

## 4.17 Transportation/Traffic

This section provides an evaluation of existing and cumulative traffic associated with the proposed RPA for the Permanente Quarry. The existing roadway network and access location to the site were examined. To assess the current safety conditions in and around the site, collision data was obtained for a recent three-year period. Travel demand estimates, including trip generation and distribution for existing and cumulative operations in the Project Area were analyzed. Lastly, potential transportation impacts associated with the proposed reclamation activities were evaluated and documented.

### 4.17.1 Setting

Section 2.2, *Project Location*, provides general information about the Project's regional and local setting. This Section 4.17.1 provides setting information specific to transportation and traffic. The site is located in an unincorporated area of the County and is not generally bounded by an existing roadway network. Adjacent uses to the site are comprised of several buffer areas and open space uses, including County parks and Mid-Peninsula Regional Open Space District preserves to the north, west, southwest, and southeast. The nearest roadway in proximity to the Project Area is Permanente Road, located in the eastern portion of the site, which serves as the main ingress and egress to the site. Permanente Road becomes Stevens Creek Boulevard, a major east-west collector roadway within Cupertino City Limits that provides direct connection to several local streets and regional highways. Figure 2-1 in Chapter 2, *Project Description*, shows the regional and local roadways near the site that are described below.

The study area relevant to transportation/traffic is the Project Area, which is located in an unincorporated area of the County. A portion of the Project Area also falls within the unincorporated Urban Service Area boundary of the City of Cupertino. Therefore, the city's transportation policies are also considered.

#### 4.17.1.1 Regional and Local Setting

##### ***Regional Roadways***

***State Route 85 (SR 85)*** is a six-lane freeway that generally runs in a north-south alignment, east of the site. SR 85 provides access to Interstate 280 (I-280) and Stevens Creek Boulevard, as well as to multiple communities, including the cities of Cupertino, Mountain View, and Sunnyvale.

***Interstate 280 (I-280)*** is an eight-lane freeway that generally runs in a southeast-northwest alignment north of the site. I-280 serves Cupertino and northwestern portions of the County; it connects with I-880/SR 17, U.S.101 to the east, and provides access to several regional and local roadways including SR 85 and SR 87. SR 85 also serves Cupertino, northwest and north central County and is one of the primary sources of connection between multiple communities throughout the County.

### **Local Roadways**

**Permanente Road** serves as the ingress and egress to and from the site. It is a two-lane roadway, with no median barrier and no pedestrian or bicycle facilities. Permanente Road discontinues at the entrance gates of the Permanente Quarry. Permanente Road becomes Stevens Creek Boulevard east of Foothill Boulevard.

**Stevens Creek Boulevard** is located directly east of the site and serves as a main access point for vehicles traveling between the site and SR 85. The roadway is a two-lane arterial with left-turn pockets (where appropriate) and raised sidewalks along both sides of the roadway. The roadway also has a four-foot-wide Class II bicycle lane along both sides of the roadway. The arterial becomes Permanente Road west of Foothill Boulevard. Santa Clara Valley Transportation Authority (VTA) bus route #51 operates along the roadway (VTA, 2010). According to the City of Cupertino Municipal Code, the roadway is a designated truck route (City of Cupertino, 2010).

**Foothill Boulevard** is located directly east of the site and serves as a connecting road for vehicles traveling between the site and I-280. The roadway is a four-lane, divided arterial with a raised median, raised sidewalks along both sides of the roadway, and a four-foot-wide Class II bicycle lane along both sides of the roadway. VTA bus route #51 operates along the roadway, and under the County Code, the roadway is a designated truck route.

The intersection of Stevens Creek Boulevard and Foothill Boulevard is signalized, with 10-foot-wide, painted crosswalks along the northbound, southbound, and westbound approaches. Pedestrian signals are present to indicate when walking across the roadway is permitted for pedestrians.

### **Quarry Operations**

The Quarry operates 24 hours a day, with two 12-hour work shifts. Vehicles associated with onsite operations access the site via Permanente Road. These vehicles operate along internal paved and unpaved roads within the site on a daily basis.

