intersection to provide two left-turn lanes, two through lanes, and two right-turn lanes and widen the westbound approach to provide two left-turn lanes, three through lanes, and a right-turn lane. However, this improvement is infeasible due to right-of-way constraints on the northwest and northeast corners associated with widening the southbound and westbound approaches, respectively. Therefore, this impact would be significant and unavoidable.

- **La Cienega Boulevard and La Tijera Boulevard (Intersection #88)**

  In order to address the critical movement that is significantly impacted at this intersection, it would be necessary to widen the southbound approach to the La Cienega Boulevard and La Tijera Boulevard intersection to provide three through lanes and two right-turn lanes. However, this improvement is considered infeasible due to right-of-way constraints on the west side of La Cienega Boulevard north of La Tijera Boulevard. Therefore, this impact would be significant and unavoidable.

- **La Cienega Boulevard and Stocker Avenue (Intersection #93)**

  In order to address the critical movement that is significantly impacted at this intersection, it would be necessary to widen the northbound approach to the La Cienega Boulevard and Stocker Avenue intersection to provide three through lanes and a free right-turn lane. The existing northbound right-turn lane is generally blocked by northbound through vehicles queuing back from the intersection during the AM and PM peak hours, effectively causing the northbound approach to operate as two through lanes and a shared through/right-turn lane. In order to address that critical movement, the northbound approach would need to be widened in order to increase the length of the northbound right-turn lane to a distance where through vehicles no longer block right-turning vehicles. However, this improvement is considered infeasible due to right-of-way constraints associated with the presence of high voltage power lines and a large transmission line tower at the southeast corner of the intersection. Therefore, this impact would be significant and unavoidable.

- **Lincoln Boulevard and Venice Boulevard (Intersection #109)**

  In order to address the critical movement that is significantly impacted at this intersection, it would be necessary to widen the northbound approach to the Lincoln Boulevard and Venice Boulevard intersection to provide two left-turn lanes, three through lanes, and a right-turn lane and widen the southbound approach to provide two left-turn lanes, three through lanes, and a right-turn lane. However, this improvement is considered infeasible due to right-of-way constraints north and south of the intersection along Lincoln Boulevard associated with providing an additional travel lane in both directions. Therefore, this impact would be significant and unavoidable.

- **Lincoln Boulevard and Washington Boulevard (Intersection #110)**

  In order to address the critical movement that is significantly impacted at this intersection, it would be necessary to widen the northbound approach to the Lincoln Boulevard and Washington Boulevard intersection to provide two left-turn lanes, three through lanes, and a through/right lane and widen the southbound approach to provide two left-turn lanes, three through lanes, and a through/right lane. However, this improvement is considered infeasible due to right-of-way constraints north and south of the intersection along Lincoln Boulevard associated with providing an additional travel lane in both directions. Therefore, this impact would be significant and unavoidable.

- **Manchester Avenue and Sepulveda Boulevard (Intersection #114)**

  In order to address the critical movement that is significantly impacted at this intersection, it would be necessary to widen the southbound approach to the Manchester Avenue and Sepulveda Boulevard intersection to provide two left-turn lanes, three through lanes, and one right-turn lane. However, this improvement is considered infeasible due to right-of-way constraints on the northwest corner associated with widening the southbound approach. Therefore, this impact would be significant and unavoidable.

- **Rosecrans Avenue and Sepulveda Boulevard (Intersection #125)**

  In order to address the critical movement that is significantly impacted at this intersection, it would be necessary to restripe the northbound approach to the Rosecrans Avenue and Sepulveda Boulevard intersection to provide two left-turn lanes, four through lanes, and one right-turn lane and widen the southbound approach to provide two left-turn lanes, four through lanes, and one right-turn lane. However, this improvement is considered infeasible due to right-of-way constraints north and south of the intersection along Sepulveda Boulevard associated with providing an additional southbound travel lane. Therefore, this impact would be significant and unavoidable.

- **Sepulveda Boulevard and Westchester Parkway (Intersection #135)**

  In order to address the critical movement that is significantly impacted at this intersection, it would be necessary to widen the westbound approach to the Sepulveda Boulevard and Westchester Parkway intersection to provide two left-turn lanes, two through lanes, and a right-turn lane. This improvement is considered infeasible due to right-of-way constraints on Westchester Parkway east of Sepulveda Boulevard. However, with the elimination of parking on Westchester Parkway and the elimination of the functional eastbound right-turn lane, there is sufficient right-of-way to provide an additional westbound left-turn lane in order to partially mitigate this intersection. The loss of parking on Westchester Parkway is not considered a burden in this immediate area since there are large surface parking lots within a short walking distance, and parking is permitted on both sides of Sepulveda Boulevard. Even with this partial mitigation, the residual impact would be significant and unavoidable.

