



## Memorandum

**Date:** October 19, 2016

**Project:** FRM026-1

**To:** Mark Robson  
Robson Homes

**From:** Mark Spencer  
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**Subject:** Hobbs Project Traffic Impact Study – 2016 vs. 2015 Synopsis

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In response to comments raised by local residents on the Hobbs Project Traffic Impact Study, W-Trans has conducted new traffic counts in October 2016 and re-run the traffic analysis to compare to see if there would be any differences in the findings compared to the 2015 analysis. In addition, we have further checked the ability of vehicles to make U-turns at key study intersections by preparing an Auto-Turn analysis. Although traffic volumes on Mission Boulevard have increased, the traffic study findings do not change as a result of using 2016 traffic counts as opposed to 2015 traffic counts.

### 2016 Traffic Counts Compared to 2015

It is evident in the 2016 traffic counts that traffic volumes on Mission Boulevard have increased over time. As the City noted in their comment responses, this is attributable to several items including job growth in Silicon Valley, the pace of new home construction (lagging behind job creation), and changing travel patterns of motorists fueled in part by new technology. The City's comment responses also note the actions the City is undertaking to address congestion issues throughout the City.

Compared to the traffic counts taken in May 2015 the highest growth in traffic observed was at the intersection of Driscoll Road/Mission Boulevard during the afternoon peak traffic period (4:00 p.m. to 6:00 p.m.). Volumes at this intersection increased by about 22 percent which reflects an increase in all turning movements, with most of the traffic volume increase on Mission Boulevard. By all observations and accounts, this growth is due to regional traffic growth, although studies of traffic flow characteristics have found a potential for wide variability (up to 10 percent) in peak hour volumes on a daily basis at the same locations. During the same p.m. peak hour comparison on the south end of the study area, at the intersection of I-680 NB Ramps/Mission Road, the volumes decreased by about 1.8 percent. At the I-680 SB Ramps/Mission Boulevard intersection, approximately 500 feet north of the I-680 northbound ramps intersection, there was a decrease in southbound through volumes but an increase in southbound right-turn volumes onto the interstate, another indication of increased and shifting regional traffic.

Since there was an increase in traffic on Mission Boulevard, in particular southbound Mission Boulevard, the counts were reviewed to determine if there are any indications of increased southbound cut through traffic known to occur through the Mission Highlands neighborhood. The new counts do not suggest any increase in cut through traffic. At the Via San Dimas/Mission Boulevard intersection, there was actually an afternoon peak hour decrease of 58 vehicles, nearly half of the 2015 counts, making a right-turn onto Mission Boulevard.

Overall, the data suggests that the I-680 bottleneck at Mission Boulevard has grown worse. As mentioned previously, the volumes from the north end of the study network have increased and the volumes at the south end remained relatively constant. Volumes from the cross streets along the corridor have also stayed relatively

constant. There is more regional traffic on Mission Boulevard, and there is more stacking of cars because they cannot get onto I-680 at the same rate, and this also accounts for variation in traffic counts.

Traffic volumes have increased on Mission Boulevard in the morning peak hours (7:00 a.m. to 9:00 a.m.) as well compared to the previous count. There is an increase of 157 cars (14.2%) on northbound Mission Boulevard going past Via San Dimas in the a.m. peak. Important to note is the fact that the number of cars in the morning peak hour making a left from Mission Boulevard onto Via San Dimas has decreased from 89 to 69. Fewer cars are cutting through the Mission Highlands neighborhood to get to the high school, although there was an increase of 20 cars exiting from Via San Dimas onto Mission Boulevard during the a.m. peak hour. At Mission Boulevard and Palm Avenue, the total traffic volume increased by 160 cars, but there was little change in the use of the left turn lane (a total increase of 3 cars from 131 cars to 134 cars over a 2 hour period).

Many more cars are using Mission Cielo Avenue in the morning for student drop-off. The number of cars making a right into Mission Cielo from Mission Boulevard increased by 94 cars. The number of cars making a left into Mission Cielo from Mission Boulevard also increased, by 53 cars. The increase in drop-off activity could be explained by the time of year (beginning of school year versus end of school year), but that probably does not explain the full extent of the change in the count. There have also been changes in the level of traffic control on Palm Avenue during student drop-off and pick-up times.

