

April 30, 2010

Mr. Demian Hardman
Contra Costa County Department of Conservation and Development
651 Pine Street
Martinez, California

Re: Reports from P/A Design Resources, Inc., titled "Creekside Memorial Park - Request for Justification and Need for Project" dated September 30, 2009 and February 5, 2010

We had originally accepted the applicant's claim that the proposed cemetery was needed. However, when we reviewed the justification and need for the project in the reports cited above, we found that they had omitted several significant factors. When we did our own analysis to determine the impact of those factors, we found that the existing cemetery space in the Tri-Valley area is more than enough to handle projected deaths for at least the next 50+ years. We also learned that changes in burial trends (i.e. more cremations) mean that the existing cemetery space will likely last much longer than initially assumed, even given projected increases in area population. As a result, we now believe that a new cemetery is NOT needed in the Tri-Valley area.

In this memo, we will review each of the claims made by the applicant and show why they are invalid. We will then describe our own research and how we calculated current and future cemetery need versus existing capacity, resulting in our conclusion that a new cemetery is not needed in the Tri-Valley area.

The first claim made by P/A Design Resources in the reports cited above is that the resolutions passed by the City Councils of the Town of Danville and the Cities of San Ramon, Pleasanton and Dublin "clearly show that the decision makers in each of those communities strongly agree that there is a need in the Tri-Valley area for local cemetery facilities to serve their respective constituents" (2/5/2010, page 1).

There are several issues with this statement. First of all, the fact that the decision makers agreed there is a need for a new cemetery does not mean that there really is a need. Simply saying something is so doesn't necessarily make it so! Solid supporting facts and analysis are also required.

Secondly, the reason why these four city/town councils agreed there was a need was because they had been told so by the "Tri-Valley Cemetery Task Force". According to a report made to the San Ramon City Council on February 10, 2004 by the City Manager, Gail Walters, this task force was created in the fall of 2003. Based on the meeting minutes of the Task Force for their meetings of November 21, 2003 and January 16, 2004 (included with the San Ramon City Council report), the task force appears to have been nothing more than a forum for the applicant to obtain support for his proposed Tassajara Valley cemetery. While a few facts were cited, no analysis was done to convert the facts into actual cemetery need, nor was any effort made to estimate existing capacity.

In addition, while the Tri-Valley Cemetery Task Force included all five of the Tri-Valley cities, it is significant that one city - Livermore - did NOT approve the applicant's resolution supporting the proposed

cemetery. The reasons cited in City of Livermore's January 10, 2006 memo to Ryan Hernandez regarding the Creekside Memorial Park Cemetery Application Land Use Permit LP05-2096, were (1) concern with the development of structures on the ridgelines of the project site and (2) through conversations with cemeteries in the City of Livermore, it was generally reported that their existing facilities can provide 20 to 40 years of burial capacity not exclusive to Livermore residents. (Note that although their memo also cited the application for a new cemetery on North Livermore Avenue (the "Smith/Vineyard Cemetery"), that is no longer a factor since that application was later withdrawn.)

Next, while P/A Design Resources includes a list of the 18 cemeteries located within a 15 mile radius of the proposed cemetery, they do not quantify how much space these have available. And while they cite the Census Bureau's published United States death rate of 8 per 1000 and the estimated population of the Tri-Valley area, they do not recognize that the death rate alone is not enough to determine cemetery need, especially given the trend towards more cremations.

At this point, we realized we would need to do our own research and analysis to determine whether a new cemetery in the Tri-Valley area was really needed. To do this, we talked to the active cemeteries located within 15 miles of the proposed site as listed by P/A Design Resources. We also reviewed information from the Cremation Association of North America (CANA). Based on these facts (detail provided below), we found that the applicant ignored the increasing trend towards cremation and the corresponding trend of fewer full body burials. Even though the number of deaths per year is expected to increase over the next 15-30 years due to the aging baby boomer population, the increase in cremations more than offsets it, resulting in a smaller number of full body burials each year.

Additionally, we have learned that the proposed "New Farm" project (located on the adjoining property to the north of this site) includes a 27 acre cemetery. While we recognize that that project is only in the very early stages of obtaining approval, the concept of two cemeteries next door to each other makes one wonder if the Tassajara Valley is going to become the 'Colma of the East Bay'; is this really what we want for the Tassajara Valley?

Following are the details of our analysis.

Total Burial Demand

To determine burial demand in the Tri-Valley Area, we started with the estimated overall death rate, and converted that to an estimated number of deaths per year.

