CITY OF BRENTWOOD
COMMUNITY DEVELOPMENT DEPARTMENT

BELLA FIORE INITIAL STUDY/ MITIGATED NEGATIVE DECLARATION

August 2014

RANEY PLANNING & MANAGEMENT, INC.

1501 Sports Drive • Sacramento • CA • 95834
Office 916.372.6100 • Fax 916.419.6108

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INITIAL STUDY

August 2014

A. BACKGROUND

1.	Project Title:	Bella Fiore
2.	Lead Agency Name and Address:	City of Brentwood Community Development Department 150 City Park Way Brentwood, CA 94513
3.	Contact Person and Phone Number:	Debbie Hill Associate Planner (925) 516-5405
4.	Project Location:	Between Shady Willow Lane and Empire Avenue Assessor Parcel Numbers 019-040-50,-51, and -66 Brentwood, CA
5.	Project Sponsor's Name and Address:	Meritage Homes of California, Inc. 1671 E. Monte Vista Avenue, Suite 214 Vacaville, CA 95688 (707) 359-2038
6.	Existing General Plan Designation:	Residential-Medium Density (R-MD)
7.	Existing Zoning	Medium Density Residential (R-2)
8.	Proposed Zoning:	Planned Development (PD)

9. Project Description Summary:

The proposed project includes approval of a Rezone from Medium Density Residential (R-2) to Planned Development (PD), Vesting Tentative Subdivision Map (VTSM), and Design Review to allow the development of 98 single-family, two-story residential units on approximately 13.5 acres of the 17.51-acre site in the northwestern area of the City of Brentwood between Shady Willow Lane and Empire Avenue. In addition to the 98 single-family units, the VTSM includes public streets, 0.85 acres of open space, and a 4.01-acre remainder parcel (Parcel J) to serve as the lot for an existing single-family residence. The other two on-site existing single-family homes would be removed as part of the proposed project.

B. SOURCES

All the technical reports and modeling results prepared for the project analysis are available upon request at the City of Brentwood City Hall. The following documents are referenced information sources utilized for purposes of this Initial Study/Mitigated Negative Declaration:

1. Abrams Associates Traffic Engineering, Inc. *Transportation Impact Analysis, Bella Fiore Residential Project.* June 19, 2014.
2. Abrams Associates Traffic Engineering, Inc. *Traffic Impact Analysis, Casa Bella Apartments.* March, 2008
3. Bay Area Air Quality Management District. *California Environmental Quality Act Air Quality Guidelines*. May 2011.
4. Bay Area Air Quality Management District. Compliance Advisory: Architectural Coatings. February 15, 2011. Available at: http://www.baaqmd.gov/~/media/Files/Rg8-3_advisory_2_15-2011-FINAL.ashx?la=en. Accessed July 22, 2014.
5. Bay Area Air Quality Management District. *Regulation 6: Particulate Matter and Visible Emissions, Rule 3, Wood-Burning Devices.* July 9, 2008. Available at: http://www.baaqmd.gov/~/media/Files/Planning%20and%20Research/Rules%20and%20Regs/reg%2006/rg0603.ashx. Accessed July 22, 2014.
6. Bollard Acoustical Consultants, Inc. *Environmental Noise Analysis, Bella Fiore Residential Development*. April 28, 2014.
7. California Air Resources Board. *Air Quality and Land Use Handbook: A Community Health Perspective*. April 2005.
8. California Burrowing Owl Consortium. *Burrowing Owl Survey Protocol and Mitigation Guidelines*. April 1993.
9. California Department of Fish and Game.[1] *Staff Report on Burrowing Owl Mitigation*. March 7, 2012.
10. California Department of Transportation. *Transportation- and Construction-Induced Vibration Guidance Manual.* June 2004.
11. Carlson, Barbee & Gibson Inc. *Stormwater Control Plan, Subdivision 9378, Bella Fiore Brentwood, California.* May 1, 2014.
12. City of Brentwood. *2010 Urban Water Management Plan*. May 24, 2011.
13. City of Brentwood. *2014 Brentwood General Plan Update EIR*. July 22, 2014.
14. City of Brentwood. *City of Brentwood General Plan*. June 2014.
15. Contra Costa County Flood Control & Water Conservation District. *Personal Communication*. March 20, 2014.
16. Contra Costa County. *The Final East Contra Costa County Habitat Conservation Plan/Natural Community Conservation Plan*. October 2006.
17. Contra Costa County. *Mapping Information Center*. Available at: http://www.ccmap.us/interactive_maps.aspx. Accessed July 31, 2014.
18. Contra Costa Resource Conservation District. *Marsh Creek Watershed*. Available at: http://www.ccrcd.org/marsh.html. Accessed July 24, 2014.
19. Contra Costa Transportation Authority. *2011 Contra Costa Congestion Management Program*. November 16, 2011.

[1] It should be noted the California Department of Fish and Game is now the California Department of Fish and Wildlife.

20. Debra Fogarty, Chief Business Officer, Liberty Union High School District, email communication, November 12, 2013.
21. Department of Toxic Substances Control. No Further Action Letter re: Miles-Fenell Property in Brentwood, CA. August 12, 2014.
22. ENGEO Inc. *Arsenic Risk Evaluation, Miles Rose Garden Empire, Brentwood.* January 28, 2014 (Revised August 6, 2014).
23. ENGEO Inc. *Geotechnical Exploration, Miles Rose Garden Empire, Brentwood, California*. November 27, 2013.
24. ENGEO Inc. *Modified Phase I Environmental Site Assessment, Miles Rose Garden Empire*. December 2, 2013.
25. ENVIRON International Corporation and the California Air Districts. *California Emissions Estimator Model User's Guide Version 2013.2*. July 2013.
26. Erler & Kalinowski, Inc. *City of Tracy 2010 Urban Water Management Plan*. May 2011.
27. Federal Emergency Management Agency. *Flood Insurance Rate Map, Panel ID 06013C0353F*. June 16, 2009.
28. Jack Schreder & Associates. *School Facility Needs Analysis for Brentwood Union School District*. July 23, 2013.
29. Moore Biological Consultants. *East Contra Costa County Habitat Conservation Plan, Planning Survey Report for Bella Fiore*. March 2014.
30. Pacific Legacy, Historic Preservation. *Cultural Resource Literature review for Meritage Bella Fiore Subdivision, Brentwood, Contra Costa County.* March 11, 2014.
31. Sacramento Fish and Wildlife Office. *U.S. Fish and Wildlife Service San Joaquin Kit Fox Survey Protocol for the Northern Range.* June 1999.
32. United States Department of Agriculture, Natural Resources Conservation Service. *Web Soil Survey.* Available at: http://websoilsurvey.sc.egov.usda.gov/App/HomePage.htm. Accessed July 28, 2014.

C. 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.

✖ **Aesthetics**	✖ **Agriculture and Forestry Resources**	✖ **Air Quality**
✖ **Biological Resources**	✖ **Cultural Resources**	✖ **Geology and Soils**
☐ **Greenhouse Gas Emissions**	✖ **Hazards and Hazardous Materials**	✖ **Hydrology and Water Quality**
☐ **Land Use and Planning**	☐ **Mineral Resources**	✖ **Noise**
☐ **Population and Housing**	✖ **Public Services**	✖ **Recreation**
✖ **Transportation/Traffic**	✖ **Utilities and Service Systems**	☐ **Mandatory Findings of Significance**

D. 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 applicant. 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" 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 pursuant to applicable standards, and (b) have been avoided or mitigated pursuant to that earlier EIR, including revisions or mitigation measures that are imposed upon the proposed project, nothing further is required.

_____	_____
Signature	Date
Debbie Hill	City of Brentwood
Printed Name	For

E. BACKGROUND AND INTRODUCTION

This Initial Study identifies and analyzes the potential environmental impacts of the proposed project. The information and analysis presented in this document are organized in accordance with the order of the California Environmental Quality Act (CEQA) checklist in Appendix G of the CEQA Guidelines. If the analysis provided in this document identifies potentially significant environmental effects of the project, mitigation measures that shall be applied to the project are prescribed.

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.

On July 22, 2014, the City of Brentwood City Council adopted a comprehensive General Plan Update, which was last updated in 1993 (a partial update involving the Growth Management, Land Use, and Circulation Elements was completed in 2001). An Environmental Impact Report (EIR) was prepared for the General Plan Update, which addressed the potential impacts associated with full buildout of the General Plan Land Use Diagram. The 2014 Brentwood General Plan Update EIR was certified by the Brentwood City Council on July 22, 2014. The General Plan Update designates the Bella Fiore Project site as R-MD. The proposed 98 single-family unit project is consistent with the R-MD Land Use Designation; therefore, in accordance with Section 15150 of the CEQA Guidelines (Section 21083.3 of the Public Resources Code), this Initial Study will tier from the previously certified Environmental Impact Report (EIR) (SCH# 2014022058) prepared for the Brentwood General Plan Update.

F. PROJECT DESCRIPTION

Current Setting

The development plan area consists of 13.5 acres of the 17.51-acre project site in the City of Brentwood (see Figure 1), and is identified by the Contra Costa County Assessor as Assessor's Parcel Numbers (APNs) 019-040-050, -051, and -066. The project is bounded by Arbor Ridge Apartments to the north, Amber Lane to the south, Empire Avenue to the east, and Shady Willow Lane to the west (see Figure 2). Surrounding land uses consist of multi-family apartments to the north, Pioneer Elementary School to the south, single-family residential to the east, and agricultural land to west, across from Shady Willow Lane. The site is predominantly vacant with ruderal grassland and scattered trees. Three existing single family residences occupy a portion of the site, near the southeastern border.

Figure 1
Regional Project Location

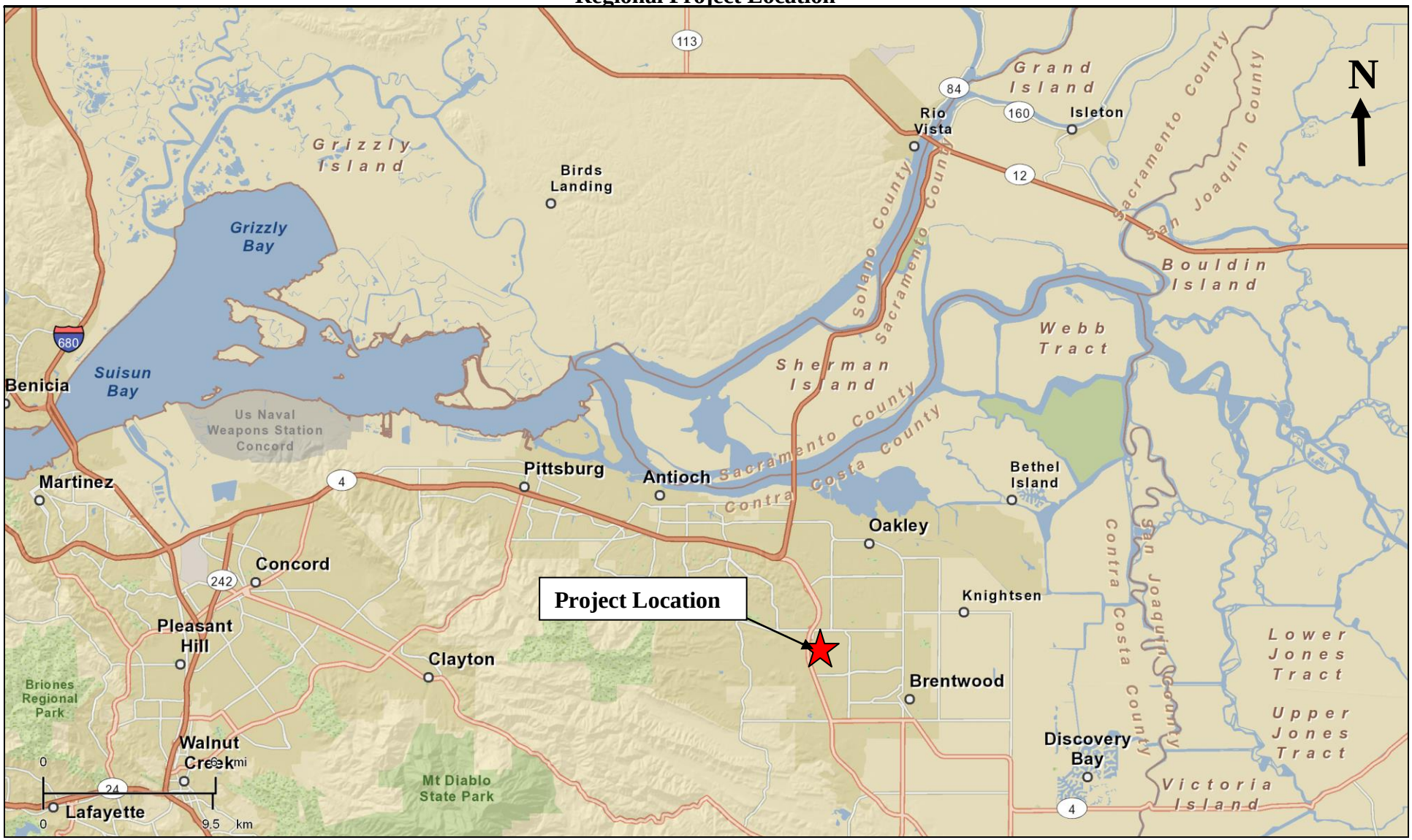


Figure 2
Project Vicinity Map

Proposed Project Components

Implementation of the proposed project requires the approval of discretionary entitlements, which are described below.

Rezone

The proposed project site is currently zoned R-2. The proposed project includes a request to rezone the 13.5-acre development plan area to PD in order to allow flexibility regarding setbacks and other development standards. As such, site specific development standards need to be approved as part of the rezone to PD. The applicant has submitted draft PD development standards for the City's review.

Vesting Tentative Subdivision Map

The VTSM for the Bella Fiore Project consists of 98 single-family, two-story residential units on approximately 13.5 acres of the 17.51-acre site (see Figure 3). This 13.5-acre area is referred to in this IS/MND as the development plan area (see Figure 4). The homes would range between 2,001 and 2,504 square feet (sq ft). In addition, the VTSM includes approximately 0.85 acres of open space and a 4.01-acre remainder parcel (parcel J) to serve as the lot for an existing single-family residence. Neighborhood access would be provided with the proposed internal street ('A' Street), which would connect to existing Amber Lane to the south and Empire Avenue to the east of the project site.

Roadway Improvements

In addition to the proposed internal street system consisting of 'A' Street and 'B' Street, the proposed project includes the dedication of Right-of-Way (ROW) for the expansion of Shady Willow Lane. The construction of the road improvements as well as landscaped island and frontage improvements are intended to occur with the construction of the proposed project.

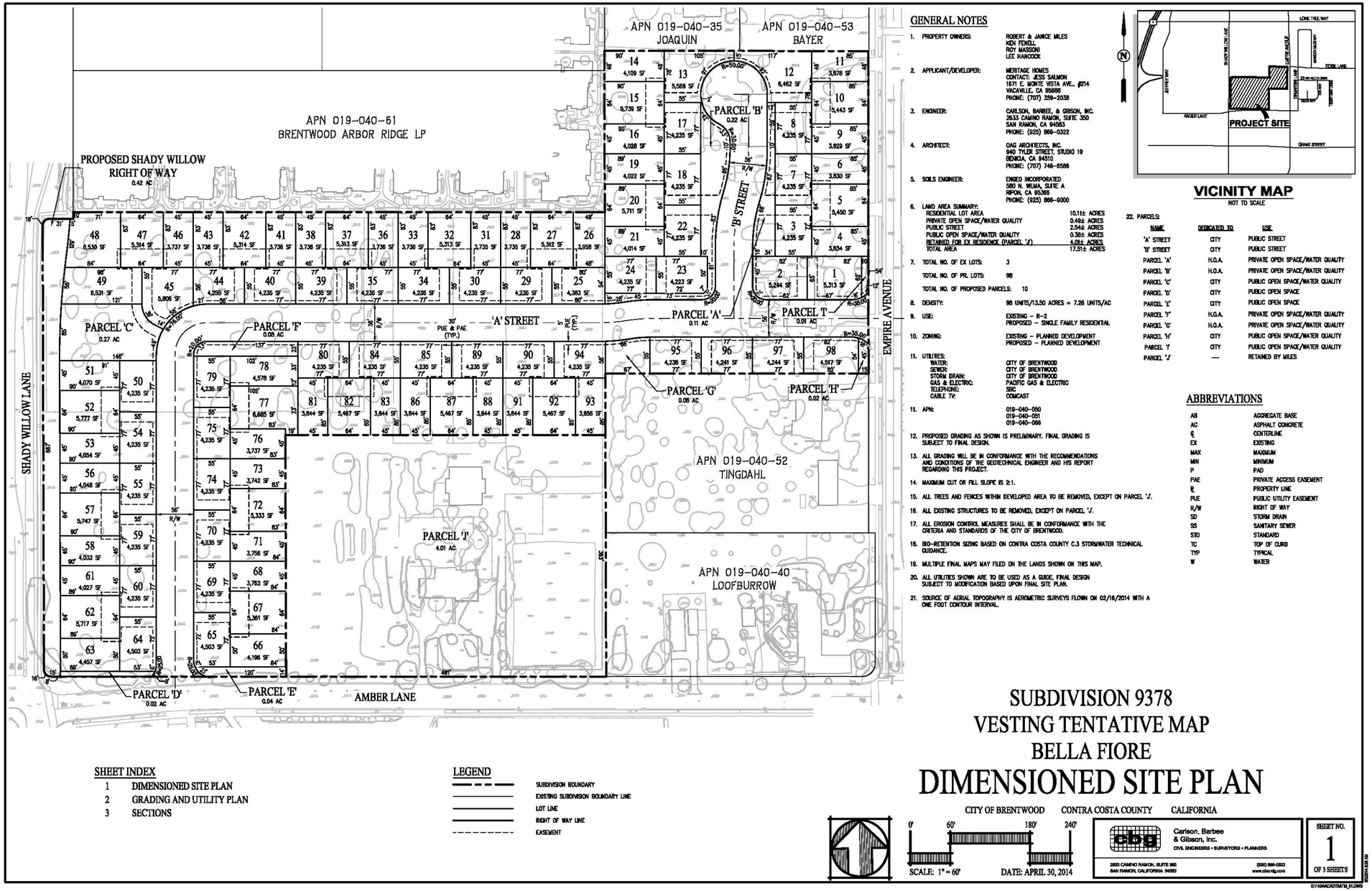
Stormwater System

The proposed project includes 0.85 acres of several landscaped open space areas located throughout the site to serve as on-site bio-retention swales in order to treat urban water runoff. The proposed vegetation has been specifically selected to be water-friendly and low water resilient. The vegetation is arranged to slow, capture and breakdown the pollutants suspended in urban runoff. Upon being treated with the proposed on-site bio-retention swales, project runoff would be routed with newly constructed 18-inch storm drain pipes, within the internal street ROW, to the existing detention basin near Fairview Avenue and the railroad tracks, after which runoff would be metered through the City's system into Marsh Creek.

Water Supply System

The project includes the construction of the necessary water infrastructure to provide water to the proposed neighborhoods. 8-inch water mains would be installed within the internal street ROW, and connect to the existing mains in Amber Lane and Empire Avenue. Off-site water infrastructure improvements are not required as part of the project.

Figure 3
Vesting Tentative Subdivision Map



GENERAL NOTES

1. PROPERTY OWNERS: ROBERT & JANICE MILES, KEN FENGLI, ROY MASSONI, LEE HANCOCK
2. APPLICANT/DEVELOPER: MERITAGE HOMES, CONTACT: JESS SALMON, 1671 E. MONTE VISTA AVE., #214, VACAVILLE, CA 95688, PHONE: (707) 359-2038
3. ENGINEER: CARLSON, BARBEE, & GIBSON, INC., 2633 CAMINO RAMON, SUITE 350, SAN RAMON, CA 94583, PHONE: (925) 866-0322
4. ARCHITECT: OAG ARCHITECTS, INC., 940 TYLER STREET, STUDIO 19, BENICIA, CA 94510, PHONE: (707) 746-8586
5. SOILS ENGINEER: ENGEO INCORPORATED, 580 N. WILMA, SUITE A, RIPON, CA 95366, PHONE: (925) 866-0000
6. LAND AREA SUMMARY:

RESIDENTIAL LOT AREA	10.11± ACRES
PRIVATE OPEN SPACE/WATER QUALITY	0.42± ACRES
PUBLIC STREET	2.54± ACRES
PUBLIC OPEN SPACE/WATER QUALITY	0.30± ACRES
RETAINED FOR EX RESIDENCE (PARCEL 'J')	4.28± ACRES
TOTAL AREA	17.31± ACRES

7. TOTAL NO. OF EX LOTS: 3
   TOTAL NO. OF PR. LOTS: 98
   TOTAL NO. OF PROPOSED PARCELS: 10
8. DENSITY: 98 UNITS/13.50 ACRES = 7.26 UNITS/AC
9. USE: EXISTING – R-2, PROPOSED – SINGLE FAMILY RESIDENTIAL
10. ZONING: EXISTING – PLANNED DEVELOPMENT, PROPOSED – PLANNED DEVELOPMENT
11. UTILITIES: WATER: CITY OF BRENTWOOD; SEWER: CITY OF BRENTWOOD; STORM DRAIN: CITY OF BRENTWOOD; GAS & ELECTRIC: PACIFIC GAS & ELECTRIC; TELEPHONE: SBC; CABLE TV: COMCAST
11. APN: 019-040-050, 019-040-051, 019-040-056
12. PROPOSED GRADING AS SHOWN IS PRELIMINARY. FINAL GRADING IS SUBJECT TO FINAL DESIGN.
13. ALL GRADING WILL BE IN CONFORMANCE WITH THE RECOMMENDATIONS AND CONDITIONS OF THE GEOTECHNICAL ENGINEER AND HIS REPORT REGARDING THIS PROJECT.
14. MAXIMUM CUT OR FILL SLOPE IS 2:1.
15. ALL TREES AND FENCES WITHIN DEVELOPED AREA TO BE REMOVED, EXCEPT ON PARCEL 'J'.
16. ALL EXISTING STRUCTURES TO BE REMOVED, EXCEPT ON PARCEL 'J'.
17. ALL EROSION CONTROL MEASURES SHALL BE IN CONFORMANCE WITH THE CRITERIA AND STANDARDS OF THE CITY OF BRENTWOOD.
18. BIO-RETENTION SIZING BASED ON CONTRA COSTA COUNTY C.3 STORMWATER TECHNICAL GUIDANCE.
19. MULTIPLE FINAL MAPS MAY FILED ON THE LANDS SHOWN ON THIS MAP.
20. ALL UTILITIES SHOWN ARE TO BE USED AS A GUIDE. FINAL DESIGN SUBJECT TO MODIFICATION BASED UPON FINAL SITE PLAN.
21. SOURCE OF AERIAL TOPOGRAPHY IS AEROMETRIC SURVEYS FLOWN ON 02/16/2014 WITH A ONE FOOT CONTOUR INTERVAL.

VICINITY MAP
NOT TO SCALE

22. PARCELS:

NAME	DEDICATED TO	USE
'A' STREET	CITY	PUBLIC STREET
'B' STREET	CITY	PUBLIC STREET
PARCEL 'A'	H.O.A.	PRIVATE OPEN SPACE/WATER QUALITY
PARCEL 'B'	H.O.A.	PRIVATE OPEN SPACE/WATER QUALITY
PARCEL 'C'	CITY	PUBLIC OPEN SPACE/WATER QUALITY
PARCEL 'D'	CITY	PUBLIC OPEN SPACE
PARCEL 'E'	CITY	PUBLIC OPEN SPACE
PARCEL 'F'	H.O.A.	PRIVATE OPEN SPACE/WATER QUALITY
PARCEL 'G'	H.O.A.	PRIVATE OPEN SPACE/WATER QUALITY
PARCEL 'H'	CITY	PUBLIC OPEN SPACE/WATER QUALITY
PARCEL 'I'	CITY	PUBLIC OPEN SPACE/WATER QUALITY
PARCEL 'J'	—	RETAINED BY MILES

ABBREVIATIONS

AB	AGGREGATE BASE
AC	ASPHALT CONCRETE
℄	CENTERLINE
EX	EXISTING
MAX	MAXIMUM
MIN	MINIMUM
P	PAD
PAE	PRIVATE ACCESS EASEMENT
ℙ	PROPERTY LINE
PUE	PUBLIC UTILITY EASEMENT
R/W	RIGHT OF WAY
SD	STORM DRAIN
SS	SANITARY SEWER
STD	STANDARD
TC	TOP OF CURB
TYP	TYPICAL
W	WATER

SHEET INDEX

1	DIMENSIONED SITE PLAN
2	GRADING AND UTILITY PLAN
3	SECTIONS

LEGEND

- SUBDIVISION BOUNDARY
- EXISTING SUBDIVISION BOUNDARY LINE
- LOT LINE
- RIGHT OF WAY LINE
- EASEMENT

SUBDIVISION 9378
VESTING TENTATIVE MAP
BELLA FIORE
DIMENSIONED SITE PLAN

CITY OF BRENTWOOD CONTRA COSTA COUNTY CALIFORNIA

0' 60' 180' 240'
SCALE: 1" = 60'
DATE: APRIL 30, 2014

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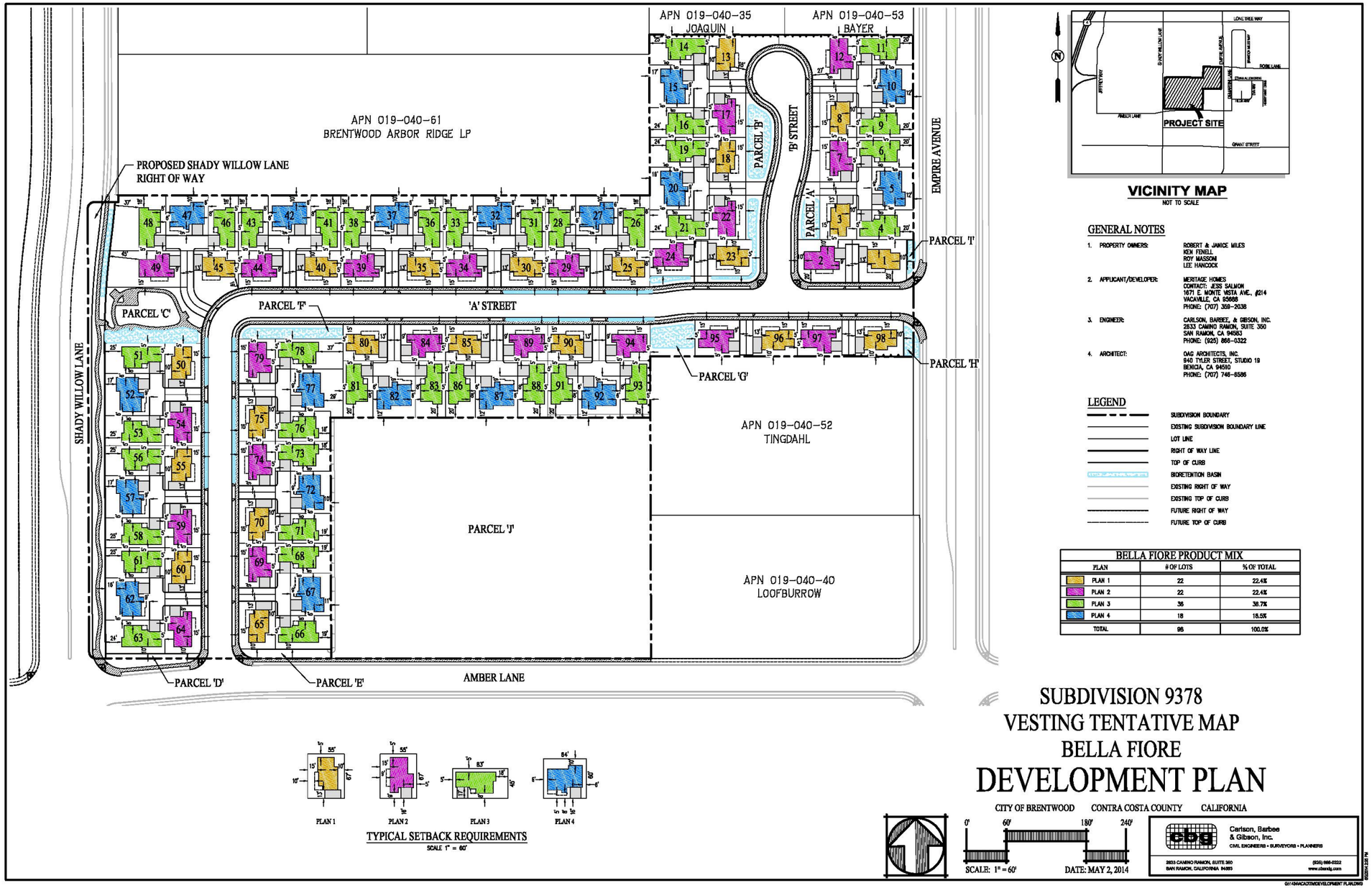
SHEET NO. 1 OF 3 SHEETS

Figure 4
Development Plan Area



Wastewater System

The wastewater generated by the project would be collected by an internal sewer system, consisting of 8-inch sewer lines, which would connect to the existing 10-inch sewer line within the Empire Avenue ROW. Off-site sewer infrastructure improvements are not required as part of the project.