## **Traffic Analysis**

Two comments made regarding the 2015 traffic data were that the data was collected during Memorial Day week, and that traffic has increased in the area since 2015. Although the traffic counts were conducted on a typical school day in May 2015, we wanted to see whether the results would differ by using a typical school day in October. Traffic counts conducted on October 6, 2016 were used in this exercise, and the analysis was re-run. The attached tables show the level of service analysis using the new data.

While there are slight variations in the intersection operations based on the 2016 traffic data compared to the 2015 traffic data, the differences are not enough to effect a change in the analysis results. The potential impacts of the proposed project would be the same as reported in the 2015 traffic study, and there would be no change in the study findings, recommendations or conclusions.

## **U-Turns on Mission Boulevard**

Some of the comments noted concerns with vehicles making U-turns on Mission Boulevard. The potential impacts of these U-turns was analyzed in the traffic study. W-Trans further checked the ability of vehicles to make U-turns at key study intersections by preparing an Auto-Turn analysis. Attached are the three Auto-Turn diagrams indicating the ability of vehicles to make U-Turns on southbound Mission Boulevard at the Via San Dimas intersection and the I-680 northbound ramps intersection, and on northbound Mission Boulevard at the Palm Avenue-Mission Cielo intersection. In each instance, large SUVs can safely negotiate a U-Turn. And larger vehicles can make U-Turns at the Via San Dimas intersection and the Palm Avenue intersection.

Two of the most important traffic operational considerations for the proposed Hobbs project are being able to make a left turn or U-turn from northbound Mission Boulevard at Palm Avenue, and being able to make a U-turn on southbound Mission Boulevard at Via San Dimas or the I-680 northbound ramps intersection. At each of these locations the traffic volumes remained steady from 2015 to 2016, and the number of additional vehicles potentially generated by the Hobbs development would be accommodated with minimal operational impacts.

## **Attachments**

Intersection LOS Tables, Auto-Turn Graphics

### Existing Peak Hour Intersection Levels of Service

Study Intersection Approach	May 2015 Conditions				October 2016 Conditions			
	AM Peak		PM Peak		AM Peak		PM Peak	
	Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS
1. Driscoll Rd/Mission Blvd	23.1	C	24.4	C	31.6	C	24.5	C
2. Palm Ave-Mission Cielo Ave/Mission Blvd	23.0	C	19.5	B	24.4	C	21.2	C
3. Hobbs Project St/Mission Blvd <i>WB Hobbs Project St (future)</i>	-	-	-	-	-	-	-	-
4. Via San Dimas/Mission Blvd <i>EB Via San Dimas</i> <i>WB County Water District Driveway</i>	1.3 23.3 43.9	A C E	1.2 18.9 35.8	A C E	2.1 40.9 >120	A E F	0.7 19.5 0.0	A C A
5. I-680 SB Ramps/Mission Blvd	10.8	B	9.4	A	11.6	B	8.1	A
6. I-680 NB Ramps/Mission Blvd	18.5	B	20.1	C	17.9	B	19.4	B

### Existing Plus Project Peak Hour Intersection Levels of Service

Study Intersection Approach	May 2015 Conditions				October 2016 Conditions			
	AM Peak		PM Peak		AM Peak		PM Peak	
	Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS
1. Driscoll Rd/Mission Blvd	23.3	C	24.5	C	31.9	C	24.7	C
2. Palm Ave-Mission Cielo Ave/Mission Blvd	23.8	C	19.9	B	25.1	C	21.7	C
3. Hobbs Project St/Mission Blvd <i>WB Hobbs Project St (future)</i>	0.1 12.8	A B	0.0 10.8	A B	0.1 13.8	A B	0.0 11.6	A B
4. Via San Dimas/Mission Blvd <i>EB Via San Dimas</i> <i>WB County Water District Driveway</i>	1.3 23.9 45.6	A C E	1.2 19.4 38.5	A C E	2.2 43.1 >120	A E F	0.7 20.0 0.0	A C A
5. I-680 SB Ramps/Mission Blvd	10.8	B	9.4	A	11.6	B	8.0	A
6. I-680 NB Ramps/Mission Blvd	18.6	B	20.4	C	18.0	B	19.7	B