### **Existing Traffic Conditions**

Field observations determined that Permanente Road and portions of Stevens Creek Boulevard (west of Foothill Boulevard) experiences moderate-to-low traffic volumes, with few vehicles traveling westbound from the Stevens Creek Boulevard / Foothill Boulevard intersection. The majority of traffic near the site is distributed along Foothill Boulevard, and traveling eastbound along Stevens Creek Boulevard. These vehicular travel patterns are primarily due to the existing retail, restaurant, and institutional uses (e.g., De Anza College) located east of the site along Stevens Creek Boulevard. No substantial queuing of vehicles was observed at the intersection of Stevens Creek Boulevard and Foothill Boulevard.

The theoretical daily carrying capacity (i.e., the highest traffic volume that can travel on a roadway in a day) ranges from about 10,000 to 15,000 vehicles for a two-lane road. The theoretical hourly carrying capacity is generally 10 percent of the daily capacity. Based on field observations, volumes along Permanente Road are lower than the road's theoretical capacity.

### ***Parking***

Onsite parking is available for employees and visitors of the site. A gated entrance is located at the terminus of Permanente Road, and the entrance is monitored by an attendant. Employees and visitors must register with the attendant at the entrance gate in order to access the onsite, unpaved parking area. On-street parking is prohibited along Permanente Road.

### ***Transit Service***

Santa Clara Valley Transportation Authority (VTA) provides regional and local transit service throughout several communities in the County. Within proximity of the site, VTA Bus Route #51 operates along Stevens Creek Boulevard and Foothill Boulevard. There is no direct transit service to the site, and no bus operations occur along Permanente Road or along Stevens Creek Boulevard west of Foothill Boulevard.

### ***Bicycle/Pedestrian Circulation***

Bicycle lanes operate along Foothill Boulevard and Stevens Creek Boulevard. These are Class II bicycle facilities, in which a four-foot-wide, striped bicycle lane operates along a roadway and is exclusively for bicycle use, and there is no barrier between the bicycle lane and a vehicle travel lane. The bicycle lane along Stevens Creek Boulevard discontinues west of Foothill Boulevard, and no bicycle facilities are located along Permanente Road.

The majority of local roadways near the site include raised, four-foot-wide paved sidewalks for pedestrians. Striped crosswalks are present at intersections along with pedestrian “walk” signals. Sidewalks along the north side and south side of Stevens Creek Boulevard discontinue when the roadway becomes Permanente Road. There are no sidewalks at the entrance of the site.

### ***Emergency Access***

Permanente Road is the only access road for emergency vehicles into the Project Area. There are no auxiliary roadways to and from the site that could be accessible for emergency vehicles.

### ***Traffic Safety***

To assess the current safety conditions near the site, collision data was obtained from the Statewide Integrated Traffic Records System (SWITRS) for the three-year period of 2007-2009, for Stevens Creek Boulevard (between Foothill Boulevard and SR 85), and Foothill Boulevard (between Stevens Creek Boulevard and I-280) (CHP, 2010).

As shown in **Table 4.17-1**, the roadway segment of Stevens Creek Boulevard averaged 26 accidents per year with no accidents involving trucks. The roadway segment of Foothill Boulevard averaged nearly 15 accidents per year with an average of about one accident per year involving a truck. The predominant cause and type of accident over the three-year period was Failure to Heed Stop/Signal Sign and Broadside, respectively.

**TABLE 4.17-1  
 COLLISION HISTORY IN PROJECT AREA<sup>a</sup>**

Roadway Segment	Distance (miles)	2007	2008	2009	2007-2009 Average
Stevens Creek Boulevard (Foothill Blvd to State Route 85)	1.3	25 (0)	29 (0)	25 (0)	26.3 (0)
Foothill Boulevard (Stevens Creek Blvd to I-280)	0.8	12 (0)	16 (2)	16 (2)	14.6 (1.3)

<sup>a</sup> The total number of accidents, for each year, are shown, with accidents involving trucks shown in parenthesis.  
 SOURCES: ESA, using data from CHP, 2010.

### 4.17.1.2 Regulatory Setting

The development and regulation of the transportation network in the vicinity of the Project Area primarily involves state, county, and local jurisdictions. Applicable state and local laws and regulations related to traffic and transportation issues are discussed below.

