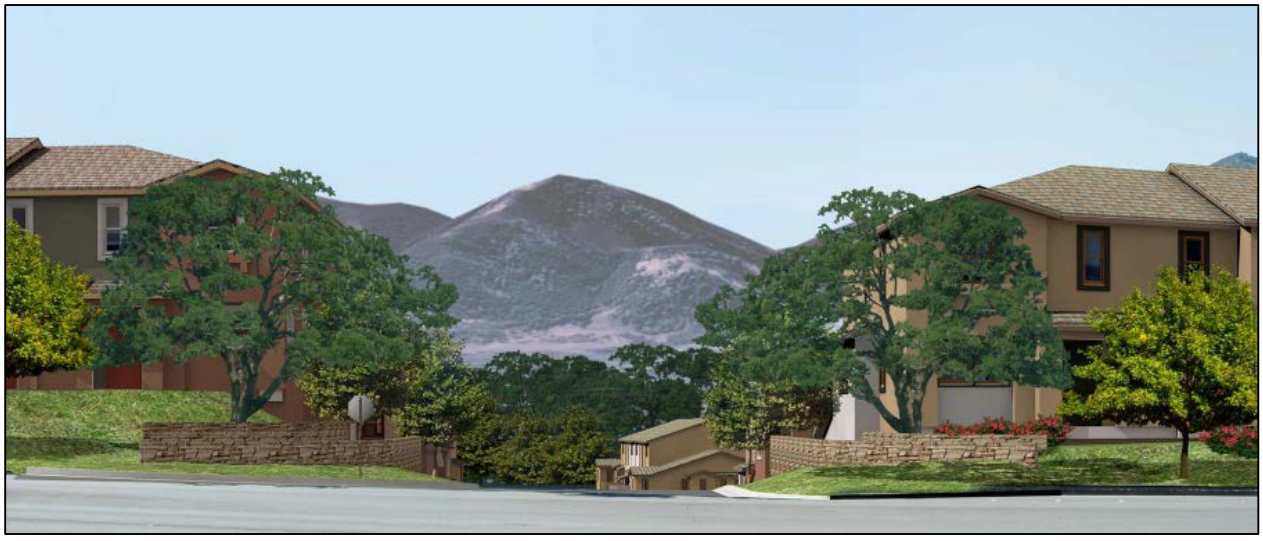
Silver Oak Estates Project
Initial Study/
Mitigated Negative Declaration
ENV-02-10

For DP-01-10,
MAP-01-10 & TRP-14-14



City of Clayton
Community Development Department
6000 Heritage Trail
Clayton, California 94517
925/673-7340

September 2014

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EXHIBITS

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See attached CD for appendices.

INTRODUCTION

The City of Clayton, in concert with its environmental consultant for the project, prepared this Initial Study/Mitigated Negative Declaration (IS/MND) to evaluate the potential environmental impacts of the Silver Oak Estates Project (proposed project). The proposed project is located on approximately 14 acres in the City of Clayton, north of Mount Diablo Creek and south of Oakhurst Drive, on the property known as Yolanda Estate, or Hurd Ranch. In addition to this IS/MND, consideration of the following discretionary actions by the City is required for the proposed project:

- Development Plan (DP-01-10) for a Planned Development project and the following subcomponents:
    - Affordable Housing Plan for six on-site rental or for-sale units along Oakhurst Drive (Lots 47 through 52)
    - Habitat Conservation Plan for the project site in accordance with the East Contra Costa County Habitat Conservation Plan;
- Vesting Tentative Map (MAP-01-10) for the subdivision of the site into 52 townhome lots, 7 single-family home lots, and 11 parcels for various uses, including open space, roadways, pool, existing well, and water meter; and
- Tree Removal Permit (TRP-14-14), including method of tree placement, as well as the replacement ratios, for the removal of an estimated 1,204 inches of on-site protected trees, in accordance with Section 15.70.040 of the Clayton Municipal Code.

This IS/MND identifies potentially significant environmental impacts for the following environmental areas:

- Aesthetics;
- Air Quality;
- Biological Resources;
- Cultural Resources;
- Geology and Soils;
- Hazards and Hazardous Materials;
- Hydrology and Water Quality;
- Noise;
- Population and Housing;
- Public Services;
- Transportation and Circulation; and
- Water, Sewer, and Stormwater Systems.

The environmental analysis determined that measures were available to mitigate potential adverse impacts to insignificant levels. As a result, this document serves as an MND pursuant to Public Resources Code Sections 21064.5 and 21080(c) and Article 6 of the California Environmental Quality Act (CEQA) Guidelines.

In accordance with the requirements of CEQA Guidelines Section 15071, this IS/MND describes the proposed project, identifies, analyzes, and evaluates the potential significant environmental

impacts that may result from the proposed project, and identifies measures to mitigate adverse environmental impacts. With the mitigation measures identified in this document, the project would not have a significant impact on the environment.

I. PROJECT / APPLICANT INFORMATION

1.	Project Title:	Silver Oak Estates Project
2.	Lead Agency Name and Address:	City of Clayton 6000 Heritage Trail Clayton, CA 94517
3.	Contact Person and Phone Number:	Charlie Mullen Community Development Director City of Clayton (925) 673-7343
4.	Project Location:	5701 Clayton Road Clayton, CA 94517
5.	Project Sponsor's Name and Address:	JR Peterson & Associates 2115 San Miguel Drive Walnut Creek, CA 94596 (925) 943-7643
6.	Existing General Plan:	Single-family Medium Density (MD)
7.	Existing Zoning:	Planned Development (PD)

8. Project Description Summary:

   The proposed project is located on approximately 14 acres in the City of Clayton, south of Oakhurst Drive, on the property known as Yolanda Estate, or Hurd Ranch. The development proposal includes a total of 59 residential units, including seven (7) single-family homes, 28 townhomes, and 24 "green court" townhomes located on approximately 2.5 acres. In addition, the proposed project includes a neighborhood swimming pool and cabana on 0.22-acre; roadways on 1.48 acres; and 8.43 acres of open space. Primary vehicular access to the project would be provided from Oakhurst Drive and restricted access via Lydia Lane for the seven single-family homes included in the project.

The environmental factors checked below would be potentially affected by this project. The following Evaluation of Environmental Impacts identifies at least one impact that is "Less Than Significant with Mitigation Incorporated" for each of the checked environmental factors.

✖ **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**	✖ **Transportation and Circulation**
✖ **Water, Sewer, and Stormwater Systems**	☐ **Mandatory Findings of Significance**	

II. DETERMINATION

On the basis of this initial evaluation:

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

X 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 since the Project proponent has made revisions in the Project and has agreed to the mitigation measures listed in "Section V. List of Mitigation Measures." I further find that the mitigation measures and the information in this study constitute a MITIGATED NEGATIVE DECLARATION in accordance with Section 15071 of the State CEQA Guidelines.

☐ 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

Charlie Mullen
Clayton Community Development Director

III. BACKGROUND

This IS/MND identifies and analyzes the potential environmental impacts of the proposed Silver Oak Estates Project. The information and analysis presented in this document is organized in accordance with the order of the 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 should be applied to the project are prescribed.

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

The environmental setting and impact discussion for each section of this Initial Study have been largely based on site-specific technical reports, and in some cases, information in the City of Clayton General Plan and associated Environmental Impact Report (EIR).

IV. PROJECT DESCRIPTION

Site Location and Setting

The project is located along Concord Boulevard and Oakhurst Drive in Clayton, at the northern terminus of Lydia Lane (see Exhibit 1 and Exhibit 2 for the project location). The study area contains several buildings associated with the former Yolanda Estate, later known as the Hurd Ranch. The main house was destroyed by fire in 2009 and the destroyed remains are still present on the site. In addition, the property contains an extant dwelling, a garage, possibly a workshop, a tank house, a bath house, and several horse barns. The horse barns are newer and were not part of the original estate. An unimproved road currently winds its way through the site. The property is approximately 14 acres and identified as 5701 Clayton Road (APN: 118-020-029).

The vegetation on the site consists of 1.26 acres of oak woodland, 3.02 acres of ornamental landscaped or barren areas, 2.75 acres of pastoral, 6.6 acres of riparian woodland, and 0.23-acre of ruderal. An old fruit orchard occurs on the southern portion of the project site. The riparian woodland is associated with Mount Diablo Creek, which runs through the site along the southern and western boundaries. Approximately 302 trees currently exist on-site.

The Silvercreek II residential subdivision is located north of the project site, across Oakhurst Drive. The Oakhurst Country Club Golf Course and Black Diamond residential subdivision are located east of the project site. West of the project site is Lydia Park and south of the site are the George Cardinet Trail and the Rachel Ranch residential subdivision.

Exhibit 1
Regional Location Map

Exhibit 2
Project Location Map

Project Description

The proposed project requires consideration for approval of the following discretionary actions by the City for the development of a total of 59 residential lots on the approximately 14-acre site:

- Development Plan (DP-01-10) for a Planned Development project and the following subcomponents:
    - Affordable Housing Plan for six on-site rental or for-sale units along Oakhurst Drive (Lots 47 through 52)
    - Habitat Conservation Plan for the project site in accordance with the East Contra Costa County Habitat Conservation Plan;
- Vesting Tentative Map (MAP-01-10) for the subdivision of the site into 52 townhome lots, 7 single-family home lots, and 11 parcels for various uses, including open space, roadways, pool, existing well, and water meter; and
- Tree Removal Permit (TRP-14-14), including method of tree placement, as well as the replacement ratios, for the removal of an estimated 1,204 inches of on-site protected trees, in accordance with Section 15.70.040 of the Clayton Municipal Code.

Detailed descriptions of the proposed project components are provided below.

Development Plan (DP-01-10)

The Development Plan for the proposed project includes a total of 59 residential units, including single-family and multi-family, as well as non-residential uses such as open space. The residential units would be composed of 28 attached townhomes (Lots 1-16, 41-52) in seven buildings in the northeastern corner of the site, 24 attached "green court" townhomes (Lots 17-40) in four buildings in the central/south-central portion of the site, and seven single-family detached homes (Lots 53-59) in the western portion of the project site. A residential entry gate is proposed to be installed along Silver Oak Estates Drive, to demarcate the proposed single-family portion of the project site.

The 24 green court townhomes are so named because they abut on-site open space areas (i.e., the Habitat Conservation Plan easement area along Mount Diablo Creek). The 24 green court units are proposed to be two- and three-story units, with a maximum height of 37 feet, 9 inches, and a garage on the first level. The green court townhomes would range in size from 1,155 square feet to 1,320 square feet, with an average size of 1,228 square feet. The other 28 townhome units are proposed to be three-story, with a maximum height of 38 feet, 8 inches, and a garage on the first level. The 28 townhome units would range in size from 1,113 square feet to 1,272 square feet, with an average size of 1,200 square feet. The seven (7) single-family homes are proposed to be two-story. The seven detached single-family homes would have typical lot dimensions of 70 feet wide by 100 feet deep, with lots ranging from 4,785 square feet to 9,306 square feet for an average lot size of 6,444 square feet.

Affordable Housing Plan

In order to meet the project's affordable housing obligations per Implementation Measure I.2.1 of the City's Housing Element, the Development Plan submittal for the project includes an Affordable Housing Plan. The project applicant proposes to offer, either for sale or for rent, six affordable housing units on the project site. The affordable housing units would be the townhomes on lots 47 through 52, along Oakhurst Drive. Three of the units (five percent of total project units) would be for very low-income, and three other units would be for low-income. Deed restrictions for the affordable units would be coordinated with the City of Clayton.

Habitat Conservation Plan for the Proposed Project

In order to comply with the East Contra Costa County Habitat Conservation Plan (ECCCHCP), the Development Plan submittal includes a Habitat Conservation Plan for the proposed project. The applicant has submitted an HCP exhibit identifying the HCP easement area, adjacent to Mount Diablo Creek, and the required development setbacks from the Creek. The project HCP, included as Exhibit 3, has been revised based upon comments submitted by the East Contra Costa County Habitat Conservancy.

The HCP easement area comprises approximately 6.53 acres, including a minimum 50-foot required setback from the top-of-bank of Mount Diablo Creek. This area will be recorded on the title of the property as a deed restricted conservation area consistent with the requirements of the ECCCHCP. This conservation area will protect Mount Diablo Creek and its associated riparian woodland habitat. The northern/eastern limits of the conservation area, where it abuts the proposed development, is proposed to be fenced with fencing, four-feet in height, to protect the conservation area from outside influences.

Open Space Areas

Several types of open space are included in the project per East Contra Costa County Habitat Conservation Plan (ECCCHCP) and City of Clayton Planned Development requirements. Parcels A through F, as well as Parcel K, total 8.43 acres, and comprise the dedicated open space areas of the project (see Exhibit 4, Open Space Plan). The open space types are as follows:

a. *Habitat Conservation Plan Easement.* This approximately 6.53-acre area will be recorded on the title of the property as a deed restricted conservation area consistent with the requirements of the ECCCHCP. This conservation area will protect Mount Diablo Creek and its associated riparian woodland habitat. The northern/eastern limits of the conservation area, where it abuts the proposed development, is proposed to be fenced with fencing, four-feet in height, to protect the conservation area from outside influences.

Exhibit 3
HCP Exhibit for Silver Oak Estates

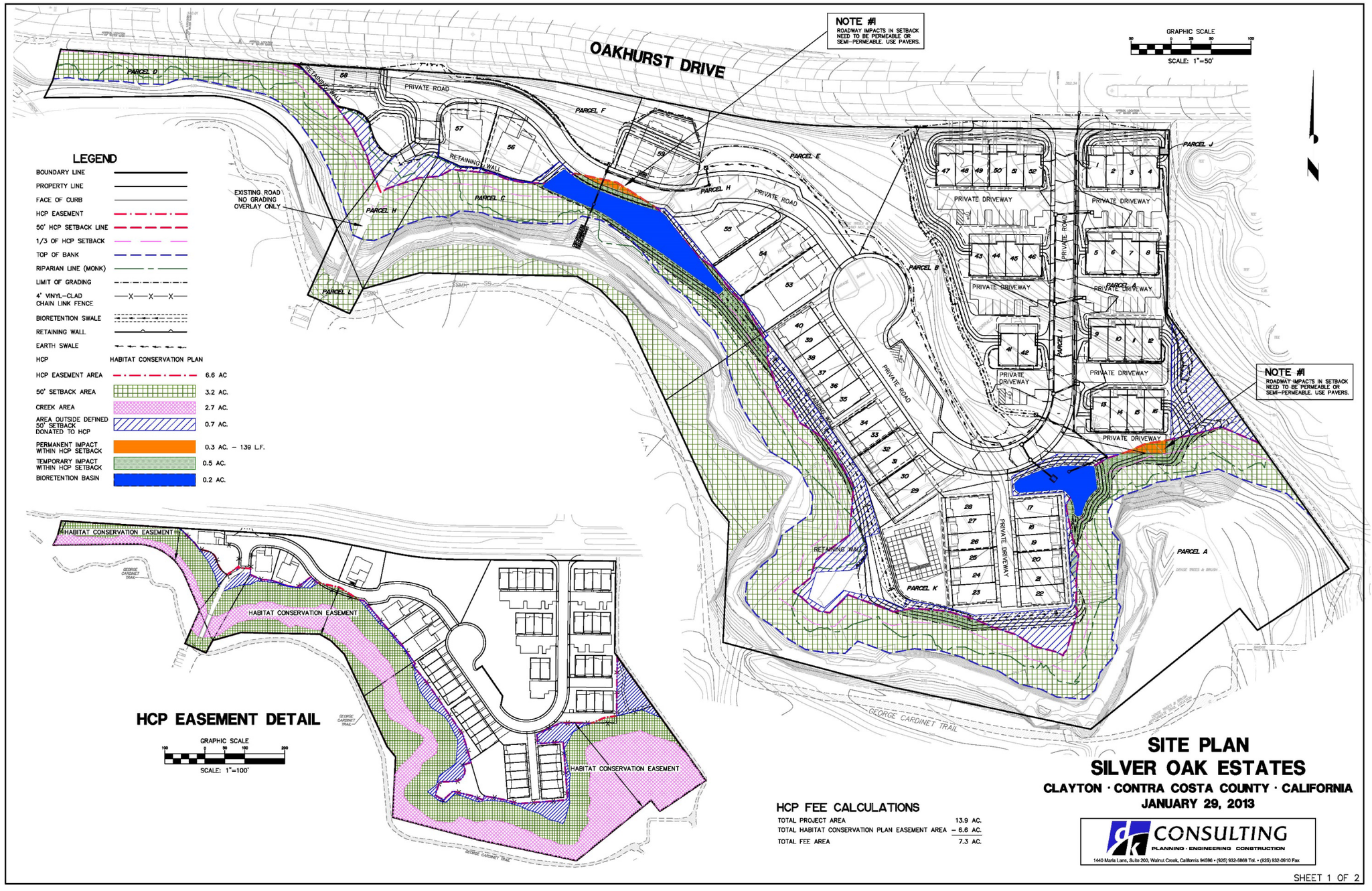
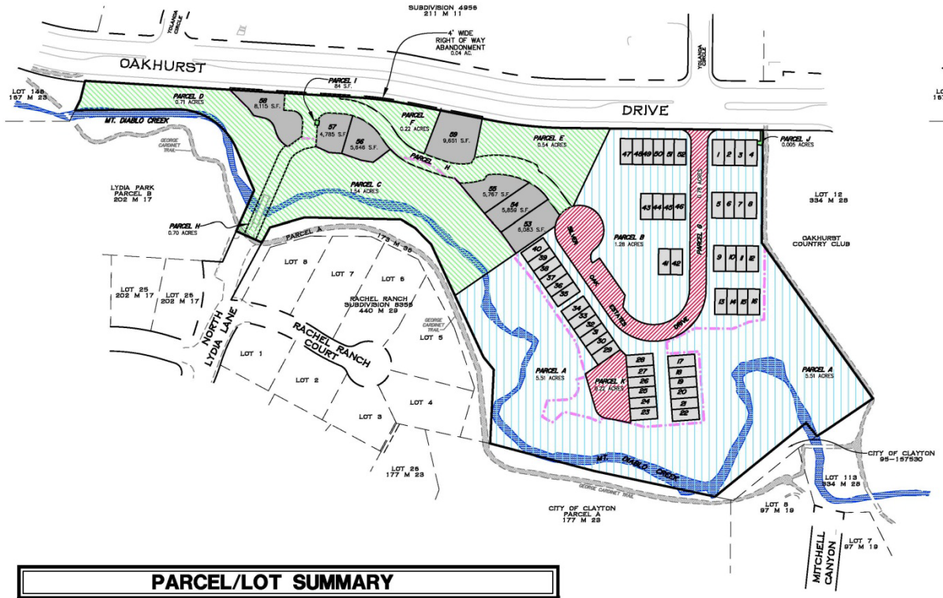
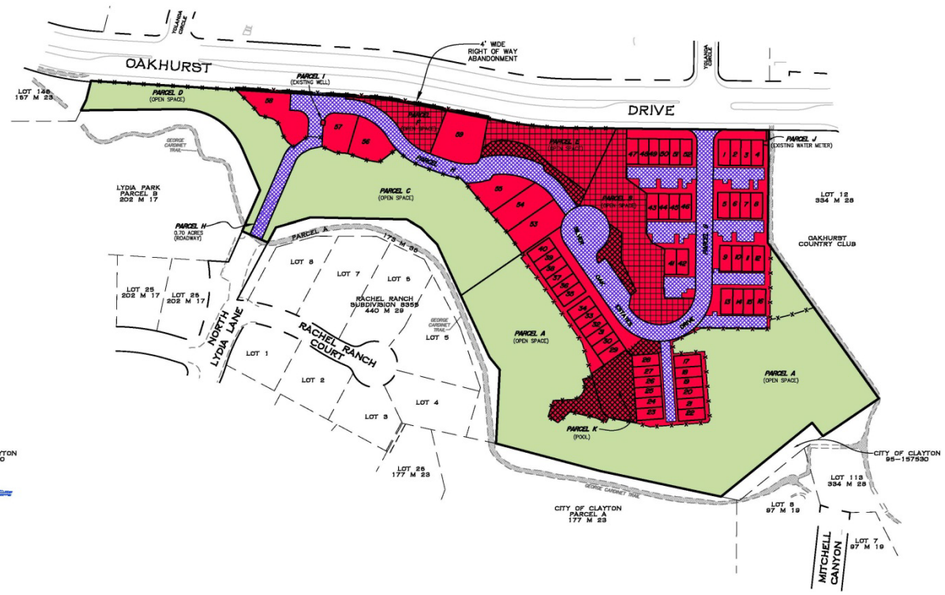


Exhibit 4
Open Space Plan





PARCEL/LOT SUMMARY

PARCEL	AREA	%	USE	MAINTAINED BY:	SYMBOL
A	5.51 AC.	39.3%	OPEN SPACE	TOWNHOUSE HOA	
B	1.28 AC.	9.1%	OPEN SPACE	TOWNHOUSE HOA	
C	1.54 AC.	11.0%	OPEN SPACE	SINGLE FAMILY HOA	
D	0.71 AC.	5.0%	OPEN SPACE	SINGLE FAMILY HOA	
E	0.54 AC.	3.9%	OPEN SPACE	SINGLE FAMILY HOA	
F	0.22 AC.	1.6%	OPEN SPACE	SINGLE FAMILY HOA	
G	0.78 AC.	5.6%	ROADWAY	MASTER HOA	
H	0.70 AC.	5.0%	ROADWAY	SINGLE FAMILY HOA	
I	0.002 AC.	0%	EXISTING WELL	PROPERTY OWNER	
J	0.005 AC.	0%	EX. WATER METER	PROPERTY OWNER	
K	0.22 AC.	1.6%	POOL/OPEN SPACE	MASTER HOA	
LOTS 53–59	1.05 AC.	7.5%	SINGLE FAMILY	PROPERTY OWNER	
LOTS 1–52	1.45 AC.	10.4%	TOWNHOUSE	PROPERTY OWNER	
TOTAL	14.00 AC.	100%			
RIGHT OF WAY ABANDONMENT			0.04 AC.		

LEGEND

DESCRIPTION	PROPOSED	EXISTING
SUBDIVISION BOUNDARY		
PARCEL/LOT LINE		
RIGHT OF WAY LINE		
HCP EASEMENT (HABITAT CONSERVATION PLAN)		
FENCE LINE		
MOUNT DIABLO CREEK BED		
TRAIL		

OPEN SPACE SUMMARY

AREA	ACRES	SYMBOL
TOTAL PROJECT AREA	14.0	
HCP EASEMENT AREA	6.53	
TOTAL ROADWAY AREA	2.10	
TOTAL NET DEVELOPABLE AREA	5.37	
ACTIVE OPEN SPACE	0.59	
PASSIVE OPEN SPACE	1.31	

NOTE: NET DEVELOPABLE AREA IS THE TOTAL PROJECT AREA MINUS THE HCP EASEMENT AREA AND MINUS THE TOTAL ROADWAY AREA.

GRAPHIC SCALE
120 0 60 120 240 480
(IN FEET)
1 inch = 120 ft.

OWNER/DEVELOPER/SUBDIVIDER RESERVES THE RIGHT TO FILE MULTIPLE FINAL MAPS

REGISTERED PROFESSIONAL ENGINEER ANDREW D. PALEY No. C 43704 DATE: CIVIL STATE OF CALIFORNIA
EXP. DATE 3-31-15

dk CONSULTING
PLANNING · ENGINEERING · CONSTRUCTION
1440 Maria Lane, Suite 200, Walnut Creek, California 94596 (925) 932-6888 Tel. (925) 932-0910 Fax

DEVELOPMENT PLAN
VESTING TENTATIVE MAP
SUBDIVISION 8516
OPEN SPACE PLAN
CITY OF CLAYTON
CONTRA COSTA COUNTY, CALIFORNIA
dk JOB NO. 08-1022-11
SHEET 7 OF 11

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b. *Passive Open Space.* The majority of Parcels B and E, as well as the entirety of Parcel F, comprise the passive open space areas of the project, which total 1.31 acres. According to Clayton Municipal Code Section 17.04.150(B), Passive Open Space means "…an area which provides visual relief to developed areas, exclusive of any area devoted to parking, vehicular movements, storage, private use (unless subject to development restrictions by a conservation easement), or any other area which does not significantly lend itself to the overall benefit of either the particular development or surrounding lands."
c. *Active Open Space.* Portions of Parcels B and E, as well as the entirety of Parcel K, comprise the active open space areas of the project, which total 0.59 acres. Parcel K, located amongst the green court units, is the proposed location of the community swimming pool. Clayton Municipal Code Section 17.04.150 defines *Active Open Space* as "…an outdoor area on the ground, roof, balcony, deck, or porch which is designed and used for outdoor living, recreation, pedestrian access, or landscaping. The areas shall not be for the use of parking, vehicular movements, or storage."

Parking

The seven detached single-family homes would each have a two-car garage, with driveway space to accommodate an additional two cars, for a total of 28 total parking spaces. As mentioned above, a garage would be provided on the first level of each of the green court and townhome units. Twenty six of the units would provide garages sufficient for three cars and the remainder of the units would have garages sufficient for two cars, for a total of 130 parking spaces associated with the multi-family residential portion of the project. In addition, 37 on-street guest spaces, one (1) accessible van space, and two (2) accessible car spaces would be provided, for an overall total of 198 parking spaces for the proposed project.

Roadway and Emergency Access

Primary access to the project site would be provided via a private roadway (referred to as Silver Oak Estates Drive) off of Oakhurst Drive, located opposite the eastern Yolanda Circle intersection. Parcels G and H, consisting of 1.48 acres, comprise the right-of-way of Silver Oak Estates Drive. All units would be able to access the project from Oakhurst Drive. In addition, restricted access to the project would be provided via the northern terminus of Lydia Lane, over the existing bridge. Only the seven (7) single-family detached homes (Lots 53-59) would be able to utilize this access point, which would have a gated access. The seven homes would also have a gated access at the cul-de-sac terminus of Silver Oak Estates Drive, via a private driveway.

One emergency vehicle access (EVA) point is included at the northwestern end of the project site, near Lots 57 and 58. This EVA point would connect to Oakhurst Drive. The EVA would include a locked gate that can be opened by emergency response personnel via a Knox Box.

Landscape Plan

The proposed Landscape Plan for the project illustrates that trees would be planted along Silver Oak Estates Drive to enhance the aesthetics of the internal streetscape (see Exhibit 5 for the landscaping plan). Enhancement tree plantings would also be included north of the HCP easement area and adjacent to the open space areas on Parcels B and E. Proposed trees include but are not limited to California Buckeye, Fremont cottonwood, Coast live oak, and Valley oak. Flowering accent trees and shrubs would also be planted in the townhome parking lot areas for screening and aesthetics purposes.

Parks and Trails

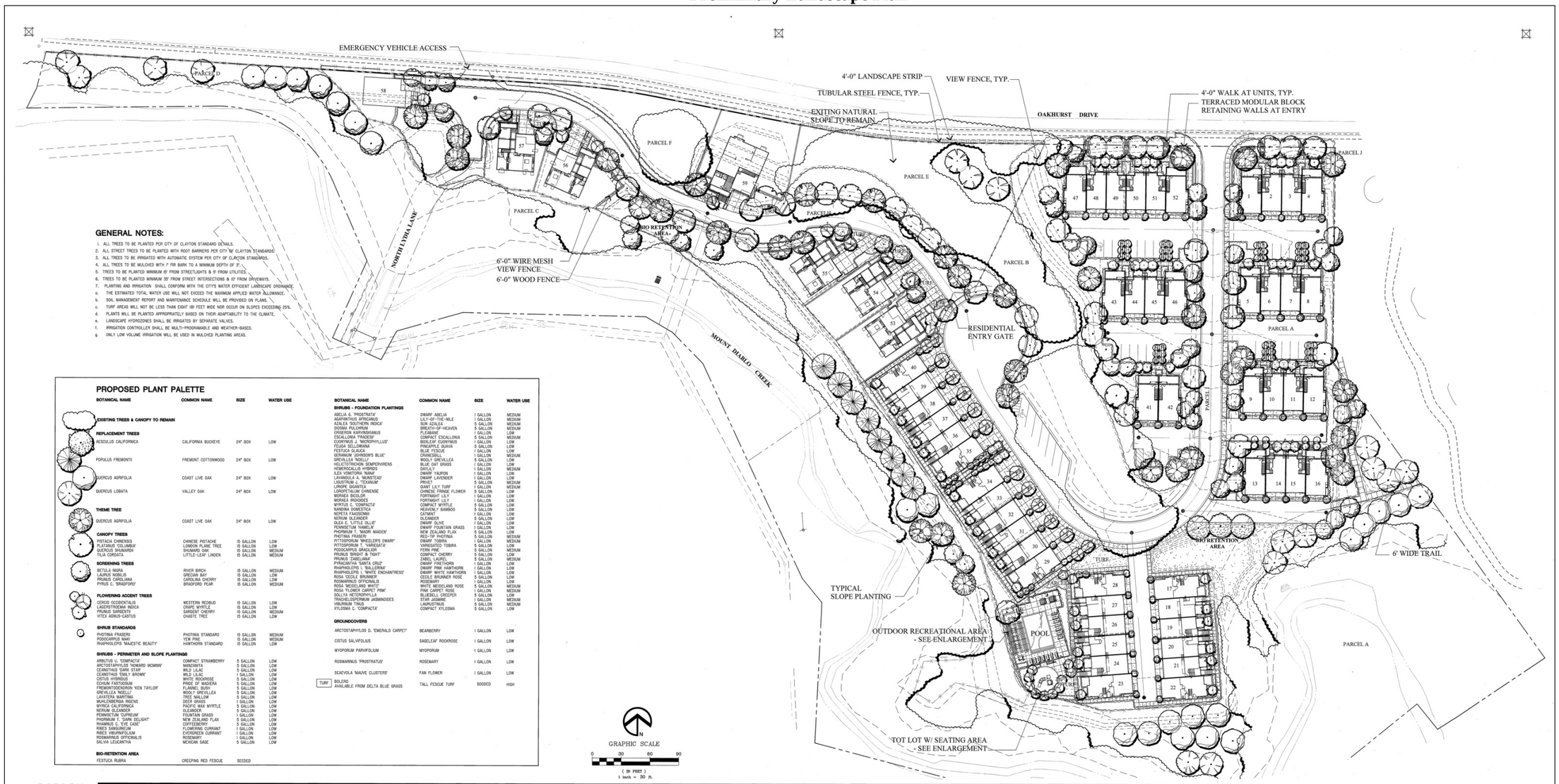
The Landscape Plan also illustrates that a tot lot (with seating area) would be included south of the proposed swimming pool and cabana, adjacent to the green court units. In addition, a walking trail would be provided at the southeastern corner of the project site, which would connect to the existing trail located adjacent to the Oakhurst Golf Course and which provides connectivity to the George Cardinet Trail located south of the project site, across Mount Diablo Creek.

Storm Drainage Infrastructure

In order to comply with C.3 storm water infiltration standards, the project includes three bio-retention facilities, also referred to as Integrated Management Practices (IMPs). These IMPs have been designed to serve as water quality treatment facilities as well as flow control facilities. The impervious areas of the project site have been divided into three distinct drainage management areas that enter the treatment IMPs via sheet flow and piping. After infiltration in the IMPs, the treated storm water enters the storm drain system, and ultimately outfalls into Mount Diablo Creek. Drainage Management Area (DMA) 1 totals 47,477 square feet (sf) and drains townhome Lots 41-52 to IMP 1, which is a 417 linear foot bio-retention swale. DMA 2 totals 59,136 sf and drains townhome Lots 1-16 to IMP 2, which is a 3,614 sf bio-retention facility. DMA 3 totals 147,074 sf and drains green court lots 17-40, single-family lots 53-59, and the adjacent street to IMP 3, which is a 7,952 sf bio-retention facility. The remaining areas on the project site are impervious and would be either self-treating (e.g., landscape areas) or self-retaining (runoff associated with the turn-around between Lots 57 and 58).

The treated runoff from DMA 3 would be discharged into Mount Diablo Creek via a new 18-inch storm drain pipe and associated outfall. The outfall has been designed to avoid impacting Clean Water Act protected waters of the U.S. and State. The outfall design keeps rip-rap out of the bed and channel (i.e., above the ordinary high water marks (OHWM)) of Mount Diablo Creek while erosion control and flow energy dissipation will be constructed into the outfall design.