- **Sepulveda Boulevard and I-105 Ramp north of Imperial Highway (Intersection #139)**

  In order to address the critical movement that is significantly impacted at this intersection, it would be necessary to widen the northbound approach to the Sepulveda Boulevard and I-105 Ramp north of Imperial Highway intersection to four through lanes. However, this measure is considered infeasible due to right-of-way constraints associated with the Sepulveda tunnel under the south runways of LAX. Therefore, this impact would be significant and unavoidable.

Intersection Improvements Determined to be Feasible

The following improvements were identified at the intersections that were anticipated to be significantly impacted and were determined to be feasible to implement.

- **Airport Boulevard and Manchester Avenue (Intersection #9)**

  Restripe the eastbound approach to the Airport Boulevard and Manchester Avenue intersection to provide one left-turn lane, two through lanes, and a through/right lane. With implementation of this measure, three parking spaces on the south side of Manchester Avenue west of Belford Avenue and two parking spaces on the south side of Manchester Avenue east of Belford Avenue would need to be restricted during the PM peak period. The loss of five parking spaces during the PM peak period is not considered a burden to this immediate area since the commercial businesses on the south side of Manchester Avenue west of Belford Avenue have an off-street parking lot, and there is parking allowed on both sides of Belford Avenue and on the north side of Manchester Avenue. Alternatively, restripe and modify the traffic signal for the westbound approach to the Airport Boulevard and Manchester Avenue intersection to provide two left-turn lanes, two through lanes, and a right-turn lane. Implementation of either mitigation measure would reduce the impact to a less-than-significant level.

- **Arbor Vitae Street and Aviation Boulevard (Intersection #10)**

  Widen the eastbound approach to the Arbor Vitae Street and Aviation Boulevard intersection to provide one left-turn lane, two through lanes, and a right-turn lane. Implementation of this mitigation measure would reduce the impact to a less-than-significant level.

- **Imperial Highway and Sepulveda Boulevard (Intersection #71)**

  Restripe the northbound approach to the Imperial Highway and Sepulveda Boulevard intersection to provide one left-turn lane, three through lanes, and two right-turn lanes. Implementation of this

mitigation measure would reduce the impact to a less-than-significant level. While restriping this intersection as described above would mitigate this impact, an alternative would be to widen the east side of Sepulveda Boulevard south of Imperial Highway to provide one left-turn lane, three through lanes, and two right-turn lanes on the northbound approach. However, provided the right-of-way is available, the provision of additional travel lane area would require disruption of traffic flows, generation of construction-related air pollutant emissions and noise impacts, and therefore the restriping is recommended rather than the widening.

- **La Cienega Boulevard and I-405 Ramps N/O Century Boulevard (Intersection #96)**

  Widen the southbound approach to the La Cienega Boulevard and I-405 Ramps N/O Century Boulevard intersection to provide two left-turn lanes and two through lanes. Implementation of this mitigation measure would reduce the impact to a less-than-significant level.

- **La Tijera Boulevard and Sepulveda Boulevard (Intersection #101)**

  Restripe the westbound approach to the La Tijera Boulevard and Sepulveda Boulevard intersection and modify the traffic signal at the intersection to provide two left-turn lanes, one through lane, and a through/right lane. Implementation of this mitigation measure would reduce the impact to a less-than-significant level. This mitigation measure would also change the westbound left-turn phasing from protected/permissive to protected only.

- **Sepulveda Boulevard and 76th/77th Street (Intersection #136)**

  Restripe the eastbound approach to the Sepulveda Boulevard and 76th/77th Street intersection to provide two left-turn lanes, a through/left-turn lane, and one right-turn lane. Implementation of this mitigation measure would reduce the impact to a less-than-significant level.

