APPENDIX J

TRAFFIC STUDY

May 7, 2014

Ms. Leianne Humble
Denise Duffy and Associates, Inc.
947 Cass Street, Suite 5
Monterey, CA 93940

Re: Traffic Study for the Heritage Oaks Memorial Park in San Jose, California

Dear Ms. Humble:

Hexagon Transportation Consultants, Inc. has completed a traffic evaluation for the proposed Heritage Oaks Memorial Park on McKean Road, south of Bailey Avenue, in San Jose, California. The proposed project consists of a 102-acre cemetery on land that is currently vacant and has an existing designation as open hillside in the San Jose General Plan. Access to the site would be provided from McKean Road, as shown on Figure 1.

For purposes of this traffic study, it is assumed that the cemetery would reach build-out after approximately 200 years. At build-out, the cemetery would have an estimated capacity of 150,000 ground burial plots and 150,000 spaces for cremation burials. The entry gates on McKean Road would be open to the public from dawn to dusk, seven days per week. With the exception of special scheduled services, the gates would be closed daily at dusk. The administration office hours would be from 9:00 a.m. to 5:00 p.m., and most trips would occur in that time period.

For purposes of estimating traffic volumes associated with the cemetery's operations, there are five main sources of trips:

- **Committal Services**: The number of committal services to be conducted at burial sites would ramp up slowly. By 2030, it is estimated that there would be up to five committal services per day. According to the California Cemetery Association, the average vehicle count per funeral procession is about 14 vehicles, so five services would generate 70 vehicles (140 trips) per day. Committal services typically occur mid-day and would not generate AM or PM peak hour traffic.

- **Memorial Services**: The proposed cemetery would include space for memorial services, with a total seating capacity for up to 120 persons. By 2030, there may be as many as three services per day (360 people total), with one service overlapping the PM peak hour. Using a conservative assumption of three services per day and an assumption of three persons per vehicle, there would be 120 vehicles (240 trips) per day. It is assumed that memorial services last long enough that people may arrive or depart during the PM peak hour, but not both.

- **Employees**: It is estimated there could be as many as 15 employees. It is conservatively assumed that all 15 would arrive during the AM peak hour and all would leave during the PM peak hour.

- **General Visitation:** Visitors are assumed to visit the cemetery throughout the day to visit gravesites. The number of trips for this purpose is assumed to be 10% of the total trips from the above purposes (10% of the sum of the trips by people attending committal and memorial services and by employees). Of the visitors, 10% are assumed to enter and exit during the AM and PM peak hours.

- **Construction Workers:** Construction would continue through build-out. The administration and maintenance buildings would be expanded, and new burial areas, roads, paths, and parking areas would be added. It is assumed that 20 construction workers would arrive at the site in the AM peak hour and depart in the PM peak hour each day through build-out of the site.

Figure 1
Site Location

The total number of daily trips generated by the cemetery by 2030 is estimated to be a maximum of 492 trips, as shown in Table 1, on a day when five committal services and three memorial services are held, with each memorial service including the maximum of 120 attendees. There would be 39 trips during the AM peak hour and 79 trips during the PM peak hour on a day with that level of activity. Most days would have fewer services and lower attendance, so the added traffic would be less.

Table 1
Estimated Trip Generation for Heritage Oaks Memorial Park

	Daily		AM Peak		PM Peak	
Trip Purpose	**Vehicles**	**Trips**	**Vehicles**	**Trips**	**Vehicles**	**Trips**
Committal Services [1]	70	140	0	0	0	0
Memorial Services [2]	120	240	0	0	40	40
General Visitation [3]	21	42	2	4	2	4
Employees [4]	15	30	15	15	15	15
Construction Workers [5]	20	40	20	20	20	20
Total (Day with 3 Memorial Services)	**246**	**492**	**37**	**39**	**77**	**79**
Total (Day with no Memorial Services)	126	252	37	39	37	39