Exhibit 5
Preliminary Landscape Plan



GENERAL NOTES:

1. ALL TREES TO BE PLANTED PER CITY OF CLAYTON STANDARD DETAILS.
2. ALL STREET TREES TO BE PLANTED WITH ROOT BARRIERS PER CITY 'M' CLAYTON STANDARDS.
3. ALL TREES TO BE IRRIGATED WITH AUTOMATIC SYSTEM PER CITY OF CLAYTON STANDARDS.
4. ALL TREES TO BE MULCHED WITH 1" FIR BARK TO A MINIMUM DEPTH OF 3".
5. TREES TO BE PLANTED MINIMUM 10' FROM STREETLIGHTS & 5' FROM UTILITIES.
6. TREES TO BE PLANTED MINIMUM 35' FROM STREET INTERSECTIONS & 10' FROM DRIVEWAYS.
7. PLANTING AND IRRIGATION SHALL CONFORM WITH THE CITY'S WATER EFFICIENT LANDSCAPE ORDINANCE.
   a. THE ESTIMATED TOTAL WATER USE WILL NOT EXCEED THE MAXIMUM APPLIED WATER ALLOWANCE.
   b. SOIL MANAGEMENT REPORT AND MAINTENANCE SCHEDULE WILL BE PROVIDED ON PLANS.
   c. TURF AREAS WILL NOT BE LESS THAN EIGHT (8) FEET WIDE NOR OCCUR ON SLOPES EXCEEDING 25%.
   d. PLANTS WILL BE PLANTED APPROPRIATELY BASED ON THEIR ADAPTABILITY TO THE CLIMATE.
   e. LANDSCAPE HYDROZONES SHALL BE IRRIGATED BY SEPARATE VALVES.
   f. IRRIGATION CONTROLLER SHALL BE MULTI-PROGRAMMABLE AND WEATHER-BASED.
   g. ONLY LOW VOLUME IRRIGATION WILL BE USED IN MULCHED PLANTING AREAS.

PROPOSED PLANT PALETTE

BOTANICAL NAME	COMMON NAME	SIZE	WATER USE
EXISTING TREES & CANOPY TO REMAIN			
REPLACEMENT TREES			
AESCULUS CALIFORNICA	CALIFORNIA BUCKEYE	24" BOX	LOW
POPULUS FREMONTII	FREMONT COTTONWOOD	24" BOX	LOW
QUERCUS AGRIFOLIA	COAST LIVE OAK	24" BOX	LOW
QUERCUS LOBATA	VALLEY OAK	24" BOX	LOW
THEME TREE			
QUERCUS AGRIFOLIA	COAST LIVE OAK	24" BOX	LOW
CANOPY TREES			
PISTACIA CHINENSIS	CHINESE PISTACHE	I5 GALLON	LOW
PLATANUS 'COLUMBIA'	LONDON PLANE TREE	I5 GALLON	LOW
QUERCUS SHUMARDII	SHUMARD OAK	I5 GALLON	MEDIUM
TILIA CORDATA	LITTLE-LEAF LINDEN	I5 GALLON	MEDIUM
SCREENING TREES			
BETULA NIGRA	RIVER BIRCH	I5 GALLON	MEDIUM
LAURUS NOBILIS	GRECIAN BAY	I5 GALLON	LOW
PRUNUS CAROLIANA	CAROLINA CHERRY	I5 GALLON	LOW
PYRUS C. 'BRADFORD'	BRADFORD PEAR	I5 GALLON	MEDIUM
FLOWERING ACCENT TREES			
CERCIS OCCIDENTALIS	WESTERN REDBUD	I5 GALLON	LOW
LAGERSTROEMIA INDICA	CRAPE MYRTLE	I5 GALLON	LOW
PRUNUS SARGENTII	SARGENT CHERRY	I5 GALLON	MEDIUM
VITEX AGNUS-CASTUS	CHASTE TREE	I5 GALLON	LOW
SHRUB STANDARDS			
PHOTINIA FRASERI	PHOTINIA STANDARD	I5 GALLON	MEDIUM
PODOCARPUS MAKI	YEW PINE	I5 GALLON	MEDIUM
RHAPHIOLEPIS 'MAJESTIC BEAUTY'	HAWTHORN STANDARD	I5 GALLON	LOW
SHRUBS - PERIMETER AND SLOPE PLANTINGS			
ARBUTUS U. 'COMPACTA'	COMPACT STRAWBERRY	5 GALLON	LOW
ARCTOSTAPHYLOS 'HOWARD MCMINN'	MANZANITA	5 GALLON	LOW
CEANOTHUS 'DARK STAR'	WILD LILAC	5 GALLON	LOW
CEANOTHUS 'JULIA PHELPS'	WILD LILAC	5 GALLON	LOW
CISTUS HYBRIDUS	WHITE ROCKROSE	5 GALLON	LOW
ECHIUM FASTUOSUM	PRIDE OF MADEIRA	5 GALLON	LOW
FREMONTODENDRON 'KEN TAYLOR'	FLANNEL BUSH	5 GALLON	LOW
GREVILLEA 'NOELLI'	WOOLY GREVILLEA	5 GALLON	LOW
LAVATERA MARITIMA	TREE MALLOW	5 GALLON	LOW
MUHLENBERGIA RIGENS	DEER GRASS	I GALLON	LOW
MYRICA CALIFORNICA	PACIFIC WAX MYRTLE	5 GALLON	LOW
NERIUM OLEANDER	OLEANDER	5 GALLON	LOW
PENNISETUM 'CUPREUM'	FOUNTAIN GRASS	I GALLON	LOW
PHORMIUM T. 'DARK DELIGHT'	NEW ZEALAND FLAX	5 GALLON	LOW
RIBES SANGUINEUM	FLOWERING CURRANT	5 GALLON	LOW
RIBES VIBURNIFOLIUM	EVERGREEN CURRANT	I GALLON	LOW
ROSMARINUS OFFICINALIS	ROSEMARY	I GALLON	LOW
SALVIA LEUCANTHA	MEXICAN SAGE	5 GALLON	LOW
BIO-RETENTION AREA			
FESTUCA RUBRA	CREEPING RED FESCUE	SEEDED	

BOTANICAL NAME	COMMON NAME	SIZE	WATER USE
SHRUBS - FOUNDATION PLANTINGS			
ABELIA G. 'PROSTRATA'	DWARF ABELIA	I GALLON	MEDIUM
AGAPANTHUS AFRICANUS	LILY-OF-THE-NILE	I GALLON	MEDIUM
AZALEA 'SOUTHERN INDICA'	SUN AZALEA	5 GALLON	MEDIUM
DIOSMA PULCHRUM	BREATH-OF-HEAVEN	5 GALLON	MEDIUM
ERIGERON KARVINSKIANUS	FLEABANE	I GALLON	LOW
ESCALLONIA 'FRADESII'	COMPACT ESCALLONIA	5 GALLON	MEDIUM
EUONYMUS J. 'MICROPHYLLUS'	BOXLEAF EUONYMUS	I GALLON	LOW
FEIJOA SELLOWIANA	PINEAPPLE GUAVA	5 GALLON	LOW
FESTUCA GLAUCA	BLUE FESCUE	I GALLON	LOW
GERANIUM 'JOHNSON'S BLUE'	CRANESBILL	I GALLON	MEDIUM
GREVILLEA 'NOELLI'	WOOLY GREVILLEA	5 GALLON	LOW
HELICTOTRICHON SEMPERVIRENS	BLUE OAT GRASS	I GALLON	LOW
HEMEROCALLIS HYBRIDS	DAYLILY	I GALLON	MEDIUM
ILEX VOMITORIA 'NANA'	DWARF YAUPON	I GALLON	LOW
LAVANDULA A. 'MUNSTEAD'	DWARF LAVENDER	I GALLON	LOW
LIGUSTRUM J. 'TEXANUM'	PRIVET	5 GALLON	MEDIUM
LOROPETALUM CHINENSE	GIANT LILY TURF	I GALLON	MEDIUM
LOROPETALUM CHINENSE	DWARF FRINGE FLOWER	5 GALLON	LOW
MORAEA BICOLOR	FORTNIGHT LILY	I GALLON	LOW
MORAEA IRIDOIDES	FORTNIGHT LILY	I GALLON	LOW
MYRTUS C. 'COMPACTA'	COMPACT MYRTLE	5 GALLON	LOW
NANDINA DOMESTICA	HEAVENLY BAMBOO	5 GALLON	LOW
NEPETA FAASSENNII	CATMINT	I GALLON	LOW
NERIUM OLEANDER	OLEANDER	5 GALLON	LOW
OLEA E. 'LITTLE OLLIE'	DWARF OLIVE	I GALLON	LOW
PENNISETUM 'HAMELN'	DWARF FOUNTAIN GRASS	I GALLON	LOW
PHORMIUM 'MAORI MAIDEN'	NEW ZEALAND FLAX	5 GALLON	LOW
PHOTINIA FRASERI	DWARF PHOTINIA	5 GALLON	MEDIUM
PITTOSPORUM 'WHEELER'S DWARF'	DWARF TOBIRA	5 GALLON	MEDIUM
PITTOSPORUM T. 'VARIEGATA'	VARIEGATED TOBIRA	5 GALLON	LOW
PODOCARPUS GRACILIOR	FERN PINE	5 GALLON	MEDIUM
PRUNUS 'BRIGHT & TIGHT'	COMPACT CHERRY	5 GALLON	LOW
PRUNUS 'ZABELIANA'	ZABEL LAUREL	5 GALLON	MEDIUM
PYRACANTHA 'SANTA CRUZ'	DWARF FIRETHORN	I GALLON	LOW
RHAPHIOLEPIS I. 'BALLERINA'	DWARF PINK HAWTHORN	I GALLON	LOW
RHAPHIOLEPIS I. 'WHITE ENCHANTRESS'	DWARF WHITE HAWTHORN	I GALLON	LOW
ROSA 'CECILE BRUNNER'	CECILE BRUNNER ROSE	5 GALLON	LOW
ROSMARINUS OFFICINALIS	ROSEMARY	I GALLON	LOW
ROSA 'MEIDELAND WHITE'	WHITE MEIDELAND ROSE	5 GALLON	MEDIUM
ROSA 'MEIDELAND PINK'	PINK MEIDELAND ROSE	5 GALLON	MEDIUM
SOLLYA HETEROPHYLLA	BLUEBELL CREEPER	5 GALLON	LOW
TRACHELOSPERMUM JASMINOIDES	STAR JASMINE	I GALLON	MEDIUM
VIBURNUM TINUS	LAURUSTINUS	5 GALLON	MEDIUM
XYLOSMA C. 'COMPACTA'	COMPACT XYLOSMA	5 GALLON	LOW
GROUNDCOVERS			
ARCTOSTAPHYLOS D. 'EMERALD CARPET'	BEARBERRY	I GALLON	LOW
CISTUS SALVIFOLIUS	SAGELEAF ROCKROSE	I GALLON	LOW
MYOPORUM PARVIFOLIUM	MYOPORUM	I GALLON	LOW
ROSMARINUS 'PROSTRATUS'	ROSEMARY	I GALLON	LOW
SCAEVOLA 'MAUVE CLUSTERS'	FAN FLOWER	I GALLON	LOW
TURF BOLERO AVAILABLE FROM DELTA BLUE GRASS	TALL FESCUE TURF	SODDED	HIGH

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CLYDE MILES CONSTRUCTION CO, INC.

Preliminary Landscape Plan

Silver Oak Estates

C l a y t o n , C a l i f o r n i a

March 20, 2013

The treated runoff from DMA 1 and DMA 2 would flow through an existing 18-inch storm drain pipe into an existing outfall at Mount Diablo Creek. The existing 18-inch storm drain pipe runs from the Silver Creek Unit 2 (Subdivision 4956), beginning at drain inlets located in Yolanda Circle, then continues across Oakhurst Drive, and passes through the proposed project site to the Mount Diablo Creek Outfall.

Using a conservative assumption that the existing 18-inch storm drain pipe is flowing full, and then adding the estimated runoff from the proposed DMA 1 and DMA 2 areas, the pipe was estimated to be at 48 percent capacity during a 10-year storm event and at 53 percent capacity during a 100-year storm event.[1] Based on this conservative assumption, adequate capacity exists within the existing 18-inch pipe and associated outfall to accommodate treated runoff from DMA 1 and DMA 2.[2,3]

Sewer Infrastructure

The project includes a connection to the existing sanitary sewer manhole, south of Mount Diablo Creek, along the George Cardinet Trail, via a new eight-inch sanitary sewer line, which would be installed across Mount Diablo Creek. Two options exist for constructing this sewer line across the creek: 1) via jack-and-bore; or 2) via open trenching during the dry season. If the applicant chooses to utilize the jack-and-bore option, operations would occur well beneath the bed elevation of Mount Diablo Creek, thus avoiding Clean Water Act regulated areas. If the applicant chooses to cut an open trench through the creek during the dry season to install the connecting pipeline, Clean Water Act regulated areas could be affected, which would require mitigation (see Section V, Biological Resources, Question "c" of this IS/MND).

Water Infrastructure

The proposed project includes a connection to the existing 12-inch water main within Oakhurst Drive. From this point of connection, an eight-inch water main would be extended in Silver Oak Estates Drive and throughout the residential areas for water service purposes.

It should be noted that Parcel I, consisting of 0.002-acre, is located near Lot 57 and contains an existing water well. The primary purpose of the well is to provide irrigation water to the Oakhurst Golf Course, located east of the project site. The water well would not be used to provide water to the project. The well pump is located below the ground level, within the well casing. The only improvement that would be made to the well as part of the project would be the construction of a concrete vault enclosure around the top of the well casing. Parcel J contains an existing water meter that would remain on-site as well.

[1] dk Consulting. Hydrology Narrative. May 2, 2014.
[2] *Ibid.*
[3] Jason Fong, Project Manager, dk Consulting. E-mail communication. September 4, 2013.

Vesting Tentative Map (MAP-01-10)

A Vesting Tentative Map (VTM) is proposed for the Silver Oak Estates Project (Subdivision 8516) that would subdivide the single parcel of approximately 14 acres into 11 non-residential parcels and 59 residential lots (see Exhibit 6 for the Vesting Tentative Map). As described in the Development Plan section above, the 59 residential units would be comprised of single-family and multi-family units, as well as non-residential uses such as open space. The parcel/lot summary is provided below in Table 1.

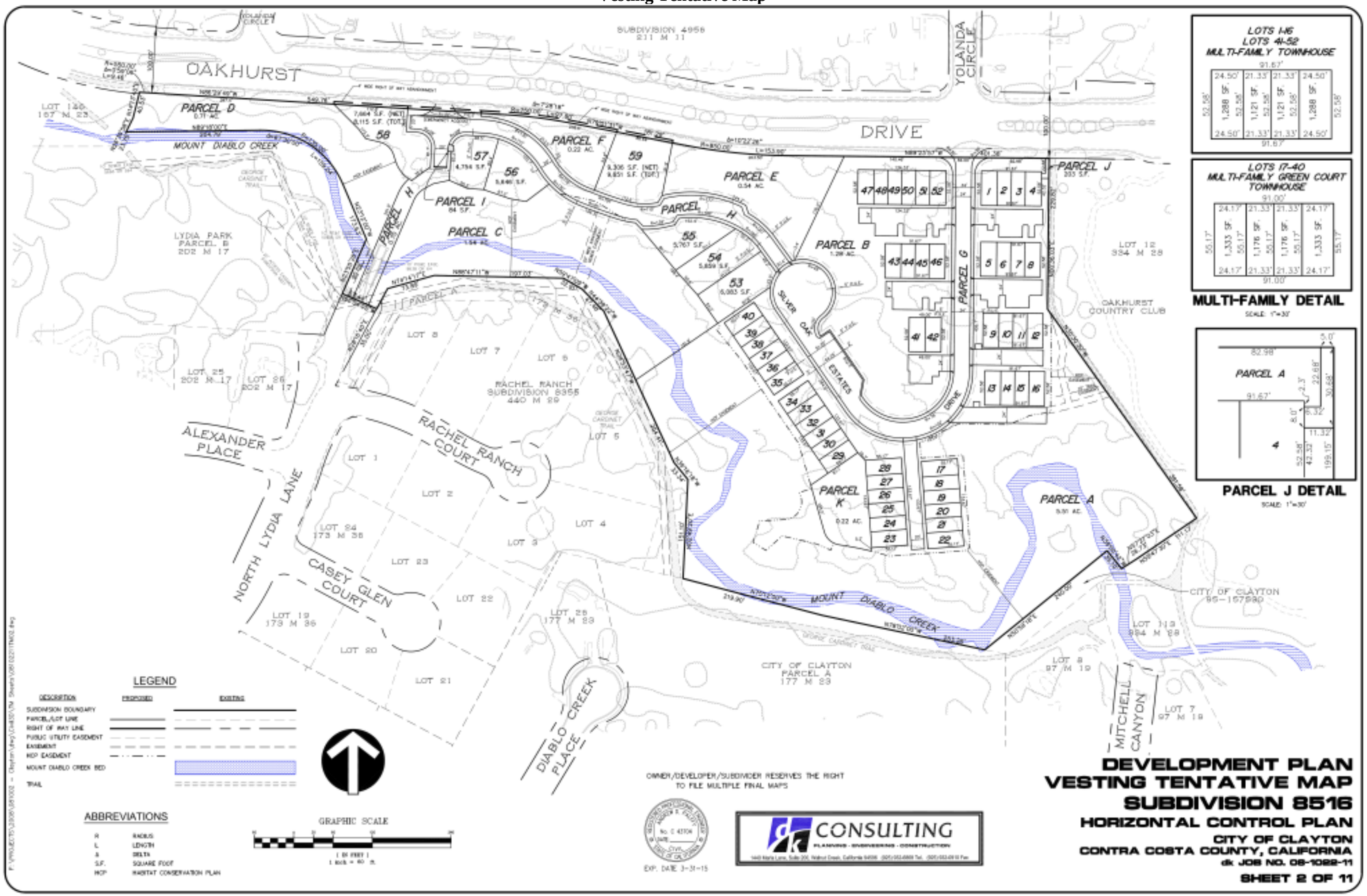
Table 1
Parcel/Lot Summary

Parcel	Area (acres)	%	Use
A	5.51	39.3	Open Space
B	1.28	9.1	Open Space
C	1.54	11.0	Open Space
D	0.71	5.0	Open Space
E	0.54	3.9	Open Space
F	0.22	1.6	Open Space
G	0.78	5.6	Roadway
H	0.70	5.0	Roadway
I	0.002	0	Existing Well
J	0.005	0	Existing Water Meter
K	0.22	1.6	Pool/Open Space
LOTS 53-59	1.02	7.5	Single-Family
Lots 1-52	1.45	10.4	Townhouse
TOTAL	**14.00**	**100**	

Tree Removal Permit (TRP-14-14)

The applicant has submitted a Tree Removal Permit application to the City for the removal of on-site trees within the proposed development footprint. Out of a total of 302 existing on-site trees, 184 trees are proposed for retention, while 118 trees are proposed to be removed, two of which are currently dead. Approval of the Tree Removal Permit would include approval of the method of tree placement, as well as the replacement ratios, for the removal of an estimated 1,204 inches of on-site protected trees, in accordance with Section 15.70.040 of the Clayton Municipal Code. For a detailed discussion of tree impacts, please refer to Section 5, Question "e", of this IS/MND.

Exhibit 6
Vesting Tentative Map



V. LIST OF MITIGATION MEASURES

Aesthetics

Mitigation Measure 1 *Prior to project approval, the overall project design shall be thoroughly evaluated by the City Planning Commission and City Council in order to make the findings required by Municipal Code Section 17.28.170. In particular, the provision of the following amenities shall be thoroughly evaluated:*

- *A. Natural Open Space: The quantity and quality of open space areas. Whether significant natural areas will be preserved including: prominent land features, watercourses, minimize removal of existing trees, etc;*
- *B. Open Spaces: Quantity and quality of open space and associated improvements to be provided and whether such areas and improvements will be functional, safe, attractive and adequate (Ord. 402, 2007);*
- *C. Vehicular Access including parking location, amount and design of pedestrian access including trails and bike paths, and the safe separation of transportation modes including provision for emergency vehicles;*
- *D. Landscape Design: The degree of compliance with the water conserving guidelines found in Chapter 17.80 of this Title and, where appropriate, the degree of fire resistant landscaping;*
- *E. Site Design:*
    1. *Creative integration of visual focal points, views and topographic features;*
    2. *Sun and wind orientation; and*
    3. *Building grouping and sensitive siting on the terrain for access and privacy as well as to minimize the necessity for retaining walls.*
- *F. Design Features:*
    1. *Maximize the harmonious integration of a variety of architectural features, materials and colors and site layouts to prevent design monotony; and*
    2. *Provision for the dense landscape screening of vehicular parking areas both public and private.*
- *G. Ownership/Maintenance of Common Areas: That adequate provision is made for the ownership and maintenance of the common areas of the development for the duration of its economic life; and*
- *H. Other Features: Provision of such other features as the Planning Commission or City Council determine are appropriate.*

Mitigation Measure 2 *In conjunction with submittal of project improvement plans, the applicant shall submit a detailed lighting plan for the review and approval by the Community Development Department, the Police Department, and the Engineering Department. The lighting plan shall indicate the locations and design of the shielded light fixtures. The applicant shall also consider the use of Light Emitting Diode (LED) lighting, which provides more precise and even distribution of light compared to traditional lighting. The LED lighting would help to focus the light onto only the areas necessary on the project site and minimize overflow of lighting off-site.*

Air Quality

Mitigation Measure 3 *During project construction, the project contractor shall comply with the Basic Construction Mitigation Measures recommended for all proposed projects by BAAQMD, which include the following:*

1. *All exposed surfaces (e.g., parking areas, staging areas, soil piles, graded areas, and unpaved access roads) shall be watered two times per day.*
2. *All haul trucks transporting soil, sand, or other loose material off-site shall be covered.*
3. *All visible mud or dirt track-out onto adjacent public roads shall be removed using wet power vacuum street sweepers at least once per day. The use of dry power sweeping is prohibited.*
4. *All vehicle speeds on unpaved roads shall be limited to 15 mph.*
5. *All roadways, driveways, and sidewalks to be paved shall be completed as soon as possible. Building pads shall be laid as soon as possible after grading unless seeding or soil binders are used.*
6. *Idling times shall be minimized either by shutting equipment off when not in use or reducing the maximum idling time to 5 minutes (as required by the California airborne toxics control measure Title 13, Section 2485 of California Code of Regulations [CCR]). Clear signage shall be provided for construction workers at all access points.*
7. *All construction equipment shall be maintained and properly tuned in accordance with manufacturer's specifications. All equipment shall be checked by a certified visible emissions evaluator.*
8. *Post a publicly visible sign with the telephone number and person to contact at the lead agency regarding dust complaints. This person shall respond and take corrective action within 48 hours. The Air District's phone number shall also be visible to ensure compliance with applicable regulations.*

Biological Resources

Mitigation Measure 4 *Prior to issuance of a grading permit, suitable amphibian exclusion fencing shall be installed along the outside edge of designated stream zone setbacks to ensure that migrating California red-legged frogs are precluded from being able to move into any designated work area. The California red-legged frog exclusion fence could be a "silt fence" that is buried along the bottom edge. The fence shall be permanent enough to ensure that the fence remains in good condition throughout the duration of the construction period on the project site. The fencing shall be installed prior to the time any site grading or other construction-related activities are implemented, and shall remain in place during all site grading or other construction-related activities.*

And

At least 24 hours prior to any grading or earth-moving activities in or adjacent to Mount Diablo Creek, the project applicant, at their own expense, shall enlist the services of a federal 10(a)(1)(A) permitted biologist to conduct preconstruction surveys along the project site tributaries to ensure such activities do not result in direct take of the California red-legged frog. A Survey Report shall be submitted to the Clayton Community Development Department.

Should a California red-legged frog be discovered in a work area where it could be harmed by project activities, all such activities shall cease, pending notification of the USFWS and approval

by this agency for appropriate translocation actions. These actions would likely include that the 10(a)(1)(A) permitted biologist net any frogs in harm's way and move them up or downstream of the project site at the project applicant's expense. In the event that California red-legged frogs are found on the project site during preconstruction surveys, thereafter all work in or adjacent to Mount Diablo Creek (adjacent would include ground disturbing actions or vehicle/equipment use within 50 feet of the top-of-bank of this creek) would require that a full-time qualified California red-legged frog biological monitor be present, at the project applicant's expense, while such work is underway.

Mitigation Measure 5 *If construction is scheduled to begin between February 1st and August 31st, nesting raptor and passerine surveys shall be conducted by a qualified ornithologist 14 days prior to the commencement of construction. The nesting raptor and passerine surveys shall include examination of all trees and shrubs within 300 feet of the entire project site. The survey shall be conducted at the expense of the project applicant. If nesting raptors or passerines are identified during the survey, within 300 feet of the project site (or 75-feet in the case of passerines), a 300-foot buffer (or 75-feet in the case of passerines) around the nest tree shall be fenced with orange construction fencing. If the nest tree is located off the project site, then the buffer shall be demarcated as per above. The size of the buffer may be altered if a qualified ornithologist conducts behavioral observations and determines the nesting raptors or passerines are well acclimated to disturbance. If this occurs, the ornithologist shall prescribe a modified buffer that allows sufficient room to prevent undue disturbance/harassment to the nesting raptors/passerines. No construction or earth-moving activity shall occur within the established buffer until it is determined by a qualified ornithologist that the young have fledged (that is, left the nest) and have attained sufficient flight skills to avoid project construction zones. This typically occurs by July 15th. This date may be earlier or later, and would have to be determined by a qualified ornithologist. If a qualified ornithologist is not hired to watch the nesting raptors/passerines then the buffers shall be maintained in place through the month of August and work within the buffer can commence September 1st.*

If the nesting survey identifies a large stick nest or other type of raptor nest that is inactive at the time of the survey, but that was evidently used in the previous year (as evidenced by condition of the nest and possibly presence of whitewash and/or feathers/down on the nest), a protection buffer (as described above) shall be established around the potential nesting tree if it is within 300 feet of the project site. This buffer shall remain until a second follow-up nesting survey can be conducted to determine the status of the nest and eliminate the possibility that the nest is utilized by a late-spring nesting raptor (for example, Cooper's hawk). This second survey shall commence even if construction has commenced. If during the follow-up late season nesting survey a nesting raptor is identified utilizing the nest, the protection buffer shall remain until it is determined by a qualified ornithologist that the young have fledged and have attained sufficient flight skills to avoid project construction zones. If the nest remains inactive, the protection buffer can be removed and construction and earth moving activities can proceed unrestrained.

Mitigation Measure 6 *If construction is scheduled to begin between February 1st and August 31st, in order to avoid impacts to ground-nesting raptors and passerines, a qualified ornithologist shall conduct walking transects through the project site's grassland habitat to search for nests 14 days prior to the commencement of construction. If ground-nesting raptors*

or passerines are identified during the surveys within 300 feet of the project site (or 75-feet in the case of passerines), a 300-foot buffer (or 75-feet in the case of passerines) around the nest site shall be fenced with orange construction fencing. If the nest is located off the project site, then the buffer shall be demarcated as per above. The size of the buffer may be altered if a qualified ornithologist conducts behavioral observations and determines the nesting raptors or passerines are well acclimated to disturbance. If this occurs, the ornithologist shall prescribe a modified buffer that allows sufficient room to prevent undue disturbance/harassment to the nesting raptors/passerines. No construction or earth-moving activity should occur within the established buffer until it is determined by a qualified ornithologist that the young have fledged (that is, left the nest) and have attained sufficient flight skills to avoid project construction zones. This typically occurs by July 15th. This date may be earlier or later, and would have to be determined by a qualified ornithologist. If a qualified ornithologist is not hired to watch the nesting raptors/passerines then the buffers shall be maintained in place through the month of August and work within the buffer can commence September 1st.

Mitigation Measure 7 *Prior to issuance of a grading permit, the project applicant shall pay the following ECCCHCP fees:*

- *Zone 2 Development Fee for impacts to 7.38 acres of land to be permanently disturbed;*
- *Wetland Mitigation Fee for impacts to 0.270-acre of riparian woodland/scrub to be permanently disturbed;*
- *Temporary Development Impact Fee for temporary impacts to 0.75-acre of land; and*
- *Temporary Wetland Mitigation Fee for temporary impacts to 0.130-acre of riparian woodland/scrub. The above calculations are in accordance with the Planning Survey Report prepared for the proposed project. The current fee estimate has been calculated to be $201,526.86, but is subject to modification by the ECCCC. Documentation of said fee payment shall be submitted to the Clayton Community Development Department.*

Mitigation Measure 8 *The installation of the sanitary sewer line via open cut trenching would impact both Corps and RWQCB jurisdiction. The fee associated with coverage under the ECCCHCP includes impacts to the Corps jurisdiction. Mitigation Measure 7 of this IS/MND requires the applicant to pay ECCCHCP fees. Pursuant to the ECCCHC's Regional General Permit (RGP), the applicant shall notify the Corps in accordance with RGP general condition number 18 (Notification) if open cut trenching is pursued.*

Impacts to the RWQCB's jurisdiction are not covered by the ECCCHC's RGP. As such, if open cut trenching occurs, the applicant shall obtain a "certification of water quality" from the RWQCB for the proposed project. The RWQCB requires mitigation for all impacts to waters of the State, typically at a 2:1 replacement ratio.

Mitigation Measure 9 *Prior to any construction work in Mount Diablo Creek, the project applicant shall obtain a Lake and Streambed Alteration Agreement (SBAA), specifically a Section 1602 SBAA, from the CDFW. The SBAA shall detail the authorized activities and provide specific terms and conditions for the proposed project. The applicant shall comply with all requirements of the SBAA, including restoring the streambed to original contours and replanting any impacted trees per the City's Tree Protection Ordinance or as otherwise specified in the 1602 Agreement with the CDFW. Work in Mount Diablo Creek shall not be authorized by the*

City without prior authorization of a SBAA by the CDFW. A copy of the SBAA approval shall be submitted to the Clayton Community Development and Engineering Departments.

Mitigation Measure 10 *Prior to removal of any on-site protected trees, the project applicant shall submit a final Tree Removal Plan to the Clayton Community Development Department for review and approval. Said Tree Removal Plan shall be in substantial conformance with the Tree Removal Permit approved by the Planning Commission. If tree removal is to occur during the avian nesting season (between February 1st and September 1st), a preconstruction nesting survey, as required per Mitigation Measures 6 and 7, shall be conducted by a qualified biologist at the expense of the project applicant.*

Mitigation Measure 11 *Prior to project approval, the Planning Commission shall approve a preliminary Tree Replacement Plan, which shall include the method of tree placement, as well as the replacement ratios, for the removal of an estimated 1,204 inches of on-site protected trees, in accordance with Section 15.70.040 of the Clayton Municipal Code. Replacement methods may include on-site tree replacement, payment of in-lieu fees, or a combination of both. It is important to note that any trees removed within the riparian limits shall be replaced on-site at a minimum ratio of 3:1 per direction provided by the CDFW and RWQCB during their on-site inspection. The replacement methods and ratios identified by the Planning Commission, as well as the CDFW and RWQCB (for trees in the riparian area), shall be incorporated into the Tree Replacement Plan, which shall be submitted to the City by the applicant prior to issuance of a Tree Removal Permit.*

Mitigation Measure 12 *The following construction policies and guidelines for tree preservation and protection put forth by the City of Clayton shall be followed during project implementation:*

- *The applicant shall submit a tree protection plan to identify the location of the tree trunk and dripline of all on- and off-site trees subject to Section 15.70.020.*
- *A protective fence shall be installed around all trees subject to the tree protection plan. The protective fence shall be installed prior to commencement of any construction activity and shall remain in place for the duration of construction.*
- *Grading, excavation, deposition of fill, erosion, compaction, and other construction-related activities shall not be permitted within the dripline or at locations which may damage the root system of trees subject to the tree protection plan, unless such activities are specifically allowed by the tree protection plan. Tree wells may be used if specifically allowed by the tree protection plan.*
- *Oil, gas, chemicals, vehicles, construction equipment, machinery, and other construction materials shall not be allowed within the dripline of trees subject to the tree protection plan.*

Mitigation Measure 13 *Implement Mitigation Measure 7.*

Cultural Resources

Mitigation Measure 14 *Prior to the issuance of a grading permit, plans shall include a requirement (via notation) indicating that if cultural resources, or human remains are encountered during site grading or other site work, all such work shall be halted immediately*

within the area of discovery and the contractor shall immediately notify the City of the discovery. In such case, the City, at the expense of the project applicant, shall 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 City for review and approval a report of the findings and method of curation or protection of the resources. Further grading or site work within the vicinity of the discovery, as identified by the qualified archaeologist, shall not be allowed until the preceding steps have been taken.

