# Appendix C

## Transportation/Traffic Assumptions

# MEMORANDUM

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**DATE:** April 24, 2014

**TO:** Amanda Olekszulin, Melinda Rivasplata

**FROM:** David Tokarski

**SUBJECT:** Placer Vineyards Parks/ Bike Trails Amendment P 14035-000

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DKS Associates has been asked to assist with environmental review of a proposed amendment to the Placer Vineyards Specific Plan. The requested amendment would result in a reduction in park acreage (consistent with the Placer County General Plan park-to-population ratio of 5 acres per 1,000 people), a reduction in the number of mini-parks and a consolidation of park acreage into larger neighborhood and community parks. The proposed amendment would also eliminate a planned pedestrian/bicycle grade separated (over or under) crossing of Baseline Road. As described, the amendment would result in a decrease in parkland from approximately 211 acres to 150 acres, a reduction in Class I bikeways from approximately 43.6 miles to approximately 32.5 miles, and modification of the proposed community center. The applicant has stated that the number of dwelling units (all types and densities) and non-residential square footage (commercial, office, and industrial) will not change with this amendment.

Transportation and circulation impacts have been identified and analyzed in in the EIR process and have been documented in the following documents:

- Revised Draft Environmental Impact Report (DEIR): March 2006
- Partially Recirculated Revised DEIR: July 2006
- Final Environmental Impact Report (FEIR): October 2006
- Second Partially Recirculated Revised DEIR: March 2007
- Supplement to the FEIR: June 2007
- Addendum to the EIR: August 2012

In these documents, transportation and circulation impacts were identified and mitigation measures identified, where necessary. Significant roadway impacts were identified within and outside of the proposed project. Mitigation measures were identified where feasible and significant and unavoidable impacts were identified where appropriate mitigation measures were not feasible.

The purpose of this memo is not to re-document or re-analyze the impact analysis completed in previous documents. It is to attempt to determine if the proposed amendment might cause additional significant impacts based on the standards of significance identified in the DEIR.

This memo is divided into two main sections. The first section addresses the change in land use (reduction in park sites) and potential change in trip generation associated with that land use change. The second section addresses the proposed changes in bicycle facilities.

### Proposed Reduction in Parks Acreage and Number of Park Sites

The proposed project amendment would consolidate parkland from many small "pocket" and "mini" parks into fewer, larger neighborhood and community parks, resulting in an overall reduction from 211 acres to 150 acres. The South Placer County Travel Demand Model (used for traffic forecasts in the PVSP EIR process) utilizes a daily trip rate of 2.2 daily trips (includes "in" and "out" trips) for each acre of park land. In terms of raw trip generation, a reduction by 61 acres of park land would result in a reduction of approximately 134 daily trip ends, or approximately 111 daily trip ends, accounting for internalized trips. This represents a decrease of less than one tenth of one percent of total daily PVSP trip generation (approximately 200,000 daily trip ends, accounting for internalized trips). Table 1 compares trip generation for the approved project with the proposed amended project.

**Table 1: Approved and Proposed Trip Generation**

| | | | DAILY TRIP ENDS | | |
|---|---|---|---|---|---|
| **Category** | **Buildout Units** | | **Per Unit** | **Approved** | **Revised** |
| Single Family | 9,040 | DU | 9.0 | 81,360 | 81,360 |
| Multi-Family | 3,750 | DU | 6.5 | 24,375 | 24,375 |
| Age-Restricted | 931 | DU | 3.3 | 3,072 | 3,072 |
| SPA Residential | 411 | DU | 9.0 | 3,699 | 3,699 |
| K-12 Schools | 8,005 | Students | 1.0 | 8,005 | 8,005 |
| Retail | 2,172.3 | KSF | 35.0 | 76,031 | 76,031 |
| Office | 1,380.5 | KSF | 17.7 | 24,435 | 24,435 |
| Church | 766.8 | KSF | 9.3 | 7,131 | 7,131 |
| Public/Quasi Public | 307.1 | KSF | 25.0 | 7,678 | 7,678 |
| Park | 211.0 | Acres | 2.2 | 464 | |
| *REVISED PARK* | *150.0* | *Acres* | | | *330* |
| **TOTAL TRIP GENERATION (TRIP ENDS)** | | | | **236,250** | **236,116** |
| Internalization | 21% | | | Change: | -134 |
| | | | | **195,248** | **195,137** |
| | | | | Change: | -111 |
| | | | | Change %: | -0.06% |