The 2006 death rate in the United States is 8.10 per 1000 www.cdc.gov/nchs/FASTATS/deaths.htm which is similar to the 'approximately 8 per 1000' cited by P/A Design Resources (2/5/2010, p. 5). But California has a significantly smaller death rate of 6.4 per 1000 www.cdph.ca.gov/data/statistics/documents/vsc-2005-0501.pdf. Since we are located in California, we used the California death rate.

For the estimated population of the Tri-Valley area, P/A Design Resources uses the Census Bureau value of 335,617. When they multiply

that by the US death rate of 8.1 per 1,000, they get 2,718 deaths per year.

However, it is more realistic to include the additional 22,321 people noted by P/A Design Resources as 'actual population data from the cities themselves'. When this population of 357,938 is multiplied by the California death rate of 6.4 per 1,000, the result is 2,291 deaths per year in the Tri-Valley area.

Non-Catholic versus Catholic Burials

Since the three Catholic cemeteries in the Tri-Valley area have sufficient space to cover the projected Catholic deaths for at least the next 100 years (detail below), we excluded the estimated number of Catholic deaths in the Tri-Valley area from the calculations. We also excluded the Catholic cemeteries from the overall capacity.

The three Catholic cemeteries in the area are St. Michael's Cemetery in Livermore (8 of 15 acres developed), Holy Sepulchre Cemetery in Hayward (77 of 115 acres developed), and Queen of Heaven Cemetery in Lafayette (11 of 198 acres developed). Note that Queen of Heaven Cemetery in Lafayette was not included in the list provided by P/A Design Resources because it is just outside the 15 mile radius.

In 2009 22% of the entire US population was Catholic, and 34% of the California population was Catholic
http://en.wikipedia.org/wiki/Catholic_Church_in_the_United_States.

We therefore estimate the number of non-Catholic deaths per year in the Tri-Valley area as 100% - 34% or 66% of the 2291 deaths per year, or 1511 deaths per year.

Cremation adjustment to burial demand

The critical factor in determining burial demand is not the total number of deaths per year but the number of full body burials per year. This is because the space required for cremated remains is less than 1/10th that of full body burials, based on numbers provided by P/A Design Resources. According to the "Creekside Memorial Park Anticipated General Operations Schedule" (March 1, 2006), 28 square feet is required for each full body burial versus 2.5 square feet for cremated remains. In addition, cremation niches can be more easily put in walls and structures that have a vertical component making the density even higher. None of the cemeteries we spoke with in the Tri-Valley area were concerned about ever running out of space for cremated remains.

Burial trends are shifting more and more towards cremation rather than 'full body entombment'. According to CANA, California cremations in 2005 were 52% of total burials, and predicted to rise to 59% by 2010 (in comparison, Washington and Oregon were at 64% in 2005). In addition, as of 2006, 60% of cremated remains in California were not buried at all but stored in the home or scattered (due in part to a law enacted in 1995 allowing the scattering of ashes on public lands, and on private land, with the property owner's permission).

A cremation rate of 59% means that full-body burials are 41% of the total, so the number of non-Catholic full body burials per year in the Tri-Valley area can be estimated at 41% of 1511, or 620.

Burial Capacity in the Tri-Valley Area

We then estimated the non-restricted burial capacity in the Tri-Valley area in terms of number of burials per year and the number of years this rate could be sustained.

We did this by contacting each active cemetery listed by P/A Design Resources as being within 15 miles of the proposed cemetery to assess how many full body burials it had per year, and the number of years it could continue at this rate. The following table summarizes what we found; note that the list only includes cemeteries available to the general public, so it excludes those that are restricted to specific religious affiliations such as Catholic, those that are non-active (pioneer and/or historic), and those restricted to specific districts. (Note that the Livermore capacity is greater than cited by the City of Livermore in their memo cited above; this is likely due to increased cremation rates since that memo was written).

Cemetery Name	Location	Full-body burial rate	Capacity
Roselawn Cemetery	Livermore	104/yr	50 years
Memory Gardens	Livermore	207/yr	50 years
Lone Tree Cemetery	Hayward	495/yr (*)	76+ years
Chapel of the Chimes	Union City	381/yr (*)	20+ years
Mount Eden Cemetery	Hayward	25/yr	50+ years
Total for the next 20+ yrs:		1212/yr	
Total for the next 20-50+ yrs:		831/yr	

(*) Note that the two busiest cemeteries (Lone Tree and Chapel of the Chimes) did not provide full body burial rates, but did advise that they held about 780 services per year at Lone Tree and 600 services per year at Chapel of the Chimes. Based on that, we estimated the number of full-body burials for each as follows:

As noted above, 41% of deaths in California result in a full body burial. Also, 59% of deaths are cremated in California and 40% of these are interred in a cemetery, which means that 40% of 59% = 23.6% of deaths in California are cremated remains interred in a cemetery. So of all deaths in California, those in which the remains are interred in a cemetery are 41% (full body) + 23.6% (cremated remains), or 64.6%. The percentage of full body versus cremation interments is therefore 41/64.6 = 63.5% full body and 23.6/64.6 = 36.5% cremation interments.