Mitigation Measure 15 *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 in the immediate vicinity of the find, which shall be identified by the qualified archaeologist, until the preceding actions have been implemented.*

Geology and Soils

Mitigation Measure 16 *Prior to approval of the project's construction drawings, the project design shall be reviewed and approved by the City Engineer and Contra Costa County Building Department for consistency with the adopted California Building Code requirements in place at the time of construction.*

Mitigation Measure 17 *During site grading, the project contractor shall remove the liquefiable layers identified in the Geotechnical Report Update and replace the loose sands with engineered fill, at the expense of the project applicant. The operations shall be supervised by a registered geotechnical engineer and a written summary of the operations shall be submitted to the City Engineer.*

Or

Prior to site grading, the project applicant shall have the liquefiable layers identified in the Geotechnical Report Update further characterized by a registered geotechnical engineer. Based on the results of the soil characterization, which shall be submitted to the City Engineer for review, the need for subexcavation could be reduced or eliminated. However, if the soils are characterized to be liquefiable, the above measure shall be implemented.

Mitigation Measure 18 *During construction, the project contractor, at the expense of the project applicant, shall completely remove and re-compact the existing non-engineered fill on-site under the supervision of a registered geotechnical engineer, according to the recommendations presented in Section 5 of the Geotechnical Report Update. The contractor shall consult the exploration logs and trench logs in Appendices A and C of the Geotechnical Report Update for existing non-engineered fill depths at specific locations. A written summary of the operations shall be submitted to the City Engineer.*

Mitigation Measure 19 *In lieu of performing chemical testing to assess the corrosion potential of the on-site soil, concrete foundations shall be designed considering the severe sulfate parameters as defined in the Geotechnical Report Update as follows:*

Requirements for Concrete for Severe Sulfate Conditions					
Max w. cm	**Min f'c (Psi)**	**Cement Type**			**Calcium Chloride Admixture**
		ASTM C150	**ASTM C595**	**ASTM C1157**	
0.45	4500	V*	IP(HS), IS(<70), (HS)	HS	Not permitted
* Other available types of cement such as Type III or Type I are permitted if the C_3A contents are less than 8 or 5 percent, respectively.					

Final foundation design shall be approved by the City Engineer and Contra Costa County Building Inspection Department prior to approval of improvement plans.

Mitigation Measure 20 *During construction, if wet soil conditions are encountered, the project contractor shall mitigate the conditions by:*

1. *Frequent spreading and mixing of soils during warm dry weather;*
2. *Mixing soils with drier materials;*
3. *Mixing soils with a lime, lime-flash, or cement product; or*
4. *Stabilizing soils with aggregate, geotextile stabilization fabric, or both.*

Options 3 and 4 shall be evaluated and approved by a qualified geotechnical engineer and the City Engineer prior to implementation.

Mitigation Measure 21 *During construction, in lieu of grading within creek encroachment areas, the project contractor shall implement one or a combination of the following, as determined by a registered geotechnical engineer and the City engineer, in accordance with the recommendations of the Geotechnical Report Update:*

- *Retaining structures such as pier walls, soldier pile walls, or sheet pile walls shall be installed to support design fills and provide erosion protection. The foundation elements of the structures shall be below the scour depths.*

Slopes shall be constructed with keyways and reinforced with geogrid to allow for steeper configurations. The facing of the slopes shall require proper scour and erosion protection.

Mitigation Measure 22 *Prior to the issuance of a grading permit, the project applicant shall prepare to the satisfaction of the City Engineer, an erosion control plan that utilizes standard construction practices to limit the erosion effects during construction of the proposed project. Actions should include, but are not limited to:*

- *Hydro-seeding;*
- *Placement of erosion control measures within drainage ways and ahead of drop inlets;*
- *The temporary lining (during construction activities) of drop inlets with "filter fabric";*
- *The placement of straw wattles along slope contours;*
- *Use of a designated equipment and vehicle "wash-out" location;*

- *Use of siltation fences;*
- *Use of on-site rock/gravel road at construction access points; and*
- *Use of sediment basins and dust palliatives.*

Mitigation Measure 23 *During construction, the project contractor shall comply with all compaction requirements set forth in Section 5.7 of the Geotechnical Report Update prepared for the proposed project for review and approval by the City Engineer.*

Hazards and Hazardous Materials

Mitigation Measure 24 *Prior to issuance of a grading permit, the applicant shall hire an Environmental Consultant to perform a Phase II Environmental Site Assessment (ESA) in order to determine the possible impacts from both the above-ground storage tanks (ASTs) and underground storage tank (UST) on the project site. The Phase II ESA shall include soil and groundwater sampling to determine if the previous uses of the unregistered storage tanks have impacted the property. The soil and groundwater analytical results shall be documented in the Phase II ESA report and submitted to the City Community Development Department, who may elect to hire a third-party, at the applicant's expense, to peer review the Phase II ESA. If the Phase II ESA determines that the on-site soils and groundwater have not been impacted, the tanks shall be removed and disposed of in accordance with Contra Costa County Environmental Health Department regulations, and further mitigation is not required.*

If the Phase II ESA determines that on-site soils and/or groundwater have been impacted, and contaminants are identified in excess of the California Human Health Screening Levels [CHHSLs] for residential land uses, the contaminated areas shall be remediated. The Phase II ESA shall specify measures for the remediation of the soils and/or groundwater, including proper removal and disposal procedures. The relative efficacy of potential removal technologies is dependent on subsurface conditions, including soil lithology, groundwater depth, and contaminant type/extent. Accordingly, several remediation options may be considered. For soil contamination, potential removal technologies could include, but would not necessarily be limited to, the following:

- *Excavation and off-haul – Impacted soils are excavated until the excavation base and sidewalls do not exhibit impact above a specific screening level or cleanup goal. The excavated soils are transported and disposed of at an appropriate landfill facility.*
- *Bioremediation - Nutrients, oxygen, and biological cofactors are introduced to the soil (either in-place or post-excavation in a treatment area) to stimulate natural biological breakdown of the contaminants.*
- *Bioaugmentation – Similar to bioremediation, except that bioaugmentation involves the introduction of engineered microorganisms to the soil to degrade the contaminants.*
- *Soil vapor extraction (SVE) - Soil gas is extracted from the subsurface under vacuum and brought to the surface, where it is treated.*

For groundwater contamination, potential removal technologies could include, but would not necessarily be limited to, the following:

- *Pump-and-treat system - Groundwater is extracted for at-surface treatment and is subsequently re-injected into the subsurface or discharged into a municipal sewer system.*
- *In-situ air sparging - Air is injected below the lowest point of groundwater contamination*

where, through a variety of mass transfer, transport, and transformation processes, the contaminants are degraded or removed. In-situ air sparging is often used with a SVE system.

- *Bioremediation – Same mechanisms as described above, but often with different means of delivery.*
- *In-situ chemical oxidation/reduction - Instead of attempting to stimulate biological activity, reagents are injected into the subsurface to directly induce a chemical reaction to degrade/destroy the contaminants.*

The project applicant shall comply with all recommendations of the Phase II ESA for the review and approval by the Contra Costa County Environmental Health Department and the City of Clayton.

Mitigation Measure 25 *Prior to issuance of a building permit, the existing septic tanks shall be abandoned in consultation with the Contra Costa County Environmental Health Department. Proof of abandonment shall be provided to the City Community Development Department and City Engineer.*

Mitigation Measure 26 *Prior to demolition and/or removal of the on-site structures or building remains, the project applicant shall prepare a work plan to demonstrate how the on-site asbestos- and lead-containing materials shall be removed in accordance with current Cal-OSHA regulations and disposed of in accordance with all Cal-EPA regulations, as identified in the Asbestos and Lead Survey conducted for the proposed project. The plan shall include the requirement that work shall be conducted by a Cal-OSHA registered asbestos and lead abatement contractor in accordance with Title 8 CCR 1529 and Title 8 CCR 1532.1 regarding asbestos and lead training, engineering controls, and certifications. The applicant shall submit the work plan to the City and the Contra Costa County Department of Conservation and Development for review and approval.*

Mitigation Measure 27 *Materials containing more than one (1) percent asbestos that is friable are also subject to BAAQMD regulations. Removal of materials containing more than one (1) percent friable asbestos shall be completed in accordance with BAAQMD Section 11-2-303.*

Mitigation Measure 28 *The developer shall complete and submit for approval to the Contra Costa County Fire Protection District a vegetation and fuels management plan for the proposed project, prior to approval of the first final map. The vegetation and fuels management plan shall include details for a fuel modification zone around the proposed subdivision and other feasible BMPs recommended in Diablo Firesafe Council's "Best Management Practices Guidebook for Hazardous Fuel Treatments in Contra Costa County." In addition, the plan shall include details regarding the entity responsible for ongoing maintenance of the fuel modification zone and implementation of other selected BMPs, and the funding mechanism that would be utilized to generate sufficient funds to cover the cost of long-term maintenance efforts.*

Hydrology and Water Quality

Mitigation Measure 29 *Prior to approval of improvement plans, the applicant shall submit to the Clayton Community Development and Engineering Departments a Final Stormwater Control Plan for review and approval. The Plan shall comply with C.3 requirements for stormwater infiltration.*

Mitigation Measure 30 *The applicant shall be responsible for the long-term operation and maintenance of the stormwater treatment facilities (bioretention areas) constructed in connection with the project; said responsibilities shall be memorialized through the execution of a Stormwater Management Facilities Operation and Maintenance Agreement and Right of Entry in the form provided by the City of Clayton Engineering Department.*

The applicant shall submit, with the application of building permits, a draft Stormwater Management Facilities Operation and Maintenance Plan that includes detailed maintenance requirements and a maintenance schedule for the review and approval by the City Engineer. All maintenance activities shall be funded by the applicant. The proposed Plan shall include the following types of maintenance actions:

- *Examine curb openings. Remove any debris and repair any damaged curb.*
- *Inspect inlets for channels, exposure of soils, or other evidence of erosion. Clear any obstructions and remove any accumulation of sediment.*
- *Inspect outlets for erosion or plugging.*
- *Inspect side slopes for evidence of instability or erosion and correct as necessary.*
- *Observe soil at the bottom of the swale or filter for uniform percolation throughout. If portions of the swale or filter do not drain within 48 hours after the end of a storm, the soil should be tilled and replanted. Remove any debris or accumulations of sediment.*
- *Confirm that check dams and flow spreaders are in place and level and that channelization within the swale or filter is effectively prevented.*
- *Examine the vegetation to ensure that it is healthy and dense enough to provide filtering and to protect soils from erosion. Replenish mulch as necessary, remove fallen leaves and debris, prune large shrubs or trees, and mow turf areas. When mowing, remove no more than 1/3 height of grasses. Confirm that irrigation is adequate and not excessive. Replace dead plants and remove noxious and invasive vegetation.*
- *Abate any potential vectors by filling holes in the ground in and around the swale and by insuring that there are no areas where water stands longer than 48 hours following a storm. If mosquito larvae are present and persistent, contact the Contra Costa Mosquito and Vector Control District for information and advice. Mosquito larvicides should be applied only when absolutely necessary and then only by a licensed individual or contractor.*

Land Use and Planning

Mitigation Measure 31 *Implement Mitigation Measure 7.*

Noise

Mitigation Measure 32 *During grading and construction, the project contractor shall ensure that the following measures are implemented, consistent with the recommendations in the Environmental Noise and Vibration Analysis:*

- *Grading and construction activities shall be limited to the daytime hours between 7:00 a.m. to 5:00 p.m. Monday through Friday, as specified in Section 15.01.101 of the Clayton Municipal Code. Any such work beyond said hours and days is strictly prohibited unless previously specifically authorized in writing by the City Engineer or designee or by project conditions of approval;*
- *The distances between on-site construction and demolition staging areas and the nearest surrounding residences shall be maximized to the extent possible; and*
- *All construction and demolition equipment that utilizes internal combustion engines shall be fitted with manufacturer's mufflers or equivalent.*

Population and Housing

Mitigation Measure 33 *In conjunction with approval of the Development Plan for the project, an Affordable Housing Plan shall be approved, which dedicates 6 units on the project site for affordable housing: 5% (3-units) for very low income housing, and 5% (3-units) for low income housing.*

Public Services

Mitigation Measure 34 *The project developer shall pay a fair share contribution to the City of Clayton for impacts to police staffing directly related to impacts of the proposed project for a five-year period. The calculation and payment shall be made at the time of issuance of the first building permit and shall be approved in advance by the Clayton Police Chief and City Manager.*

The methodology for calculating the project's fair share contribution is listed below with exemplary numbers:

Current Sworn Officer / Dwelling Unit Ratio:

11 Sworn Officers / 4,086 Dwelling Units[4] = 1 Sworn Officer / 371.5 Dwelling Units*

Project Impacts on Police Service (5 Year Period):

59 Net New Dwelling Units x (1 Sworn Officer / 371.5 Dwelling Units) = 0.159 Sworn Officer

0.159 Sworn Officer x $111,032/year total compensation = $17,654/year

5 years x $17,654/year = $88,270 cost to City

Mitigation Measure 35 *Prior to issuance of any building permits for the project, the project developer shall pay all applicable school impact fees to the Mount Diablo Unified School District in effect at the time of building permit issuance. Proof of payment shall be submitted to the Clayton Community Development Department.*

[4] U.S. Department of Commerce, *U.S. Census Bureau. 2010 Census Table DP-1 Profile of General Population and Housing Characteristics: 2010, 2010 Demographic Profile Data, Clayton City, California*. Accessed July 2, 2014.

Mitigation Measure 36 *The project developer shall pay all applicable parkland dedication impact fees, per the City of Clayton Development Impact and Related Fees schedule, in effect at the time of building permit issuance. The fee amount shall be determined by the Clayton Community Development Department.*

Mitigation Measure 37 *The project developer shall pay all applicable development impact and related fees, per the City of Clayton Development Impact and Related Fees schedule, in effect at the time of building permit issuance, subject to review and approval by the Clayton Community Development Department.*

Mitigation Measure 38 *The City shall retain a professional environmental consultant, at the applicant's expense, to provide the necessary oversight and inspection services and perform mitigation monitoring duties during construction of the proposed project, as needed.*

Transportation and Circulation

Mitigation Measure 39 *Prior to approval of improvement plans for the project, the plans shall show installation of a stop sign and stop bar pavement markings on the Silver Oak Estates Drive approach to Oakhurst Drive. In addition, the existing sidewalk on Oakhurst Drive shall be modified and ADA accessible ramps shall be constructed. The improvements shall be reviewed and approved by the City Engineer prior to approval of improvement plans.*

Mitigation Measure 40 *Prior to approval of improvement plans for the project, the plans shall show a separate westbound left-turn pocket at Oakhurst Drive for traffic turning into Silver Oak Estates Drive (i.e., project entrance) to provide for a safe left-turn movement into the proposed project entrance. The improvements shall be reviewed and approved by the City Engineer prior to approval of improvement plans.*

Mitigation Measure 41 *Prior to approval of improvement plans for the project, the plans shall show pedestrian stop signs on the George Cardinet trail at each approach to Lydia Lane to warn trail users of the active motor vehicle crossing. The improvements shall be reviewed and approved by the City Engineer prior to approval of improvement plans.*

Mitigation Measure 42 *Signage shall be posted at the project's Lydia Lane access point, which shall read: "Truck Deliveries Prohibited". Signage shall be reviewed and approved by the Community Development Director and City Engineer prior to issuance of building permits.*

Mitigation Measure 43 *Prior to approval of improvement plans for the project, the applicant shall hire an experienced contractor to repair the cracks and spalls identified in the Yolanda Estate/Hurd Ranch Bridge Evaluation Report prepared by L&M Engineers, Inc., to the satisfaction of the City Engineer. The repairs shall be made with Simpson FX-763 Low-Modulus Trowel-Grade Epoxy or an equivalent product, consistent with the recommendations of the evaluation report.*

Mitigation Measure 44 *Prior to issuance of grading and building permits, the project applicant shall submit a Traffic Control Plan to the City for review and approval by the City Engineer. Each phase of construction would be subject to the Traffic Control Plan and oversight*

by the City Engineer. The Traffic Control Plan shall include, but would not necessarily be limited to, the following requirements:

- *Truck drivers shall be notified of and required to use the most direct route between the project site and Ygnacio Valley Road, as determined by the City Engineering 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 shall 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 Oakhurst Drive;*
- *Debris and mud on main driveways, Oakhurst Drive, and other 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;*
- *If importation and exportation of material becomes a traffic nuisance, then the City Engineer shall limit the hours such activities are able to take place; and*
- *Additional worker parking measures shall be implemented during the last phase of construction, as necessary, depending on the circumstances, as remaining vacant land may not be available on the site for parking.*

Water, Sewer, and Stormwater Systems

Mitigation Measure 45 *Prior to approval of the construction drawings, the project design shall be reviewed and approved by the City Engineer and Contra Costa County Building Department for consistency with the adopted State Building Code standards for water conservation, as well as the water-conserving guidelines for landscaping included in Chapter 17.80 of the City's Municipal Code.*

VI. EVALUATION OF ENVIRONMENTAL IMPACTS

1. AESTHETICS.

Issues		Potentially Significant Impact	Less-Than-Significant With Mitigation Incorporated	Less-Than-Significant Impact	No Impact
Would the project:					
a.	Have a substantial adverse effect on a scenic vista?	□	X	□	□
b.	Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a State scenic highway?	□	□	X	□
c.	Substantially degrade the existing visual character or quality of the site and its surroundings?	□	X	□	□
d.	Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?	□	X	□	□

a. Would the project have a substantial adverse effect on a scenic vista? ..... Less-Than-Significant With Mitigation Incorporated

c. Would the project substantially degrade the existing visual character or quality of the site and its surroundings? ..... Less-Than-Significant With Mitigation Incorporated

Discussion (a. and c.)

The City of Clayton is located at the base of the north slope of Mount Diablo. The Clayton General Plan identifies scenic routes and corridors within the City, which have been established in recognition of panoramic views of Mount Diablo and associated foothills, including Concord Boulevard and Oakhurst Drive.[5]

The proposed project site currently contains several buildings associated with the former Yolanda Estate, later known as the Hurd Ranch. The main house was destroyed by fire in 2009; however, the property still contains an extant dwelling, a garage, possibly a workshop, a tank house, a bath house, and several horse barns. An unimproved road is also located through the project site. Residential subdivisions make up the majority of the surrounding area, as well as the Oakhurst Country Club Golf Course to the east, Lydia Park to the southwest, and the George Cardinet Trail to the south.

The vegetation on the site consists of 1.26 acres of oak woodland, 3.02 acres of ornamental landscaped or barren areas, 2.75 acres of pastoral, 6.6 acres of riparian woodland, and 0.23-acre of ruderal. An old fruit orchard occurs on the southern portion of the project site. The riparian woodland is associated with Mount Diablo Creek, which runs through the site along the southern and western boundaries. Approximately 302 trees currently exist on-site.

[5] City of Clayton. *City of Clayton General Plan Section V: Community Design Element* [page V-9]. As amended February 5, 2008.

Although the total project area is comprised of 14 acres, only 4.2 acres of such would be developed with the remaining area to consist of open space areas, parks, and trails that would remain undeveloped. As shown in Exhibit 3 and discussed previously, the proposed project would include a 6.53-acre Habitat Conservation Plan easement area, which would preserve the Mount Diablo Creek area. Out of a total of 302 on-site trees, the project would retain 184 trees, while 118 trees would be removed, two of which are currently dead. In addition, the project would include planted trees along Silver Oak Estates Drive, as well as north of the HCP easement area and adjacent to the open space areas on Parcels B and E. Flowering accent trees and shrubs would also be planted in the townhome parking lot areas for screening and aesthetics purposes.

The developable portion of the project area would include 28 townhomes in the northeastern corner of the site, 24 green court townhomes in the central/south-central portion of the site, and seven single-family homes in the western portion of the project site, for a total of 59 residential units. The green court units would be two- and three-story units, with a maximum height of 37 feet, 9 inches, and parking garage on the first level. The townhome units would be three-story, with a maximum height of 38 feet, 8 inches, and parking garage on the first level. The seven single-family homes would be two-story. Primary access to the project site would be provided via a driveway along Oakhurst Drive. In addition, restricted access via a gated entry to the project would be provided at the northern terminus of Lydia Lane, over the existing bridge, which would be utilized by only the seven single-family homes.

As the project site contains currently vacant, timeworn structures, as well as remnants of a destroyed main house, the proposed project would be more consistent visually with the surrounding residential area. This visual consistency would be ensured through the Development Plan review and approval process for the proposed project. For example, one of the required findings for Development Plan approval by the Planning Commission is "That the development will be compatible with and in harmony and character with the City as a whole and with adjoining areas and uses" (Municipal Code Section 17.28.170(D). Accordingly, the City's design review process would ensure that the proposed project would be consistent with and/or compliment the surrounding area.

Notwithstanding the above, photo simulations were prepared for the proposed project to aid in evaluating the potential visual impacts of the proposed project to the surrounding areas (see Exhibits 7 through 14). The visual simulations include before and after views of the proposed project site, including the grass, trees, and shrubs from the Landscape Plan, from views in the surrounding area. Details regarding the visual simulation are provided below.

Exhibit 7
Existing View Looking East from Oakhurst Drive

Exhibit 8
View of Proposed Project Looking East from Oakhurst Drive

Exhibit 9
Existing View Looking South from Yolanda Circle

Exhibit 10
View of Proposed Project Looking South from Yolanda Circle

Exhibit 11
Existing View Looking West from the Oakhurst Country Club Golf Course

Exhibit 12
View of Proposed Project Looking West from the Oakhurst Country Club Golf Course

Exhibit 13
Existing View Looking North from Clayton Road

Exhibit 14
View of Proposed Project Looking North from Clayton Road

View Looking East From Oakhurst Drive

Exhibit 7 and Exhibit 8 present the existing and potential future views looking east from Oakhurst Drive. As mentioned previously, Oakhurst Drive has been established as a scenic route within the City in recognition of providing panoramic views of Mount Diablo and associated foothills. Views of Mount Diablo are not available from this viewpoint. As shown in the exhibits, the existing view is predominantly streetscape and associated landscaping, with a slight view of the western hills in the backdrop. Development of the proposed project would result in a noticeable visual change from this view, including a reduction in the amount of landscaping vegetation along the roadway and partial views of proposed homes. Yet, Exhibit 8 shows that post-project views would also be marked by increased views of the hills beyond the project site toward the east. Overall, the visual character of the area from this view would not be significantly changed or substantially degraded with implementation of the proposed project, nor would the project substantially affect scenic views from Oakhurst Drive.

View Looking South from Yolanda Circle

Exhibit 9 and Exhibit 10 present the existing and potential future views looking south from Yolanda Circle towards the project access point and beyond to Mount Diablo. Residences that are located near the Yolanda Circle/Oakhurst Drive intersection have views similar to that which is shown in Exhibit 9. As shown in Exhibit 9, the existing view is characterized by streetscape along Oakhurst Drive with predominantly obstructed views of Mount Diablo foothills in the backdrop. As shown in Exhibit 10, the post-project view would consist of the proposed primary access driveway, with proposed three-story townhome buildings visible on either side of the access driveway, associated streetscape, and a direct view of the foothills of Mount Diablo in the backdrop. Importantly, a broader view of the Mount Diablo foothills would be afforded looking south from Yolanda Circle with development of the proposed project. Therefore, while the post-project view from the Yolanda Circle/Oakhurst Drive intersection area would transition from a landscaped/open setting to a more urban setting, with residential structures and landscaping, views of Mount Diablo, the primary scenic feature identified in the City's General Plan, would be expanded.

In summary, although the proposed project would result in a noticeable change in the visual character of the area from this view, the project would offer view opportunities of Mount Diablo foothills that do not currently exist. The project would not substantially affect scenic views from the roadway.

View Looking West from the Oakhurst Country Club Golf Course

Exhibit 11 and Exhibit 12 present the existing and potential future views looking west from the Oakhurst Country Club Golf Course, which represents views through the site currently afforded to the homes east of the golf course. As shown in Exhibit 11, the existing view is characterized by predominantly trees and vegetation, with an existing chain-link fence and structure on the project site currently visible. As shown in Exhibit

12, the chain-link fence would still be visible post-project from this viewpoint. The top levels of three of the three-story townhome buildings would be visible; however, the large existing trees, as well as the densely planted trees and flowering accent trees and shrubs proposed, would provide screening that would block the majority of the proposed structures from this view. Although the proposed project would increase the amount of built development visible from the golf course, the increase would not necessarily be considered a degradation of the existing character or quality of the view. For example, the proposed project would not affect the views of the hills in the backdrop, which would all still be visible with implementation of the proposed project.

View Looking North from Clayton Road

Exhibit 13 and Exhibit 14 present the existing and potential future views looking north from Clayton Road near City Hall. As shown in Exhibit 13, the existing view overlooks a densely vegetated valley area with scattered buildings and structures visible and rolling hills in the backdrop. The post-project view would be similar to the existing view, but with the addition of the cluster of proposed buildings visible. Although the proposed project would reduce the amount of natural vegetation and increase the amount of urban development visible from this view, views of the foothills in the backdrop would still be offered. In addition, Clayton Road is not a designated scenic roadway. As such, the project would not have a substantial adverse effect on a scenic vista or degrade the existing visual character or quality of the area.

Conclusion

As shown in the photo simulations, implementation of the proposed project would result in noticeable changes to the visual character of the area; however, modifications to the visual character or quality of the site and surrounding area as a result of the proposed project would not be considered a substantial degradation. In addition, the proposed project would include landscaping and other design aspects consistent with the surrounding area and the City's policies and ordinances. Visual consistency of the project design, and compliance with the Planned Development District requirements, would be ensured through the Development Plan approval process, including review and approval of the overall project design by the City Planning Commission and City Council. Without verification of visual consistency through the Development Plan approval process, the changes to the visual character or quality of the site and its surroundings could be considered to result in a ***potentially significant*** impact.

Mitigation Measure(s)

The following mitigation measure would reduce the above impact to a *less-than-significant level*.

Mitigation Measure 1 *Prior to project approval, the overall project design shall be thoroughly evaluated by the City Planning Commission and City Council in order to make the findings required by Municipal Code Section 17.28.170. In particular, the*

provision of the following amenities shall be thoroughly evaluated:

A. *Natural Open Space: The quantity and quality of open space areas. Whether significant natural areas will be preserved including: prominent land features, watercourses, minimize removal of existing trees, etc;*
B. *Open Spaces: Quantity and quality of open space and associated improvements to be provided and whether such areas and improvements will be functional, safe, attractive and adequate (Ord. 402, 2007);*
C. *Vehicular Access including parking location, amount and design of pedestrian access including trails and bike paths, and the safe separation of transportation modes including provision for emergency vehicles;*
D. *Landscape Design: The degree of compliance with the water conserving guidelines found in Chapter 17.80 of this Title and, where appropriate, the degree of fire resistant landscaping;*
E. *Site Design:*
    1. *Creative integration of visual focal points, views and topographic features;*
    2. *Sun and wind orientation; and*
    3. *Building grouping and sensitive siting on the terrain for access and privacy as well as to minimize the necessity for retaining walls.*
F. *Design Features:*
    1. *Maximize the harmonious integration of a variety of architectural features, materials and colors and site layouts to prevent design monotony; and*
    2. *Provision for the dense landscape screening of vehicular parking areas both public and private.*
G. *Ownership/Maintenance of Common Areas: That adequate provision is made for the ownership and maintenance of the common areas of the development for the duration of its economic life; and*
H. *Other Features: Provision of such other features as the Planning Commission or City Council determine are appropriate.*

b. Would the project substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a State scenic highway? ..... Less-Than-Significant Impact

Discussion (b.)

The proposed project is not within view of a designated State scenic highway. Therefore, the proposed project would have a ***less-than-significant*** impact with respect to substantially damaging any rock outcroppings, historic buildings, or other scenic resources within view of a State scenic highway.

d. Would the project create a new source of substantial light or glare which would adversely affect day or nighttime views in the area? ..... Less-Than-Significant With Mitigation Incorporated

Discussion (d.)

The majority of the proposed project site is surrounded by other existing residential developments and a golf course, by which night lighting and glare are currently generated. Thus, the addition of light and glare in the area created by the proposed project would not be expected to cause a substantial change in day or nighttime views in the area from existing conditions. In addition, the project is located near a park and trail, which would likely not be in use during the nighttime hours when light and glare would primarily be an issue for park and trail users. Although the proposed project would create new light and glare on a site where minimal amounts currently exist, the project would be consistent with the surrounding uses. In addition, the proposed project would be required to comply with all applicable policies and standards set forth regarding light and glare, including Section 8.09.030(A) of the City's Municipal Code.

Compliance with Section 8.09.030(A) of the City's Municipal Code would ensure that the project would be designed to minimize effects of light and glare on surrounding areas. Without incorporation of cut-off lenses or other adequate means of shielding or focusing outdoor lighting downward, compliance with Section 8.09.030(A) of the City's Municipal Code may not be achievable. Therefore, the proposed project could be considered to create a new source of substantial light or glare that could adversely affect day or nighttime views in the area, and impacts would be considered ***potentially significant***.

Mitigation Measure(s)

The following mitigation measure would reduce the above impact to a *less-than-significant level*.

Mitigation Measure 2 *In conjunction with submittal of project improvement plans, the applicant shall submit a detailed lighting plan for the review and approval by the Community Development Department, the Police Department, and the Engineering*

Department. The lighting plan shall indicate the locations and design of the shielded light fixtures. The applicant shall also consider the use of Light Emitting Diode (LED) lighting, which provides more precise and even distribution of light compared to traditional lighting. The LED lighting would help to focus the light onto only the areas necessary on the project site and minimize overflow of lighting off-site.

2. AGRICULTURE AND FORESTRY RESOURCES.

Issues		Potentially Significant Impact	Less-Than-Significant With Mitigation Incorporated	Less-Than-Significant Impact	No Impact
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?	□	□	X	□
b.	Conflict with existing zoning for agricultural use, or a Williamson Act contract?	□	□	□	X
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))?	□	□	□	X
d.	Result in the loss of forest land or conversion of forest land to non-forest use?	□	□	□	X
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?	□	□	X	□

a. Would the project convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance to non-agricultural use? ..... Less-Than-Significant Impact

e. Would the project 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?..... Less-Than-Significant Impact

Discussion (a. and e.)

While the project site is the location of a former ranch, the property is no longer utilized as such. Various unused horse barns are still located on the property. Historically, portions of the project site contained a walnut orchard. Although limited agricultural operations have occurred on-site, such operations have ceased; and, according to the Contra Costa County Important Farmland 2010 map, the project site is designated Urban and Built-Up Land. The project would result in the development of 59 residential units on a site that is not utilized for agricultural operations and is not designated Prime Farmland

on the CCC Important Farmland Map. As a result, the project would have a ***less-than-significant*** impact with respect to converting Prime Farmland, Unique Farmland, or Farmland of Statewide Importance.

b. Would the project conflict with existing zoning for agricultural use, or a Williamson Act contract? ..... No Impact

Discussion (b.)

The project site is not under Williamson Act contract, nor is the site zoned for agricultural use. The current General Plan Land Use designation is Medium Density (MD) and the zoning designation for the project site is Planned Development (PD). Therefore, the project would have ***no impact*** with respect to conflicting with agricultural zoning or Williamson Act contracts.

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))? ..... No Impact

d. Result in the loss of forest land or conversion of forest land to non-forest use? ..... No Impact

Discussion (c. and 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.

3. AIR QUALITY.

Issues		Potentially Significant Impact	Less-Than-Significant With Mitigation Incorporated	Less-Than-Significant Impact	No Impact
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?	□	□	X	□
b.	Violate any air quality standard or contribute substantially to an existing or projected air quality violation?	□	X	□	□
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?	□	X	□	□
d.	Expose sensitive receptors to substantial pollutant concentrations?	□	□	X	□
e.	Create objectionable odors affecting a substantial number of people?	□	□	X	□

a. Would the project conflict with or obstruct implementation of the applicable air quality plan? ..... Less-Than-Significant Impact

Discussion (a.)

