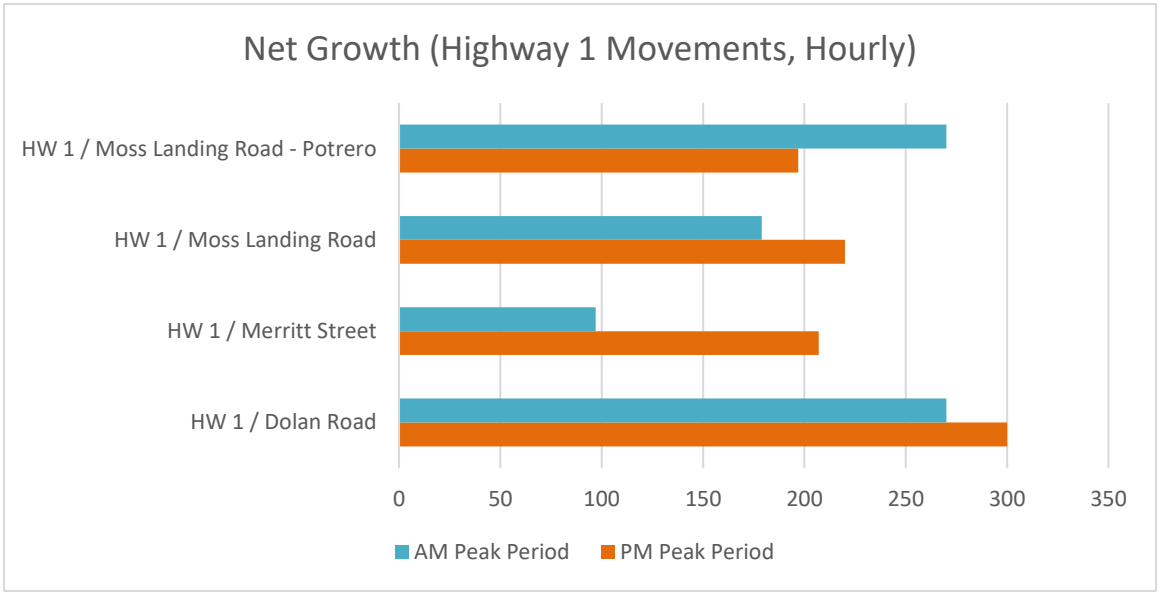


**Figure 1. Net Growth Along Highway 1 Corridor**

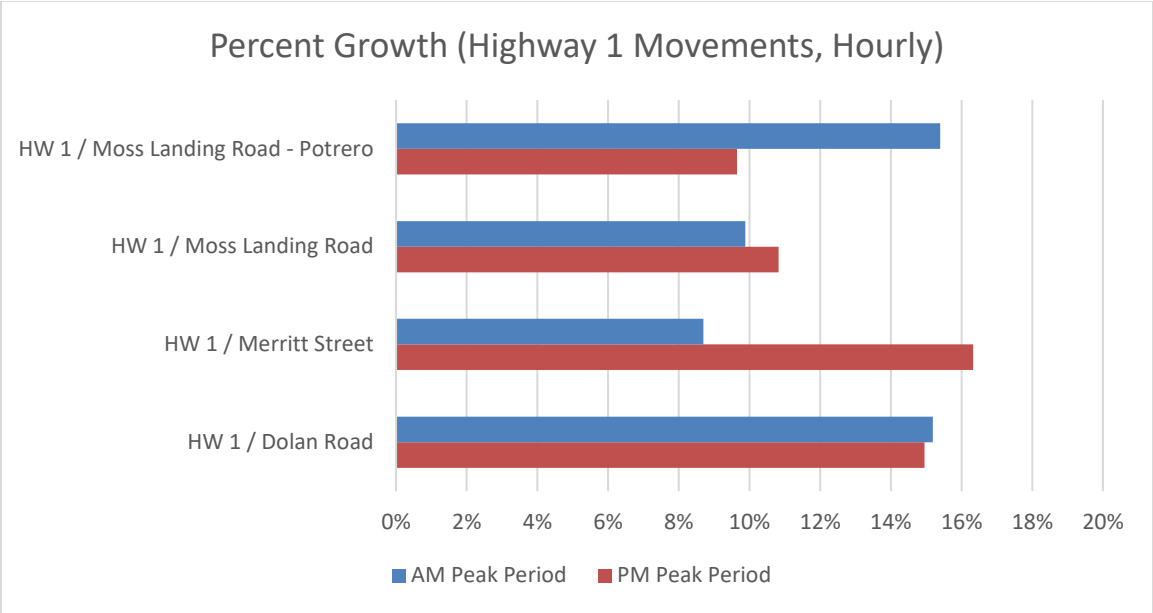


**Figure 2. Percent Growth Along Highway 1 Corridor**

## Total Intersection Volume

**Table 2** summarizes the total intersection volumes, volume differences and percent change for the AM and PM peak hours at the four study intersections. The net volume differences and percent changes are also summarized in **Figure 3** and **Figure 4,** respectively. Overall, the total intersection volumes have increased compared to the data collected in 2011. In terms of total volume change, the Highway 1/Dolan Road intersection has the greatest net increase in volume during AM and PM peak periods (331 and 313 vehicles, respectively). The average percent growth for all four intersections is about 13 percent in the AM and 11 percent in the PM peak hour. The Highway 1/Dolan Road intersection has the highest percent growth during AM peak hour (16 percent) and the Highway 1/Moss Landing Road-Potrero Road intersection has the highest percent growth during PM peak hour (15 percent).

