

CITY OF BRENTWOOD
COMMUNITY DEVELOPMENT DEPARTMENT



THE STREETS OF BRENTWOOD LIFESTYLE RETAIL CENTER
Design Review 06-08

INITIAL STUDY / MITIGATED NEGATIVE DECLARATION

June 2006



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I. BACKGROUND

- A. Project Title:** The Streets of Brentwood Lifestyle Retail Center
- B. Lead Agency:** City of Brentwood
Community Development Department
104 Oak Street
Brentwood, CA 94513
- C. Contact Person and Phone Number:** Howard Sword
Community Development Director
(925) 516-5405
- D. Project Location:** Northwest corner of Sand Creek Road and Shady Willow Lane
directly east of the State Route 4 Bypass
- E. Project Sponsor's Name and Address:** Continental Real Estate Companies
150 East Broad Street
Columbus, Ohio 43215
(614) 221-1800
- F. General Plan Designation:** Special Planning Area D (Regional Commercial)
- G. Zoning:** Planned Development No. 6
- H. Project Description Summary:**

The proposed project is a retail shopping center, totaling approximately 460,000 square feet, known as "The Streets of Brentwood", comprised of a multi-screen movie theater, retail stores and restaurants. The project site consists of approximately 53.7 acres located on the northwest corner of Sand Creek Road and Shady Willow Lane, and is bounded generally on the west by the State Route 4 Bypass. The only entitlement sought for this project is Design Review for the site and architectural plans, and associated development standards and guidelines (DR 06-08). A public hearing has been scheduled before the Brentwood Planning Commission on August 1, 2006 for consideration of the Mitigated Negative Declaration and project entitlements.



II. SOURCES

The following documents and sources of information have been utilized in this Initial Study, and are referenced herein as noted:

1. Revised Plans for Design Review Application for the Streets of Brentwood Lifestyle Retail Center (DR 06-08). Continental Real Estate Companies, May 11, 2006.
2. Traffic Impact Analysis for the Streets of Brentwood Lifestyle Retail Center, City of Brentwood, California. Abrams Associates, May 2006.
3. Environmental Noise Assessment for the Streets of Brentwood Lifestyle Retail Center, City of Brentwood California. Bollard Acoustical Consultants, Inc., April 2006.
4. Air Quality Impact Analysis for the Proposed Streets of Brentwood Lifestyle Retail Center, City of Brentwood, California. Donald Ballanti Certified Consulting Meteorologist, March 2006.
5. Biological Assessment for the Streets of Brentwood Lifestyle Retail Center, City of Brentwood, California. Wildlife Research Associates, February 2006.
6. Aesthetics Impact Analysis for the Streets of Brentwood Lifestyle Retail Center, City of Brentwood, California. Richard T. Loewke, AICP Urban & Environmental Planning, April 2006.
7. Archaeological Survey and Cultural Resources Assessment for the Streets of Brentwood Lifestyle Retail Center, Brentwood, California. William Self Associates, Inc., January 2006.
8. Phase I Environmental Site Assessment for the Andrade Property, Brentwood, California. Treadwell & Rollo, Inc., February 2004.
9. Preliminary Geotechnical Investigation for the Andrade Property, Brentwood, California. Treadwell & Rollo, Inc., August 2005.
10. Draft Bridle Gate Development Initial Study / Mitigated Negative Declaration, Brentwood, California. City of Brentwood Community Development Department, April 2006.
11. Sand Creek Crossing Shopping Center Initial Study / Mitigated Negative Declaration, Brentwood, California. RBF Consulting and the City of Brentwood Community Development Department, April 2001.
12. Oil Production Impact Study for the Brentwood Shopping Center, San Jose Avenue, Brentwood, California. ENGEO, Inc., March 2001.
13. Special Planning Area D, Planned Development (PD) 6
14. Brentwood Municipal Code Chapter 17, Brentwood, California. City of Brentwood, with amendments through June 2006.
15. City of Brentwood General Plan Update 2001-2021 (November 2001) with amendments through June 2006.
16. City of Brentwood General Plan Update EIR (SCH #2000122013), June 2001.
17. City of Brentwood Ordinance No. 695 certifying the EIR for the General Plan Update, adopted on November 27, 2001.
18. City of Brentwood General Plan 1993-2010, June 1993.
19. City of Brentwood General Plan EIR, June 1993.
20. City of Brentwood City Council Resolution No. 93-53 certifying the final EIR for the Brentwood General Plan, passed on June 8, 1993.

21. Parks, Trails and Recreation Master Plan, City of Brentwood, RRM Design Group, June 2002.
22. City of Brentwood Design Guidelines, April 2001.

III. ENVIRONMENTAL FACTORS POTENTIALLY AFFECTED

The environmental factors checked below would be potentially affected by this project, involving at least one impact that is a "Potentially Significant Impact" as indicated by the checklist on the following pages.

- | | | |
|---|--|--|
| <input checked="" type="checkbox"/> Aesthetics | <input checked="" type="checkbox"/> Agricultural Resources | <input checked="" type="checkbox"/> Air Quality |
| <input checked="" type="checkbox"/> Biological Resources | <input checked="" type="checkbox"/> Cultural resources | <input checked="" type="checkbox"/> Geology / Soils |
| <input checked="" type="checkbox"/> Hazards & Hazardous Materials | <input checked="" type="checkbox"/> Hydrology / Water Quality | <input type="checkbox"/> Land Use / Planning |
| <input type="checkbox"/> Mineral resources | <input checked="" type="checkbox"/> Noise | <input type="checkbox"/> Population Housing |
| <input checked="" type="checkbox"/> Public Services | <input type="checkbox"/> Recreation | <input checked="" type="checkbox"/> Transportation / Traffic |
| <input checked="" type="checkbox"/> Utilities / Service Systems | <input checked="" type="checkbox"/> Mandatory Findings of Significance | |

IV. DETERMINATION

On the basis of this initial study:

I find that the proposed project COULD NOT have a significant effect on the environment, and a NEGATIVE DECLARATION will be prepared.

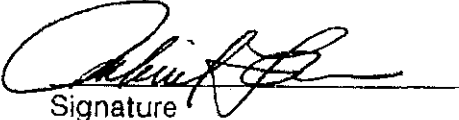
I find that although the proposed project could have a significant effect on the environment, there will not be a significant effect in this case because revisions in the project have been made by or agreed to by the project proponent. A MITIGATED NEGATIVE DECLARATION will be prepared.


I find that the proposed project MAY have a significant effect on the environment, and an ENVIRONMENTAL IMPACT REPORT is required.

I find that the proposed project MAY have a "potentially significant impact" or "potentially significant unless mitigated" impact on the environment, but at least one effect (1) has been adequately analyzed in an earlier document pursuant to applicable legal standards, and (2) has been addressed by mitigation measures based on the earlier analysis as described on attached sheets. An ENVIRONMENTAL IMPACT REPORT is required, but it must analyze only the effects that remain to be addressed.

I find that although the proposed project could have a significant effect on the environment, because all potentially significant effects (a) have been analyzed adequately in an earlier EIR or NEGATIVE DECLARATION, including revisions or mitigation measures that are imposed upon the proposed project, nothing further is required.

The foregoing determination is based on the analysis contained in this Initial Study and is subject to implementation of all project-sponsored mitigation measures contained in Section VII.


Signature


Howard Sword
Printed Name

June 23, 2006
Date

City of Brentwood
For

V. BACKGROUND AND INTRODUCTION

This Initial Study identifies and analyzes the potential environmental impacts of the proposed Streets of Brentwood Lifestyle Retail Center project. The information and analysis presented in this document are organized in accordance with the order of the CEQA checklist in Appendix G of the CEQA Guidelines. Where the analysis provided in this document identifies potentially significant environmental effects of the project, mitigation measures are prescribed to reduce such impacts to a less-than-significant level.

The mitigation measures prescribed for environmental effects described in this Initial Study will be implemented in conjunction with the project, as required by CEQA. The mitigation measures will be incorporated into the project through project conditions of approval. The City will adopt findings and a Mitigation Monitoring/Reporting Program for the project in conjunction with its approval of the project.

The environmental setting and impact discussion for each section of this Initial Study have been largely based on information in the 2001 Brentwood General Plan EIR, the 1993 Brentwood General Plan EIR, and a series of focused technical studies specifically prepared for the project, identified as Appendices A through H. Information contained in Appendices A through H has been prepared for the project by subconsultants, and has been utilized where appropriate. This Initial Study and MND are predicated upon the City's current independent processing of certain amendments to the PD-6 Zone, for consistency with the General Plan and Downtown Specific Plan, which are expected to be approved prior to consideration of this environmental analysis (and may become effective shortly thereafter).

VI. PROJECT DESCRIPTION

The proposed Streets of Brentwood project is a regionally oriented commercial development, consisting of a total of approximately 460,000 square feet of retail, restaurant uses and other commercial uses. The project Site Plan consists of approximately 53.7 acres located on the north side of Sand Creek Road between Shady Willow Lane and the State Route 4 Bypass. As shown in the City of Brentwood General Plan Land Use Map on page 9, the entire site has been identified as Special Planning Area "D", and designated for development of regional commercial land uses.

As designed, the project includes a central open air courtyard with approximately 391,800 square feet of surrounding "in-line" retail space, consisting of 12 principal buildings (designated as A through L). The westerly-most building measures approximately 63,000 square feet in area, and is planned to accommodate a theater use, or alternatively, additional retail space. In addition, nine separate free-standing retail pads (identified as "Outlots") are located adjoining Sand Creek Road and Shady Willow Lane. The outlot retail uses would range in size from 4,000 to 7,500 square feet of building space. All proposed uses are consistent with the range of land uses contained in the Planned Development No. 6 (PD-6) Zone. In addition, the proposed project has been designed to comply with all development standards and other ordinances of the City. Consequently, the pending Design Review action is the only discretionary entitlement required to facilitate development of the project as currently proposed.

The site is relatively flat, averaging only 0.8% slope, and drains generally from west to east. Planned site grading is estimated at approximately 45,000 cubic yards, and will balance on the site. The preliminary grading plan calls for the creation of earthen berms along the Sand Creek Road and

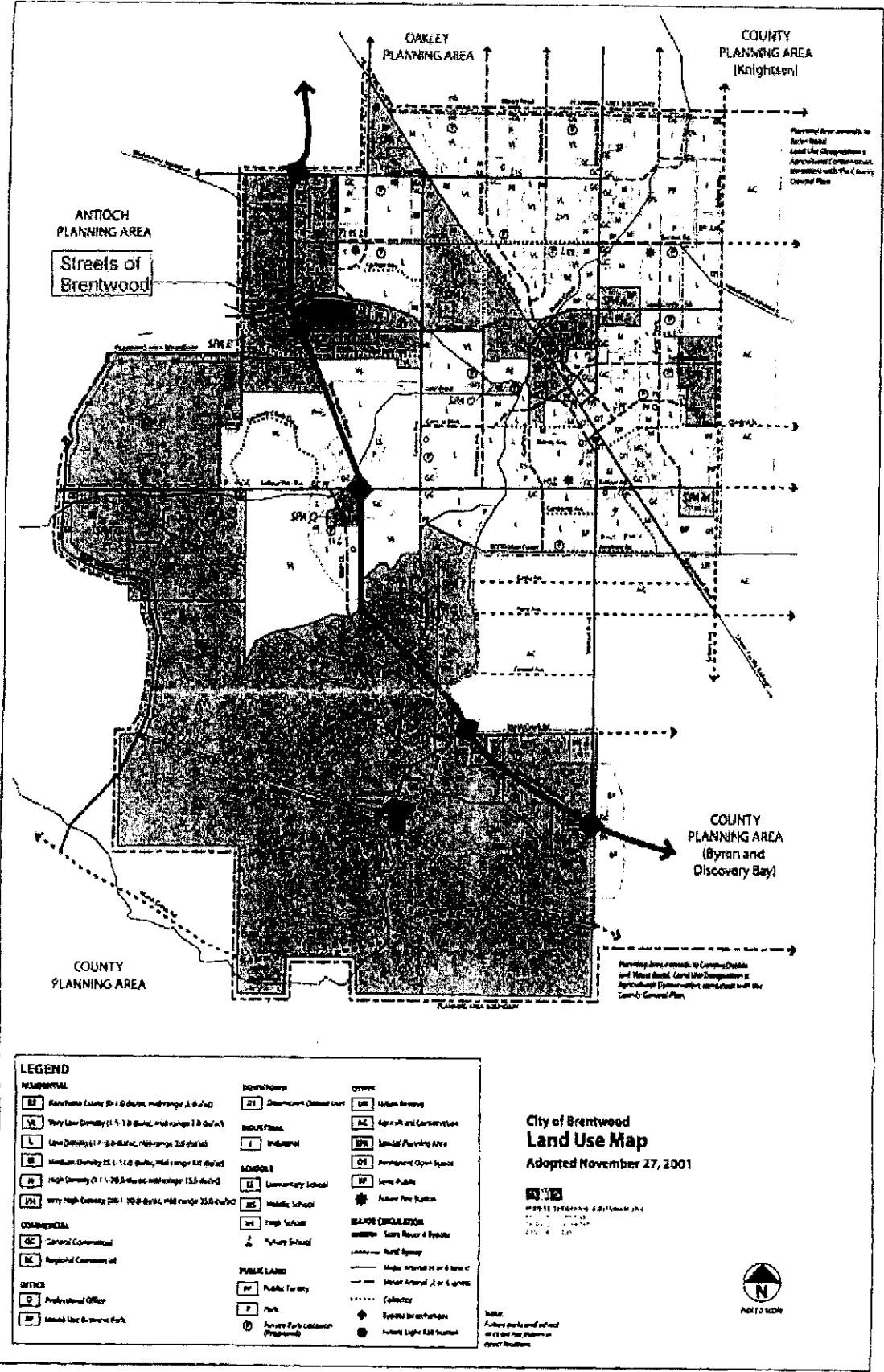
Shady Willow Lane frontages, providing for a limited amount of visual screening of parked cars and headlights. The screening effect will be enhanced through the use of landscape planting along the berm, in accordance with plans to be approved by the City.

Based on input from the public during a recent neighborhood meeting on May 10, 2006, and a workshop with the Planning Commission on June 1, 2006, several refinements are expected to the site and architectural plans referenced in this analysis. The contemplated changes will include additional parking lot landscaping and pedestrian passageways, enhancements to the building elevations, and the extension of pedestrian/bicycle trail improvements to the northerly property line adjoining Old Sand Creek Road. These latter improvements are expected to be complemented by supplemental riparian and other native landscape improvements, designed to facilitate an improved future connection to the public pathway adjoining Sand Creek. As further discussed in Section VII.4 below, none of these improvements would impact the creek itself or the biological resources associated with Sand Creek.

It is proposed that the site plan, in-line building architectural components, and project Design Guidelines be approved by the Planning Commission. The Planning Commission would also review details of the Theater Building and each of the nine Outlot Buildings, as these plans are finalized. The Community Development Director would have authority for subsequent review and approval of final construction plans, including minor changes to the initially approved plans, provided that they are consistent with the Design Review action.

It is anticipated that the proposed project will be developed within approximately two years. All mitigation measures identified in this analysis have been sponsored by the project proponent, and are therefore included as part of the project. These measures will be implemented with the project, as specifically identified in Section VII below.

Figure 1: City of Brentwood General Plan Land Use Map Showing Project Site



City of Brentwood General Plan, 2001-2021
Figure 3 Land Use Map

Figure 2: Perspective Rendering of Streets of Brentwood Project

STREETS OF BRENTWOOD

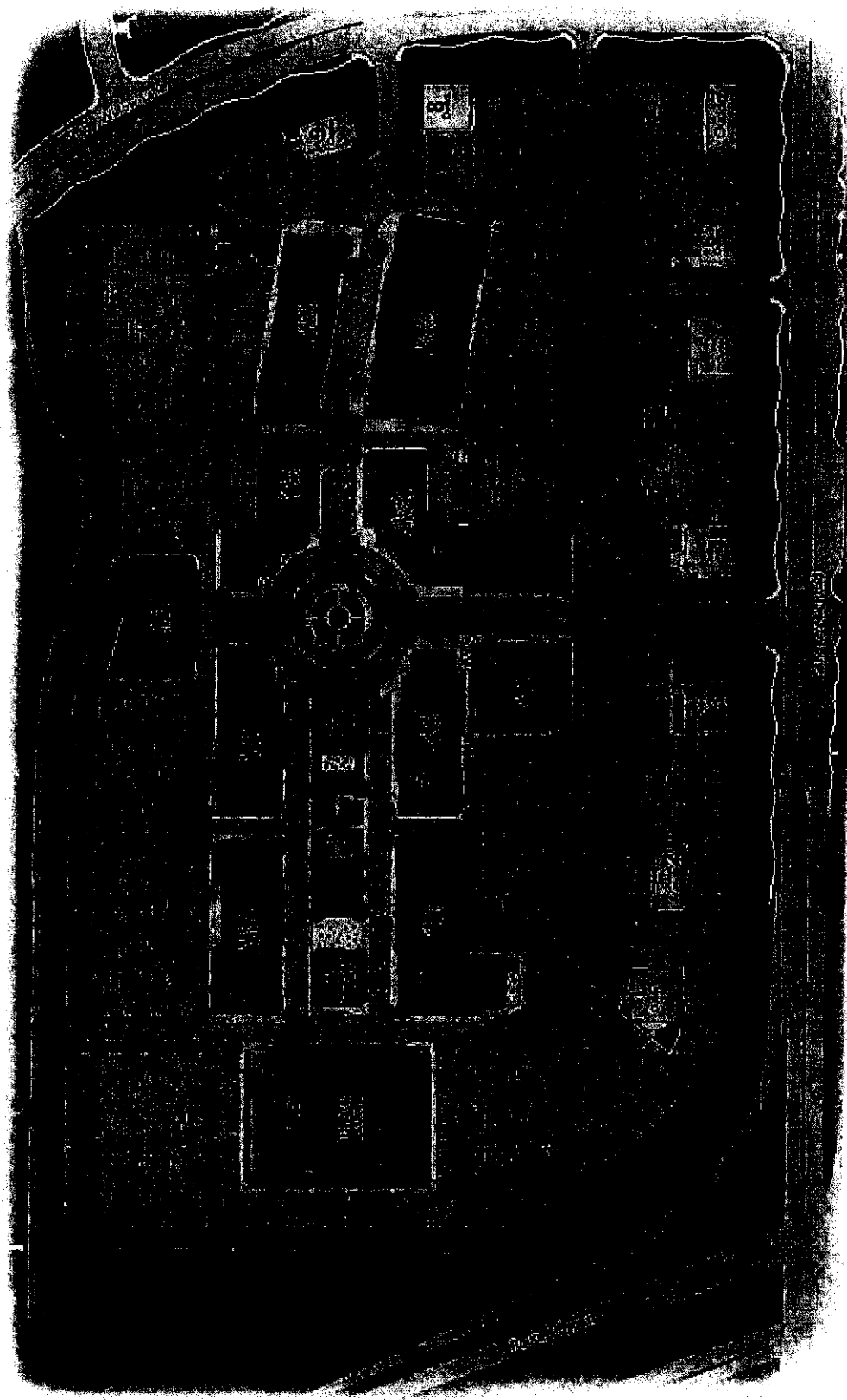


May, 2006

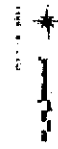
NOTE: This roadway is for illustrative purposes only. See site and architectural plans for details.