The City of Clayton 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), which are based on ABAG projections that are, in turn, based on the City's General Plan. The proposed project is consistent with the current land use and zoning designations for the site, and a General Plan amendment or any modifications to the land use or zoning designations are not proposed as part of the project. As such, the project would be considered consistent with growth assumptions of the applicable air quality plans. In addition, as presented in the sections below, the project would not exceed the applicable thresholds of significance for any pollutant and would not result in emissions that substantially contribute to the nonattainment designations of PM and ozone for the area. Therefore, 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. Would the project violate any air quality standard or contribute substantially to an existing or projected air quality violation? ..... Less-Than-Significant With Mitigation Incorporated

c. Would the project 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? ..... Less-Than-Significant With Mitigation Incorporated

Discussion (b. and c.)

According to the 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 2, are recommended for use in the evaluation of air quality impacts associated with proposed development projects.

Table 2 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; and
- 114 dwelling units for construction criteria pollutants.

The screening criteria for a townhouse residential development are if the development is less than or equal to the following screening level sizes:

- 451 dwelling units for operational criteria pollutants; and
- 240 dwelling units for construction criteria pollutants.

Accordingly, if a development is less than or equal to the screening size for operational and construction criteria pollutants, 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. The Court of Appeal held that CEQA does not require BAAQMD to conduct CEQA review 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 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, which would be the City of

Clayton for the proposed project. 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 2 and screening criteria are applicable for this analysis.

The proposed project consists of a total of 59 dwelling units - 7 single-family residential detached homes and 52 single-family attached townhomes, which is well below both the construction and operational screening levels for criteria pollutants. Therefore, the project is not expected to result in potentially significant air quality impacts, and a detailed air quality assessment would not be required. The project would not violate any air quality standard, contribute substantially to the region's nonattainment status of ozone or PM, or result in a cumulatively considerable net increase of any criteria air pollutant. However, it should be noted that the BAAQMD has established basic construction mitigation measures recommended for all proposed projects. Although the project is not anticipated to result in construction emissions in excess of the applicable thresholds of significance, compliance with the BAAQMD's recommended construction mitigation measures would ensure impacts would be less than significant. Therefore, without compliance with the BAAQMD's recommended construction mitigation measures, a ***potentially significant*** impact could occur associated with construction emissions.

Mitigation Measure(s)

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

Mitigation Measure 3 *During project construction, the project contractor shall comply with the Basic Construction Mitigation Measures recommended for all proposed projects by BAAQMD, which include the following:*

1. *All exposed surfaces (e.g., parking areas, staging areas, soil piles, graded areas, and unpaved access roads) shall be watered two times per day.*
2. *All haul trucks transporting soil, sand, or other loose material off-site shall be covered.*
3. *All visible mud or dirt track-out onto adjacent public roads shall be removed using wet power vacuum street sweepers at least once per day. The use of dry power sweeping is prohibited.*
4. *All vehicle speeds on unpaved roads shall be limited to 15 mph.*
5. *All roadways, driveways, and sidewalks to be paved shall be completed as soon as possible. Building pads shall be laid as soon as possible after grading unless seeding or soil binders are used.*
6. *Idling times shall be minimized either by shutting equipment off when not in use or reducing the maximum idling time to 5 minutes (as required by*

the California airborne toxics control measure Title 13, Section 2485 of California Code of Regulations [CCR]). Clear signage shall be provided for construction workers at all access points.

7. *All construction equipment shall be maintained and properly tuned in accordance with manufacturer's specifications. All equipment shall be checked by a certified visible emissions evaluator.*
8. *Post a publicly visible sign with the telephone number and person to contact at the lead agency regarding dust complaints. This person shall respond and take corrective action within 48 hours. The Air District's phone number shall also be visible to ensure compliance with applicable regulations.*

d. Would the project expose sensitive receptors to substantial pollutant concentrations? ..... Less-Than-Significant Impact

Discussion (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 order to provide a conservative indication of whether a project would result in localized CO emissions that would exceed the applicable threshold of significance, the BAAQMD has established screening criteria for localized CO emissions. According to BAAQMD, a proposed project would result in a less-than-significant impact related to localized CO emission concentrations if the project does not conflict with the following screening criteria:

- The project is consistent with an applicable congestion management program established by the county congestion management agency for designated roads or highways, regional transportation plan, and local congestion management agency plans;
- The project traffic would not increase traffic volumes at affected intersections to more than 44,000 vehicles per hour; and
- The project traffic would not increase traffic volumes at affected 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.

The Contra Costa Transportation Authority (CCTA) is required to prepare a Congestion Management Program and update the program every two years. The most recent update

to the Contra Costa Congestion Management Program was adopted December 18, 2013. The Congestion Management Plan contains several components, including traffic level of service standards for State highways and principal arterials, multi-modal performance measures, a seven-year capital improvement program of projects, a program to analyze the impacts of land use decisions, and a travel demand element that promotes transportation alternatives to the single-occupant vehicle. Because the proposed project is consistent with the existing land use and zoning designations for the site, the project would be consistent with the Contra Costa Congestion Management Program, as such programs are based on land use designations.

According to the traffic impact study prepared for the proposed project, the study intersections would not operate at traffic volumes in excess of the BAAQMD localized CO emissions screening criteria, even under cumulative 2030 Plus Project conditions.[6] The traffic assessment also concluded that the estimated amount of new trips associated with the proposed project would not result in any significant impacts to nearby roadways or intersections. As such, a substantial increase in levels of CO at surrounding intersections would not occur, and the project would not generate localized concentrations of CO that would exceed standards.

Toxic Air Contaminants (TACs) are also a category of environmental concern. The CARB's *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. 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 59 residences, the occupants of which would be considered sensitive receptors.

[6] The study intersection of Oakhurst Drive and Yolanda Circle/Silver Oak Estates Drive would have the worst LOS during the PM peak hour under Cumulative Plus Project conditions. The Existing PM peak hour volume at the intersection would be 572 according to the Transportation Impact Analysis prepared for the proposed project. Utilizing the assumption from the Transportation Impact Analysis of a 23 percent increase in traffic volumes from existing conditions to 2030 cumulative conditions, and adding the estimated increase in PM peak hour trips from implementation of the proposed project of 59, the traffic volume at the intersection during the PM peak hour under Cumulative Plus Project conditions was estimated to be approximately 763 (572 + [572*23%] + 59 = 763), which is substantially less than the BAAQMD screening criteria of 44,000 or 24,000 vehicles per hour.

The project does not involve long-term operation of any stationary diesel engine or other major on-site stationary source of TACs. Due to the residential nature of the development, relatively few vehicle trips associated with the proposed use would be expected to be composed of diesel-fueled vehicles. In addition, the CARB's Handbook includes distribution centers with associated diesel truck trips of more than 100 trucks per day as a source of substantial TAC emissions. The project would not be located near an existing distribution center. Therefore, the project would not generate any substantial concentrations of TACs and would not expose any future on-site sensitive receptors to emissions of TACs associated with future on-site operations or distribution centers.

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. The existing residences associated with the Silvercreek II residential subdivision, located north of the project site across Oakhurst Drive, and the existing residences associated with the Rachel Ranch residential subdivision, located south of the project site across from Mount Diablo Creek, 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. Furthermore, the nearest sensitive receptors are separated from the project site by either an existing roadway or waterway, which would provide a buffer between on-site emissions and the receptor. 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 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. Would the project create objectionable odors affecting a substantial number of people? ..... Less-Than-Significant Impact

Discussion (e.)

Typical sources of objectionable odor include industrial or intensive agricultural uses. The proposed project is surrounded by existing residential development and open space areas. Heavy industrial or agricultural uses are not located in the vicinity of the project

site. Thus, the future residents would not be subjected to any objectionable odor from existing sources.

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 minimal and regulated. Accordingly, the project would not be expected to create objectionable odors affecting a substantial number of people, resulting in a ***less-than-significant*** impact

4. GREENHOUSE GAS EMISSIONS.

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

a. Would the project generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment? ..... Less-Than-Significant Impact

b. Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases? ..... Less-Than-Significant Impact

Discussion (a. and 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).

It should be noted that the BAAQMD was challenged in the Alameda County Superior Court, and was ordered to set aside the proposed thresholds of significance and screening criteria.[7] However, the City of Clayton has determined that the BAAQMD thresholds of significance and screening criteria are the best available option for evaluation of GHG impacts for the project and, thus, are used in this analysis.

[7] 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 held that CEQA does not require BAAQMD to conduct CEQA review 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.

The BAAQMD identifies GHG 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 a project is below the screening criterion for GHG, a detailed assessment of that project's GHG emissions would not be required. The operational GHG screening criteria for a single-family and a townhouse residential development are if the development is less than or equal to 56 dwelling units or 78 dwelling units, respectively.

The proposed project consists of a total of 59 dwelling units - 7 single-family detached residences and 52 single-family attached townhomes, which is below the operational GHG screening levels for each type of development. Thus, the project is not anticipated to generate GHG emissions that would significantly impact the environment. However, if the units were all to be considered single-family units, the project would exceed the single-family residential development screening criteria. To provide a conservative analysis, and to determine that the proposed project would not generate GHG emissions that would significantly impact the environment or conflict with any plan, policy, or regulation adopted for the reduction of GHG emissions, the project's operational GHG emissions have been analyzed.

The BAAQMD threshold of significance for project-level operational GHG emissions is 1,100 $MTCO_2e$/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 established a threshold of significance for construction-related GHG emissions and does not require quantification. Nonetheless, the proposed project's construction GHG emissions have been amortized over the estimated lifetime of the proposed project, which was assumed to be approximately 40 years; and these amortized emissions have been included in the annual operational GHG emissions estimate for the project.[8] Amortizing the construction GHG emissions (a one-time release that would occur only during project construction) and including them in the annual operational emissions (which would occur every year over the lifetime of the entire project) would represent a conservative, worst-case analysis for the project's annual operational emissions estimate.

Analysis of the proposed project's GHG emissions included estimations of CO_2, N_2O, and CH_4 emissions. The California Emissions Estimator Model software version 2013.2 (CalEEMod.2013.2) was utilized for the analysis.[9] All modeling results are provided in Appendix A. Utilizing the CalEEMod.2013.2 modeling software, the total annual

[8] The BAAQMD does not recommend any specific operational lifetimes for use in amortization of construction-related GHG emissions; however, the SMAQMD, per its *Guide to Air Quality Assessment in Sacramento County*, suggests an operational lifetime for a new conventional commercial building of 25 years and a new residential building of 40 years. The estimates are derived from the State of California Executive Order D-16-00 and US Green Building Council's October 2003 report on *The Costs and Financial Benefits of Green Buildings.*

[9] 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., trip generation rates).

construction-related GHG emissions were estimated to be 1,014.38 $MTCO_2e$, or 25.36 $MTCO_2e$ per year over the expected operational lifetime of the project.

According to the CalEEMod.2013.2 results, the proposed project would result in estimated operational GHG emissions of 745.05 $MTCO_2e$/yr. Taking the construction-related emissions into account, the proposed project would result in total annual GHG emissions of 770.41 $MTCO_2e$/yr, which is below the applicable threshold of significance of 1,100 $MTCO_2e$/yr. Therefore, the project would not generate GHG emissions that would significantly impact the environment or conflict with any applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of GHGs, and impacts would be ***less than significant***.

5. BIOLOGICAL RESOURCES.

Issues		Potentially Significant Impact	Less-Than-Significant With Mitigation Incorporated	Less-Than-Significant Impact	No Impact
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?	□	X	□	□
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?	□	X	□	□
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 marshes or vernal pools) through direct removal, filling, hydrological interruption, or other means?	□	X	□	□
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?	□	X	□	□
e.	Conflict with any local policies or ordinances protecting biological resources, including trees?	□	X	□	□
f.	Conflict with the provisions of an adopted habitat conservation plan?	□	X	□	□

a. Would the project 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? ..... Less-Than-Significant With Mitigation Incorporated

d. Would the project 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? ..... Less-Than-Significant With Mitigation Incorporated

Discussion (a. and d.)

A Biological Resource Analysis (BRA) was prepared for the proposed project by Monk & Associates, Inc., August 15, 2014 (see Appendix B). The Analysis was based on research of the most recent version of the California Department of Fish and Wildlife (CDFW)'s California Natural Diversity Database (CNDDB) application, the 2013

electronic version of the California Native Plant Society (CNPS)'s *Inventory of Rare and Endangered Plants of California*, the ECCCHCP, and observations during site visits. It should be noted that the area around the proposed project site has experienced rapid growth over the last 10 years, and many of the CNDDB record locations are now developed. In fact, the proposed project site is predominantly surrounded by existing residential development. Exhibit 15 provides a graphical illustration of the closest known recorded special-status species within five miles of the proposed project site, as determined in the BRA.

The proposed project is required to comply with the ECCCHCP, including payment of fees and implementation of mitigation measures, based upon the on-site habitats. The ECCCHCP, including implementation of the mitigation requirements and fees set forth in the ECCCHCP, has undergone separate environmental review.[10] As demonstrated in Chapter 4 of the Final EIR/EIS prepared for the ECCCHCP, implementation of the ECCCHCP would mitigate biological impacts in the region to less-than-significant levels through compliance with the requirements and fee payments set forth within the ECCCHCP.

Existing Site Conditions

The 13.96-acre project site supports two native plant communities and three anthropogenic (that is, human-established) communities/land use types. The native plant communities are: oak woodland (1.5 acres) and riparian woodland (5.27 acres). The riparian woodland will be permanently protected in a deed-restricted stream corridor/setback of approximately 6.6 acres. The anthropogenic communities are urban (3.60 acres), and ruderal (3.59 acres).[11]

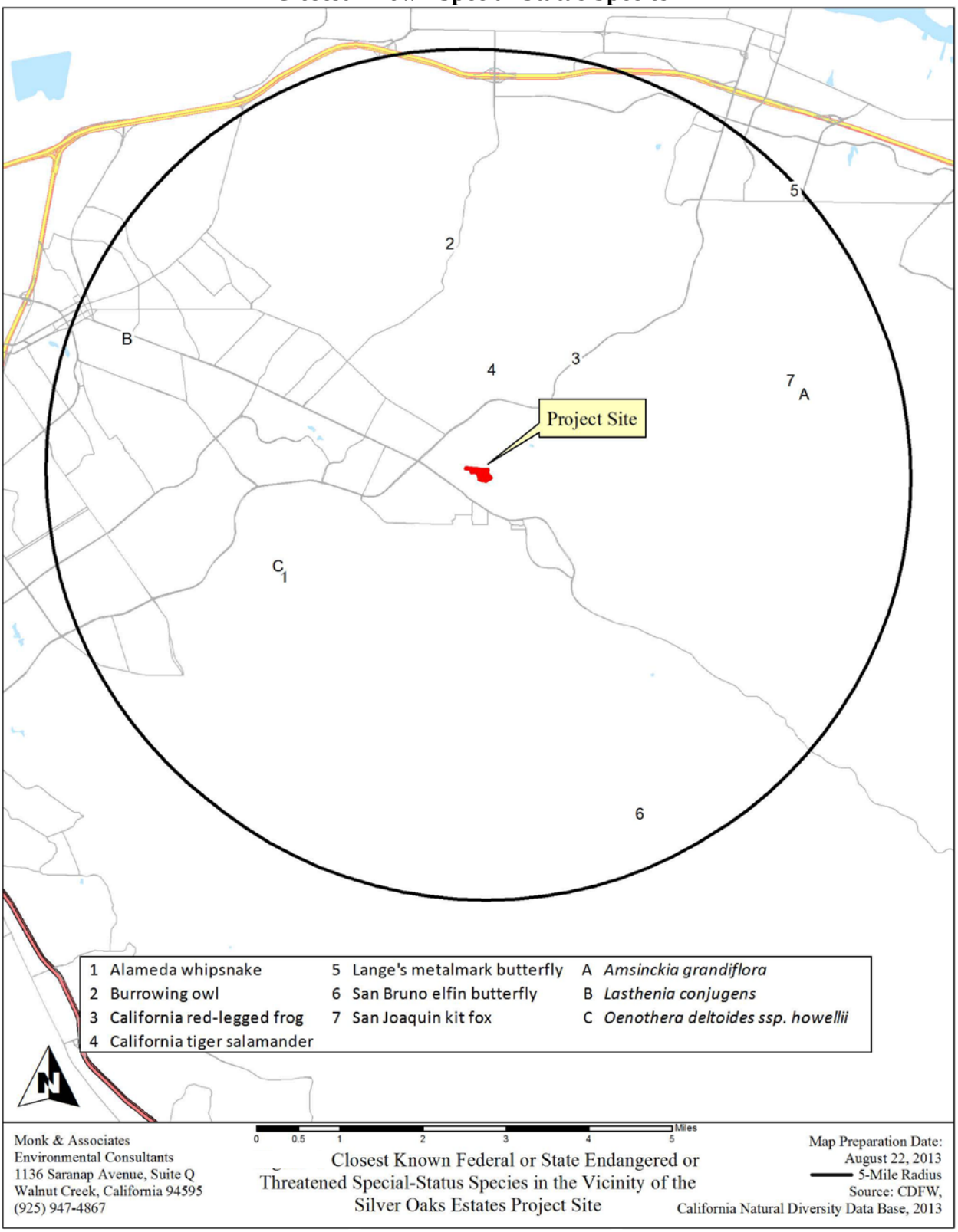
Special-Status Plant Species

Special-status plants have not been mapped on or adjacent to the project site; however, a total of 25 special-status plant species are known to occur within five miles of the proposed project site. Most of the plants occur in specialized habitats such as chaparral and broadleaf forest, or on serpentine or alkaline soils. Special-status plant species were not observed during the numerous site investigations conducted from 2010 to 2014 as part of the BRA. According to the BRA, the proposed project site does not provide suitable habitat for any of the 25 special-status plant species known to occur in the region, with the exception of Diablo helianthella.

[10] The EIR/EIS prepared for the ECCCHCP is available at: http://www.co.contra-costa.ca.us/depart/cd/water/hcp/archive/final_EIS/eis_eir.html.

[11] Per Figure 3A, Land Cover Types, Silver Oak Estates Project Site, included in the Planning Survey Report prepared for the project by Monk & Associates, Inc. August 15, 2014.

Exhibit 15
Closest Known Special-Status Species



Diablo helianthella (*Helianthella castanea*) is a CNPS Rank 1B.2 species and has no state or federal status. This member of the sunflower family is found in a variety of habitat types including broadleaved upland forest, chaparral, cismontane woodland, coastal scrub, riparian woodland, and valley and foothill grassland. Diablo helianthella is a perennial herb that blooms from March through June. This plant is threatened by urbanization, grazing, and fire suppression. This species has been observed in chaparral habitats within the Black Diamond Regional Park, approximately 2.6 miles east of the project site (CNDDB Occurrence No. 29).

The riparian woodland that occurs on the project site provides suitable habitat for Diablo helianthella. Regardless, no special-status plant species have been observed by M&A botanists during the appropriately-timed surveys conducted during the periods when this species would have been identifiable in 2010, 2012, 2013, and 2014. As a result, the project would not result in adverse impacts to special-status plants. This includes the new 18-inch storm drain pipe and associated outfall, as well as the sewer line improvement across Mount Diablo Creek. Within the proposed footprint of the proposed storm drain and sewer pipes, one tree that is scheduled for preservation, and potentially the dripline of four additional trees that are scheduled for preservation, could be impacted by construction associated with the installation of the proposed pipelines. Construction of the stormwater outfall and sewer line across Mount Diablo Creek may require excavation and construction within the dripline of trees within the minimum 50-foot conservation area setback, which could damage the root system of the trees and affect the health and vigor of the impacted trees. However, construction policies and guidelines for tree preservation and protection, as set forth by the City of Clayton, would be required for the proposed project (see Mitigation Measure 12 of this IS/MND). Impacts and mitigation measures associated with local policies protecting biological resources, including trees, are discussed in further detail below under section "e".

Special-Status Wildlife Species

Special-status animals have not been mapped on or adjacent to the proposed project site, and were not observed during the numerous site investigations conducted from 2010 to 2014 as part of the BRA. However, according to the CNDDB, a total of five special-status animal species are known to occur within five miles of the project site, including the California tiger salamander (*Ambystoma californiense*), California red-legged frog (*Rana draytonii*), Alameda whipsnake (*Masticophis lateralis euryxanthus*), Western burrowing owl (*Athene cunicularia hypugaea*), and San Joaquin kit fox (*Vulpes macrotis mutica*). According to the BRA, only one of the five special-status species (California red-legged frog) has the potential to occur on the project site due to the site's lack of preferred and suitable habitats for the species (i.e., grassland of the valleys and foothills and standing water [California tiger salamander], coastal scrub and chaparral habitat [Alameda whipsnake], open, dry annual or perennial grasslands, deserts, and scrublands [Western burrowing owl[12]], and open grasslands with scattered shrubs and loose-textured

[12] The closest known record for western burrowing owl to the project site is located 2.8 miles to the north (CNDDB records). Western burrowing owls are typically found in vast, open spaces with ample viewsheds from which potential predators can be observed at a distance. Because such open spaces on the project are small (about 1/3 of an acre), and are surrounded by trees, fences, buildings, and rubbish piles, the project site does not support suitable western burrowing owl habitat. Furthermore, no western burrowing owls, or suitable western burrowing owl burrows have been observed on the proposed project site during M&A's numerous site visits conducted in 2010,

sand soils [San Joaquin kit fox]), as well as the disturbed and predominantly developed nature of the area.[13]

In addition, due to the riparian woodland habitat associated with Mount Diablo Creek, raptors (birds of prey) also have the potential to nest in the oak trees on or adjacent to the project site. Further details regarding each special-status species potentially occurring on-site are provided below.

California Red Legged Frog

The California red-legged frog (*Rana draytonii*) was federally listed as threatened on May 23, 1996, and, as such, is protected pursuant to the Federal Endangered Species Act. On March 16, 2010 the USFWS issued the final designation for California red-legged frog Critical Habitat (USFWS 2010). The project site is located outside of Critical Habitat (Critical Habitat Unit CCS-2A is located approximately four miles to the south). The California red-legged frog is also a State "species of special concern." Records for the California red-legged frog do not occur on or near the project site. The closest known record to the project site is 1.6 miles northeast of the project site in a stock pond.

The California red-legged frog is typically found in ponds, slow-flowing portions of ephemeral, perennial, and intermittent streams that maintain water in the summer months. The species is also found in hillside seeps that maintain pool environments or saturated soils throughout the summer months. Populations probably cannot be maintained if all surface water disappears (i.e., surface water not available for egg laying and larval development habitat). Larval California red-legged frogs require 11 to 20 weeks of permanent water to reach metamorphosis (i.e., to change from a tadpole into a frog) in water depths of 10 to 20 inches. California red-legged frogs also use upland habitats for migration and dispersal. The USFWS *Recovery Plan for the California Red-Legged Frog* states that frog overland excursions via uplands can vary between 0.25-mile up to three miles during the course of a wet season.

Monk & Associates biologists Geoff Monk and Sarah Lynch, both federal 10(a)(1)(A) permit holders with authorization to survey for and handle California red-legged frogs for identification purposes, have evaluated the project site for California red-legged frog habitat. Based on the surveys of the project site from 2010 to 2013, the determination has been made that the project site does not provide the aquatic habitat necessary to support a breeding or likely migrating California red-legged frog population. California red-legged frogs have not been observed on-site during the numerous surveys in Mount Diablo Creek.

2012, and 2013. Thus, western burrowing owls are extremely unlikely to be affected by the proposed project.

[13] See Monk & Associates. *Biological Resources Analysis, Silver Oak Estates*. September 9, 2013, p. 9. It should also be noted that the project site (i.e., Mount Diablo Creek) does not provide fisheries habitat for protected fish species, such as chinook salmon (Central Valley spring-run and Sacrament River winter-run) and Central Valley steelhead. According to the ECCCHCP (Table 3-7), no records or accessible habitat for these species is within the ECCCHCP inventory area. Only Central Valley fall/late fall-run chinook salmon have been observed within the inventory area, in the lower 3 miles of Marsh Creek, between the mouth of Big Break and the WWTP in Brentwood.

It is important to note that other than Mount Diablo Creek, waters of the U.S. (i.e. wetlands or other waters) do not exist on or adjacent to the project site that could support the California red-legged frog. On the project site, Mount Diablo Creek does not support large or deep plunge pools required by the California red-legged frog as escape cover and/or for reproduction. Rather, the creek is a rocky, cobbly creek, which does not support herbaceous or emergent wetland plant cover. Thus, M&A concludes that in the absence of deep plunge pools, emergent vegetation in the creek, deeper water flows year round, that eggs, tadpoles, or metamorphs of the California red-legged frog would not survive in this creek within the project site.

While Mount Diablo Creek is a perennial creek, dry season flows are contributed primarily from adjacent urban runoff. In normal rainfall years, the creek dries down relatively quickly to very low flows (i.e., a trickle) or has no flows. The high flows in Mount Diablo Creek, which can be flashy, would be highly likely to detach and wash any amphibian eggs downstream, off of the project site into a high density urban setting.

The project site's uplands also likely have little value to migrating California red-legged frogs. Surrounding developments around the project site present significant impediments to overland travel by California red-legged frogs to or through the project site. Impediments include but are not limited to high density urban development and major roads with high vehicle use.

Mount Diablo Creek on the project site is also not a likely valuable migration corridor for the California red-legged frog since it flows from downtown Clayton into the project site, and then into urban Concord. These developed and urban areas support buildings or backyards (constructed long ago) that extend to the top-of-banks of this creek downstream of the project site and upstream of where this creek enters a large and extensive culvert system/concrete sided flood control channel that winds its way through Concord emptying into Seal Creek, which empties into Suisun Bay. The appurtenant structures downstream of the project site effectively truncate any migration corridor value of this creek. In the urban settings present downstream of the project site, conditions that are required to support the California red-legged frog were long ago converted to urban development. Conversely, there is almost no likelihood that the California red-legged frog would migrate from downstream locations to upstream locations (that include the project site) as this frog would be most unlikely to exist in downstream urban creek settings. Thus, the California red-legged frog is not expected to use Mount Diablo Creek on the project site.

Regardless of the challenges posed by Mount Diablo Creek as a migration corridor for the California red-legged frog, in order to ensure that the project would not impact the California red-legged frog, precautionary measures are prescribed. In addition, it should be noted that the project would be required to obtain coverage under the ECCCHCP as administered by the East Contra Costa County Conservancy (ECCCC).[14]

[14] It should be noted that this project has been discussed with the ECCCC on numerous occasions and a Planning

Nesting Raptors and Passerine Birds

Large stick nests or tree cavities suggesting that raptors have nested on the project site in the recent past were not found on the project site. However, sharp-shinned hawk, Cooper's hawk, red-shouldered hawk, and red-tailed hawks are all known to occur in the area, and conceivably could nest on the project site in future years. All of the aforementioned raptors (i.e., birds of prey) are protected under the Migratory Bird Treaty Act, and their eggs and young are protected under the CDFW Code Sections 3503, 3503.5. In addition, white-tailed kite (*Elanus caeruleus*), a CDFW Fully Protected species, could nest in the trees on the project site. Development of the proposed project could result in disturbance to nesting birds, and potentially death of adults and/or young. Nesting raptors have not been identified on the project site; however, specific surveys for nesting raptors were not conducted as part of the BRA. As such, a nesting raptor survey would need to be conducted in order to ensure that adverse impacts to nesting raptors would not occur.

Similar to nesting raptors, nesting passerine birds (i.e., perching birds) and special-status birds such as the loggerhead shrike, tricolored blackbird, and yellow warbler could potentially occur in the area. Birds and their nests are protected under CDFW Code (Sections 3503, 3503.5,3513) and the Migratory Bird Treaty Act. Development of the proposed project could result in impacts to nesting birds, their eggs, and/or young.

Conclusion

As discussed above, the majority of the special-status species known to occur in the area would not be expected to be present at the project site. However, the remote possibility exists for the project to affect the California red-legged frog. In addition, nesting raptors and/or passerine birds may occupy the project site prior to construction activities. Consequently, unless mitigated, the proposed project would result in a ***potentially significant*** impact associated with effects on special-status species, interference 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.

Mitigation Measure(s)

Implementation of the following mitigation measures would ensure that the above impact is reduced to a *less-than-significant* level.

Mitigation Measure 4 *Prior to issuance of a grading permit, suitable amphibian exclusion fencing shall be installed along the outside edge of designated stream zone setbacks to ensure that migrating California red-legged frogs are precluded from being able to move into any designated work area. The California red-legged frog exclusion fence could be a "silt fence" that is buried along the bottom edge. The fence shall be permanent enough to ensure that the fence remains in good*

Survey Report has been filed with the ECCCC for use of the ECCCHCP.

condition throughout the duration of the construction period on the project site. The fencing shall be installed prior to the time any site grading or other construction-related activities are implemented, and shall remain in place during all site grading or other construction-related activities.

And

At least 24 hours prior to any grading or earth-moving activities in or adjacent to Mount Diablo Creek, the project applicant, at their own expense, shall enlist the services of a federal 10(a)(1)(A) permitted biologist to conduct preconstruction surveys along the project site tributaries to ensure such activities do not result in direct take of the California red-legged frog. A Survey Report shall be submitted to the Clayton Community Development Department.

Should a California red-legged frog be discovered in a work area where it could be harmed by project activities, all such activities shall cease, pending notification of the USFWS and approval by this agency for appropriate translocation actions. These actions would likely include that the 10(a)(1)(A) permitted biologist net any frogs in harm's way and move them up or downstream of the project site at the project applicant's expense. In the event that California red-legged frogs are found on the project site during preconstruction surveys, thereafter all work in or adjacent to Mount Diablo Creek (adjacent would include ground disturbing actions or vehicle/equipment use within 50 feet of the top-of-bank of this creek) would require that a full-time qualified California red-legged frog biological monitor be present, at the project applicant's expense, while such work is underway.

Mitigation Measure 5 *If construction is scheduled to begin between February 1st and August 31st, nesting raptor and passerine surveys shall be conducted by a qualified ornithologist 14 days prior to the commencement of construction. The nesting raptor and passerine surveys shall include examination of all trees and shrubs within 300 feet of the entire project site. The survey shall be conducted at the expense of the project applicant. If nesting raptors or passerines are identified during the survey, within 300 feet of the project site (or 75-feet in the case of passerines), a 300-foot buffer (or 75-feet in the case of passerines) around the nest tree shall be fenced with orange construction fencing. If the nest tree is located off the project site, then the buffer shall be demarcated as per*

above. The size of the buffer may be altered if a qualified ornithologist conducts behavioral observations and determines the nesting raptors or passerines are well acclimated to disturbance. If this occurs, the ornithologist shall prescribe a modified buffer that allows sufficient room to prevent undue disturbance/harassment to the nesting raptors/passerines. No construction or earth-moving activity shall occur within the established buffer until it is determined by a qualified ornithologist that the young have fledged (that is, left the nest) and have attained sufficient flight skills to avoid project construction zones. This typically occurs by July 15th. This date may be earlier or later, and would have to be determined by a qualified ornithologist. If a qualified ornithologist is not hired to watch the nesting raptors/passerines then the buffers shall be maintained in place through the month of August and work within the buffer can commence September 1st.

If the nesting survey identifies a large stick nest or other type of raptor nest that is inactive at the time of the survey, but that was evidently used in the previous year (as evidenced by condition of the nest and possibly presence of whitewash and/or feathers/down on the nest), a protection buffer (as described above) shall be established around the potential nesting tree if it is within 300 feet of the project site. This buffer shall remain until a second follow-up nesting survey can be conducted to determine the status of the nest and eliminate the possibility that the nest is utilized by a late-spring nesting raptor (for example, Cooper's hawk). This second survey shall commence even if construction has commenced. If during the follow-up late season nesting survey a nesting raptor is identified utilizing the nest, the protection buffer shall remain until it is determined by a qualified ornithologist that the young have fledged and have attained sufficient flight skills to avoid project construction zones. If the nest remains inactive, the protection buffer can be removed and construction and earth moving activities can proceed unrestrained.