Design Review

In accordance with the Brentwood Zoning Ordinance, all proposed structures and signs are subject to design review approval by the City of Brentwood Planning Commission in order to foster a good design character through consideration of aesthetic and functional relationships to surrounding development.[2]

The Bella Fiore neighborhood would incorporate four architectural floor plans, each with four distinct elevations. All plans are two stories, ranging from 2,001 to 2,504 sq ft. Five homes are grouped around a "T-shaped" motor court, also referred to as a courtyard. Each courtyard grouping would share common architectural themes to provide visual unity. The courtyard architectural theme mixes would pair "Cottage" with "Traditional" styles and "Mission" with "Italianate" styles (see Figure 5). The architecture themes would give each home a distinct individual presence while reflecting a uniform style within the court grouping.

It should be noted that the applicant is proposing to include, as part of the subdivision, landscaping and street trees that would enhance the visual quality of the site. Street trees are proposed along Empire Avenue, Amber Lane, and Shady Willow Lane. In addition, street trees are proposed on both sides of the proposed internal street ('A' Street) as well as the courtyards. Furthermore, the primary open space is located in the northwest corner of the site providing pedestrian connection to Shady Willow Lane, and includes recreational amenities such as benches, picnic tables, BBQ pit and turf.

[2] The Planning Commission is tasked with determining whether the proposed project conforms to the following criteria:

A. The proposed development shall create a well-composed urban design, harmoniously related to other facilities in the immediate area and to the total setting as seen from key vantage points in the community;
B. Elements of design which have significant relationship to the exterior appearance of structures and facilities shall be given special consideration; these elements include but are not limited to height, arrangement on the site, texture, lighting, material, color, signs, landscaping, size, bulk and scale, and appurtenances;
C. The proposed development shall be of a quality and character appropriate to, and serving to protect the value of, private and public investments in the immediate area;
D. Where the proposed development is located in an area for which a specific plan, planned development, neighborhood plan or precise plan has been adopted by the city council, the design of the development shall conform in all significant respects with such plans;
E. The proposed development shall conform with all requirements for landscaping, screening, parking, usable open space and off-street loading as set forth in this title;
F. The site development criteria set forth in Section 17.820.008;
G. "The City of Brentwood Design Guidelines" Draft, dated February 1, 2001, and any other applicable specific design criteria or standards set out in this title or other city ordinance;
H. All applicable regulations of the zoning ordinance and other city ordinances, policies or resolutions. (Ord. 663 § 1, 2001; Ord. 408, 1987)

Figure 5
Proposed Bella Fiore Architectural Themes

Discretionary Actions

Implementation of the proposed project would require the following discretionary actions by the City of Brentwood Planning Commission and/or City Council:

- Rezone from R-2 to PD and approval of site specific development standards;
- Tentative Subdivision Map approval to subdivide approximately 17.92 acres into 98 medium density residential lots, 0.85 acres of open space, internal roadway right of ways, and a 4.01-acre remainder parcel (Parcel J) for an existing residence; and
- Design Review of proposed two-story residential structures.

G. ENVIRONMENTAL CHECKLIST

The following Checklist contains the environmental checklist form presented in Appendix G of the CEQA Guidelines. The checklist form is used to describe the impacts of the proposed project. A discussion follows each environmental issue identified in the checklist. Included in each discussion are project-specific mitigation measures recommended as appropriate as part of the Proposed Project.

For this checklist, the following designations are used:

Potentially Significant Impact: An impact that could be significant, and for which mitigation has not been identified. If any potentially significant impacts are identified, an EIR must be prepared.

Less-Than-Significant With Mitigation Incorporated: An impact that requires mitigation to reduce the impact to a less-than-significant level.

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

No Impact: The project would not have any impact.

Issues		Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less-Than-Significant Impact	No Impact
I. 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 night-time views in the area?	☐	✖	☐	☐

Discussion

a,b. The City of Brentwood is located in the eastern valley area of Contra Costa County, immediately east of the Diablo Range, which includes Mount Diablo. The City of Brentwood has recognized views of Mount Diablo as an important visual resource to be preserved (see Policy COS 7-3 of the Conservation and Open Space Element of the Brentwood General Plan).

According to the 2014 Brentwood General Plan Update EIR and the California Scenic Highway Mapping System, administered by Caltrans, the City of Brentwood does not contain officially designated State Scenic Highways.[3] However, it should be noted that the segment of State Route 4 (SR 4) located approximately 0.4 miles to the east of the project site is listed as an Eligible State Scenic Highway, but has not yet been officially designated. As such, the project would not damage any scenic resources, such as trees, rock outcroppings, or historic buildings, within a State scenic highway. The 2014 Brentwood General Plan Update EIR identifies SR 4 as a local scenic route due to the distant panoramic vistas of the Diablo Range and Mount Diablo in particular. Mount Diablo is located to the west of SR 4 and the proposed Bella Fiore Project is located to the east of SR 4. As a result, the project structures would not impede views of Mount Diablo currently afforded to travelers along SR 4.

Residents along Empire Avenue currently have very limited views of Mount Diablo through the project site, from their second story windows. These residents' distant views of Mount Diablo are already obstructed due to the existing 8-foot masonry block wall, mature trees, and residences along the western side of Empire Avenue. Therefore, a substantial adverse effect on scenic vista would not occur as a result of project development.

[3] City of Brentwood. *2014 Brentwood General Plan Update EIR [pg. 3.1-5]*. July 22, 2014.

Given the above considerations, the project would result in a ***less-than-significant*** impact to a scenic vista, a State scenic highway, and scenic resources within a State scenic highway.

c. The development of the project site would change the existing visual setting from predominately vacant land, covered with annual ruderal grasses and three single family residences located near the southeastern border, to an urban area consisting of 98 single-family residential units. However, the proposed development would be considered compatible with other residential uses in the immediate vicinity of the project site and throughout the City of Brentwood. For example, the proposed project site is adjacent to residential subdivisions to the east and north, and an elementary school to the south. In addition, the proposed project is consistent with the type of development planned for the site in the recently adopted General Plan Update.

The proposed architecture for the project would also enhance the aesthetic quality of the development. The final project design would be approved by the City through its design review process. Through this process the Planning Commission would ensure the design meets the criteria set forth in Municipal Code Section 17.820.007. The currently proposed architecture provides four architectural floor plans, each with four distinct elevations. All plans are two stories, ranging from 2,001 to 2,504 sq ft. The site design accommodates the City of Brentwood's General Plan intentions for medium density single-family detached homes on small lots. Five homes are grouped around a "T-shaped" motor court, also referred to as a courtyard. Each courtyard grouping would share common architectural themes to provide visual unity. The courtyard architectural theme mixes would pair "Cottage" with "Traditional" styles and "Mission" with "Italianate" styles. The architecture themes give each home a distinct individual presence while reflecting a uniform style within the court grouping.

It should be noted that the applicant is proposing to include as part of the subdivision, landscaping and street trees that would enhance the visual quality of the site. Street trees are proposed along Empire Avenue, Amber Lane, and Shady Willow Lane. In addition, street trees are proposed on both sides of the proposed internal street ('A' Street) as well as the courtyards. Furthermore, the primary open space is located in the northwest corner of the site providing pedestrian connection to Shady Willow Lane, and includes recreational amenities such as benches, picnic tables, BBQ pit and turf.

As a result, buildout of the project site would result in a ***less-than-significant*** impact with respect to substantially degrading the existing visual character or quality of the site and its surroundings.

d. The project site contains three existing single family residences located near the southeastern border; however, the site is predominately vacant and covered with annual ruderal grasses. As a result, a relatively small amount of light or glare is currently emitted from the project site. The change from a predominately vacant property to a residential development including 98 single-family units and street lighting would generate new sources of light and glare. The project site is bordered by new subdivisions to the east and north, an elementary school to the south, and open agricultural fields west, southwest, and southeast. The residences located in the immediate vicinity of the site would be considered sensitive receptors, which could be adversely affected by additional sources of light and glare. Therefore, the increase in light and glare produced by the proposed project would be considered a ***potentially significant***

impact.

Mitigation Measure(s)

Implementation of the following mitigation measure would reduce the potential impacts related to light and glare to a *less-than-significant* level.

I-1. *In conjunction with development of the proposed project, the developer shall shield all on-site lighting so that nighttime lighting is directed within the project site and does not illuminate adjacent properties. A detailed lighting plan shall be submitted for the review and approval by the Community Development Department and the Public Works Department in conjunction with the project improvement plans. The lighting plan shall indicate the locations and design of the shielded light fixtures.*

Issues		Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less-Than-Significant Impact	No Impact
II. AGRICULTURE AND FORESTRY 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. In determining whether impacts to forest resources, including timberland, are significant environmental effects, lead agencies may refer to information compiled by the California Department of Forestry and Fire Protection regarding the state's inventory of forest land, including the Forest and Range Assessment Project and the Forest Legacy Assessment project; and forest carbon measurement methodology provided in Forest Protocols adopted by the California Air Resources Board. Would the project:*					
a.	Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping Program of the California Resources Agency, to non-agricultural use?	☐	✖	☐	☐
b.	Conflict with existing zoning for agricultural use, or a Williamson Act contract?	☐	☐	☐	✖
c.	Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code section 12220(g)), timberland (as defined by Public Resources Code section 4526), or timberland zoned Timberland Production (as defined by Government Code section 51104(g))?	☐	☐	☐	✖
d.	Result in the loss of forest land or conversion of forest land to non-forest use?	☐	☐	☐	✖
e.	Involve other changes in the existing environment which, due to their location or nature, could individually or cumulatively result in loss of Farmland to non-agricultural use?	☐	✖	☐	☐

Discussion

a,e. The 13.5-acre development plan area is predominately vacant with ruderal annual grassland vegetation and scattered trees. Two existing single family residences occupy a portion of the development plan area, near the eastern border. The entire project site contains Capay Clay (0 to 2 percent slopes).[4] According to the "Guide to Mapping Units" included in the Contra Costa County Soil Survey, the on-site soil is considered Class II, as defined by the United States Department of Agriculture Natural Resource Conservation Service.[5] Section 17.730.020 of the City of Brentwood's Agricultural Preservation Program states that, "agricultural land" requiring mitigation, includes but is not limited to: "[…] Class I, II, III, or IV soils as defined by the United States Department of Agriculture Natural Resource Conservation Service." As a result, all on-site agricultural land that would be converted for development of the Bella Fiore Project, is subject to mitigation per the City's Agricultural Preservation Program.

The City of Brentwood General Plan Update designates the project site as Residential-Medium Density (R-MD).[6] The General Plan primarily designates agricultural areas surrounding the City as Agricultural Conservation (AGCON). The proposed project is not located within the conservation area. The 2014 General Plan Update EIR evaluated the impacts of Prime Farmland conversion that would result from buildout of the General Plan and determined that impacts would remain significant and unavoidable even with implementation of General Plan goals and policies aimed at preserving agricultural lands. Given the fact that the 2014 General Plan designated the Bella Fiore project site for development (R-MD), the conversion of agricultural land on the project site was already evaluated and considered in the General Plan Update EIR analysis. As a result, in accordance with Public Resource Code Section 21083.3 this IS/MND need not evaluate significant effects already evaluated within a program EIR – in this case, the 2014 Brentwood General Plan Update EIR. The City adopted Findings of Fact and a Statement of Overriding Considerations for this significant and unavoidable impact. Furthermore, as explained above, the project would be required to comply with Chapter 17.730, Agricultural Preservation Program, of the Brentwood Municipal Code, which requires the project applicant to preserve agricultural lands by either:

1. Granting an agricultural conservation easement to or for the benefit of the City and/or a qualified land trust approved by the City on agricultural land deemed acceptable by the City. The easement shall encumber the exact acreage of the proposed entitlement, including any land used for park and recreation purposes and may encumber land acquired by the City and/or qualified land trust in fee; or

2. Paying an in-lieu fee established by City Council resolution. The fee may be adjusted annually but may not be increased by more than ten percent during any twelve-month period.

[4] United States Department of Agriculture, Natural Resources Conservation Service. *Web Soil Survey*. Available at: http://websoilsurvey.sc.egov.usda.gov/App/HomePage.htm. Accessed July 28, 2014.
[5] United States Department of Agriculture, Soil Conservation Service. *Soil Survey of Contra Costa County, California*. September 1977, pp. 123ff.
[6] City of Brentwood. *City of Brentwood General Plan*. July 2014.

Should the project applicant not comply with the City's agricultural preservation requirements, the project's conversion of agricultural land would result in a ***potentially significant*** impact.

Mitigation Measure(s)
Implementation of the following mitigation measure would mitigate potential impacts related to the loss of agricultural resources to a *less-than-significant* level.

II-2. *Prior to recordation of any final map or issuance of any grading permit, the developer shall comply with Chapter 17.730, Agricultural Preservation Program, of the Brentwood Municipal Code in order to mitigate the project's conversion of agricultural land, as defined in Section 17.730.020, by granting an agricultural conservation easement or paying the current agricultural conservation City fee in effect at that time to provide funds to purchase conservation easements to mitigate the loss of farmland.*

b. The project site is not under Williamson Act contract, nor is the site zoned for agricultural use. The current zoning designation for the project site is R-2. Therefore, the project would have ***no impact*** with respect to conflicting with agricultural zoning or Williamson Act contracts.

c,d. The project site is not considered forest land (as defined in Public Resources Code section 12220[g]), timberland (as defined by Public Resources Code section 4526), and is not zoned Timberland Production (as defined by Government Code section 51104[g]). Therefore, the proposed project would have ***no impact*** with regard to conversion of forest land or any potential conflict with forest land, timberland, or Timberland Production zoning.

Issues		Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less-Than-Significant Impact	No Impact
III. 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 cumulatively 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. The City of Brentwood is within the jurisdiction of the Bay Area Air Quality Management District (BAAQMD), which regulates air quality in the San Francisco Bay Area, and is located in the San Francisco Bay Area Air Basin (SFBAAB). The SFBAAB is currently designated as a nonattainment area for State and federal ozone, State and federal particulate matter 2.5 microns in diameter ($PM_{2.5}$), and State particulate matter 10 microns in diameter (PM_{10}) standards. The BAAQMD, in cooperation with the Metropolitan Transportation Commission (MTC) and the Association of Bay Area Governments (ABAG), prepared the *2005 Ozone Strategy*, which is a roadmap depicting how the Bay Area will achieve compliance with the State one-hour air quality standard for ozone as expeditiously as practicable and how the region will reduce transport of ozone and ozone precursors to neighboring air basins. Although the California Clean Air Act does not require the region to submit a plan for achieving the State PM_{10} standard, the *2005 Ozone Strategy* is expected to also reduce PM_{10} emissions. In addition, to fulfill federal air quality planning requirements, the BAAQMD adopted a $PM_{2.5}$ emissions inventory for year 2010, which was submitted to the U.S. Environmental Protection Agency (USEPA) on January 14, 2013 for inclusion in the State Implementation Plan (SIP).

The current plan in place to achieve progress toward attainment of the federal ozone standards is the *Revised San Francisco Bay Area Ozone Attainment Plan for the 1-Hour*

National Ozone Standard. The USEPA recently revoked the 1-hour federal ozone standard; however, the region is designated nonattainment for the new 8-hour standard that replaced the older one-hour standard. Until the region either adopts an approved attainment plan or attains the standard and adopts a maintenance plan, the *Revised San Francisco Bay Area Ozone Attainment Plan for the 1-Hour National Ozone Standard* remains the currently applicable federally-approved plan.

The aforementioned applicable air quality plans contain mobile source controls, stationary source controls, and transportation control measures (TCMs) to be implemented in the region to attain the State and federal ozone standards within the SFBAAB. The plans are based on population and employment projections provided by local governments, usually developed as part of the General Plan update process. The proposed project would be considered to conflict with, or obstruct implementation of, an applicable air quality plan if the project would be inconsistent with the Ozone Attainment Plan's growth assumptions, in terms of population, employment, or regional growth in Vehicle Miles Traveled (VMT). The growth assumptions are based on ABAG projections that are, in turn, based on the City's General Plan. The proposed project site was designated for medium density residential uses in the previous Brentwood General Plan in effect at the time ABAG projections were forecast. The proposed Bella Fiore is consistent with the medium density residential land use designation; therefore, the project would be considered consistent with the growth assumptions of the applicable air quality plans. As a result, the proposed project would not conflict with or obstruct implementation of the applicable air quality plans, and a ***less-than-significant*** impact would result.

b,c. According to the California Environmental Quality Act (CEQA) Guidelines, an air quality impact may be considered significant if the proposed project's implementation would result in, or potentially result in, conditions, which violate any existing local, State or federal air quality regulations. In order to evaluate ozone and other criteria air pollutant emissions and support attainment goals for those pollutants designated as nonattainment in the area, the BAAQMD has established significance thresholds associated with development projects for emissions of reactive organic gases (ROG), nitrogen oxide (NO_x), PM_{10}, and $PM_{2.5}$. The BAAQMD's significance thresholds, expressed in pounds per day (lbs/day) for project-level and tons per year (tons/yr) for cumulative, listed in Table 1, are recommended for use in the evaluation of air quality impacts associated with proposed development projects.

Table 1
BAAQMD Thresholds of Significance

Pollutant	Construction (lbs/day)	Operational (lbs/day)	Cumulative (tons/year)
ROG	54	54	10
NO_x	54	54	10
PM_{10}	82	82	15
$PM_{2.5}$	54	54	10

Source: BAAQMD, CEQA Guidelines, May 2011.

In addition, the BAAQMD identifies screening criteria for development projects, which provide a conservative indication of whether a development could result in potentially

significant air quality impacts. If the screening criteria are met by a project, a detailed air quality assessment of that project's air pollutant emissions would be required. The screening criteria for a single-family residential development are if the development is less than or equal to the following screening level sizes:

- 325 dwelling units for operational criteria pollutants;
- 56 dwelling units for operational greenhouse gas (GHG) (addressed in Section VII); or
- 114 dwelling units for construction criteria pollutants.

Accordingly, if a single-family development is less than or equal to the screening size for operational or construction criteria pollutants, or for operational GHG, the development would not be expected to result in potentially significant air quality impacts, and a detailed air quality assessment would not be required.

It should be noted that the BAAQMD was challenged in Superior Court, on the basis that the BAAQMD failed to comply with CEQA when it adopted its CEQA guidelines, including thresholds of significance. The BAAQMD was ordered to set aside the thresholds and conduct CEQA review of the proposed thresholds. On August 13, 2013, the First District Court of Appeal reversed the trial court's decision striking down BAAQMD's CEQA thresholds of significance for GHG emissions. The Court of Appeal's held that CEQA does not require BAAQMD to prepare an EIR before adopting thresholds of significance to assist in the determination of whether air emissions of proposed projects might be deemed "significant." The Court of Appeal's decision provides the means by which BAAQMD may ultimately reinstate the GHG emissions thresholds, though the court's decision does not become immediately effective. It should be further noted that a petition for review has been filed; however, the court has limited its review to the following issue: Under what circumstances, if any, does CEQA require an analysis of how existing environmental conditions will impact future residents or users (receptors) of a proposed project? Ultimately, the thresholds of significance used to evaluate proposed developments are determined by the CEQA lead agency. Per CEQA Guidelines Section 15064.7, the City has elected to use the BAAQMD's thresholds and methodology for this project, as they are based on substantial evidence and remain the most up-to-date, scientifically-based method available to evaluate air quality impacts. Thus, the BAAQMD's thresholds of significance presented in Table 1, and the screening criteria, are utilized for this analysis.

Implementation of the proposed project would contribute local emissions in the area during both the construction and operation of the proposed project. As the proposed project involves the development of 98 dwelling units, the project does not exceed the screening criteria for operational or construction-related criteria pollutants resulting from a single-family residential development. As such, the proposed project would not be expected to result in potentially significant operational or construction-related air quality impacts. Out of an abundance of caution, Raney calculated the construction and operational air emissions resulting from the project to conclusively determine whether thresholds could be exceeded.

The proposed project's emissions were quantified using the California Emissions Estimator Model (CalEEMod) software version 2013.2.2.[7] Results of the CalEEMod modeling are expressed in lbs/day for construction and operational emissions, and in tons/yr for cumulative emissions, which allows for comparison between the model results and the BAAQMD significance thresholds. All modeling results are available for review at Brentwood City Hall.

Construction Emissions

The proposed project would require demolition as well as off-site hauling for site preparation, both of which have been factored into the modeling. During construction of the project, various types of equipment and vehicles would temporarily operate on the project site. Construction exhaust emissions would be generated from construction equipment, earth movement activities, construction workers' commute, and construction material hauling for the entire construction period. The aforementioned activities would involve the use of diesel- and gasoline-powered equipment that would generate emissions of criteria pollutants. Project construction activities also represent sources of fugitive dust, which includes PM emissions. As construction of the proposed project would generate air pollutant emissions intermittently within the site, and in the vicinity of the site, until all construction has been completed, construction is a potential concern because the proposed project is in a nonattainment area for ozone and PM.

Utilizing CalEEMod, the proposed project's construction-related criteria air pollutant emissions were estimated and are presented in Table 2 below. It should be noted that the BAAQMD requirement regarding architectural coating VOC content limits was used to calculate the emissions for the proposed project.

Table 2
Maximum Unmitigated Project Construction Emissions

Pollutant	Project Emissions (lbs/day)	BAAQMD Significance Threshold (lbs/day)
ROG	19.64	54.0
NO_X	104.46	54.0
PM_{10}	21.33	82.0
$PM_{2.5}$	12.82	54.0

Source: CalEEMod, July 2014.

As shown in Table 2, the proposed project's construction-related ROG, PM_{10}, and $PM_{2.5}$ emissions would be below the applicable thresholds of significance. However, the proposed project's construction-related NO_x emissions would be above the applicable threshold. It should be noted that the project is required to comply with all BAAQMD rules and regulations for construction, including implementation of the BAAQMD's recommended Basic Construction Mitigation Measures. The Basic Construction Mitigation Measures

[7] CalEEMod is a statewide model designed to provide a uniform platform for government agencies, land use planners, and environmental professionals to quantify air quality emissions, including GHG emissions, from land use projects. The model applies inherent default values for various land uses, including construction data, trip generation rates based on the Institute of Transportation Engineers (ITE) Manual, vehicle mix, trip length, average speed, etc. However, where project- or site-specific data was available, such data was input into the model (e.g., construction phases and timing).

include, but are not limited to, watering exposed surfaces, covering all haul truck loads, removing all visible mud or dirt track-out, limiting vehicle speeds on unpaved roads, and minimizing idling time. Because the proposed project would exceed the applicable threshold of significance for construction-related emissions of NO_x, an ozone precursor, the project could violate construction-related air quality standards or contribute to the area's nonattainment status of ozone, and impacts associated with construction-related emissions would be considered potentially significant.

Operational Emissions

Operational emissions of ROG, NO_X, PM_{10}, and $PM_{2.5}$ would be generated by the proposed project from both mobile and stationary sources. Day-to-day activities such as future residents' vehicle trips to and from the project site would make up the majority of the mobile emissions. Emissions would occur from area sources such as natural gas combustion from heating mechanisms, landscape maintenance equipment exhaust, and consumer products.

Utilizing the CalEEMod, the proposed project's operational criteria air pollutant emissions were estimated and are presented in Table 3 below. It should be noted that BAAQMD Regulation 6, Rule 3: Wood-Burning Devices, was assumed for the proposed project to calculate project emissions. As shown in Table 3, the proposed project's operational emissions of ROG, NO_x, PM_{10}, and $PM_{2.5}$ would not exceed the applicable thresholds of significance. Therefore, the proposed project would not violate operational air quality standards or contribute to the area's nonattainment status of ozone and PM, and impacts associated with operational emissions would be considered less than significant.

Table 3
Unmitigated Project Operational Emissions

Pollutant	Project Emissions (lbs/day)	BAAQMD Significance Threshold (lbs/day)
ROG	8.49	54.0
NO_X	8.10	54.0
PM_{10}	4.33	82.0
$PM_{2.5}$	1.41	54.0

Source: CalEEMod, July 2014.

Cumulative Emissions

The long-term emissions associated with operation of the proposed project in conjunction with other existing or planned development in the area would incrementally contribute to the region's air quality. In order to determine the proposed project's cumulative contribution to regional air quality, the City, as lead agency, has chosen to utilize the BAAQMD's cumulative thresholds as presented in Table 1. The proposed project's contribution to cumulative emissions of criteria air pollutants was calculated using CalEEMod and is presented in Table 4 below. As shown in Table 4, the proposed project's unmitigated cumulative emissions would be below the applicable cumulative thresholds of significance. Therefore, the proposed project's incremental contribution to cumulative air quality impacts would be considered less than significant.