Notes:
(1) Committal Services: Assume 5 services per day. Average vehicles per service: 14 vehicles. Committal services will not typically occur during AM or PM peak.
(2) Memorial Services: 120 person capacity. Could be 3 services per day. Assuming 3 persons per vehicle, there would be 40 vehicles per service and 120 per day. On a 3-service day, one service would occur during PM peak.
(3) General Visitation: 10% of traffic (10% of committal services + memorial services + employees). 10% of these visitors would visit during AM and PM peak hours.
(4) Employees: Assume 15 employees. Conservatively assume all arrive in AM peak hour and leave in PM peak hour.
(5) Construction: Assume 20 construction workers per day, and that all arrive in AM peak hour and depart in PM peak hour.

The estimated number of daily trips on a day with the maximum level of activity is estimated to be 492, but that is not expected to be an average day. There would likely be days with no memorial services, days with one memorial service, days with two memorial services, and days with three memorial services. The number of attendees at each service would be expected to vary considerably. To provide a sense of the range of expected trip generation, Table 1 also shows the number of trips estimated to occur on a day with no memorial services. On a day when no memorial services are held, there would be an estimated 252 daily trips, 39 AM peak hour trips, and 39 PM peak hour trips.

Traffic counts were not conducted for this study, but volumes for McKean Road and Bailey Avenue were extrapolated from other sources. Daily traffic counts were conducted on McKean Road south of Country View Drive in November 2013 for another study prepared by Hexagon. Country View Drive is approximately 1.5 miles north of Bailey Avenue, but since there are very few driveways or intersections between Country View Drive and Bailey Avenue, the McKean Road volumes at that location would not vary greatly from the volumes at Bailey Avenue. The average daily traffic volume on McKean Road south of Country View Drive

is currently 3,130. A two-lane rural arterial such as McKean Road is estimated to have capacity for 15,800 vehicles per day.

Peak-hour traffic volumes for the intersection of Santa Teresa Boulevard and Bailey Avenue were obtained from the City of San Jose's TRAFFIX count database. Although the peak-hour intersection counts were conducted in 2007, there has been no significant new development in the area since then, so volumes are likely to be similar today. There is a large IBM facility on Bailey Road west of this intersection, and a substantial portion of the traffic proceeding west through the intersection during the AM peak hour and east during the PM peak hour is attributable to the IBM research lab. As shown in Table 2, the traffic volumes on Bailey Avenue were less than 500 vehicles in each direction at the Santa Teresa Boulevard intersection during both peak hours, and the volumes can be assumed to be lower during the mid-day period. Based on the data in Table 2, traffic volumes on Bailey Avenue are estimated to be less than 300 vehicles in each direction during both peak hours west of the IBM facility.

Table 2
Peak Hour Traffic Volumes at Intersection of Santa Teresa Blvd and Bailey Avenue

Westbound Volume on Bailey (west of Santa Teresa Blvd)		Eastbound Volume on Bailey (east of Santa Teresa Blvd)	
AM Peak Hour			
Traffic Coming From:		**Traffic Coming From:**	
Bailey WB Thru	322	Bailey EB Thru	86
Santa Teresa SB Right Turn	81	Santa Teresa SB Left Turn	69
Santa Teresa NB Left Turn	59	Santa Teresa NB Right Turn	80
	462		235
PM Peak Hour			
Bailey WB Thru	83	Bailey EB Thru	377
Santa Teresa SB Right Turn	36	Santa Teresa SB Left Turn	62
Santa Teresa NB Left Turn	22	Santa Teresa NB Right Turn	47
	141		486

Source: City of San Jose TRAFFIX database. Count conducted in 2007, but existing traffic volumes are likely to be roughly similar.

Bailey Avenue is a four-lane divided roadway east of the IBM facility and becomes a curvy two-lane road west of IBM. The hourly capacity of a roadway like Bailey Avenue is approximately 950 vehicles per lane per hour, so the additional traffic generated by the cemetery (39 trips in the AM peak hour and 79 trips in the PM peak hour) would not substantially change existing traffic conditions.