Mitigation Measure 6 *If construction is scheduled to begin between February 1st and August 31st, in order to avoid impacts to ground-nesting raptors and passerines, a qualified ornithologist shall conduct walking transects through the project site's grassland habitat to search for nests 14 days prior to the commencement of construction. If ground-nesting raptors or passerines are identified during the surveys within 300 feet of the project site (or 75-feet in the case of passerines), a 300-foot buffer (or 75-feet in the case of passerines) around the nest site shall be fenced with orange*

construction fencing. If the nest is located off the project site, then the buffer shall be demarcated as per above. The size of the buffer may be altered if a qualified ornithologist conducts behavioral observations and determines the nesting raptors or passerines are well acclimated to disturbance. If this occurs, the ornithologist shall prescribe a modified buffer that allows sufficient room to prevent undue disturbance/harassment to the nesting raptors/passerines. No construction or earth-moving activity should occur within the established buffer until it is determined by a qualified ornithologist that the young have fledged (that is, left the nest) and have attained sufficient flight skills to avoid project construction zones. This typically occurs by July 15th. This date may be earlier or later, and would have to be determined by a qualified ornithologist. If a qualified ornithologist is not hired to watch the nesting raptors/passerines then the buffers shall be maintained in place through the month of August and work within the buffer can commence September 1st.

b. Would the project 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 Wildlife or US Fish and Wildlife Service? .... Less-Than-Significant With Mitigation Incorporated

c. Would the project have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to marshes or vernal pools) through direct removal, filling, hydrological interruption, or other means? .... Less-Than-Significant With Mitigation Incorporated

Discussion (b. and c.)

Riparian Woodland

The project site contains approximately 5.27 acres of riparian woodland. The riparian woodland community runs along Mount Diablo Creek on the south side of the project site. Total canopy cover averaged along this creek on the project site is approximately 60 to 70 percent. The riparian woodland is dominated by valley oaks and California buckeye (*Aesculus californica*) trees. Almond (*Prunus dulcis*) trees, black walnut (*Juglans hindsii*) trees, and Oregon ash (*Fraxinus latifolia*) are also present along the creek. Shrubby toyon and non-native Himalayan blackberry (*Rubus armeniacus*) are also present along the banks. The understory is herbaceous, dominated by non-native grasses, as well as non-native and native forbs (broad-leaved plants). The mixture of oak and buckeye along with

the understory vegetation provides wildlife with many different food sources, nesting opportunities, and cover from predators. This riparian woodland habitat would be impacted if the sewer line across Mount Diablo Creek is installed via the open cut trenching (see below section for more discussion).

Waters of the U.S. and/or State

Monk & Associates, Inc. conducted site assessment surveys of the project site in 2010, 2012, and in 2013, as part of the BRA prepared for the proposed project. Aside from Mount Diablo Creek, waters of the U.S. or State do not occur on the project site. The creek is part of a deed-restricted conservation area that would be preserved in perpetuity as part of the proposed project. The conservation area includes the bed, bank, and channel of Mount Diablo Creek, along with the riparian vegetation and a riparian setback that averages approximately 50 feet from the top-of-bank of the creek channel to the edge of the proposed development. The location of the creek's top-of-bank was determined in the field during a site visit with representatives of the Regional Water Quality Control Board (RWQCB) and the CDFW. The edge of riparian vegetation was also discussed and defined, and the creek setback was intended to protect all riparian vegetation with high resource value.

While the development plans avoid the creek as much as practicable, the proposed project design includes directing stormwater runoff from on-site detention basin facilities into a new 18-inch storm drain pipe and associated outfall into Mount Diablo Creek. The project's stormwater outfall has been designed to avoid impacting Clean Water Act protected waters of the U.S. and State. The outfall design keeps rip-rap outside of the bed and channel (i.e., above the ordinary high water marks) of Mount Diablo Creek while erosion control would be built into the outfall design. As water exits the 18-inch HDPE stormdrain pipe, it would enter the outfall structure with a 250 cubic-foot (approximately) energy-dissipation area. This energy-dissipation area would be essentially a concrete box that is filled with CalTrans "light-class" rip-rap. The rip-rap would dissipate the energy of the stormwater outflow, dramatically reducing the velocity of water leaving the stormdrain system. Once the water enters the energy-dissipater, it would trickle through the rip-rap and into an approximately 10-foot long gravel-filled energy-dissipater, which would slow the water's velocity even further. From the gravel-filled dissipater, water would trickle onto the banks of Mount Diablo Creek, well-above the ordinary high watermark (OHWM), and into the low-flow channel of Mount Diablo Creek at a low-enough velocity as to not cause erosion of the bank, bed, or channel.

In addition, the proposed project includes a connection to the existing sanitary sewer manhole on the south side of Mount Diablo Creek via a new eight-inch sanitary sewer line, which would need to transverse the creek. Two options exist for constructing the sewer line across the creek: 1) jack-and-bore; and 2) open trench during the dry season. Jack-and-bore operations would occur well beneath the bed elevation of Mount Diablo Creek; thus, avoiding Clean Water Act regulated areas and a permit from the USACE would not be required. Accordingly, a permit from the RWQCB pursuant to Section 401 of the Clean Water Act would not be required. Should the applicant choose to cut an open trench through the creek bed during the dry season to install the sewer pipeline, Clean Water Act regulated areas could be affected. The approximately 10-foot wide trench would traverse approximately 140 feet of the riparian corridor associated with Mount

Diablo Creek, commencing at the proposed Silver Oak Estates Drive to the north of the creek, and terminating at the existing sanitary sewer manhole on the south side of the Creek. Construction associated with an open cut trench would result in temporary impacts to approximately 0.05-acre (2,191 square feet) of the Stream Setback (the conservation area), 0.03-acre (1,471 square feet) of which is within Mount Diablo Creek (below top of bank). Accordingly, a permit from the USACE pursuant to Section 404 of the Clean Water Act would likely be required. In addition, a permit from the RWQCB pursuant to Section 401 of the Clean Water Act would be required. Coverage from the CDFW via a 1602 agreement (permit) would be required for either option.

Conclusion

Consequently, the stormwater and sewer improvements required for the proposed project could result in ***potentially significant*** impacts associated with riparian habitat or other sensitive natural community, and federally protected wetlands.

Mitigation Measure(s)

Implementation of the following mitigation measures would ensure that the above impacts are reduced to a *less-than-significant* level.

Mitigation Measure 7 *Prior to issuance of a grading permit, the project applicant shall pay the following ECCCHCP fees:*

- *Zone 2 Development Fee for impacts to 7.38 acres of land to be permanently disturbed;*
- *Wetland Mitigation Fee for impacts to 0.270-acre of riparian woodland/scrub to be permanently disturbed;*
- *Temporary Development Impact Fee for temporary impacts to 0.75-acre of land; and*
- *Temporary Wetland Mitigation Fee for temporary impacts to 0.130-acre of riparian woodland/scrub. The above calculations are in accordance with the Planning Survey Report prepared for the proposed project. The current fee estimate has been calculated to be $201,526.86, but is subject to modification by the ECCCC. Documentation of said fee payment shall be submitted to the Clayton Community Development Department.*

Mitigation Measure 8 *The installation of the sanitary sewer line via open cut trenching would impact both Corps and RWQCB jurisdiction. The fee associated with coverage under the ECCCHCP includes impacts to the Corps jurisdiction. Mitigation Measure 7 of this IS/MND requires the applicant to pay ECCCHCP fees. Pursuant to the ECCCHC's Regional General Permit (RGP), the applicant shall notify the Corps in accordance with RGP general condition number 18 (Notification) if open cut trenching is pursued.*

Impacts to the RWQCB's jurisdiction are not covered by the ECCCHC's RGP. As such, if open cut trenching occurs, the applicant shall obtain a "certification of water quality" from the RWQCB for the proposed project. The RWQCB requires mitigation for all impacts to waters of the State, typically at a 2:1 replacement ratio.

Mitigation Measure 9 *Prior to any construction work in Mount Diablo Creek, the project applicant shall obtain a Lake and Streambed Alteration Agreement (SBAA), specifically a Section 1602 SBAA, from the CDFW. The SBAA shall detail the authorized activities and provide specific terms and conditions for the proposed project. The applicant shall comply with all requirements of the SBAA, including restoring the streambed to original contours and replanting any impacted trees per the City's Tree Protection Ordinance or as otherwise specified in the 1602 Agreement with the CDFW. Work in Mount Diablo Creek shall not be authorized by the City without prior authorization of a SBAA by the CDFW. A copy of the SBAA approval shall be submitted to the Clayton Community Development and Engineering Departments.*

e. Would the project conflict with any local policies or ordinances protecting biological resources, including trees? Less-Than-Significant With Mitigation Incorporated

Discussion (e.)

The City of Clayton has a Tree Protection Ordinance (Chapter 15.70 of the Zoning Code), which requires a permit and replacement plantings when removal of any "protected tree" is proposed. According to the City's Tree Protection Ordinance a protected tree is any of the following species: ash, bay, box elder, buckeye, cherry, cottonwood, elderberry, hop tree, madrone, maple, coast live oak, canyon live oak, blue oak, California black oak, valley oak, interior live oak, sycamore, or walnut. A tree removal permit is required in order to remove any protected tree with a single trunk or multiple trunks of a cumulative trunk diameter of six inches or greater, located on private or public property.

As shown in Exhibit 16 and Exhibit 17, out of a total of 302 on-site trees, the project would retain 184 trees, while 118 trees would be removed, two of which are currently dead.

The equivalent diameter for all non-protected trees on the project site totals 1,638 inches. Approximately 1,038 inches (63 percent) are proposed for removal during project development.[15] The equivalent diameter for all protected trees on the project site totals

[15] Jason Fong, dk Consulting. Silver Oak Estates, Subdivision 8516. Letter dated September 30, 2013.

3,738 inches; approximately 1,204 inches (32 percent) are proposed for removal during project development.

The majority of the proposed removal trees are located within the development footprint area of the project site. However, according to the BRA, eight protected trees within the riparian zone would need to be removed to accommodate the proposed development as well. The riparian trees and their removal were discussed with the RWQCB and the CDFW during an on-site meeting on March 23, 2011. Owing to the dead or diseased condition of the trees, or the minor infringement on the drip lines of the trees, the impacts were deemed approvable by the CDFW and the RWQCB.

Because development of the proposed project would involve the removal of protected trees, the project would result in a ***potentially significant*** impact associated with a conflict with the local ordinance protecting such resources if replacement of the protected trees is not consistent with the City's Tree Protection Ordinance.

Mitigation Measure(s)

Implementation of the following mitigation measures would ensure that the impact is *less-than-significant*.

Mitigation Measure 10 *Prior to removal of any on-site protected trees, the project applicant shall submit a final Tree Removal Plan to the Clayton Community Development Department for review and approval. Said Tree Removal Plan shall be in substantial conformance with the Tree Removal Permit approved by the Planning Commission. If tree removal is to occur during the avian nesting season (between February 1st and September 1st), a preconstruction nesting survey, as required per Mitigation Measures 6 and 7, shall be conducted by a qualified biologist at the expense of the project applicant.*

Mitigation Measure 11 *Prior to project approval, the Planning Commission shall approve a preliminary Tree Replacement Plan, which shall include the method of tree placement, as well as the replacement ratios, for the removal of an estimated 1,204 inches of on-site protected trees, in accordance with Section 15.70.040 of the Clayton Municipal Code. Replacement methods may include on-site tree replacement, payment of in-lieu fees, or a combination of both. It is important to note that any trees removed within the riparian limits shall be replaced on-site at a minimum ratio of 3:1 per direction provided by the CDFW and RWQCB during their on-site inspection. The replacement methods and ratios identified by the Planning Commission, as well as the CDFW and RWQCB (for trees in the riparian area), shall be incorporated into the Tree Replacement Plan, which shall be submitted to the City by the applicant prior to issuance of a Tree Removal Permit.*

Exhibit 16
Tree Preservation Plan

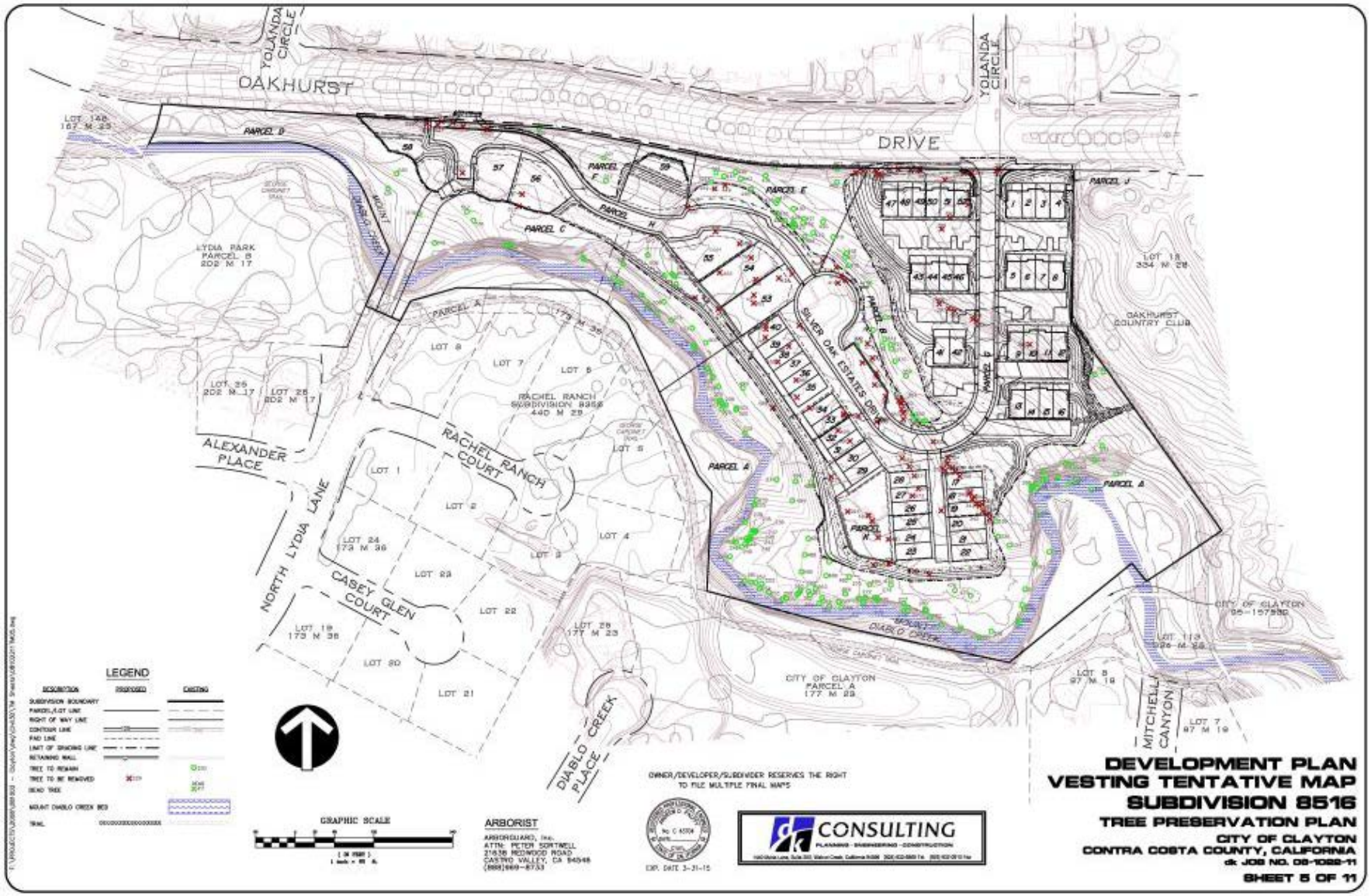


Exhibit 17
Tree Inventory Plan

TREE INVENTORY

NUMBER	SIZE(DIA.)	SPECIES	STATUS
207	15.2	WILLOW	TO REMAIN
208	7.8	WILLOW	TO REMAIN
209	14.7,5.6 & 6.0	WILLOW	TO REMAIN
210	36.1	VALLEY OAK	TO REMAIN
211	23.2	VALLEY OAK	TO REMAIN
212	7.3	CALIFORNIA BUCKEYE	TO BE REMOVED
213	6.8 & 5.5	CALIFORNIA BUCKEYE	TO REMAIN
214	27.5	WILLOW	TO REMAIN
215	8.8	ALMOND	TO REMAIN
216	26.7	OREGON ASH	TO REMAIN
217	26.7	CALIFORNIA BUCKEYE	TO REMAIN
218	16.8	WILLOW	TO REMAIN
219	12.2 & 8.0	CALIFORNIA BUCKEYE	TO REMAIN
220	20.3	VALLEY OAK	TO REMAIN
221	26.2	VALLEY OAK	TO REMAIN
222	18.2, 4.6 & 6.8	OREGON ASH	TO REMAIN
223	20.6	VALLEY OAK	TO REMAIN
224	14.6, 11.4 & 28.4	CALIFORNIA BUCKEYE	TO REMAIN
225	8.7	OREGON ASH	TO REMAIN
226	6.0	OREGON ASH	TO REMAIN
227	15.7	VALLEY OAK	TO REMAIN
228	8.5	CALIFORNIA BUCKEYE	TO REMAIN
229	20	VALLEY OAK	TO REMAIN
230	14.8	WILLOW	TO REMAIN
231	13.4,8.3,7.6,6.3&6	ELDERBERRY	TO REMAIN
232	10.0	WILLOW	TO REMAIN
233	11.0 & 11.0	WILLOW	TO REMAIN
234	7.8 & 3.0	WILLOW	TO REMAIN
235	10.2	CALIFORNIA BUCKEYE	TO REMAIN
236	6.9	CALIFORNIA BUCKEYE	TO REMAIN
237	7.3	CALIFORNIA BUCKEYE	TO REMAIN
238	8.2	CALIFORNIA BUCKEYE	TO REMAIN
239	8.8 & 8.1	CALIFORNIA BUCKEYE	TO REMAIN
240	13.7	CALIFORNIA BUCKEYE	TO REMAIN
241	11.0	CALIFORNIA BUCKEYE	TO REMAIN
242	12.8	CALIFORNIA BUCKEYE	TO REMAIN
243	6.7 & 5.7	CALIFORNIA BUCKEYE	TO REMAIN
244	7.4	CALIFORNIA BUCKEYE	TO REMAIN
245	18.2	BUTTERNUT	TO REMAIN
246	13.3,8.0,7.2&6.2	CALIFORNIA BLACK WALNUT	TO REMAIN
247	8.8	CALIFORNIA BUCKEYE	TO REMAIN
248	13.4	LIVE OAK	TO REMAIN
249	[illegible]	CALIFORNIA BUCKEYE	TO REMAIN
250	8.5	OREGON ASH	TO REMAIN
251	7.5	CALIFORNIA BLACK WALNUT	TO REMAIN
252	18.4	LIVE OAK	TO REMAIN
253	8	LIVE OAK	TO REMAIN
254	8.5	CALIFORNIA BUCKEYE	TO REMAIN
255	10.5	ALMOND	TO REMAIN
256	[illegible]	CALIFORNIA BUCKEYE	TO REMAIN
257	9.8 & 3.0	ELDERBERRY	TO REMAIN
258	15.4	LIVE OAK	TO REMAIN
259	7.2	LIVE OAK	TO REMAIN
260	8.8	ALMOND	TO REMAIN
261	7.8	VALLEY OAK	TO REMAIN
262	6.6	LIVE OAK	TO REMAIN
263	10.1	ALMOND	TO REMAIN
264	21.2	LIVE OAK	TO REMAIN
265	[illegible]	OREGON ASH	TO REMAIN
266	[illegible]	CALIFORNIA BUCKEYE	TO REMAIN
267	18	LIVE OAK	TO REMAIN
268	13.5	LIVE OAK	TO REMAIN
269	11.5/11.2	BLACK MULBERRY	TO REMAIN
270	7.5	LIVE OAK	TO REMAIN
271	7	CALIFORNIA BUCKEYE	TO REMAIN
272	7.8	CALIFORNIA BUCKEYE	TO REMAIN
273	9.5	CALIFORNIA BUCKEYE	TO REMAIN
274	18.8	LIVE OAK	TO REMAIN
275	[illegible]	ELDERBERRY	TO REMAIN
276	24.1	VALLEY OAK	TO REMAIN
277	10.5	CHINESE PISTACHE	TO REMAIN
278	28	WILLOW	TO REMAIN
279	6.4 & 4.6	CALIFORNIA BUCKEYE	TO REMAIN
280	8.7	CALIFORNIA BUCKEYE	TO REMAIN
281	18.8	LIVE OAK	TO REMAIN

TREE INVENTORY CONT'D

NUMBER	SIZE(DIA.)	SPECIES	STATUS
282	[illegible]	BUCKEYE	TO REMAIN
283	5,6,3.6	CALIFORNIA BUCKEYE	TO REMAIN
284	23.4	LIVE OAK	TO REMAIN
285	[illegible]	CALIFORNIA BUCKEYE	TO REMAIN
286	6,5,3.6	CALIFORNIA BLACK WALNUT	TO REMAIN
287	8.1	CALIFORNIA BUCKEYE	TO REMAIN
288	8.7	CALIFORNIA BUCKEYE	TO REMAIN
289	8.3,5.5,3.5	CALIFORNIA BUCKEYE	TO REMAIN
290	8.0,11.2	CALIFORNIA PEPPER	TO REMAIN
291	14.3,11.3,13.7	LIVE OAK	TO REMAIN
292	65.7	VALLEY OAK	TO REMAIN
293	8.3	WILLOW	TO REMAIN
294	7.8	OREGON ASH	TO REMAIN
295	16.6	WILLOW	TO REMAIN
296	10	WILLOW	TO REMAIN
297	16.8	WILLOW	TO REMAIN
298	13.7, 5.8	WILLOW	TO REMAIN
299	10.5	VALLEY OAK	TO REMAIN
300	11.1	VALLEY OAK	TO REMAIN
301	13.7	VALLEY OAK	TO REMAIN
302	9.0 & 3.3	CALIFORNIA PEPPER	TO REMAIN
303	11.8	OREGON ASH	TO REMAIN
304	8.2 & 8.5	CALIFORNIA BLACK OAK	TO REMAIN
305	6.2 & 7.5	ALMOND	TO REMAIN
306	27.7	BLUE OAK	TO REMAIN
307	5.5	WILLOW	TO REMAIN
308	6	WILLOW	TO REMAIN
309	13.2 & 8.5	WILLOW	TO REMAIN
310	20.1	LIVE OAK	TO REMAIN
311	24.7	LIVE OAK	TO REMAIN
330	14.7	LIVE OAK	TO BE REMOVED
331	7.8	VALLEY OAK	TO REMAIN
332	11.8	VALLEY OAK	TO REMAIN
333	35	LIVE OAK	TO REMAIN
334	41.8	VALLEY OAK	TO REMAIN
335	10.5	LIVE OAK	TO REMAIN
336	7.7	LIVE OAK	TO REMAIN
337	17.3	LIVE OAK	TO BE REMOVED
338	9.7	LIVE OAK	TO BE REMOVED
339	12.8	LIVE OAK	TO BE REMOVED
340	13.4	LIVE OAK	TO BE REMOVED
341	8.5	LIVE OAK	TO BE REMOVED
342	8.3	VALLEY OAK	TO BE REMOVED
343	20.1	LIVE OAK	TO BE REMOVED
344	14.8	LIVE OAK	TO BE REMOVED
345	15.4	LIVE OAK	TO BE REMOVED
346	10	LIVE OAK	TO BE REMOVED
347	11.71 & 11.6	LIVE OAK	TO BE REMOVED
348	8.4	VALLEY OAK	TO BE REMOVED
349	10.5	LIVE OAK	TO BE REMOVED
350	14.2	LIVE OAK	TO BE REMOVED
351	8.4	LIVE OAK	TO BE REMOVED
352	11.8	LIVE OAK	TO BE REMOVED
353	16.8	LIVE OAK	TO BE REMOVED
354	13.2 & 12.7	LIVE OAK	TO BE REMOVED
355	41	LIVE OAK	TO BE REMOVED
356	12.4	LIVE OAK	TO REMAIN
357	8.6	LIVE OAK	TO REMAIN
358	8.4 & 18.6	CALIFORNIA PEPPER	TO REMAIN
359	27.3	CALIFORNIA PEPPER	TO REMAIN
360	24.1	LIVE OAK	TO BE REMOVED
361	6.5	DEODAR CEDAR	TO BE REMOVED
362	6.1	CALIFORNIA PEPPER	TO BE REMOVED
363	10.8	LIVE OAK	TO BE REMOVED
364	8	CALIFORNIA PEPPER	TO BE REMOVED
365	9.8	LIVE OAK	TO BE REMOVED
366	19.1	LIVE OAK	TO BE REMOVED
367	5.9	ORANGE TREE	TO BE REMOVED
368	28.5	LIVE OAK	TO BE REMOVED
369	34.4	VALLEY OAK	TO REMAIN
370	10.3	LIVE OAK	TO REMAIN
371	8.3	BLUE OAK	TO REMAIN
372	8.1	BLUE OAK	TO REMAIN
373	8.3	LIVE OAK	TO REMAIN
374	17.8	LIVE OAK	TO REMAIN
375	20	BOX-ELDER	TO BE REMOVED

TREE INVENTORY CONT'D

NUMBER	SIZE(DIA.)	SPECIES	STATUS
376	7.4	PERSIMMON	TO BE REMOVED
377	24.6	LIVE OAK	TO BE REMOVED
378	7.3	PERSIMMON	DEAD
379	26.6	BLUE OAK	TO REMAIN
380	10.5	VALLEY OAK	TO REMAIN
383	14	VALLEY OAK	TO BE REMOVED
384	14.8	VALLEY OAK	TO BE REMOVED
385	15.3	VALLEY OAK	TO BE REMOVED
387	12.8	VALLEY OAK	TO BE REMOVED
388	7.8 & 6.1	BLUE OAK	TO BE REMOVED
389	14.4	HOLLY OAK	TO BE REMOVED
390	14.5	CALIFORNIA SYCAMORE	TO BE REMOVED
391	15	HOLLY OAK	TO BE REMOVED
392	30	VALLEY OAK	TO BE REMOVED
393	10.7	VALLEY OAK	TO BE REMOVED
394	7.2	ALMOND	TO BE REMOVED
395	7,6,6.5	ALMOND	TO BE REMOVED
396	6.7 & 3.7	VALLEY OAK	TO BE REMOVED
397	9.7	VALLEY OAK	TO BE REMOVED
398	8.4	VALLEY OAK	TO BE REMOVED
399	7.6	VALLEY OAK	TO BE REMOVED
400	8.3	VALLEY OAK	TO BE REMOVED
401	[illegible]	CHINESE PISTACHE	TO BE REMOVED
402	6.5	VALLEY OAK	TO BE REMOVED
403	8	VALLEY OAK	TO BE REMOVED
404	9.2	VALLEY OAK	TO BE REMOVED
405	14.1	VALLEY OAK	TO BE REMOVED
406	8	VALLEY OAK	TO BE REMOVED
407	8.3	VALLEY OAK	TO REMAIN
408	5.4 & 4.8	ALMOND	TO REMAIN
409	8.2	VALLEY OAK	TO REMAIN
410	14.6	BLUE OAK	TO REMAIN
411	37	VALLEY OAK	DEAD
412	7.9	DEODAR CEDAR	TO BE REMOVED
413	6.9	DEODAR CEDAR	TO BE REMOVED
414	12.4	INCENSE CEDAR	TO BE REMOVED
415	7.5	INCENSE CEDAR	TO BE REMOVED
416	24	BLUE OAK	TO REMAIN
417	17.6	VALLEY OAK	TO REMAIN
418	27.5	VALLEY OAK	TO REMAIN
419	23.0	BLUE OAK	TO REMAIN
420	16.1	LIVE OAK	TO REMAIN
421	7.1	ALMOND	TO REMAIN
422	12.6	BLUE OAK	TO REMAIN
423	7.7 & 3.7	ELDERBERRY	TO REMAIN
424	8.8	ALMOND	TO REMAIN
425	26.4	BLUE OAK	TO REMAIN
426	21.8	BLUE OAK	TO REMAIN
427	8.5	SCRUB OAK	TO REMAIN
428	14.7	BLUE OAK	TO REMAIN
429	14.4	BLUE OAK	TO REMAIN
430	8.2	LIVE OAK	TO REMAIN
431	17.2	BLUE OAK	TO REMAIN
432	28.5	VALLEY OAK	TO REMAIN
433	7	BLUE OAK	TO REMAIN
434	44.2	DEODAR CEDAR	TO BE REMOVED
435	32.2	DEODAR CEDAR	TO BE REMOVED
436	10.1	CALIFORNIA PEPPER	TO BE REMOVED
437	7.6	VALLEY OAK	TO BE REMOVED
438	6.8	DEODAR CEDAR	TO BE REMOVED
440	16.1 & 10.5	CALIFORNIA PEPPER	TO BE REMOVED
441	18.0	CALIFORNIA BUCKEYE	TO BE REMOVED
442	32.4	VALLEY OAK	TO BE REMOVED
443	22.7	VALLEY OAK	TO REMAIN
444	8	BLUE OAK	TO REMAIN
445	[illegible]	VALLEY OAK	TO REMAIN
446	17.8 & 5.2	BLUE OAK	TO REMAIN
447	12.6	VALLEY OAK	TO REMAIN
448	28.0	BLUE OAK	TO REMAIN
449	15	BLUE OAK	TO BE REMOVED
450	38.1	VALLEY OAK	TO BE REMOVED
451	13.3	ORANGE TREE	TO BE REMOVED
452	12	LIVE OAK	TO BE REMOVED
453	28.0	MONTEREY PINE	TO BE REMOVED
454	7.6	ELDERBERRY	TO BE REMOVED
455	9.4 & 9.8	VALLEY OAK	TO BE REMOVED

TREE INVENTORY CONT'D

NUMBER	SIZE(DIA.)	SPECIES	STATUS
456	8.4	VALLEY OAK	TO BE REMOVED
457	7.6	VALLEY OAK	TO BE REMOVED
458	8.7	ALMOND	TO BE REMOVED
459	11.7	ALEPPO PINE	TO BE REMOVED
460	60.7	VALLEY OAK	TO BE REMOVED
461	8.4 & 7.6	TOBIRA	TO BE REMOVED
462	8.3 & 3.5	CALIFORNIA PEPPER	TO BE REMOVED
463	6.4	ALMOND	TO BE REMOVED
464	14.2	LIVE OAK	TO BE REMOVED
465	12.4	VALLEY OAK	TO BE REMOVED
466	18.1	SOUTHERN MAGNOLIA	TO BE REMOVED
467	11.4	VALLEY OAK	TO BE REMOVED
468	[illegible]	TOBIRA	TO BE REMOVED
469	[illegible]	POMEGRANATE	TO BE REMOVED
470	[illegible]	POMEGRANATE	TO BE REMOVED
471	8.4 & 7.3	POMEGRANATE	TO BE REMOVED
472	8.2 & 6.8	POMEGRANATE	TO BE REMOVED
473	7.1 & 5.7	POMEGRANATE	TO BE REMOVED
474	39	LIVE OAK	TO BE REMOVED
475	6.4	ALMOND	TO REMAIN
476	7.3	ALMOND	TO REMAIN
477	23.5	LIVE OAK	TO BE REMOVED
478	13.7	LIVE OAK	TO BE REMOVED
479	[illegible]	BLACK MULBERRY	TO REMAIN
480	6.3 & 6.1	VALLEY OAK	TO BE REMOVED
481	40.8	LIVE OAK	TO BE REMOVED
482	8.6	CALIFORNIA PEPPER	TO BE REMOVED
483	10.5	EDIBLE FIG	TO BE REMOVED
484	[illegible]	BLACK MULBERRY	TO REMAIN
485	12.6 & 18	BLACK MULBERRY	TO REMAIN
486	14	EDIBLE FIG	TO REMAIN
487	13.4	EDIBLE FIG	TO REMAIN
488	10	EDIBLE FIG	TO REMAIN
489	14	EDIBLE FIG	TO REMAIN
490	8.5	PLUM	TO REMAIN
491	6.8 & 7.4	POMEGRANATE	TO BE REMOVED
492	[illegible]	POMEGRANATE	TO BE REMOVED
493	7.1,8.6,6.1	POMEGRANATE	TO BE REMOVED
494	49.9	VALLEY OAK	TO REMAIN
495	20.7	SCRUB OAK	TO REMAIN
496	[illegible]	LOQUAT	TO REMAIN
497	8.3	TOBIRA	TO BE REMOVED
498	33.8 & 41.8	VALLEY OAK	TO BE REMOVED
499	42.3	ALEPPO PINE	TO REMAIN
500	15.1 & 8.1	CALIFORNIA BUCKEYE	TO REMAIN
501	21.5	VALLEY OAK	TO REMAIN
502	13.7	INCENSE CEDAR	TO REMAIN
503	[illegible]	LIVE OAK	TO REMAIN
504	31.2	CAMPHOR TREE	TO BE REMOVED
505	30.5	CALIFORNIA PEPPER	TO REMAIN
506	11.7 & 10.8	CALIFORNIA PEPPER	TO REMAIN
507	19.5	FREMONT POPLAR	TO REMAIN
508	18	FREMONT POPLAR	TO REMAIN
509	18	CALIFORNIA PEPPER	TO REMAIN
510	7.5 & 3.7	VALLEY OAK	TO REMAIN
511	26.6	CALIFORNIA PEPPER	TO REMAIN
512	30.8	BLUE OAK	TO REMAIN
513	12.7	VALLEY OAK	TO BE REMOVED
514	14.1	VALLEY OAK	TO BE REMOVED
516	8.3	BLUE OAK	TO REMAIN
517	29.2	BLUE OAK	TO REMAIN
518	43.2	VALLEY OAK	TO REMAIN
519	24.9	LIVE OAK	TO REMAIN
520	14.5	ENGLISH WALNUT	TO BE REMOVED
521	29.4	BLUE OAK	TO REMAIN
522	[illegible]	CALIFORNIA PEPPER	TO REMAIN
523	[illegible]	ALMOND	TO BE REMOVED
524	[illegible]	ALMOND	TO BE REMOVED
525	7.7	VALLEY OAK	TO BE REMOVED
526	8.4	ALMOND	TO BE REMOVED
527	6.2 & 3.7	ALMOND	TO BE REMOVED
528	6.0 & 4.2	ALMOND	TO BE REMOVED
529	8.4	VALLEY OAK	TO BE REMOVED
530	8.4	ALMOND	TO REMAIN
531	8	WILLOW	TO REMAIN

TREE SCHEDULE

TREES LOCATED	302
TREES TO REMAIN	184
DEAD TREES	2
TREES TO BE REMOVED	116

ARBORIST

ARBORGUARD, Inc.
ATTN: PETER SORTWELL
21638 REDWOOD ROAD
CASTRO VALLEY, CA 94546
(888)969-8733

EXP. DATE 3-31-15

OWNER/DEVELOPER/SUBDIVIDER RESERVES THE RIGHT TO FILE MULTIPLE FINAL MAPS

dk CONSULTING
PLANNING · ENGINEERING · CONSTRUCTION

DEVELOPMENT PLAN
VESTING TENTATIVE MAP
SUBDIVISION 8516
TREE INVENTORY PLAN
CITY OF CLAYTON
CONTRA COSTA COUNTY, CALIFORNIA
dk JOB NO. 08-1082-11
SHEET 6 OF 11

Mitigation Measure 12 *The following construction policies and guidelines for tree preservation and protection put forth by the City of Clayton shall be followed during project implementation:*

- *The applicant shall submit a tree protection plan to identify the location of the tree trunk and dripline of all on- and off-site trees subject to Section 15.70.020.*
- *A protective fence shall be installed around all trees subject to the tree protection plan. The protective fence shall be installed prior to commencement of any construction activity and shall remain in place for the duration of construction.*
- *Grading, excavation, deposition of fill, erosion, compaction, and other construction-related activities shall not be permitted within the dripline or at locations which may damage the root system of trees subject to the tree protection plan, unless such activities are specifically allowed by the tree protection plan. Tree wells may be used if specifically allowed by the tree protection plan.*
- *Oil, gas, chemicals, vehicles, construction equipment, machinery, and other construction materials shall not be allowed within the dripline of trees subject to the tree protection plan.*

f. Would the project conflict with the provisions of an adopted habitat conservation plan? ..... Less-Than-Significant With Mitigation Incorporated

Discussion (f.)