Table 4 Unmitigated Project Cumulative Emissions		
Pollutant	**Project Emissions (tons/yr)**	**BAAQMD Significance Threshold (tons/yr)**
ROG	1.43	10
NO_X	1.41	10
PM_{10}	0.73	15
$PM_{2.5}$	0.22	10
Source: CalEEMod, July 2014.		

Conclusion

As presented and discussed above, the proposed project would result in operational and cumulative emissions below the applicable BAAQMD thresholds of significance. However, the proposed project would result in construction-related NO_X emissions in excess of the applicable thresholds of significance. Accordingly, the project could violate air quality standards and contribute to the region's nonattainment status of ozone, which would be considered, a ***potentially significant*** impact.

Mitigation Measures

Implementation of Mitigation Measures III-1 and III-2 would reduce the project's construction-related NO_x emissions from 104.46 lbs/day to 41.08 lbs/day. With implementation of Mitigation Measures III-1 and III-2, the project's construction-related emissions of NO_X would be reduced to below the applicable threshold of significance.

III-1. *Prior to issuance of a grading permit, the project applicant shall show on the grading plans with notation that the contractor shall ensure that all diesel-powered equipment larger than 50 horsepower and operating on the site for more than two days, consecutively, shall meet USEPA emissions standards for Tier 3 engines or equivalent. The grading plans shall be submitted for review and approval by the City Engineer.*

III-2. *Prior to issuance of a grading permit, the project applicant shall show on the grading plans with notation that the contractor shall ensure that all generators shall be alternatively fueled or meet USEPA emissions standards for Tier 3 engines or equivalent. The grading plans shall be submitted for review and approval by the City Engineer.*

d. Emissions of carbon monoxide (CO) are of potential concern, as the pollutant is a toxic gas that results from the incomplete combustion of carbon-containing fuels such as gasoline or wood. CO emissions are particularly related to traffic levels.

In addition to screening criteria for criteria pollutants and GHG, BAAQMD has established screening criteria for localized CO emissions, including the following:

- Consistency with applicable congestion management programs;
- Project traffic increase traffic volumes at intersections to more than 44,000 vehicles

per hour; or

- Project traffic increase traffic volumes at intersections to more than 24,000 vehicles per hour where vertical and/or horizontal mixing is substantially limited (e.g., tunnel, parking garage, underpass, etc.).

As the City has elected to use the BAAQMD's thresholds and methodology for this project, the BAAQMD's screening criteria for localized CO emissions presented above are utilized for this analysis.

A General Plan amendment is not required for the proposed project. The proposed density is consistent with the General Plan designation for the site and the proposed rezone is only required to allow for greater flexibility in design. As such, the project would be considered consistent with the growth assumptions of the General Plan. Subsequently, the project would result in similar mobile source emissions as currently anticipated for the site. In addition, according to the traffic impact assessment prepared for the proposed project, none of the affected intersections currently involve traffic volumes of 44,000 vehicles per hour (or 24,000 vehicles per hour where vertical and/or horizontal mixing is substantially limited), and would not increase traffic volumes greater than 44,000 vehicles per hour as a result of the proposed project. Therefore, according to the BAAQMD screening criteria above, the proposed project would not be expected to result in substantial increase in levels of CO at surrounding intersections, and the project would not generate or be subjected to localized concentrations of CO in excess of applicable standards.

Toxic Air Contaminants (TACs) are also a category of environmental concern. The California Air Resources Board's (CARB) *Air Quality and Land Use Handbook: A Community Health Perspective* (Handbook) provides recommendations for siting new sensitive land uses near sources typically associated with significant levels of TAC emissions, including, but not limited to, freeways and high traffic roads, distribution centers, and rail yards. It should be noted that the project site is approximately half-a-mile from the nearest railroad tracks; however, due to the lack of idling trains, the CARB does not consider tracks to be a significant source of TAC emissions. The project site is not located in the vicinity of any rail yard. The CARB has identified diesel particulate matter (DPM) from diesel-fueled engines as a TAC; thus, high volume freeways, stationary diesel engines, and facilities attracting heavy and constant diesel vehicle traffic are identified as having the highest associated health risks from DPM. Health risks from TACs are a function of both the concentration of emissions and the duration of exposure. Health-related risks associated with DPM in particular are primarily associated with long-term exposure and associated risk of contracting cancer.

Children, pregnant women, the elderly, and those with existing health problems are considered more sensitive to air pollution than others. Accordingly, land uses that are typically considered to be sensitive receptors include residences, schools, day care centers, playgrounds, and medical facilities. The proposed project includes the development of single-family residences, the occupants of which would be considered sensitive receptors. The CARB, per its Handbook, considers that any project placing sensitive receptors within 500 feet of a major roadway or freeway may have the potential to expose those receptors to DPM. Similarly, the BAAQMD recommends placement of overlay zones at least 500 feet

from all freeways and high volume roadways. The nearest freeway, SR 4, is located over 2,000 feet to the west of the project site. Therefore, the project site is not located within 500 feet of any freeway or high volume roadway, and would not be subjected to substantial concentrations of DPM associated with such.

The project does not involve long-term operation of any stationary diesel engine or other major on-site stationary source of TACs. Relatively few vehicle trips associated with operations of the proposed use would be expected to be composed of diesel-fueled vehicles. Therefore, the project would not generate any substantial concentrations of TACs during operations. Construction activities have the potential to generate DPM emissions related to the number and types of equipment typically associated with construction. Off-road heavy-duty diesel equipment used for site grading, paving, and other construction activities result in the generation of DPM. Pioneer Elementary School to the south, located opposite Amber Lane from the project site, would be considered the nearest existing sensitive receptors to the project site and could become exposed to DPM emissions from the site during construction activities. However, construction is temporary and occurs over a relatively short duration in comparison to the operational lifetime of the proposed project. In addition, only portions of the site would be disturbed at a time during buildout of the proposed project, with operation of construction equipment regulated and occurring intermittently throughout the course of a day. Thus, the likelihood that any one sensitive receptor would be exposed to high concentrations of DPM for any extended period of time would be very low. Because health risks associated with exposure to DPM or any TAC are correlated with high concentrations over a long period of exposure (e.g., over a 70-year lifetime), the temporary, intermittent construction-related DPM emissions would not be expected to cause any health risks to nearby sensitive receptors. Thus, construction of the proposed project would not expose any nearby existing sensitive receptors to any short-term substantial concentrations of TACs.

In conclusion, the proposed project would not expose sensitive receptors to substantial concentrations of any TACs. Therefore, impacts related to exposure of sensitive receptors to substantial pollutant concentrations would be considered ***less than significant***.

e. According to the CARB's Handbook, some of the most common sources of odor complaints received by local air districts are sewage treatment plants, landfills, recycling facilities, waste transfer stations, petroleum refineries, biomass operations, autobody shops, coating operations, fiberglass manufacturing, foundries, rendering plants, and livestock operations. The proposed project site is located in a developed area and is surrounded by existing residential land uses to the north, south, and west. Pioneer Elementary School is also located to the south of the project site. Commercial land uses are located to the east, opposite the Union Pacific Railroad tracks. Accordingly, the proposed project is not located in the vicinity of any substantial objectionable odor sources such as those mentioned above.

Residential land uses are not typically associated with the creation of substantial objectionable odors. Diesel fumes from construction equipment and delivery trucks are often found to be objectionable; however, construction of the proposed project would be temporary and diesel emissions would be temporary and regulated. Accordingly, the project would not be expected to create or be subjected to objectionable odors, and a ***less-than-significant*** impact would result.

Issues		Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less-Than-Significant Impact	No Impact
IV. 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 US 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 resident or migratory fish or wildlife species or with established resident or migratory wildlife corridors, or impede the use of wildlife 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 Conservation Community Plan, or other approved local, regional, or state habitat conservation plan?	☐	☐	✖	☐

Discussion

a. The following section is based upon the Planning Survey Report (PSR) prepared for the project site by Moore Biological Consultants in order to comply with and receive Permit coverage under the East Contra Costa County Habitat Conservation Plan (ECCCHCP).[8]

The site is best described as historical California annual grassland series that has been highly disturbed by past agricultural use, development of surrounding parcels, and other human activities. The site is periodically mowed for weed abatement. Dominant grassland species on the site include foxtail barley (*Hordeum murinum*), perennial ryegrass (*Lolium perenne*), oats (*Avena fatua*), soft chess brome (*Bromus hordeaceus*), ripgut brome (*Bromus diandrus*), prickly lettuce (*Lactuca serriola),* black mustard (*Brassica nigra*), artichoke thistle (*Cynara cardunculus*), common mallow (*Malva neglecta*), and filaree (*Erodium botrys*).

The project site was an historical orchard that is now vegetated with ruderal annual grassland vegetation. Trees on the site are primarily associated with the on-site residences and include blue gum *(Eucalyptus* sp.), pines *(Pinus* sp.), coastal live oak *(Quercus agrifolia),* fan palm *(Washingtonia filifera),* black walnut *(Juglans califomicus),* and several additional ornamental and fruit trees. A variety of ornamental shrubs associated with the on-site residences and widely scattered coyote bush *(Baccharis pilularis)* shrubs in the ruderal grasslands are located on the site.

Special-status plant species

Surveys to assess whether the project site contains potentially suitable habitat for special-status plants, and to search for special-status plants, were undertaken on February 14, 2014. The site was systematically searched by walking throughout the project site. Covered or no-take plants were not observed at the project site. Potentially occurring special-status plant species listed in the ECCCHCP for the annual grassland habitat type are not expected to occur on-site for the following reasons.

Alkali Milkvetch

The California Native Plant Society (CNPS) online Inventory of Rare and Endangered Plants (2013) describes alkali milkvetch (*Astragalus tener* ssp. *tener*) as occurring in annual grasslands in adobe clay soils, and alkaline vernal pools, at elevations between 0 and 60 meters above sea level. Such suitable habitat does not occur on-site. In addition, the CNPS Inventory describes this species as extirpated in Contra Costa County.[9]

Big Tarplant

The CNPS Inventory describes big tarplant (*Blepharizonia plumosa*) as occurring in annual grassland habitats at elevations between 30 and 505 meters above sea level. The highly

[8] Moore Biological Consultants. *East Contra Costa County Habitat Conservation Plan, Planning Survey Report for Bella Fiore*. March 2014.
[9] Moore Biological Consultants. *East Contra Costa County Habitat Conservation Plan, Planning Survey Report for Bella Fiore [pg. 19]*. March 2014.

disturbed ruderal grassland on the site does not provide suitable habitat for this species; and the site is at the extreme low end of the elevation range of big tarplant. The site is not mapped in the ECCCHCP as either "Suitable Low Potential Habitat" or "Suitable Habitat" for this species.

Brewer's Dwarf Flax

The CNPS Inventory describes Brewer's dwarf flax (*Hesperolinon breweri*) as occurring in annual grasslands, usually in serpentine soils, at elevations between 90 and 900 meters above sea level. The project site has been highly disturbed by past agricultural use and the site is below the elevation range for Brewer's dwarf flax. In addition, the ECCCHCP does not map the site as either "Suitable Low Potential Habitat" or "Suitable Habitat" for this species.

Contra Costa Goldfields

The CNPS Inventory describes Contra Costa goldfields (*Lasthenia conjugens*) as occurring in annual grassland habitats and vernal pools at elevations between 0 and 470 meters above sea level. The project site has been highly disturbed by past agricultural use and vernal pools are not located on-site.

Diamond-petaled Poppy

The CNPS Inventory describes diamond-petaled poppy (*Eschscholzia rhombipetala*) as occurring in annual grassland habitats with alkaline or clay soils, at elevations between 0 and 975 meters above sea level. The on-site ruderal grasslands are moderately to highly disturbed and areas of alkaline or clay soils do not occur on-site. In addition, the CNPS Inventory describes this species as extirpated in Contra Costa County.[10]

Large-flowered Fiddleneck

The CNPS Inventory describes large-flowered fiddleneck (*Amsinckia grandiflora*) as occurring in annual grasslands habitats at elevations between 275 and 550 meters above sea level. The project site has been highly disturbed by past agricultural use and is well below the elevation range for this species.

Mount Diablo Buckwheat

The CNPS Inventory describes Mount Diablo buckwheat (*Eriogonum truncatum*) as occurring in annual grassland habitats with sandy soils, at elevations between 3 and 350 meters above sea level. The on-site grasslands are moderately to highly disturbed, thereby reducing the suitability of the site for this species. In addition, the CNPS Inventory states that Mount Diablo buckwheat is only known from one population in Contra Costa County, within Mount Diablo State Park.

[10] Moore Biological Consultants. *East Contra Costa County Habitat Conservation Plan, Planning Survey Report for Bella Fiore [pg. 19]*. March 2014.

Mount Diablo Fairy-lantern

The CNPS Inventory describes Mount Diablo fairy-lantern (*Calochortus pulchellus*) as occurring in annual grassland habitats with sandy soils, at elevations between 30 and 840 meters above sea level. The project site is at the extreme low end of the elevation range for the species and the ECCCHCP does not map the project site as "Suitable Habitat" for Mount Diablo fairy-lantern.

Round-leaved Filaree

The CNPS Inventory describes round-leaved filaree (*California macrophylla*) as occurring in cismontane woodland habitats and annual grassland habitats with clay soils, at elevations between 15 and 1,200 meters above sea level. Clay soils were not observed at the project site. The highly disturbed ruderal grassland within the project site does not provide suitable habitat for round-leaved filaree. The level of on-site disturbance greatly reduces the suitability of the site for this species. In addition, the project site is at the low end of the elevation range for round-leaved filaree. The site is not mapped in the ECCCHCP as either "Primary Habitat" or "Secondary Habitat" for this species.

Showy Madia

The CNPS Inventory describes showy madia (*Madia radiata*) as occurring in annual grassland habitats at elevations between 25 and 900 meters above sea level. The highly disturbed condition of the ruderal grassland on the site greatly reduces the suitability of the site for showy madia. In addition, the CNPS Inventory describes this species as extirpated in Contra Costa County; and known records do not exist for showy madia in the ECCCHCP planning area.

Conclusion

Based upon the above-described factors, construction of the project would not result in adverse impacts to special-status plant species. The moderate to highly disturbed nature of the annual grasslands on-site results in a relative lack of suitable habitat for the special-status plant species that could potentially occur within annual grassland habitats.

Special-Status Wildlife Species

Based upon the on-site habitats, four covered wildlife species may occur on the project site. Each of these species is discussed below.

San Joaquin kit fox

The project site is just within the northern tip of the historical range of the San Joaquin kit fox (*Vulpes macrotis mutica*) and is mapped as "Suitable Low Use Habitat" in the modeled range of the species. Moore Biological inspected the project site for burrows and dens with evidence of kit fox occupancy (e.g., scat, tracks), and burrows and dens that met the dimensional criteria for kit fox. Comprehensive inspection of potential den habitat was

accomplished by walking meandering transects throughout the property. Potential San Joaquin kit fox dens were not observed in the project area.

Burrowing owl

The project site is within the range of the western burrowing owl (*Athene cunnicularia*). The site and visible areas on adjacent lands were inspected by Moore Biological for burrowing owls and ground squirrel burrows with evidence of burrowing owl occupancy (e.g., white wash, pellets, feathers). Comprehensive inspection of potential burrowing owl habitat was accomplished by walking meandering transects throughout the property. Western burrowing owls or burrows with evidence of burrowing owl occupancy were not observed in the study area.

Swainson's hawk

The project site is located along the far western edge of the range of Swainson's hawks (*Buteo swainsoni*). The project site contains several potential nest trees, with many of the largest trees being within the proposed remainder parcel (Parcel J). A few potential nest trees are located near and visible from the site. Trees on the project site and in adjacent lands were inspected for raptor stick nests. Moore Biological did not observe nests in the on-site trees or off-site trees visible from the site. In addition, Swainson's hawks were not observed in the study area during the field survey, which was conducted prior to the nesting season of this species. Due to the location of the project site being at the far western edge of the species' range, Swainson's hawks would unlikely nest in the trees on or near the project site.

Golden Eagle

The project site is within the range of the golden eagle (*Aquila chrysaetos*). The project site contains several potential nest trees, with many of the largest trees being within the proposed remainder parcel (Parcel J). A few potential nest trees are located near and visible from the site. Trees on the project site and in adjacent lands were inspected for raptor stick nests. Moore Biological did not observe nests in the on-site trees or off-site trees visible from the site. In addition, golden eagles were not observed in the study area during the field survey, and golden eagles most often nest in cliffs rather than trees in urban settings.

White-tailed kite and other migratory birds

White-tailed kite, though not covered under the ECCCHCP, is a fully protected species per California Fish and Game Code Section 3511. White-tailed kite could potentially nest in the trees located within the project site. Project improvements could result in impacts to the on-site trees; therefore, the possibility exists that construction of the project could disrupt nesting behavior if occupied raptor nests are present within said trees. In addition, on-site ruderal grasslands could be used for nesting purposes by other bird species protected by the Migratory Bird Treaty Act. Removal of on-site disturbed grassland could therefore result in impacts to nesting birds.

Conclusion

Due to the disturbed nature of the project site's ruderal annual grassland cover type, suitable habitat does not exist to support special-status plant species known to occur within the annual grassland cover type of East Contra Costa County. While the presence of special-status wildlife species is relatively unlikely, based upon the current land cover types found on-site, in accordance with the ECCCHCP, wildlife species surveys are required to determine whether any special-status wildlife species are occupying the project site prior to initiating on-site ground disturbance and vegetation removal. If the necessary preconstruction surveys are not carried out, the project could result in a ***potentially significant*** 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 U.S. Fish and Wildlife Service (USFWS), or the California Department of Fish and Wildlife (CDFW). In addition, the proposed project could result in *potentially significant* impacts to federally- or state-protected birds not covered under the ECCCHCP (i.e., white-tailed kite, migratory birds).

Mitigation Measure(s)

The following mitigation measures would reduce the above-stated special-status wildlife impacts to a *less-than-significant* level.

IV-1. *Prior to the issuance of grading or construction permits for the project site, the developer shall submit an ECCCHCP application and associated fee worksheet to the City of Brentwood Community Development Department for review and approval. The developer shall pay the applicable ECCCHCP per-acre fee in effect for Zone I in compliance with Section 16.168.070 of the Brentwood Municipal Code.*

San Joaquin Kit Fox

IV-2a. *Prior to any ground disturbance related to activities covered under the ECCCHCP, a USFWS/CDFW-approved biologist shall conduct a preconstruction survey of the 13.5-acre development plan area (see Figure 4 of the Planning Survey Report for Bella Fiore, available for review at Brentwood City Hall). The surveys shall establish the presence or absence of San Joaquin kit foxes and/or suitable dens, and evaluate use by kit foxes in accordance with USFWS survey guidelines.*[11] *Preconstruction surveys shall be conducted within 30 days of ground disturbance. On the parcel where the activity is proposed, the biologist shall survey the proposed disturbance footprint and a 250-foot radius from the perimeter of the proposed footprint in order to identify kit foxes and/or suitable dens.*

Adjacent parcels under different land ownership shall not be surveyed. The status of all dens shall be determined and mapped. Written results of the preconstruction survey shall be submitted to the City of Brentwood

[11] Sacramento Fish and Wildlife Office. *U.S. Fish and Wildlife Service San Joaquin Kit Fox Survey Protocol for the Northern Range.* June 1999.

Community Development Department within 5 working days after survey completion and before the start of ground disturbance. Concurrence is not required prior to initiation of activities covered under the ECCCHCP. If San Joaquin kit foxes and/or suitable dens are identified in the survey area, Mitigation Measure IV-2b shall be implemented. If kit foxes and/or suitable dens are not discovered, then further mitigation is not necessary.

IV-2b. *Dens within proposed disturbance footprint*

If a San Joaquin kit fox den is discovered in the proposed disturbance footprint during the surveys required under Mitigation Measure IV-2a, the following measures shall be implemented by a USFWS/CDFW-approved biologist:

- *The den shall be monitored for 3 days by a USFWS/CDFW-approved biologist, using a tracking medium or an infrared beam camera to determine if the den is currently being used.*
- *Unoccupied dens shall be destroyed immediately to prevent subsequent use.*
- *If a natal or pupping den is found, USFWS and CDFW shall be notified immediately. The den shall not be destroyed until the pups and adults have vacated, and then only after further consultation with USFWS and CDFW.*
- *If kit fox activity is observed at the den during the initial monitoring period, the den shall be monitored for an additional 5 consecutive days from the time of the first observation to allow any resident animals to move to another den while den use is actively discouraged. For dens other than natal or pupping dens, use of the den could be discouraged by partially plugging the entrance with soil such that any resident animal could easily escape. Once the den is determined to be unoccupied it may be excavated under the direction of the biologist. Alternatively, if the animal is still present after 5 or more consecutive days of plugging and monitoring, the den may have to be excavated when, in the judgment of the biologist, the den is temporarily vacant (i.e., during the animal's normal foraging activities).*

Dens outside proposed disturbance footprint

If a San Joaquin kit fox den is discovered outside of the proposed disturbance footprint during the surveys required under Mitigation Measure IV-2a, exclusion zones around each den entrance or cluster of entrances shall be demarcated. The configuration of exclusion zones shall be circular, with a radius measured outward from the den entrance(s). Covered activities shall not occur within the exclusion zones. Exclusion zone radii for potential dens shall be at least 50 feet and shall be demarcated with four to five flagged stakes. Exclusion zone radii for known dens shall be at least 100 feet and demarcated with staking and flagging that encircles each den or cluster of dens, but does not prevent access to the den by kit fox.

Burrowing Owl

IV-3a. *Prior to any ground disturbance related to activities covered under the ECCCHCP, a USFWS/CDFW-approved biologist shall conduct a preconstruction survey of the 13.5-acre development plan area (see Figure 4 of the Planning Survey Report for Bella Fiore, available for review at Brentwood City Hall). The surveys shall establish the presence or absence of western burrowing owl and/or habitat features, and evaluate use by owls in accordance with CDFW survey guidelines.*[12]

On the parcel where the activity is proposed, the biologist shall survey the proposed disturbance footprint and a 500-foot radius from the perimeter of the proposed footprint to identify burrows and owls. Adjacent parcels under different land ownership need not be surveyed. The survey shall take place near the sunrise or sunset in accordance with CDFW guidelines. All burrows or burrowing owls shall be identified and mapped. Survey shall take place no more than 30 days prior to construction. During the breeding season (February 1-August 31), surveys shall document whether burrowing owls are nesting on or directly adjacent to disturbance areas. During the non-breeding season (September 1-January 31), surveys shall document whether burrowing owls are using habitat on or directly adjacent to any disturbance area. Survey results would be valid only for the season during which the survey is conducted. The survey results shall be submitted to CDFW and the City of Brentwood Community Development Department.

If burrowing owls and/or burrows are identified in the survey area, Mitigation Measure IV-3b shall be implemented. If burrowing owls and/or suitable burrows are not discovered, then further mitigation is not necessary.

IV-3b. *If burrowing owls are found during the breeding season (February 1-August 31), the project proponent shall avoid all nest sites that could be disturbed by project construction during the remainder of the breeding season, or while the nest is occupied by adults or young.*

Avoidance shall include establishment of a 160-foot non-disturbance buffer zone. Construction may occur during the breeding season if a qualified biologist monitors the nest and determines that the birds have not begun egg-laying and incubation, or that the juveniles from the occupied burrows have fledged. During the non-breeding season (September 1-January 31), the project proponent shall avoid the owls and the burrows they are using, if possible. Avoidance shall include the establishment of a 160-foot non-disturbance buffer zone.

If occupied burrows for burrowing owls are not avoided, passive relocation shall be implemented. Owls shall be excluded from burrows in the immediate

[12] California Burrowing Owl Consortium. *Burrowing Owl Survey Protocol and Mitigation Guidelines*. April 1993.

impact zone and within a 160-foot buffer zone by installing one-way doors in burrow entrances. These doors shall be in place for 48 hours prior to excavation. The project area shall be monitored daily for 1 week to confirm that the owl has abandoned the burrow. Whenever possible, burrows shall be excavated using hand tools and refilled to prevent re-occupation.[13] Plastic tubing or a similar structure shall be inserted in the tunnels during excavation to maintain an escape route for any owls inside the burrow.

Swainson's hawk

IV-4a. *Prior to any ground disturbance related to activities covered under the ECCCHCP, which are conducted during the nesting season (March 15-September 15), a qualified biologist shall conduct a preconstruction survey no more than 30 days prior to construction in order to establish whether occupied Swainson's hawk nests are located within 1,000 feet of the project site. A written summary of the survey results shall be submitted to the City of Brentwood Community Development Department. If occupied nests occur on-site or within 1,000 feet of the project site, then Mitigation Measure IV-4b shall be implemented. If occupied nests are not found, further mitigation is not necessary.*

IV-4b. *During the nesting season (March 15-September 15), covered activities within 1,000 feet of occupied nests or nests under construction shall be prohibited to prevent nest abandonment. If site-specific conditions, or the nature of the covered activity (e.g., steep topography, dense vegetation, limited activities) indicate that a smaller buffer could be used, the City of Brentwood may coordinate with CDFW/USFWS to determine the appropriate buffer size. If young fledge prior to September 15, covered activities cold proceed normally.*

Golden Eagle

IV-5a. *Prior to any ground disturbance related to activities covered under the ECCCHCP, a qualified biologist shall conduct a preconstruction survey within 0.5 miles of the project site to establish whether nests of golden eagles are occupied. A written summary of the survey results shall be submitted to the City of Brentwood Community Development Department. If occupied nests occur on-site or within 0.5 miles of the project site, then Mitigation Measure IV-5b shall be implemented. If occupied nests are not found, further mitigation is not necessary.*

IV-5b. *Covered activities shall be prohibited within 0.5 mile of active golden eagle nests. If site-specific conditions, or the nature of the covered activity (e.g., steep topography, dense vegetation, limited activities) indicate that a smaller*

[13] California Department of Fish and Game. *Staff Report on Burrowing Owl Mitigation*. March 7, 2012. It should be noted the California Department of Fish and Game is now the California Department of Fish and Wildlife.

buffer could be used, the City of Brentwood may coordinate with CDFW/USFWS to determine the appropriate buffer size. The qualified biologist, at the applicant's expense, shall also engage in construction monitoring. Construction monitoring shall focus on ensuring that ground disturbance related activities do not occur within the buffer zone established around an active nest. Construction monitoring would ensure that direct effects to golden eagles are minimized.