Notes: DU = Dwelling Units, KSF = 1,000 Square Feet
210.0 park acres analyzed in EIR was 1 acre short

Impacts on roadways cannot, however, be determined strictly by raw trip generation calculations. Because the amount of park land within the PVSP would decrease and would be consolidated into fewer sites, it is likely that people would have to travel further to get to parks. This could result in changes in mode choice, whereby park users change their mode of transportation used for traveling to and from a park. Some park users could choose to drive to other parks within the PVSP instead of walking or biking, while others could

choose to drive to parks outside of the PVSP. This could result in auto trip generation increases to offset the decreases noted in the previous paragraph. Quantifying the actual change in vehicular traffic due to these changes in mode and destination choice is beyond the scope of this memorandum, but it is unlikely that project trip generation would increase substantially due to these shifts. For the purposes of this memorandum, it is assumed that the increase on study roadways due to the potential shift in mode and destination would likely be less than one percent (an assumption based on the relatively limited mode shift anticipated with a reduction in park acreage), and would be localized to roadways within the PVSP and on roadways directly adjacent to the project. Therefore, it is assumed that no additional impacts would be identified on Caltrans highways or Sacramento County facilities.

Cumulative impacts and "near" impacts have been reviewed in the various certified FEIR documents to determine if a possible minor increase in traffic volume due to elimination of some parks and consolidation to other parks might exacerbate any identified impacts or result in new impacts at locations where "near" impacts occurred. Because the potential increase in traffic is so small (likely less than one percent) it can be assumed that no impacts already identified would be exacerbated to worse levels. "Near" impacts have been identified where an increase in volume to capacity (V/C) ratio of 0.01 could result in a new impact under Cumulative conditions.