Graphic depictions of the improvements described above are included in Appendix C-3. Improvements that were considered for each intersection are depicted, including those improvements determined to be infeasible.[70]

Timing for Implementation of Feasible Intersection Improvements

As indicated in Section 2.4.5 of this EIR, international passenger activity levels at TBIT are assumed in the EIR analysis to increase from 16.7 MAP in 2008 to 21.8 MAP in 2013. The impacts analysis presented in Section 4.2.8 above is based on the additional vehicle trip generation associated with the 5.1 MAP increase in international passenger activity levels. The timing for implementation of the feasible improvements described above will be coordinated with the growth in international passenger activity levels at TBIT based on 1 MAP increments (i.e., 17.7 MAP, 18.7 MAP, 19.7 MAP, etc.). In order to determine which intersection improvements are required under each increment of growth, each significantly impacted intersection where feasible improvements are proposed was analyzed to identify the level of growth that triggers the significant impact. This was done by comparing the intersection LOS and V/C ratio under "Without Project" conditions and "With Project" conditions at each progressive increment of growth until the significant impact was triggered. The "Without Project" conditions were determined for each MAP level by linear interpolation of growth in ambient traffic that would occur over a sequence of five 1-MAP increases in passenger activity levels at TBIT. "With Project" conditions were then determined for each MAP level by linear interpolation of growth in project vehicle trips that would occur over a sequence of five 1-MAP increases in passenger activity levels at TBIT. Impacts were then determined for each MAP level by comparing the corresponding "with" and "without" project scenarios. If the difference in LOS was calculated to exceed the threshold guidelines defined by the jurisdiction in which the intersection was located, then the recommended improvement(s) was identified for construction once the airport reached the corresponding growth in MAP.

[70] The intersection improvements shown in Appendix C-3 focus on the 71 intersections evaluated within the study area, as identified in Section 4.2.3. The improvements for Intersection #93 (La Cienega Boulevard and Stocker Avenue) are not shown in Appendix C-3 because that intersection is addressed as part of the CMP analysis as an arterial monitoring station, as described in Section 4.2.8.2, which is separate from the 71 intersections.

The impact comparison for these conditions is depicted in Appendix C-9 of this EIR. The associated level of service sheets are also provided in Appendix C-9. The following identifies the intersection mitigation improvements associated with each increment of MAP growth over 2008 conditions (16.7 MAP for international travel at TBIT), as will be determined annually, based on calendar year passenger counts at LAX.

One MAP Increase (i.e., 17.7 MAP)

No improvements are necessary at an increase of one MAP (i.e., 17.7 MAP) at TBIT as part of the Bradley West Project.

Two MAP Increase (i.e., 18.7 MAP)

The following intersection improvements shall be implemented at an increase of two MAP (i.e., 18.7 MAP) at TBIT as part of the Bradley West Project.

- Modify the Intersection of La Tijera Boulevard and Sepulveda Boulevard (Intersection #101)

Three MAP Increase (i.e., 19.7 MAP)

In addition to the improvements identified above, improvements at the following three intersections shall be implemented at an increase of three MAP (i.e., 19.7 MAP) at TBIT as part of the Bradley West Project.

- Modify the Intersection of Airport Boulevard and Manchester Avenue (Intersection #9)
- Modify the Intersection of Imperial Highway and Sepulveda Boulevard (Intersection #71)
- Modify the Intersection of Sepulveda Boulevard and 76th/77th Street (Intersection #136)

Four MAP Increase (i.e., 20.7 MAP)

In addition to the improvements identified above, improvements at the following two intersections shall be implemented at an increase of four MAP (i.e., 20.7 MAP) at TBIT as part of the Bradley West Project.

- Modify the Intersection of Arbor Vitae Street and Aviation Boulevard (Intersection #10)
- Modify the Intersection of La Cienega Boulevard and I-405 Ramps N/O Century Boulevard (Intersection #96)

Five MAP Increase (i.e., 21.7 MAP)

All feasible intersection improvements would be implemented before a five MAP increase at TBIT is reached.

Recommended Mitigation Program

In summary, based on the information provided above, the following mitigation measures are proposed to address off-airport surface transportation impacts associated with the Bradley West Project:

- **MM-ST (BWP)-4. Modify the Intersection of Airport Boulevard and Manchester Avenue (Intersection #9).**

  The eastbound approach to the Airport Boulevard and Manchester Avenue intersection shall be restriped to provide one left-turn lane, two through lanes, and a through/right lane. Three parking spaces on the south side of Manchester Avenue west of Belford Avenue and two parking spaces on the south side of Manchester Avenue east of Belford Avenue shall be restricted during the PM peak period. Alternatively, the westbound approach to the Airport Boulevard and Manchester Avenue intersection shall be restriped and the traffic signal modified to provide two left-turn lanes, two through lanes, and a right-turn lane. This mitigation measure will be implemented to the standards and satisfaction of the City of Los Angeles. Implementation of this measure shall occur if/when international passenger activity levels at TBIT increase to 19.7 million annual passengers.