05-1051-10

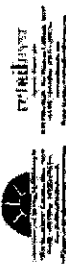
Figure 3: Project Illustrative Site Plan



Notes: This plan is for illustrative purposes only. Text (where applicable) is for reference only.



ILLUSTRATIVE SITE PLAN
STREETS OF BRENTWOOD
BRENTWOOD, CALIFORNIA



P.d
DESIGN
CONSULTANTS

VII. ENVIRONMENTAL CHECKLIST

The following checklist contains the environmental checklist form presented in Appendix G of the California Environmental Quality Act Guidelines. The checklist form is used to describe the impacts of the proposed project included in the analysis. A discussion follows each environmental issue identified in the checklist. Included in each discussion is a review of the project-specific mitigation measures which have been included as an integral part of the proposed project. The following designations have been utilized to identify the determination of potential project effect with respect to each issue evaluated:

Potentially Significant Impact: An impact that could be significant, and for which no mitigation has been identified to reduce the severity of effect below the applicable threshold of significance.

Less Than Significant With Mitigation Incorporated: Applies where the incorporation of project-sponsored mitigation measures have reduced an effect from "Potentially Significant Impact" to a "Less Than Significant Impact."

Less Than Significant Impact: Any impact that would not be considered significant under CEQA relative to existing standards and applicable thresholds.

No Impact: The project would not have any measurable impact.

Issue	Information Sources (See Item #18 Below)	Potentially Significant Impact	Less than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
1. Aesthetics – Would the project:					
a) Have a substantial adverse effect on a scenic vista?			✓		
b) Substantially damage scenic resources, including, but not limited to trees, rock outcroppings, and historic buildings within a state scenic highway?				✓	
c) Substantially degrade the existing visual character or quality of the site and its surroundings?				✓	
d) Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?			✓		

Discussion

a. The proposed project involves the construction of a group of well-organized principal commercial buildings surrounding a central plaza feature located near the center of a 54-acre site, together with a series of "Outlot" or secondary free-standing structures positioned facing the frontages of Sand Creek Road and Shady Willow Lane. The Outlot buildings are setback roughly 40-90 feet from the property lines adjoining the street frontages, whereas the principal buildings are recessed between 200 and 500 feet. This arrangement serves to create substantial "windows" of visual access into the site, and aggregates the principal

building mass near the center of the site. As shown in the Streets of Brentwood site development plan, the perimeter street frontages of the site will be landscaped to a depth averaging over 80 feet, thereby reducing the apparent building mass as seen from the street, and screening the surface parking beyond.

The Streets of Brentwood project will transform this vacant site into a regional commercial center with a total of almost 460,000 square feet of building area, in accordance with development standards outlined in the General Plan, Special Planning Area "D" and Planned Development No. 6. The Aesthetic Impact Analysis presented in Appendix E provides a summary of the City's applicable community design policies and procedural requirements, as well as an inventory of visual resources on and adjoining the site, including both short and long-range views.

The Community Design Element of the Brentwood General Plan establishes a set of goals and policies to shape future development to "improve the appearance of the City and fit in with existing development." These include the following provisions which are directly applicable to development of the 54-acre project site:

Goal 1 promotes the "highest standards of architecture and site design for all development projects, both public and private." Policy 1.3 encourages "quality landscape and design" through: (1.1.3) compliance with a set of landscape and design standards for new development; and (1.3.2) preservation of views along the Delta Expressway (the State Route 4 Bypass) through use of setbacks and other tools. Policy 1.4 calls for the creation of streets "which are pedestrian friendly and provide views of abutting neighborhoods", and promotes implementation through: (1.4.1) implementation of a street tree planting program; and (1.4.7) placement of one-story structures immediately adjacent to arterial thoroughfares, with taller structures set back further onto larger sites. Policy 1.5 promotes incorporation of outdoor art in public places.

Goal 2 seeks to "preserve and enhance the views of dominant natural features" within the community. Implementation Policy 2.1 looks to individual development projects to preserve views of "significant natural features such as Mt. Diablo" within developments by: (2.1.5) including consideration of building heights and view corridors in order to preserve views of significant natural features.

Goal 3 attempts to "create a sense of place for the community by preserving and enhancing the identity and small town rural character of Brentwood." Policy 3.1 seeks to enhance the architectural character of the community through: (3.1.2) implementation of the City's Design Review Process. Policy 3.3 promotes "strong transitions between the City of Brentwood and neighborhood communities" and the creation of "major activity centers or nodes of intense development whose intensity decreases as you travel out of the node." Policy 3.3 is to be implemented through: (3.3.2) establishment of "community gateways that clearly define major entry points of Brentwood"; (3.3.4) implementation of design guidelines.

The Community Design Element designates both the State Route 4 Bypass (Delta Expressway) and Sand Creek Road as "Gateway Routes" where special landscape treatments should be used. The intersection of these two important roadways is also noted as a location where special landscape treatments should be used. In addition, in the vicinity of the proposed project, the State Route 4 Bypass has been designated in the 2001 General Plan as a Scenic Route.

Finally, the entire project site is included in Special Planning Area D (SPA "D"), as identified on the Land Use Map of the General Plan. The Streets of Brentwood project is a regional commercial use which is consistent with permitted uses assigned to SPA "D". Planned Development No. 6, as adopted by ordinance for SPA "D", serves to implement the foregoing General Plan goals and policies through a set of coordinated development standards (Section 17.456.005). The SPA "D" design requirements applicable to the proposed project includes widening of Sand Creek Road to provide a second west-bound travel lane and bike lane, and a 30-foot parkway frontage treatment.

The project site covers 54 acres extending from the SR 4 Bypass on the west to Shady Willow Lane on the east, and from Sand Creek Road to the northerly property line approximately 1,200 feet to the north. The Sand Creek drainage channel occurs off-site, on the north side of adjoining Old Sand Creek Road. As documented in the project Topographic Survey, the site is relatively flat (less than one-half of one percent slope), with a high point elevation of approximately 133' near the northwest corner, and a low point of approximately 113' adjoining the southeast corner.

A series of photographs was taken between March and June of 2006 along Sand Creek Road, Shady Willow Lane, and the State Route 4 Bypass frontages of the undeveloped project site. The location and orientation of these visual inventory photographs were superimposed on the project site as shown in Appendix E. A first group of photographs was taken at a location on the Sand Creek Road median just to the west of the project's proposed main entrance. A second group of photographs were taken looking west from three locations along Shady Willow Lane. Additional photographs were taken of the project site from the State Route 4 Bypass frontage, looking to the east. These photographs show the relationship between the existing Sand Creek Crossing regional commercial center, the project site, and Mt. Diablo, and the Bypass. Visibility of all but a small portion of Mt. Diablo was found to be obscured from the southerly end of Shady Willow Lane just north of Sand Creek Road, by the north wall of the existing grocery store building (approximately 30-foot high). Existing buildings within the Sand Creek Crossing project were also found to block visibility of Mt. Diablo as seen traveling westbound along much of the proposed project's Sand Creek Road frontage. Virtually the entire project site is currently visible from the State Route 4 Bypass.

Planned "Outlot" structures will be located closest to Shady Willow Lane (setback roughly 80 feet from the street right-of-way), whereas the closest principal commercial buildings are set back a distance of between 200 and 500 feet from the street right-of-way line. The positioning of the proposed buildings has a maximum visual effect with respect to views of Mt. Diablo, as seen from a limited perspective along Shady Willow Lane opposite Los Cielos Way, as shown in Appendix D. Based on a simulation perspective from this location near Los Cielos Way, it was determined that much of Mt. Diablo will be screened by buildings; the window of visibility toward Mt. Diablo opens again both to the north and south along Shady Willow Lane.

The 2001 General Plan Update EIR identifies State Route 4, Camino Diablo Road, Marsh Creek Road, Walnut Boulevard, Deer Valley Road, Lone Tree Way and the SR 4 Bypass as Scenic Routes. General Plan Community Design Policy 1.3 calls for preservation of views along the State Route 4 Bypass through use of setbacks and other tools. Proposed development of the project would place the nearest commercial buildings roughly 200 feet east of the State Route 4 Bypass. The project is proposed to include landscape improvements west of the nearest commercial buildings which would be visible from the north-bound lane(s) of the Bypass.

This arrangement of buildings and site improvements, as seen from the Bypass (the designated Scenic Route) provides for substantial setbacks and landscape improvements, with the bulk of the building mass aligned near the center of the site. This configuration achieves consistency with the foregoing Community Design Element goals and policies by maintaining substantial setbacks to larger buildings, and by incorporating both distinctive architecture and special landscape treatments at the important Sand Creek Road / State Route 4 "gateway" to the City. Based on the Design Review application as proposed, the project would therefore have a less-than-significant impact subject to compliance with the following design-level mitigation:

Mitigation Measures

The following mitigation measures would reduce potential aesthetics impacts identified below to a *less-than-significant* level:

Impact 1-a: Scenic Corridor Vista. The principal structure along the westerly end of the project (Building B) would be visible to the SR 4 Bypass, a designated City of Brentwood Scenic Corridor.

Mitigation Measure 1-a: *Project shall obtain Design Review approval, demonstrating consistency with all applicable development standards and specific architectural criteria in accordance with PD-6. Because the design of Building B (the principal structure closest to the westerly project boundary) is to be deferred until a specific tenant is identified, this structure shall return to the Planning Commission for final design review approval. The Building B side and rear elevations shall incorporate appropriate materials, colors and detailing complementary to the overall architectural theme established for the east-facing elevation. Final improvement plans shall incorporate substantial landscaping to help reduce the apparent mass of Building B as seen from the State Route 4 Bypass.*

b. Community Design Policy 2.1 calls upon individual projects to preserve views of "significant natural features such as Mt. Diablo" within developments, through consideration of building heights and view corridors in order to preserve views of significant natural features. The principal scenic resource identified in the

General Plan and verified in the foregoing project site Visual Resource Inventory is the long range views of Mt. Diablo to the southwest.

Development of the project site would have no effect on views of Mt. Diablo as seen from Sand Creek Road (see Photos 1 and 4 in Figures 2 and 3). Long-range views of Mt. Diablo from Shady Willow Lane are currently partially obscured from locations within 300 feet of Sand Creek Road. However, Mt. Diablo is clearly visible on the westerly horizon, as currently viewed from the remaining portions of Shady Willow Lane further to the north. These views of Mt. Diablo from other locations along Shady Willow Lane and several adjoining residential properties would be affected by the proposed project, as discussed below.

The proposed project site development plan shows a limited massing of commercial buildings along the Shady Willow Lane frontage. Along this 1,200-foot long street frontage, building massing is most noticeable opposite Los Cielos Way. As documented in Appendix E, two of the "Outlot" buildings and portions of the principal commercial buildings would obscure much of the view of Mt. Diablo (as seen from a 5-foot height) at this particular location. Moving further to the north or south beyond the "Outlot" buildings, views of Mt. Diablo would again emerge, and remain either unobstructed or only partially blocked by planned buildings and site improvements.

Section 17.456.004 of PD-6 provides for maximum building heights of 50 feet (three stories) for regional commercial uses, and establishes no minimum front yard setback requirements. The proposed buildings would not exceed the prescribed height limitations, would have a substantial setback from the street frontages, and have been aligned to minimize the obstruction of Mt. Diablo from the available public vantage points. The effect of this project on views of Mt. Diablo as a scenic resource is therefore self-mitigated; the project would result in a less-than-significant effect.

c. General Plan Policy 1.4 calls for the creation of pedestrian-friendly streets, in part, through placement of one-story structures immediately adjacent to arterial thoroughfares, with taller structures set back further into larger sites. As currently designed, the Streets of Brentwood project would place the smaller "Outlot" structures roughly 80 feet back from the frontages of Sand Creek Road and Shady Willow Lane, while the larger principal commercial buildings would be set back a distance of between 200 and 300 feet from the streets. The planned commercial structures have a typical height of up to 30 feet, with only limited architectural features extending somewhat higher. The vertical scale of this development is not substantially different than that of the Sand Creek Crossing center to the south, or the two-story residential neighborhood to the east, and is substantially less than that authorized under PD-5 (50 feet or three stories). The Brentwood General Plan classifies the adjoining property to the north for "Business Park" uses, the buildings for which are likely to have similar height proportions.

Impact 1-b: Visual Quality of "Outlot" Buildings. The overall site design and hierarchy of building massing for the proposed project is largely self-mitigating. However, the location of the nine "Outlot" buildings makes these structures particularly prominent in terms of their effect on overall visual quality from public vantage points. Consequently, the following mitigation measure is recommended in order to assure a uniformly high quality of design for the "Outlot" buildings:

Mitigation Measure 1-b: *Prior to issuance of building permits, detailed plans for each of the "Outlot" buildings shall be submitted for review and approval by the Planning Commission, showing the details of elevation treatments, materials and colors. Architectural detailing and treatments shall be consistent with the overall approved Design Review theme for the project.*

d. The project will incorporate parking lot and building lighting which will generate additional light and glare in the area. However, as shown in the site development plan (Figure 1) and the project preliminary Parking Lot Landscape plan set (application Sheets L-01 through L-07), all parking facilities will be separated from surrounding streets by an average of 80 feet of landscape planting area, including earthen berms. This physical separation and berming will serve to lessen effects from headlights on the adjoining roadway and residential uses to the east.

In addition, the project Site Lighting Plan and Site Lighting Details (application Sheets SL1 and SL3) identify the location and design of both parking lot and plaza lighting fixtures throughout the site. Lighting fixtures are designed to have heights of between 14 and 20 feet in total height, and are to incorporate cut-off optics to limit

the angle of light emitted horizontally from the fixtures.

Impact 1-c: Glare from Parking Lot Lighting. Based on the foregoing, the potential for adverse impact on the public right-of-way or adjoining properties has been reduced to a ***less-than-significant level***. However, in order to assure compliance with these details and City standards, the following additional mitigation measure shall be implemented:

Mitigation Measure 1-c: Details for use of cutoff or full-cutoff classification shielded lighting fixtures, together with a site illumination diagram, shall be submitted for review and approval by the Community Development Department prior to issuance of building permits. Directional lighting shall be controlled to avoid spill-over onto adjoining properties or public streets. Overall exterior lighting shall adhere to the requirement of the Brentwood Municipal Code, which requires lighting in parking areas to be within a range of 0.5 to 7.0 foot-candles. Project design and architectural treatments shall incorporate additional techniques to reduce light and glare, such as low reflectivity glass, subdued colors for building materials in high visibility areas, and use of plant materials along the perimeter of structures to soften views.

Issue	Sources (See Item #18 Below)	Potentially Significant Impact	Less than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
<p>2. Agricultural Resources: In determining whether impacts to agricultural resources are significant environmental effects, lead agencies may refer to the California Agricultural Land Evaluation and Site Assessment Model (1997) prepared by the California Dept. of Conservation as an optional model to use in assessing impacts on agriculture and farmland. Would the project:</p>					
<p>a) Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?</p>			✓		
<p>b) Conflict with existing zoning for agricultural use, or a Williamson Act contract?</p>					✓
<p>c) Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland to non-agricultural use?</p>					✓

Discussion

a. The proposed project would result in development of approximately 54 acres located at the northeast corner of the State Route 4 Bypass and Sand Creek Road. This site is surrounded on all sides by existing or planned urban development. Continued agricultural operations on this property, though possible, will be increasingly constrained by the presence of immediately adjoining residences to the east, commercial uses to the south, a business park use to the north, and the State Route 4 Bypass to the west.

The City of Brentwood 2001 General Plan includes agricultural preservation policies in the Conservation/Open Space Element which describe potential agricultural preservation program components. The General Plan also designates areas along the eastern and southeastern portions of the Planning Area as Agricultural Conservation. The proposed project is not located within the conservation area. Additionally, the Brentwood General Plan has identified this site for regional commercial development.

General Plan Conservation Element Policy 1.1.4 states:

Secure Agricultural Land: Establish a program which secures permanent agriculture on lands designated for agriculture in the City and/or County General Plan. The program should include joint use concepts (e.g. wastewater irrigation), land dedication (e.g. secured through development agreements), and a transfer of development/in-lieu fees ordinance. The program should also create incentives for continuing agriculture (e.g. long-term irrigation water contracts) and assurances that potential agricultural-urban conflicts will be mitigated.

Impact 2-a: Loss of Farmland. The Contra Costa County Important Farmland Map (2000) indicates that the project area has been designated as Prime Farmland. Although the Conservation Goal in the Brentwood 2001 General Plan EIR is restricted to Prime Farmland east of Sellers Avenue and south of the ECCID main canal (IV.1-4), which excludes the project site, the development of the proposed project would result in the direct loss of Prime farmland. Absent mitigation, this would be considered a potentially significant impact. Implementation of the following measure would mitigate potential impacts related to the loss of agricultural resources to a less-than-significant level:

Mitigation Measure 2-a: *Prior to issuance of any grading permits, the developer shall comply with any City Council conservation programs established pursuant to General Plan Conservation Element Policy 1.1.4 in order to mitigate the potential significant impact of the proposed project on the loss of farmland. The applicant shall pay the current agricultural conservation City fee in effect at that time to provide funds to purchase conservation easements to mitigate for the loss of farmland.*

- b. The project site is not under Williamson Act contract and the site is designated for urban development consisting of regional commercial uses. Therefore, development of the site as proposed would not result in conflict with a Williamson Act contract or existing zoning for agriculture. Implementation of the proposed project would result in *no impact* to agriculture zoning or Williamson Act contracts.
- c. Individual project impacts to the loss of prime farmland are addressed through Mitigation Measure 2-a above. The proposed Streets of Brentwood project is not anticipated to promote off-site development because the proposed infrastructure is sized to serve only the project site. In addition, the site is surrounded by existing development on the south and east, bounded by the SR 4 Bypass on the west, and adjoins a future business park on the north. The proposed project is consistent with the type and intensity of land uses anticipated by the General Plan. Therefore, the proposed project would result in *no impact* to the existing environment that could individually or cumulatively result in loss of farmland to agricultural use.