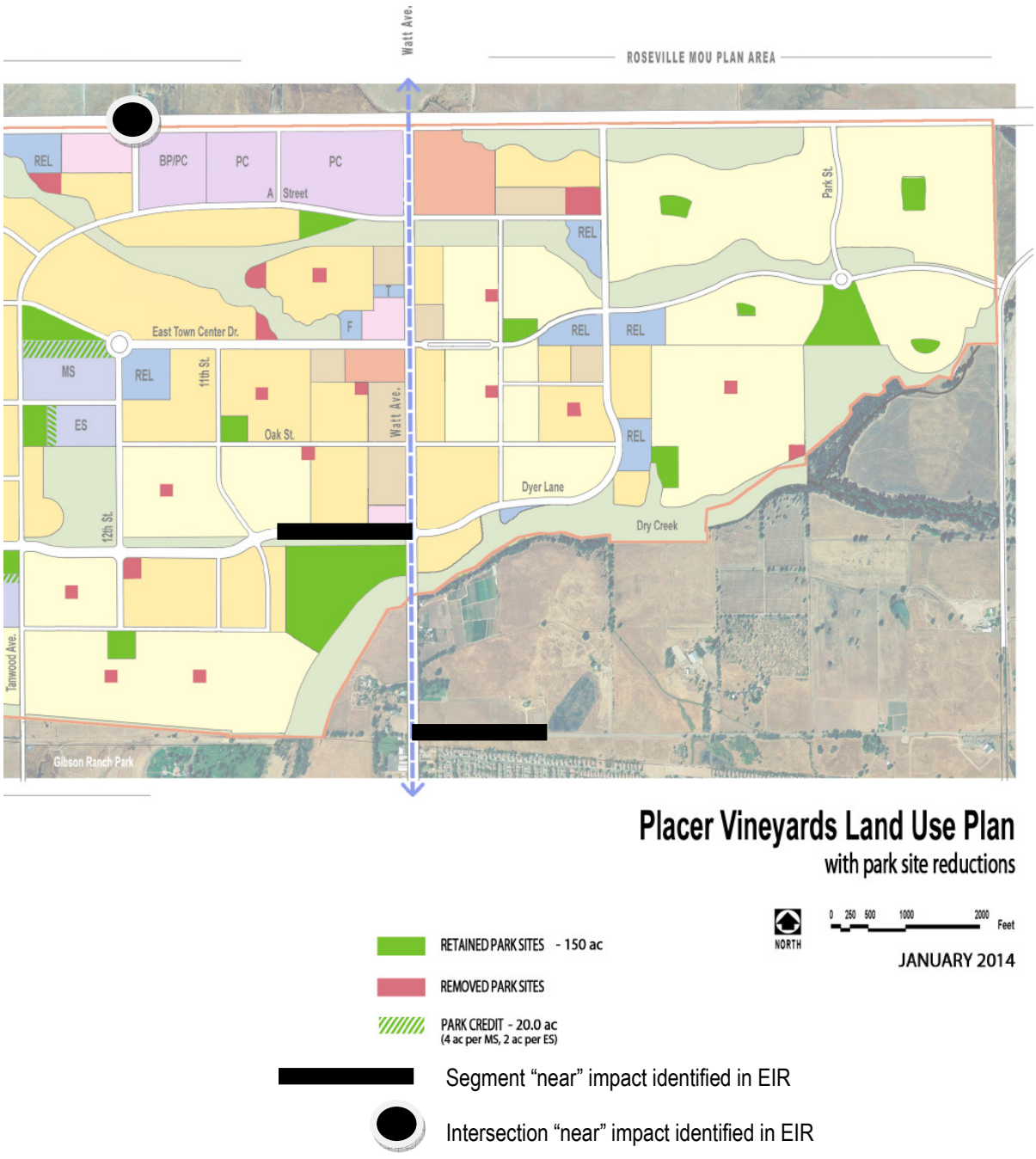
On Placer County roadways, two locations represent "near" impacts. The segment of PFE Road east of Watt Avenue remains at LOS C with the addition of the proposed project, but the V/C ratio increases from 0.71 to 0.79). Because this location is outside of the PVSP area, degradation to LOS D (greater than V/C 0.80) would result in a new impact. If volume on this roadway increased by one percent, a new impact could be identified. The specific plan park located closest to this roadway segment is a large park that would be retained with the redesigned project. Therefore it is unlikely that any shifted park trips would use this roadway as the local area would still be served by a large park and any shifts in park travel would likely remain within the specific plan boundaries in this area.

Dyer Lane west of Watt Avenue is a new 4 lane segment that would be constructed with the project and is projected to operate at LOS D (acceptable within the PVSP based on the LOS significance threshold) with a V/C of 0.90 under Cumulative conditions. If this roadway segment were to increase by one percent, it could operate at LOS E, representing an impact based on the standards of significance. This roadway is located directly adjacent to one of the larger park sites in Placer Vineyards. This park site remains with the revised specific plan, while other smaller parks nearby have been removed. Therefore it is likely that some people that would have walked or biked to the other small park sites nearby might shift mode and drive to this park, resulting in volume increases on Dyer Road adjacent to the park. This could lead to an additional project impact. It should be noted, however, that the intersection directly adjacent to this location (Dyer Lane and Watt Avenue) has already been identified as a significant and unavoidable impact (LOS F) in the FEIR and this roadway segment represents one of the approaches too that intersection. Therefore, a potential additional impact on this roadway segment is already represented as an impact at the adjacent intersection.