#### **State of California**

##### **California Department of Transportation**

Caltrans manages interregional transportation, including management and construction of the California highway system. In addition, Caltrans is responsible for permitting and regulation of the use of state roadways. Within proximity of the Project Area, there are two facilities that fall under Caltrans' jurisdiction: I-280 and SR 85.

#### **County of Santa Clara**

##### **General Plan**

The County General Plan Transportation Chapter provides information about the transportation needs of the County (County of Santa Clara, 1994a, 1994b). The Plan also includes Level of Service (LOS) standards for the County.<sup>1</sup> Currently, the County deems LOS D or better to be the acceptable service levels for intersections and roadway segments, and LOS E for designated Congestion Management Program (CMP) roadways. The following policies that pertain to the Project are from the General Plan Transportation Chapter:

**Policy C-TR 1:** the County should develop and maintain an adequate, balanced, and integrated transportation system that is affordable and convenient to use and that is capable of meeting projected future demand.

**Policy R-TR 2:** Transportation plans for facilities in the rural unincorporated areas should be periodically reviewed and revised.

<sup>1</sup> Level of service (LOS) is a qualitative description of a roadway's or intersection's performance based on the average delay conditions experienced by motorists.

**Policy R-TR 9:** Rural roads should be designed and built to standards that will assure driving safety and provide access for emergency vehicles.

**Policy R-TR 11:** New development which would significantly impact private or public roads should be allowed only when safety hazards and roadway deterioration will be mitigated to a less than significant level.

Implementation of the Project would be consistent with the Santa Clara County General Plan.

## 4.17.2 Baseline

The overall baseline date for this EIR is June 2007. Although traffic count data are not available from that timeframe, for reasons described further under Approach to Analysis below, given the low trip generation associated with the proposed Project, traffic volumes and traffic flow conditions observed on affected roadways by professional transportation analysts provide an adequate baseline for determining the significance of potential transportation/traffic impacts.

## 4.17.3 Significance Criteria

Consistent with County of Santa Clara Environmental Checklist and Appendix G of the CEQA Guidelines, the Project would have a significant impact if it would:

- a) Conflict with an applicable plan, ordinance or policy establishing measures of effectiveness for the performance of the circulation system, taking into account all modes of transportation including mass transit and non-motorized travel and relevant components of the circulation system, including but not limited to intersections, streets, highways and freeways, pedestrian and bicycle paths, and mass transit;
- b) Conflict with an applicable congestion management program, including but not limited to level of service standards and travel demand measures, or other standards established by the county congestion management agency for designated roads or highways;
- c) Result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks;
- d) Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment);
- e) Result in inadequate emergency access;
- f) Conflict with adopted policies, plans, or programs regarding public transit, bicycle, or pedestrian facilities, or otherwise decrease the performance or safety of such facilities; or
- g) Not provide safe access, obstruct access to nearby uses or fail to provide for future street right-of-way.

In addition to the above-listed criteria, the following criterion is derived from common engineering practice to apply to the Project-specific analysis presented herein. The Project would have a significant impact if it would:

- a) Cause substantial damage or wear of public roadways by increased movement of heavy vehicles.

### **Approach to Analysis**

A transportation analysis was conducted to determine the extent to which the Project may increase the level of traffic traveling to and from the site over time. Given the negligible increase in traffic associated with the Project on area roads external to the site (see Section 2.7.11.7, *Off-site Traffic and Onsite Circulation*), a detailed evaluation of level of service conditions on roadway segments and intersections with and without the Project was not necessary. Rather, professional transportation engineering judgment was applied to reach reasonable conclusions as to the context, intensity, and duration of potential impacts. Estimates of daily vehicle trips based on the number of additional vehicle trips associated with the Project, and the effect of those daily trips on the existing and cumulative (Future Year 2030) transportation network were evaluated (see Impact 4.17-1 below). Cumulative impacts of the Project and other projects also are discussed.

### **4.17.4 Discussion of Criteria with No Transportation/Traffic Impacts**

Due to the nature of the Project, there would be no impact related to significance criteria b), c), e) or f). Therefore, for the reasons described below, no impact discussion is provided for these topics in Section 4.17.5.