Issue	Sources (See Item #18 Below)	Potentially Significant Impact	Less than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
3. Air Quality: Where available, the significance criteria established by the applicable air quality management or air pollution control district may be relied upon to make the following determinations. Would the project:					
a) Conflict with or obstruct implementation of the applicable air quality plan?			✓		
b) Violate any air quality standard or contribute substantially to an existing or projected air quality violation?			✓		
c) Result in a cumulative considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors)?			✓		
d) Expose sensitive receptors to substantial pollutant concentrations?			✓		
e) Create objectionable odors affecting a substantial number of people?				✓	

Discussion

a-e. Brentwood is located on the south side of the San Joaquin River delta, east of the Carquinez Straits. Its location between the greater Bay Area and the Central Valley has great influence on the climate and air quality of the area. It is located at the eastern boundary of the 9-county San Francisco Bay Area Air Basin. Brentwood is a few miles west of San Joaquin County, which is part of the 8-county San Joaquin Valley Air Basin.

Brentwood has a relatively low potential for air pollution given the persistent and strong winds typical of the area. Wind records from the closest wind-measuring sites show a strong predominance of westerly winds. As documented in the Air Quality Impact Analysis prepared for the project by Donald Ballanti, Certified Consulting Meteorologist, average wind speed is relatively high and the frequency of calm winds is quite low. These winds dilute pollutants and transport them away from the area, so that emissions released in the project area have more influence on air quality in the Sacramento and San Joaquin valleys than they do locally. There are, however, several major stationary sources in upwind cities that can influence local air quality, and the project's location downwind of the greater Bay Area also means that pollutants from other areas are transported to the area.

The air quality impacts associated with emissions from increased numbers of vehicles resulting from long-term development within the Brentwood Planning Area were initially analyzed in the 1993 Brentwood General Plan EIR, and subsequently re-evaluated in the Brentwood 2001 General Plan Update EIR. The analysis determined that buildout under the 1993 General Plan would create significant unavoidable impacts with respect to increases in long-term regional air pollutant emissions, and a Statement of Overriding Consideration was adopted (City Council Resolution No. 93-53, June 8, 1993 – see Reference 21). The 2001 General Plan Update EIR identified an overall 11% reduction in daily traffic compared to the 1993 Plan, based on a projected 450,000 average daily trips at buildout. However, it concluded that buildout associated with the current General Plan would lead to emissions of ROG, NOx and PM10 at levels which could "substantially contribute to an existing or projected air quality violation or be inconsistent with regional air quality plans to

achieve attainment." The proposed Streets of Brentwood commercial project involves development of regional commercial uses which are consistent with the adopted 2001 General Plan for which these findings were made.

The federal Clean Air Act and the California Clean Air Act of 1988 require that the State Air Resources Board, based on air quality monitoring data, designate portions of the state where the Federal or State ambient air quality standards are not met as "nonattainment areas". Because of the differences between the national and State standards, the designation of nonattainment areas is different under the Federal and State legislation.

The Bay Area is currently a nonattainment area for 1-hour ozone standard. However, in April 2004, the U.S. EPA made a final finding that the Bay Area has attained the national 1-hour ozone standard. The finding of attainment does not mean the Bay Area has been reclassified as an attainment area for the 1-hour standard. The region must submit a re-designation request to EPA in order to be reclassified as an attainment area. The U.S. EPA has classified the San Francisco Bay Area as a nonattainment area for the federal 8-hour ozone standard. The Bay Area was designated as unclassifiable/attainment for the federal PM_{2.5} standards.

Under the California Clean Air Act Contra Costa County is a nonattainment area for ozone and particulate matter (PM₁₀ and PM_{2.5}). The county is either attainment or unclassified for other pollutants. The California Clean Air Act requires local air pollution control districts to prepare air quality attainment plans. These plans must provide for district-wide emission reductions of five percent per year averaged over consecutive three-year periods or, if not, provide for adoption of "all feasible measures on an expeditious schedule".

The Bay Area Air Quality Management District defines sensitive receptors as facilities where sensitive receptor population groups (children, the elderly, the acutely ill and the chronically ill) are likely to be located. These land uses include residences, schools, playgrounds, childcare centers, retirement homes, convalescent homes, hospitals and medical clinics. Sensitive land uses near the project site include residences east, southeast and northeast of the project site, on the opposite side of Shady Willow Lane.

BAAQMD CEQA Guidelines provide the following definitions of a significant air quality impact:

- A project contributing to carbon monoxide (CO) concentrations exceeding the State Ambient Air Quality Standard of 9 parts per million (ppm) averaged over 8 hours or 20 ppm for 1 hour would be considered to have a significant impact.
- A project that generates criteria air pollutant emissions in excess of the BAAQMD annual or daily thresholds would be considered to have a significant air quality impact. The current thresholds are 15 tons/year or 80 pounds/day for Reactive Organic Gases (ROG), Nitrogen Oxides (NO_x) or PM₁₀. Any proposed project that would individually have a significant air quality impact would also be considered to have a significant cumulative air quality impact.
- Any project with the potential to frequently expose members of the public to objectionable odors would be deemed to have a significant impact.
- Any project with the potential to expose sensitive receptors or the general public to substantial levels of toxic air contaminants would be deemed to have a significant impact.

Despite the establishment of both Federal and State standards for PM_{2.5} (particulate matter, 2.5 microns), the BAAQMD has not developed a threshold of significance for this pollutant. For this analysis, PM_{2.5} impacts would be considered significant if project emissions of PM₁₀ exceed 80 pounds per day.

The BAAQMD significance threshold for construction dust impacts is based on the appropriateness of construction dust controls. The BAAQMD guidelines provide feasible control measures for construction emission of PM₁₀. If the appropriate construction controls are to be implemented, then air pollutant emissions for construction activities would be considered less-than-significant.

The project does not include any industrial or agricultural uses. Therefore, aside from temporary construction-related diesel emissions, project operation would not lead to impacts associated with objectionable odors.

Mitigation Measures

The following mitigation measures would reduce potential air quality impacts identified below to a *less-than-significant* level:

Impact 3-a: Construction Dust Emissions. Construction activities such as demolition, clearing, excavation and grading operations, construction vehicle traffic and wind blowing over exposed earth would generate fugitive particulate matter emissions that would temporarily affect local air quality. This impact is potentially significant, but normally mitigable.

Construction dust would affect local air quality during implementation of the project. The dry, windy climate of the area during the summer months creates a high potential for dust generation when and if underlying soils are exposed to the atmosphere. The proposed project would involve substantial excavation and earthmoving. The movement of earth on the site is a construction activity with a high potential for creating air pollutants. After grading of the site, dust would continue to affect local air quality during construction of the project.

According to the *BAAQMD CEQA Guidelines*, emissions of ozone precursors (ROG and NO_x) and carbon monoxide related to construction equipment are already included in the emission inventory that is the basis for regional air quality plans, and thus are not expected to impede attainment or maintenance of ozone and carbon monoxide standards in the Bay Area. Thus, the effects of construction activities would be increased dustfall and locally elevated levels of PM₁₀ downwind of construction activity. Construction dust has the potential for creating a nuisance at nearby properties. This is considered a potentially significant impact. The following mitigation measures would reduce the foregoing potential impacts to a less-than-significant level:

Mitigation Measure 3-a: *Prior to issuance of a grading permit, the developer shall prepare an Erosion Prevention and Dust Control Plan. The plan shall be followed by the project's grading contractor and submitted for review and approval by the Engineering Department, which shall be responsible for field verification of the plan during construction. The plan shall comply with the City's Grading Ordinance and shall include the following measures:*

- (1) *Water all active construction areas at least twice daily and more often during windy periods; active areas adjacent to existing land uses shall be kept damp at all times, or shall be treated with non-toxic stabilizers or dust palliatives;*
- (2) *Cover all trucks hauling soil, sand, and other loose materials or require all trucks to maintain at least 2 feet of freeboard;*
- (3) *Pave, apply water three times daily, or apply (non-toxic) soil stabilizers on all unpaved access roads, parking areas, and staging areas at construction sites;*
- (4) *Sweep daily (preferably with water sweepers) all paved access roads, parking areas, and staging areas at construction sites; water sweepers shall vacuum up excess water to avoid runoff-related impacts to water quality;*
- (5) *Sweep streets daily (preferably with water sweepers) if visible soil material is carried onto adjacent public streets;*
- (6) *Apply non-toxic soil stabilizers to inactive construction areas;*
- (7) *Enclose, cover, water twice daily, or apply non-toxic soil binders to exposed stockpiles (dirt, sand, etc.);*
- (8) *Limit traffic speeds on unpaved roads to 15 mph;*
- (9) *Install sandbags or other erosion control measures to prevent silt runoff to public roadways;*
- (10) *Replant vegetation in disturbed areas as quickly as possible.*
- (11) *Where feasible, use alternative fueled construction equipment*
- (12) *Minimize idling time (5 minutes maximum);*
- (13) *Maintain properly tuned equipment;*
- (14) *Limit the hours of operation of heavy equipment and/or the amount of equipment in use.*

The above measures include all feasible measures for construction emissions identified by the Bay Area Air Quality Management District for large sites. According to the District threshold of significance for construction impacts, implementation of the measures would reduce construction impacts of the project to a **less-than-significant** level.

Impact 3-b: Construction TAC Emissions. During construction various diesel-powered vehicles and equipment would be in use on the site. Exposure of sensitive receptors to diesel particulate would represent a less-than-significant impact.

In 1998 the California Air Resources Board identified particulate matter from diesel-fueled engines as a toxic air contaminant (TAC). CARB has completed a risk management process that identified potential cancer risks for a range of activities using diesel-fueled engines. High volume freeways, stationary diesel engines and facilities attracting heavy and constant diesel vehicle traffic (distribution centers, truckstop) were identified as having the highest associated risk.

Health risks from Toxic Air Contaminants are function of both concentration and duration of exposure. Unlike the above types of sources, construction diesel emissions are temporary, affecting an area for a period of days or perhaps weeks. Additionally, construction related sources are mobile and transient in nature, and the bulk of the emission occurs within the project site at a substantial distance from nearby receptors. Because of its short duration and the fact that nearby sensitive receptors would not be down-wind of construction activity when the wind is from the prevailing west direction, health risks from construction emissions of diesel particulate would be a **less-than-significant** impact. Therefore no additional mitigation measures are required.

Impact 3-c: Permanent Local Impacts. Project traffic would add to carbon monoxide concentrations near streets and intersections providing access to the site. This impact would be less-than-significant.

On the local scale, the project would change traffic on the local street network, changing carbon monoxide levels along roadways used by project traffic. Carbon monoxide is an odorless, colorless poisonous gas whose primary source in the Bay Area is automobiles. Concentrations of this gas are highest near intersections of major roads.

Carbon monoxide concentrations under worst-case meteorological conditions have been predicted for the most heavily traveled nearby intersections. PM peak traffic volumes were applied to the a screening form of the CALINE-4 dispersion model to predict maximum 1-and 8-hour concentrations near these intersections under the worst-case assumption that project traffic changes would occur in 2006. Attachment 1 provides a description of the model and a discussion of the methodology and assumptions used in the analysis. The model results were used to predict the maximum 1- and 8-hour concentrations, corresponding to the 1- and 8-hour averaging times specified in the state and federal ambient air quality standards for carbon monoxide.

Table 4 shows the results of the CALINE-4 analysis for the peak 1-hour and 8-hour traffic periods in parts per million (PPM). The 1-hour values are to be compared to the federal 1-hour standard of 35 PPM and the state standard of 20 PPM. The 8-hour values in Table 4 are to be compared to the state and federal standard of 9 PPM.

Table 4 shows that existing predicted concentrations near the intersections meet the 1-hour and 8-hour standards. Traffic from the proposed project would increase concentrations by up to 2.0 Parts Per Million (PPM). Traffic from the cumulative traffic increases would further increase concentrations by up to 2.5 Parts Per Million (PPM). However, concentrations with project and cumulative traffic growth would not exceed the state/federal ambient air quality standards.

Since project traffic would not cause any new violations of the 8-hour standards for carbon monoxide, nor contribute substantially to an existing or projected violation, project impacts on local carbon monoxide concentrations are considered to be **less-than-significant**. Therefore no additional mitigation measures are required.

Table 4: Worst Case Carbon Monoxide Concentrations Near Selected Intersections, in Parts Per Million

Intersection	Existing		Existing + Project		Existing+Project+ Cumulative	
	1-Hour	8-Hour	1-Hour	8-Hour	1-Hour	8-Hour
Sand Creek/ S.R. 4	6.2	4.5	7.1	5.1	7.5	5.4
W. Shopping Cntr./ Sand Creek	4.7	3.5	6.7	4.8	9.2	6.6
Sand Creek/ Fairview	4.5	3.3	5.2	3.8	7.8	5.6
E. Shopping Cntr./ Sand Creek	4.2	3.1	5.1	3.7	7.5	5.4
Most Stringent Standard	20.0	9.0	20.0	9.0	20.0	9.0

Table 5: Project Regional Emissions in Pounds Per Day

	Reactive Organic Gases	Nitrogen Oxides	PM ₁₀
Area Sources	7.0	4.3	0.1
Vehicular Sources	181.0	179.7	143.6
Total	188.0	184.0	143.7
BAAQMD Significance Threshold	80.0	80.0	80.0

Impact 3-d: Permanent Regional Impacts. Additional trips to and from the project would result in new air pollutant emissions within the air basin. The emissions from these new trips would exceed the BAAQMD thresholds of significance, but these emissions were anticipated and addressed in the Brentwood General Plan and do not represent a new significant impact.

Vehicle trips generated by the project would result in air pollutant emissions affecting the entire San Francisco Bay Air Basin. Regional emissions associated with project vehicle use have been calculated using the URBEMIS2002 emission model. The methodology used in estimating vehicular emissions is described in Attachment 2.

The incremental daily emission increase associated with project land uses is identified in Table 5 for reactive organic gases and oxides of nitrogen (two precursors of ozone) and PM₁₀. The Bay Area Air Quality Management District has established threshold of significance for ozone precursors and PM₁₀ of 80 pounds per day. Proposed project emissions shown in Table 5 would exceed these thresholds of significance.

These emissions would contribute to the significant cumulative impacts on regional air quality documented in the 1993 General Plan EIR, for which a Statement of Overriding Consideration was adopted. The Streets of Brentwood Project is a regional commercial use that is classified as consistent with Special Planning Area "D" under the Brentwood General Plan. Because of the consistency of the proposed project with the General Plan, the emissions associated with the project do not represent a new significant impact. Therefore no additional mitigation measures are required.

Impact 3-e: Cumulative Impacts. The project is consistent with the General Plan and would not have significant cumulative impacts. According to BAAQMD significance criteria, any proposed project that would individually have a significant air quality impact would also be considered to have a significant cumulative air quality impact. The proposed project would not individually have a significant impact. Therefore no additional mitigation measures are required.

Issue	Sources (See Item #18 Below)	Potentially Significant Impact	Less than Significant With Mitigation Incorporated	Less Than Significant Impact	No impact
4. Biological Resources: Would the project:					
a) Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?			✓		
b) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies regulations or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?				✓	
c) Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?				✓	
d) Interfere substantially with the movement of any native resident or migratory fish or wildlife species, or with established native resident or migratory wildlife corridors, or impede the use of native nursery sites?				✓	
e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?					✓
f) Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?					✓

Discussion

a-c. A complete biological assessment (BA) was prepared for the project site in February of 2006 by Wildlife Research Associates to assess the potential for the presence of special-status biological resources, to evaluate the potential biological constraints to the proposed project, and to identify potential impacts and mitigation measures which may be implemented with the Streets of Brentwood project. This section of the Initial Study presents a summary of the BA findings and recommendations; the complete BA is presented in Appendix D.

Habitats within the 54-acre project site were altered several years ago as the result of the removal of orchards which had been in production for several decades. No special-status communities or plant species were found to occur within the project study area. Based on a review of the California Natural Diversity Data Base, a total of 31 special-status plant species were considered to have at least some potential to occur within the region of the study area. None of the species are considered to have any significant potential for occurrence within the study area, due to a lack of suitable habitat, and the presence of orchards on the site within the last several years.

Based upon a review of the California Natural Diversity Data Base, a total of 44 special-status animal species were considered to have at least some potential to occur within the region of the study area. One California special concern species, the western burrowing owl, is known to nest approximately 400 feet on the west side of the SR 4 Bypass. Although 44 other species are reported in the area, none have potential to occur on site based on the disturbed nature of the site. No trees or bushes currently exist on the site. California ground squirrels were observed on the site, and therefore the potential for burrowing owl to nest on the site is considered high.

Wildlife Habitats

Grassland habitat, including native and non-native grasslands, provides nesting and foraging habitats. Reptiles, such as western fence lizard, can be found in this habitat, feeding on invertebrates found within and beneath debris. This habitat also attracts seed-eating and insect-eating species of birds and mammals. Mourning dove and meadowlark are a few seed-eaters that nest and forage in grasslands. Insect-eaters such as scrub jay use the habitat for foraging only. Grasslands are important foraging grounds for aerial and ground foraging insect-eating bat species such as myotis and pallid bat. A large number of other mammal species such as California vole, deer mouse, Botta's pocket gopher, California ground squirrel and brush rabbit also forage and nest within grasslands. Small rodents attract raptors such as owls that hunt at night, as well as day-hunting raptors such as white-tailed kite, and red-tailed hawk, among others. Several colonies of ground squirrels were observed on the site, as described in the BA. No evidence of western burrowing owl was observed during the site reconnaissance.

Special-Status Vegetation Communities

Based on a review of the California Natural Diversity Data Base (CNDDDB) (CNDDDB 2006), a total of 6 special-status communities may have potential to occur within the region, including alkali meadow, alkali seep, cismontane alkali marsh, coastal brackish marsh, coastal and valley freshwater marsh, and stabilized interior dunes. None of these communities were found to occur on the site.

Special-Status Plant Species

Special-status plant species include those listed as Endangered, Threatened, Rare or Candidates for listing by the USFWS, CDFG, CNDDDB, and CNPS, as detailed in the BA. The CNPS listing is sanctioned by the CDFG and serves essentially as their list of "candidate" plant species. Based on a review of the CNDDDB, and general and personal knowledge of the flora of eastern Contra Costa County, a total of 31 special-status plant species were reviewed. None of these species were considered to have any potential to be present within the project area due to a lack of suitable habitat and the high level of disturbance from the active orchard production within the last several years.

San Joaquin kit fox (SJKF)

A Federally listed Endangered and State listed Threatened species, SJKF are associated with open habitats, such as arid grasslands, alkali sinks, and open woodlands of the San Joaquin Valley and in surrounding foothills. Reports have shown that SJKF will use the edges of orchards for denning, while foraging in adjacent grassland areas. Kit fox are usually associated with loose textured soils that are suitable for excavating dens, with badgers and coyotes sometimes initiating the excavation. Dens have been found on flatter slopes, suggesting a preference for deep, friable soils. Den entrances are typically 5 to 10 inches in diameter, with three- to six-foot ramps formed from diggings, although dens in this species' northern range often lack ramps or other signs of use. Occurrences of populations of SJKF are thought to be related to the availability of denning sites, particularly natal denning sites, which are often moved several times throughout the season. Manmade features, such as culverts and roadbeds, are occasionally used for dens. San Joaquin kit fox prey includes kangaroo rats, black-tailed hare, and ground squirrels.