Baseline Road at 12$^{th}$ Street is a new intersection that would be constructed with the project and is projected to operate at LOS D (acceptable within the PVSP) with a V/C of 0.89 under Cumulative conditions. If

volumes at this intersection were to increase by more than one percent, it could likely operate at LOS E, representing an impact based on the standards of significance. There is one park site within ½ mile of this intersection that is to be removed with the project revision. While it is possible that people who would have used this park might instead drive to other park sites north of Baseline Road in Roseville's Sierra Vista specific plan, it is more likely that potential park users would instead utilize other remaining park sites within Placer Vineyards. The closest two park sites would be fairly large neighborhood parks within the area bounded by "A" Street and East Town Center Drive. Therefore it is unlikely that this intersection would be significantly impacted by the reduction in park sites. Figure 1 shows the retained and removed park sites, as well as the two segments and one intersection with "near" impacts identified in the EIR.

**Figure 1: Retained and Removed Park Sites and "Near" Impact Locations**



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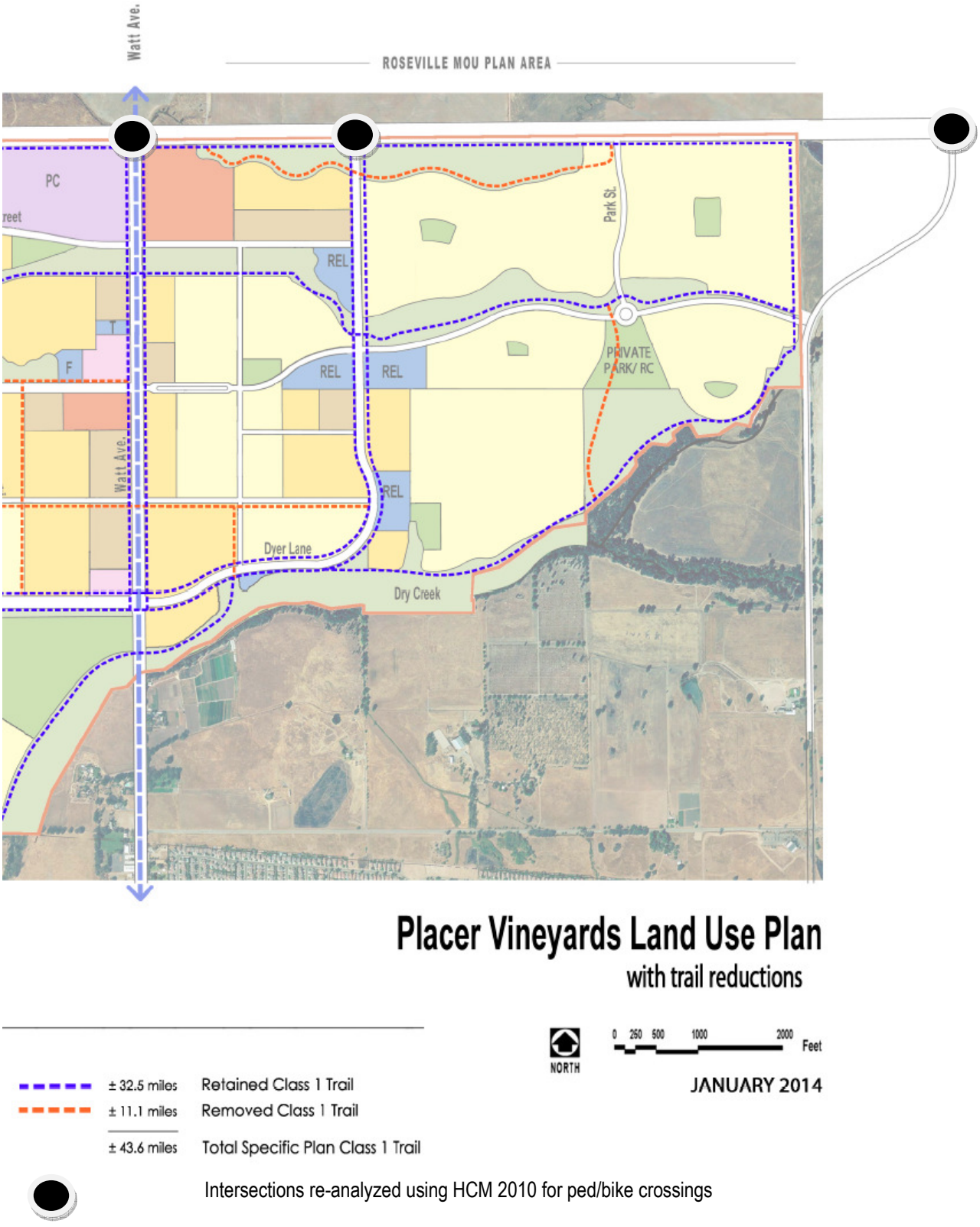
**Proposed Reduction in Off Street Bike Trails**