**b) The Project would not conflict with an applicable congestion management program, including but not limited to level of service standards and travel demand measures, or other standards established by the County congestion management agency for designated roads or highways.**

There are three roadways in proximity to the project that are included in the CMP roadway network, I-280, SR 85, and Stevens Creek Boulevard, all of which Project traffic likely would utilize to access the Project Area. The level of service standards established by the Santa Clara Valley Transportation Authority (the designated County congestion management agency) and documented congestion management plans are intended to regulate long-term traffic impacts due to on-going traffic-generating land uses and do not apply to temporary projects whose increases in traffic volumes end when temporary activities end. Furthermore, upon completion of reclamation activities, the Project's activities would not result in a substantial increase in traffic volumes on area roads and would not affect service levels established by the congestion management agency. Therefore, the Project would result in no impact to criterion b).

**c) The Project would not result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks.**

The Project site is about six miles from the nearest airport, and does not (and would not under Project conditions) place any object within the flight path for airplanes in the area. The Project would not result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks. Consequently, the Project would cause no impact related to criterion c).

**e) The Project would not result in inadequate emergency access.**

In the event of an emergency, vehicles can access the Project Area only via Permanente Road, as there are no other auxiliary roadways that could be used. The absence of a second emergency access location could pose a safety hazard during the implementation of the Project. However, this is the existing condition, and the Project would neither change this condition, nor contribute to any adverse consequences of the lack of secondary (emergency) access. Therefore, the Project would result in no impact related to criterion e).

**f) The Project would not conflict with adopted policies, plans, or programs regarding public transit, bicycle, or pedestrian facilities, or otherwise decrease the performance or safety of such facilities.**

The Project would not directly or indirectly eliminate alternative transportation corridors or facilities (e.g., bike paths, lanes, bus turnouts, etc.). In addition, the Project would not include changes in policies or programs that support alternative transportation. Therefore, the Project would not conflict with adopted policies, plans, or programs regarding public transit, bicycle, or pedestrian facilities, or otherwise decrease the performance or safety of such facilities. No impact would result related to criterion f).

## 4.17.5 Impacts and Mitigation Measures

**a) Would the Project conflict with an applicable plan, ordinance or policy establishing measures of effectiveness for the performance of the circulation system, taking into account all modes of transportation including mass transit and non-motorized travel and relevant components of the circulation system, including but not limited to intersections, streets, highways and freeways, pedestrian and bicycle paths, and mass transit?**

**Impact 4.17-1: The Project would cause increases in traffic volumes on area roadways, but would not conflict with an applicable plan, ordinance or policy establishing measures of effectiveness for the performance of the circulation system. (*Less than Significant Impact*)**

### Travel Demand Estimate

**Travel Patterns.** Most traffic generated by the Project would use internal, onsite roads between and among the various areas to be reclaimed. Travel patterns (within and external to the site) would not be affected by the Project, as off-site Project-related vehicles would use the current site access road (Permanente Road) to enter and exit the site property, and the same roads leading to the access road (Stevens Creek Boulevard, Foothill Boulevard, I-280, and the Foothill Expressway) in substantially the same numbers as they do now; the same onsite vehicles and heavy equipment that currently conduct surface mining operations would be detailed to reclamation-related activities, and so continue to move along paved and unpaved roadways within the confines of the Project Area and the site and would not affect external roadways. Reclamation activities and vehicle trips associated with these activities would occur 24 hours a day, six days a week, and 50 weeks per year (i.e., approximately 300 workdays a year) (ALG, 2011).

**Trip Generation.** The intensity and nature of the Project activities would vary, and the number of vehicle trips generated by that activity would similarly vary. As noted in Chapter 2, *Project Description*, an average of 35 people has been employed at the Quarry over the last 10 years. As the proposed reclamation proceeds, an average of up to 14 additional employees (49 employees) would be required during Phase 1 activities, and up to 3 additional employees would be required during Phase 2. As a result, Phase 1 activities would generate approximately 14 daily employee commute trips (28 one-way trips) and Phase 2 activities would generate approximately three daily employee commute trips (six one-way trips). No additional employees would be required during Phase 3 activities and would generate no new trips (ALG, 2011, Table D-14).