Ground squirrel burrows (approximately 4" in diameter extending 2.5') were observed within the project area, which could provide potentially suitable denning habitat for SJKF. However, no evidence of past or present SJKF presence was observed on the site. No scat, tracks or other sign were observed on site. Further, the project site is effectively isolated by Sand Creek Road and commercial development to the south, Shady Willow Lane and established residential development to the east, and the SR 4 Bypass to the west. A business park use is planned to occupy the property adjoining the project site to the north. The closest reported sightings of SJKF are located approximately 5 miles to the west, in Horse Valley.

Swainson's hawk (SH)

State listed Threatened and protected under the Migratory Bird Treaty Act and California Fish and Game Code 3503.5, the SH was once found throughout the lowland basin of California, but are now restricted to portions of the Central Valley where suitable nesting and foraging habitat are still available. Swainson's hawks prefer to nest along the periphery of riparian systems, but will also use lone trees or groves of trees in agricultural fields (CDFG 1990). Valley oak, Fremont cottonwood, walnut and large willow are the tree species most commonly used. Swainson's hawks require large open grasslands with abundant prey, such as small mammals and insects. Over 85% of SH territories in the Central Valley are in riparian systems adjacent to suitable foraging habitats (Barnes 1994). This species has been reported nesting within 4.3 miles northeast of the study area (CNDDDB 2006). However, no suitable nesting trees occur in the study area.

California red-legged frog (CRF)

CRF is listed by the USFWS as Threatened and is classified by the CDFG as a California Species of Special Concern. It breeds primarily in ponds, but will also breed in slow moving streams, or deep pools in intermittent streams. Inhabited ponds are typically permanent, at least three feet in depth, and contain emergent and shoreline vegetation. Sufficient pond depth and shoreline cover are both critical, because they provide means of escape from predators for the frogs. Non-breeding CRF have been found in both aquatic and upland habitats. The majority of individuals prefer dense, shrubby or emergent vegetation, closely associated with deep (>0.7 meters) still, or slow moving water. However, Wildlife Research Associates reports that some individuals use habitats that are removed from aquatic habitats, seeking cover under coyote brush and non-native grasslands. Aestivation habitat can occur in areas up to 300 feet from a stream corridor or pond and includes natural features, such as boulders, rocks, trees, shrubs, and logs. California red-legged frog is considered to have no potential to occur within the project area, based on the lack of suitable habitat. The closest reported sighting of CRF is 3 miles west of the site (CNDDDB 2006). The project area is located outside any proposed Critical Habitat designations for this species.

California tiger salamander (CTS)

CTS is Federally listed Threatened, and a California Special Concern species. California tiger salamander inhabits grassland and oak savanna habitats in the valleys and low hills of central and coastal California. Habitat conversion has eliminated the species from much of its former range. Adults spend most of their lives underground, typically in the burrows of ground squirrels and other animals. During winter rains between November and March, adults emerge from underground retreats to feed, court and breed. Ponds must contain water for at least 3.5 months to allow CTS larvae to complete their development. Following transformation, juvenile salamanders seek refuge, typically in mammal burrows, where they remain until the next winter rains. The California tiger salamander is considered to have no potential for occurrence within the project area due to the lack of suitable breeding habitat on the site, together with the site's disconnection from known occurrences. The closest report sighting of CTS occurs approximately 2.5 miles south of the project site. Residential and commercial development occurs between the study area and the reported sighting. The project study area is located outside any Critical Habitat designations for this species.

Valley Elderberry Longhorn Beetle (VELB)

A Federally-listed Threatened species, VELB is a red and black wood-boring insect which occurs throughout the California Central Valley and foothills of the Coast Ranges and Sierras, between the elevations of 0 to 3,000 ft. The host plant, blue elderberry, is typically associated with riparian habitats and adjacent upland habitats. The one- to two-year life cycle of the VELB is dominated by the larval stage of the insect, where it resides in the trunk and limbs of the blue elderberry. Emergence of adults occurs from late March through June, and evidence of occupancy in an elderberry is shown by the emergence hole of the adult. Today less than 4% of the historical 400,000 acres of riparian forest remain (USFWS 1990). The VELB is considered to have no potential for occurrence within the project area due to the lack of suitable habitat on the site - no elderberry trees were observed on site during the survey conducted by Wildlife Research Associates.

Bat Species (including the pallid bat)

Small-footed myotis, long-eared myotis, fringed myotis, Yuma myotis, and long-legged myotis, are listed as Federal Species of Concern and California Special Concern species. Of the 25 bat species in California,

approximately 60% (15 species) use trees as an important part of their roosting habitat, according to the Biological Assessment prepared by Wildlife Research Associates. Species that use trees as well as other structures include pallid bat, western small-footed, western long-eared myotis, fringed bat, and long-legged bat. Day roost selection is governed by several factors, such as temperature, roost configuration, lack of disturbance from people and predators, and proximity to foraging habitat and/or water. Trees typically used by bats require structurally complex forests, heterogeneous age structure, and a large component of old trees (>25 inch DBH and >40 feet in height) with emergent canopy or gap providing sun exposure and snags of various stages, although smaller trees with suitable cavities are also used. No suitable roosting habitat occurs on the project site for special status bat species.

Western burrowing Owl (BUOW)

The BUOW is a Federal Species of Concern, a California Special Concern species and is protected under the Migratory Bird Treaty Act. The BUOW is small, and long-legged, with dull brown plumage that is barred and spotted with white. Burrowing owls are typically observed on the ground, at or near a burrow, or on elevated areas, such as dirt mounds or fence posts that are used as observational or hunting perches. Foraging and breeding habitat for burrowing owl includes native and non-native grasslands, deserts, and agricultural areas. Three habitat characteristics that comprise burrowing owl habitat include openness (lack of canopy cover), short vegetation, and burrow availability. Suitable habitat may also include areas with trees and shrubs, as long as the canopy covers less than 30 percent of the ground surface. Vegetation height has been identified as a limiting factor in occupancy. One study reported occupied burrows in grass with an average height between 2.87 and 4.4 inches. Burrowing owls will utilize edge habitats around agricultural fields, golf courses, and airports where there is little or sparse vegetation and raised elevations, which facilitate hunting of small rodents, birds, lizards and insects, with the main prey being Jerusalem cricket. Owls have been reported foraging up to one mile from breeding areas, according to Wildlife Research Associates. This species was observed approximately 386 feet from the study area on the west side of the SR 4 Bypass (CNDDDB 2006). Based on the presence of ground squirrels and their burrows on the site the potential for owls to occur is high.

Raptors

Raptors including white-tailed kite, American kestrel and red-tailed hawk are Protected under the Federal Migratory Bird treaty Act and Fish and Game Code 3503.5 and 3511. Nest structures for raptor species range from stick nests to burrows. Remnant orchard trees and riparian trees located along Sand Creek provide potential nesting habitat for a limited number of the raptor species listed above, including white-tailed kite, which has been observed nesting in abandoned orchards and non-native trees in the vicinity of the project site. No suitable nesting trees for raptors occur within the study area or along Sand Creek.

Passerines

Passerines (or perching birds), including loggerhead shrike, Say's phoebe, mourning dove and ground-nesting species, such as western meadowlark and horned lark, are protected under the Federal Migratory Bird Treaty Act and Fish and Game Code 3503.5. Several of these species, including western meadowlark and horned lark, breed in open grasslands throughout the Central Valley and adjacent foothills and along the central and southern California coast region. These species typically prefer shorter, less dense grasses and areas with some bare ground. California horned lark often forms flocks in the summer and winter months, foraging and roosting in cultivated fields and along dirt roads and feeding on insects and seeds. Tree nesting species, such as loggerhead shrike and mourning dove, prefer densely vegetated, isolated trees and shrubs and occasionally man-made structures are typically used for nesting. Loggerhead shrikes feed on a variety of small prey, including arthropods, small mammals, amphibians, reptiles and birds. These passerines may nest within the trees along Sand Creek adjoining the project site. Therefore, there is a moderate likelihood these species will nest adjacent to the site.

This section summarizes the potential temporary biological impacts from construction activities within the study area. The analysis of these impacts is based on a single reconnaissance-level survey of the study area, a review of existing databases and literature, and personal professional experience with biological resources of the region. Potential impacts to special-status biotic resources, namely to individual special-status animal species may occur from the proposed project. Mitigation for these biological impacts to avoid adverse effects on the environment, are provided below.

Mitigation Measures

The following mitigation measures would reduce potential impacts to special status habitats and species identified below to a **less-than-significant** level:

Impact 4-a: San Joaquin kit fox. The SJKF has no potential for occurrence on-site, and based on the presumed presence of extremely low numbers in the region and the physical distance and urban separation of the site from known San Joaquin kit fox habitat, no suitable habitat for this species occurs on the project site. Although ground squirrel burrows, which could provide potentially suitable denning habitat, were observed on site, no burrows showed signs of San Joaquin kit fox activity (i.e., large dirt ramps from excavation, cleared vegetation, tracks, scat, etc). Therefore, construction within the grasslands would not result in any temporary direct or indirect impacts to San Joaquin kit fox individuals and/or habitat. This is a **less-than-significant** impact. Therefore no additional mitigation measures are required.

Impact 4-b: Burrowing owl. The proposed project could result in the removal of BUOW nesting habitat within the non-native grasslands. No focused surveys for nesting burrowing owls have been conducted within the 54-acre project site. Disturbance during the nesting season (February 1 through August 31) could result in potential nest abandonment and mortality of young, resulting in "take" of individuals.

Mitigation Measure 4-b: *To avoid "take" and ensure that potential impacts to BUOW are reduced to a less-than-significant level, the following measures shall be implemented:*

- (1) *Grading or stockpiling activities shall occur outside the nesting season (Feb. 1-Aug. 31). If such work is to occur during the nesting season (Feb. 1-Aug. 31), then prior to issuance of a stockpiling or grading permit, the project proponent shall submit to CDFG and the Community Development Department a pre-construction survey of the project site for BUOW performed in accordance with CDFG standards. The survey shall be conducted by a qualified biologist not more than 30 days prior to application for the permit. In addition, if ground disturbing activities are delayed or suspended for more than 30 days after the pre-construction survey, the site shall be re-surveyed (unless resumption of work is delayed until after August 31).*
- (2) *If nesting burrowing owls are not discovered during the pre-construction survey, further mitigation is not required unless the City has adopted a Habitat Conservation Plan (HCP) fee. In the event that the City has adopted a HCP fee prior to the issuance of initial permits, the project proponent shall pay the adopted fee in effect at that time. If nesting burrowing owls are observed during the pre-construction surveys, the applicant shall perform the following additional measures:*
 - *A fenced 300-foot buffer shall be created between the nesting site(s) (that is, the active burrow(s)) and any earth-moving activity or other disturbance. This 300-foot buffer may be removed once it is determined by a qualified raptor biologist that the young have fledged. Typically, the young fledge by August 31; however this date may be earlier or later than August 31 and would have to be determined by a qualified raptor biologist.*
 - *To offset the loss of foraging and burrow habitat on the project site, off-site BUOW occupied habitat shall be acquired and permanently protected, based on 1.5 times 6.5 acres for each pair and each unpaired resident bird, in accordance with the California Burrowing Owl Consortium (CBOC) 1993 report and the CDFG 1995 Staff Report. If the mitigation site is habitat that is contiguous to occupied habitat (but not occupied itself) then mitigation will be required at 2 times the 6.5 acres per pair or individual.*

Impact 4-c: Passerine nesting: The proposed project could result in the removal of potential nesting habitat for passerines, including loggerhead shrike, Say's phoebe, mourning dove and ground-nesting species, such as western meadowlark and horned lark (as protected under the Federal Migratory Bird Treaty Act and Fish and Game Code 3503.5) in the non-native grasslands and small trees along the northern project boundary. No focused surveys for nesting passerines have been conducted within the project area. Disturbance during the nesting season may result in the potential nest abandonment and mortality of young.

Mitigation Measure 4-c: To avoid "take" and/or further evaluate presence or absence of passerines, the following measures are recommended:

- (1) Grading within the grasslands shall be conducted outside the nesting season, which occurs between approximately February 1 and August 15.
- (2) If grading before February 1 is infeasible and groundbreaking must occur within the breeding season, a pre-construction nesting bird survey of the grasslands and adjacent trees shall be performed by a qualified biologist and submitted to the City and CDFG. If no nesting birds are observed, no further action is required and grading shall occur within one week of the survey to prevent "take" of individual birds that may have begun nesting after the survey.
- (3) If birds are observed on site after February 1 it will be assumed that they are nesting on site or adjacent to the site and ground breaking will have to be delayed until after the young have fledged, as determined by bird surveys by a qualified biologist, or after the nesting season.
- (4) The CDFG Central Coast Regional office does allow grading to occur if nesting birds are observed on site, providing that a 100 foot buffer zone is created around the observed nest until the young have fledged.

d. Wildlife movement includes migration (i.e., usually one way per season), inter-population movement (i.e., long-term genetic flow) and small travel pathways (i.e., daily movement corridors within an animal's territory). While small travel pathways usually facilitate movement for daily home range activities such as foraging or escape from predators, they also provide connection between outlying populations and the main corridor, permitting an increase in gene flow among populations.

These linkages among habitat types can extend for miles between primary habitat areas and occur on a large scale throughout California. Habitat linkages facilitate movement among populations located in discrete areas and populations located within larger habitat areas. The mosaic of habitats found within a large-scale landscape results in wildlife populations that consist of discrete sub-populations comprising a large single population, which is often referred to as a meta-population. Even where patches of pristine habitat are fragmented, such as occurs with coastal scrub, the movement between wildlife populations is facilitated through habitat linkages, migration corridors and movement corridors. Depending on the condition of the corridor, genetic flow between populations may be high in frequency, thus allowing high genetic diversity within the population, or may be low in frequency. Potentially low frequency genetic flow may lead to complete isolation, and if pressures are strong, potential extinction (McCullough 1996; Whittaker 1998).

Although the site is undeveloped, it was once orchards which sustained a certain amount of disturbance. Within the last few years commercial and residential development has occurred to the south and east of the site, with Segment 2 of the State Route 4 Bypass occurring on the west side of the site. Based on the recent development, only Sand Creek provides any movement corridor between the east and west sides of the SR 4 Bypass. Small predators, such as domestic cats and opossum, more than likely use the Sand Creek corridor. Other wildlife species potentially using the corridor include amphibians that may move from the west to the east. However, no suitable habitat occurs along Sand Creek east of the site, due to the removal of the riparian canopy cover for flood control purposes. No significant impacts to this adjoining corridor would result from development within the project area as contemplated.

e.f. No heritage trees or other important natural vegetation would be affected by development of the 54-acre project site. The property has been recently disked, and supports emerging non-native grasslands. The project is classified on the City of Brentwood General Plan for Regional Commercial land uses, and its development was contemplated in the programmatic analysis of urban development in the General Plan EIR. Therefore, no impacts are anticipated to occur.

Issue	Sources (See Item #18 Below)	Potentially Significant Impact	Less than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
5. Cultural Resources: Would the project:					
a) Cause a substantial adverse change in the significance of a Historical resource as defined in § 15064.5?				✓	
b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to § 15064.5?			✓		
c) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?			✓		
d) Disturb any human remains, including those interred outside of formal cemeteries?			✓		

Discussion

a-c. As documented in the Brentwood General Plan EIR and the site-specific Archaeological Survey and Cultural Resources Assessment prepared by William Self Associates (Appendix F), no significant prehistoric or historic archaeological sites are known to exist in the vicinity of the project site. No structures exist on the 54-acre site. The City of Brentwood 2001 General Plan EIR identifies two properties which are listed on the National Register of Historic Places, and 14 properties listed in the State Historic Properties Directory. The project site is not among those listed.

The potential exists, however, that archaeological resources may become apparent once vegetation is removed or during construction excavation. The site was evaluated for the presence of historic site indicators including foundations, fence lines, ditches, standing buildings, objects or structures such as sheds or concentrations of materials at least 50 years in age. In addition, it was evaluated for prehistoric site indicators including darker soils with concentrations of ash, charcoal, bits of animal bone, shell, flaked stone, groundstone, and even human bones. Section 15064.5 of the CEQA Guidelines establishes rules for determining the significance of impacts to architectural and historic resources. Any project which would cause a substantial change in the significance of an historic resource (such as the demolition of an historic building) may have a significant effect on the environment.

A preliminary reconnaissance was conducted by William Self Associates in September 2005 by walking transects over the entire project site. Such an archaeological site evaluation assesses the potential for a site to meet one or more of the criteria for "importance" based upon visual surface and subsurface evidence (if available), information gathered during the literature and record searches, and the researcher's knowledge of and familiarity with the historic or prehistoric context associated with the site. No direct evidence of occurrence of archaeological resources was encountered on site or through review of available records.

Impact 5-a: Potential grading-related impacts. The potential exists that archaeological resources may become apparent once vegetation is removed or during construction excavation. In order to mitigate the potential for impact to historic or pre-historic resources to a *less-than-significant* level, the following measure shall be implemented.

Mitigation Measure 5-a: *Prior to grading permit issuance, the developer shall submit plans to the Community Development Department for review and approval which indicate (via notation on the improvement plans) that if historic and/or cultural resources are encountered during site grading or other site work, all such work shall be halted immediately within the area of discovery and the developer shall immediately notify the Community Development Department of the discovery. In such case, the developer shall be required to, at its own expense, retain the services of a qualified archaeologist for the purpose of recording, protecting, or curating the discovery as appropriate. The archaeologist shall be required to submit to the Community Development Department for review and approval, a report of the findings and method of curation or protection of the resources. Further grading or site work within the area of discovery will not be allowed until the proceeding work has occurred.*

d. The potential for discovery of human remains is low to moderate on this site, according to the available archaeological and cultural resources analysis presented in the Brentwood General Plan EIR and the site-specific Archaeological Survey and Cultural Resources Assessment (Appendix F), and as described above. In the event that Native American human remains or funerary objects are discovered, the provisions of the California Health and Safety Code should be followed, in addition to Mitigation Measure 5-a above.

Impact 5-b: Identification of Human Remains During Construction. The following supplemental mitigation measure should be implemented in furtherance of the language contained in Section 7050.5(b) of the California Health and Safety Code, in the event that human remains or possible human remains are located, in order to comply with State law and reduce any potential impact to a *less-than-significant* level.