The proposed project amendment would result in fewer off street Class I bike trails and would eliminate a proposed grade separated pedestrian/ bicycle crossing over or under Baseline Road somewhere adjacent to Roseville's approved Sierra Vista project. PVSP Class I trail mileage would decrease from approximately 43.6 miles to approximately 32.5 miles. This represents a reduction of approximately 25%. It is assumed that most of these eliminated Class I bike trails would be replaced by Class II on-street bike paths within the Specific Plan. Because the PVSP has a comprehensive roadway system consisting of arterials, collectors, and local streets, it is likely that the street system could accommodate the additional bike trips that would shift from eliminated trails onto roadways. Retained Class I bike trails would still provide east/west and north/south access to the extent of the Specific Plan area boundaries. A continuous Class I path system would provide unbroken connections between the far west and far east portions of the plan, as well as from the far north to far south portions of the site. The applicant should work closely with County staff to determine if the revised proposed bicycle system meets County standards for access and safety.

The approved Specific Plan included reference to a proposed grade separated bicycle/ pedestrian crossing across Baseline Road between Placer Vineyards and Sierra Vista. The exact location of this crossing was not identified nor was it specifically determined whether the crossing would be over or under Baseline Road. Because the exact nature of the proposed crossing is not clear, it was decided to look at the major intersections connecting Placer Vineyards to Sierra Vista to the north. Consistent with Placer County and City of Roseville practice, intersection analysis for the EIR was completed using the Circular 212, or critical volume, methodology and TRAFFIX software. This level of service (LOS) methodology relies solely on turning movement volumes, number of lanes, and basic signal phasing to determine the planning level LOS at signalized intersections. It does not take into account pedestrian and bicycle volumes, signal cycle time, or detailed signal timing. In order to best analyze the impact of additional pedestrians and bicycles on intersections connecting Placer Vineyards and Sierra Vista, three intersections along Baseline Road (Watt Ave, East Dyer Lane, and Fiddyment Road) were re-analyzed using SYNCHRO software and the 2010 Highway Capacity Manual (HCM 2010) methodology. These three intersections are shown in Figure 2. Unlike the Circular 212 methodology, HCM determines LOS by intersection delay and incorporates much more detail, including signal timing and actuated pedestrian crossings. For each intersection, three HCM 2010 alternatives were analyzed:

- No Pedestrian Crossings: pedestrian phases deactivated, assuming no pedestrians or bicycles cross the intersections
- Moderate Pedestrian Crossings: 5 pedestrian calls assumed per hour (per SYNCHRO guidelines)
- Heavy Pedestrian Crossings: up to 100 pedestrian calls per hour (per SYNCHRO guidelines. This assumes each pedestrian button is called every cycle.