The East Contra Costa County Habitat Conservation Plan (ECCCHCP) was adopted by the participating agencies, and became effective in the City of Clayton in January 2008. The ECCCHCP is intended to provide a coordinated, regional approach to special-status species conservation and development regulation. A total of 28 species are covered under the ECCCHCP, including California red-legged frog, California tiger salamander, Alameda whipsnake, San Joaquin kit fox, vernal pool tadpole shrimp, and burrowing owl, among others. The ECCCHCP provides streamlined permits from the U.S. Fish and Wildlife Service (USFWS) and CDFW for covered species for new urban development projects and a variety of public infrastructure projects. As discussed above, the ECCCHCP has undergone separate environmental analysis, including implementation of the requirements and fees set forth in the ECCCHCP. The environmental documentation concluded that implementation of the ECCCHCP would mitigate biological impacts in the region through compliance with the requirements and fee payments within the ECCCHCP. Thus, this IS/MND relies, in part, on the previously prepared and approved environmental analysis of the ECCCHCP, particularly for the biological resources analysis of the proposed project, which is a supported approach by the HCP Conservancy staff.

The proposed project site is located within the ECCCHCP boundaries, and would be considered a regulated development project under the plan. According to the ECCCHCP Development Fee Zone Map, the proposed project site is within development fee Zone II. The project has been designed to avoid possible inadvertent take of special-status species by including a minimum 50-foot buffer from Mount Diablo Creek and associated riparian vegetation. However, development of the project and associated infrastructure would result in permanently and temporarily disturbed lands.[16] According to the Planning Survey Report prepared for the proposed project and filed with the ECCCC, the project would result in 7.38 acres of permanently disturbed land, 0.270-acre of permanently disturbed riparian woodland, 0.75-acre of temporarily disturbed land, and 0.13-acre of temporarily disturbed riparian woodland. Thus, payment of the appropriate associated ECCCHCP fees would be required. Mitigation Measure 7 requires the payment of ECCCHCP impact fees, which would ensure that the project complies with the ECCCHCP. Therefore, without payment of the appropriate fees, the project could conflict with provisions of the adopted habitat conservation plan, and impacts could be ***potentially significant***.

Mitigation Measure(s)

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

Mitigation Measure 13 *Implement Mitigation Measure 7.*

[16] *Acreage of land permanently disturbed* is broadly defined in the HCP/NCCP to include all areas removed from an undeveloped or habitat-providing state and includes land in the same parcel or project that is not developed, graded, physically altered, or directly affected in any way but is isolated from natural areas by the covered activity. Unless such undeveloped land is dedicated to the Preserve System or is a deed-restricted creek setback, the development fee will apply.

6. CULTURAL RESOURCES.

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

a. Would the project cause a substantial adverse change in the significance of a historical resource as defined in Section 15064.5? ..... Less-Than-Significant Impact

Discussion (a.)

A Cultural Resources Survey was conducted for the project site by Tom Origer & Associates.[17] As part of the Cultural Resources Survey, Origer & Associates requested a records search at the Northwest Information Center (NWIC). The NWIC search (File No. 13-0162) found that study area was included in a large survey completed by Miley Holman in 1978. Resources were not found during that survey within or adjacent to the present study area. While known prehistoric resources are not located within the study area, the project site contains the remains of the early 20th century Yolanda Estate, later known as the Hurd Ranch. The Yolanda Estate is briefly described in Clayton's Heritage Preservation Task Force Report.[18] The main residence of the estate was recorded by Mark Hulbert in 2009 after the house was destroyed by fire.[19] The property still contains an extant dwelling, a garage, possibly a workshop, a tank house, a bath house, and several horse barns. The horse barns are newer and were not part of the original estate. The caretaker's house and some of the other buildings, including the tank house, are built in the Spanish Eclectic style.

[17] Tom Origer & Associates, *A Cultural Resources Survey for the Silver Oak Estates Residential Project, Clayton, Contra Costa County, California*, August 27, 2013.

[18] City of Clayton, *Clayton Heritage Preservation Task Force Report*, September 1994, p. 26.

[19] Mark Hulbert, Preservation Architect, *Primary Record, 5701 Clayton Road*, November 4, 2009. According to Hulbert's research, the subject structure was, originally, a second home of Juliette Alexander (1864-1948), a Piedmont resident, daughter of Samuel T. Alexander, and Granddaughter of William P. Alexander, both forebears having been 19th-20th century Hawaiian agriculturalists and industrialists. Few records exist about this semi-rural property, so few definitive facts are recorded. Based on second hand information, the property may have been acquired by J. Alexander in 1930 (thought it may already have been under the ownership of her family). Juliette Alexander was a descendant and heir of the prosperous Alexander family of Hawaii. She obviously lived prosperously as a result. Otherwise, she is not identifiable as a person important to local or regional history. Following J. Alexander's passing, the property was passed to her niece, Martha Alexander Hurd (1902-2004), the daughter of Juliette's brother Wallace McKinney Alexander, who also used the property as a secondary residence. Hurd relinquished the property to the current owner in the late-1970s. The main residence was destroyed in a fire in August 2009.

The original 1930s estate buildings are anecdotally attributed to architect Charles W. Dickey. During Origer & Associates' study, limited historical research was undertaken to establish Dickey's significance in the field of architecture. Research found that Dickey designed three of Oakland's public libraries, the Claremont Hotel, and many other East Bay commercial, civic, and residential buildings between 1895 and 1923. In 1923, Dickey relocated to Hawaii where he was born. He had been working for Hawaiian clients even during his years in California. It was in Hawaii that Dickey's importance as an architect was established. J. Meredith Neil, professor of American Studies at the University of Hawaii, wrote "No one man has a more central place in Hawaii's architectural history than Charles William Dickey".[20] Dickey was known for his sensitive treatment of home designs which emphasized Hawaiian culture rather than recycling American styles on the islands. His work stressed the importance of interior courtyards, broad lanais, fountains, and other features appropriate to the climate and culture. As discussed above, Dickey's importance as an architect was established in Hawaii and was associated with Hawaiian architectural history, rather than California's architectural history. As such, the 1930s estate buildings located on the project site are not associated with the lives of persons important to California's past (see Section 15064.5 of the CEQA Guidelines).

Based on Origer & Associates' research, their professional opinion is that neither the remains of the burned down main residence, nor the remaining buildings, are eligible for inclusion on the California Register. Architecturally, there are some buildings on the property constructed in a Spanish Eclectic style, a style very common in California during the 1920s to 1940s. These buildings are not especially good representatives of the style. Therefore, Origer & Associates does not recommend further evaluation of the on-site structures due to their lack of historical significance. Therefore, the project would have a ***less-than-significant*** impact with respect to causing a substantial adverse change in the significance of a historical resource.

b. Would the project cause a substantial adverse change in the significance of a unique archaeological resource pursuant to Section 15064.5? ..... Less-Than-Significant With Mitigation Incorporated

c. Would the project directly or indirectly destroy a unique paleontological resource on site or unique geologic features? Less-Than-Significant With Mitigation Incorporated

d. Would the project disturb any human remains, including those interred outside of formal cemeteries. ..... Less-Than-Significant With Mitigation Incorporated

Discussion (b - d.)

A field survey was completed by Origer & Associates on August 16, 2013. The survey area was examined intensively by walking in a zigzag pattern within corridors about 15

[20] J. Meredith Neil, "The Architecture of C.W. Dickey in Hawaii," *The Hawaiian Journal of History*, Vol. 9, pp. 101-113, as cited in Origer & Associates, "*A Cultural Resources Survey for the Silver Oak Estates Project*," p. 7.

meters wide. Visibility was excellent to poor, with vegetation the chief hindrance. A hoe was used to clear small patches, as needed, so that the ground could be inspected.

Based on the distribution of known cultural resources and their environmental settings, it was anticipated that prehistoric archaeological sites could be found within the study area. Prehistoric archaeological site indicators expected to be found in the region include but are not limited to: obsidian and chert flakes and chipped stone tools; grinding and mashing implements such as slabs and handstones, and mortars and pestles; bedrock outcrops and boulders with mortar cups; and locally darkened midden soils containing some of the previously listed items plus fragments of bone, shellfish, and fire affected stones. Historic period site indicators generally include: fragments of glass, ceramic, and metal objects; milled and split lumber; and structure and feature remains such as building foundations and discrete trash deposits (e.g., wells, privy pits, dumps). Archaeological site indicators were not detected on-site during the intensive field survey.

However, given the fact that archaeological sites have been found elsewhere within the City of Clayton, the possibility exists that buried archaeological deposits could be present on-site, and accidental discovery could occur during construction of the project. Therefore, the proposed project could have a ***potentially significant*** impact to archaeological resources.

Mitigation Measure(s)

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

Mitigation Measure 14 *Prior to the issuance of a grading permit, plans shall include a requirement (via notation) indicating that if cultural resources, or human remains are encountered during site grading or other site work, all such work shall be halted immediately within the area of discovery and the contractor shall immediately notify the City of the discovery. In such case, the City, at the expense of the project applicant, shall 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 City for review and approval a report of the findings and method of curation or protection of the resources. Further grading or site work within the vicinity of the discovery, as identified by the qualified archaeologist, shall not be allowed until the preceding steps have been taken.*

Mitigation Measure 15 *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 in the immediate vicinity of the find, which shall be identified by the qualified archaeologist at the applicant's expense, until the preceding actions have been implemented.

7. GEOLOGY AND SOILS.

Issues		Potentially Significant Impact	Less-Than-Significant With Mitigation Incorporated	Less-Than-Significant Impact	No Impact
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?	□	X	□	□
	ii. Strong seismic ground shaking?	□	X	□	□
	iii. Seismic-related ground failure, including liquefaction?	□	X	□	□
	iv. Landslides?	□	X	□	□
b.	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?	□	X	□	□
c.	Result in substantial soil erosion or the loss of topsoil?	□	X	□	□
d.	Be located on expansive soil, as defined in the Uniform Building Code?	□	X	□	□
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?	□	□	□	X

a-i. Would the project expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving 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?..... Less-Than-Significant With Mitigation Incorporated

a-ii. Would the project expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving strong seismic ground shaking? ..... Less-Than-Significant With Mitigation Incorporated

aiii-iv. Would the project expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving seismic-related ground failure, liquefaction and landslides? .... Less-Than-Significant With Mitigation Incorporated

b. Would the project 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? ..... Less-Than-Significant With Mitigation Incorporated

Discussion (a. and b.)

This section of the IS/MND is primarily based upon the Geotechnical Report Update prepared for the proposed project by ENGEO Incorporated in August 2013. According to the Geotechnical Report Update, numerous small earthquakes occur every year in the San Francisco Bay Region, and larger earthquakes have been recorded and could be expected to occur in the future. Based on United States Geologic Survey (USGS) 2008 National Seismic Hazard Maps, nearby active faults include the Green Valley fault, approximately four miles northeast of the project site and capable of a maximum magnitude of 6.8, and the Great Valley fault, approximately seven miles north of the project site and capable of a maximum magnitude of 6.7.

Potential seismic hazards resulting from a nearby moderate to major earthquake can generally be classified as primary and secondary. The primary effect is ground rupture, also called surface faulting. The common secondary seismic hazards include ground shaking, liquefaction, densification, lateral spreading, and ground lurching. Further discussions of such hazards as they apply to the site are provided below. In addition, based on topographic and lithologic data, the risk of regional subsidence or uplift, landslides, tsunamis, or seiches is considered low to negligible at the site.

Ground Rupture

Active faults do not exist on the project site nor would cross the property, and the site is not located within an Earthquake Fault Special Study Zone. The proposed project site is not located within a currently designated Alquist-Priolo Earthquake Fault Zone and known surface expression of active faults is not believed to exist within the site. Thus, fault rupture through the project site is not anticipated and would be considered unlikely to occur at the project site.

Ground Shaking

An earthquake of moderate to high magnitude generated within the San Francisco Bay region could cause considerable ground shaking at the site. All structures proposed for the project would be designed in accordance with the adopted edition of the California Building Code (CBC) requirements in place at the time of construction. Structures built according to the seismic design provisions of current building codes should 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. Conformance to the current building code recommendations does not constitute any kind of guarantee that significant structural damage would not occur in the event of a maximum magnitude earthquake; however, according to the Geotechnical Report Update prepared for the proposed project, compliance with building code recommendations would help to ensure

well-designed and well-constructed structures that would not collapse or cause loss of life in the event of a major earthquake. Consequently, as the proposed project would comply with all applicable building code recommendations, the project would not be anticipated to be substantially affected by ground shaking.

Liquefaction and Lateral Spreading

Soil liquefaction results from loss of strength during cyclic loading, such as imposed by earthquakes. Soils most susceptible to liquefaction are clean, loose, saturated, uniformly graded fine sands below the groundwater table. Empirical evidence indicates that loose silty sands are also potentially liquefiable. When seismic ground shaking occurs, the soil is subjected to cyclic shear stresses that can cause excess hydrostatic pressures to develop. Lateral spreading is a failure within weak soils, typically due to liquefaction, which causes a soil mass to move along a free face, such as an open channel, or down a gentle slope. As such, reduction of liquefaction risk reduces the potential for lateral spreading.

Based on interactive mapping available at the Association of Bay Area Governments (ABAG) website, the southern portion of the site near Mount Diablo Creek is mapped within an area classified as "Very High" to "High" susceptibility to liquefaction depending on the earthquake scenario.[21] The northern portion of the site is mapped within an area classified as "Low" susceptibility to liquefaction. The site is primarily mapped as potentially liquefiable due to the presence of alluvium soils mapped at the site.

Variable strata of loose sandy gravel five to 10 feet thick were encountered in two on-site borings at depths of 15 to 20 feet below the ground surface. A preliminary liquefaction analysis indicates that the loose sandy gravel layers observed in the borings are potentially liquefiable. The potentially liquefiable layers identified at the site may present a hazard for lateral spreading. Because potentially liquefiable layers were observed at the project site, and, thus, lateral spread is a potential concern for the site, removal of the liquefiable layers would be required to avoid impacts.

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 can cause ground cracks to form in weaker soils. The potential for the formation of such cracks is considered greater at contacts between deep alluvium and bedrock. According to the Geotechnical Report Update prepared for the proposed project, such an occurrence is possible at the site as in other locations in the Bay Area region; however, based on the site location, the offset is expected to be very minor.

[21] Association of Bay Area Governments. Interactive Liquefaction Hazard Map. Available at: http://quake.abag.ca.gov/earthquakes/#LIQUEFACTION. Accessed September 9, 2013.

Existing Non-Engineered Fill

According to the Geotechnical Report Update, portions of the site are underlain by minor non-engineered fills. The fills were encountered in the northeastern corner of the project site. The extent of fill may be up to 10 feet in thickness in some areas near Oakhurst Drive. Non-engineered fills could undergo excessive settlement, especially under new fill or building loads. Therefore, to reduce potential total and differential settlements, any uncontrolled existing fills should be completely over-excavated and removed.

Soil Corrosion Potential

An evaluation of possible corrosion impacts to site improvements has not been conducted on the subgrade soils. As such, the Geotechnical Report Update recommends either testing be conducted after rough grading of the site or the project be designed considering the severe sulfate parameters. To ensure impacts associated with soil corrosion would not occur, the project shall implement the recommendations set forth in the Geotechnical Report Update.

Groundwater Conditions

Groundwater was encountered in five borings at depths ranging from approximately 15 to 25 feet below existing grades across the site. Fluctuations in the level of groundwater may occur due to variations in rainfall, irrigation practices, and other factors not evident at the time measurements were made as part of the Geotechnical Report Update. However, wet soil conditions may be encountered below the groundwater table, which could make proper compaction difficult or impossible. Therefore, engineering recommendations for wet soil conditions must be applied during construction activities.

Creek Bank Stability

The over-steepened banks of the adjacent Mount Diablo Creek may present a creek bank stability hazard over time from continued erosion. Creek bank erosion and failures observed would require mitigation for permanent stable configurations.

Conclusion

As discussed above, the proposed project could expose people or structures to potential adverse effects associated with liquefaction and lateral spreading, and may be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, particularly due to existing non-engineered fill, soil corrosion potential, groundwater conditions, and creek bank stability. Therefore, a ***potentially significant*** impact could occur.

Mitigation Measure(s)

The following mitigation measures would reduce the impacts from the proposed project to a *less-than-significant* level.

Mitigation Measure 16 *Prior to approval of the project's construction drawings, the project design shall be reviewed and approved by the*

City Engineer and Contra Costa County Building Department for consistency with the adopted CBC requirements in place at the time of construction.

Mitigation Measure 17 *During site grading, the project contractor shall remove the liquefiable layers identified in the Geotechnical Report Update and replace the loose sands with engineered fill, at the expense of the project applicant. The operations shall be supervised by a registered geotechnical engineer and a written summary of the operations shall be submitted to the City Engineer.*

Or

Prior to site grading, the project applicant shall have the liquefiable layers identified in the Geotechnical Report Update further characterized by a registered geotechnical engineer. Based on the results of the soil characterization, which shall be submitted to the City Engineer for review, the need for subexcavation could be reduced or eliminated. However, if the soils are characterized to be liquefiable, the above measure shall be implemented.

Mitigation Measure 18 *During construction, the project contractor shall completely remove and re-compact the existing non-engineered fill on-site under the supervision of a registered geotechnical engineer, at the expense of the applicant, according to the recommendations presented in Section 5 of the Geotechnical Report Update. The contractor shall consult the exploration logs and trench logs in Appendices A and C of the Geotechnical Report Update for existing non-engineered fill depths at specific locations. A written summary of the operations shall be submitted to the City Engineer.*

Mitigation Measure 19 *In lieu of performing chemical testing to assess the corrosion potential of the on-site soil, concrete foundations shall be designed considering the severe sulfate parameters as defined in the Geotechnical Report Update, as follows:*

Requirements for Concrete for Severe Sulfate Conditions					
		Cement Type			Calcium Chloride Admixture
Max w. cm	Min f'c (Psi)	ASTM C150	ASTM C595	ASTM C1157	
0.45	4500	V*	IP(HS), IS(<70), (HS)	HS	Not permitted
* Other available types of cement such as Type III or Type I are permitted if the C_3A contents are less than 8 or 5 percent, respectively.					

Final foundation design shall be approved by the City Engineer and Contra Costa County Building Inspection Department prior to approval of improvement plans.

Mitigation Measure 20 *During construction, if wet soil conditions are encountered, the project contractor shall mitigate the conditions by:*

1. *Frequent spreading and mixing of soils during warm dry weather;*
2. *Mixing soils with drier materials;*
3. *Mixing soils with a lime, lime-flash, or cement product; or*
4. *Stabilizing soils with aggregate, geotextile stabilization fabric, or both.*

Options 3 and 4 shall be evaluated and approved by a qualified geotechnical engineer and the City Engineer prior to implementation.

Mitigation Measure 21 *During construction, in lieu of grading within creek encroachment areas, the project contractor shall implement one or a combination of the following, as determined by a registered geotechnical engineer and the City engineer, in accordance with the recommendations of the Geotechnical Report Update:*

- *Retaining structures such as pier walls, soldier pile walls, or sheet pile walls shall be installed to support design fills and provide erosion protection. The foundation elements of the structures shall be below the scour depths.*
- *Slopes shall be constructed with keyways and reinforced with geogrid to allow for steeper configurations. The facing of the slopes shall require proper scour and erosion protection.*

c. Would the project result in substantial soil erosion or the loss of topsoil? .. Less-Than-Significant With Mitigation Incorporated

Discussion (c.)

Construction of the proposed project would involve the disturbance and relocation of topsoils, rendering earth surfaces susceptible to erosion from wind and water. During the grading and excavation phases of construction, appropriate measures consistent with the goals and policies of the Clayton Stormwater Management Ordinance and other applicable regulations (e.g., C.3 standards) would be required to be implemented in order to control erosion on the site and minimize the impacts related to loss of topsoil. See Section 9, Hydrology and Water Quality, of this IS/MND for further discussion regarding erosion as it relates to water quality. The loss of topsoil and susceptibility to erosion during construction resulting from grading and excavation of the project site would be considered a ***potentially significant*** impact.

Mitigation Measure(s)

Implementation of the following mitigation measure would ensure that the above impact is reduced to a *less-than-significant* level.

Mitigation Measure 22 *Prior to the issuance of a grading permit, the project applicant shall prepare to the satisfaction of the City Engineer, an erosion control plan that utilizes standard construction practices to limit the erosion effects during construction of the proposed project. Actions should include, but are not limited to:*

- *Hydro-seeding;*
- *Placement of erosion control measures within drainage ways and ahead of drop inlets;*
- *The temporary lining (during construction activities) of drop inlets with "filter fabric";*
- *The placement of straw wattles along slope contours;*
- *Use of a designated equipment and vehicle "wash-out" location;*
- *Use of siltation fences;*
- *Use of on-site rock/gravel road at construction access points; and*
- *Use of sediment basins and dust palliatives.*

d. Would the project be located on expansive soil, as defined in the Uniform Building Code? ..... Less-Than-Significant With Mitigation Incorporated

Discussion (d.)

Expansive soils change in volume with changes in moisture. They can shrink or swell and cause heaving and cracking of slabs-on-grade, pavements, and structures founded on shallow foundations. According to the Geotechnical Report Update prepared for the

proposed project, potentially expansive fat clay was observed near the surface of the site in several soil borings. Laboratory testing indicated that the soils exhibit high shrink/swell potential with variations in moisture content.

Building damage due to volume changes associated with expansive soils could be reduced by various methods. Successful performance of structures on expansive soils requires special attention during construction, including keeping exposed soils moist prior to placement of concrete for foundation construction. Recommendations are provided in the Geotechnical Report Update for reducing the swell potential of the clay, including compacting the soil at a high moisture content and controlling the amount of compaction. Without compliance with the recommendations, the proposed project could result in a ***potentially significant*** impact associated with expansive soils.

Mitigation Measure(s)

Implementation of the following mitigation measure would ensure that the above impact is reduced to a *less-than-significant* level.

Mitigation Measure 23 *During construction, the project contractor shall comply with all compaction requirements set forth in Section 5.7 of the Geotechnical Report Update prepared for the proposed project for review and approval by the City Engineer.*

e. Would the project have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of wastewater? ..... No Impact

Discussion (e.)

The proposed project would connect to existing sanitary sewer lines and would not involve the use of septic tanks or alternative wastewater disposal systems. Therefore, the proposed project would have ***no impact*** regarding soils supporting septic systems.

8. HAZARDS AND HAZARDOUS MATERIALS.

Issues		Potentially Significant Impact	Less-Than-Significant With Mitigation Incorporated	Less-Than-Significant Impact	No Impact
Would the project:					
a.	Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?	□	X	□	□
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?	□	X	□	□
c.	Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?	□	□	X	□
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?	□	□	□	X
e.	Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?	□	□	X	
f.	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?	□	X	□	□

a. Would the project create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials? ..... Less-Than-Significant With Mitigation Incorporated

b. Would the project 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? .... Less-Than-Significant With Mitigation Incorporated

Discussion (a. and b.)

Operations associated with the proposed project's residential uses would not involve the routine transport, use, or disposal of hazardous materials. Thus, during operations, the proposed project would not create any hazards to the public or the environment through reasonably foreseeable upset and accident conditions involving the likely release of hazardous materials into the environment.

The proposed project site currently contains several buildings associated with the former Yolanda Estate, later known as the Hurd Ranch. The main house was destroyed by fire in 2009; however, the property still contains the burned down remains of the main house

along with an extant dwelling, a garage, possibly a workshop, a tank house, a bath house, and several horse barns. The horse barns are newer and were not part of the original estate. A Phase I Environmental Site Assessment (ESA) was prepared for the proposed project in order to determine potentially hazardous conditions at the site (see Appendix C).

According to the records search performed as part of the Phase I ESA, which included a review of regulatory databases maintained by County, State, and federal agencies, documentation of hazardous materials violations or discharge on the property was not found. Documented soil or groundwater contamination associated with abutting properties was not found. However, physical evidence of potential soil and groundwater impairment associated with unregistered above-ground storage tanks (ASTs) and an unregistered underground storage tank (UST) was found on the property during the site reconnaissance performed as part of the Phase I ESA. An approximately 550-gallon AST that reportedly contained heating oil was observed along the southern bathhouse wall. A hand-pump dispenser, indicative of an UST, was observed in the southeast corner of the garage building. An approximately 25-gallon rectangular AST was observed along the eastern garage wall, adjacent to the location of the hand-pump dispenser. Because the contents of the storage tanks are unknown, and the condition of the UST and its potential impact to soil and groundwater is unknown, the on-site ASTs and UST would be considered Recognized Environmental Conditions (RECs). Thus, the tanks should be removed and further investigation should be performed in order to determine the impact to the soil and groundwater.

The previous developments on the property were serviced by a water supply well and septic systems. The on-site domestic water supply well would remain on-site and continue to be used for off-site irrigation. The septic systems would need to be properly abandoned prior to development of the proposed project. In addition, an Asbestos and Lead Survey was conducted by C&W Environmental Consulting, Inc. in January 24, 2010 for the main house on site that was destroyed by fire in 2009. Asbestos was identified in the boiler insulation and pipe lagging taken from the basement boiler located in the main structure. Additionally, regulated levels of lead were identified within the exterior siding, the interior paint waste stream, the ceramic tile waste stream of the bathroom, the ceramic floor tile waste stream of the main structure, and within the exterior siding of the caretaker's cottage. Removal and/or disturbance of the asbestos- or lead-containing materials would require compliance with all applicable local, State, and federal regulations, as construction workers could be exposed to such materials during demolition and/or handling of the structures and/or debris.

Therefore, the proposed project could create a significant hazard to the public or the environment through a reasonably foreseeable upset or accidental condition involving the release of hazardous materials into the environment, and a ***potentially significant*** impact would result.

Mitigation Measure(s)

Implementation of the following mitigation measures would ensure that the above impacts are reduced to a *less-than-significant* level.

Mitigation Measure 24 *Prior to issuance of a grading permit, the applicant shall hire an Environmental Consultant to perform a Phase II Environmental Site Assessment (ESA) in order to determine the possible impacts from both the above-ground storage tanks (ASTs) and underground storage tank (UST) on the project site. The Phase II ESA shall include soil and groundwater sampling to determine if the previous uses of the unregistered storage tanks have impacted the property. The soil and groundwater analytical results shall be documented in the Phase II ESA report and submitted to the City Community Development Department, who may elect to hire a third-party, at the applicant's expense, to peer review the Phase II ESA. If the Phase II ESA determines that the on-site soils and groundwater have not been impacted, the tanks shall be removed and disposed of in accordance with Contra Costa County Environmental Health Department regulations, and further mitigation is not required.*

If the Phase II ESA determines that on-site soils and/or groundwater have been impacted, and contaminants are identified in excess of the California Human Health Screening Levels [CHHSLs] for residential land uses, the contaminated areas shall be remediated. The Phase II ESA shall specify measures for the remediation of the soils and/or groundwater, including proper removal and disposal procedures. The relative efficacy of potential removal technologies is dependent on subsurface conditions, including soil lithology, groundwater depth, and contaminant type/extent. Accordingly, several remediation options may be considered. For soil contamination, potential removal technologies could include, but would not necessarily be limited to, the following:

- *Excavation and off-haul – Impacted soils are excavated until the excavation base and sidewalls do not exhibit impact above a specific screening level or cleanup goal. The excavated soils are transported and disposed of at an appropriate landfill facility.*
- *Bioremediation - Nutrients, oxygen, and biological cofactors are introduced to the soil (either in-place or post-excavation in a treatment area) to stimulate natural biological breakdown of the contaminants.*
- *Bioaugmentation – Similar to bioremediation, except that bioaugmentation involves the introduction of engineered microorganisms to the soil to degrade the contaminants.*

- *Soil vapor extraction (SVE) - Soil gas is extracted from the subsurface under vacuum and brought to the surface, where it is treated.*

For groundwater contamination, potential removal technologies could include, but would not necessarily be limited to, the following:

- *Pump-and-treat system - Groundwater is extracted for at-surface treatment and is subsequently re-injected into the subsurface or discharged into a municipal sewer system.*
- *In-situ air sparging - Air is injected below the lowest point of groundwater contamination where, through a variety of mass transfer, transport, and transformation processes, the contaminants are degraded or removed. In-situ air sparging is often used with a SVE system.*
- *Bioremediation – Same mechanisms as described above, but often with different means of delivery.*
- *In-situ chemical oxidation/reduction - Instead of attempting to stimulate biological activity, reagents are injected into the subsurface to directly induce a chemical reaction to degrade/destroy the contaminants.*

The project applicant shall comply with all recommendations of the Phase II ESA for the review and approval by the Contra Costa County Environmental Health Department and the City of Clayton.