Mitigation Measure 5-b: In the event of discovery or recognition of any human remains, there shall be no further excavation or disturbance of the site or any nearby area reasonably suspected to overlie adjacent remains until the coroner of the county in which the human remains are discovered has determined, in accordance with Chapter 10 (commencing with Section 27460) of Part 3 of Division 2 of Title 3 of the Government Code, that the remains are not subject to the provisions of Section 27492 of the Government Code or any other related provisions of law concerning investigation of the circumstances, manner and cause of death, and the recommendations concerning treatment and disposition of the human remains have been made to the person responsible for the excavation, or to his or her authorized representative, in the manner provided in Section 5097.98 of the Public Resources Code.

Issue	Sources (See Item #19 Below)	Potentially Significant Impact	Less than Significant With Mitigation Incorporated	Less Than Significant Impact	No impact
6. Geology and soils: Would the project:					
a) Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving:					
i) Rupture of a known earthquake fault, as defined on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42.			✓		
ii) Strong seismic ground shaking?			✓		
iii) Seismic-related ground failure, including liquefaction?			✓		
iv) Landslides?				✓	
b) Result in substantial soil erosion or loss of topsoil?			✓		
c) Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse?			✓		
d) Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial risks to life or property?			✓		
e) Have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of wastewater?					✓

Discussion

a.i-ii. A geotechnical analysis of the Brentwood Planning Area is presented in the 2001 General Plan EIR, and a site-specific analysis of potential risks associated with surface and subsurface movement is presented in the Preliminary Geotechnical Investigation prepared by Treadwell & Rollo (Appendix H). Together, these studies confirm the absence of any earthquake faults as occurring within or adjoining the project site, and show that the site itself is not located within a State mandated Earthquake Fault Hazard Zone. According to these reports, several active faults occur within the region, and have a potential to induce strong ground shaking.

Impact 6-a: Earthquake-induced instability. Earthquake activity can have a significant effect on overall stability of the developed site.

Mitigation Measure 6-a: *All grading and foundation plans for the development designed by the project civil and structural engineer shall be reviewed and approved by the City Engineer and Chief Building Official prior to issuance of grading and building permits to ensure that all geotechnical recommendations specified in the geotechnical report are properly incorporated and utilized in design.*

a.iii, c,d. The Brentwood 2001 General Plan states that during a seismic event rapid loading of saturated, fine-grained soil may create excess pore pressures, which may not dissipate rapidly. The excess pressure may result in a loss of shear strength, which is referred to as liquefaction. The potential for liquefaction is greater when the groundwater is shallow (less than 50 feet). The Treadwell & Rollo Geotechnical Report identifies the respective soil types present on the subject property, and examines the risks associated with potential liquefaction and other potential seismically-induced ground failure. The Geotechnical Report (August 2005), finds that on the basis of data from the borings, CPT's and laboratory test results, there are some layers of sand and silt layers that may liquefy and result in seismically induced settlement at the surface. The Report concludes that these layers appear to be thin and discontinuous, and therefore, other earthquake-induced ground failures such as lurching and landsliding have a low potential for occurrence.

Impact 6-b: Liquefaction. Liquefaction would be expected to have a *less than significant* impact on the proposed project, subject to implementation of the following measure.

Mitigation Measure 6-b: *The foundation design shall take into consideration the potential for post-liquefaction settlement in the silt and sand layers at depth and the presence of moderately to highly expansive soil. Mitigation Measure 6-a shall be followed, and plans shall incorporate building designs to reduce the potential for damage from the effects of differential settlement resulting during an earthquake, and from expansive soil.*

a.iv. The project site is relatively flat, averaging less than 0.8% average slope. The potential for impacts associated with landslide activity is therefore considered low. Compliance with Mitigation measures 6-a and 6-b above will result in a **less-than-significant** effect.

b. The project site consists of vacant land without the presence of any structures. Proposed commercial development would overlay much of the ground with heavy, impermeable surfaces such as retail buildings, parking lots, streets, driveways, and sidewalks. The constructed surfaces would both shield the soil from wind and water and secure the soil from movement. Therefore, long-term alterations to the land by the proposed project would not promote a significant loss of topsoil.

The Brentwood General Plan EIR states that soil erosion potential in the Planning Area is not a significant problem in most locations due to the generally flat topography and the cohesive nature of the soils. However, soil erosion potential is considered potentially significant in areas with slopes over 5 percent and in areas with sandy soils. The project site is relatively flat; however, erosion resulting from landscape improvements could result in adverse impacts. Furthermore, because construction activities include excavation and grading operations, which would relocate topsoil and break the soil into easily transported particles, earth surfaces would be susceptible to erosion from wind and water.

Impact 6-c: Soil Erosion. Soil erosion resulting from grading of the project area would be considered potentially significant unless mitigated through implementation of the following measures.

Mitigation Measure 6-c: *Prior to grading permit issuance, the applicant shall submit a grading plan to the City Engineer for review and approval. If the grading plan differs significantly from the proposed grading illustrated on the approved project plans, plans that are consistent with the new revised grading plan shall be provided for review and approval by the City Engineer.*

Mitigation Measure 6-d: *Any applicant for a grading permit shall submit an erosion control plan to the City Engineer for review and approval. This plan shall identify protective measures to be taken during construction, supplemental measures to be taken during the rainy season, the sequenced timing of grading and construction, and subsequent revegetation and landscaping work to ensure water quality in creeks and tributaries in the General Plan Area is not degraded from its present level. All protective measures shall be shown on the grading plans and specify the entity responsible for completing and/or monitoring the measure and include the circumstances and/or timing for implementation.*

Mitigation Measure 6-e: *Prior to approval of final facilities design, plans for drainage and stormwater runoff control systems and their component facilities shall be submitted to the Engineering Department for review and approval to ensure that these systems and facilities are non-erosive in design.*

Mitigation Measure 6-f: *Grading, soil disturbance, or compaction shall not occur during periods of rain or on ground that contains freestanding water. Soil that has been soaked and wetted by rain or any other cause shall not be compacted until completely drained and until the moisture content is within the limit approved by a Soil Engineer. Approval by a Soil Engineer shall be obtained prior to the continuance of grading operations. Confirmation of this approval shall be provided to the Engineering Department prior to commencement of grading.*

e. The project does not involve demand for septic tank facilities; public sewer is currently available nearby to serve the proposed commercial development, and will be extended as a condition of building permits. Therefore, **no impact** will result.

Issue	Sources (See Item #18 Below)	Potentially Significant Impact	Less than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
7. Hazards and Hazardous Materials: Would the project:					
a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?			✓		
b) Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?				✓	
c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?				✓	
d) Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code §65962.5 and, as a result, would it create a significant hazard to the public or the environment?					✓
e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard for people residing or working in the project area?					✓
f) For a project within the vicinity of a private airstrip, would the project result in a safety hazard for people residing or working in the project area?					✓
g) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?					✓
h) Expose people or structures to a significant risk of loss, injury or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands?					✓

Discussion

a. No transport, storage or disposal of hazardous materials is associated with the anticipated future commercial development on the project site. No other hazardous materials will be used in sufficient quantities or under circumstances which could result in a potential hazard to the public or the environment. All construction work shall be in compliance with City ordinances, which will address construction-related hazards, materials usage and disposal.

A Phase I Environmental Site Assessment (Report) was prepared for the project site by Treadwell & Rollo (February 2004, contained in Appendix "G"). The Report states in Section 5.1 that four of five former oil wells

located on the project site have been abandoned in accordance with State regulations by placing cement plugs in the wells to specified depths. A fifth well is scheduled for abandonment, according to the Treadwell & Rollo report. As planned, the proposed project will complete abandonment for the remaining well in accordance with State standards. On-site building setbacks have been designed to be consistent with the Brentwood Zoning Ordinance, Section 17.680.021 (B), which states the following regarding abandoned oil and gas wells:

"Tentative maps, planned development and other development plans submitted to the City shall show the exact location of all wells drilled on the property. Prior to development of an area, any well shown as abandoned shall be accompanied by written verification for the DOG (State Division of Oil and Gas). Development shall be designed such that the Building Official is satisfied that no structure will be built within ten feet of any well that has been properly abandoned pursuant to DOG requirements. Any lot or parcel containing an abandoned well shall be encumbered with a deed restriction specifying the exact location of such well and prohibiting any construction within the ten-foot area. If a final map is recorded, the encumbrance shall be recorded concurrent with the final map. The DOG, at their discretion, may also require that any abandoned well be uncovered, tested for leakage, require remedial work on leaking wells, and be accurately located on the final map before recordation of the map."

Therefore, because the project buildings would have setbacks from the oil wells consistent with the Brentwood Zoning Ordinance and because the low-levels of detected contaminants would not pose a threat to domestic water supply, the abandoned on-site oil wells would not have adverse impacts on future site visitors or the public.

Impact 7-a: Abandoned Oil Wells. Implementation of the following mitigation measures would mitigate potential impacts to a *less-than-significant* level.

Mitigation Measure 7-a: *Prior to issuance of any construction permits, the applicant shall submit proof to the satisfaction of the City Engineer that all planned commercial buildings on-site are at least 10 feet from any abandoned wells. Precise locations of all oil well sites and underground utility systems shall be depicted on the site grading and improvement plans.*

- b. The location of any existing pipelines or other underground utilities on the subject property have been identified in the Treadwell & Rollo Report (Appendix G), and will be accurately identified in the field prior to construction, and documented through the site grading and improvement plan review process. Any potential hazards associated with any such facilities will be reduced to a less than significant level through implementation of Mitigation Measure 7-a above.
- c. Loma Vista Elementary School is located approximately one-fourth mile to the south of the project site, fronting along the north side of San Jose Avenue, and separated from the project by the existing Sand Creek Crossing regional commercial center. No impacts to Loma Vista Elementary would result from development of the proposed project, based on implementation of Mitigation Measure 7-a above.
- d. The project site is not located on a known or listed hazardous materials site, according to information documented in the Preliminary Geotechnical Investigation (Appendix H), the Phase I Environmental Site Assessment (Appendix G), and the Brentwood General Plan EIR analysis.
- e,f. No public airport is located within 2 miles of the project site; no impacts will result. No private airport is located within the vicinity of the project site; no impacts will result.
- g. Development of the project site would not interfere with an adopted emergency response plan or emergency evacuation plan. Therefore, *no impact* would occur.
- h. Equipment used on site shall be properly licensed and maintained in accordance with City ordinances. The project site is located adjacent to public streets with adequate access for fire protection. *No impacts* to wildlands would result from development of the subject property.

Issues	Sources (See Item #18 Below)	Potentially Significant Impact	Less than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
8. Hydrology and Water Quality: Would the project:					
a) Violate any water quality standards or waste requirements?			✓		
b) Substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g., the production rate of pre-existing nearby wells would drop to a level which would not support existing land uses or planned uses for which permits have been granted)?				✓	
c) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner which would result in substantial erosion or siltation on- or off-site?			✓		
d) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site?			✓		
e) Create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted water?			✓		
f) Otherwise substantially degrade water quality?			✓		
g) Place housing within a 100-year flood hazard area as mapped on a federal Flood Boundary or Flood Insurance Rate Map or other flood hazard delineation map?					✓
h) Place within a 100-year flood hazard area structures which would impede or redirect flood flows?					✓
i) Expose people or structures to a significant risk of loss, injury or death involving flooding, including flooding as a result of the failure of a levee or dam?					✓
j) Inundation by seiche, tsunami, or mudflow?					✓

Discussion

a,f. The existing site slopes roughly west to east, at an average slope of approximately 0.8%. Short-term grading and construction activities may cause an increase in erosion leading to sedimentation of streams in

the affected watershed, which could result in stormwater pollution. Stormwater pollution control is the responsibility of the State Water Resources Control Board and the California Regional Water Quality Control Board and is implemented through the use of National Pollution Discharge Elimination System (NPDES) permits. The City of Brentwood is responsible for ensuring compliance with the stormwater pollution control standards. The proposed project's construction activities could result in an increase in erosion, and consequently, affect water quality. Therefore, a potentially significant impact could occur. A detailed Storm Water Control Plan (C.3 Report) has been prepared by the project civil engineers, however, to address the potential adverse effects of stormwater pollution.

Impact 8-a: Stormwater pollution. Implementation of the following mitigation measure would reduce the impacts to a *less-than-significant* level.

Mitigation Measure 8-a: *Prior to grading permit issuance, the developer shall submit to the City Engineer for review and approval a Drainage Master Plan and Stormwater Control Plan (based on current C.3 regulations), which implement Best Management Practices (BMPs) to control quality of stormwater runoff. A National Pollution Discharge Elimination System (NPDES) construction permit shall be obtained for any disturbance of more than one acre.*

b. The Brentwood 2001 General Plan indicates that water is provided by the City of Brentwood, and that the primary water supply is groundwater supplemented by treated surface water. The 2001 General Plan Update EIR suggests that, at build-out, Brentwood's water demand is projected to be approximately 19 million gallons per day (MGD). Available water supply is projected to be 19.45 MGD. Therefore, because the development of the project site is anticipated in the build-out of the General Plan, the proposed project would have a less than significant impact related to groundwater supplies and recharge.

c-e. The existing site slopes roughly west to east, at an average slope of approximately 0.8%. The site has an overall topographic relief of 16 feet, ranging from elevation 132 (mean sea level) at the highest portion of the site along the western boundary line to approximately elevation 116 at the lowest point along Shady Willow Lane. The site, historically farmed, is currently undeveloped, and covered with native vegetation.

The proposed development of the site will drain from west to east to an existing 48" storm drain line constructed in conjunction with a residential subdivision on the east side of Shady Willow Lane. This existing storm drain line flows to an existing detention basin further east and downstream. The detention basin attenuates peak flows and then releases the drainage into Sand Creek. Both the existing 48" pipe and the detention basin were sized to accept the flows from the project site.

Impact 8-b: Stormwater detention facilities. Implementation of the following mitigation measures would ensure the impact is *less-than-significant*.

Mitigation Measure 8-b (1): *Prior to grading permit issuance, the developer shall submit to the City Engineer for review and approval a Drainage Master Plan which implements BMPs to control quality of stormwater runoff. The plan shall describe how on-site drainage systems will be designed to compensate for the reduced water absorption capacity of the site and to prevent flooding of adjacent properties. The plan must ensure that all stormwater entering or originating within the project site shall be conveyed, without diversion of the watershed, to the nearest adequate, natural watercourse, or adequate man-made drainage facility. The rate of surface runoff in the post-development condition will be maintained at the same level as exists prior to development of the project. Final engineering analysis and design of the Streets of Brentwood project will confirm the adequacy of the existing system to convey the drainage from the site. If additional capacity is required, it will be attained through: (1) construction of a parallel storm drain across the undeveloped parcel west of Shady Willow Lane to the existing detention basin; or (2) the construction of on-site detention facilities within the project boundary.*

Mitigation Measure 8-b (2): *Design of both the on-site and downstream drainage facilities shall meet with the approval of both the City Engineer and the Contra Costa County Flood Control & Water Conservation District prior to grading permit issuance. Contra Costa County Flood Control & Water Conservation District drainage fees for the Drainage Area shall be paid prior to issuance of a grading permit.*

g-i. No portion of the subject property is subject to a 100-year flood or affected by potential failure of a levee or dam. Therefore **no impacts** would result from implementation of the proposed project.

j. Tsunamis are defined as sea waves created by undersea fault movement. A tsunami poses little danger away from shorelines; however, when it reaches the shoreline, a high swell of water breaks and washes inland with great force. Waves may reach 50 feet in height on unprotected coasts. Historic records of the Bay Area used by one study indicate that 19 tsunamis were recorded in San Francisco Bay during the period of 1868-1968. Maximum wave height recorded at the Golden Gate tide gauge (where wave heights peak) was 7.4 feet. The available data indicate a standard decrease of original wave height from the Golden Gate to about half original wave height on the shoreline near Richmond, and to nil at the head of the Carquinez Strait. As Brentwood is several miles inland from the Carquinez Strait, the project site is not exposed to flooding risks from tsunamis and adverse impacts would not result.

A seiche is a long-wavelength, large-scale wave action set up in a closed body of water such as a lake or reservoir, whose destructive capacity is not as great as that of tsunamis. Seiches are known to have occurred during earthquakes, but none have been recorded in the Bay Area. In addition, the project is not located near a closed body of water. Therefore, it is not anticipated that the project site would be impacted by seiches in the future.

No landslides or slope instability impacts are expected as a result of this project, as discussed above.

Issue	Sources (See Item #18 Below)	Potentially Significant Impact	Less than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
9. Land Use and Planning: Would the project:					
a) Physically divide an established community?				✓	
b) Conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to the general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect?				✓	
c) Conflict with any applicable habitat conservation plan or natural community conservation plan?					✓

Discussion

- a. As noted in the General Plan, the City of Brentwood has planned for orderly, logical development that supports compatibility among adjacent uses. The General Plan goals seek to retain the character of existing communities and ensure that future land uses are compatible with existing uses. The project site consists of vacant land. As a result, the current project site does not contain an existing community, nor does it propose to divide an existing community. Therefore, the proposed project would not divide an existing community and would result in a **less than significant** impact.
- b. The Brentwood General Plan identifies the 54-acre project site as Special Planning Area "D". The proposed shopping center use is consistent with the regional commercial land use classification applied to SPA "D". The project is subject to development and design standards of the implementing PD-6 Zone for SPA "D", as discussed in Section 1 (Aesthetics) above, and would therefore have a **less-than-significant** impact.
- c. The project site is not located within the area designated by the General Plan as Expected Habitat Conservation Plan or Area of Significant Natural Open Space. Therefore, **no impact** would occur.

Issue	Sources (See Item #18 Below)	Potentially Significant Impact	Less than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
10. Mineral Resources: Would the project:					
a) Result in a loss of availability of a known mineral resource that would be of value to the region and the residents of the state?				✓	
b) Result in the loss of availability of a locally-important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan?				✓	

Discussion

a,b. Regarding the loss of availability of locally important mineral resource recovery, the project site is located within a designated gas field. The Brentwood 2001 General Plan Update EIR identifies coal, oil and gas, and sand as the significant mineral resources within the area. In addition, although the development of the project site would not result in loss of access to possible oil and gas deposits off-site, should the well sites within the project area not be identified prior to project development, a *potentially significant* impact would occur.

Impact 10-a: Mineral Resources. Potential impacts will be reduced to a *less-than-significant* level through implementation of Mitigation measure 7-a.