The Project would generate truck trips during each phase of reclamation and as such, the analysis of potential impacts focused on each phase of the Project. Phase 1 would involve the reclamation of the EMSA site, and this phase would occur during a 9-year period. Activities during Phase 1 would generate a total of up to 348 external haul truck trips per year for fuel transport. Based on the schedule of activities during Phase 1, the increase in trucks for fuel transport would result in about one external truck trip per day (two one-way trips) (ALG, 2011; Table D-14). Phase 2 would involve excavation in the WMSA site and backfilling of the Quarry pit and would occur during a 5-year period. During Phase 2 activities would generate a total of up to 1,141 external haul truck trips per year for fuel transport and the importing of mulched green waste materials. Over the course of Phase 2 and based scheduled activities, the increase in truck traffic would be about eight external truck trips per day (16 one-way trips), which equates to about one truck trip per hour (ALG, 2011; Table D-14). Phase 3 would include the removal of equipment and structures throughout the Project Area, and this phase would occur during a 5-year period. It is estimated that over the course of the 5 years, there would be substantially fewer numbers of external truck trips than during Phases 1 and 2. Additional trips would occur internally, within the borders of the Quarry property (ALG, 2011).

**Transportation Conditions with Project Activities.** As stated, the number of vehicle trips generated by implementation of the Project would vary in step with the intensity and nature of reclamation-related activities, with a total of up to about 30 daily one-way trips during Phase 1, up to approximately 22 daily one-way trips during Phase 2, and substantially fewer than Phase 1 and Phase 2 trips during Phase 3. As stated, these trips per each phase would be spread over the course of a day, resulting in an average of less than one new truck trip per hour on any one day. Although drivers could experience delays if they were traveling behind a truck, the increase in traffic due to the reclamation-related activities would be negligible relative to both existing and cumulative (2030) traffic volumes, and Project traffic would not significantly increase delay experienced by motorists on area roadways or at area intersections.<sup>2</sup> The impact therefore would be less than significant, and no mitigation is required.

---

<sup>2</sup> Day-to-day traffic volumes typically vary by as much as 10 percent (i.e., plus-or-minus five percent), and an increase of less than that is unlikely to be perceptible to the average motorist. Traffic volumes on area roadways likely would increase over time, and 2030 traffic volumes would be higher than existing volumes. However, the percent increase in traffic volumes due to the reclamation-related activities would be lower compared to the higher 2030 traffic volumes than to existing volumes, and the Project impact would be less than significant under both existing and cumulative conditions.



**d) Would the Project substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?**

**Impact 4.17-2: Traffic generated by Project activities could affect traffic safety of pedestrians and bicyclists. (*Less than Significant Impact*)**

As described under Impact 4.17-1, above, Project operations and associated vehicle trips would not cause any significant impacts to local traffic conditions. There is little pedestrian and bicycle activity on Permanente Road, and pedestrian and bicycle activity on Foothill Boulevard and Stevens Creek Boulevard are accommodated in Class II bicycle lanes and on raised sidewalks. The additional vehicle trips to and from the Project would not change the physical character of a roadway, or the mix of vehicles (autos and trucks) on a roadway. Based on the recent collision data involving trucks and heavy vehicles, Project activities would not increase the potential for traffic hazards to bicyclists or pedestrians. The impact would be less than significant.

---

**g) Would the Project fail to provide safe access, obstruct access to nearby uses, or fail to provide for future street right-of-way?**

**Impact 4.17-3: The Project would provide safe access, and would not obstruct access to nearby uses or fail to provide for future street right-of-way. (*Less than Significant Impact*)**

As described under Impact 4.17-1, above, traffic levels would remain low along Permanente Road, as the Project would generate a minimal amount of vehicle trips that would be spread over the course of a day. Additionally, the Project would not change the physical character of the roadway, and as such would not obstruct access to nearby uses along Permanente Road or other affected roads. Furthermore, according to the County *General Plan* (1994) and the VTA *Transportation Plan 2035* (2009), there are no plans to alter or modify the future right-of-way of Permanente Road or any other roadways that would be utilized by Project vehicles. Therefore, the Project would not introduce any obstructions or result in any implications that would fail to provide for future right-of-way of Permanente Road and other affected roadways.