The proposed cemetery would be located in an area where traffic volumes are low because much of the surrounding land is vacant or in agricultural use. Assuming that virtually all visitors and employees would travel to and from the cemetery via Bailey Road, a driver would travel through the following intersections, if they were approaching from Highway 101 (as shown on Figure 1):

- **Bailey Avenue and Highway 101:** This interchange has ramps for both northbound and southbound Hwy 101 to access Bailey Road heading west towards the cemetery.

- **Bailey Avenue and Monterey Road:** Bailey has an overpass over Monterey Road, so additional traffic on Bailey would not affect traffic operations on Monterey Road.

- **Bailey Avenue and Santa Teresa Boulevard**: 4-way signalized intersection. Based on the traffic counts conducted in 2007 discussed above, the City of San Jose's TRAFFIX database indicates the existing level of service was LOS C at this intersection in both the AM and PM peak hours. (Level of Service is a qualitative description of operating conditions ranging from LOS A, or free-flow conditions with little or no delay, to LOS F, or jammed conditions with excessive delays.) As stated earlier, since there has been no significant development in the area since 2007, it is unlikely that the level of service based on new counts would be very different from that calculated using the 2007 count data.

- **Bailey Avenue and McKean Road:** 3-legged ("T") unsignalized intersection with one-way stop control on Bailey Avenue. This intersection is over two miles from Santa Teresa Boulevard, and, other than the IBM driveways, there are no other intersections on Bailey Road in between Santa Teresa Boulevard and McKean Road.

A level of service analysis was not conducted as part of this study, because the only intersection within two miles of the proposed project's main entry gates (on the Bailey Avenue route that most visitors to the cemetery would take) is the T-intersection at McKean Road and Bailey Avenue, and it is unsignalized. The City of San Jose does not have a level of service standard for unsignalized intersections. Thus, by definition, the intersection of McKean Road and Bailey Avenue cannot drop below a level of service threshold.

The City of San Jose's level of service standard for signalized intersections is "D" or better during the peak hours. The addition of 39 AM peak hour trips would be less than one trip per minute, and the addition of 79 PM peak hour trips would be approximately one trip every 45 seconds, on average. Adding this number of trips would not be expected to cause the intersection of Bailey Avenue and Santa Teresa Boulevard to fall below a LOS D, given that its most recently calculated LOS was C in both peak hours. Based on this reasoning, the proposed cemetery would be consistent with the City's level of service policy.

An additional consideration for the intersection operations on Bailey Avenue concerns funeral processions. The California Department of Motor Vehicles' *California Driver Handbook* states:

> Do not block or hinder a funeral procession. Vehicles taking part in a funeral procession have the right-of-way, and if you interfere, obstruct, or interrupt the funeral procession, you are subject to a citation. A funeral procession is led by a traffic officer. All vehicles taking part in the procession have windshield markers to identify them and have their headlights on.

A funeral procession would only need to pass through one signalized intersection – Santa Teresa Boulevard and Bailey Avenue – between Highway 101 and the entry gates on McKean Road. For a large funeral procession on Bailey Avenue, in addition to a police escort, a traffic officer should be positioned at the Santa Teresa Boulevard signalized intersection to direct traffic and allow the entire procession to travel through the intersection together. The escorted procession would continue on Bailey Avenue and turn left onto McKean Road at the unsignalized T-intersection. Provided that all vehicles have proper windshield markers and headlights are turned on, a traffic officer probably would not be needed to direct traffic at this unsignalized intersection.

Within the Heritage Oaks site, a network of curving and looped roadways would provide access to the burial grounds and other facilities. The roadways would be 20 feet wide throughout most of the cemetery, with traffic circles provided at numerous locations, as shown on Figure 2. The 20-foot wide roadways would provide sufficient width for parallel parking on portions of the roadways during burial committal ceremonies and visitation, while allowing other vehicles to pass. All roadways would be private, and maintenance would be the responsibility of the cemetery.