Issue	Sources (See Item #18 Below)	Potentially Significant Impact	Less than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
11. Noise: Would the project:					
a) Exposure of persons to or generation of noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?			✓		
b) Exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels?			✓		
c) A substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project?			✓		
d) A substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project?			✓		
e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?					✓
f) For a project within the vicinity of a private airstrip, would the project expose people residing or working on the project area to excessive noise levels?					✓

Discussion

ad. The existing noise environment and potential project-generated noise effects are addressed in a focused Environmental Noise Assessment, prepared by Bollard Acoustical Engineers (April 2006, contained in Appendix B). The existing ambient noise environment in the immediate project vicinity is defined primarily by local traffic on Sand Creek Road and Shady Willow Lane, as well as traffic on the State Route 4 Bypass. The Bollard analysis shows that noise from the existing commercial operations to the south are insignificant when compared to noise from the traffic noise sources.

To quantify the existing ambient noise environment in the project vicinity, short-term (15-minute) ambient noise level measurement surveys were conducted at three locations in the project area between 2-3 p.m. on February 21, 2006. Ambient noise level survey results are presented in the following table.

SUMMARY OF AMBIENT NOISE LEVEL MEASUREMENTS, SHORT-TERM SAMPLES – FEB. 21, 2006 (2-3 p.m.)

Site	Location	L _{eq} , dB	L _{max} , dB	Noise Sources
A	Southeast – Vacant Land	61	81	Traffic on Shady Willow Ln. and Sand Creek Rd.
B	Northeast – Park	47	59	Traffic on Shady Willow Ln. and local construction
C	Northwest – On Site	51	57	Traffic on Highway 4

(Source: Bollard Acoustical Consultants, Inc.)

Roadway Traffic Noise

To predict existing noise levels due to traffic, the Federal Highway Administration Highway Traffic Noise Prediction Model (FHWA RD-77-108) was used. Traffic volumes for existing conditions were obtained from the Traffic Impact Study prepared for the project by Abrams Associates (Appendix A). The data within that report is in the form of AM/PM peak-hour intersection turning movements, which was converted to ADT by Bollard Acoustical Consultants, Inc. The following table reflects the existing noise levels within a study area potentially affected by the Streets of Brentwood project.

EXISTING TRAFFIC NOISE LEVELS AND CONTOUR DISTANCES

Roadway	Segment	Distance to Noise Contour (feet)			
		L _{dn} (dB) @ 75 Feet	70 dB L _{dn}	65 dB L _{dn}	60 dB L _{dn}
Sand Creek Road	Highway 4 – Shopping Center	66	41	89	191
	Shopping Center – Shopping Center	65	35	75	163
	Shopping Center – Shady Willow Ln.	66	38	81	175
	Shady Willow Ln. – Fairview Ave.	65	36	77	165
	East of Fairview Ave.	64	31	67	145
Shady Willow Lane	North of Grant Street	58	11	24	52
	Grant Street – Empire Ave.	57	10	21	45
	Empire Ave. – Los Cielos Way	59	15	32	69
	Los Cielos Way – Sand Creek Rd.	59	14	29	63
	South of Sand Creek Rd.	56	9	19	41
SR 4 Bypass	North of Sand Creek Rd.	68	58	125	269
	South of Sand Creek Rd.	67	45	96	207
Grant Street	West of Shady Willow Lane	31	0	0	1
	East of Shady Willow Lane	50	3	7	15
Empire Avenue	West of Shady Willow Lane	42	1	2	4
	East of Shady Willow Lane	52	5	11	23
Los Cielos Way	East of Shady Willow Lane	45	2	4	8
Fairview Avenue	North of Sand Creek Rd.	60	17	37	79
	South of Sand Creek Rd.	61	18	38	82

(Source: FHWA-RD-77-108 with inputs from Abrams Associates and Bollard Acoustical Consultants, Inc.)

Brentwood General Plan Noise Element

The City of Brentwood General Plan Noise Element sets forth land use compatibility criteria for various community land uses. For noise generated by transportation noise sources such as traffic, the Noise Element specifies that residential land uses are compatible with exterior noise levels of up to 60 dB L_{dn} without the need for noise mitigation. The 60 dB L_{dn} noise level is considered an acceptable noise environment for residential outdoor activities. The City may allow an exterior noise level of up to 65 dB L_{dn} provided that available exterior noise level reduction measures have been implemented and interior noise levels are in compliance with the City standard.

The City's interior noise level criterion of 45 dB L_{dn} is specified in the Noise Element for residential land uses exposed to transportation noise sources. The intent of this interior noise standard is to provide a suitable environment for indoor communication and sleep. In addition to the L_{dn} criteria discussed above, the City has established noise level performance criteria regarding non-transportation noise exposure at noise-sensitive uses. These standards are summarized in the following table:

NOISE LEVEL PERFORMANCE STANDARDS, CITY OF BRENTWOOD NOISE ELEMENT

Noise Level Descriptor	Daytime (7 a.m. – 10 p.m.)	Nighttime (10 p.m. – 7 a.m.)
Hourly Average (L_{eq} , dB)	50	45
Maximum (L_{max} , dB)	70	65

Standards of Significance

Generally, a project may have a significant impact on the environment if it will substantially increase the ambient noise levels at adjoining areas or expose people to severe noise levels. In practice, more specific professional standards have been developed, as discussed above. These standards state that a noise impact may be considered significant if it would generate noise that would conflict with local planning criteria. Additionally, noise impacts associated with the proposed project would be considered significant if they would expose existing noise-sensitive land uses to a traffic noise level increase of 3 dB or more.

Impact 11-a: Traffic Noise. To assess noise impacts due to project-related traffic increases on the local roadway network, traffic noise levels were predicted at a representative distance (75 feet from the roadway centerlines) for the Existing + Project, Cumulative, and Cumulative + Project conditions. The traffic noise levels were predicted using the same modeling methodology used for the Existing scenario described in above. Results of this analysis are summarized in the following table:

PREDICTED TRAFFIC NOISE LEVELS AT 75 FEET FROM ROADWAY CENTERLINES

Roadway	Segment	L _{dn} , dB (Change, dB)	
		Existing + Project	Cumulative + Project
Sand Creek Road	Highway 4 – Shopping Center	69 (+3)	72 (+1)
	Shopping Center – Shopping Center	68 (+3)	71 (+1)
	Shopping Center – Shady Willow Ln.	67 (+1)	70 (0)
	Shady Willow Ln. – Fairview Ave.	67 (+2)	70 (0)
	East of Fairview Ave.	65 (+1)	69 (+1)
Shady Willow Lane	North of Grant Street	60 (+2)	67 (0)
	Grant Street – Empire Ave.	60 (+3)	68 (+1)
	Empire Ave. – Los Cielos Way	63 (+4)	71 (+1)
	Los Cielos Way – Sand Creek Rd.	63 (+4)	67 (+2)
	South of Sand Creek Rd.	57 (+1)	59 (+1)
Highway 4	North of Sand Creek Rd.	69 (+1)	NA
	South of Sand Creek Rd.	67 (0)	NA
Grant Street	West of Shady Willow Lane	31 (0)	50 (0)
	East of Shady Willow Lane	54(+4)	56 (+3)
Empire Avenue	West of Shady Willow Lane	42 (0)	50 (0)
	East of Shady Willow Lane	54 (+2)	64 (+1)
Los Cielos Way	East of Shady Willow Lane	45 (0)	45 (0)
Fairview Avenue	North of Sand Creek Rd.	65 (+5)	64 (0)
	South of Sand Creek Rd.	65 (+4)	68 (0)

(Source: FHWA-RD-77-108 with inputs from Abrams Associates and Bollard Acoustical Consultants, Inc.)

Based on the foregoing modeling analysis, it is expected that significant project-related noise exposure increases may be expected along parts of Shady Willow Lane, Grant Street, and Fairview Avenue in the project vicinity.

Mitigation Measure 11-a: *The project will generate increased traffic on local area roadways. As shown in the above table, project-related traffic relative to no project volumes on parts of Shady Willow Lane, Grant Street, and Fairview Avenue may elevate unmitigated traffic noise levels above the City's 60 dB L_{dn} criterion and produce a +3 dB or more increase. However, these traffic noise levels and associated increases were anticipated in the 1993 Brentwood General Plan Final EIR as being significant and unavoidable, and overriding findings of consideration were adopted. The proposed project is consistent with the Brentwood General Plan, and its contribution to cumulative noise impacts are therefore addressed in the previous General Plan EIR determination. Mitigation measures adopted with the 1993 and 2001 General Plan EIR documents included sound attenuation walls with all new residential development along arterial and collector streets in the vicinity of the proposed project.*

Impact 11-b: Parking Lot Noise. As a means of determining potential noise exposure due to project parking lot activities, Bollard Acoustical Consultants utilized noise level data collected for previous parking lot noise studies. A typical sound exposure level (SEL) due to automobile arrivals/departures, including car doors slamming and people conversing, is approximately 77 dB at a distance of 25 feet. This SEL would be approximately 60 dB at a distance of 185 feet, the approximate distance between the edge of the proposed parking lots and the closest residential property lines on Shady Willow Lane. It is assumed that approximately 110 cars could enter or leave one of the proposed project parking lots on the east side of the project site within a worst-case hour. Parking lot noise exposure was determined using the following equation:

$$\text{Peak Hour } L_{eq} = 60 + 10\log(110) - 35.6,$$

Where 60 is the SEL for a single automobile parking operation, 110 is the number of parking lot operations in a peak hour, and 35.6 is 10 times the logarithm of the number of seconds in an hour.

Using the equation and operations data described above, the proposed parking lot could be expected to produce an unmitigated noise exposure of approximately 45 dB Peak Hour L_{eq} at the closest residential property lines. Additionally, maximum noise levels (L_{max}) are generally assumed to be approximately 10 dB less than the measured/calculated SEL, or approximately 50 dB in this case. This noise exposure is expected to comply with the City's noise exposure limits (daytime and nighttime), and will therefore have a **less-than-significant** effect on the closest residential properties. No additional mitigation is required.

Impact 11-c: Project Construction. During the construction phases of the project, noise from building equipment would be expected to add to the noise environment in the immediate project vicinity. Activities involved in construction would likely generate maximum noise levels, as indicated in the table below, ranging from 85-88 dB at a distance of 50 feet. Construction activities would be temporary in nature and are anticipated to occur during normal daytime working hours. Still, existing residences located along the east side of the project site will likely be affected by this noise.

CONSTRUCTION EQUIPMENT NOISE LEVELS	
Type of Equipment	L_{max} , dB at 50 feet
Bulldozers	87
Heavy Trucks	88
Backhoe	85
Pneumatic Tools	85

(Source: Environmental Noise Pollution, Patrick R. Cunniff, 1977.)

Activities associated with the project construction will result in elevated noise levels, with maximum noise levels ranging from 85-88 dB at 50 feet as shown above. Although these levels would be audible at the nearest existing residences, they would be temporary in nature and would likely occur during normal daytime working hours. Nonetheless, because construction activities would result in periods of elevated noise levels, this impact is considered to be potentially significant. Implementation of the following noise mitigation measures would reduce this impact to a **less-than-significant** level.

Mitigation Measure 11-c (1): Construction activities shall be limited to the hours set forth below:

Monday-Friday	7:00 AM to 5:00 PM
Saturday	9:00 AM to 4:00 PM

Construction shall be prohibited on Sundays and City holidays. These criteria shall be included in the grading plan submitted by the developer for review and approval of the Community Development Director prior to grading permit issuance. Exceptions to allow expanded construction activities shall be reviewed on a case-by-case basis as determined by the Chief Building Official and/or City Engineer.

Mitigation Measure 11-c (2): All construction equipment shall use properly operating mufflers, and no combustion equipment such as pumps or generators shall be allowed to operate within 500 feet of any occupied residence during construction hours, unless the equipment is surrounded by a noise protection barrier acceptable to the Community Development Department. These criteria shall be included in the grading plan submitted by the developer for review and approval of the Community Development Director prior to grading permit issuance.

- e,f. The project site is not located near an existing airport and is not within area covered by an existing airport land use plan. Therefore, **no impact** would occur.

Issue	Sources (See Item #18 Below)	Potentially Significant Impact	Less than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
12. Population and Housing: Would the project:					
a) Induce substantial population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?					✓
b) Displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere?					✓
c) Displace substantial numbers of people, necessitating the construction of replacement housing elsewhere?					✓

Discussion

a. The proposed project would be developed in accordance with the Brentwood General Plan land use designations for the project site, as the description of Special Planning Area D anticipates regional commercial land uses. Development would not increase the population in the area. Therefore, **no impact** is anticipated to result from implementation of the project.

b,c. The project site is currently vacant. No displacement of nearby area residents would occur. Therefore, approval and implementation of the proposed project would neither displace housing nor necessitate the construction of replacement housing, and the project would thus result in **no impact**.

Issue	Sources (See Item #18 Below)	Potentially Significant Impact	Less than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
13. Public Services: Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which would cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the following public services:					
a) Fire Protection?			✓		
b) Police Protection?			✓		
c) Schools?				✓	
d) Parks?				✓	

Discussion

a,b. The proposed project is located within the jurisdiction of the Brentwood Police Department, and the East Contra Costa Fire Protection District is the current provider of fire protection services. Development of the project site would not affect the overall operations of the service providers or expand their service boundaries. However, development of the proposed project would add to the overall demand for police and fire protection services. This increase in service requirements for the proposed project is considered a potentially significant impact.

Impact 13-a: Added demand for police and fire protection services. This impact may be reduced to a *less-than-significant* level through implementation of the following measures.

Mitigation Measure 13-a(1): Prior to building permit issuance, the developer shall participate in the City of Brentwood Capital Improvement Financing Program.

Mitigation Measure 13-a(2): The Police Department shall review the design plans for this project prior to building permit issuance in order to ensure that the site plan incorporates appropriate crime prevention features.

Mitigation Measure 13-a (3): Prior to building permit issuance, the developer shall comply with all applicable requirements of the Uniform Fire Code and the adopted policies of the Contra Costa County and East Contra Costa Fire Protection Districts. The City of Brentwood Chief Building Official shall review the building plans to ensure compliance.

Mitigation Measure 13-a (4): Prior to building permit issuance, the developer shall provide an adequate and reliable water supply for fire protection with a minimum fire flow of 2,000 gallons per minute (GPM) for the residential area. The required fire flow shall be delivered from not more than two fire hydrants flowing simultaneously while maintaining 20 pounds of residual pressure in the main. The City Engineer shall ensure the minimum fire flow requirements are satisfied. Flow requirements for the commercial areas will be determined by the ECCFPD prior to issuance of encroachment and/or building permits.

Mitigation Measure 13-a (5): Prior to building permit issuance, the developer shall provide the number of East Bay type fire hydrants required by ECCFPD. Hydrant locations will be determined by the ECCFPD prior to building and/or encroachment permit issuance.

Mitigation Measure 13-a (6): *Prior to commencing construction, the developer shall provide access driveways having all-weather driving surfaces of not less than 20' unobstructed width and not less than 13'6" of vertical clearance to within 150 feet of travel distance to all portions of the exterior walls of every building. Access driveways shall not exceed 16% grade, shall have a minimum outside turning radius of 42 feet, and must be capable of supporting imposed loads of fire apparatus (37 tons). Center divide medians on any access roadways shall leave a minimum remaining lane width of 16 feet on each side. Median length shall not exceed 150 feet when a 16-foot lane width is used. A rolled curb and an unobstructed drivable surface on the median may be used to assist with meeting apparatus turning radius requirements. The City Engineer shall ensure compliance.*

Mitigation Measure 13-a (7): *Prior to encroachment and/or building permit issuance for improvements, the developer (and all subsequent property owners/homeowners) shall submit plans and specifications to the ECCFPD and the City Engineer for review and approval in accordance with codes, regulations, and ordinances administered by the ECCFPD and the State Fire Marshal's office..*

Mitigation Measure 13-a (8): *Prior to building permit issuance, the developer shall comply with any Fire and Paramedic Service Program adopted by the City Council.*

c. The project site is located within the Liberty Union High School District and the Brentwood Union School District. However, the development of commercial uses will not add to the demand for services provided by either District. Implementation of the proposed project would have a **less-than-significant** impact related to schools, subject to payment of applicable fees at the time of building permit issuance.

d. The City of Brentwood encourages an urban form that is based on open space throughout and around the community. Development of the project would not increase the demand for neighborhood, community, and regional parks and recreation facilities. However, the northerly project boundary parallels and is approximately 30 feet south of existing Old Sand Creek Road, which the City plans to incorporate into a future bicycle trail, with connections to a future business park use to the north and the subject shopping center project to the south. The proximity of the project site to the planned bicycle trail presents an opportunity for future connections, allowing trail users to access shopping and eating facilities within the project. Consequently, the project proponents plan to incorporate landscaped trail improvements within the project boundaries, extending from the central plaza to the northerly property line. Impacts as a result of the proposed project are anticipated to be **less-than-significant**.

Issue	Sources (See Item #18 Below)	Potentially Significant Impact	Less than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
14. Recreation:					
a) Would the project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?				✓	
b) Does the project include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment?				✓	

Discussion

a,b. The Brentwood General Plan Update includes general guidelines for meeting Brentwood's future parks and recreation needs, and the Parks, Trails, and Recreation Master Plan provides specific details about planned parks and recreation facilities and services. Development of the project site would not result in new demand for park or recreation facilities. However, as noted in the discussion under Section 13d above, the project's location lies to the south of the Old Sand Creek Road bicycle trail, and therefore presents an opportunity for future access to shopping and eating facilities by local bicyclists and pedestrians. Impacts of the proposed project are consequently anticipated to be ***less-than-significant***.

Issue	Sources (See Item #16 Below)	Potentially Significant Impact	Less than Significant With Mitigation Incorporated	Less Than Significant Impact	No impact
15. Transportation & Circulation: Would the project:					
a) Cause an increase in traffic which is substantial in relation to the existing traffic load and capacity of the street system (i.e., result in a substantial increase in either the number of vehicle trips, the volume to capacity ratio on roads, or congestion at intersections)?			✓		
b) Exceed, either individually or cumulatively, a level of service standard 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) Result in inadequate parking capacity?			✓		
g) Conflict with adopted policies, plans, or programs supporting alternative transportation (e.g., bus turnouts, bicycle racks)?			✓		

Discussion

a-g. The Brentwood General Plan provides a framework for growth of the City through the year 2020, including development of the subject property as a regional commercial use. The General Plan Circulation Element projects vehicle trip generation and the corresponding design of a transportation system to adequately accommodate the movement of vehicles based on this planned future development. The transportation system includes a hierarchical roadway system with different classifications designed to carry traffic generated by planned development. The General Plan EIR identifies the impact on traffic from build-out of the General Plan to be significant and unavoidable (2001 General Plan Update EIR, 3.4-32), but has adopted policies to reduce traffic impacts.