White-tailed Kite

IV-6. *Prior to any ground disturbance related activities that occur during the nesting season (March 15-August 31), a qualified biologist shall conduct a preconstruction survey no more than one month prior to construction to establish whether white-tailed kite is nesting in on-site trees. In the event active nests are found, the applicant shall develop and submit a construction monitoring plan to the East Contra Costa County Habitat Conservancy and the City of Brentwood for review and approval prior to the commencement of construction activities.*

Migratory Birds

IV-7. *If possible, vegetation removal shall occur outside of the general bird nesting season (February 1 through August 31). Alternatively, a qualified biologist shall conduct a preconstruction survey no more than two weeks prior to vegetation removal. A written summary of the survey results shall be submitted to the City of Brentwood Community Development Department. If active nests are found, vegetation removal shall be delayed until the young have fledged, as determined by a qualified biologist.*

b,c. Riparian habitats are described as the land and vegetation that is situated along the bank of a stream or river. Wetlands are areas where water covers the soil, or is present either at or near the surface of the soil all year or for varying periods of time during the year. Wetlands usually must possess hydrophytic vegetation (i.e., plants adapted to inundated or saturated conditions), wetland hydrology (e.g., topographic low areas, exposed water tables, stream channels), and hydric soils (i.e., soils that are periodically or permanently saturated, inundated or flooded). Vernal pools are seasonal depressional wetlands that are covered by shallow water for variable periods from winter to spring, but may be completely dry for most of the summer and fall. Vernal pools range in size from small puddles to shallow lakes and are usually found in a gently sloping plain of grassland.

During the site survey conducted on February 14, 2014 by Moore Biological, riparian habitat, seasonal wetlands, or vernal pools were not observed on the proposed project site; and Moore Biological concluded that these aquatic habitats do not exist on the project site.[14] As a result, the implementation of the proposed project would have a ***less-than-significant*** impact to any

[14] Moore Biological Consultants. *East Contra Costa County Habitat Conservation Plan, Planning Survey Report for Bella Fiore*. February 14, 2014.

riparian habitat, seasonal wetlands, or vernal pools as defined by Section 404 of the Clean Water Act through direct removal, filling, hydrological interruption, or other means.

d. While the proposed project would result in substantial development of the project site, the site is predominately surrounded by existing residential development to the east and north, and an existing elementary school to the south. The project site and the open fields to the west, southwest, and southeast provide limited opportunities for native, resident, or migratory wildlife to use as a movement corridor.

In addition, the ECCCHCP shows movement corridors for San Joaquin kit fox west of the City of Brentwood. The nearest San Joaquin kit fox movement corridor is approximately 4 miles west of the project site. Given the distance to the known movement corridor, and the fact that the project site is primarily surrounded by development, impacts related to the movement of any resident or migratory fish or wildlife species or with established resident or migratory wildlife corridors, or impeding the use of wildlife nursery sites are considered ***less than significant***.

e. The following section is based upon the Tree Survey Report (TSR) prepared for the project site by Ed Brennan, Consulting Arborist.[15]

On April 26, 2014, Ed Brennan surveyed the project site. The survey procedure consisted of the following steps:

- Identifying the species of each tree greater than or equal to 6 inches in diameter at breast height (dbh);
- Evaluating the health and structural condition using a scale of 1 to 5:
    1. Tree in severe decline, dieback of scaffold branches and/or trunk; most of foliage from epicormics[16]; extensive structural defects that cannot be abated.
    2. Tree in decline, epicormic growth, extensive dieback of medium to large branches, significant structural defects that cannot be abated.
    3. Tree with moderate vigor, moderate twig and small branch dieback, thinning of crown, poor leaf color, moderate structural defects that might be mitigated with regular care.
    4. Tree with slight decline in vigor, small amount of twig dieback, minor structural defects that could be corrected.
    5. A healthy, vigorous tree, reasonably free of signs and symptoms of disease, with good structure and form typical of the species.
- Rating the suitability for preservation as "good", "moderate" or "poor". Suitability for preservation considers the health, age and structural condition of the tree, and its potential to remain an asset to the site for years to come.

    Good: Trees with good health and structural stability that have the potential for longevity at the site.

[15] Ed Brennan, Consulting Arborist. *Tree Survey Report, Bella Fiore Project Brentwood, California*. April 30, 2014.
[16] Small shoots which grow from the base of a tree, on the main stem, on branches and from buds. A sign of stress, damage, or is stimulated by pruning.

Moderate: Trees with somewhat declining health and/or structural defects than could be abated with treatment. The tree would require more intense management and monitoring, and may have shorter life span than those in 'good' category.

Poor: Tree in poor health or with significant structural defects that cannot be mitigated. Tree is expected to continue to decline, regardless of treatment. The species or individual may have characteristics that are undesirable for landscapes, and generally are unsuited for use areas.

Description of Trees

Seventy-seven trees were identified and evaluated. Descriptions of each tree are found in the Tree Survey and locations are plotted on the Tree Survey Map (available for review at Brentwood City Hall). A summary is provided in Table 5. The trees grow in landscaped areas near two on-site residences, and in a few cases, in an open field. As shown in Table 5, the tree population on the Bella Fiore site is characterized by a high degree of species diversity. Twenty-nine species grow on the site, with twenty-four of them represented by only one or two trees. Camphor and almond are the most commonly occurring species with 12 trees each. The almonds appear to be the remnants of an orchard that once occupied the site. Half of the almonds are in poor condition, while the camphors are in fair-to-good condition. The overall condition of the trees is fair. Many trees appeared to be suffering from drought stress and age-related decline in health. Only the two coast live oak trees are native to the area. The remaining twenty-eight species are exotic. Trees are not afforded protection under the City of Brentwood plans and ordinances; however, the City does endeavor to protect native oak trees whenever possible as a matter of practice.

Conclusion

As indicated in the Bella Fiore TSR, an abundance of trees are located on the project site. However, only the two coast live oak trees are native to the area, and the remaining twenty - eight species are exotic. According to the arborist consultant, grading to construct new buildings, access roads, driveways, and underground infrastructure would not leave undisturbed soil for the two native coast live oak trees to remain; and the existing on-site trees would require removal prior to development.[17] Therefore, the proposed project would conflict with the City of Brentwood past practices and would result in a ***potentially significant*** impact.

Mitigation Measure(s)

Implementation of the following mitigation measure would reduce the impact from the proposed project to a *less-than-significant* level.

Table 5
Condition Ratings and Frequency of Tree Occurrence

Common Name	Scientific Name	Condition Rating	Number

[17] Ed Brennan, Consulting Arborist. *Tree Survey Report Bella Fiore Project Brentwood, California*. April 30, 2014.

		Poor (1-2)	Moderate (3)	Good (4-5)	of Trees
Italian alder	*Alnus cordata*	0	1	0	1
Hinoki cypress	*Chamaecyparis obtusa*	0	1	0	1
Camphor	*Cinnamomum camphora*	0	9	3	12
Red gum	*Eucalyptus camaldulensis*	0	1	1	2
Willow-leaf peppermint	*Eucalyptus nicolaii*	0	0	1	1
Silver dollar gum	*Eucalyptus polyanthemos*	0	0	1	1
Red ironbark	*Eucalyptus sideroxylon*	0	2	0	2
Raywood ash	*Fraxinus oxycarpa*	1	1	0	2
Locust	*Gleditsia sp.*	0	1	0	1
Honey locust	*Gleditsia triacanthos*	0	1	0	1
California black walnut	*Juglans hindsii*	3	4	0	7
English walnut	*Juglans regia*	0	1	0	1
Sweetgum	*Liquidambar styraciflua*	1	3	6	3
Fruitless mulberry	*Morus alba*	0	3	0	3
Mulberry	*Morus rubra*	1	1	0	2
Sandalwood	*Myoporum laetum*	0	2	0	2
Canary island pine	*Pinus canariensis*	0	0	1	1
Chinese pistachio	*Pistachia chinensis*	0	2	0	2
London plane	*Platanus x acerifolia*	0	1	0	1
Flowering plum	*Prunus cerasifera*	0	1	0	1
Plum	*Prunus domestica*	0	1	0	1
Almond	*Prunus dulcis*	6	6	0	12
Coast live oak	*Quercus agrifolia*	0	0	2	2
	Total	**15**	**44**	**18**	**77**
Source: Ed Brennan, 2014					

IV-8. Prior to issuance of a grading permit, the project improvement plans shall identify the two coast live oak trees within the disturbance area. If feasible, the oak trees shall be protected from damage. Appropriate protective measures shall be taken to ensure preservation during grading activity. In the event that the determination is made that avoidance of the oak trees is not feasible the trees shall be relocated or replaced, to the satisfaction of the Community Development Department, in accordance with Section 17.470.006 of the Brentwood Municipal Code.

f. In July 2007 the ECCCHCP was adopted by Contra Costa County, the City of Brentwood, other member cities, the USFWS and the CDFW. The ECCCHCP provides guidance for the mitigation of impacts to covered species. Mitigation of impacts is accomplished through the payment of a Development Fee. The Development Fee requires payment based on a cost per acre for all acres converted to non-habitat with the cost per acre based on the quality of the habitat converted. The fees are used to acquire higher value habitats in preserved areas and to fund their restoration and management. Because the City of Brentwood is a signatory to the ECCCHCP, anticipated project impacts could be mitigated through the payment of Development Impact fees to the ECCCHCP Conservancy. The proposed project would comply with the ECCCHCP requirements regarding special-status species, and the applicant would be required to pay the associated Development Fee, to the Conservancy, per Mitigation Measure IV-1. Therefore, the proposed project would not conflict with the

provisions of an adopted Habitat Conservation Plan, Natural Conservation Community Plan, or other approved local, regional, or state habitat conservation plan, resulting in a ***less-than-significant*** impact.

Issues		Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less-Than-Significant Impact	No Impact
V. CULTURAL RESOURCES. *Would the project:*					
a.	Cause a substantial adverse change in the significance of a historical resource as defined in Section 15064.5?	☐	☐	✖	☐
b.	Cause a substantial adverse change in the significance of a unique archaeological resource pursuant to Section 15064.5?	☐	✖	☐	☐
c.	Directly or indirectly destroy a unique paleontological resource on site or unique geologic features?	☐	✖	☐	☐
d.	Disturb any human remains, including those interred outside of formal cemeteries.	☐	✖	☐	☐

Discussion

a. Pacific Legacy, Historic Preservation consultant, conducted a literature review for the proposed Bella Fiore Project to determine if the project site has been the subject of previous cultural resources studies. The literature review was conducted at the Northwest Information Center of the California Historical Resources Information System on March 6, 2014. Cultural resource studies have not been completed within the proposed area of development.

The records review revealed that 34 studies have been previously completed within the ¼ mile record search radius. Fifteen of those studies were overview reports that did not address the subject parcel. Nineteen of the studies were specific to other projects in areas surrounding the subject parcel. The records search did not reveal the presence of any previously documented resources within the study area or the ¼ mile radius around the study area. One survey (Report Number S-26302) was completed adjacent to the east side of the study area, on the east side of Empire Avenue; and prehistoric resources were not found. Another parcel was surveyed to the north of the project area, abutting Lone Tree Way (S-25002), with negative results. To the west of the project parcel, one parcel was surveyed (S-34056) again with negative results.

Three existing single family residences occupy a portion of the site, near the southeastern border. According to the Contra Costa County Assessor, the three existing residences were built in 1970, 1974, and 2005.[18] A 4.01-acre remainder parcel (Parcel J) would be created as part of the VTSM approval to establish a lot for the existing residence built in 2005. The other two existing single-family homes built in 1970 and 1974 would be removed as part of the proposed project. The California Office of Historical Preservation identifies structures

[18] Contra Costa County. *Mapping Information Center*. Available at: http://www.ccmap.us/interactive_maps.aspx. Accessed on: July 31, 2014.

over 45 years old as a potential historic resource.[19] The two existing on-site residences proposed for demolition are not eligible for the inclusion of the California Register of Historic Resources due to their age.

The 2014 Brentwood General Plan Update EIR identifies 24 historic properties in the Brentwood Planning Area. The 24 properties listed are not within the proposed Bella Fiore project site.[20] The existing on-site structures do not represent a distinctive characteristic of a type, period, region, or method of design/construction. The structures and resident's lives are not considered important to local, California, or national history and the structures would not likely yield information important in prehistory or history. As such, the existing on-site structures to be demolished as part of the proposed project are not considered a "historical resource" under Section 15064.5 in the CEQA handbook.

For the above-stated reasons, development of the proposed project would have a ***less-than-significant*** impact on historical resources.

b-d. According to Pacific Legacy, Historic Preservation consultant, of the 34 cultural resources studies that have been conducted within a ¼ mile radius of the proposed project, at least eight studies have been completed either adjacent to or very close to the project parcel. The studies did not identify Native American archaeological resources. Three parcels to the south of the project parcel, abutting the Mokelumne Aqueduct route, were also surveyed, and cultural resources were not identified. Therefore, Pacific Legacy concluded the subject parcel is of low archaeological sensitivity for prehistoric cultural resources.[21] However, ground disturbing activities may have the potential to uncover buried cultural deposits. As a result, during construction and excavation activities, unknown archaeological resources, including human bone, may be uncovered, resulting in a ***potentially significant*** impact.

Mitigation Measure(s)

Implementation of the following mitigation measures would reduce the construction-related impacts to a *less-than-significant* level.

V-1. *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, at their own expense, to 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*

[19] Office of Historic Preservation. *Instructions for Recording Historical Resources [pg. 2]*. March 1995.
[20] City of Brentwood. *2014 Brentwood General Plan Update EIR [pg. 3.5-7]*. July 22, 2014.
[21] Pacific Legacy, Historic Preservation. *Cultural Resource Literature review for Meritage Bella Fiore Subdivision, Brentwood, Contra Costa County*. March 11, 2014.

the area of discovery would not be allowed until the preceding work has occurred.

V-2. *Pursuant to State Health and Safety Code §7050.5 (c) State Public Resources Code §5097.98, if human bone or bone of unknown origin is found during construction, all work shall stop in the vicinity of the find and the Contra Costa County Coroner shall be contacted immediately. If the remains are determined to be Native American, the coroner shall notify the Native American Heritage Commission who shall notify the person believed to be the most likely descendant. The most likely descendant shall work with the contractor to develop a program for re-internment of the human remains and any associated artifacts. Additional work is not to take place within the immediate vicinity of the find until the identified appropriate actions have been implemented.*

Issues			Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less-Than-Significant Impact	No Impact
VI. 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 delineated on the most recent Alquist - Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area based on other substantial evidence of a known fault?	☐	✖	☐	☐
	ii.	Strong seismic ground shaking?	☐	✖	☐	☐
	iii.	Seismic-related ground failure, including liquefaction?	☐	☐	✖	☐
	iv.	Landslides?	☐	☐	☐	✖
b.	Result in substantial soil erosion or the 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 18-1B of the Uniform Building Code?		☐	✖	☐	☐
e.	Have soils incapable of adequately supporting the use of septic tanks or alternative waste water disposal systems where sewers are not available for the disposal of waste water?		☐	☐	☐	✖

Discussion

a.i-ii. The following section is based upon the Geotechnical Exploration report (November 27, 2013) prepared for the project site by ENGEO (available for review at Brentwood City Hall).[22]

The site is not located within a currently designated Alquist-Priolo Earthquake Fault Zone and known surface expression of active faults does not exist within the site. However, the site is located within a seismically active region. According to the USGS Fault and Fold Database, the nearest active faults are the Greenville Fault and the Concord Fault, located

[22] ENGEO Inc. *Geotechnical Exploration, Miles Rose Garden Empire, Brentwood, California*. November 27, 2013.

about 7 miles southwest and 14 miles west, respectively. The Greenville Fault is considered to be capable of a moment magnitude earthquake of 6.8 to 7.0.

According to the Geotechnical Exploration prepared for the proposed project, the Sherman Island Fault is mapped within the eastern portion of the site and through the southwest corner of the property. In 2003, ENGEO conducted a fault exploration including the Sherman Island and adjacent fault traces on property approximately 3.5 miles south of the project site. With the data from previous explorations and the exploration in 2003, ENGEO was able to determine the fault had not been active within approximately 40,000 years.[23] The USGS Fault and Fold Database classifies the fault as <1.6 million years in age and is mapped as concealed and moderately constrained within the site area. With the above information and mapping by the USGS Fault and Fold Database, the Sherman Island Fault is not considered active.

In addition, the Great Valley Fault, a buried thrust fault, underlies the general Brentwood area. The location of the Great Valley Fault is inferred from regional data; the fault does not extend to the ground surface and location of the fault is not accurately known. The USGS Fault and Fold Database maps segment 5 of the Great Valley Fault approximately 7 miles east of the site and is considered capable of a moment magnitude earthquake of 6.5 to 6.7. The Great Valley Fault is not zoned as active by the State of California, and fault rupture through the site is not anticipated.

Geologic Hazards

Potential seismic hazards resulting from a nearby moderate to major earthquake could generally be classified as primary and secondary. The primary seismic hazard is ground rupture, also called surface faulting. The common secondary seismic hazards include ground shaking and ground lurching.

Ground Rupture

The Sherman Islands fault is mapped across the site; however, according to the Geotechnical Exploration, the fault is considered inactive. Because the property does not have known active faults crossing the site, and the site is not located within an Earthquake Fault Special Study Zone, ground rupture is unlikely at the subject property.[24]

Ground Shaking

An earthquake of moderate to high magnitude generated within the San Francisco Bay region could cause considerable ground shaking at the site, similar to that which has occurred in the past. The project would be built using standard engineering and seismic safety design techniques. Building design at the project site would be completed in conformance with the recommendations of the geotechnical investigation, as reviewed and approved by the City of Brentwood Building Division. The structures would meet the requirements of applicable

[23] ENGEO Inc. *Geotechnical Exploration, Miles Rose Garden Empire, Brentwood, California [pg. 3]*. November 27, 2013.
[24] *Ibid.*

Building and Fire Codes, including the 2013 California Building Code (CBC), as adopted or updated by the City of Brentwood. Seismic design provisions of current building codes generally prescribe minimum lateral forces, applied statically to the structure, combined with the gravity forces of dead-and-live loads. The code-prescribed lateral forces are generally considered to be substantially smaller than the comparable forces that would be associated with a major earthquake. Therefore, structures would be able to: (1) resist minor earthquakes without damage, (2) resist moderate earthquakes without structural damage but with some nonstructural damage, and (3) resist major earthquakes without collapse but with some structural as well as nonstructural damage.

Ground Lurching

Ground lurching is a result of the rolling motion imparted to the ground surface during energy released by an earthquake. Such rolling motion could cause ground cracks to form in weaker soils. The potential for the formation of these cracks is considered greater at contacts between deep alluvium and bedrock. Such an occurrence is possible at the site as in other locations in the Bay Area, but based on the site location, the offset is expected to be very minor.[25]

Conclusion

The project site is not within an Alquist-Priolo Special Studies Zone; however, the Geotechnical Exploration report prepared for the proposed project indicates that the Brentwood area is located in a seismically active zone. Five active faults are located within an approximate 50-mile radius of the project site. The nearest State of California zoned, active faults are the Greenville and Concord faults, located approximately 7 miles southwest and 14 miles west, respectively. Development of the proposed project in this seismically active zone could expose people or structures to substantial adverse effects, including the risk of loss, injury, or death involving rupture of a known earthquake fault and/or strong seismic ground shaking. Therefore, a ***potentially significant*** impact could result.

Mitigation Measure(s)
Implementation of the following mitigation measure would ensure the potential impacts are *less-than-significant*.

VI-1. *All grading and foundation plans for the development shall be designed by a Civil and Structural Engineer and reviewed and approved by the Director of Public Works/City Engineer, Chief Building Official, and a qualified Geotechnical Engineer 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 the project design.*

a.iii, c. Soil liquefaction results from loss of strength during cyclic loading, such as that which is imposed by earthquakes. Soils most susceptible to liquefaction are clean, loose, saturated, uniformly graded, and fine-grained sands. According to the Geotechnical Exploration conducted specifically for the Bella Fiore Project by ENGEO, the subject site is mapped as

[25] ENGEO Inc. *Geotechnical Exploration Miles Rose Garden Empire Brentwood, California [pg. 5]*. November 27, 2013.

Quaternary-aged alluvial deposits (Qc), which is described as clayey alluvium. The topography of the project site is a slight gradient from an elevation in the southwest corner of the site of 115 feet above mean sea level (msl) to an elevation of 110 feet above msl in the northeast corner.[26]

ENGEO performed a field exploration on November 20 and November 25, 2013, which included drilling six borings located by pacing from existing features and elevations interpolated from a topographic map. The borings were advanced to depths ranging from approximately 6 to 40 feet below existing grade.

The Geotechnical Exploration concludes that based on the material types and densities of granular materials encountered in ENGEO's borings, and the lack of groundwater, the risk of liquefaction is considered low at the project site.[27] Therefore, considering the low risk of liquefaction at the project site coupled with the fact that the City of Brentwood requires new development to conform to the requirements described in the CBC, the impact would be considered ***less than significant***.

a.iv. The proposed project site is not susceptible to landslides because the area is essentially flat. Therefore, ***no impact*** would occur.

b. The development plan area currently consists of undeveloped agricultural land and two single-family residences. According to the Stormwater Control Plan prepared for the proposed project, development of the Bella Fiore Project would result in the creation of approximately 8.2 acres (357,192 sq ft) of new impervious surface area.[28] The development of the 13.5-acre residential area would cause ground disturbance of top soil. The ground disturbance would be limited to the areas proposed for grading and excavation, including the residential building pads and drainage, sewer, and water infrastructure improvements. After grading and excavation and prior to overlaying the disturbed ground surfaces with impervious surfaces and structures, the potential exists for wind and water erosion to occur, which could adversely affect downstream storm drainage facilities.

Without implementation of appropriate Best Management Practices (BMPs) related to prevention of soil erosion during construction, development of the project would result in a ***potentially significant*** impact with respect to soil erosion.

Mitigation Measure(s)
Implementation of the following mitigation measures would ensure the impact is *less-than-significant*.

VI-2. *Prior to grading permit issuance, the applicant shall submit a final grading plan to the Director of Public Works/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*

[26] ENGEO Inc. *Geotechnical Exploration Miles Rose Garden Empire Brentwood, California [pg. 2]*. November 27, 2013.
[27] *Ibid.*
[28] Carlson, Barbee & Gibson, Inc. *Stormwater Control Plan for Bella Fiore [pg. 1]*. May 1, 2014.

grading plan shall be provided for review and approval by the Director of Public Works/City Engineer.

VI-3. *Any applicant for a grading permit shall submit an erosion control plan to the Director of Public Works/City Engineer for review and approval. The 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.*

VI-4. *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 Soils Engineer. Approval by a Soils Engineer shall be obtained prior to the continuance of grading operations. Confirmation of this approval shall be provided to the Public Works Department prior to commencement of grading.*

d. Expansive soils shrink/swell when subjected to moisture fluctuations, which could cause heaving and cracking of slabs-on-grade, pavements, and structures founded on shallow foundations. Building damage due to moisture changes in expansive soils could be reduced by appropriate grading practices and using post-tensioned slab foundations or similarly stiffened foundation systems which are designed to resist the deflections associated with soil expansion. The Geotechnical Exploration, conducted specifically for the Bella Fiore Project by ENGEO, indicates the near-surface site soils exhibit moderate to high expansion potential with Plasticity Index (PI) values ranging from 29 to 34.[29] Therefore, because of the presence of expansive soils on the site, a ***potentially significant*** impact could occur.

Mitigation Measure(s)
Implementation of the following mitigation measure would ensure the impact is *less-than-significant*.

VI-5. *Implement Mitigation Measure VI-1.*

e. The project has been designed to connect to existing City sewer systems. Therefore, ***no impact*** would occur related to soils incapable of adequately supporting the use of septic tanks.

[29] ENGEO Inc. *Geotechnical Exploration, Miles Rose Garden Empire, Brentwood, California [pg. 6]*. November 27, 2013.

Issues		Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less-Than-Significant Impact	No Impact
VII. GREENHOUSE GAS EMISSIONS. *Would the project:*					
a.	Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?	☐	☐	✖	☐
b.	Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gasses?	☐	☐	✖	☐

Discussion

a,b. Implementation of the proposed project would cumulatively contribute to increases of GHG emissions that are associated with global climate change. Estimated GHG emissions attributable to future development would be primarily associated with increases of carbon dioxide (CO_2) and, to a lesser extent, other GHG pollutants, such as methane (CH_4) and nitrous oxide (N_2O). Sources of GHG emissions include area sources, mobile sources or vehicles, utilities (electricity and natural gas), water usage, wastewater generation, and the generation of solid waste. The common unit of measurement for GHG is expressed in terms of annual metric tons of CO_2 equivalents ($MTCO_2e$/yr).

The City of Brentwood has determined that the BAAQMD thresholds of significance are the best available option for evaluation of GHG impacts for this project and, thus, are used in this analysis.[30]

The BAAQMD identifies screening criteria for development projects, which provide a conservative indication of whether a development could result in a potentially significant impact associated with GHG emissions. If the screening criterion for GHG is met by a project, an assessment of that project's GHG emissions would be required. The operational GHG screening criterion for a single-family residential development is if the development is less than or equal to 56 dwelling units. Because the proposed project consists of a total of 98 single-family residential dwelling units, a GHG assessment is required for the proposed project.

The BAAQMD threshold of significance for project-level operational GHG emissions is 1,100 $MTCO_2e$/yr or 4.6 $MTCO_2e$ per service population, per year ($MTCO_2e$/SP/yr). Construction GHG emissions are a one-time release and are, therefore, not typically expected to generate a significant contribution to global climate change. As such, BAAQMD has not

[30] As explained previously, the BAAQMD was challenged in Superior Court, on the basis that the BAAQMD failed to comply with CEQA when it adopted its CEQA guidelines. The BAAQMD was ordered to set aside the proposed thresholds and conduct CEQA review of the thresholds. On August 13, 2013, the First District Court of Appeal reversed the trial court's decision. The Court of Appeal's held that CEQA does not require BAAQMD to prepare an EIR before adopting thresholds of significance to assist in determining whether air emissions of proposed projects might be deemed "significant." The Court of Appeal's decision provides the means by which BAAQMD may ultimately reinstate the GHG emissions thresholds, though the court's decision does not become immediately effective.

established a threshold of significance for construction-related GHG emissions and the District does not require their quantification. Nevertheless, this analysis has amortized construction emissions over the anticipated 25-year lifetime of the project.

The proposed project's operational GHG emissions, including CO_2, N_2O, and CH_4 emissions, were analyzed using CalEEMod. Applying the City's 3.22 persons per household[31] statistic to the proposed project's 98 units, the proposed project would result in a service population of 316 persons. According to the CalEEMod results, the proposed project's unmitigated operational GHG emissions per the service population of 316 persons would be 3.89 $MTCO_2e$/SP/yr (1,248/316, see Table 6), which would be below the applicable threshold of significance of 4.6 $MTCO_2e$/SP/yr. In addition, it should be noted that implementation of Mitigation Measures III-1 and III-2 set forth within this IS/MND would further reduce the proposed project's associated construction GHG emissions in conjunction with criteria pollutant emissions. The proposed project's GHG emissions are presented in Table 6 below.