Mitigation Measure 25 *Prior to issuance of a building permit, the existing septic tanks shall be abandoned in consultation with the Contra Costa County Environmental Health Department. Proof of abandonment shall be provided to the City Community Development Department and City Engineer.*

Mitigation Measure 26 *Prior to demolition and/or removal of the on-site structures or building remains, the project applicant shall prepare a work plan to demonstrate how the on-site asbestos- and lead-containing materials shall be removed in accordance with current Cal-OSHA regulations and disposed of in accordance with all Cal-EPA regulations, as identified in the Asbestos and Lead Survey conducted for the proposed project. The plan shall include the requirement that work shall be conducted by a Cal-OSHA registered asbestos and lead abatement contractor in accordance with Title 8 CCR 1529 and Title 8 CCR 1532.1 regarding asbestos and lead training, engineering controls, and certifications. The applicant shall submit the work plan to the City and the*

Contra Costa County Department of Conservation and Development for review and approval.

Mitigation Measure 27 *Materials containing more than one (1) percent asbestos that is friable are also subject to BAAQMD regulations. Removal of materials containing more than one (1) percent friable asbestos shall be completed in accordance with BAAQMD Section 11-2-303.*

c. Would the project emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school? ..... Less-Than-Significant Impact

Discussion (c.)

The nearest existing or proposed school facility is Mount Diablo Elementary School, which is located approximately one-half mile south of the project site. Therefore, the proposed project would result in a ***less-than-significant*** impact associated with hazardous emission or handling of hazardous materials within one-quarter mile of an existing or proposed school.

d. Would the project be located on a site which is included on a list of hazardous materials sites compiled pursuant to G.C. Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment? ..... No Impact

Discussion (d.)

The proposed project site is not located on the list of hazardous materials sites compiled pursuant to Government Code Section 65962.5, resulting in ***no impact***.

e. Would the project impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan? ..... Less-Than-Significant Impact

Discussion (e.)

The City of Clayton has an adopted Emergency Operations Plan, dated January 2012, which identifies the City's emergency planning, organizational, and response policies and procedures. The Emergency Operations Plan addresses how the City would respond to extraordinary events or disasters, including departmental Standard Operating Procedures. The primary exit routes out of the City to the north are Pine Hollow Road, Clayton Road, and Concord Boulevard. To the south, the primary exit route out of the City is Marsh Creek Road. The project site is predominantly surrounded by existing residential developments. Modifications to the City's emergency exit routes would not occur as a result of the proposed project; thus, development of the project site would not be expected to interfere or impair any of the primary exit routes out of the City. In addition,

the project would provide one emergency access point at the northwestern end of the site, at the connection of the proposed Silver Oak Estates Drive with Oakhurst Drive. A locked gate that could be opened by emergency response personnel would be included at the access point. As such, adequate emergency access to the site would be provided. Therefore, the proposed project would result in a ***less-than-significant*** impact associated with impairing implementation of, or physically interfering with, an adopted emergency response plan or evacuation plan.

f. Would the project 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? ..... Less-Than-Significant With Mitigation Incorporated

Discussion (f.)

Wildfire is a serious hazard in the City of Clayton. According to the Diablo Fire Safe Council, the City of Clayton is located within a wildland urban interface (WUI).[22] The WUI is defined as an area in which wildlands and communities are sufficiently close to each other to present a credible risk of fire spreading from one to another.[23] Fire services to the Clayton area are provided by the Contra Costa County Fire Protection District (CCCFPD), with the nearest station to the site located on Center Street, approximately 1 mile southeast of the project site. Wildfire risks at the site are minimized due to the predominance of surrounding residential uses; however, the project includes a 6.6-acre HCP conservation area, which provides a minimum 50-foot setback from Mount Diablo Creek's top of bank. This HCP conservation area contains undeveloped areas with natural vegetation that could be flammable during summer and fall. The proposed project is required to be designed in compliance with all applicable State and local standards and recommendations for new development, such as the CCCFPD's requirements for providing a water supply system for fire protection, and adequate emergency and fire access. In addition, per State and local adopted Fire Code, all residential units must be equipped with internal fire sprinklers. Nonetheless, due to the close proximity of some of the project's structures to open, undeveloped, naturally-vegetated areas, a ***potentially significant*** impact related to exposing people or structures to risks involving wildland fires could occur.

Mitigation Measure(s)

Implementation of the following mitigation measures would ensure that the above impact is reduced to a *less-than-significant* level.

Mitigation Measure 28 *The developer shall complete and submit for approval to the Contra Costa County Fire Protection District a vegetation and fuels management plan for the proposed project, prior to approval of the first final map. The vegetation and fuels management plan shall include details for a fuel modification*

[22] See Appendix A, Fire Hazard Severity and WUI Area Map, to Community Wildfire Protection Plan, Contra Costa County, California, prepared by Diablo Fire Safe Council, adopted 2009.
[23] Diablo Fire Safe Council, *Community Wildfire Protection Plan*, p. 8.

zone around the proposed subdivision and other feasible BMPs recommended in Diablo Firesafe Council's "Best Management Practices Guidebook for Hazardous Fuel Treatments in Contra Costa County." In addition, the plan shall include details regarding the entity responsible for ongoing maintenance of the fuel modification zone and implementation of other selected BMPs, and the funding mechanism that would be utilized to generate sufficient funds to cover the cost of long-term maintenance efforts.

9. HYDROLOGY AND WATER QUALITY.

Issues		Potentially Significant Impact	Less-Than-Significant With Mitigation Incorporated	Less-Than-Significant Impact	No Impact
Would the project:					
a.	Violate any water quality standards or waste discharge requirements?	□	X	□	□
b.	Otherwise substantially degrade water quality?	□	X	□	□
c.	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)?	□	□	X	□
d.	Substantially alter the existing drainage pattern of the site or area, including alteration of the course of a stream, in a manner which would result in substantial erosion or siltation on- or off-site?	□	X	□	□
e.	Substantially alter the existing drainage pattern of the site or area, including alteration of the course of a stream, or substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site?	□	X	□	□
f.	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?	□	X	□	□
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?	□	□	X	□
h.	Place within a 100-year floodplain structures which would impede or redirect flood flows?	□	□	X	□
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?	□	□	X	□

a. Would the project violate any water quality standards or waste discharge requirements? .... Less-Than-Significant With Mitigation Incorporated

b. Would the project otherwise substantially degrade water quality? ..... Less-Than-Significant With Mitigation Incorporated

Discussion (a. and b.)

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.

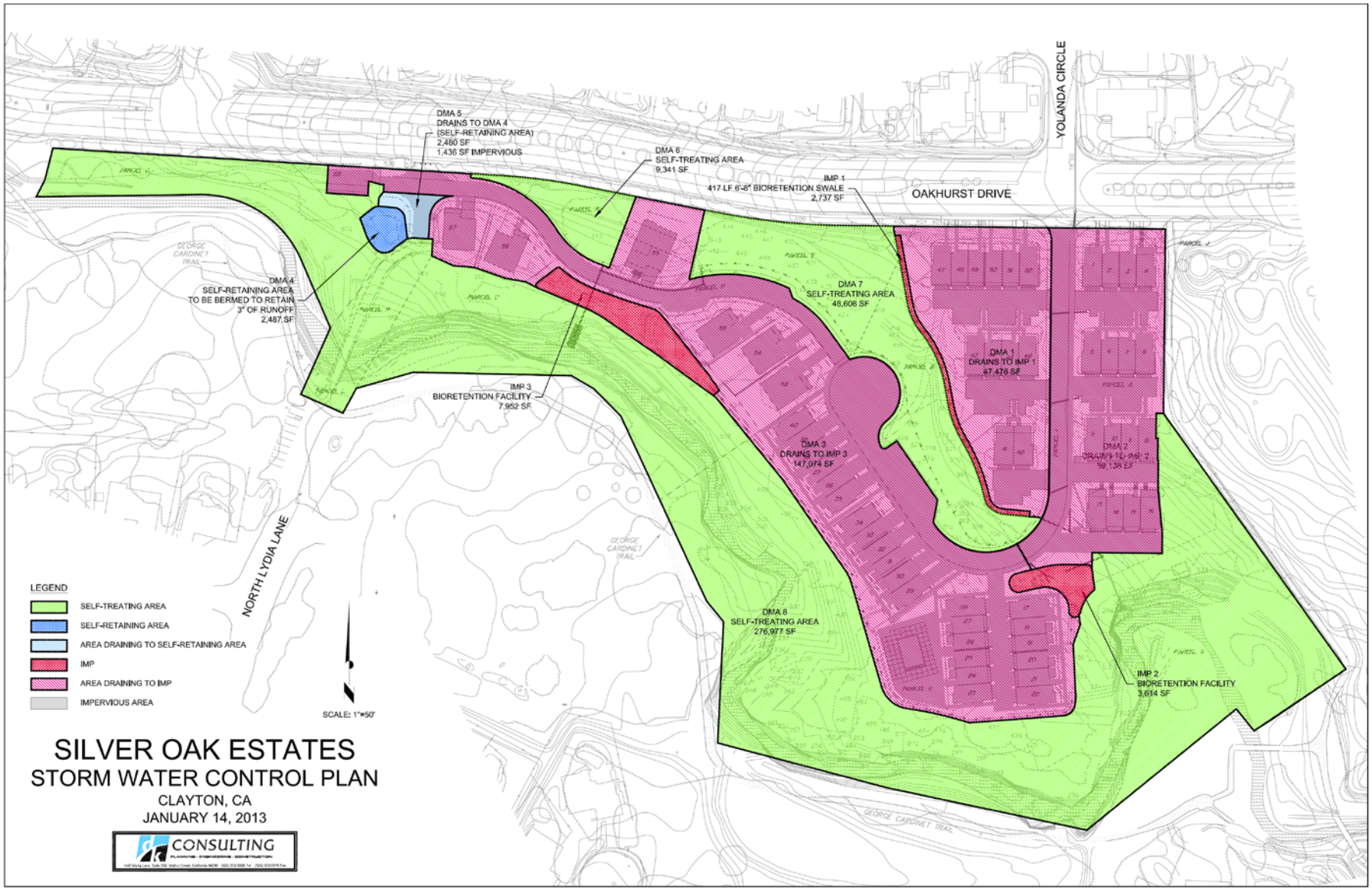
Performance Standard NDCC-13 of the City's National Pollutant Discharge Elimination System (NPDES) permit requires applicants to show proof of coverage under the State's General Construction Permit prior to receipt of any construction permits. The State's General Construction Permit requires a Storm Water Pollution Prevention Plan (SWPPP) to be prepared for the site. A SWPPP describes Best Management Practices (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. Thus, the City and State's regulatory requirements, which are required for the project, would fully address all construction runoff impacts.

The proposed residential uses would not involve operations typically associated with the generation or discharge of polluted water. Thus, typical operations on the project site would not violate any water quality standards or waste discharge requirements, nor degrade water quality. However, implementation of the impervious surfaces on the site would result in the generation of urban runoff, which could contain pollutants if the runoff comes into contact with vehicle fluids on parking surfaces and/or landscape fertilizers. The San Francisco Bay Regional Water Quality Control Board (RWQCB) issued an Order requiring all municipalities within Contra Costa County (and the County itself) 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 or redevelopment projects that disturb one or more acres of land 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.

Exhibit 18 illustrates the key components of the preliminary stormwater control plan for the proposed project site. In order to comply with C.3 Standards, the project includes three bioretention facilities, also referred to as Integrated Management Practices (IMPs), which are identified as the red areas in Exhibit 18. These IMPs have been designed to serve as water quality treatment facilities as well as flow control facilities. It should be noted that the proposed project's IMPs exceed the minimum area and surface volume requirements, as shown in the Stormwater Control Plan prepared for the proposed project.[24] The impervious areas of the project site have been divided into three distinct drainage management areas (DMAs), identified as the pink areas in Exhibit 18. Stormwater runoff from the DMAs enters the treatment IMPs via sheet flow and piping. After infiltration into the IMPs, the treated storm water enters the storm drainage system, and ultimately outfalls into Mount Diablo Creek. The treated runoff from DMA 1 and DMA 2 would flow through an existing 18-inch storm drain pipe into an existing outfall at Mount Diablo Creek. Using a conservative assumption that the existing 18-inch storm drain pipe is flowing full, and then adding the estimated runoff from the proposed DMA 1 and DMA 2 areas, the pipe was estimated to be at 48 percent capacity during a 10-year storm event and at 53 percent capacity during a 100-year storm event.[25]

[24] dk Consulting. *Stormwater Control Plan for Silver Oak Estates, Clayton, California*. January 16, 2013.
[25] dk Consulting. Hydrology Narrative. May 2, 2014.

Exhibit 18
Stormwater Control Plan



Based on this conservative assumption, adequate capacity exists within the existing 18-inch pipe and associated outfall to accommodate treated runoff from IMP DMA 1 and IMP DMA 2. [26,27] Treated runoff from DMA 3 would be discharged into Mount Diablo Creek via a new 18-inch storm drain pipe and associated outfall. The outfall has been designed to avoid impacting Clean Water Act protected waters of the U.S. and State. The outfall design keeps rip-rap out of the bed and channel of Mount Diablo Creek, while erosion control and flow energy dissipation would be constructed into the outfall design. As such, any stormwater runoff from the project site would be adequately treated prior to being released downstream, and, thus, would not degrade downstream water quality.

Based on the preliminary stormwater control plan for the proposed project site, the project would comply with all applicable regulations, does not involve uses associated with the generation or discharge of polluted water, and has been designed to adequately treat stormwater runoff from the site prior to discharge. However, the stormwater control plan is considered preliminary, and in order to ensure that the final design of the proposed project would not violate any water quality standards, waste discharge requirements, or otherwise substantially degrade water quality, a final stormwater control plan must be submitted for review and approval by the City. Therefore, without review and verification by the City that the project would not substantially degrade water quality or violate any water quality standards, impacts could be considered ***potentially significant***.

Mitigation Measure 29 *Prior to approval of improvement plans, the applicant shall submit to the Clayton Community Development and Engineering Departments a Final Stormwater Control Plan for review and approval. The Plan shall comply with C.3 requirements for stormwater infiltration.*

c. Would the project 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)? ..... Less-Than-Significant Impact

Discussion (c.)

The Contra Costa Water District (CCWD) provides domestic water service to the City of Clayton. The major sources of water are the Sacramento River and the Sacramento River via the Contra Costa Water District Canal, not pumped groundwater. As such, the proposed project would not result in the depletion of any groundwater supplies. Development of the proposed project would result in a net increase in impervious surfaces. However, over 50 percent of the total project site area is proposed to remain as

[26] *Ibid.*

[27] Jason Fong, Project Manager, dk Consulting. E-mail communication. September 4, 2013.

open space. As such, the overall increase in impervious surfaces would not substantially alter groundwater recharge at the site, and impacts would be ***less than significant***.

d. Would the project substantially alter the existing drainage pattern of the site or area, including alteration of the course of a stream, in a manner which would result in substantial erosion or siltation on- or off-site? ..... Less-Than-Significant With Mitigation Incorporated

e. Would the project substantially alter the existing drainage pattern of the site or area, including alteration of the course of a stream, or substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site?Less-Than-Significant With Mitigation Incorporated

f. Would the project 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? ..... Less-Than-Significant With Mitigation Incorporated

Discussion (d. - f.)

Development of the proposed project would result in an increase in impervious surfaces on the project site, which would alter the existing drainage pattern of the site. However, as discussed above, the project is required to comply with C.3 Standards and is proposed to include appropriate site design measures, source controls, and hydraulically-sized stormwater treatment measures.

As stated above, the treated runoff from DMA 1 and DMA 2 would flow through an existing 18-inch storm drain pipe into an existing outfall at Mount Diablo Creek. Using a conservative assumption that the existing 18-inch storm drain pipe is flowing full, and then adding the estimated runoff from the proposed DMA 1 and DMA 2 areas, the pipe was estimated to be at 48 percent capacity during a 10-year storm event and at 53 percent capacity during a 100-year storm event.[28] Based on this conservative assumption, adequate capacity exists within the existing 18-inch pipe and associated outfall to accommodate treated runoff from IMP DMA 1 and IMP DMA 2. [29,30]

A new 18-inch storm drain pipe and associated outfall into Mount Diablo Creek is proposed for the treated runoff from DMA 3. The outfall has been designed to avoid impacting Clean Water Act protected waters of the U.S. and State. As water enters the outfall structure from the 18-inch stormdrain pipe, the water would flow through an energy-dissipation area, which is essentially a concrete box filled with rip-rap. The rip-rap dissipates the energy of the stormwater outflow, dramatically reducing the velocity of

[28] dk Consulting. Hydrology Narrative. May 2, 2014.
[29] *Ibid.*
[30] Jason Fong, Project Manager, dk Consulting. E-mail communication. September 4, 2013.

water leaving the stormdrain system. Once the water enters the energy-dissipater, the water trickles through the rip-rap and into an approximately 10-foot long gravel-filled energy-dissipater, which slows the water's velocity even further. From the gravel-filled dissipater, water trickles onto the banks of Mount Diablo Creek, well-above the OHWM, and trickles into the low-flow channel of Mount Diablo Creek at a low-enough velocity to prevent erosion of the bank, bed, or channel.

As mentioned above, the IMPs for the proposed project have been designed to serve as not only water quality treatment facilities, but flow control facilities as well. With implementation of the IMPs, the post-development stormwater runoff flow would not exceed the pre-development stormwater runoff flow from the site.[31] As such, the proposed project would not result in an increase in the rate or amount of runoff from the site.

In addition, the project would comply with all applicable regulations associated with construction-related erosion control, including obtaining a General Construction Permit. Mitigation Measure 22 of this IS/MND, requires the preparation of an erosion control plan to the satisfaction of the City Engineer, including a number of actions to limit erosion effects during construction. As such, implementation of Mitigation Measure 22 would help to ensure that impacts associated with construction-related erosion would be less than significant.

Overall, the proposed project would not alter the existing drainage pattern of the site or area in a manner which would result in erosion or siltation on- or off-site, increase the rate or amount of surface runoff, 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. However, in order to ensure that the proposed project's stormwater treatment facilities remain adequate, long-term maintenance would be required. Without a long-term maintenance plan established, the proposed project could result in a ***potentially significant*** impact related to stormwater drainage and runoff.

Mitigation Measure(s)

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

Mitigation Measure 30 *The applicant shall be responsible for the long-term operation and maintenance of the stormwater treatment facilities (bioretention areas) constructed in connection with the project; said responsibilities shall be memorialized through the execution of a Stormwater Management Facilities Operation and Maintenance Agreement and Right of Entry in the form provided by the City of Clayton Engineering Department.*

The applicant shall submit, with the application of building permits, a draft Stormwater Management Facilities Operation and Maintenance Plan that includes detailed

[31] dk Consulting. *Silver Oak Estates – C.3 narrative*. August 29, 2013.

maintenance requirements and a maintenance schedule for the review and approval by the City Engineer. All maintenance activities shall be funded by the applicant. The proposed Plan shall include the following types of maintenance actions:

- *Examine curb openings. Remove any debris and repair any damaged curb.*
- *Inspect inlets for channels, exposure of soils, or other evidence of erosion. Clear any obstructions and remove any accumulation of sediment.*
- *Inspect outlets for erosion or plugging.*
- *Inspect side slopes for evidence of instability or erosion and correct as necessary.*
- *Observe soil at the bottom of the swale or filter for uniform percolation throughout. If portions of the swale or filter do not drain within 48 hours after the end of a storm, the soil should be tilled and replanted. Remove any debris or accumulations of sediment.*
- *Confirm that check dams and flow spreaders are in place and level and that channelization within the swale or filter is effectively prevented.*
- *Examine the vegetation to ensure that it is healthy and dense enough to provide filtering and to protect soils from erosion. Replenish mulch as necessary, remove fallen leaves and debris, prune large shrubs or trees, and mow turf areas. When mowing, remove no more than 1/3 height of grasses. Confirm that irrigation is adequate and not excessive. Replace dead plants and remove noxious and invasive vegetation.*
- *Abate any potential vectors by filling holes in the ground in and around the swale and by insuring that there are no areas where water stands longer than 48 hours following a storm. If mosquito larvae are present and persistent, contact the Contra Costa Mosquito and Vector Control District for information and advice. Mosquito larvicides should be applied only when absolutely necessary and then only by a licensed individual or contractor.*

g. Would the project 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? ..... Less-Than-Significant Impact

h. Would the project place within a 100-year

floodplain structures which would impede or redirect flood flows? ..... Less-Than-Significant Impact

i. Would the project 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? ..... Less-Than-Significant Impact

Discussion (g. - i.)

The project's grading plan shows the location of the 100-year floodplain, which is indicated as shown on Exhibit 19 and Exhibit 20 by a blue dashed line. As shown in the exhibits, the proposed development footprint would be located outside of the 100-year floodplain. Thus, housing or structures would not be placed within the 100-year floodplain. Some areas of grading would occur within the 100-year floodplain. However, all proposed work within the floodplain would comply with Section 15.58, Flood Damage Prevention, of the City's Municipal Code, which allows grading within the floodplain as long as the flood elevation is not increased by more than one foot. Prior to approval of improvement plans, the City Engineer shall ensure the proposed limited improvements within the floodplain area would be consistent with the City's Flood Damage Prevention Ordinance and would not cause any impacts associated with flooding. In addition, dams or levees are not located upstream of the proposed project site; thus, flooding due to dam or levee failure would not occur. Therefore, the proposed project would not place housing or structures within the 100-year floodplain or expose people or structures to risks involving flooding, and impacts would be ***less than significant***.

Exhibit 19
Project Grading Plan (1 of 2)

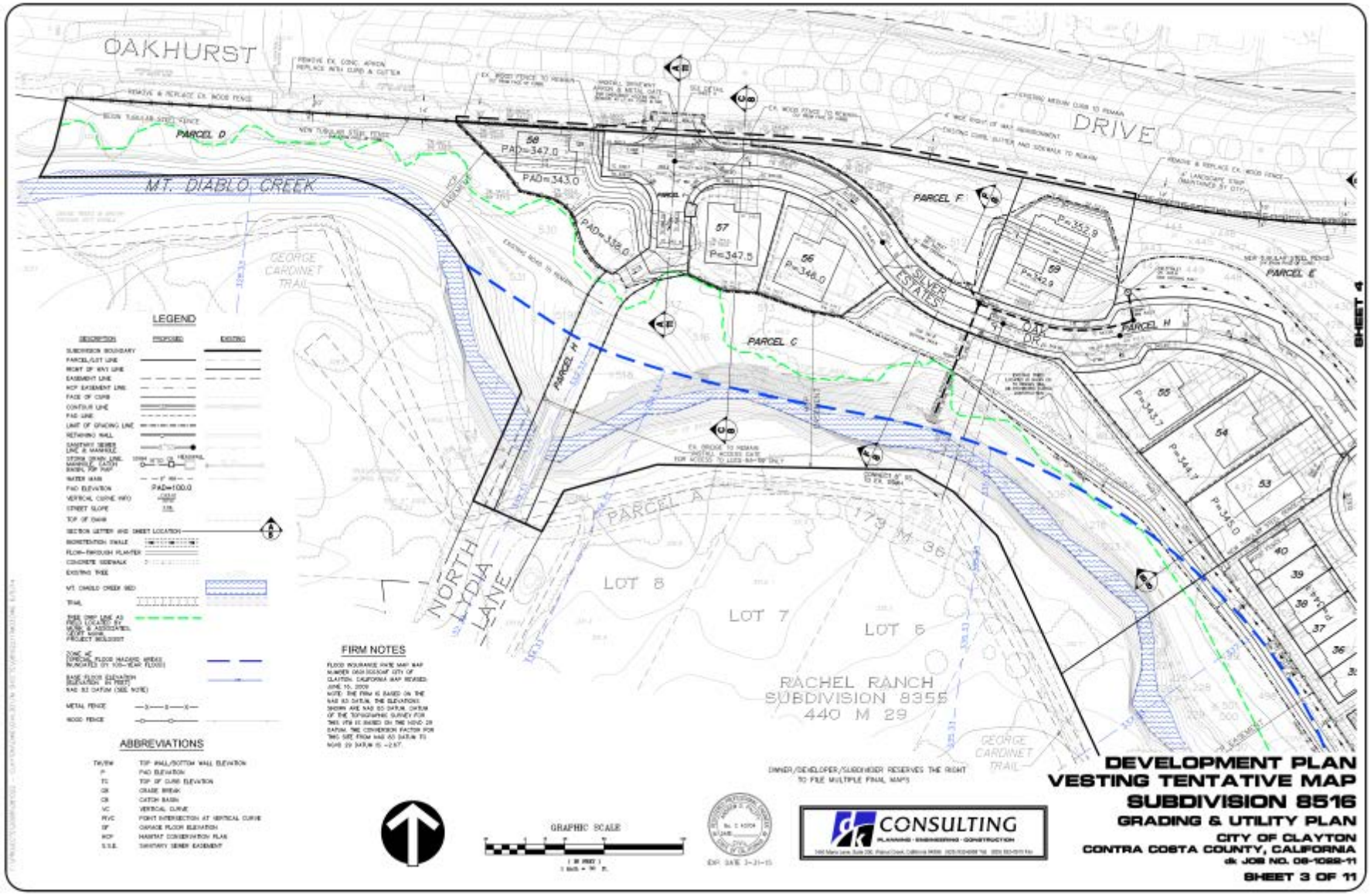
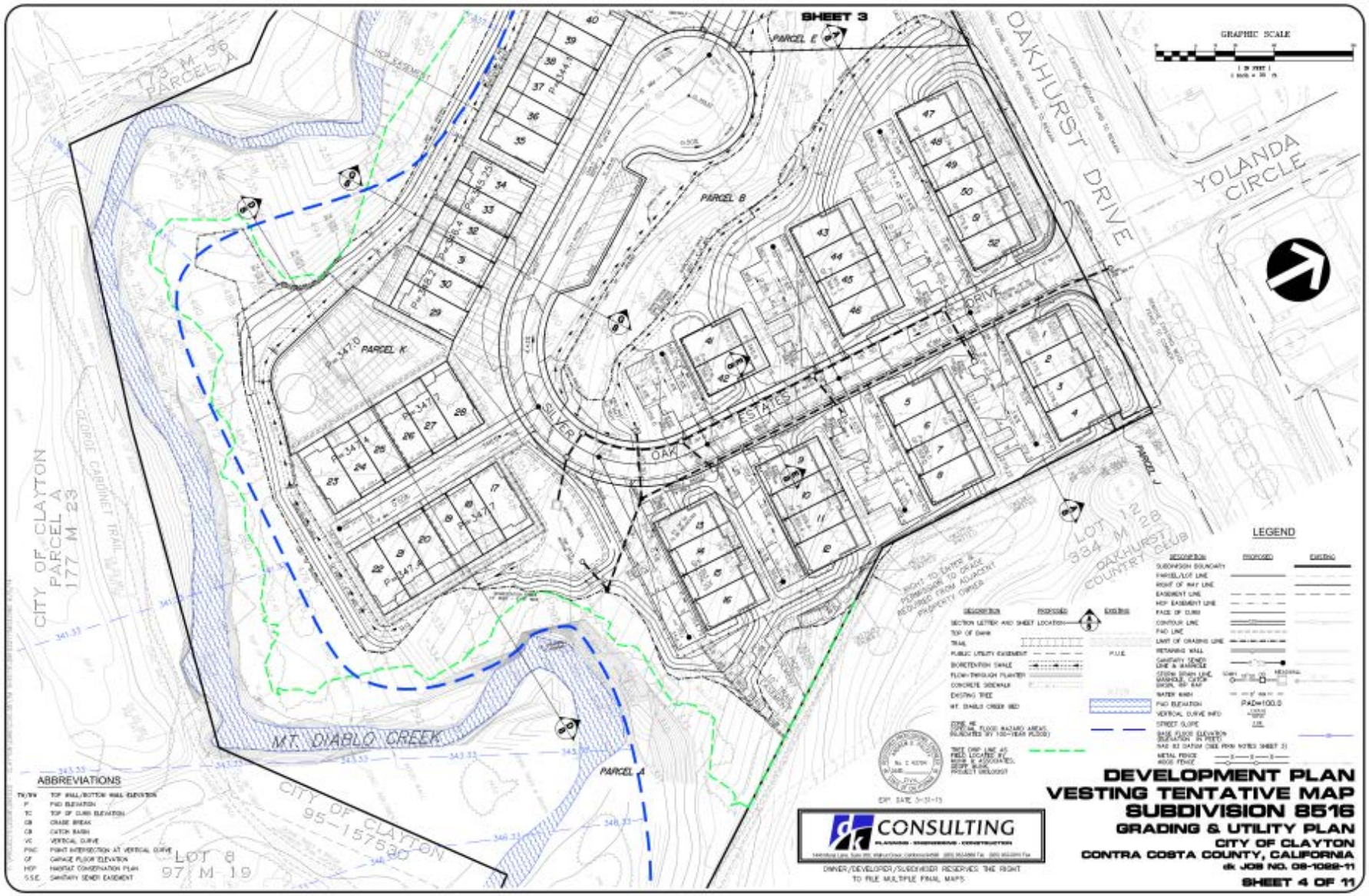


Exhibit 20
Project Grading Plan (2 of 2)



10. LAND USE AND PLANNING.

Issues		Potentially Significant Impact	Less-Than-Significant With Mitigation Incorporated	Less-Than-Significant Impact	No Impact
Would the project:					
a.	Physically divide an established community?	□	□	X	□
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, or zoning ordinance) adopted for the purpose of avoiding or mitigating on environmental effect?	□	□	X	□
c.	Conflict with any applicable habitat conservation plan or natural communities conservation plan?	□	X	□	□

a. Would the project physically divide an established community? ..... Less-Than-Significant Impact

Discussion (a.)

The proposed project site currently contains several buildings associated with the former Yolanda Estate, later known as the Hurd Ranch. In addition, the site is predominantly surrounded by existing residential development, as well as Oakhurst Country Club Golf Course to the east, Lydia Park to the west, and the George Cardinet Trail to the south. As the project is located within a developed area, development of the proposed project site would not physically divide an established community, but would rather provide continuity with the surrounding uses. Therefore, impacts would be ***less than significant***.

b. Would the project 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, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect? ..... Less-Than-Significant Impact

Discussion (b.)

The project site is currently designated in the City's General Plan as Single-family Medium Density (MD) residential and zoned Planned Development (PD). The proposed project would complement and be compatible with the surrounding residential land uses, as well as the land use and zoning designations for the site. The allowable density for the site is 3.1 to five units per acre, with net allowable units of 43 to 69. The proposed project would have a density of 4.2 dwelling units per gross acre, with a total of 59 dwelling units, which are within the allowable ranges. As a result, the proposed project would not conflict with any plans, policies, or regulations adopted for the purpose of avoiding or mitigating an environmental effect, and a ***less-than-significant*** impact would occur. With respect to the City's Tree Protection Ordinance, this ordinance is discussed in Section 5, Biological Resources, of this IS/MND.

c. Would the project conflict with any applicable habitat conservation plan or natural communities conservation plan? .... Less-Than-Significant With Mitigation Incorporated

Discussion (c.)

As discussed in question f. in Section 5, Biological Resources, of this IS/MND, the proposed project is located within the ECCCHCP boundaries, and would be considered a regulated development project under the plan. According to the ECCCHCP Development Fee Zone Map, the proposed project site is within development fee Zone II.

The project has been designed to avoid possible inadvertent take of special-status species by including a minimum 50-foot buffer from Mount Diablo Creek and associated riparian vegetation. However, development of the project and associated infrastructure would result in permanently disturbed land. According to the Planning Survey Report prepared for the proposed project and filed with the ECCCC, the project would result in 7.38 acres of permanently disturbed land and 0.75-acre of temporarily disturbed land. Thus, payment of the appropriate associated ECCCHCP fees would be required. Mitigation Measure 7 requires the payment of ECCCHCP impact fees, which would ensure that the project complies with the ECCCHCP. Therefore, without payment of the appropriate fees (currently estimated at $178,847.58 for land disturbance, $18,816.48 for wetland impacts, and $3,862.80 for temporary construction impacts), the project could conflict with provisions of the adopted habitat conservation plan, and impacts could be ***potentially significant***.