The following discussion is based largely on the project-specific Traffic Impact Analysis prepared by Abrams Associates in May 2006 (contained in Appendix A). The analysis examines existing conditions, as well as future approved (baseline) and cumulative planned development within the Brentwood Planning Area, based on the adopted General Plan and the proposed Streets of Brentwood project. The project consists of a central shopping area with approximately 391,800 square feet of retail space with additional building space spread out on nine separate pads or "outlots", for a maximum total of 460,000 square feet. About a third of the available building space on these outlots has been assumed to be restaurant uses and the remaining portion is assumed to be general retail uses.

Existing Conditions

Abrams Associates conducted an analysis of the existing roadways in the vicinity of the project site. The following are the primary roadways that are affected by the project: State Route 4 Bypass, Sand Creek Road, and Shady Willow Lane.

- The State Route 4 Bypass is currently a two-lane arterial street with a striped median that has been constructed between Lone Tree Way and Balfour Road. Future stages include an extension to the north to connect directly to the existing State Route 4 freeway. Following this, the road will be expanded to a four-lane freeway facility with a full interchange with Sand Creek Road. The State Route 4 bypass carries approximately 23,000 vehicles per day in the vicinity of Sand Creek Road.
- Sand Creek Road is a two- to four-lane east-west divided roadway with raised landscaped medians, bike lanes, and parking prohibited. Currently Sand Creek Road terminates to the west at the SR 4 Bypass but it is assumed to be extended further to the west as part of the baseline conditions. Sand Creek Road is designated as a major arterial in the City of Brentwood General Plan.
- Shady Willow Lane is a two- to four-lane north-south divided roadway with raised landscaped medians, bike lanes, and parking prohibited in most areas. Shady Willow Lane has existing traffic signals in place at Empire Avenue, Grant Street, and Lone Tree Way and one is also planned at Sand Creek Road. Shady Willow Lane is designated as a minor arterial in the City of Brentwood General Plan.
- Empire Avenue and Grant Street are both two-lane roadways with signalized intersections at Shady Willow Lane. Both of these streets provide access to smaller residential streets in the project area. In the project area both Grant Street and Empire Avenue are designated as minor arterials in the City of Brentwood General Plan.

The analysis of this project is focused on eight intersections. Abrams Associates conducted new turning movement counts for all of the project study intersections in January and February, 2006. As summarized in Table 1 below, all study area intersections were found to operate at acceptable levels of service.

Table 1: Existing Intersection Operations

INTERSECTION	PEAK HOUR	EXISTING		
		CONTROL ¹	V/R RATIO OR DELAY	LOS
1. SR 4 Bypass Ramps At Sand Creek Road	AM	Signal	0.61	B
	PM		0.56	A
2. W Shopping Center At Sand Creek Rd	AM	Signal	0.40	A
	PM		0.37	A
3. E Shopping Center At Sand Creek Rd	AM	TWSC	24.8 Sec	C
	PM		25.6 Sec	D
4. Shady Willow Lane At Sand Creek Road	AM	AWSC	27.7 Sec	D
	PM		21.9 Sec	C
5. Sand Creek Road At Fairview Avenue	AM	Signal	0.37	A
	PM		0.49 Sec	A
6. Shady Willow Lane At Los Cielos Way	AM	TWSC	9.2 Sec	A
	PM		9.7	A
7. Shady Willow Lane At Empire Avenue	AM	Signal	0.10	A
	PM		0.07	A
8. Shady Willow Lane At Grant Street	AM	Signal	0.06	A
	PM		0.05	A

¹ Signal= signalized Intersection; TWSC= side street stop-controlled intersection; AWSC= all-way-stop controlled intersection.
Traffic conditions measured in January 2006. Capacity calculation results are expressed in terms of Level of Service and average vehicle delay at the traffic signal and all-way stop locations. At the stop sign intersections, the delay results are shown for the approach with the stop sign.

Baseline Conditions

In order to provide a more accurate forecast of the impact of the project on traffic in the area an analysis was also conducted to determine the traffic that will be added from approved projects that could affect the project study area. It is assumed that the project could be constructed and in operation within about two years.

Therefore the background and baseline conditions that have been studied include approved projects that are currently under construction or will likely be completed within the next two years (by 2008). The information was compiled based on a complete list of approved projects that was prepared from previous traffic studies provided by the City of Brentwood and the latest subdivision map for the City of Brentwood. In addition, Abrams Associates staff contacted representatives of all incomplete projects in the area to determine the number of approved residential units that were still vacant at the time of the traffic counts. This information was also reviewed and updated by Brentwood City Staff in May, 2006. This was used to account for traffic from nearby projects that have been constructed but not yet occupied.

Funded roadway improvements planned for the next two years were assumed to be in place under the Baseline conditions. Major roadway improvements planned in the study area include:

1. Extension of Sand Creek Road to the west of the SR 4 Bypass
2. Modification of the traffic signal at the SR 4 Bypass/Sand Creek Road intersection to accommodate four lane approaches on Sand Creek Road as part of the extension. The Sand Creek Road approaches would include two through lanes with exclusive left-and right-turn lanes.
3. Installation of a new Traffic Signal at the intersection of Sand Creek Road and Shady Willow Lane.
4. Connection of San Jose Ave. to Sand Creek Rd. (This connection could potentially reduce traffic at study intersections 1 through 4 by providing additional access to SR 4 for the residential areas south of Sand Creek Road. However, to be conservative, no adjustments to the traffic volumes have been made to account for this factor.

With the addition of the traffic from approved projects all project study intersections would continue to meet the standards set forth by the City of Brentwood and Contra Costa County (LOS D or better). One unsignalized intersection would have LOS F on the existing side street approach – the eastern entrance to the Sand Creek Crossing Shopping Center on Sand Creek Road. It should be noted that this issue would be mitigated under project conditions by the restriction of the side street movements to right-turn only (with an exception for trucks). The results of the levels of service analysis for the baseline conditions are given in Table 2.

General Plan Policies. The General Plan identifies several goals and policies that have been adopted to ensure that the transportation system of the City will have adequate capacity to serve planned growth. The following applicable goals and policies are from the Brentwood General Plan:

Goal 1: Movement of People and Goods

Policy 1.1 **Balanced Transportation System** Develop and maintain a balanced transportation system with the City that provides a choice of transit, bicycle, equestrian, pedestrian, and private automobile modes.

Goal 2: Transportation Alternatives

Policy 2.1 **Development Patterns** Recognize the link between land use and transportation. Promote land use and development patterns that encourage walking, bicycling, and transit use. Emphasize well-designed high-density and mixed land use patterns that promote transit and pedestrian travel.

Goal 3: Livability

Policy 3.1 **Integrated Transportation System** Integrate the transportation system into the physical structure of the City in order to enhance livability, while providing an efficient and safe means of moving people and goods.

Each of the above mentioned General Plan policies have associated action programs that identify development review as one of their implementation mechanisms. Based on a preliminary review of all the applicable action programs it would appear that the project would meet the goals of the City's General Plan.

Standards of Significance. Based on the adopted policies of CCTA, the City of Brentwood, and Contra Costa County a traffic impact would be considered significant if any of the following conditions, or potential thereof, would result from implementation of the proposed project.

- Substantially increased traffic volumes in relation to existing traffic load and capacity of the street system;
- For intersections along "Basic Routes" a decline in LOS at a signalized intersection to an unacceptable level - LOS of High "D" (V/C = 0.85) or higher;
- For intersections along "Routes of Regional Significance" (i.e. the SR 4 Bypass) a decline in LOS at a signalized intersection to an unacceptable level - LOS "F";
- A decline in LOS at an unsignalized intersection to unacceptable level – Mid LOS D (Average Delay = 30 seconds) or lower;
- An unsignalized intersection is forecast to meet the warrants for installation of a traffic signal, as set forth by Caltrans;
- Failure of any street or portion of a street to meet accepted safety and design standards or guidelines;
- Failure to meet adopted alternative transportation policies, plans, or programs.
- Inadequate access for emergency vehicles.

Analysis Methodology. The analysis is intended to quantify the traffic impacts of the project and to address the circulation and roadway improvements needed to mitigate these impacts. The analysis addresses traffic conditions occurring during the morning and evening peak hours, and the area studied encompasses all of the major intersections that would be affected by the proposed project. The analysis considers the project's impacts on the baseline traffic conditions as well as conditions occurring in the future under the City of Brentwood and Contra Costa County General Plans.

Level of Service Evaluations. Levels of service at each of the intersections studied were evaluated to demonstrate how the proposed project would impact the transportation and circulation system. Three near-term and two long-term cumulative scenarios were considered:

- *Existing Conditions* – The current (2006) traffic volumes and roadway conditions were evaluated.
- *Existing-Plus-Approved-Projects (Baseline) Conditions* – This scenario evaluates conditions that would result when adding traffic generated by already approved projects that might affect the study intersections to existing traffic conditions.
- *Baseline-Plus-Project Conditions* – This scenario begins with the conditions determined for the existing-plus-approved-projects scenario and adds traffic that would be generated by the proposed Streets of Brentwood Project.
- *Year 2030 Plus Project Conditions* – Future traffic conditions at the study intersections were projected based on "Eastern Contra Costa County Travel Demand Model" developed by the Contra Costa Transportation Authority (CCTA).

Trip Generation. Trip generation is defined as the number of one-way vehicle trips produced by a particular land use or study site. Trips generated by the Streets of Brentwood Project were estimated using the rates contained in *Trip Generation, Seventh Edition*, published by the Institute of Transportation Engineers.

Trip Distribution and Assignment. Trip distribution is the process of determining in what proportion vehicle trips will travel between different locations within a traffic study area. Trip assignment is the allocation of vehicle trips to available routes (local streets) between locations in the traffic study area. Traffic was distributed to the roadway system manually based on existing travel patterns. Future traffic generated by approved and buildout developments was distributed and assigned to the local street system using information from the City of Brentwood and Contra Costa County General Plans and from the "Eastern Contra Costa County Travel Demand Model," which takes into account likely peak-hour route choices.

Intersection Capacity Analysis. The level of service (LOS) measurement is a qualitative description of traffic operating conditions for intersections and roadways. Levels of service are given letter designations ranging from A to F, which are defined in Tables 3 and 4 below. The LOS measurement that is used to determine the significance of any impacts a project might have on traffic and circulation is an intersection's *overall* LOS. Separate methodologies are used to determine levels of service at signalized and unsignalized intersections.

Signalized Intersections. The LOS definitions for signalized intersections are included in Table 3. The operating conditions at the signalized study intersections were evaluated using the most recent 1995 update of the Contra Costa County Transportation Authority's CCTALOS Program (Version 2.35). This is the intersection analysis methodology currently required by the CCTA. This program uses the TRB (Transportation Research Board) Circular 212 methodology to analyze the operations at signalized intersections based on the utilization of intersection capacity.

Unsignalized Intersections. For unsignalized intersections the methodology set forth in Chapter 10 of the 2000 Highway Capacity Manual was used. This methodology is based on average total delay (seconds/vehicle). The HCM analysis was conducted using Synchro 6.0 and the level-of-service calculations are included in the appendix to this report. As with signalized intersections, there are six levels of service for unsignalized intersections, A through F, which represent conditions from best to worst, respectively. Table 4 shows the corresponding average total delay per vehicle at unsignalized intersections for each LOS category from A to F.

Table 2: Existing and Baseline Intersection Operations

INTERSECTION	PEAK HOUR	EXISTING			BASELINE		
		CONTROL ¹	V/R RATIO OR DELAY	LOS	CONTROL ¹	V/R RATIO OR DELAY	LOS
1. SR 4 Bypass Ramps At Sand Creek Road	AM	Signal	0.61	B	Signal	0.66	B
	PM		0.56	A		0.77	C
2. W Shopping Center At Sand Creek Rd	AM	Signal	0.40	A	Signal	0.54	A
	PM		0.37	A		0.57	A
3. E Shopping Center At Sand Creek Rd	AM	TWSC	24.8 Sec	C	TWSC	48.7 Sec	E
	PM		25.6 Sec	D		> 50 Sec	F
4. Shady Willow Lane At Sand Creek Road	AM	AWSC	27.7 Sec	D	AWSC	0.53A	F
	PM		21.9 Sec	C		0.56	A
5. Sand Creek Road At Fairview Avenue	AM	Signal	0.37	A	Signal	0.42	A
	PM		0.49 Sec	A		0.56	A
6. Shady Willow Lane At Los Cielos Way	AM	TWSC	9.2 Sec	A	TWSC	9.7 Sec	A
	PM		9.7	A		10.5 Sec	B
7. Shady Willow Lane At Empire Avenue	AM	Signal	0.10	A	Signal	0.14	A
	PM		0.07	A		0.10	A
8. Shady Willow Lane At Grant Street	AM	Signal	0.06	A	Signal	0.08	A
	PM		0.05	A		0.08	A

¹ Signal= signalized Intersection; TWSC= side street stop-controlled intersection; AWSC= all-way-stop controlled intersection. Traffic conditions measured in January 2006. Capacity calculation results are expressed in terms of Level of Service and average vehicle delay at the traffic signal and all-way stop locations. At the stop sign intersections, the delay results are shown for the approach with the stop sign.

Table 3: Level of Service for Signalized Intersections

The 2000 HIGHWAY CAPACITY MANUAL methodology for analyzing signalized intersections measures the performance by the control delay per vehicle in seconds. The CRITICAL MOVEMENT ANALYSIS METHODOLOGY, required by the CCTA is described in Transportation Research Board's Circular 212, defines Level of Service (LOS) for signalized intersections in terms of the ratio of critical movement traffic volumes to an estimate of the maximum capacity for critical volume at an intersection. Critical movements at an intersection are calculated by determining the maximum traffic volumes for conflicting traffic movements (i.e., left-turns plus opposing through traffic) per single stream of traffic (by lane). For the Critical Movement Methodology the LOS for intersections is determined by the ratio of critical movement volume to critical movement capacity (volume-to-capacity ratio = V/C) for the entire intersection. Six categories of LOS are defined, ranging from LOS "A" with minor delay to LOS "F" with delays averaging more than 40 seconds during the peak hour.

Level-of-Service	Description
LOS "A" V/C Range 0.00 - 0.60 Average Stop Delay (seconds) 0.0 - 10.0	Free flow. If signalized, conditions are such that no vehicle phase is fully utilized and no vehicle waits through more than one red indication. Very slight or no delay.
LOS "B" V/C Range 0.61 - 0.70 Average Stop Delay (seconds) 10.1 - 20.0	Stable flow. If signalized, an occasional approach phase is fully utilized; vehicle platoons are formed. Slight delay.
LOS "C" V/C Range 0.71 - 0.80 Average Stop Delay (seconds) 20.1 - 35.0	Stable flow or operation. If signalized, drivers occasionally may have to wait through more than one red indication. Acceptable delay.
LOS "D" V/C Range 0.81 - 0.90 Average Stop Delay (seconds) 35.1 - 55.0	Approaching unstable flow or operation; queues develop but quickly clear. Tolerable delay.
LOS "E" V/C Range 0.91 - 1.00 Average Stop Delay (seconds) 55.1 - 80.0	Unstable flow or operation; the intersection has reached ultimate capacity; Congestion and intolerable delay.
LOS "F" V/C Range - Measured 1.00 or less - Forecast 1.01 or more Average Stop Delay (seconds) > 80	Forced flow or operation. Intersection operates below capacity. Jammed

Table 4: Level-of-Service for Unsignalized Intersections

LEVEL OF SERVICE (LOS)	AVE TOTAL DELAY (SEC/VEH)	TRAFFIC CONDITION
A	< 10	No Delay
B	>10 - 15	Short Delay
C	>15 - 25	Moderate Delay
D	>25 - 35	Long Delay
E	>35 - 50	Very Long Delay
F	> 50	Volume>Capacity

Baseline plus Project Conditions

Trip Generation. The project is proposed to include a central shopping area with approximately 391,840 square feet of retail space with additional building space spread out on nine separate pads or "outlots", for a maximum total of 460,000 square feet. About a third of the available building space on the pads has been assumed to be restaurant uses and the remaining portion is assumed to be general retail uses. The trip generation rates for this project were based on the most current ITE rates from the seventh edition of the ITE Trip Generation Manual as shown in Table 5. Please note that the rates for Fast Food with Drive Through were used to be conservative although no drive-through windows are proposed at this time. Based on these ITE trip rates, the daily and peak hour project trips have been calculated. With the completion of the project it is expected to generate about 19,000 vehicle trips per day, with about 540 trips during the AM peak hour and about 1,650 trips during the PM peak hour. A summary of the estimated trip generation during the AM and PM peak hours is shown on Table 6.

Pass-By and Diverted Linked Trips. Pass-by trips are project trips that are assumed to enter the site and then resume travel in the same direction. They are trips made as intermediate stops on the way from an origin to a primary destination. Diverted linked trips are trips that are attracted from the traffic volume on roadways within the vicinity of the generator but that require a diversion from that roadway to gain access to the site. There would also be some shared trips between the various stores and restaurants within the site. However, it was assumed these were accounted for in the Pass-By/Diverted Link data and no further reductions were made. Pass-by trips are not considered new trips on the roadway network. However, please note that pass-by trips are still considered new trips at the shopping center access intersections. Based on the ITE Trip Generation Handbook the percentage of pass-by and diverted linked trips (i.e., those trips that are already in the existing traffic stream) assumed for each project component are shown in Table 6.

Project Roadway Improvements. The project includes frontage improvements that would allow for the completion of the planned cross-sections for two significant arterials in the City. All roadway improvements would be constructed in accordance with traffic studies completed for this project and the Brentwood General Plan. The roadway improvements planned for the Streets of Brentwood project include the following:

1. Sand Creek Road would be improved to a four-lane divided roadway with the construction of the remaining westbound through lane from Shady Willow Lane to the SR 4 Bypass. A separate westbound right turn lane at Intersection #2 is optional.
2. Shady Willow Lane would be improved to a four-lane divided roadway with the construction of the remaining southbound through lane from the Old Sand Creek trail crossing to Sand Creek Road.
3. A traffic signal would be installed at the main entrance on Shady Willow Lane at Los Cielos Way and would be interconnected with the signal at Sand Creek Road and Shady Willow Lane. This traffic signal would help to reduce speeds and improve safety in this segment of Shady Willow Lane. Appropriate signage will be posted at this intersection to minimize the chance of east-bound traffic from the shopping center entering the adjacent neighborhood.
4. At the secondary project entrance on Sand Creek Road left-turns from the side streets would be prohibited from the project driveway and from the existing driveway to the Sand Creek Crossing shopping center. Inbound left-turns from eastbound and westbound Sand Creek Road would also be prohibited. It should be noted that the City may choose to allow large trucks to continue to make outbound left-turns at this location from the existing Sand Creek Crossing Shopping center. This would be accomplished with striping and signage modifications.
5. The existing traffic signal on Sand Creek Road at the entrance to the Sand Creek Crossing Shopping Center would need to be modified to accommodate the project entrance to the north and new exclusive left-turn phases. At this intersection the roadway cross-section has already been constructed to accommodate an eastbound dual-left turn lane from Sand Creek Road into the project site. As part of the proposed project the eastbound left-turn lane would be marked as a dual-left-turn lane.
6. The interim traffic signal planned for Shady Willow Lane at Sand Creek Road would need to be modified to accommodate the changes planned for Shady Willow Lane.