### Baseline Peak Hour Intersection Levels of Service

Study Intersection Approach	May 2015 Conditions				October 2016 Conditions			
	AM Peak		PM Peak		AM Peak		PM Peak	
	Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS
1. Driscoll Rd/Mission Blvd	23.3	C	24.4	C	32.0	C	24.7	C
2. Palm Ave-Mission Cielo Ave/Mission Blvd	24.8	C	20.7	C	26.2	C	22.5	C
3. Hobbs Project St/Mission Blvd <i>WB Hobbs Project St (future)</i>	-	-	-	-	-	-	-	-
4. Via San Dimas/Mission Blvd <i>EB Via San Dimas</i> <i>WB County Water District Driveway</i>	1.3 24.5 47.8	A C E	1.2 19.8 40.4	A C E	2.3 45.4 >120	A E F	0.7 20.5 0.0	A C A
5. I-680 SB Ramps/Mission Blvd	17.7	B	12.5	B	21.4	C	12.3	B
6. I-680 NB Ramps/Mission Blvd	18.5	B	20.7	C	18.0	B	20.0	B

### Baseline Plus Project Peak Hour Intersection Levels of Service

Study Intersection Approach	May 2015 Conditions				October 2016 Conditions			
	AM Peak		PM Peak		AM Peak		PM Peak	
	Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS
1. Driscoll Rd/Mission Blvd	23.5	C	24.6	C	32.4	C	24.9	C
2. Palm Ave-Mission Cielo Ave/Mission Blvd	25.7	C	21.1	C	27.0	C	23.0	C
3. Hobbs Project St/Mission Blvd <i>WB Hobbs Project St (future)</i>	0.1 13.0	A B	0.0 11.0	A B	0.1 14.1	A B	0.0 11.9	A B
4. Via San Dimas/Mission Blvd <i>EB Via San Dimas</i> <i>WB County Water District Driveway</i>	1.4 25.2 49.7	A D E	1.2 20.3 43.7	A C E	2.3 48.0 >120	A E F	0.7 21.1 0.0	A C A
5. I-680 SB Ramps/Mission Blvd	17.9	B	12.7	B	21.9	C	12.5	B
6. I-680 NB Ramps/Mission Blvd	18.6	B	21.0	C	18.0	B	20.3	C

### Cumulative Peak Hour Intersection Levels of Service

Study Intersection Approach	May 2015 Conditions				October 2016 Conditions			
	AM Peak		PM Peak		AM Peak		PM Peak	
	Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS
1. Driscoll Rd/Mission Blvd	24.9	C	27.1	C	34.5	C	29.6	C
2. Palm Ave-Mission Cielo Ave/Mission Blvd	23.0	C	19.6	B	25.0	C	22.2	C
3. Hobbs Project St/Mission Blvd <i>WB Hobbs Project St (future)</i>	-	-	-	-	-	-	-	-
4. Via San Dimas/Mission Blvd <i>EB Via San Dimas</i> <i>WB County Water District Driveway</i>	1.3 24.9 74.5	A C F	1.3 20.0 38.2	A C E	2.4 51.3 >120	A F F	0.7 20.6 0.0	A C A
5. I-680 SB Ramps/Mission Blvd	24.7	C	21.7	C	28.4	C	17.8	B
6. I-680 NB Ramps/Mission Blvd	19.8	B	23.0	C	19.8	B	21.8	C

### Cumulative Plus Project Peak Hour Intersection Levels of Service

Study Intersection Approach	May 2015 Conditions				October 2016 Conditions			
	AM Peak		PM Peak		AM Peak		PM Peak	
	Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS
1. Driscoll Rd/Mission Blvd	25.1	C	27.4	C	34.8	C	30.2	C
2. Palm Ave-Mission Cielo Ave/Mission Blvd	23.7	C	20.1	C	25.7	C	22.9	C
3. Hobbs Project St/Mission Blvd <i>WB Hobbs Project St (future)</i>	0.1 15.3	A C	0.0 10.8	A B	0.1 16.5	A C	0.0 11.7	A B
4. Via San Dimas/Mission Blvd <i>EB Via San Dimas</i> <i>WB County Water District Driveway</i>	1.3 25.7 77.9	A D F	1.3 20.6 41.2	A C E	2.6 54.7 >120	A F F	0.7 21.2 0.0	A C A
5. I-680 SB Ramps/Mission Blvd	24.9	C	21.9	C	28.8	C	17.9	B
6. I-680 NB Ramps/Mission Blvd	19.8	B	23.2	C	19.9	B	22.1	C





Mission Blvd at Interstate 680

AutoTURN Exhibit