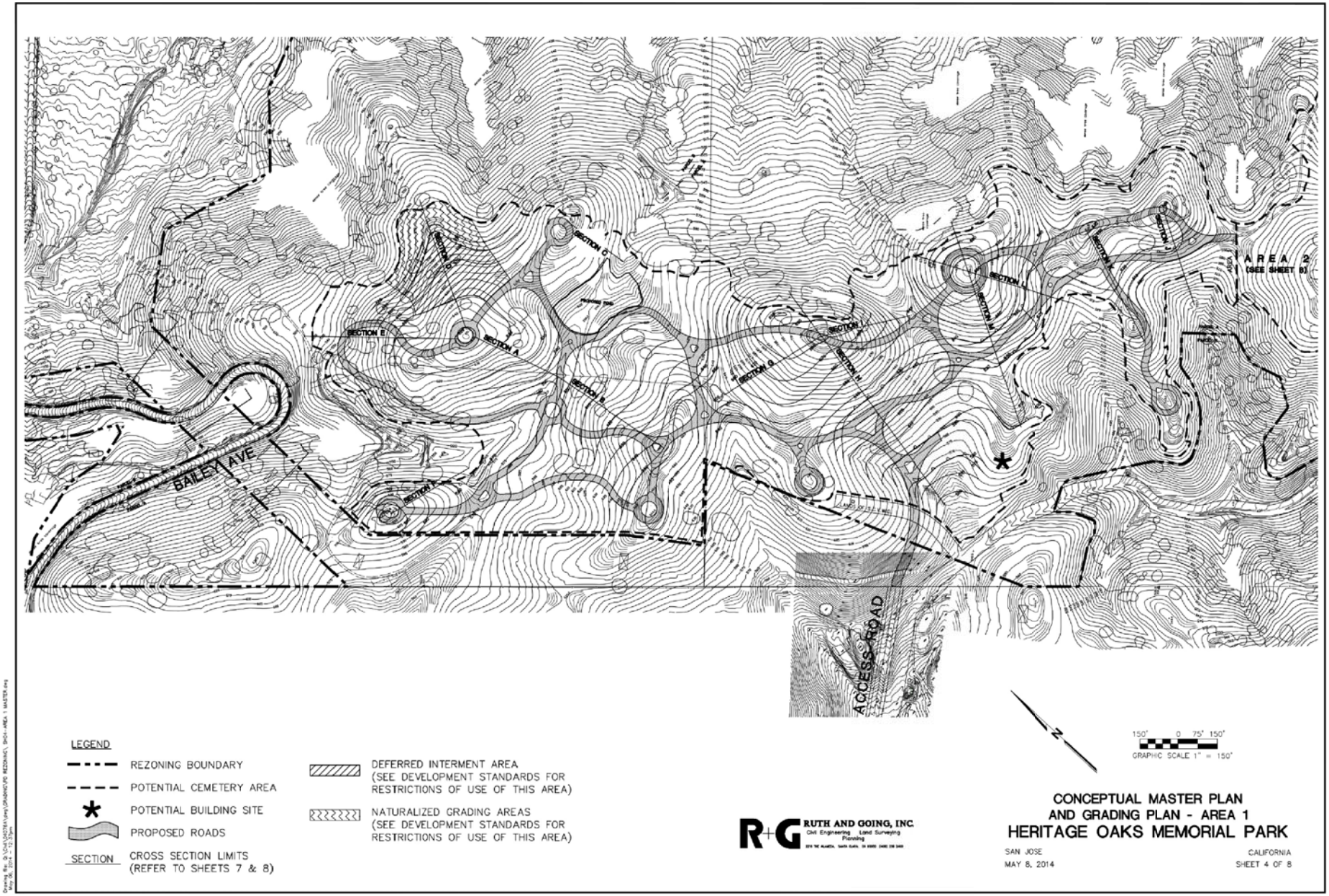

Figure 2
Proposed Roadway Network for the Heritage Oaks Memorial Park

We appreciate the opportunity to submit this report. Please do not hesitate to contact us if additional information is needed.

Sincerely,

HEXAGON TRANSPORTATION CONSULTANTS, INC.

Gary K. Black
President