---

**h) Would the Project cause substantial damage or wear of public roadways by increased movement of heavy vehicles?**

**Impact 4.17-4: Traffic generated by the Project would contribute to pavement wear-and-tear on area roadways. (*Less than Significant Impact*)**

The use of heavy vehicles to transport equipment and material to and from the Project Area could affect pavement conditions along haul routes by increasing the rate of road wear. The degree to which this impact would occur depends on the roadway design (pavement type and thickness) and the existing condition of the road. Freeways, such as I-280 and SR 85, are designed to handle a

mix of vehicle types, including heavy trucks. The Project's impacts would be negligible on those roads. In addition, ongoing Project operations, including placement and grading of overburden, would generate few, if any, external heavy truck trips. Site reclamation would involve mostly light- to medium-duty vehicles, which would have only minor impacts on pavement. Because the Project would involve no substantial heavy hauling activities to or from the Project site, the Project's impacts on area roadway pavement would be less than significant.

---

## 4.17.6 Alternatives

### 4.17.6.1 Alternative 1: Complete Backfill Alternative

The reclamation activities associated with Alternative 1 would be similar to the activities under the Project. Under this alternative, overburden materials stored in the EMSA would be backfilled into the Quarry pit upon the conclusion of mineral extraction activities, but that activity would generate traffic on-site only and would not affect nearby roadways. Traffic on roads external to the Project site would be the same for Alternative 1 as for the Project. Therefore, potential impacts to transportation conditions under this alternative would be the same as the Project.

### 4.17.6.2 Alternative 2: Central Materials Storage Area Alternative

The reclamation activities associated with Alternative 2 would be similar to the activities under the Project. Under this alternative, overburden materials in the Quarry pit would be moved to new, more-distant locations within the Quarry, but that activity would generate traffic on-site only and would not affect nearby roadways. Traffic on roads external to the Project site would be the same for Alternative 1 as for the Project. Therefore, potential impacts to transportation conditions under this alternative would be the same as the Project.

### 4.17.6.3 No Project Alternative

The No Project Alternative would extend the time period in which surface mining activities occur within the Project Area and delay final reclamation conditions by approximately 7 years, but would not substantially alter the level of traffic on roads external to the Project site generated by reclamation activities. Therefore, potential impacts to transportation conditions under this alternative would be the same as the Project.

## References – Transportation/Traffic

- Ashworth Leininger Group (ALG). 2011. *Air Quality Technical Analysis – Revised Reclamation Plan Amendment*. December 7.
- California Highway Patrol (CHP). 2010. *Statewide Integrated Traffic Records System (SWITRS) 2007-2009 Accident Data on California State Highways*, August.
- City of Cupertino. 2005. Section 4: Circulation. In *City of Cupertino General Plan 2000 – 2020*. <http://www.cupertino.org/index.aspx?page=709> (accessed November 5, 2010)
- City of Cupertino. Chapter 11.32: Truck Traffic Routes. In Cupertino, CA Municipal Code, Title 11: Vehicles and Traffic. [http://www.amlegal.com/nxt/gateway.dll/California/cupertino/title19zoning?f=templates\\$fn=default.htm\\$3.0\\$vid=amlegal:cupertino\\_ca\\$anc](http://www.amlegal.com/nxt/gateway.dll/California/cupertino/title19zoning?f=templates$fn=default.htm$3.0$vid=amlegal:cupertino_ca$anc) (accessed November 5, 2010).
- County of Santa Clara. 1994a. Part 2: Countywide Issues and Policies. In *Santa Clara County General Plan Charting a Course for Santa Clara County's Future: 1995-2010 Book A*, adopted December 1994.
- County of Santa Clara. 1994b. Part 3: Rural Unincorporated Area Issues & Policies In *Santa Clara County General Plan Charting a Course for Santa Clara County's Future: 1995-2010 Book B*, adopted December 1994.
- Santa Clara Valley Transportation Authority (VTA). 2009. *Transportation Plan 2035*, adopted January.
- Santa Clara Valley Transportation Authority (VTA). 2010. *Schedule by Route : Route 51*, effective January 11, 2010.