Table 6: Trip Generation for the Streets of Brentwood

NUMBER OF VEHICLE TRIPS							
DEVELOPMENT*	DAILY TRIPS	AM PEAK HOUR (8:00-9:00 AM)			PM PEAK HOUR (5:00-6:00 PM)		
		IN	OUT	TOTAL	IN	OUT	TOTAL
Shopping Center Retail (427,840 sq. ft.)	23,921	244	115	359	1,080	1,080	2,161
Shopping Center Pass-By Traffic (34 percent)	8,133	83	39	122	367	367	735
Net New Shopping Center Trips	15,788	161	76	237	713	713	1,426
Fast Food Restaurants (9,000 sq. ft.)	4,465	244	234	478	162	150	312
Fast Food Restaurant Pass-By Traffic (50 percent)	2,233	122	117	239	81	75	156
Net New Fast Food Restaurant Trips	2,233	122	117	239	81	75	156
High Turnover Sit-Down Restaurant (10,000 sq. ft.)	1,272	60	55	115	67	43	109
High Turnover Restaurant Pass-By Traffic (34 percent)	547	26	24	50	29	18	47
Net New High Turnover Sit-Down Restaurant Trips	725	34	32	66	38	24	62
Total Project Trips	18,475	317	224	541	832	812	1,644

*Development area estimates reflect traffic generating uses; total gross project size is estimated at a maximum of 460,000 sq. ft.

Note: The weekday peak hours have been used in this analysis since our review of traffic operations clearly indicates that the weekday commute hours are the critical design hours for all roadways in the area.

Intersection Operations. The capacity calculations for the Baseline Plus Project scenario are shown in Table 7. As seen in this table, with the addition of traffic from the Proposed Project all intersections would continue to have acceptable operations and meet all applicable LOS standards. At the intersection of Sand Creek Road and the SR 4 Bypass further analysis of operations using the HCM methodology indicated that an additional southbound left-turn lane should be provided until a full interchange can be constructed. Beyond this intersection the analysis indicates the project would not cause any other significant impacts on traffic operations in the area. The project LOS shown in Table 7 for the "Baseline" condition does not include Mitigation Measure 15-a, as discussed in the "2006 Baseline Plus Project Impacts and Mitigation Measures" section. With this mitigation in place all intersections would have acceptable operations (mid LOS "D" or better) and the project's impacts on traffic operations would be mitigated to a *less-than-significant* level. The complete LOS calculations are included in Appendix A.

Intersection Signalization Needs. Traffic signals are used to provide for an orderly flow of traffic through an intersection. Many times they are needed to provide side street traffic an opportunity to access a major road where high volumes and/or high vehicle speeds block crossing or turn movements. There are eleven possible tests (called "warrants") set forth by Caltrans (and the Manual of Uniform Traffic Control Devices) for determining whether a traffic signal should be considered for installation. These tests consider criteria such as traffic volumes and delay, pedestrian volumes, presence of school children, and accident history.

For this report, observations of peak hour traffic conditions and a test for peak hour volumes were conducted at all unsignalized project study intersections. Future traffic signals are already planned at one of the unsignalized intersections that have poor operations (Sand Creek Road at Shady Willow Lane.) The only other intersection where the warrants would be met is at the project entrance on Shady Willow Lane at Los Cielos Way. At this location a combination of increasing through traffic on Shady Willow Lane and left-turn movements to and from the shopping center will eventually cause this intersection to meet the warrants for a signal. Based on discussions with City staff it is recommended that the Shady Willow/Los Cielos signal be implemented with the project to ensure safe access for construction vehicles. The detailed traffic signal warrant analysis for this intersection is included in Appendix A. Beyond this intersection our review indicated that no other unsignalized intersections in the study area would meet Caltrans warrants for installation of a traffic signal as a result of project traffic.

Site Access and Circulation. The Streets of Brentwood project would have a signalized primary entrance on Sand Creek Road and a secondary signalized entrance on Shady Willow Lane. In addition the project would have two smaller driveways (one on Sand Creek Road and one on Shady Willow Lane) where traffic will be restricted to right-turns only. In general, the proposed site plan should function well and would not cause any safety or operational problems. The project site design has been required to conform to City design standards and would not create any significant impacts to pedestrians, bicyclists or traffic operations. A preliminary review of the site plan for truck access was conducted, and indicates that all necessary truck turning movements can be accommodated.

At the secondary signalized entrance on Shady Willow Lane at Los Cielos Way some additional signage will be required to minimize the potential for project traffic mistakenly crossing into the Los Cielos neighborhood. Although this neighborhood has no through roadways it is possible that some patrons of the shopping center may enter the neighborhood thinking that they can go through to Fairview Avenue, for example. To address this issue it is recommended that signs be posted that read "Local Traffic Only" and "No Outlet" for traffic exiting the shopping center. It should be noted that the through movements between Los Cielos Way and the shopping center could theoretically be prohibited without any major physical changes to this intersection. This would really only affect the residents of the Los Cielos Way neighborhood because they would then be forced to make U-turns to access the shopping center. In general it is recommended that the City allow the through movements unless a persistent problem with traffic intruding into the neighborhood develops once the project opens.

Emergency Vehicle Access. Factors such as number of access points, roadway width, and proximity to fire stations determine whether a project has sufficient emergency access. In this case the proposed project would provide multiple access points from the arterials in the area. Therefore, if one of the roadways is blocked or obstructed, an emergency vehicle could use an alternate route to access the project.

Parking. As shown on the site plan, the proposed project is expected to provide approximately 2,800 parking spaces within the shopping center. The total gross building area is estimated at a maximum of 460,000 square feet, which therefore equates to a parking ratio of 6.1 spaces per 1,000 square feet. The City of Brentwood requires 1 space per 200 square feet of retail space and 1 space per 100 square feet of restaurant uses. Based on the proposed land uses the project would require 2,395 parking spaces. Therefore, the total of 2,800 parking spaces will be more than sufficient to serve all of the proposed uses on the site during peak periods on weekdays and on weekends and would not be expected to create negative parking impacts on the surrounding area.

It should be noted that the ITE parking generation manual indicates a weekday parking concentration of 3.23 spaces per 1,000 square feet for shopping centers, with a maximum ratio of 3.97 spaces per 1,000 square feet on weekends. This indicates the center should have sufficient capacity for even the highest parking demand. There should be no spillover of parking demand onto adjacent streets, and, in fact, no parking will be permitted on Sand Creek Road or on Shady Willow Lane in the vicinity of the project.

The possible development of a theater as part of the project is also an issue that has been reviewed. Assuming that the theater building would comprise 63,000 square feet, this would likely be developed with about 14 screens and about 2,700 seats. If this is the case, there will still be sufficient parking to accommodate the theater. The theater's peak parking time occurs in the evening, generally from 6 pm to 9 pm, which enables it to efficiently use parking when other parts of the shopping center are not at capacity. This shared parking effect can frequently result in the need for about 20 percent less parking spaces as compared to a condition where each land use was independent from the other. Therefore, the substitution of a theater for an equivalent amount of retail space will not result in any changes to the conclusions about the project's parking impacts.

Movie Theater Trip Generation. An analysis was conducted of the potential trip generation effects of the proposed theater use and it was determined that the peak hour trip generation would not exceed the trips generated by alternative retail uses in the 63,000 square foot building located on the western end of the site. Based on a review of recent movie theater projects in the County it was determined that a building of this size would likely accommodate approximately 14-screens in a multiplex theater format with approximately 2,700 seats. Using the ITE trip generation methodology it was determined that including the proposed theater would not result in a net increase in the peak hour trip generation above that generated by conventional retail uses. While there would be a net increase in late evening traffic and in weekend traffic, the traffic during the critical PM commute peak hour (which determines the impacts and roadway designs) would not be increased.

In summary, the analysis indicates peak hour traffic generation from the movie theater would not exceed that of the alternative use of the 63,000 square feet as retail. Therefore, the mitigation measures proposed with the project and referenced in this report would be adequate for either use of the 63,000 square foot building in question. Trip generation calculations comparing the traffic from the retail use versus the theater use are included in Appendix A.

Impact 15-a: The addition of project traffic would contribute to unacceptable LOS F operations during the peak hours at the intersection of Sand Creek Road with the SR 4 Bypass. The primary reason that there could be poor operations at this intersection is because of the southbound left-turn movement for the SR 4 Bypass onto eastbound Sand Creek Road. This movement is forecast to be over capacity with substantial delay under Baseline plus Project Conditions.

Mitigation Measure 15-a: *Construction of a southbound dual-left turn lane would mitigate the operational problems forecast for this movement, resulting in a less-than-significant impact. Previous traffic studies in the area have shown this movement as having a single left-turn lane but the State Route 4 Bypass Project EIR indicated that this movement will ultimately require a dual-left turn. If this improvement is not already included as part of a local traffic impact fee program then the project will pay a proportionate share of the cost to construct this additional left turn lane. The project's share is estimated to be 19% based on the project's percentage of the total traffic entering the intersection.*

Table 7: Baseline and Baseline Plus Project Intersection Operations

INTERSECTION	PEAK HOUR	BASELINE			BASELINE PLUS PROJECT		
		CONTROL L ¹	V/R RATIO OR DELAY	LOS	CONTROL L ¹	V/R RATIO OR DELAY	LOS
1. SR 4 Bypass Ramps At Sand Creek Road	AM	Signal	0.66	B	Signal	0.72	C
	PM		0.77	C		0.89	D
2. W Shopping Center At Sand Creek Rd	AM	Signal	0.54	A	Signal	0.42	A
	PM		0.57	A		0.69	B
3. E Shopping Center At Sand Creek Rd	AM	TWSC	48.7 Sec	E	TWSC	12.2 Sec	B
	PM		> 50 Sec	F		15.5 Sec	C
4. Shady Willow Lane At Sand Creek Road	AM	Signal	0.53A	F	Signal	0.39	A
	PM		0.56	A		0.56	A
5. Sand Creek Road At Fairview Avenue	AM	Signal	0.42	A	Signal	0.45	A
	PM		0.56	A		0.66	B
6. Shady Willow Lane At Los Cielos Way	AM	TWSC	9.7 Sec	A	Signal	0.23	A
	PM		10.5 Sec	B		0.59	A
7. Shady Willow Lane At Empire Avenue	AM	Signal	0.14	A	Signal	0.16	A
	PM		0.10	A		0.17	A
8. Shady Willow Lane At Grant Street	AM	Signal	0.08	A	Signal	0.09	A
	PM		0.08	A		0.11	A

² Signal= signalized intersection; TWSC= side street stop-controlled intersection; AWSC= all-way-stop controlled intersection. Traffic conditions measured in January 2006. Capacity calculation results are expressed in terms of Level of Service and average vehicle delay at the traffic signal and all-way stop locations. At the stop sign intersections, the delay results are shown for the approach with the stop sign.

Cumulative Conditions

Cumulative (2030) Traffic Forecasts. Cumulative traffic forecasts for this study were based on information obtained from the East County Travel Demand Model, the City of Brentwood General Plan Update EIR, and the Sand Creek Specific Plan Transportation Analysis. It should be noted that commercial uses on the subject property have been assumed in all previous traffic planning studies for the area.

Cumulative (2030) Planned Roadway Improvements. The analysis assumes that several roadway improvements would be constructed in the interim period between the Baseline and Cumulative analysis years. These improvements are in addition to the improvements and mitigations that would be implemented by the proposed project. Major roadway improvements in the area that are planned to be completed by 2030 include:

- Completion of SR 4 Bypass Segment 1 as a four-lane freeway between SR 4 and Lone Tree Way with a partial interchange at SR 4/SR 160, and interchanges at Laurel Road and Lone Tree Way. (Bypass Authority)
- Completion of SR 4 Bypass Segment 2 as a four-lane freeway between Lone Tree Way and Balfour Road with interchanges at Sand Creek Road and Balfour Road. (Bypass Authority)
- Completion of SR 4 Bypass Segment 3 as a two-lane expressway between Balfour Road and Vasco Road with at-grade intersections at Marsh Creek Road and Walnut Boulevard. (Bypass Authority)
- Construction of the SR 4 Bypass interchange at Sand Creek Road would result in the currently existing signalized intersection at the Bypass being replaced with two new signalized intersections at the planned SR 4 freeway ramps. (Bypass Authority)

Year 2030 With Project Scenario. The Cumulative (2030) lane configurations are shown in Appendix A, as are the future traffic volumes with the addition of traffic from the proposed project. The resulting levels of service for the "Cumulative plus Project" scenario are shown in Table 8. Assuming completion of the foregoing listed major transportation network improvements, all intersections are forecast to have acceptable operations with implementation of the planned local roadway improvements and project-sponsored mitigation measures 15-a above.

Table 8: Baseline Plus Project and Cumulative Intersection Operations

INTERSECTION	PEAK HOUR	BASELINE PLUS PROJECT			CUMULATIVE		
		CONTROL ¹	V/R RATIO OR DELAY	LOS	CONTROL ¹	V/R RATIO OR DELAY	LOS _c
1. SR 4 Bypass Ramps At Sand Creek Road	AM	Signal	0.72	C			
	PM		0.89	D			
2. W Shopping Center At Sand Creek Rd	AM	Signal	0.42	A	Signal	0.60	A
	PM		0.69	B		0.81	D
3. E Shopping Center At Sand Creek Rd	AM	TWSC	12.2 Sec	B	TWSC	15.4 Sec	C
	PM		15.5 Sec	C		23.1 Sec	C
4. Shady Willow Lane At Sand Creek Road	AM	Signal	0.39	A	Signal	0.50	A
	PM		0.56	A		0.61	B
5. Sand Creek Road At Fairview Avenue	AM	Signal	0.45	A	Signal	0.77	C
	PM		0.66	B		0.85	D
6. Shady Willow Lane At Los Cielos Way	AM	Signal	0.23	A	Signal	0.44	A
	PM		0.59	A		0.88	D
7. Shady Willow Lane At Empire Avenue	AM	Signal	0.16	A	Signal	0.55	A
	PM		0.17	A		0.64	B
8. Shady Willow Lane At Grant Avenue	AM	Signal	0.09	A	Signal	0.32	A
	PM		0.11	A		0.29	A
9. SR 4 Bypass Ramps At Sand Creek Road	AM	Future	N/A	N/A	Signal	0.44	A
	PM		N/A	N/A		0.66	B
10. SR 4 Bypass Ramps At Sand Creek Road	AM	Future	N/A	N/A	Signal	0.49	A
	PM		N/A	N/A		0.60	A

¹ Signal- signalized intersection; TWSC= side street stop-controlled intersection; AWSC= all-way-stop controlled intersection.

Traffic conditions measured in January 2006. Capacity calculation results are expressed in terms of Level of Service and average vehicle delay at the traffic signal and all-way stop locations. At the stop sign intersections, the delay results are shown for the approach with the stop sign.

Issue	Sources (See Item #18 Below)	Potentially Significant Impact	Less than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
16. Utilities and Service Systems: Would the project:					
a) Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board?			✓		
b) Require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?			✓		
c) Require or result in the construction of new storm water drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?			✓		
d) Have significant water supplies available to serve the project from existing entitlements and resources, or are new or expanded entitlements needed?			✓		
e) Result in a determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?			✓		
f) Be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs?				✓	
g) Comply with federal, state, and local statutes and regulations related to solid waste?				✓	

Discussion

a-e. The proposed project would require the installation and necessary extension of all utility lines for water, sewer, electricity, natural gas, telephone, and cable communications. The General Plan EIR indicates that Pacific Gas & Electric has sufficient facilities to provide gas and electricity to the General Plan area. The City of Brentwood provides water and sewer service to the entire City, including the project site. The General Plan EIR concludes that the City has adequate water to implement the General Plan. The proposed project is consistent with the type of development identified in the General Plan for Special Planning Area D. Therefore, the City of Brentwood possesses adequate capacity to serve the development, conditioned upon payment of sufficient improvement fees by the developer of the project in conjunction with the City's Capital Improvement Financing Program. However, to guarantee adequate delivery capacity to serve the proposed project, the developer must ensure that the project is adequately connected to the existing facilities. Therefore, the impact from the proposed project on public utilities would be *potentially significant*.

Impact 16-a: Utility and Service System Connections.

Potential impacts may be reduced to a *less-than-significant* level through implementation of the following measure.

Mitigation Measure 16-a: *The developer shall be required to connect to the existing Brentwood utility network as well as pay all applicable fees in effect at the time of building permit issuance. Improvement plans indicating conformance to City of Brentwood Standards shall be prepared, submitted, and approved by the City Engineer prior to encroachment permit issuance.*

f.g. The proposed project consists of the development of approximately 460,000 square feet of regional commercial uses which are consistent with Special Planning Area D in the General Plan Land Use Element. The solid waste generated by the development would be consistent with the levels that have been anticipated for the site. The City of Brentwood operates its own solid waste disposal service and has anticipated this potential increase in usage. Therefore, any impacts as a result of the project are considered ***less-than-significant***.

Issue	Sources (See Item #18 Below)	Potentially Significant Impact	Less than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
17. Mandatory Findings of Significance:					
a) Does the project have the potential to degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory?				✓	
b) Does the project have impacts that are individually limited, but cumulatively considerable? ("Cumulatively considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects.)				✓	
c) Does the project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?				✓	

Discussion

a. Development that converts rural areas to urban/suburban uses may be regarded as achieving short-term goals to the disadvantage of long-term environmental goals. However, the inevitable impacts resulting from population and economic growth are mitigated by long-range planning to establish policies, programs, and measures for the efficient and economical use of resources. Long-term environmental goals, both broad and specific, have been addressed previously in several environmental documents, the most comprehensive being the General Plan Final EIR certified in 1993, and the General Plan Update EIR certified in 2001. Therefore, any impacts are considered to be less than significant.

b,c. The loss of prime agricultural land is considered a "cumulatively considerable impact" and a "substantial adverse impact," both direct and indirect. However, this Initial Study includes mitigation in order to reduce the impacts of the proposed project on Prime Farmland conversion to a less-than-significant level. Other cumulative impacts associated with the proposed project may be identified in the categories of use of resources, demand for services, and physical changes to the natural environment. These impacts would be considered potentially significant. However, either these impacts would be mitigated to a degree through mitigation measures cumulatively applied as development occurs, or they have been considered to be subject to findings of overriding benefit by the lead agency, in this case, the City of Brentwood. The previous mitigation and findings of overriding benefit result in a **less-than-significant** impact for the proposed project.