Table 6
Unmitigated Project (2020) GHG Emissions

Emission Source	Annual GHG Emissions ($MTCO_2e$/yr)
Construction-Related GHG Emissions[1]	18.86
Operational GHG Emissions	1,229.82
Total Annual GHG Emissions	**1,248.68**
Total Annual Project GHG Emissions per Service Population	**3.89**

[1] Amortized total construction emissions (471.44 $MTCO_2e$) over the anticipated 25-year lifetime of the project (471.44 $MTCO_2e$ / 25 years = 18.86 $MTCO_2e$/yr).

Source: CalEEMod, July 2014.

As shown in Table 6, the proposed project's unmitigated project (2020) GHG emissions would be below the applicable threshold of significance of 4.6 $MTCO_2e$/SP/yr. Therefore, the project would not conflict with any applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of GHGs, and impacts associated with the generation of GHG emissions would be considered ***less than significant***.

[31] City of Brentwood. *2014 Brentwood General Plan Update EIR [pg. 3.10-32]*. July, 2014.

Issues		Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less-Than-Significant Impact	No Impact
VIII.	**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 likely 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 Section 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 the 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,b. The following discussion addresses potential hazards associated with existing site conditions of the 13.5-acre development plan area, as well as the potential use of hazardous materials during operation of the project.

Existing Site Conditions and Associated Hazards

A Phase I Environmental Site Assessment (Phase I Report), dated December 2, 2013, was prepared for the project site by ENGEO, Inc. ENGEO conducted a reconnaissance of the project site on November 12, 2013. The parcel was viewed for hazardous materials storage, superficial staining or discoloration, debris, stressed vegetation, or other conditions that may be indicative of potential sources of soil or groundwater contamination. The project site was also checked for evidence of fill/ventilation pipes, ground subsidence, or other evidence of existing or preexisting underground storage tanks. According to the Phase I Report, the study area currently consists of existing residential structures, a swimming pool, a remnant orchard, disked former agricultural land, and associated outbuildings.

Aerial Photograph Interpretation

Historical aerial photographs dated 1939, 1949, 1959, 1966, 1979, 1984, 1993, 1999, 2005, 2006, 2009, 2010, and 2012 were reviewed by ENGEO to assess the history of the subject site and the immediate vicinity. The photographs were obtained from Environmental Data Resources (EDR). The 1939, 1949, 1959, and 1966 photographs depicted the project site and the surrounding properties as orchards. The 1979, 1984, 1993, and 1999 photographs show the 2200 Shady Willow Lane property to be clear of orchards and developed into row crops. The 2551 and 2301 Empire Avenue parcels are still developed as orchards, but appear to have structures in the locations of the existing structures. The 2005, 2006, 2009, 2010, and 2012 photographs depict the conditions on the 2200 Shady Willow Lane property similar to the previous photographs. The 2301 Empire Avenue property does not appear to have orchards at this time; 2551 Empire Avenue does appear to have orchards surrounding the structures. The surrounding properties now have residential developments constructed at this time, and to the south, Pioneer Elementary School has been constructed.

Structures

The Phase I Report states that two, single-story residences, three outbuildings at 2301 and 2251 Empire Avenue, and one small barn at 2200 Shady Willow Lane were observed on the development plan area. Several Portland Concert Cement (PCC) standpipes were also observed on the project site, which appeared to be connected with an underground irrigation line, at the west end of 2301 Empire Avenue.

Hazardous Substances

According to the Phase I prepared for the project site, with the exception of a vehicle battery and some car parts adjacent to an apparently abandoned vehicle at 2301 Empire Avenue, other hazardous substances or petroleum products, such as: storage tanks; odors indicative of

hazardous materials or petroleum material impacts; pools of potentially hazardous liquid; drums; Polychlorinated Biphenyls (PCBs); pits, ponds, or lagoons; stained soil; or signs of stressed vegetation, were not observed within the project site during the reconnaissance.

Solid Waste/Debris

One of the outbuildings at 2301 Empire Avenue appears to be used as a storage area, as indicated by the solid waste and debris stored at that location. The debris generally consists of automotive parts and furniture. The project site also contains multiple vehicles, some which appeared inoperable, parked along the eastern border of 2301 Empire Avenue.

Wells

ENGEO did not observe on-site wells during site reconnaissance; however, based on interviews conducted by ENGEO, a domestic well is located at 2200 Shady Willow Lane and possible wells exist at 2251 and 2301 Empire Avenue. If detected, domestic wells located at 2251 and 2301 Empire Avenue would need to be abandoned because the project would connect to the City's water system. Abandonment of the wells must be performed by a licensed contractor and would require well abandonment permits from the Contra Costa County Environmental Health Division.

Septic Systems

According to the Phase I, septic systems were not observed at the project site during the reconnaissance, but from the records research, ENGEO understands that septic tanks were abandoned in-place at 2301 and 2551 Empire Avenue. ENGEO contacted the Contra Costa County Environmental Health Division regarding septic system abandonment permits for both the Empire Avenue properties.

2301 Empire Avenue

In May 2005, a septic system abandonment permit was given and the septic tank was abandoned in-place. In July 2005, the septic tank was pumped out, had holes drilled in bottom of the tank, and was filled with native soil.

2251 Empire Avenue

A septic tank abandonment application was filed on March 15, 2005. The septic tank was abandoned in-place and pumped out on May 4, 2005. The redwood tank bottom was perforated and filled with sand on May 5, 2005.

The septic systems are unlikely to have affected subsurface soils with hazardous materials based on expected residential waste effluent as opposed to commercial or industrial wastewater discharges. If any abandoned septic tanks are encountered during construction they would be removed by the contractor.

Asbestos-Containing Materials and Lead-Based Paint

As previously discussed, existing structures are located on-site and would be removed as part of project construction. For buildings constructed prior to 1980, the Code of Federal Regulations (29 CFR 1926.1101) states that all thermal system insulation and surface materials must be designated as "presumed asbestos-containing material" (PACM) unless proven otherwise through sampling in accordance with the standards of the Asbestos Hazard Emergency Response Act. Asbestos-containing materials (ACMs) were banned in the mid-1970s. ACMs could include, but are not limited to resilient floor coverings, drywall joint compounds, acoustic ceiling tiles, piping insulation, electrical insulation and fireproofing materials. Furthermore, the existing structures were constructed prior to lead-based paint being banned in 1978 by the Federal Government, making the presence of lead-based paint possible. Typically, exposure to lead from older vintage paint is possible when the paint is in poor condition or is being removed. In construction settings, workers could be exposed to airborne lead during renovation, maintenance, or demolition work. Lead-based paints were phased out of production in the early 1970s. Therefore, given the age of the structures, asbestos-containing materials and lead-based paint may be present within the structures.

Pesticide and Arsenic Soil Sampling

On November 12, 2013 ENGEO collected a total of 16 surface soil samples across the project site (approximately 0-6 inches below ground surface). Laboratory analysis of the soil samples included the following target analytes:

- Organochlorine Pesticides (OCPs) - four, 4-point composite samples.
- Arsenic - 16 discrete samples.

The reported OCP concentrations are well below the applicable California Human Health Screening Level (CHSSLs) for residential land use. The reported arsenic concentrations for the property ranged from 8.7 to 20 milligrams per kilogram (mg/kg). For the eastern parcels, APNs 019-040-050 and 019-040-051, the arsenic concentrations range from 8.7 to 11 mg/kg. The arsenic levels across the western parcel, APN 019-040-066, range from 13 mg/kg to 20 mg/kg.

An Arsenic Risk Evaluation (January 28, 2014, Revised August 6, 2014) was prepared for the project site by ENGEO to determine the statistical background arsenic concentration at the property and to provide additional delineation of the vertical and lateral extent of arsenic-impacted soil.

An approximate 120 x 120-foot grid pattern was developed for the property, resulting in a total of 42 grid locations. ENGEO retrieved soil samples from each of the 42 grid locations within. The field investigation was conducted under the observation of an ENGEO Environmental Scientist.

A total of 42 shallow soil samples and 14 deeper soil samples were submitted to a state-accredited laboratory for testing.

Arsenic Background Analyses

An initial background arsenic evaluation was conducted for the Property by Mark Stelljes, Ph.D., Toxicologist (SLR International). The entire SLR report is provided as an attachment. The evaluation was prepared in accordance with the following California Environmental Protection Agency (CAL-EPA DTSC) guidance documents:

- *Department of Toxic Substances Control (DTSC), Selecting Inorganic Constituents as Chemicals of Potential Concern at Risk Assessments at Hazardous Waste Sites and Permitted Facilities; February 1997.*
- *Department of Toxic Substances Control (DTSC), Arsenic Strategies Determination of Arsenic Remediation Development of Arsenic Cleanup Goals for Proposed and Existing School Sites. California Environmental Protection Agency, Sacramento, California; March 2007.*

The deeper samples showed reduced concentrations relative to the shallow samples. Only the samples from the upper foot were included in the evaluation, because the goal is to identify arsenic background in the interval most likely to have been affected by potential historical use of arsenical agrichemicals. The shallow samples were evaluated both statistically and graphically following the steps outlined in the referenced 1997 DTSC guidance document.

Arsenic Concentrations for Bella Fiore Site

Arsenic was detected in all samples at concentrations between 7.2 mg/kg and 18 mg/kg, with a mean of 12 mg/kg, a standard deviation of 2.8 mg/kg, and a coefficient of variation of 0.23.

Background Arsenic Determination

In order to further define the range of local arsenic concentrations in native soils, ENGEO compiled available soil quality data from 13 previous ENGEO projects located within two miles of the subject property (see Table 7). Table 7 provides a summary of the nearby sites.

The 212 soil samples summarized in Table 7, all recovered from within 12 inches of the ground surface, were evaluated using the USEPA ProUCL Version 5.0 software package. Table 8 provides the summary statistics for the background samples.

Arsenic Risk Evaluation Conclusion

Review of the laboratory test results found detectable arsenic in all 42 surface samples and 14 subsurface samples recovered at the project site. The concentrations ranged from 7.2 to 18 mg/kg, with a mean concentration for the Property of 12.1 mg/kg.

Table 7
Background Evaluation Properties

Job Number	Site Location	Date of Sampling	Distance (feet)	Number of Samples	Range mg/kg	
					Min.	Max.
5535	94-Acre Property Brentwood, CA	7/01/2002	8,000	10	6.5	7.6
6071	Sterling Preserves III	1/12/2006	6,000	26	4.4	11
5180	20 Acre Brentwood Site	2/21/2002	2,200	21	4.5	7.2
5517	Brentwood Property	3/13/2003	5,800	42	6.5	14
5017	Arcadia Property	5/28/2002	2,800	22	3.1	7.1
5697	Lone Tree Widening	10/11/2002	1,500	24	6.2	10
5128	Brentwood Shopping Center	9/20/2001	4,000	4	6.7	8.5
6474	Granville Estates	3/10/2006	6,200	3	7.7	9.4
6387	2200 JefferyWay, Brentwood, CA	7/19/2004	1,200	8	<1.0	10
4627	Subdivision 8953, Balfour Way, Brentwood, CA	2/14/2005	10,000	11	3.5	5.8
6320	Lone Tree Way Properties	5/21/2004	10,000	21	6.8	14
12051	Parkside Villas, Brentwood, CA	7/21/2005	4,600	10	9.3	15
5209	Neroly Road Properties	4/10/2001	7,000	10	2	6.2

Source: ENGEO, Arsenic Risk Evaluation for August 6, 2014.

Table 8
Background Samples – Summary Statistics

Background Sample Statistics			
Total Number of Observations	212	Number of Distinct Observations	67
Minimum	1 mg/kg	Mean	7.7 mg/kg
Maximum	15 mg/kg	Median	7.6 mg/kg
Standard of Deviation	2.51	Coefficient of Variation	0.325

Source: ENGEO, Arsenic Risk Evaluation for August 6, 2014.

A background evaluation for arsenic in near-surface soil was conducted that included an evaluation of 13 properties located within 2 miles of the subject Property. A total of 212 soil samples were evaluated using USEPA methodologies. The background arsenic concentrations ranged from 1.0 to 15 mg/kg, with a mean concentration of 7.7 mg/kg.

Based on ENGEO's review of the available on-site and off-site data, it is ENGEO's professional opinion that the arsenic concentrations reported for the Bella Fiore property are consistent with the range of background concentrations for this area of Brentwood.[32] The California Department of Toxic Substances Control (DTSC) concurs with this conclusion, as indicated in its no further action (NFA) letter to the project applicant, dated August 12,

[32] ENGEO Inc. *Arsenic Risk Evaluation [pg. 5]*. January 28, 2014 (Revised August 6, 2014).

2014.[33] As a result, arsenic will have no adverse effects on construction workers or proposed project residents.

Proposed Project Uses

The proposed project has limited potential for the routine transport, use, or disposal of hazardous materials. The proposed single family uses would not involve the routine transport, use, or disposal of hazardous materials, or present a reasonably foreseeable release of hazardous materials. Hazardous materials associated with the residential uses would consist mostly of typical household-type cleaning products and fertilizers, which would be utilized in small quantities and in accordance with label instructions.

Conclusion

Development of the proposed project would include the construction of 98 single-family residential homes and associated infrastructure. Projects that involve the routine transport, use, or disposal of hazardous materials are typically industrial in nature. The proposed project would not involve the routine transport, use, or disposal of hazardous materials. However, the project site contains one or more on-site existing water supply wells, which will require abandonment. In addition, the existing on-site structures were constructed prior to ACMs and lead-based paint being banned, and, as a result, the potential exists for asbestos and lead-based paint to be present in the on-site structures. Therefore, based on the analysis discussed above, development of the proposed project would result in a ***potentially significant*** impact regarding hazardous materials.

Mitigation Measure(s)
Implementation of the following mitigation measures would reduce potential impacts to a *less-than-significant* level.

VIII-1. *Prior to initiation of any ground disturbance activities within 50 feet of a well, the applicant shall hire a licensed well contractor to obtain a well abandonment permit from Contra Costa County Environmental Health Division, and properly abandon the on-site wells, pursuant to review and approval by the Contra Costa County Environmental Health Division.*

VIII-2. *Prior to issuance of a demolition permit by the City for any on-site structures, the project applicant shall provide a site assessment that determines whether any structures to be demolished contain lead based paint. If structures do not contain lead-based paint, further mitigation is not required. If lead-based paint is found, all loose and peeling paint shall be removed and disposed of by a licensed and certified lead paint removal contractor, in accordance with federal, State, and local regulations. The demolition contractor shall be informed that all paint on the buildings shall be considered as containing lead. The contractor shall take appropriate precautions to protect his/her workers, the surrounding community, and to*

[33] Department of Toxic Substances Control. No Further Action Letter re: Miles-Fenell Property in Brentwood, CA. August 12, 2014.

dispose of construction waste containing lead paint in accordance with federal, State, and local regulations subject to approval by the City Engineer.

VIII-3. *Prior to issuance of a demolition permit by the City for any on-site structures, the project applicant shall provide a site assessment that determines whether any structures to be demolished contain asbestos. If structures do not contain asbestos, further mitigation is not required. If any structures contain asbestos, the application for the demolition permit shall include an asbestos abatement plan consistent with federal, State, and local standards, subject to approval by the City Engineer.*

c. While Pioneer Elementary School is located directly adjacent to the south of the project site, the proposed project has limited potential for the routine transport, use, or disposal of hazardous materials as discussed above in Questions a,b. The proposed single family uses would not involve the routine transport, use, or disposal of hazardous materials, or present a reasonably foreseeable release of hazardous materials. Therefore, the project would have a ***less than significant*** impact with respect to emitting hazardous emissions or handling hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school.

d. EDR performed a search of federal, tribal, State, and local hazardous materials/sites databases regarding the project site and nearby properties.

The project site has not been identified in any of the hazardous databases, nor is the site on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5. As a result, the proposed project would have ***no impact*** under this criterion.

e-f. The project site is not within an airport land use plan or within two miles of an airport. The nearest airport, Funny Farm Airfield, is a private airfield located approximately 5.0 miles east of the project site. Therefore, ***no impact*** would occur.

g. The Brentwood General Plan currently designates the proposed project site for medium density single-family residential uses, such as those proposed for the project. Implementation of the proposed project would not result in any substantial modifications to the existing roadway system and would not interfere with potential evacuation or response routes used by emergency response teams. Therefore, a ***less-than-significant*** impact would result.

h. The site is not located within an area where wildland fires occur. The site is predominately surrounded by existing residential development to the east and north, and an existing elementary school to the south. Therefore, ***no impact*** would occur.

Issues		Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less-Than-Significant Impact	No Impact
IX.	**HYDROLOGY AND WATER QUALITY.** *Would the project:*				
a.	Violate any water quality standards or waste discharge 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 (i.e., 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 runoff?	☐	✖	☐	☐
f.	Otherwise substantially degrade water quality?	☐	✖	☐	☐
g.	Place housing within a 100-year floodplain, as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map?	☐	☐	✖	☐
h.	Place within a 100-year floodplain 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. During the early stages of construction activities, topsoil would be exposed due to grading and partial leveling of the site. After grading and leveling and prior to overlaying the ground surface with impervious surfaces and structures, the potential exists for wind and water erosion to discharge sediment and/or urban pollutants into stormwater runoff, which would adversely affect water quality.

The State Water Resources Control Board (SWRCB) regulates stormwater discharges associated with construction activities where clearing, grading, or excavation results in a land disturbance of one or more acres. Performance Standard NDCC-13 of the City's National Pollutant Discharge Elimination System (NPDES) permit requires applicants to show proof of coverage under the State's General Construction Permit prior to receipt of any construction permits. The State's General Construction Permit requires a Storm Water Pollution Prevention Plan (SWPPP) to be prepared for the site. A SWPPP describes BMPs to control or minimize pollutants from entering stormwater and must address both grading/erosion impacts and non-point source pollution impacts of the development project, including post-construction impacts. The City of Brentwood requires all development projects to use BMPs to treat runoff.

In summary, disturbance of the on-site soils during construction activities could result in a ***potentially significant*** impact to water quality should adequate BMPs not be incorporated during construction in accordance with SWRCB regulations.

Mitigation Measure(s)
Implementation of the following mitigation measure would reduce the above impact to a *less-than-significant* level.

IX-1. *Prior to issuance of grading permits, the contractor shall prepare a Storm Water Pollution Prevention Plan (SWPPP). The Developer shall file the Notice of Intent (NOI) and associated fee to the SWRCB. The SWPPP shall serve as the framework for identification, assignment, and implementation of BMPs. The contractor shall implement BMPs to reduce pollutants in stormwater discharges to the maximum extent practicable. The SWPPP shall be submitted to the Director of Public Works/City Engineer for review and approval and shall remain on the project site during all phases of construction. Following implementation of the SWPPP, the contractor shall subsequently demonstrate the SWPPP's effectiveness and provide for necessary and appropriate revisions, modifications, and improvements to reduce pollutants in stormwater discharges to the maximum extent practicable.*

b. The City provides domestic, potable water to its residents using both surface water and groundwater resources. The City has seven active groundwater wells, which provided approximately 30 percent of the potable water supplied during 2010. Brentwood is located within the Tracy Subbasin of the San Joaquin Valley Groundwater Basin. While the project would create new impervious surface area on the site (e.g., approximately 8.2 acres [357,192 sq ft], of new impervious area), the Tracy Subbasin comprises 345,000 acres (539 square

miles); therefore, recharge of the groundwater basin within which the project site is located comes from many sources over a broad geographic area. The new impervious surfaces associated with the project would not cause a substantial depletion of recharge within the Tracy Subbasin. In addition, except for seasonal variations resulting from recharge and pumping, water levels in most of the wells of the Tracy Subbasin have remained stable over at least the last 10 years (as of 2010).[34]

It should be noted that the City of Brentwood has adequate water supply to meet the demands of the proposed project as well as future anticipated development within the Brentwood General Plan area (as is explained in detail in Section XVI, Question 'd', of this IS/MND). The project itself does not include installation of any wells, but would rather include connections to existing water lines in Amber Lane and Empire Avenue. Therefore, the project would result in a ***less-than-significant*** impact with respect to substantially depleting groundwater supplies or interfering substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level.

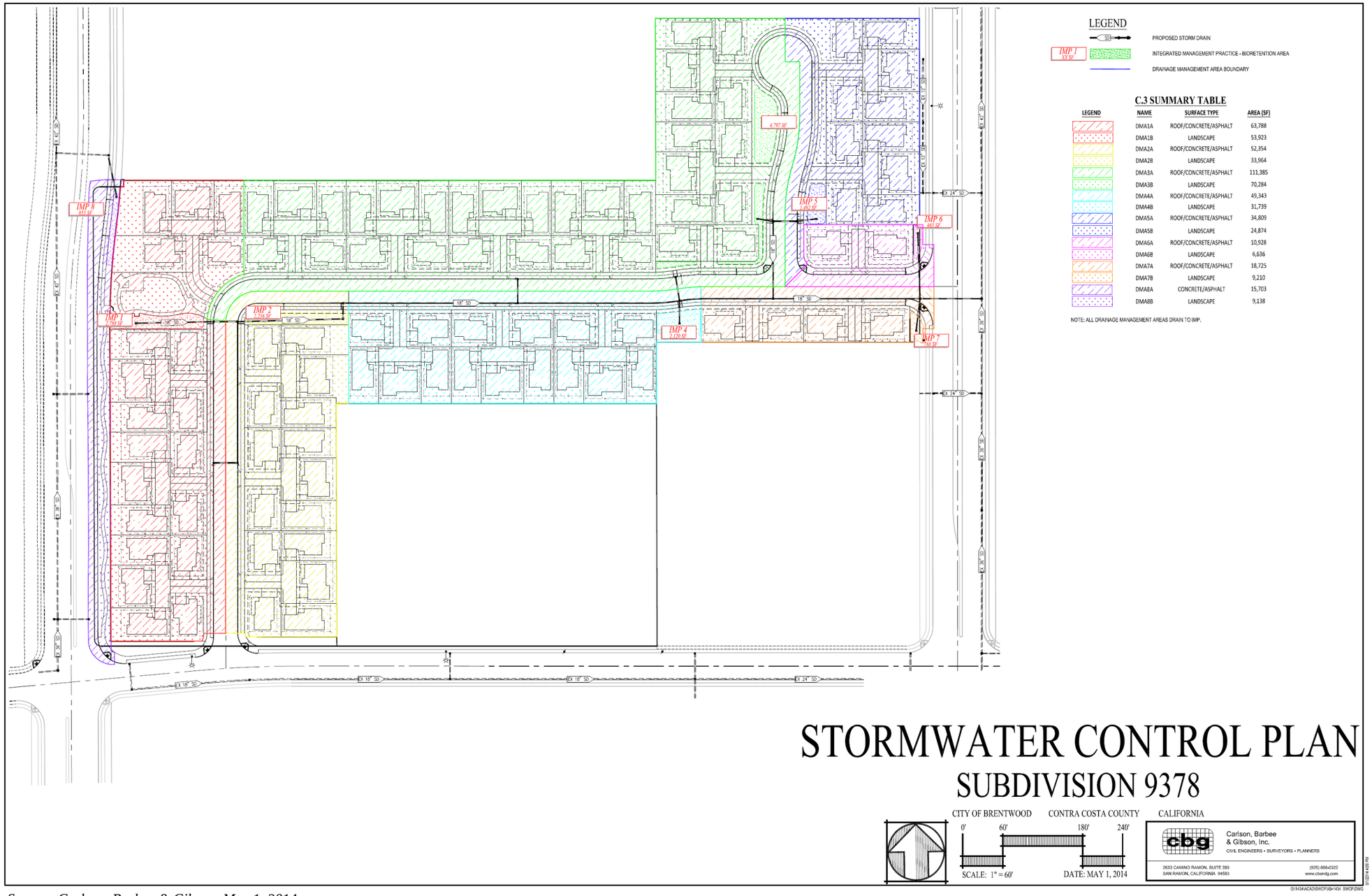
c-e. The project site is located within the Marsh Creek Watershed. The Marsh Creek Watershed drains the east side of Mt. Diablo, and covers about 128 square miles of rangeland, farmland, protected parkland, and urban land. The watershed flows approximately 30 river miles from the creeks headwaters in Morgan Territory Preserve through Brentwood and Oakley to empty into the Delta at Big Break.[35] According to the Stormwater Control Plan prepared for the project, development of the proposed project on the 13.5-acre development plan area would result in the creation of approximately 8.2 acres (357,192 sq ft) of new impervious surface area.

All municipalities within Contra Costa County (and the County itself) are required to develop more restrictive surface water control standards for new development projects as part of the renewal of the Countywide NPDES permit. Known as the "C.3 Standards," new development and redevelopment projects that create or replace 10,000 or more sq ft of impervious surface area must contain and treat stormwater runoff from the site. The proposed project is a C.3 regulated project and is required to include appropriate site design measures, source controls, and hydraulically-sized stormwater treatment measures.

For the proposed project, selected landscaping areas, totaling 0.85 acres, are proposed to be used as bio-retention BMPs to fulfill the C.3 requirements for the runoff generated by the project improvements. Where feasible, adjacent sidewalk and street runoff would be directed to bio-retention areas. Runoff from impervious areas has been divided into Drainage Management Areas (DMAs) as seen in Figure 6. The proposed DMAs are each treated by a bio-retention area. Runoff from each of these areas is managed by a treatment integrated management practices (IMP). As demonstrated in the Stormwater Control Plan prepared for the Bella Fiore Project, (see Appendix B of the Stormwater Control Plan prepared for the Bella Fiore Project) each IMP proposed for the project would exceed the minimum sizing requirement with respect to treatment area volume.

[34] Erler & Kalinowski, Inc. *City of Tracy 2010 Urban Water Management Plan*. May 2011.
[35] Contra Costa Resource Conservation District. *Marsh Creek Watershed*. Available at: http://www.ccrcd.org/marsh.html. Accessed July 24, 2014.

Figure 6
Stormwater Control Plan



Source: Carlson, Barbee & Gibson, May 1, 2014.

Upon being treated within the proposed on-site bio-retention swales, project runoff would be routed to the existing detention basin near Fairview Avenue and the railroad tracks, after which runoff would be metered through the City's system into Marsh Creek. As described by the Contra Costa County Flood Control & Water Conservation District (CCCFCWCD), because downstream Marsh Creek, between the project site and the Delta/Bay, is an engineered hardened channel, flow-control is not required for the project.[36] In addition, the project applicant shall be required to pay CCCFCWCD drainage fees for Drainage Area 30c.

The SWCP sets forth an adequate stormwater treatment system for the project consisting of various landscaped open space areas located throughout the proposed project to serve as on-site bio-retention swales for water quality treatment purposes. These bio-retention facilities would need to be maintained properly so that the on-site treatment system functions properly. A long-term maintenance plan is needed to ensure that all proposed stormwater treatment BMPs function properly. Should the proposed water quality treatment facilities not be maintained properly, a ***potentially significant*** impact could occur with respect to creating or contributing runoff water which would exceed the capacity of existing or planned stormwater drainage systems or providing substantial additional sources of polluted runoff.

