



1625 SHATTUCK AVENUE  
SUITE 300  
BERKELEY, CA 94709  
TEL: 510 848 3815  
FAX: 510 848 4315  
www.dceplanning.com

**MEMORANDUM**

DATE November 12, 2010  
TO Vacaville Steering Committee  
FROM City Staff and DC&E  
RE **Existing Policy Plan Area Infrastructure Constraints**

Future development within the Interchange Business Park, Golden Hills Business Park, and Vaca Valley Business Park is limited due to infrastructure constraints. In total, these policy plans have approximately 960 acres of vacant land. However, there is insufficient wastewater collection and traffic capacity to serve the buildout of these areas, or to support all the permitted uses specified by the individual policy plans.

***A. Sewer Collection Capacity***

Each business park is governed by a policy plan that identifies permitted uses. Permitted uses range from uses with very high sewer demands, such as fast food restaurants, to uses with low sewer demands, such as a warehouse. Planning for these areas has historically assumed a sewage collection need of 2,000 gallons per day (gpd) per acre.

Most office and warehousing uses have low sewer demands; thus, they can easily be accommodated in the policy plan areas. However, higher intensity uses, such as commercial uses, manufacturing, and some industrial uses, require sewer capacity beyond the 2,000 gpd per acre that has been allocated for each parcel. Most manufacturing and industrial uses located in Vacaville require collection capacities of 3,000 to 6,000 gpd per acre, and intensive biotech uses like Genetech require as much as 13,000 gpd per acre. These collection capacities are not available for the undeveloped parcels.

The City's Wastewater Treatment Plant has the capacity to serve the policy plan areas, but the issue lies with the existing sewer collection lines. The existing sewer lines do not have adequate capacity to serve future buildout of these areas, nor can they serve uses with a sewer demand exceeding 2,000 gpd per acre. This has greatly limited the development potential of the remaining parcels.

At one time, the City had a "reserve" of sewage capacity available to serve uses that required over 2,000 gpd per acre. However, over the years this reserve has been almost

completely exhausted, with only about 100,000 gpd available, which is likely to be taken by a new project in the near future.

Additionally, there are several cases of “stranded” collection capacity, which is capacity that has been allocated to a single user that will likely remain unused. For example, Genentech has an option for an additional 450,000 gpd per acre of capacity that expires in 2015, and owns the rights to another 450,000 gpd. If this capacity could be transferred to other users, it would greatly improve the sewer situation in the rest of the business park area, although it would not solve the entire problem. This situation is exacerbated by the fact that the business park area is served by multiple sewage collection systems, and much of the remaining capacity is not in the same collection area where capacity is needed.

The City foresees using one or more of the following potential solutions to resolve the wastewater capacity issue. These ideas and others will be discussed at the upcoming Steering Committee Meeting #5.

- ◆ **Recover “stranded” wastewater capacity.** Some sites within the policy plan areas have rights to wastewater collection capacity that are not being used and which appear unlikely to be used in the future.
- ◆ **Allow individual users to sell or trade away capacity if they use less than 2,000 gpd.** Current City policy does not allow users to sell or trade unused capacity on their sites, with the idea that the City wants to maintain the possibility that a different user with higher wastewater generation rates might later want to use a site. While this ensures flexibility in the future, it also means that theoretical capacity is not available for users who need it.
- ◆ **Build new sewer line.** Building a new sewer line would resolve capacity issues. However, such an upgrade is estimated to cost \$50 million, so funding would be an issue. The City could consider expanding the sewer upgrade to serve other areas of new development, such as the Northeast Growth Area, in order to distribute the costs.
- ◆ **Recruit “dry” businesses.** Uses such as office or warehouse require significantly less wastewater capacity than industrial uses. The City could make a policy decision to recruit dry businesses to overcome the wastewater capacity issue. However, such uses generally have lower employment densities and/or are harder to recruit in today’s competitive market than are more water-intensive industrial uses.
- ◆ **Redesignate portions of the business park area for non-industrial or heavy industrial uses.** It may be appropriate to consider the northwest corner of the Interchange Business Park for non-industrial uses such as residences or for heavy industrial. Since both these uses generate less wastewater per acre than light industry, this would free up capacity for other parts of the business park.

***B. Traffic Capacity***

The existing Vacaville General Plan has established a citywide goal of level of service (LOS) C at all intersections, interchanges, and road links, but allows for LOS D, LOS E, and LOS F under specified circumstances. All of the aforementioned business parks gain access from Vaca Valley Parkway. Due to existing LOS deficiencies on Vaca Valley Parkway, which are described in more detail below, additional development within the business parks will require traffic mitigation to help fund traffic improvement projects that would provide for an acceptable level of service.

As described in more detail in the Transportation and Circulation Existing Conditions Technical Memorandum, which is available on the General Plan Update website ([vacavillegeneralplan.org](http://vacavillegeneralplan.org)), a portion of Vaca Valley Parkway, located between Interstate 80 and Interstate 505, currently operates at LOS D in the peak flow direction during the afternoon (PM) peak hour. In addition, several other intersections currently serving the business parks are functioning at LOS D or lower during one or both peak hours. The following list identifies the affected intersections and any required and/or planned traffic improvement projects that are necessary to maintain LOS C:

- ◆ **Interstate 505 Southbound Ramps/Vaca Valley Parkway.** This unsignalized intersection operates at LOS D during the PM peak hour. Design of interim improvements, including intersection widening and signalization, is currently underway.
- ◆ **Vaca Valley Parkway/Interstate 505 Southbound Interim Improvements.** These planned improvements including widening Vaca Valley Parkway to provide a protected westbound left-turn lane and an eastbound right-turn lane, and widening the southbound off-ramp to provide a southbound right-turn lane and providing signalization at the southbound ramp intersection. Construction is scheduled to begin in March 2011. This project will be funded by the City's Development Impact Fee (DIF) Program.
- ◆ **Interstate 505/Vaca Valley Parkway Interchange.** This planned improvement includes widening the existing overcrossing with protected turn pockets and to accommodate pedestrians and Class II bike lane, and modifying the interchange to provide a partial cloverleaf design. This project is needed for cumulative development of the business parks and its priority depends on the level of area development. The transportation portion of the DIF Program will fund a four-lane overcrossing with slip ramps, but the existing General Plan identifies the need for a six-lane overcrossing.
- ◆ **Vaca Valley Parkway Widening.** This planned improvement includes widening Vaca Valley Parkway to a four-lane divided road with protected turn pockets from Interstate 505 to Browns Valley Parkway and to a six-lane divided road with protected turn pockets from Interstate 505 to Crescent Drive. This project would be funded by development projects.

The City foresees using one or more of the following potential strategies to address the traffic capacity issues in the business parks. These ideas and others will be discussed at the upcoming Steering Committee Meeting #5.

- ◆ Consider revising level of service standard(s) and definition of level of service goals to allow for more flexibility and/or less costly improvements.
- ◆ Consider updating the procedures to assess level of service for roadway segments and intersections. This evaluation should also consider including an analysis of hour(s) outside the PM peak period (4:00 to 6:00 p.m.).
- ◆ Since there have been improvements to roadways since some of the roadway operations data were collected, existing level of service should be reevaluated with the improvements in place.
- ◆ Conduct an update to the transportation portion of the DIF Program, applying methodology and transportation policy consistent with the updated General Plan.
- ◆ Based on proposed General Plan transportation policy updates, establish any revisions to the Municipal Code needed related to transportation, including but not limited to, review of the Traffic Impact Mitigation and Transportation System Management sections.