**Figure 2: Retained and Removed Bicycle Facilities and Re-Analyzed Intersections**



For the SYNCHRO analysis, pedestrian crossing times first needed to be established. Pedestrians are assumed to need to cross 9 lanes (3 outbound, 2 LT, 3 TH, 1 RT), times 12 feet per lane, divided by 3.5 feet per second, mandating 31 seconds of flashing "don't walk" time for each intersection leg. 5 seconds was assumed for the walk symbol, per SYNCHRO default. Actuated, uncoordinated operation was assumed, with minimum recalls to Baseline Road through phases. All roadways are assumed to have a posted speed of 45 mph, peak hour factor (PHF) of 0.92, and 2% heavy vehicles. Yellow times are 3.5 sec for left turn phases and 4.3 sec for though phases per assumed speed limits and MUTCD. All red times are 0.5 sec for left turn phases and 1.0 sec for through phases. Vehicle extensions are 2.0 sec for each phase.

Using these detailed assumptions (and the same Cumulative plus project PM peak hour volumes) for each intersection, there were no significant changes in LOS for any of the three intersections based on added pedestrian/ bicycle crossings that might occur with the elimination of the grade separated crossing. The LOS results are summarized in Table 2.

**Table 2: Baseline Road Intersection HCM 2010 Analysis**

| | Circular 212 (TRAFFIX) | | HCM 2010 (SYNCHRO 8) | | | | | |
|---|---|---|---|---|---|---|---|---|
| | | | No Ped Crossings | | Moderate Ped Crossings | | Heavy Ped Crossings | |
| Baseline Road at: | LOS | V/C Ratio | LOS | Delay (sec/veh) | LOS | Delay (sec/veh) | LOS | Delay (sec/veh) |
| Watt Ave/ Santucci Blvd | F | 1.11 | F | 83.8 | F | 83.8 | F | 83.8 |
| E Dyer Street/ Market St | F | 1.04 | E | 61.4 | E | 66.8 | E | 66.8 |
| Fiddyment Rd/ Walerga Rd | F | 1.16 | F | 86.4 | F | 86.8 | F | 86.8 |

The primary reason for the added pedestrian calls not impacting overall intersection delay is that the volumes at these intersections are high enough to require lengthy signal phases, and these lengthy green times for non-turning vehicles are sufficient to accommodate the time required for pedestrians and cyclists to safely cross the width of the street in all directions.

## Conclusion

One location was identified where trip changes from the proposed amendment could result in where such an increase in V/C would have the potential to result in an additional project impact associated with the proposed amendment changed traffic conditions. Dyer Lane west of Watt Avenue is a new 4-lane segment that would be constructed with the project and is projected to operate at LOS D (acceptable within the PVSP) with a V/C of 0.90 under cumulative conditions. A one percent increase for this roadway segment would likely cause the roadway to operate at LOS E, which would represent an impact based on the standards of significance. As described above, the trip changes expected with the proposed amendment would be a reduction of less than 0.1%, or would be virtually the same as the approved project. This roadway is located directly adjacent to one of the larger park sites, which would remain under the proposed amendment, while other smaller parks nearby would be removed. It is likely with the proposed amendment changes that park users, who would have reached the smaller parks on foot or by bicycle may potentially drive to this park resulting localized in traffic volume increases on Dyer Road adjacent to the park. However, these changes are not expected to result in significant impacts considering the

overall slight decrease in trip generation that would occur with the park acreage reduction. Further, the intersection of Dyer Lane and Watt Avenue was identified as operating unacceptably under cumulative conditions in the in the PRRDEIR (Revised Table 4.7-27, p. 4.7-16; Impact 4.7-13, pp. 4.7-25 to -28) for which no mitigation was available to reduce this impact to a less-than-significant level. This impact was concluded to be significant and unavoidable. While increased trips could occur near this intersection and could contribute to the unacceptable operating conditions of this intersection, these trips would be minor and would not cause a substantially more severe impact at this intersection compared to what was evaluated in the 2007 FEIR. Therefore, the conclusions of the 2007 EIR remain valid and approval of the proposed amendment would not result in any new significant impacts.