Mitigation Measure(s)

Implementation of the following mitigation measures would reduce the impact to a *less-than-significant* level. Proper operation and maintenance of stormwater management facilities would be the responsibility of the Homeowner's Association in perpetuity, except for the bio-retention area on Shady Willow Lane which would be maintained by the City. The Homeowner's Association would be subject to an annual fee (set by the City's standard fee schedule) to offset the cost of inspecting the site or verifying that the stormwater management facilities are being maintained.

IX-2. *Prior to the completion of construction the applicant shall prepare and submit, for the City's review, an acceptable Stormwater Control Operation and Maintenance Plan. In addition, prior to the sale, transfer, or permanent occupancy of the site the applicant shall be responsible for paying for the long-term maintenance of treatment facilities, and executing a Stormwater Management Facilities Operation and Maintenance Agreement and Right of Entry in the form provided by the City of Brentwood. The applicant shall accept the responsibility for maintenance of stormwater management facilities until such responsibility is transferred to another entity.*

The applicant shall submit, with the application of building permits, a draft Stormwater Facilities and Maintenance Plan, including detailed maintenance requirements and a maintenance schedule for the review and approval by the Director of Public Works/City Engineer. Typical routine maintenance consists of the following:

- *Limit the use of fertilizers and/or pesticides. Mosquito larvicides shall be applied only when absolutely necessary.*

[36] Contra Costa County Flood Control & Water Conservation District. *Personal Communication*. March 20, 2014.

- *Replace and amend plants and soils as necessary to insure the planters are effective and attractive. Plants must remain healthy and trimmed if overgrown. Soils must be maintained to efficiently filter the storm water.*
- *Visually inspect for ponding water to ensure that filtration is occurring.*
- *After all major storm events remove trash, inspect drain pipes and bubble-up risers for obstructions and remove if necessary.*
- *Continue general landscape maintenance, including pruning and cleanup throughout the year.*
- *Irrigate throughout the dry season. Irrigation shall be provided with sufficient quantity and frequency to allow plants to thrive.*
- *Excavate, clean and or replace filter media (sand, gravel, topsoil) to insure adequate infiltration rate (annually or as needed).*

IX-3. *Contra Costa County Flood Control & Water Conservation District drainage fees for the Drainage Areas shall be paid prior to approval of any Final Map.*

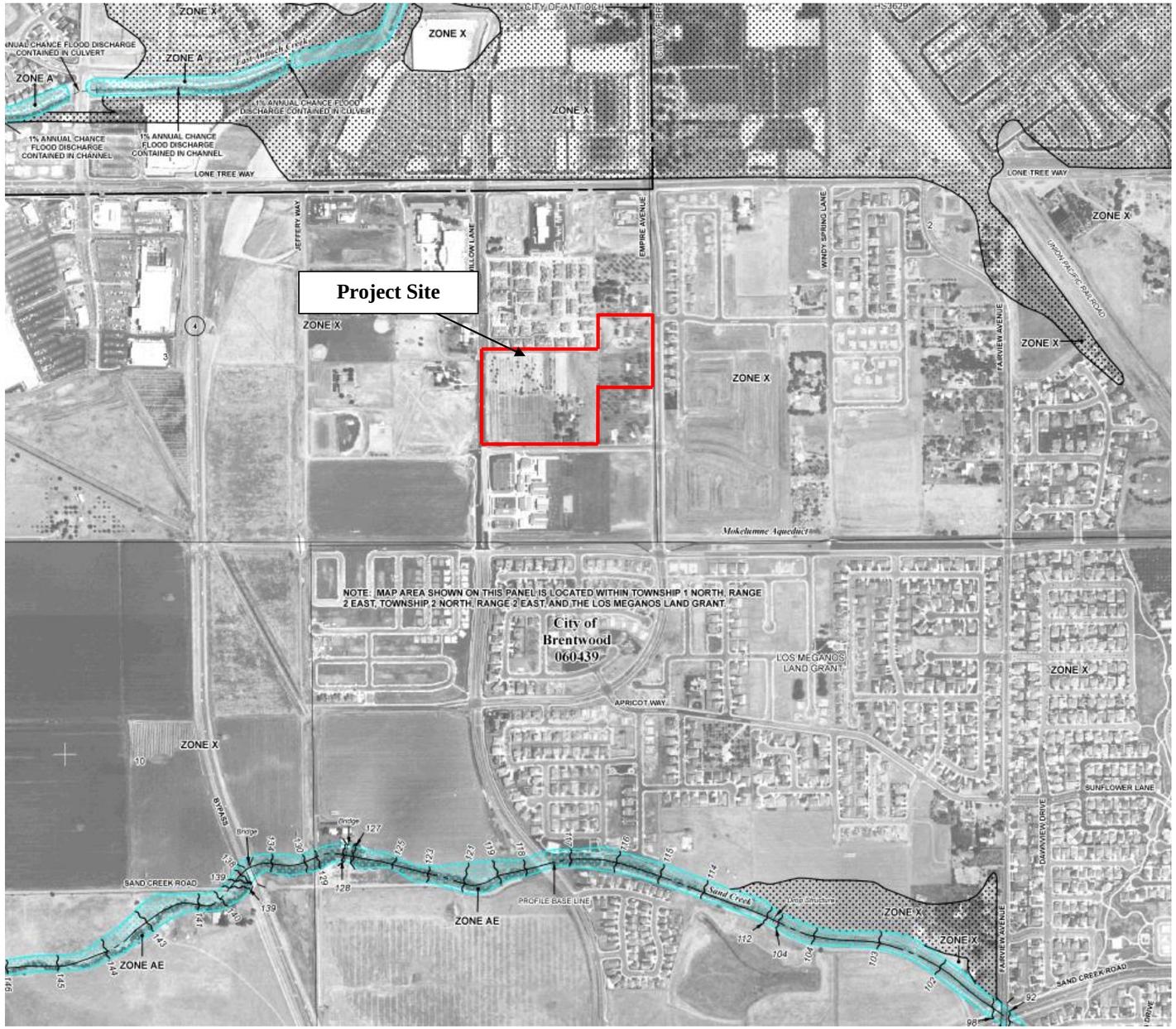
g-i. According to the June 16, 2009 FEMA Flood Insurance Rate Maps (FIRM), Panel ID 06013C0353F, the project site is not located within a designated flood zone (see Figure 7). In addition, based on site elevations and distance from water sources, flooding is not expected at the subject site.[37] Therefore, a ***less-than-significant*** impact would result from implementation of the proposed project with respect to placing structures within a 100-year floodplain, which would impede or redirect flood flows.

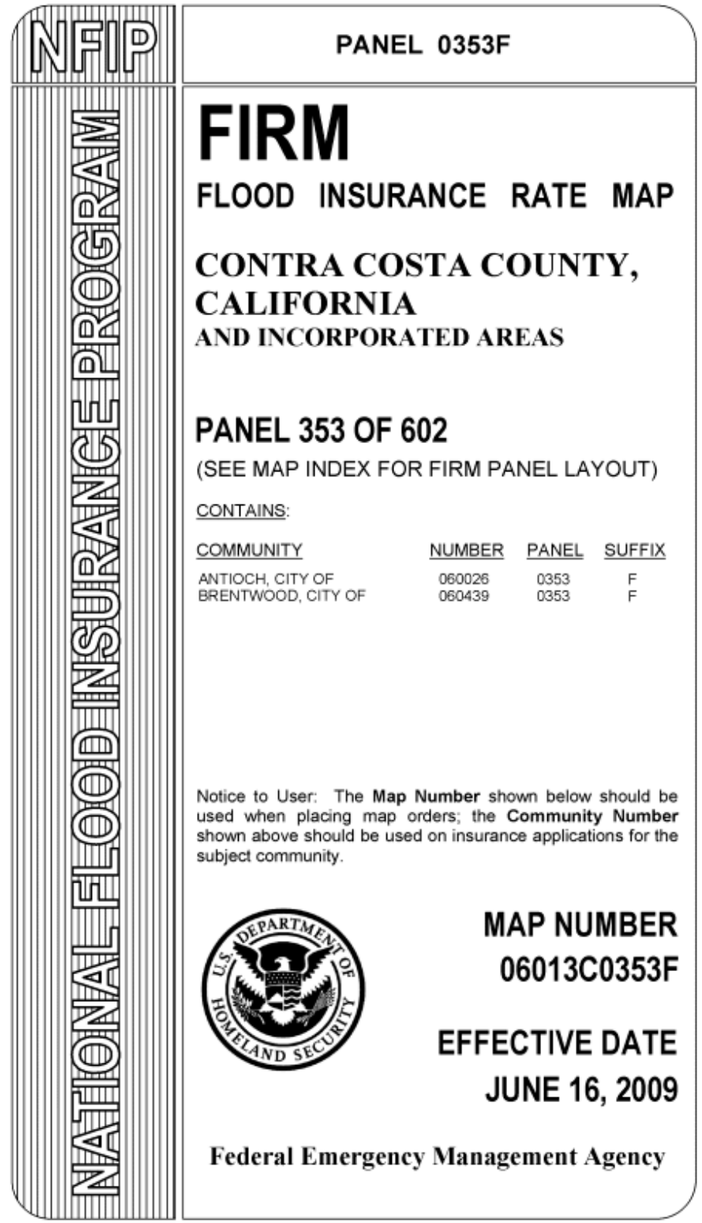
j. Tsunamis are defined as sea waves created by undersea fault movement. A tsunami poses little danger away from shorelines; however, when a tsunami reaches the shoreline, a high swell of water breaks and washes inland with great force. Waves may reach 50 feet in height on unprotected coasts. Historic records of the Bay Area used by one study indicate that nineteen 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, risks from seiches and adverse impacts would not result.

[37] ENGEO Inc. *Geotechnical Exploration Miles Rose Garden Empire Brentwood, California [pg.6]*. November 27, 2013.

Figure 7
FEMA Flood Insurance Rate Map




NFIP
NATIONAL FLOOD INSURANCE PROGRAM

PANEL 0353F

FIRM
FLOOD INSURANCE RATE MAP

CONTRA COSTA COUNTY, CALIFORNIA
AND INCORPORATED AREAS

PANEL 353 OF 602
(SEE MAP INDEX FOR FIRM PANEL LAYOUT)

CONTAINS:

COMMUNITY	NUMBER	PANEL	SUFFIX
ANTIOCH, CITY OF	060026	0353	F
BRENTWOOD, CITY OF	060439	0353	F

Notice to User: The **Map Number** shown below should be used when placing map orders; the **Community Number** shown above should be used on insurance applications for the subject community.

MAP NUMBER
06013C0353F

EFFECTIVE DATE
JUNE 16, 2009

Federal Emergency Management Agency

Source: Federal Emergency Management Agency, June 16, 2009.

Mudflows typically occur in mountainous or hilly terrain. Given the existing and proposed flat topography of the project site, risks from mudflows and adverse impacts would not result. Therefore, potential impacts resulting from tsunamis, seiches, or mudslides would be ***less than significant***.

Issues		Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less-Than-Significant Impact	No Impact
X. LAND USE AND PLANNING. *Would the project:*					
	a. Physically divide an established community?	☐	☐	✖	☐
	b. Conflict with any applicable land use plans, policies, or regulations 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 on environmental effect?	☐	☐	✖	☐
	c. Conflict with any applicable habitat conservation plan or natural communities 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 17.51-acre project site is predominately vacant with ruderal annual grassland vegetation, scattered trees, and three existing, occupied single-family residences near the southeastern border. Two of the existing single family residences are located within the 13.5-acre development plan area and would be removed during project construction. Parcel J would be created to serve as the lot for the third existing single-family residence. While two residences would be removed as part of the project, two residences do not constitute an established community. Ample replacement housing is available within the City of Brentwood and 98 homes will be created with implementation of the proposed project. As a result, the construction of the proposed project would have a ***less-than-significant*** impact with respect to dividing an existing community.

b. The recently adopted Brentwood General Plan identifies the project site as R-MD. According to the Brentwood General Plan, medium density residential includes a range of 5.1 dwelling units per acre (du/ac) to 11.0 du/ac. The proposed Bella Fiore Project consists of the development of 98 single-family residential units on 13.5 acres, which results in approximately 7.04 du/ac. Therefore, the proposed project is consistent with the site's existing General Plan land use designation.

The proposed project site is currently zoned R-2. The proposed project includes a request to rezone the 17.9-acre vesting tentative subdivision map area to PD in order to allow flexibility regarding setbacks and other development standards. As such, site specific development standards need to be approved is part of the rezone to PD. The applicant has submitted draft PD development standards for the City's review.

The requested rezone is a policy issue under the purview of the Brentwood City Council. Should City Council approve the requested rezone, the project would not conflict with any

applicable land use plans, policies, or regulations 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 on environmental effect. As a result, the project's impact related to conflicts with applicable land use plans, policies, regulations, or surrounding uses would be ***less than significant***.

c. The ECCCHCP provides guidance for the mitigation of impacts to covered species. Mitigation of impacts is accomplished through payment of a Development Fee. The Development Fee requires payment based on a cost per acre for all acres converted to non-habitat with the cost per acre based on the quality of the habitat converted. The fees are used to acquire higher value habitats in preserved areas and to fund their restoration and management. Because the City of Brentwood is a signatory to the ECCCHCP, anticipated project impacts could be mitigated through the payment of Development Impact fees to the ECCCHCP Conservancy. The proposed project would comply with the ECCCHCP requirements regarding special-status species, and the applicant would be required to pay the associated Development Fee to the Conservancy, per Mitigation Measure IV-1 above. Therefore, the proposed project would not conflict with the provisions of an adopted Habitat Conservation Plan, Natural Conservation Community Plan, or other approved local, regional, or state habitat conservation plan, resulting in a ***less-than-significant*** impact.

Issues	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less-Than-Significant Impact	No Impact
XI. MINERAL RESOURCES. *Would the project:*				
a. Result in the 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. The 2014 Brentwood General Plan Update EIR identifies coal, oil and gas, and sand as the significant mineral resources within the area. However, the proposed project site has not been formerly used for oil or gas extraction, and does not contain active oil or gas wells.[38] In addition, Figure 3.6-6 in the 2014 Brentwood General Plan Update EIR does not show an existing active oil and gas well on the project site.[39] Therefore, the project would have a ***less-than-significant*** impact regarding the loss of availability of a known mineral resource that would be of value to the region.

[38] ENGEO Inc. *Modified Phase I Environmental Site Assessment, Miles Rose Garden Empire [pg. 5]*. December 2, 2013.
[39] City of Brentwood. *2014 Brentwood General Plan Update EIR [pg.3.6-45]*. July, 2014.

Issues		Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less-Than-Significant Impact	No Impact
XII.	**NOISE.** *Would the project result in:*				
	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 in the project area to excessive noise levels?	☐	☐	✖	☐

Discussion

a. This section is based upon the project-specific noise report prepared by Bollard Acoustical Consultants, Inc. dated April 28, 2014 (available for review at Brentwood City Hall).

Significance Criteria

The following criteria were used to evaluate the significance of environmental noise resulting from the project:

- A significant noise impact would be identified if the project would expose persons to or generate noise levels that would exceed applicable noise standards presented in the City of Brentwood General Plan. Specifically, exterior and interior noise levels of 60 dB Ldn and 45 dB Ldn, respectively, for residential uses exposed to transportation

noise sources. Where it is not possible to reduce noise in outdoor activity areas to 60 dB Ldn/CNEL, or less using a practical application of the best available noise reduction measures, an exterior noise level of up to 65 dB Ldn/CNEL may be allowed provided that available exterior noise level reduction measures have been implemented and interior noise levels are in compliance with this table (see p. IV. 3-9 of the General Plan).

Existing Noise Environment

The main source of noise in the area is from local traffic along Shady Willow Lane and Empire Avenue. On February 6, 2014, Bollard Acoustical Consultants, Inc. conducted short-term noise level measurements and concurrent counts of Empire Avenue and Shady Willow Lane traffic to quantify the existing noise environment at the project site. The noise measurement locations are illustrated on Figure 8.

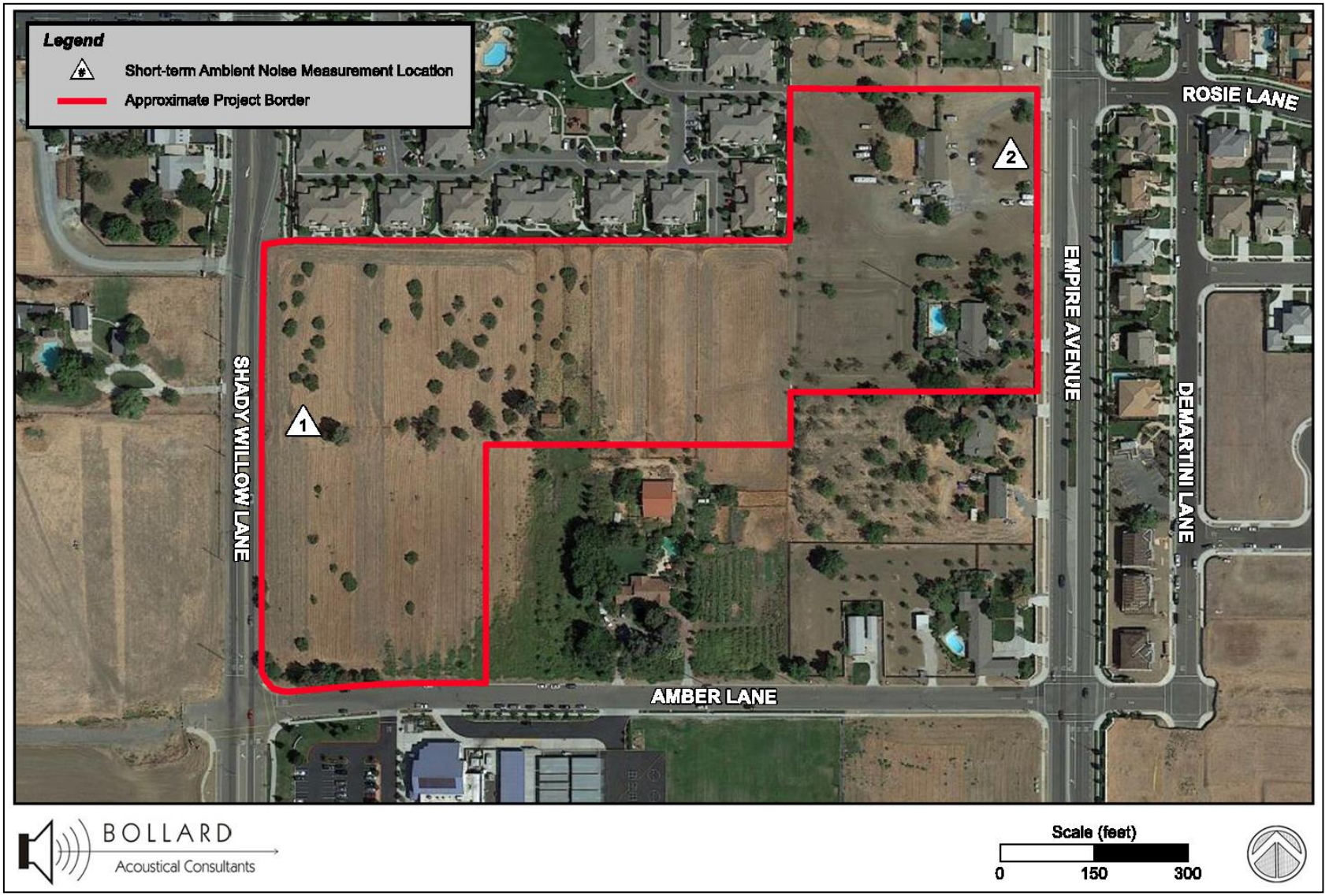
The noise measurement results were compared to the FHWA model results by entering the observed traffic volumes, speeds and distances as inputs to the FHWA model. The results of the FHWA Model calibration procedure indicate that the model over-predicted existing traffic noise levels at the project site by 2.5 dB for Shady Willow Lane and 5.4 dB for Empire Avenue.

The Shady Willow Lane results are believed to be due to excess ground attenuation. Because that attenuation would not be present following site development, adjustments to the model were not made for the prediction of future Shady Willow Lane traffic noise levels. The Empire Avenue results were due to the presence of an existing 8-foot tall noise barrier along that roadway. To account for the shielding provided by that barrier, a conservative adjustment of -5 dB was applied to the model for the prediction of future traffic noise levels.

Future Noise Environment

The future noise environment in the project vicinity consists of traffic-related noise and noise associated with the nearby elementary school. The anticipated exterior and interior noise levels, as well as the noise associated with school activities, are presented in further detail below.

Figure 8
Short-term Ambient Noise Measurement Locations



Source: Bollard Acoustical Consultants, April 2014.

Exterior Noise

According to Mr. Steve Kersevan, Traffic Engineer for the City of Brentwood, the Average Daily Traffic (ADT) volumes for future conditions (2025) were estimated to be 11,500 for Empire Avenue and 7,000 for Shady Willow Lane.[40] The calibrated FHWA Model was used with these future traffic forecasts to predict future traffic noise levels at the proposed backyard areas and building facades of the project residences located closest to Shady Willow Lane and Empire Avenue. Because Amber Lane was observed to have very light traffic, assessment of traffic noise impacts for that roadway was not considered to be warranted. The FHWA Model results for Shady Willow Lane and Empire Avenue are summarized in Table 9.

Table 9
Predicted Future Traffic Noise Levels at Project Residences

Location	Distance to Roadway Centerline	Noise Level (Ldn)
Backyards and facades closest to Empire Avenue	70 feet	59[1]
Backyards and facades closest to Shady Willow Lane	70 feet	62

Notes:
1. Predicted levels for Empire Avenue include shielding provided by the existing noise barrier adjacent to that roadway.

Source: Bollard Acoustical Consultants, April 28, 2014.

The Table 9 data indicate that the existing barrier located along Empire Avenue would be adequate to reduce future traffic noise levels at proposed Bella Fiore residences to 60 dB Ldn or less. However, the barrier openings for the existing driveways associated with the two on-site residences proposed for removal would need to be closed during project development.

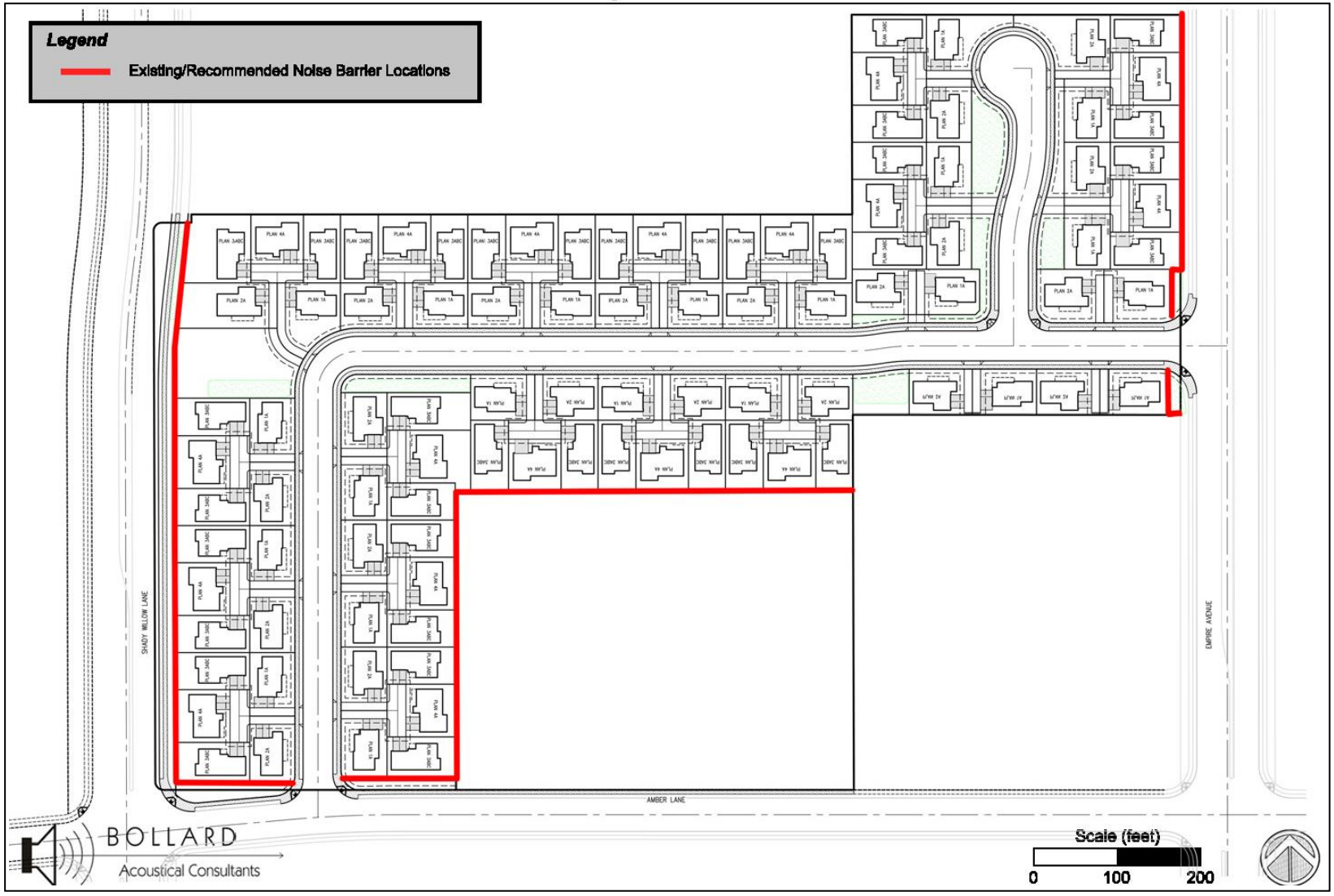
The Table 9 data also indicate that future traffic noise levels along Shady Willow Lane would exceed the City's 60 dB Ldn exterior noise level standard at the backyards of residences proposed adjacent to Shady Willow Lane. As a result, a 6-foot tall solid noise barrier would be required along Shady Willow Lane to reduce future traffic noise levels to below 60 dB Ldn within those backyards, as shown on Figure 9.

Interior Noise

After consideration of shielding provided by both existing and recommended noise barriers, future Empire Avenue and Shady Willow Lane noise levels at first-floor building facades would be below 60 dB Ldn. To achieve compliance with the City of Brentwood 45 dB Ldn interior noise level standard within first-floor rooms of residences proposed adjacent to Empire Avenue and Shady Willow Lane, building facade noise level reductions of less than 15 dB would be required.

[40] Bollard Acoustical Consultants. *Environmental Noise Analysis, Bella Fiore Residential Development [pg. 5]*. April 28, 2014.