So at Lone Tree, we estimated that 63.5% of the 780 burials per year, or 495, are full body burials. And at Chapel of the Chimes, we estimated that 63.5% of the 600 burials per year, or 381, are full body burials.

Cremation rate will accelerate, so full body burials remain flat, might even drop, in spite of the rise in death rate due to baby boomers

According to CANA, the death rate will show a slight increase through 2050. This is when most of the "baby boomer" generation is expected to die; the average "boomer" will reach age 80 between 2026 and 2044 http://en.wikipedia.org/wiki/Baby_boom.

The baby boom consisted of an increase in the birthrate of about 50% starting in 1946 and lasting for about 18 years. The death rate will likely have a similar increase, although it may be spread out over more than 18 years. However, there will not be a corresponding increase in full body burials because the cremation rate is increasing at a rate which surpasses the increase in death rate during this period.

According to the "2006 Statistics and Projections to the Year 2025" CANA, Sept, 2007:

US by year	Total Deaths (1000s)	Total Cremations 1000s / %	Total Non-cremations 1000s / %
2005	2432	785 / 32%	1647 / 68%
2010	2634	1029 / 39%	1605 / 61%
2025	3242	1857 / 57%	1385 / 43%

These numbers show the falling trend in the number of non-cremation deaths, i.e. in the number of full body burials. In other words, the need for full body burials will fall in the future, so that the existing cemetery supply will last longer than expected.

Impact on burial need due to population growth

We estimate that population growth rate in Contra Costa County is about 1%. This is based on information from the Census <http://quickfacts.census.gov/qfd/states/06/06013.html>, which showed a growth of 9.7% in population over the 9 years from 2000 to 2009, which equates to 1.02% growth rate per year. However, most of the growth was in areas such as Oakley (8.2% in 2006) and Brentwood (6.4% in 2006) versus Concord that actually lost population (-0.4% in 2006) http://www.dot.ca.gov/hq/tpp/offices/ote/socio_economic_files/2007/Contra_Costa.pdf. We therefore estimated the future population growth of the Tri-Valley area at 1%.

Also, based on the table above, total US cremation rates are predicted to increase between 2010 and 2025 from 39% to 57%. This is equivalent to an annual increase in cremation rate of approximately 4.01% (the table above shows 1,029,000 cremations in 2010, 1,857,000 cremations in 2025, which is a period of 15 years, and the compound interest formula gives: $100 * ((1,857,000 / 1,029,000)^{1/15} - 1) = 4.01\%$ per year).

So how will these two factors affect the number of full body burials per year in the Tri-Valley area? This can be calculated as follows:

Annual change in number of full body burials =
Annual change in deaths (=1% * Population * Death Rate), less
Annual change in California cremations(=4.01% * 59% * Population * Death Rate)

So the annual change in number of full body burials =
= (1% - 4.01% * 59%) * Population * Death Rate
= -1.37% * Population * Death rate

In other words, the number of full body burials in the Tri-Valley area is FALLING by about 1.4% each year, since the rate of cremation increase more than compensates for the rise in the deaths due to population growth in the area. Note that this last calculation uses the California cremation rate in 2010 of 59%, and conservatively assumes that the growth in California's cremation rate is the same as the rest of the country (i.e. 4.01%).

Summary

The existing cemeteries in the Tri-Valley area have a capacity of 1212 full body burials per year for the next 20+ years, and of 831 full body burials per year for the next 50-76+ years. When this capacity is compared with the estimated need for 620 full body burials per year, it is clear that the existing cemeteries in the Tri-Valley area have more than enough capacity to meet all projected needs for the foreseeable future. And, since the rate of cremations is expected to increase faster than the expected population growth, the existing capacity is likely to last even longer.

In comparison, the proposed Creekside Cemetery has a capacity of 1100 burials per year at full build-out, of which we estimate that 63.5%, or 698 per year, would be full body burials. This is more than the estimated need for 620 full body burials per year in the entire Tri-Valley area.

Given these facts, it is clear that this new cemetery is not needed in the Tri-Valley area.

We respectfully submit that the above analysis of cemetery need versus capacity should be used by the County to evaluate this project, rather than the partial and flawed reports submitted by the applicant. Thank you for taking the time to consider our comments.

Bill & Holly Newman
7300 Camino Tassajara
415-518-7131 cell