**Table 2: Total Intersection Volumes**

| Year | Highway 1 / Dolan Road | Highway 1 / Merritt Street | Highway 1 / Moss Landing Road | Highway 1 / Moss Landing Road – Potrero Road | Total |
|---|---|---|---|---|---|
| ***AM*** | | | | | |
| 2011 | 2,134 | 1,898 | 1,922 | 1,870 | 7,824 |
| 2018 | 2,465 | 2,105 | 2,100 | 2,151 | 8,821 |
| Net Difference (2018 – 2011) | 331 | 207 | 178 | 281 | 997 |
| Percent Growth | 16% | 11% | 9% | 15% | 13% |
| ***PM*** | | | | | |
| 2011 | 2,415 | 2,245 | 2,247 | 2,122 | 9,029 |
| 2018 | 2,728 | 2,475 | 2,420 | 2,434 | 10,057 |
| Net Difference (2018 – 2011) | 313 | 230 | 173 | 312 | 1,028 |
| Percent Growth | 13% | 10% | 8% | 15% | 11% |

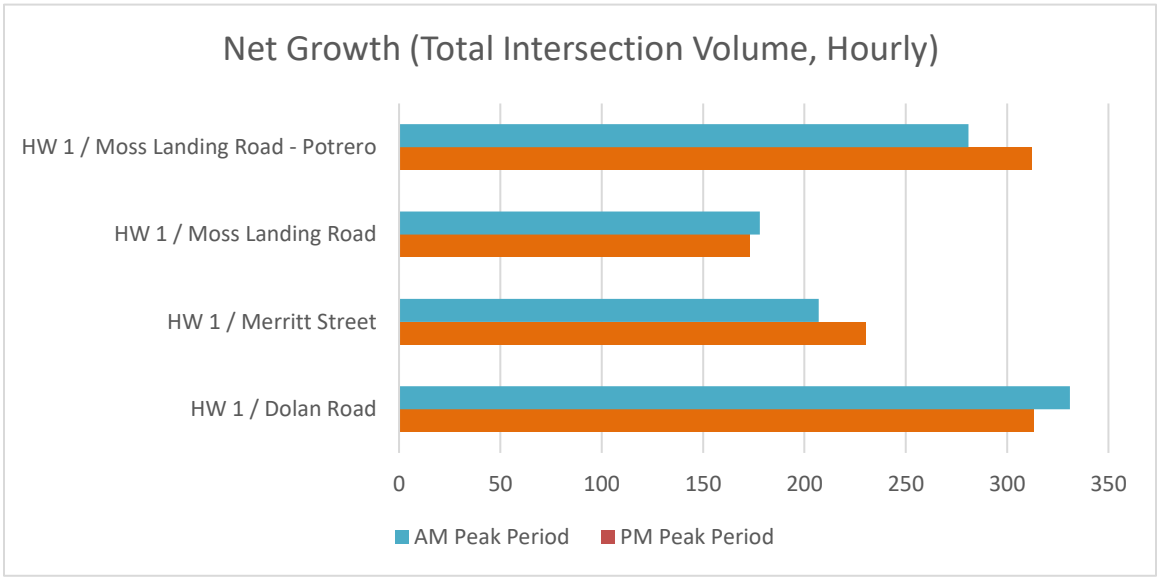


**Figure 3. Net Growth in Total Intersection Volume**

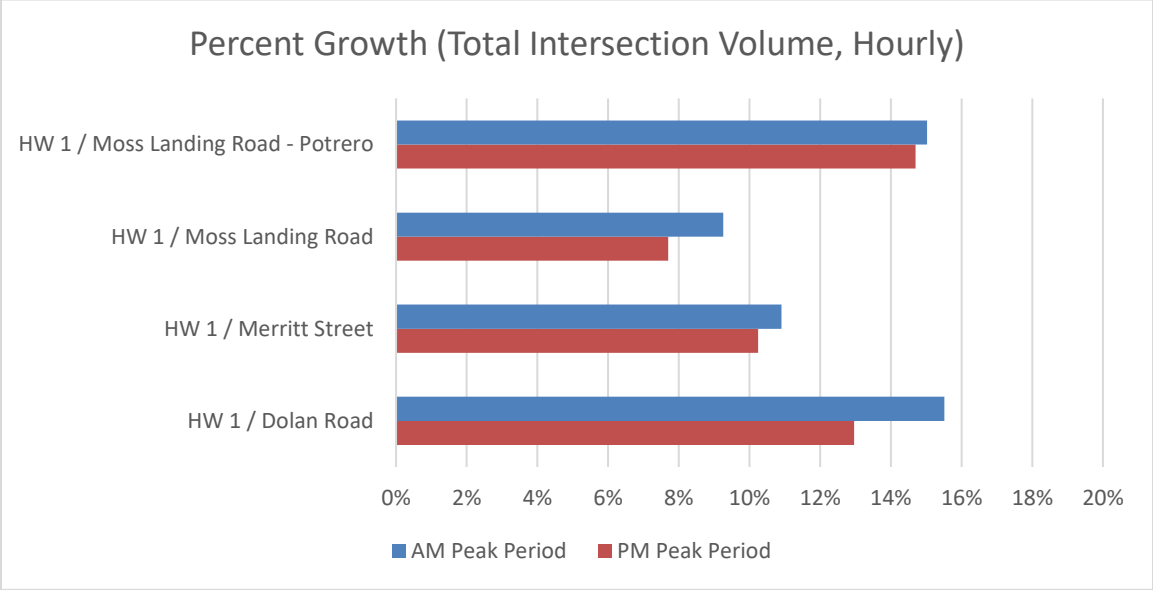


**Figure 4. Percent Growth in Total Intersection Volume**