Figure 9
Existing and Recommended Noise Barrier Locations



Source: Bollard Acoustical Consultants, April 2014.

Standard residential construction (stucco, STC-27 windows, door weather-stripping, exterior wall insulation, composition plywood roof), results in an exterior to interior noise reduction of at least 25 dB, with windows closed, and approximately 15 dB with windows open. Therefore, standard construction would be acceptable for first-floor facades.

At unshielded second-floor locations of residences proposed adjacent to Shady Willow Lane and Empire Avenue, future traffic noise levels are predicted to be 64 dB and 66 dB Ldn, respectively. To achieve compliance with the City of Brentwood 45 dB Ldn interior noise level standard within second-floor rooms of residences proposed adjacent to Empire Avenue and Shady Willow Lane, building facade noise level reductions of 19 and 21 dB would be required, respectively. Because standard residential construction results in an exterior to interior noise reduction of at least 25 dB with windows closed, standard construction would be acceptable for second-floor facades.

Elementary School Noise

The project site is located north of the Pioneer Elementary School. Although the project site is not located adjacent to the playing field areas of this school, elevated noise levels associated with school activities could occur, particularly during student drop off and pick up. As a result, Bollard Acoustical Consultants has recommended that a solid masonry noise barrier 6 feet in height should be extended along Amber Lane at the locations shown on Figure 9.

Conclusion

Development of the Bella Fiore Project could result in exposure of future residential receptors to adverse traffic noise levels along Empire Avenue and Shady Willow Lane, and school noise levels along Amber Lane, which could exceed the exterior noise level standards applied to new residential developments by the City of Brentwood. Therefore future traffic and school noise could result in a ***potentially significant*** noise impact at the project site.

Mitigation Measure(s)

Implementation of the following mitigation measures would ensure that future residences at the project site would not be subject to exterior and interior noise levels in excess of the City's standards, resulting in a *less-than-significant* impact.

XII-1. *Prior to building permit issuance, the construction drawings shall include a noise barrier measuring 6 feet in height relative to building pad elevation, along Shady Willow Lane and north of Amber Lane, as per Figure 9 of the Bella Fiore IS/MND. The barrier shall be constructed of masonry or pre-cast concrete panels as specified in the recommendations outlined in the Environmental Noise Analysis performed specifically for the project by Bollard Acoustical Consultants. The final design of the noise barrier shall be approved by the Community Development Director prior to building permit issuance.*

XII-2. Prior to building permit issuance, the construction drawings shall show the extension of the existing 8-foot tall noise barrier along Empire Avenue to close gaps in the wall resulting from existing driveway openings, as per Figure 9 of this IS/MND. The final design of the noise barrier shall be approved by the Community Development Director.

XII-3. Prior to issuance of buildings permits for any residential unit, the construction drawings shall include a suitable form of forced-air mechanical ventilation for each unit, as determined by the City's Chief Building Official, so that windows could be kept closed at the occupant's discretion to control interior noise and achieve the City's interior 45 dBA Ldn noise standard.

b. The construction of the project may generate perceptible vibration when heavy equipment or impact tools (e.g. jackhammers, hoe rams) are used. Construction activities would include excavation, site preparation work, foundation work, and new building framing and finishing. The proposed project would not require pile driving, which could cause excessive vibration.

For structural damage, the California Department of Transportation uses a vibration limit of 0.5 inches/second, peak particle velocity (in/sec, PPV), for buildings structurally sound and designed to modern engineering standards; 0.3 in/sec PPV for buildings that are found to be structurally sound but where structural damage is a major concern; and a conservative limit of 0.08 in/sec PPV for ancient buildings or buildings that are documented to be structurally weakened. Table 10 presents typical vibration levels that could be expected from construction equipment at a distance of 25 feet.

Table 10
Vibration Source Levels for Construction Equipment

Equipment	PPV at 25 ft (in/sec)
Vibratory Roller	0.210
Large Bulldozer	0.089
Caisson drilling	0.089
Loaded trucks	0.076
Jackhammer	0.035
Small bulldozer	0.003
Source: Caltrans, June 2004.	

Project construction activities, such as drilling, the use of jackhammers, and other high-power or vibratory tools, and rolling stock equipment (tracked vehicles, compactors, etc.), may generate substantial vibration in the immediate vicinity. Jackhammers typically generate vibration levels of 0.035 in/sec PPV, and drilling typically generates vibration levels of 0.09 in/sec PPV at a distance of 25 feet. Vibration levels would vary depending on soil conditions, construction methods, and equipment used. Vibration levels would be expected to be 0.2 in/sec PPV or less, below the 0.3 in/sec PPV significance threshold utilized for this analysis. The nearest vibration-sensitive receptors would be: the existing residential development to the north; scattered residences to the west, east, and south; and the elementary school to the south. Vibration generated by construction activities could at times be perceptible at these locations; however, the construction-generated vibrations would not be expected to result in "architectural" damage to these structures. Therefore, the project would have a ***less-than-***

significant impact with respect to exposing persons to or generating excessive groundborne vibration levels.

c. According to the Traffic Impact Analysis (TIA) prepared for the Bella Fiore Project by Abrams Associates, the project would generate approximately 933 ADT.[41] The increase in traffic noise resulting from additional vehicle traffic generated from the proposed project could impact residential receptors in the area if the traffic noise levels attributable to the project exceed the Federal Interagency Committee on Noise (FICON) thresholds listed in Table 11. The FICON thresholds shown in the table are the relevant thresholds utilized in the 2014 Brentwood General Plan Update EIR noise analysis.

Table 11
Changes in Noise Exposure Threshold

Ambient Noise Level Without Project (Ldn)	Increase Required for Significant Impact
<60 dB	+5.0 dB or more
60-65 dB	+3.0 dB or more
>65 dB	+1.5 dB or more

Source: 2014 Brentwood General Plan Update EIR, July 22, 2014.

The 2014 Brentwood General Plan Update EIR analyzed traffic noise levels on surrounding roadways under existing ambient conditions and General Plan buildout conditions. The estimated traffic noise levels per the General Plan Update EIR noise analysis are presented in Table 12.

Table 12
Traffic Noise Levels

Roadway	Segment	Noise Levels (dB, Ldn,)[1]			Distance to Traffic Noise Contours[2]		
		Existing	General Plan Buildout	Change (dB)	70 dB Ldn	65 dB Ldn	60 dB Ldn
Empire Avenue	South of Lone Tree Way	55.5	57.3	1.8	34	74	159
Shady Willow Lane	Lone Tree Way to Sand Creek	57.0	57.6	0.6	14	30	64

Notes:
1. Traffic noise level are predicted at the closest sensitive receptor.
2. Noise contours are measured in feet from roadway centerlines and account for areas which are primarily shielded by Soundwalls.

Source: 2014 Brentwood General Plan Update, July 22, 2014.

As shown in Table 12, existing ambient traffic noise from 100 feet of the centerline for Empire Avenue, south of Lone Tree Way, is 55.5 dB Ldn, and the projected traffic noise level along this roadway under General Plan buildout would be 57.3 dB Ldn, which represents an increase in traffic noise of 1.8 dB Ldn. The increase in traffic noise along Shady Willow Lane, under General Plan buildout, would be 0.6 dB Ldn.

[41] Abrams Associates Traffic Engineering, Inc. *Transportation Impact Analysis, Bella Fiore Residential Project [pg.12]*. June 19, 2014.

Given the fact that the 2014 General Plan designated the Bella Fiore project site for development (R-MD), and the proposed project is consistent with the residential densities allowable with the R-MD designation, the increase in traffic noise resulting from additional vehicle traffic generated from the proposed project has already been evaluated and considered in the General Plan Update EIR analysis. Because the projected increase in traffic noise levels along the roadways bordering the site would not exceed the relevant FICON thresholds, even under General Plan buildout conditions, the conclusion could be made that the proposed project's increase in traffic noise would result in a ***less-than-significant*** impact.

d. Noise impacts resulting from construction depend on the noise generated by various pieces of construction equipment, the timing and duration of noise generating activities, and the distance between construction noise sources and noise sensitive areas. Construction noise impacts primarily result when construction activities occur during noise-sensitive times of the day (e.g., early morning, evening, or nighttime hours), the construction occurs in areas immediately adjoining noise-sensitive land uses, or when construction lasts over extended periods of time.

Construction activities generate considerable amounts of noise, especially during earth-moving activities when heavy equipment is used. The highest maximum noise levels generated by project construction would typically range from about 90 to 95 dBA at a distance of 50 feet from the noise source. Typical hourly average construction-generated noise levels are about 81 to 88 dBA measured at a distance of 50 feet from the center of the site during busy construction periods (e.g., earth moving equipment, impact tools, etc.). Hourly average noise levels generated by the construction of residential units would range from about 65 to 88 dBA measured at a distance of 50 feet, depending upon the amount of activity at the site. Construction-generated noise levels drop off at a rate of about 6 dBA per doubling of distance between the source and receptor. Shielding by buildings or terrain often result in lower construction noise levels at distant receptors.

All exterior construction at the project site would be completed first, and once construction moves indoors, minimal noise would be generated at off-site locations. Noise generated by construction activities would temporarily elevate noise levels at adjacent noise-sensitive receptors, but this would be considered a less-than-significant impact if construction activities are conducted in accordance with the provisions of the City of Brentwood Municipal Code and with the implementation of construction BMP. Should project construction not comply with the City's allowable construction hours, nor incorporate construction noise BMPs, a ***potentially significant*** temporary construction noise impact could result.

Mitigation Measure(s)
Implementation of the following mitigation measures would ensure the impact is *less-than-significant*.

XII-4. *The project contractor shall ensure that construction activities shall be limited to the hours set forth in Brentwood Municipal Code Section 9.32.050, as follows:*

Outside Heavy Construction:

Monday-Friday	*8:00 AM to 5:00 PM*
Saturday	*9:00 AM to 4:00 PM*

Outside Carpentry Construction:

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

Construction shall be prohibited on Sundays and City holidays. The construction activities hours shall be included in the grading plan submitted by the developer for review and approval by the Community Development Director prior to grading permit issuance.

XII-5. *The project contractor shall ensure that the following construction noise BMPs are met on-site during all phases of construction:*

- *All equipment driven by internal combustion engines shall be equipped with mufflers, which are in good condition and appropriate for the equipment.*
- *The construction contractor shall utilize "quiet" models of air compressors and other stationary noise sources where technology exists.*
- *At all times during project grading and construction, stationary noise-generating equipment shall be located as far as practicable from sensitive receptors and placed so that emitted noise is directed away from residences.*
- *Unnecessary idling of internal combustion engines shall be prohibited.*
- *Construction staging areas shall be established at locations that would create the greatest distance between the construction-related noise sources and noise-sensitive receptors nearest the project site during all project construction activities, to the extent feasible.*
- *The required construction-related noise mitigation plan shall also specify that haul truck deliveries are subject to the same hours specified for construction equipment.*
- *Neighbors located adjacent to the construction site shall be notified of the construction schedule in writing.*
- *The construction contractor shall designate a "noise disturbance coordinator" who would be responsible for responding to any local complaints about construction noise. The disturbance coordinator shall be responsible for determining the cause of the noise complaint (e.g., starting too early, poor muffler, etc.) and instituting reasonable measures as warranted to correct the problem. A telephone number for the disturbance coordinator shall be conspicuously posted at the construction site.*

Construction noise BMPs shall be included in the grading plan submitted by the developer for review and approval by 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 an area covered by an existing airport land use plan. The nearest airport, Funny Farm Airfield, is a private airfield located approximately 5.0 miles east of the project site. Although aircraft-related noise could occasionally be audible at the project site, noise would be extremely minimal. Exterior and interior noise levels resulting from aircraft would be compatible with the proposed project. Therefore, a ***less-than-significant*** impact would occur.

Issues		Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less-Than-Significant Impact	No Impact
XIII.	**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 (e.g., through projects in an undeveloped area or extension of major 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 directly induce population growth in the area through the proposed construction of 98 single family dwelling units, generating approximately 316 additional residents (based on 3.22 persons per household[42]). As discussed below, the utility systems (e.g., water and sewer) serving the project could accommodate the additional demands created by the project and the project includes infrastructure improvements needed to connect the project to these existing utility systems. In addition, public service providers, such as police and fire, could accommodate the additional demands for service created by the project. As a result, the project would have a ***less-than-significant*** impact with respect to inducing population growth because the demands resulting from said growth could be accommodated by existing utility systems and service providers.

b,c. The project site is predominantly vacant with ruderal grassland and scattered trees. Three existing single family residences occupy a portion of the site, near the southeastern border. A 4.01-acre remainder parcel (Parcel J) would be created to serve as the lot for an existing single-family residence. The other two existing single-family homes would be removed as part of the proposed project. While two residences would be removed as part of the project, two residences do not constitute a substantial number of housing or people. Ample replacement housing is available within the City of Brentwood and 98 homes will be created with implementation of the proposed project. Therefore, approval and implementation of the proposed project would neither displace a large number of housing nor necessitate the construction of replacement housing, and the project would result in a ***less-than-significant*** impact.

[42] City of Brentwood. *2014 Brentwood General Plan Update EIR [pg. 3.10-32]*. July, 2014.

Issues		Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less-Than-Significant Impact	No Impact
XIV. 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 could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the public services:*					
a.	Fire protection?	☐	☐	✖	☐
b.	Police protection?	☐	☐	✖	☐
c.	Schools?	☐	✖	☐	☐
d.	Parks?	☐	✖	☐	☐

Discussion

a, The proposed project is located within the jurisdiction of the East Contra Costa Fire Protection District (ECCFPD). According to the 2014 Brentwood General Plan Update EIR, the ECCFPD has a total of 48 personnel: 3 Chiefs, 15 Captains, 15 Engineers, and 15 Firefighters.[43] The District is currently staffed with five stations, one station in Oakley, one in Knightsen, one in Discovery Bay, and two in Brentwood.

- Station 52, at 201 John Muir Parkway, Brentwood
- Station 54, at 739 First Street, Brentwood
- Station 59, at 1685 Bixler Road, Discovery Bay
- Station 93, at 530 O'Hara Avenue, Oakley
- Station 94, at 15 A Street, Knightsen

The City of Brentwood is served primarily by Station 52 and Station 54. The nearest station to the project site is Station 52, which is located approximately 2.2 miles to the south.

The Brentwood General Plan includes nine policies and four actions (Policies CSF 1-1 through 1-3, and 4-1 through 4-6, and Actions CSF 1a, and 4a-c) to ensure that fire protection services are provided in a timely fashion, are adequately funded, are coordinated between the City and appropriate service agency, and that new development pays their fair share of services. Among the actions items included in the Brentwood General Plan that are applicable to the project are:

- Action CSF 1a: Requiring new development to pay their fair share fees of the cost of on and off-site community services and facilities;

[43] City of Brentwood. *2014 Brentwood General Plan Update EIR [pg. 3.12-2]*. July 22, 2014.

- Action CSF 4a: Continue to enforce the California Building Code and the California Fire Code to ensure that all construction implements fire-safe techniques, including fire resistant materials, where required;
- Action CSF 4b: As part of the City's existing development review process for new projects, the City would continue to refer applications to the ECCFPD for determination of the project's potential impacts on fire protection services. Requirements would be added as conditions of project approval, if appropriate.

The project would comply with these General Plan actions. For example, the City of Brentwood collects development impact fees that support the construction of new fire facilities in the amount of approximately $700 per new single-family residence. The City also has Community Facilities Districts (special tax revenue) that support emergency police and fire services. These funds amount to approximately $730 per year per home and could be used to fund new facilities, maintain existing facilities and equipment, and pay for salaries and benefits. In addition to providing additional revenue for fire facilities, the project would be required to comply with all ECCFPD standard conditions of approval related to provision of fire flow, roadway widths, etc. The project is also subject to the City of Brentwood residential life safety sprinkler requirements set forth in Section 15.64.010 of the Municipal Code.

The 2014 Brentwood General Plan Update EIR concluded implementation of the General Plan would result in a less than significant impact related to the provision of public services throughout the City.[44] The project is consistent with the General Plan designation for the site; therefore, the additional demand for fire protection services resulting from the proposed project has already been evaluated in the General Plan EIR. Given the project's compliance with the relevant General Plan policies and actions related to fire service, the impact from the proposed project, consistent with the General Plan EIR determination, would be ***less than significant*** regarding the need for the construction of new fire protection facilities which could cause significant environmental impacts.

b. The City of Brentwood Police Department would provide police protection services to the project site. Currently, the Brentwood Police Department provides law enforcement and police protection services throughout the City. Established in 1948, the Brentwood Police Department is a full service law enforcement agency that is charged with the enforcement of local, State, and Federal laws, and with providing 24-hour protection of the lives and property of the public. The Police Department functions both as an instrument of public service and as a tool for the distribution of information, guidance, and direction.

The Brentwood Police Department services an area of approximately 14 square miles. The Department currently has 62 sworn police officers and another 17 civilian support staff. In addition to the permanent staff, the Department has approximately 20 volunteers who are citizens of the community and assist with day to day operations.

The Brentwood General Plan includes eight policies and five actions (Policies CSF 1-1 through 1-3, and 3-1 through 3-5; and Actions CSF 1a and 3a-d) to ensure that police protection services are provided in a timely fashion, are adequately funded, are coordinated

[44] City of Brentwood. *2014 Brentwood General Plan Update EIR [pg. 3.12-23]*. July 22, 2014.

between the City and appropriate service agency, and that new development pays their fair share of services. Among the policies and actions items included in the Brentwood General Plan that are applicable to the project are:

- Policy CSF 3-4: Emphasize the use of physical site planning as an effective means of preventing crime. Open spaces, landscaping, parking lots, parks, play areas, and other public spaces should be designed with maximum feasible visual and aural exposure to community residents.
- Policy CSF 3-5: Promote coordination between land use planning and urban design through consultation and coordination with the Police Department during the review of new development applications.
- Action CSF 1a: Requiring new development to pay their fair share fees of the cost of on and off-site community services and facilities;
- Action CSF 3c: As part of the development review process, consult with the police department in order to ensure that the project design facilitates adequate police staffing and that the project addresses its impacts on police services.

The project applicant will be required by the City to comply with these policies and actions. Therefore, consistent with the General Plan EIR conclusion related to governmental facility impacts resulting from General Plan buildout, the project would have a ***less-than-significant*** impact regarding the need for the construction of new police protection facilities which could cause significant environmental impacts.

c. The project site is located within the Liberty Union High School District and the Brentwood Union School District (BUSD). Liberty Union High School District (LUHSD) includes three comprehensive high schools: Liberty High, Freedom High, and Heritage High. In addition, the District includes one continuation high school, La Paloma, and one alternative high school, Independence High School. According to the LUHSD, all three comprehensive high school sites were built with a 2,200 student capacity; this capacity is currently being exceeded at all three high schools and facility needs are being met with portables.[45] The LUHSD student generation factors for grades 9-12 are 0.2074 for single-family detached units. With 98 single family units, the project is expected to generate approximately 21 new high school students. Available capacity does not exist to accommodate these additional students.

The BUSD consists of eight elementary schools and three middle schools. In 2013 the District had a K-6th grade enrollment of 6,345 with a K-6th capacity of 6,800. The District's 2013 7-8th grade enrollment is 2,081 with a 7-8th capacity of 1,940.[46] Therefore, the District has excess capacity for another 455 K-6th students, but is over capacity for grades 7-8th by approximately 141 students. Utilizing the District's current Student Generation Rates, the 98 single family units proposed for the Bella Fiore project would introduce approximately 40 new K-6th students (98 * 0.402) to the District and 12 new 7-8th students (98 * 0.118). Available capacity exists to accommodate the additional K-6th students anticipated from the project, but not the new 7-8th grade students.

[45] Debra Fogarty, Chief Business Officer, Liberty Union High School District, email communication, November 12, 2013.
[46] Jack Schreder & Associates. *School Facility Needs Analysis for Brentwood Union School District*. July 23, 2013.

The applicant is required to pay school impact fees. Proposition 1A/SB 50 prohibits local agencies from using the inadequacy of school facilities as a basis for denying or conditioning approvals of any "[…] legislative or adjudicative act…involving …the planning, use, or development of real property" (Government Code 65996(b)). Satisfaction of the Proposition 1A/SB 50 statutory requirements by a developer is deemed to be "full and complete mitigation."

Because the LUHSD is already over capacity; and the BUSD is over capacity for grades 7-8, adding students to the districts may result in further overcrowding and compromising programs. Therefore, the project would have a ***potentially significant*** impact regarding the need for the construction of new school facilities which could cause significant environmental impacts.

Mitigation Measure(s)
Consistent with State law, implementation of the following mitigation measure would reduce the impacts to a *less-than-significant* level.

XIV-1. *Prior to building permit issuance for any residential development, the developer shall submit to the Community Development Department written proof from the Liberty Union High School District and the Brentwood Union School District that appropriate school mitigation fees have been paid.*

d. The proposed Bella Fiore Project includes the construction of 98 single family residences. Applying the Brentwood standard of 3.22 residents per dwelling unit, the proposed project would create housing for approximately 316 additional residents. The Brentwood General Plan calls for 5 acres of park per 1,000 residents. The proposed project would thus require approximately 1.58 acres of park space for these additional residents. The proposed project includes 0.85 acres of various landscaped open space areas located throughout the neighborhood to serve as on-site bio-retention swales. The proposed project does not include any active park space. Therefore, the proposed project's impact related to the provision of adequate parks would be ***potentially significant***.

Mitigation Measure(s)
Implementation of the following mitigation measure would reduce the impact to a *less-than-significant* level.

XIV-2. *Prior to the recordation of final map(s), the project applicant shall pay the required park in-lieu fees as determined by the Community Development Department.*

Issues		Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less-Than-Significant Impact	No Impact
XV.	**RECREATION.** *Would the project:*				
	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. As explained above in Question 'd' of the Public Services section, the VTSM for the proposed project does not include sufficient park land acreage for the 98 residential units. As a result, in-lieu fee payments would be required to meet the City's park land requirements. Therefore, the proposed project's impact related to the provision of adequate recreational facilities would be ***potentially significant***.

Mitigation Measure(s)
Implementation of the following mitigation measure would reduce the impact to a *less-than-significant* level.

XV-1. Implementation of Mitigation Measure XIV-2.

Issues		Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less-Than-Significant Impact	No Impact
XVI.	**TRANSPORTATION/TRAFFIC.** *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 features (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?	☐	☐	✖	☐
e.	Result in inadequate emergency access?	☐	✖	☐	☐
f.	Conflict with adopted policies, plans, or programs regarding public transit, bicycle, or pedestrian facilities, or otherwise decrease the performance or safety of such facilities?	☐	☐	✖	☐

Discussion

a,b. The following discussion is based on a Traffic Impact Analysis (TIA) prepared for the Bella Fiore Project by Abrams Associates, dated June 19, 2014 as well as the Traffic Impact Analysis prepared for the Casa Bella Apartments Project by Abrams Associates, dated March 2008 (available for review at Brentwood City Hall).

Analysis Methodology

Existing operational conditions at the study intersections have been evaluated according to the requirements set forth by the Contra Costa County Transportation Authority (CCTA) using the methodology in the Final Technical Procedures Update (dated July 19, 2006). Analysis of traffic operations was conducted using the 2010 Highway Capacity Manual (HCM) Level of Service (LOS) methodology with Synchro software. LOS is an expression, in the form of a scale, of the relationship between the capacity of an intersection (or roadway segment) to accommodate the volume of traffic moving through the intersection (or roadway segment) at any given time.

The Bella Fiore TIA evaluates the following study intersections (see Figure 10):

Intersections

1. Shady Willow Lane & Grant Street
2. Shady Willow Lane & Amber Lane
3. Empire Avenue & Amber Lane
4. Empire Avenue & Rosie Lane
5. Amber Lane & the Proposed Project Entrance

Study Traffic Scenarios

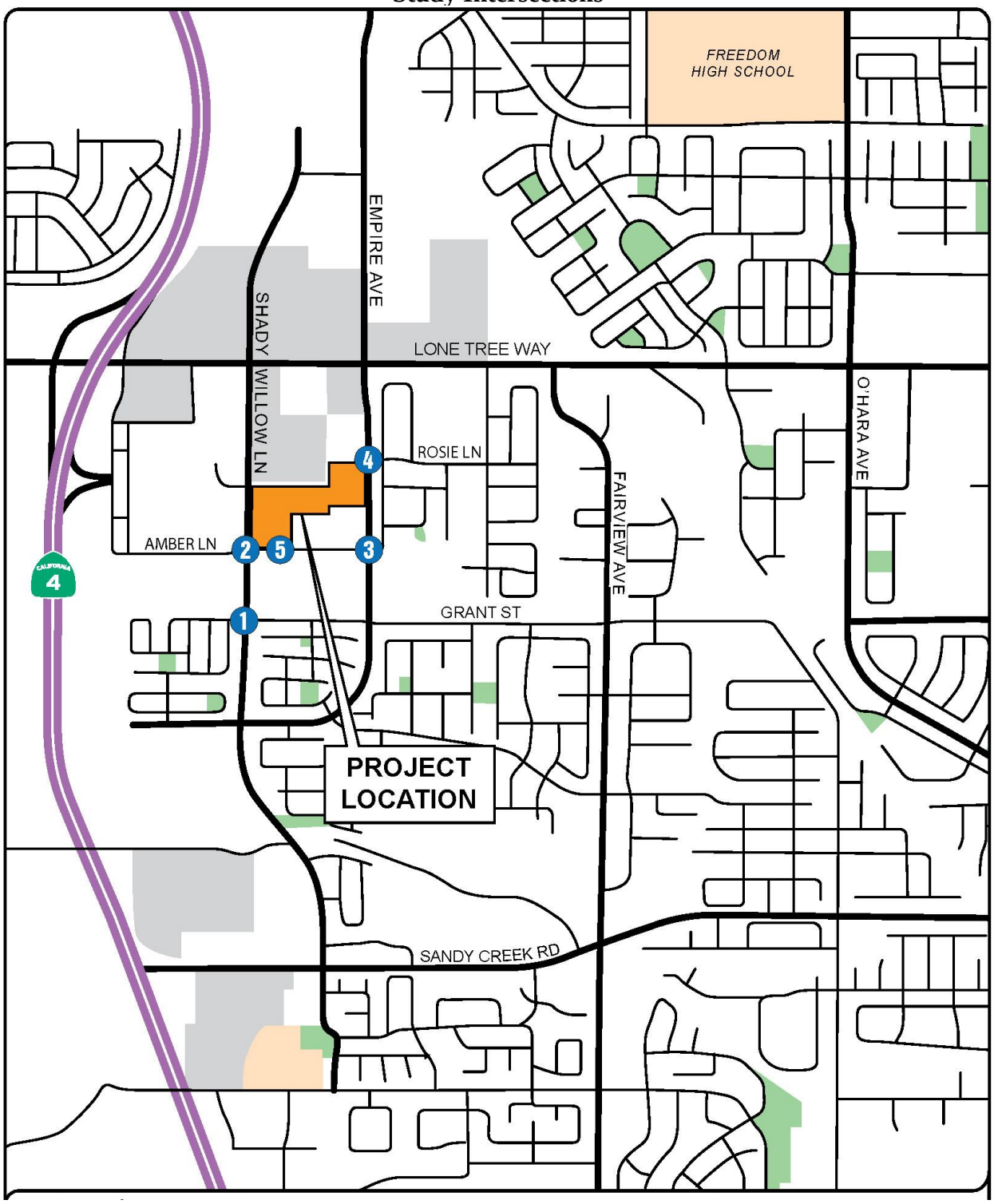
The following scenarios were analyzed in the Bella Fiore TIA:

1. **Existing Conditions:** LOS based on existing peak hour volumes and existing intersection configurations.
2. **Existing Plus Project:** Existing traffic volumes plus trips from the proposed project.
3. **Baseline (No Project) Conditions:** The Baseline scenario is based on the existing volumes plus growth in background traffic (for five years) plus the traffic from all reasonably foreseeable developments that could substantially affect the volumes at the project study intersections.
4. **Baseline Plus Project Conditions**: This scenario is based on the Baseline traffic volumes plus the trips from the proposed project.
5. **Cumulative (No Project) Conditions:** This scenario includes cumulative volumes based on the most recent (March, 2013) release of the Countywide Travel Demand Model.
6. **Cumulative Plus Project Conditions:** This scenario includes cumulative volumes based on the most recent (March, 2013) release of the Countywide Travel Demand Model plus the trips from the proposed project.

Thresholds of Significance

Project impacts are determined by comparing the proposed project conditions to those without the proposed project. Significant impacts for intersections are created when traffic from the proposed project causes the LOS to fall below a specific threshold. The LOS scale describes traffic flow with six ratings ranging from A to F, with "A" indicating relatively free flow of traffic and "F" indicating stop-and-go traffic characterized by traffic jams. The goal of the City of Brentwood is to maintain a LOS D during the peak hours. The East County Action Plan specifies that: "Peak hour V/C ratio at signalized intersections should not be worse than 0.85 (mid level of service D) based on the Authority's method of LOS analysis." Using the 2010 HCM intersection analysis methodology as previously discussed, this mid LOS D standard equates to an overall average intersection delay of 45 seconds or less.

Figure 10
Study Intersections



Source: Abrams Associates, 2014.

Signalized Intersections

Project-related operational impacts on the City of Brentwood's signalized study intersections are considered significant if project-related traffic causes the Level of Service (LOS) rating to deteriorate from mid LOS D or better to high LOS D, LOS E or F, or from LOS E to LOS F.

Unsignalized Intersections

Project-related operational impacts on unsignalized intersections are considered significant if project-generated traffic causes the LOS at an unsignalized intersection to degrade to worse than mid-LOS D (average delay of 30 seconds per vehicle) or causes an unsignalized intersection to meet traffic signal warrants based on Warrant 3B (peak hour volume warrant) as presented in the California Manual of Uniform Traffic Control Devices (CMUTCD), dated September 26, 2006.

Existing Conditions

Traffic counts at all of the project study intersections were conducted in April of 2014 at times when local schools were in session. Traffic volume data was also collected for the afternoon school peak hour (2:15 PM to 3:15 PM) to verify whether additional significant transportation impacts would occur during this time period. During this time period the traffic on the primary access routes in the area was found to be slightly lower than the PM commute peak hour volumes. According to the TIA, the AM peak commute hour represents the worst case scenario from a traffic operations perspective.[47] Table 13 summarizes the associated LOS computation results for the existing weekday AM and PM peak hour conditions. As shown in Table 13, all of the signalized study intersections currently have acceptable conditions (LOS D or better) during the weekday AM and PM peak hours.

Existing Plus Project Conditions

Traffic from the proposed project was added to the existing conditions volumes to determine the potential traffic impacts resulting from the project.

Project Trip Generation

The number of trips that would be generated by the proposed project was approximated using Trip Generation, 9th Edition, published by the Institute of Transportation Engineers (ITE). The total trip generation reflects all vehicle trips that would be counted at the project driveways, both inbound and outbound. Adjustments were not applied to account for pass-by or internal trips. For purposes of determining the reasonable worst-case impacts of traffic on the surrounding street network from a proposed project, the trips generated by this proposed development are estimated for the peak commute hours which represent the peak of "adjacent street traffic", which is the time period when the project traffic would generally contribute to the greatest amount of congestion. The estimated number of trips for the project

[47] Abrams Associates Traffic Engineering, Inc. *Transportation Impact Analysis Bella Fiore Residential Project [pg. 20]*. June 19, 2014.

is shown in Table 14. As noted in the Table 14, the project would generate approximately 74 vehicle trips during the AM peak hour and 98 trips during the PM peak hour.

Table 13
Study Intersection LOS – Existing Conditions

Intersection	Control	AM Peak Hour		PM Peak Hour	
		Delay	LOS	Delay	LOS
1. Shady Willow Lane & Grant Street	Traffic Signal	15.4	B	10.0	A
2. Shady Willow Lane & Amber Lane	All Way Stop	12.7	B	12.3	B
3. Empire Avenue & Amber Lane	All Way Stop	9.9	A	8.8	A
4. Empire Avenue & Rosie Lane	Side Street Stop	10.1	B	13.1	B
5. Amber Lane & Project Entrance	Side Street Stop	11.9	B	8.8	A

Notes:
HCM LOS results are presented in terms of average intersection delay in seconds per vehicle. For stop controlled intersections the results for the worst side street approach are presented.

Source: Abrams Associates, 2014.

Table 14
Trip Generation Calculations

Land Use	Size/Rate	ADT	AM Peak Hour			PM Peak Hour		
			In	Out	Total	In	Out	Total
ITE Single Family Trip Rates	per unit	9.52	0.19	0.56	0.75	0.63	0.37	1.00
Bella Fiore Trip Generation	98 units	933	19	55	74	62	36	98

Source: Abrams Associates, 2014.

Project Trip Distribution

The trip distribution assumptions have been based on the project's proximity to freeway interchanges, the existing directional split at other local intersections, and the overall land use patterns in the area. Table 15 shows the percentage of project traffic assigned to various study roadways in both the AM and PM peak hours.

Table 15
Project Trip Distribution

Origin / Destination	Trip Distribution Percentages
North on Shady Willow Lane	35%
South on Shady Willow Lane	30%
North on Empire Avenue	10%
South on Empire Avenue	25%

Source: Abrams Associates, 2014.

Existing Plus Project Intersection LOS Results

Traffic operations were evaluated at the study intersections under existing conditions plus traffic generated by the project. The intersection LOS under Existing Plus Project conditions are shown in Table 16. As shown in Table 16, all of the signalized study intersections would continue to have acceptable conditions (LOS D or better) during the weekday AM and PM peak hours.

Table 16
Study Intersection LOS – Existing Plus Project Conditions

Intersection	Control	Existing Conditions				Existing Plus Project Conditions			
		AM Peak Hour		PM Peak Hour		AM Peak Hour		PM Peak Hour	
		Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS
1. Shady Willow Lane & Grant Street	Traffic Signal	15.4	B	10.0	A	15.4	B	10.0	A
2. Shady Willow Lane & Amber Lane	All Way Stop	12.7	B	12.3	B	13.6	B	12.5	B
3. Empire Avenue & Amber Lane	All Way Stop	9.9	A	8.8	A	10.2	B	9.0	A
4. Empire Avenue & Rosie Lane	Side Street Stop	10.1	B	13.1	B	10.3	B	14.1	B
5. Amber Lane & Project Entrance	Side Street Stop	11.9	B	8.8	A	12.8	B	9.0	A

Notes:
HCM LOS results are presented in terms of average intersection delay in seconds per vehicle. For stop controlled intersections the results for the worst side street approach are presented.

Source: Abrams Associates, 2014.

Baseline Conditions

Baseline Conditions refer to the existing conditions with the addition of traffic from reasonably foreseeable projects in the area. In addition, the general baseline growth in traffic was developed based on the assumption that the project completion date would be 2015. The Baseline Condition was prepared in coordination with the City of Brentwood and includes all reasonably foreseeable projects that would significantly affect the traffic volumes in the project study area.

Baseline Plus Project Intersection LOS

The Baseline Plus Project traffic forecasts were developed by adding project-related traffic to the baseline traffic volumes. Table 17 summarizes the associated LOS computation results for the Baseline and Baseline Plus Project weekday AM and PM peak hour conditions. As shown in Table 17, with addition of traffic from the proposed project all study intersections

would continue have acceptable conditions (LOS D or better) during the weekday AM and PM peak.

Table 17
Study Intersection LOS – Baseline Conditions

Intersection	Control	Baseline Conditions				Baseline Plus Project Conditions			
		AM Peak Hour		PM Peak Hour		AM Peak Hour		PM Peak Hour	
		Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS
1. Shady Willow Lane & Grant Street	Traffic Signal	15.6	B	10.0	A	15.5	B	10.0	A
2. Shady Willow Lane & Amber Lane	All Way Stop	13.3	B	12.6	B	14.3	B	12.8	B
3. Empire Avenue & Amber Lane	All Way Stop	10.3	B	9.1	A	10.8	B	9.3	A
4. Empire Avenue & Rosie Lane	Side Street Stop	10.2	B	13.6	B	10.4	B	14.6	B
5. Amber Lane & Project Entrance	Side Street Stop	12.4	B	9.0	A	13.3	B	9.2	A

Notes:
HCM LOS results are presented in terms of average intersection delay in seconds per vehicle. For stop controlled intersections the results for the worst side street approach are presented.

Source: Abrams Associates, 2014.

Cumulative Conditions

For the Cumulative Conditions, the intersection traffic volumes were based on the existing turning movements with the addition of traffic from all planned and approved projects plus the addition of growth estimated by the CCTA's traffic model.

Cumulative Plus Project Intersection LOS

The Cumulative Plus Project (year 2035) traffic forecasts were developed by adding project-related traffic to the cumulative traffic volumes. Table 18 summarizes the associated LOS computation results for the Cumulative and Cumulative Plus Project weekday AM and PM peak hour conditions. As shown in Table 18, with addition of traffic from the proposed project, all study intersections would continue have acceptable conditions (LOS D or better) during the weekday AM and PM peak under the cumulative scenario.

The Traffic Impact Analysis prepared by Abrams Associates for the Casa Bella Apartment Project dated March 2008 identified that the addition of project traffic would contribute to unacceptable operations during the morning peak hour at the intersection of Shady Willow Lane and Amber Lane and included that additional traffic volumes would occur upon completion of the segment of Amber Lane between Jeffrey Way and Shady Willow Lane necessitating the installation of a traffic signal at the intersection of Shady Willow Lane and

Amber Lane. Since the Project will add additional traffic to this intersection, the installation of a traffic signal will be necessary at this time. The traffic signal installation is part of the City's Development Fee Program, which means that the cost of this improvement would be reimbursable.

Table 18
Study Intersection LOS – Cumulative Conditions

Intersection	Control	Cumulative Conditions				Cumulative Plus Project Conditions			
		AM Peak Hour		PM Peak Hour		AM Peak Hour		PM Peak Hour	
		Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS
1. Shady Willow Lane & Grant Street	Traffic Signal	16.4	B	10.0	A	16.4	B	10.0	A
2. Shady Willow Lane & Amber Lane	All Way Stop	16.2	C	12.5	B	18.7	C	13.1	B
3. Empire Avenue & Amber Lane	All Way Stop	11.0	B	9.4	A	11.4	B	9.6	A
4. Empire Avenue & Rosie Lane	Side Street Stop	10.5	B	14.4	B	10.6	B	15.4	C
5. Amber Lane & Project Entrance	Side Street Stop	13.2	B	9.1	A	14.5	B	9.7	A

Notes:
HCM LOS results are presented in terms of average intersection delay in seconds per vehicle. For stop controlled intersections the results for the worst side street approach are presented.

Source: Abrams Associates, 2014.

Conclusion

As discussed above, the project will increase traffic at the intersection of Shady Willow Lane and Amber Lane. In addition, the future completion of Amber Lane will also increase traffic in the vicinity of the intersection of Shady Willow Lane and Amber Lane. These factors will necessitate the installation of a traffic signal at this intersection. Therefore, the proposed project's impact related to the provision of a traffic signal would be ***potentially significant.***

Mitigation Measure(s)
Implementation of the following mitigation measure would reduce the impact to a *less-than-significant* level.

XVI-1. *The developer shall construct the traffic signal at the intersection of Shady Willow Lane and Amber Lane to the satisfaction of the Director of Public Works. This traffic signal shall be reimbursable per the City's Development Fee Program.*

c. The proposed project would not require any changes to existing regional air traffic activity and the nearest airport, Funny Farm Airfield, is a private airfield located approximately 5.0 miles east of the project site. Therefore, ***no impact*** would occur.

d. The TIA for the proposed project included a site circulation analysis, and the TIA did not

identify any internal site circulation or access issues that would cause a traffic safety problem or any unusual traffic congestion or delay that could result in inadequate emergency access. The volumes on the internal roadways would be low enough so that significant conflicts would not be expected within the project. It should be noted that an analysis of Caltrans' Peak Hour Signal Warrants indicates that neither of the two project entrances would be expected to meet the warrants for a traffic signal, even under Cumulative Conditions. As a result, buildout of the project would result in a ***less-than-significant*** impact with respect to substantially increasing hazards due to a design feature.

e. The Bella Fiore VTSM includes two emergency vehicle access (EVA) points within the neighborhood, one on Amber Lane and the other on Empire Avenue. These EVA points would enable emergency access personnel to respond readily to emergency events. However, the short term increase in traffic as a result of demolition and construction activities associated with the proposed project could temporarily disrupt daily traffic flow, including emergency response vehicles in transit. Construction traffic has been quantified assuming a worst-case single phase construction period of 12 months.

Heavy Equipment

Approximately four pieces of heavy equipment are estimated to be transported on and off the site each month throughout the demolition of two on-site residences, and construction of the proposed project. Heavy equipment transport to and from the site could cause traffic impacts in the vicinity of the project site during construction.

Employees

Based on past construction of similar projects, construction workers could require parking for up to 40 vehicles during the peak construction period. It should be noted that the number of trips generated during construction would not only be temporary, but would also be substantially less than the proposed project at buildout. In addition, deliveries, visits, and other activities may generate peak non-worker parking demand of 5 to 10 trucks and automobiles per day. Therefore, up to 50 vehicle parking spaces may be required during the peak construction period for the construction employees.

Construction Material Import

The project would also require the importation of construction material, including raw materials for the building pads, the buildings, infrastructure, and landscaping. Based on past construction of similar projects, importing this material is estimated to require substantial amounts of truck traffic.

Conclusion

The short term increase in traffic as a result of demolition and construction activities associated with the proposed project as described above could adversely affect emergency vehicle access and response time within the project area; therefore, a ***potentially significant*** impact could result.

Mitigation Measure(s)
Implementation of the following mitigation measure would reduce the impact to a *less-than-significant* level.

XVI-2. *Prior to issuance of grading and building permits, the project applicant shall submit a Traffic Control Plan to the Public Works Department. The Traffic Control Plan shall ensure a safe flow of traffic in the project area during the demolition and construction activities associated with the proposed project.*

The requirements within the Traffic Control Plan shall include, but are not limited to, the following:

- *Truck drivers shall be notified of and required to use the most direct route between the site and SR 4, as determined by the Public Works Department;*
- *All site ingress and egress shall occur only at the main driveways to the project site and construction activities may require installation of temporary (or ultimate) traffic signals as determined by the City Engineer;*
- *Specifically designated travel routes for large vehicles would be monitored and controlled by flaggers for large construction vehicle ingress and egress;*
- *Warning signs indicating frequent truck entry and exit shall be posted on Lone Tree Way;*
- *Debris and mud on nearby streets caused by trucks shall be monitored daily and may require instituting a street cleaning program;*
- *Construction employee parking shall be provided on the project site to eliminate conflicts with nearby residential areas; and*
- *If importation and exportation of material becomes a traffic nuisance, then the City Engineer may limit the hours the activities can take place.*

If the project is built in phases over time, each phase shall be subject to the Traffic Control Plan and oversight by the Public Works Department.

f. The following section discusses the availability of transit, bicycle, and pedestrian facilities in and around the project area.

Transit Facilities

Transit service in the City of Brentwood is provided by Tri-Delta Transit (TDT). TDT currently operates two routes (385 and 395) on weekdays and one route on weekends (395), both of which serve the project area. Route 385 runs between the Antioch Park & Ride (Hillcrest) and the Brentwood Park & Ride, using local streets including Hillcrest Avenue, Lone Tree Way, Sand Creek Road, Fairview Avenue, and Balfour Road. The weekend route, Route 395, runs from the Antioch Park & Ride (Hillcrest) south on SR 4 to Lone Tree Way, where the route heads east and then south to connect with Sand Creek Road before heading north on SR 4 back to the Antioch Park & Ride. The proposed project would not conflict with any transit plans or goals of the City or the CCTA, or interfere with any existing bus routes and would not remove or relocate any existing bus stops. A portion of the proposed project's residents are expected to utilize connections to the future Hillcrest Avenue E-BART station and would provide additional ridership for local bus companies.

Bicycle and Pedestrian Facilities

The proposed project would generate additional bicycle and pedestrian traffic in the area, thereby potentially increasing conflicts between vehicles, bicycles, and pedestrians. However, in general, the proposed project would not generate a significant increase in pedestrian and bicycle traffic in the area given the size of the proposed project. In addition, the proposed project would not significantly impact or change the design of any existing bicycle and pedestrian facilities, or create any new safety problems in the area. Furthermore, the project would construct necessary on-site sidewalks, walkways, bicycle parking, and other amenities in compliance with adopted policies, plans and programs of the City of Brentwood.

Pedestrian facilities in the study area include sidewalks, crosswalks, pedestrian signals and multi-use trails. Roadways in the study area generally provide sidewalks and crosswalks on both sides of the street. Shady Willow Lane, adjacent to the project site to the west, and Lone Tree Way to the northeast, have Class II bicycle facilities.[48] In addition, Grant Street to the south has Class I bicycle facilities. Empire Avenue adjacent to the project site to the east has a proposed Class II bicycle facility.

Conclusion

Given the presence of existing pedestrian, bicycle, and transit resources, and incorporation of the additional transit, bicycle, and pedestrian improvements for the project, the project would result in a ***less-than-significant*** impact to alternative modes of transportation.

[48] Bicycle facilities include the following:

- *Bike paths (Class I)* - Paved trails that are separated from roadways, and are shared with pedestrians.
- *Bike lanes (Class II)* - Lanes on roadways designated for use by bicycles through striping, pavement legends, and signs.
- *Bike routes (Class III)* - Roadways designated for bicycle use by signs only; may or may not include additional pavement width for cyclists.

Issues		Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less-Than-Significant Impact	No Impact
XVII. 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 sufficient 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,b,e. The following discussion addresses available wastewater treatment plant (WWTP) capacity and wastewater infrastructure to serve the project site.

Wastewater Treatment Plant Capacity

The existing WWTP is located on approximately 70 acres of land owned by the City on the north side of Sunset Road and east of SR 4. The WWTP is designed to have sufficient capacity to handle all wastewater flows at buildout per the General Plan. The WWTP has a

current treatment capacity of 5 million gallons per day (mgd) with an average dry weather flow (ADWF) of 3.4 mgd in 2012.

The current WWTP system is designed to expand to 10 mgd in 2.5 mgd increments and the City collects development impact fees from new development to fund future expansion efforts. Phase I of the WWTP expansion was completed in 1998-2002, to bring the treatment plant to current levels. Preliminary planning of the Phase II expansion of the WWTP has been completed. Final design and construction would not start until wastewater influent ADWF is 3.75 mgd. Phase II would expand capacity to 7.5 or 10.0 mgd by adding oxidation ditches, secondary clarifiers, filters, and related appurtenances.[49]

Buildout of the proposed project would result in the construction of 98 single family dwelling units generating approximately 316 additional residents (based on 3.22 persons per household). The 2014 Brentwood General Plan Update EIR uses a wastewater generation factor of 85 gallons per day per person of residential development.[50] Therefore, the total wastewater flow from the project site would be about 0.0027 MGD. Therefore, the current capacity of the WWTP would be sufficient to handle the wastewater flow from the proposed project. In addition, the proposed project is required to pay sewer impact fees which would contribute towards the cost of future upgrades, when needed. As a result, the proposed project would not have adverse impacts to wastewater treatment capacity.

Wastewater Infrastructure

The wastewater generated by the project would be collected by an internal sewer system, consisting of 8-inch sewer lines, which would connect to the existing 10-inch sewer line within the Empire Avenue ROW.

Conclusion

Because the project applicant would pay City sewer impact fees, and adequate long-term wastewater treatment capacity is available to serve full buildout of the project, a ***less-than-significant*** impact would occur related to requiring or resulting in the construction of new wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects.

c. As discussed in Questions 'c-e' of Section VIII, Hydrology and Water Quality, of this IS/MND, the proposed project site is located within the Marsh Creek Watershed. All bio-retention basins proposed for the project have been designed to exceed the minimum IMP area/volume requirements. Upon being treated with the proposed on-site bio-retention swales, project runoff would be routed to the existing detention basin near Fairview Avenue and the railroad tracks, after which runoff would be metered through the City's system into Marsh Creek. As described by the CCCFCWCD, because downstream Marsh Creek, between the project site and the Delta/Bay, is an engineered hardened channel, flow-control is not required for the project.

[49] City of Brentwood. *2014 Brentwood General Plan Update EIR [pg. 3.14-26]*. July 22, 2014.
[50] City of Brentwood. *2014 Brentwood General Plan Update EIR [pg. 3.14-21]*. July 22, 2014.

The on-site bio-retention facilities would need to be maintained properly so that the on-site treatment system functions properly. A long-term maintenance plan is needed to ensure that all proposed stormwater treatment BMPs function properly. Should the proposed water quality treatment facilities not be maintained properly, a ***potentially significant*** impact could occur with respect to creating or contributing runoff water which would exceed the capacity of existing or planned stormwater drainage systems or providing substantial additional sources of polluted runoff.

Mitigation Measure(s)
Implementation of the following mitigation measure would reduce the impact to a *less-than-significant* level.

XVII-1. Implementation of Mitigation Measure IX-2

d. The following discussion addresses available water supply system and water supply infrastructure to serve the project site.

Water Supply System

The City of Brentwood has prepared an Urban Water Management Plan (UWMP) that predicts the water supply available to the City of Brentwood in normal, single-dry, and multiple-dry years out to 2035. The total supply available in 2035 during all scenarios (normal, single-dry, multiple-dry) well exceeds the projected demand.[51] The future demand projections included in the UWMP are based upon General Plan land uses. The proposed project's use is consistent with the General Plan; therefore, the proposed project's future water demand was considered in the UWMP.[52] As a result, the proposed project would have a less-than-significant impact with respect to the availability of sufficient water supplies to serve the project.

Water Supply Infrastructure

The project would involve the construction of the necessary water infrastructure to serve the proposed neighborhoods. The project includes installation of 8-inch water mains within the internal street ROWs which would connect to the existing mains in Amber Lane and Empire Avenue.

Conclusion

Because adequate long-term water supply is available to serve full buildout of the proposed Bella Fiore project and the project includes the extension of adjacent water line infrastructure, the project would have a ***less-than-significant*** impact related to water supply.

[51] City of Brentwood. *2010 Urban Water Management Plan [pg. 6-12 and 6-13]*. May 24, 2011.
[52] It should be noted the *2010 Urban Water Management Plan* was prepared prior to the *2014 Brentwood General Plan Update EIR*; however, the *2014 General Plan Update EIR* population buildout is 9 percent less than the buildout population projected for the previous General Plan. Therefore, the water demand estimates in the *2010 Urban Water Management Plan* should be considered conservative.

f,g. The solid waste from Brentwood is disposed of at Keller Canyon County landfill. Keller Canyon Landfill covers 2,600 acres of land; 244 acres are permitted for disposal. The site currently handles 2,500 tons of waste per day, although the permit allows up to 3,500 tons of waste per day to be managed at the facility. As of September 2008, the remaining capacity of the landfill's disposal area is estimated at 60-64 million cubic yards, and the estimated closing date for the landfill is 2050.[53] Because the 2014 Brentwood General Plan Update EIR determined that solid waste capacity is adequate to serve the demand resulting from General Plan buildout and the proposed project's use is consistent with the General Plan designation for the project site; the project's impact to solid waste would be ***less than significant***.

[53] City of Brentwood. *2014 Brentwood General Plan Update EIR [pg. 3.14-45]*. July 22, 2014.

Issues	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less-Than-Significant Impact	No Impact
XVIII. 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 the potential to achieve short-term, to the disadvantage of long-term, environmental goals?	☐	☐	✖	☐
c. 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)?	☐	☐	✖	☐
d. Does the project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?	☐	☐	✖	☐

Discussion

a. Although relatively unlikely, based upon the current land cover types found on-site, special-status wildlife species and/or federally- or state-protected birds not covered under the ECCCHCP could be occupying the site. In addition, although unlikely, the possibility exists for subsurface excavation of the site during grading and other construction activities to unearth deposits of cultural significance. However, this IS/MND includes mitigation measures that would reduce any potential impacts to less-than-significant levels. Therefore, the proposed project would have ***less-than-significant*** impacts related to degradation of the quality of the environment, reduction of habitat, threatened species, and/or California's history or prehistory.

b. 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

2014 Brentwood General Plan Update EIR adopted on July 22, 2014. As discussed throughout this IS/MND, the proposed project would comply with all relevant goals set forth in the General Plan. Therefore, the impact is ***less than significant.***

c. The proposed project in conjunction with other development within the City of Brentwood could incrementally contribute to cumulative impacts in the area. However, mitigation measures for all potentially significant project-level impacts identified for the proposed project in this IS/MND have been included that would reduce impacts to less-than-significant levels. As such, the project's incremental contribution towards cumulative impacts would not be considered significant. In addition, all future discretionary development projects in the area would be required to undergo the same environmental analysis and mitigate any potential impacts, as necessary. Therefore, the proposed project would not have any impacts that would be cumulatively considerable, and impacts would be ***less than significant***.

d. The proposed project site is surrounded by existing development and is consistent with the land use designation for the site. Due to the consistency of the proposed land use, substantial adverse effects on human beings are not anticipated with implementation of the proposed project. It should be noted that during construction and demolition activities, the project could result in potential impacts related to asbestos, lead-based paints, soil or groundwater contamination, and noise. However, this IS/MND includes mitigation measures that would reduce any potential impacts to a less-than-significant level. In addition, the proposed project would be designed in accordance with all applicable building standards and codes to ensure adequate safety is provided for the future residents of the proposed project. Therefore, impacts related to environmental effects that could cause adverse effects on human beings would be ***less than significant***.