Mitigation Measure(s)

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

Mitigation Measure 31 *Implement Mitigation Measure 7.*

11. MINERAL RESOURCES.

Issues		Potentially Significant Impact	Less-Than-Significant With Mitigation Incorporated	Less-Than-Significant Impact	No Impact
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?	□	□	□	X
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?	□	□	□	X

a. Would the project 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? ..... No Impact

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? ..... No Impact

Discussion (a. and b.)

The Contra Costa County General Plan states that the most important mineral resources that are mined in the County include crushed rock near Mt. Zion, west of Mitchell Canyon Road (over one mile south of the project site); shale in the Port Costa area; and sand and sandstone deposits, mined from several other, distant locations.

Because the project site is not within the immediate vicinity of the Mt. Zion quarry or any other of the identified areas of important mineral deposits, the project would not interfere with existing operations or access to these deposits. Therefore, the proposed project would have ***no impact*** to mineral resources.

12. NOISE.

Issues		Potentially Significant Impact	Less-Than-Significant With Mitigation Incorporated	Less-Than-Significant Impact	No Impact
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?	□	□	X	□
b.	A substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project?	□	□	X	□
c.	Exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels?	□	□	X	□
d.	A substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project?	□	X	□	□

a. Would the project result in 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? ..... Less-Than-Significant Impact

b. Would the project result in a substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project? ..... Less-Than-Significant Impact

Discussion (a. and b.)

The City of Clayton General Plan Noise Element establishes 60 dB Ldn and 45 dB Ldn as acceptable exterior and interior noise environments for residential land uses, respectively.[32] In addition, the City Municipal Code Section 15.01.101 restricts hours of construction to between the hours of 7:00 AM and 5:00 PM on weekdays. In addition, the Federal Interagency Commission on Noise (FICON) has developed a scale as a means of developing thresholds for impact identification for project-related noise level increases. According to FICON, a 5 dB increase in noise levels due to a project is required for a finding of significant noise impact where ambient noise levels without the project are less than 60 dB Ldn. Where pre-project ambient conditions are between 60 and 65 dB Ldn, a 3 dB increase is applied as the standard of significance. Finally, in areas already exposed to higher noise levels – specifically pre-project noise levels in excess of 65 dB Ldn – a 1.5 dB increase is considered by FICON as the threshold of significance.

[32] A common statistical tool to measure the ambient noise level is the average, or equivalent, sound level (Leq) over a given time period (usually one hour). The Leq is the foundation of the Day-Night Average Level noise descriptor, Ldn, and shows very good correlation with community response to noise. The Day-Night Average Level (Ldn) is based upon the average noise level over a 24-hour day, with a +10 decibel weighing applied to noise occurring during nighttime (10:00 PM to 7:00 AM) hours. Ldn based noise standards are commonly used to assess noise impacts associated with traffic, railroad and aircraft noise sources.

An Environmental Noise and Vibration Analysis was prepared for the proposed project in order to assess the noise and vibration impacts generated by the proposed project, as well as the project's compliance with applicable noise standards (see Appendix E). According to the analysis, the existing ambient noise environment in the immediate project vicinity is consistent with that of typical rural areas and is defined primarily by traffic and natural sounds, (wind, birds, etc.). The primary sources of permanent noise associated with the proposed project would be from traffic and the on-site water well associated with irrigation water for the Oakhurst Golf Course, which are discussed in further detail below.

Project-Generated Traffic Noise Level Increases

The Environmental Noise and Vibration Analysis prepared for the proposed project analyzed the noise levels associated with the project's increase in traffic levels from existing conditions (i.e., existing plus project), as well as from future cumulative conditions (i.e., future plus project). Exhibit 21 shows the traffic noise measurement locations. According to the Environmental Noise and Vibration Analysis prepared for the proposed project, the ambient noise levels at Site 1 and Site 2, as shown in Exhibit 21, were measured as presented in Table 3.

Table 3
Summary of Ambient Noise Monitoring
Average Measured Hourly Noise Levels (dB) 90 feet from C/L

	Daytime (7 a.m. to 10 p.m.)			Nighttime (10 p.m.to 7 a.m.)			
Location	**L_{eq}**	**L_{50}**	**L_{max}**	**L_{eq}**	**L_{50}**	**L_{max}**	**L_{dn}**
Site 1	50	48	68	45	43	60	53
Site 2	52	50	71	47	42	65	55

Source: Bollard Acoustical Consultants, Inc., September 2013.

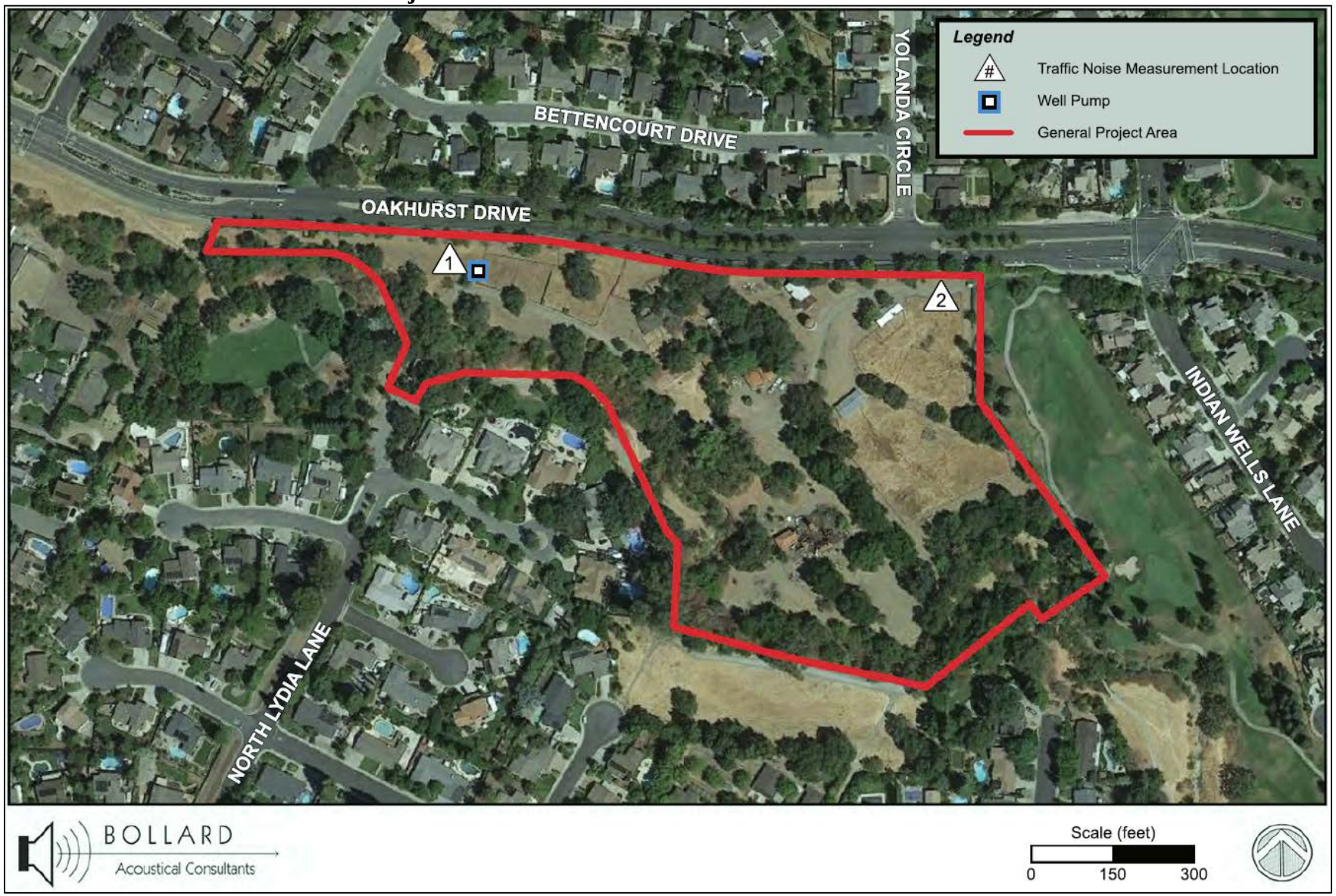
Table 4 presents the anticipated traffic noise exposure under existing conditions with and without the proposed project, as well as under future conditions with and without the proposed project.

Table 4
Summary of Traffic Noise Exposure

Roadway	Scenario	Ldn, dB @ 100 feet
Oakhurst Drive	Existing	61.1
	Existing Plus Project	61.2
	Future (Cumulative)	62.0
	Future Plus Project	62.1

Source: Abrams Associates Traffic Engineering, Inc. and Bollard Acoustical Consultants, Inc., September 2013.

Exhibit 21
Project Area and Traffic Noise Measurement Locations



As shown in Table 4, project-generated traffic would result in an increase in existing and future traffic noise levels of 0.1 dB Ldn at all existing residences located adjacent to Oakhurst Drive. As discussed above, FICON considers a traffic noise level increase from 1.5 to 5 dB to be significant, depending upon the ambient noise level. In addition, traffic noise level increases of less than 1 dB are considered to be well below the threshold of perception, and would be considered inaudible. Because the project-generated 0.1 dB Ldn increase is below even the lowest FICON threshold of 1.5 dB, the project-related increase in traffic noise levels would be imperceptible at existing residences located along Oakhurst Drive and would be considered less than significant. As such, the project-generated traffic noise level increases would not represent a substantial increase in ambient noise levels in the area and would not affect any existing nearby residences or other sensitive uses in the area.

The project proposes residences approximately 70 feet from the centerline of Oakhurst Drive. Because the western portion of the project site is depressed relative to the roadway, a substantial shielding of Oakhurst Drive traffic noise would occur at the seven proposed single-family units (Lots 53-59). The measured Ldn at the project site ranged from 53 to 55 dB Ldn. According to the Environmental Noise and Vibration Analysis, existing traffic noise levels at the same approximate distance to the Oakhurst Drive centerline were predicted to be 61 dB Ldn (at-grade level). As a result, the conclusion could be made that the existing shielding by intervening topography resulted in a 6 to 8 dB decrease in traffic noise levels at the proposed residential locations. Although site grading would increase the elevations of the proposed townhomes on Lots 1 through 4 and 47 through 52, the single-family units would remain shielded by intervening topography. Lots 1 through 4 and 47 through 52 would face Oakhurst Drive, thereby locating the rear patio areas further from the roadway and shielding such from view of the roadway by the intervening residences. As a result of the topographic shielding at the single-family units, and the orientation of Lots 1 through 4 and 47 through 52, a -6 dB offset was applied to the predicted future traffic noise levels at the residential locations to conservatively account for the shielding.

With an input distance of 70 feet from the roadway centerline and the aforementioned -6 dB offset, the predicted future traffic noise level at the outdoor areas of all of the nearest residences to Oakhurst Drive was computed to be 58 dB Ldn or less. Interior noise levels at the proposed project site associated with future traffic noise would be 25 dB lower, or approximately 33 dB Ldn. Because the predicted exterior and interior noise levels would satisfy the 60 dB Ldn exterior and 45 dB Ldn interior noise level standards of the City of Clayton, impacts would be considered less than significant.

Water Well Noise Levels at Nearest Residences

A water well pump for the Oakhurst Golf Course irrigation water is located in the northwestern area of the project site. To quantify the noise generation of the well, noise level measurements were conducted at distances of 5 and 15 feet from the wellhead. The submersible pump was barely audible over background noise at the 15-foot distance, registering a noise level of 45 dBA. At the 5-foot distance (directly above the wellhead),

the measured average noise level with the pump running was 52 dB Leq. The nearest proposed residence (Lot 57) would be located approximately 20 feet or more from the wellhead. Because of the low noise generation of the submersible pump, the predicted noise level of the pump at the nearest residence would be below 50 dB Ldn. Because the predicted exterior noise level of 50 dB Ldn would be below the 60 dB Ldn exterior noise level standard of the City of Clayton, the impact would be considered less than significant.

Conclusion

As discussed above, the proposed project's increase in traffic on local roadways would not result in a substantial increase in ambient noise in the area. In addition, the noise associated with the existing water well would not result in noise that would exceed interior or exterior noise level standards for residential land uses. Therefore, the proposed project would not permanently increase ambient noise levels in the project vicinity or generate noise levels in excess of local standards, and impacts would be considered ***less than significant***.

c. Would the project result in exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels? ..... Less-Than-Significant Impact

Discussion (c.)

Vibration can be described in terms of acceleration, velocity, or displacement. A common practice is to monitor vibration measures in terms of peak particle velocities (ppv) in inches per second (in/sec). Standards pertaining to perception as well as damage to structures have been developed for vibration in terms of ppv. According to the Environmental Noise and Vibration Analysis, the threshold for damage to structures ranges from 2 to 6 in/sec ppv. One-half of the minimum threshold, or 1 in/sec ppv, is considered a criterion that would protect against significant architectural or structural damage. The general threshold at which human annoyance could occur is noted as one-tenth of the minimum threshold level, or 0.1 in/sec ppv.

The existing ambient vibration environment in the immediate project vicinity is extremely low, as would be expected in a rural area without appreciable sources of local vibration. Because identified existing sources of appreciable vibration are not located in the project vicinity, baseline vibration levels around the project perimeter were well below the threshold of perception. In addition, the proposed project would not include any substantive sources of vibration. Because the project would not introduce any substantial sources of groundborne vibration and existing sources of vibration are not located in the vicinity of the project, construction vibration levels at the proposed project are predicted to be well below the thresholds of significance discussed above. As a result, the proposed project's impact related to vibration would be considered ***less than significant***.

d. A substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project? .... Less-Than-Significant With Mitigation Incorporated

Discussion (d.)

During the construction phases of the proposed project, noise from construction activities would add to the noise environment in the immediate project vicinity. According to the Environmental Noise and Vibration Analysis prepared for the proposed project, activities involved in typical construction would generate maximum noise levels ranging from 85 to 90 dB at a distance of 50 feet. Although construction activities would only occur for a limited duration, project construction activities could generate noise levels that would result in temporary increases in ambient noise levels in the project vicinity. Therefore, the proposed project's impact would be considered ***potentially significant***.

Mitigation Measure(s)

Implementation of the following mitigation measures would ensure that the above potential impact is reduced to a *less-than-significant* level.

Mitigation Measure 32 *During grading and construction, the project contractor shall ensure that the following measures are implemented, consistent with the recommendations in the Environmental Noise and Vibration Analysis:*

- *Grading and construction activities shall be limited to the daytime hours between 7:00 a.m. to 5:00 p.m. Monday through Friday, as specified in Section 15.01.101 of the Clayton Municipal Code. Any such work beyond said hours and days is strictly prohibited unless previously specifically authorized in writing by the City Engineer or designee or by project conditions of approval;*
- *The distances between on-site construction and demolition staging areas and the nearest surrounding residences shall be maximized to the extent possible; and*
- *All construction and demolition equipment that utilizes internal combustion engines shall be fitted with manufacturer's mufflers or equivalent.*

13. POPULATION AND HOUSING.

Issues		Potentially Significant Impact	Less-Than-Significant With Mitigation Incorporated	Less-Than-Significant Impact	No Impact
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)?	□	X	□	□
b.	Displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere?	□	□	X	□
c.	Displace substantial numbers of people, necessitating the construction of replacement housing elsewhere?	□	□	X	□

a. Would the project 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)? ..... Less-Than-Significant With Mitigation Incorporated

Discussion (a.)

The proposed project involves the construction of new residential dwelling units and associated improvements, including parking, new roadway connections, as well as open space areas. As the project would create new housing, the project would induce population growth in the area. The population growth, however, would not be considered substantial, because the proposed project is consistent with the City's General Plan land use and zoning designations for the site and would, thus, be consistent with the growth assumed for buildout of the General Plan.

Implementation Measure I.2.1 of the City's Housing Element requires the development of an Affordable Housing Plan, which is applicable to any residential projects of two or more units. The Affordable Housing Plan is required to include a certain percentage of units to be built as affordable housing for very low- and low-income households. The City requests that at least five percent of all project units be built as very low-income housing units and at least five percent of all project units be built as low-income housing units. In order to meet the project's affordable housing obligations per Implementation Measure I.2.1 of the City's Housing Element, the project applicant has prepared an Affordable Housing Plan and proposes to offer, either for sale or for rent, six affordable housing units on the project site.[33] The affordable housing units would be the townhomes on lots 47 through 52, along Oakhurst Drive. Three of the units (five percent of total project units) would be for very low-income and three would be for low-income. Deed restrictions for the affordable units would be coordinated with the City of Clayton.

[33] JR Peterson & Associates. *Affordable Housing Plan*. May 23, 2014.

Without dedication of affordable housing on-site, the project would not satisfy the requirements per Implementation Measure I.2.1 of the City's Housing Element, and a ***potentially significant*** impact would occur.

Mitigation Measure(s)

Implementation of the following mitigation measures would ensure that the above impact is reduced to a *less-than-significant* level.

Mitigation Measure 33 *In conjunction with approval of the Development Plan for the project, an Affordable Housing Plan shall be approved, which dedicates 6 units on the project site for affordable housing: 5% (3-units) for very low income housing, and 5% (3-units) for low income housing.*

b. Would the project displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere? ..... Less-Than-Significant Impact

c. Would the project displace substantial numbers of people, necessitating the construction of replacement housing elsewhere? ..... Less-Than-Significant Impact

Discussion (b. and c.)

The proposed project involves the construction of new residential dwelling units and associated improvements, including parking, new roadway connections, as well as open space areas. Although the proposed project would involve the destruction of one currently occupied dwelling, the proposed project would not involve the displacement of substantial numbers of existing housing or people. Thus, construction of replacement housing elsewhere would not be necessary as a result of the proposed project, and impacts related to displacement would be ***less than significant***.

14. PUBLIC SERVICES.

Issues		Potentially Significant Impact	Less-Than-Significant With Mitigation Incorporated	Less-Than-Significant Impact	No Impact
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?	□	□	X	□
b.	Police protection?	□	X	□	□
c.	Schools?	□	X	□	□
d.	Parks and recreation?	□	X	□	□
e.	Solid waste?	□	□	X	□
f.	Other public facilities and services?	□	X	□	□

a. 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 fire protection? ..... Less-Than-Significant Impact

Discussion (a.)

The Contra Costa County Fire Protection District (CCCFPD) provides fire prevention, suppression, and emergency medical response for advanced and basic life support to nine cities, including Clayton, and much of the unincorporated territory in the central and western portions of Contra Costa County. The CCCFPD operates 23 stations throughout its jurisdictional area and has a staff of 262 uniformed personnel. Station 11, located in the City of Clayton, at 6500 Center Street, is currently being staffed part-time with one engine from 1pm to 8pm. This station is located approximately 1 mile southeast of the project site. The District has indicated that it anticipates that the station will be staffed 24/7 in the near future and that timing is contingent upon getting staffing levels up to accommodate the positions needed not only to cover Station 11, but other staffing deficits district-wide.[34] Although Station 11 is partially closed at this time, it is anticipated that project units would not be occupied until after the point in time when Station 11 would become fully operable. With respect to the partial closure of Station 11, the current issue is one of personnel (i.e., the lack thereof), not a need for additional fire facilities. As a result, the project would not result in the need for new or physically altered fire facilities, the construction of which could cause significant environmental impacts, in order to

[34] Email communication with Ted Leach, Fire Inspector, Contra Costa County Fire Protection District. August 19, 2014, and September 2, 2014.

maintain acceptable service ratios, response times or other performance objectives for fire service. Therefore, impacts related to fire protection services would be considered ***less than significant***.

b. Police protection? ..... Less-Than-Significant With Mitigation Incorporated

Discussion (b.)

Police protection services would be provided for the project by the Clayton Police Department. The construction of 59 additional units and the associated population increase would increase the demand for police protection services. However, according to the Police Chief, the Clayton Police Department would be able to provide adequate services to the project site with existing equipment and facilities, and no new or altered facilities would be required. [35] Thus, the proposed project would not result in substantial adverse physical impacts associated with the provision of new or physically altered police facilities, need for new or physically altered police facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives. However, development of the proposed project would increase calls for police service, based on the construction phase and the increase in on-site population. Staffing levels of the Clayton Police Department have not kept pace with population increases in the community. Therefore, development of the proposed project could have a ***potentially significant*** impact on the Clayton Police Department services.

Mitigation Measure(s)

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

Mitigation Measure 34 *The project developer shall pay a fair share contribution to the City of Clayton for impacts to police staffing directly related to impacts of the proposed project for a five-year period. The calculation and payment shall be made at the time of issuance of the first building permit and shall be approved in advance by the Clayton Police Chief and City Manager.*

The methodology for calculating the project's fair share contribution is listed below with exemplary numbers:

Current Sworn Officer / Dwelling Unit Ratio:

11 Sworn Officers / 4,086 Dwelling Units[36] = 1 Sworn Officer / 371.5 Dwelling Units*

[35] Clayton Police Department. Personal communication with Chris Thorsen, Police Chief. October 21, 2013.

[36] U.S. Department of Commerce, *U.S. Census Bureau. 2010 Census Table DP-1 Profile of General Population and Housing Characteristics: 2010, 2010 Demographic Profile Data, Clayton City, California*. Accessed July 2, 2014.

Project Impacts on Police Service (5 Year Period):

59 Net New Dwelling Units x (1 Sworn Officer / 371.5 Dwelling Units) = 0.159 Sworn Officer

0.159 Sworn Officer x $111,032/year total compensation = $17,654/year

5 years x $17,654/year = $88,270 cost to City

c. Schools?..... Less-Than-Significant With Mitigation Incorporated

Discussion (c.)

The City of Clayton is located within the Mt. Diablo Unified School District. Within the City are Mt. Diablo Elementary and Diablo View Middle Schools. Because a high school does not exist within the City, high-school-age students could attend any high school within the District. The high schools available to Clayton students are College Park, Concord, Mt. Diablo, Northgate, Ygnacio Valley, and Clayton Valley Charter High School.

The enrollment and capacity of each school available to the City of Clayton residents are presented below in Table 5. As shown in the table, the two schools located within the City, Mt. Diablo Elementary School and Diablo View Middle School, had a 2012-2013 student enrollment of 792 students and 654 students, respectively. The 2012-2013 student enrollment numbers for the high schools available to the City - College Park, Concord, Mt. Diablo, Northgate, Ygnacio Valley, and Clayton Valley Charter High School - were 1,892, 1,500, 1,372, 1,589, 1,207 students, and 2,000, respectively. As shown in Table 5, all schools within the District were operating under capacity for the 2012-2013 school year, with the exception of Clayton Valley Charter High School, which is operating at capacity.

Table 5
Enrollment and Capacity for 2012-2013 School Year

School	Enrollment (students)[1]	Capacity (students)[2]
Mt. Diablo Elementary	792	917
Diablo View Middle	654	729
College Park High	1,892	2,057
Concord High	1,500	1,784
Mt. Diablo High	1,372	2,219
Northgate High	1,589	1,647
Ygnacio Valley High	1,207	2,258
Clayton Valley Charter High[3]	2,000[4]	2,000

[1] *Source: California Department of Education: Education Demographics Unit, September 4, 2013.*
[2] *Source: Sandy Barnhart, Administrative Secretary, Research and Evaluation, September 4, 2013.*
[3] *Source: Clayton Valley Charter High School. Personal communication with Neil McChesney, Director of Administrative Services. July 7, 2014.*
[4] According to Clayton Valley Charter, the high school is at capacity and has several hundred students on a waitlist.

Using student generation rates provided by the District, development of the project's seven detached homes and 52 attached homes would introduce additional students to schools within the Mount Diablo Unified School District, as shown in Table 6. As depicted in the table, the proposed project would result in a total student generation for grades K-5 of approximately seven new students, grades 6-8 of approximately four new students, and grades 9-12 of approximately 11 new students.

Comparing the new student figures to the 2012-2013 student enrollment and capacity figures presented in Table 5, sufficient capacity exists for the new students generated by the proposed project, with the exception of Clayton Valley Charter High School. However, under State law, payment of school impact fees per Senate Bill (SB) 50, prior to the issuance of a building permit, is required for full mitigation for impacts to school facilities. Therefore, a ***potentially significant*** impact could occur associated with school services if school impact fees are not paid.

Table 6
Proposed Project Student Generation

Grades	Student Generation Rate - Detached Homes	Students Generated from Project's Detached Homes	Student Generation Rate - Attached Homes	Students Generated from Project's Attached Homes	Total Students Generated by Project
K-5	0.220	1.540	0.093	4.836	7
6-8	0.086	0.602	0.060	3.120	4
9-12	0.950	6.650	0.066	3.432	11

Source: Sandy Barnhart, Administrative Secretary, Research and Evaluation, September 4, 2013.

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

Mitigation Measure 35 *Prior to issuance of any building permits for the project, the project developer shall pay all applicable school impact fees to the Mount Diablo Unified School District in effect at the time of building permit issuance. Proof of payment shall be submitted to the Clayton Community Development Department.*

d. Parks and recreation? ..... Less-Than-Significant With Mitigation Incorporated

Discussion (d.)
The proposed project involves the creation of new housing, and, thus, would induce population growth in the area. The increase in residents within the area may result in an increase in demand for and use of local parks and recreation areas. However, the project site is located near Lydia Park to the east and the George Cardinet Trail to the south. In addition, the proposed project would include a tot lot, swimming pool, cabana, and a

walking trail at the southeastern corner of the site that would connect to the existing trail located adjacent to the Oakhurst Golf Course.

As part of the City of Clayton's Planned Development District requirements, projects must contain provisions for active and passive open space areas, collectively comprising at least 20 percent of the project site. As discussed in the Project Description section of this IS/MND, the proposed project includes a total of 8.43 acres of dedicated open space areas, which includes an approximately 6.53-acre Habitat Conservation Plan easement area, 1.31 acres of passive open space, and 0.59-acre of active open space. Thus, approximately 60 percent of the proposed project site would be open space areas, which would exceed the minimum open space requirement of 20 percent of the project site.

The project, however, does not incorporate active park facilities. Although Lydia Lane park is located immediately west of the project site, and project residents would be expected to use Lydia Lane park, the project is still required to dedicate on-site park areas, or pay in-lieu fees in accordance with Section 16.12.010 of the Clayton Municipal Code. Therefore, if in-lieu parkland dedication fees are not paid by the project applicant, the project could result in substantial adverse physical impacts associated with the provision of new or physically altered parks and recreation facilities, need for new or physically altered parks and recreation facilities, the construction of which could cause significant environmental impacts. This is considered a ***potentially significant*** impact.

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

Mitigation Measure 36 *The project developer shall pay all applicable parkland dedication impact fees, per the City of Clayton Development Impact and Related Fees schedule, in effect at the time of building permit issuance. The fee amount shall be determined by the Clayton Community Development Department.*

e. Solid waste? ..... Less-Than-Significant Impact

Discussion (e.)
Solid waste from the City of Clayton is disposed of at the nearest landfill, which is the Keller Canyon Landfill, over four miles north from the site. According to the Allied Waste Industries (the owner of the Keller Canyon Landfill) website, the landfill currently handles 2,500 tons of waste per day; however, the permit allows up to 3,500 tons of waste per day to be managed at the facility. The Keller Canyon Landfill is anticipated to have adequate capacity for 30 to 35 years. According to the California Department of Resources Recycling and Recovery (CalRecycle), residential developments have estimated solid waste generation rates ranging from 3.6 pounds per unit per day to 12.23 pounds per unit per day.[37] Utilizing the higher generation rate, the project could generate

[37] California Department of Resources Recycling and Recovery (CalRecycle). Waste Characterization Residential

a total of approximately 721.57 pounds of solid waste per day (or 0.36 tons per day). As the Keller Canyon Landfill currently handles 1,000 tons per day less than the permit allows, the project's addition of approximately 0.36 tons per day would not be expected to cause a substantial increase in demand for solid waste disposal services such that new or physically altered facilities would be required. Thus, adequate solid waste disposal service is available for the project.

In addition, the City is required by AB 939 to ensure that it achieves and maintains the diversion and recycling mandates of the State. Construction of the project would comply with the construction and demolition debris recycling requirements of Chapter 15.80 of the City's Municipal Code, which requires a waste management plan be prepared for both demolition and new construction. The waste management plan must address all materials that would not be acceptable for disposal in the sanitary landfill. At least 50 percent of the construction and demolition debris must be diverted from the landfill and made available for salvage, reuse, and/or recycling. Therefore, as the project is required to comply with the City's Municipal Code, and sufficient capacity exists at the Keller Canyon Landfill, implementation of the proposed project would result in a ***less-than-significant*** impact related to solid waste services.

f. Other public facilities and services? ..... Less-Than-Significant With Mitigation Incorporated

Discussion (f.)

The proposed project would introduce new residents to the area. However, the associated increase in population would not be substantial enough to result in the need for any new or physically altered governmental facilities, such as libraries, the construction of which could cause environmental impacts. However, the City does not currently have qualified staff or staff resources available for the provision of mitigation monitoring oversight and inspection services associated with the proposed project. As such, a professional environmental consultant would need to be hired by the City in order to monitor the project applicant's/contractor's compliance with the mitigation monitoring and reporting program adopted for the project.

In addition, the City has an adopted schedule for Development Impact and Related Fees. The applicant will be required to pay development impact and related fees in accordance with the City's adopted schedule. These fees will help fund community facilities, SWPPP inspections, annual inspections of the project's stormwater system, review of improvement plans, etc.

Therefore, without the provision of needed funding for post-project CEQA compliance services, and payment of development impact and related fees, the proposed project could result in a ***potentially significant*** impact to other public facilities and services.

Mitigation Measure(s)

Developments: Estimated Solid Waste Generation Rates. Available at: http://www.calrecycle.ca.gov/WASTECHAR/WasteGenRates/Residential.htm. Accessed May 7, 2014.

Implementation of the following mitigation measures would reduce the above impact to a *less-than-significant* level.

Mitigation Measure 37 *The project developer shall pay all applicable development impact and related fees, per the City of Clayton Development Impact and Related Fees schedule, in effect at the time of building permit issuance, subject to review and approval by the Clayton Community Development Department.*

Mitigation Measure 38 *The City shall retain a professional environmental consultant, at the applicant's expense, to provide the necessary oversight and inspection services and perform mitigation monitoring duties during construction of the proposed project, as needed.*

15. TRANSPORTATION AND CIRCULATION.

Issues		Potentially Significant Impact	Less-Than-Significant With Mitigation Incorporated	Less-Than-Significant Impact	No Impact
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)?	□	□	X	□
b.	Exceed, either individually or cumulatively, a level of service standard established by the county congestion management agency for designated roads or highways?	□	□	X	□
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.	□	□	□	X
d.	Substantially increase hazards due to a design features (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?	□	X	□	□
e.	Result in inadequate emergency access?	□	□	X	□
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?	□	□	X	□

a. Would the project 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)? ..... Less-Than-Significant Impact

b. Would the project exceed, either individually or cumulatively, a level of service standard established by the county congestion management agency for designated roads or highways? ..... Less-Than-Significant Impact

Discussion (a. and b.)

A Transportation Impact Analysis was prepared for the proposed project by Abrams Associates, October 29, 2013 (see Appendix D). The Transportation Impact Analysis describes the existing traffic and circulation system, and provides an analysis of the potential impacts of the proposed project. It should be noted that Contra Costa County requires a traffic study to be prepared for all projects that would generate over 100 vehicle trips during a one-hour period. The proposed project, consisting of a maximum of approximately 59 vehicle trips on a weekday during the PM peak hour (i.e., the peak hour generating the most project traffic), would not meet the standard; however, the Transportation Impact Analysis was prepared for informational purposes.

Two intersections - Oakhurst Drive / Yolanda Circle (an unsignalized intersection) and Kirker Pass Road / Concord Boulevard - have been studied in detail for capacity and delay conditions. In addition, a cursory review of the existing traffic conditions on Oakhurst Drive has been made by analyzing the nearby signalized intersections, which include the intersections of Oakhurst Drive with both Eagle Peak Avenue and Clayton Road.

The existing roadway network in the project vicinity is described in further detail as follows:

- Oakhurst Drive - Oakhurst Drive is a four-lane divided arterial roadway and is an important roadway in the City of Clayton. At Kirker Pass Road, the roadway is named Concord Boulevard and changes names to Oakhurst Drive at the City limits with Concord. An approximately 20-foot landscaped median is provided throughout with left turns at each intersection. Sidewalks exist on each side of the street, as well as a five-foot bike lane in each direction. On-street parking is not provided on any segments of Oakhurst Drive.

  West of Yolanda Circle on Oakhurst Drive is a four-way stop intersection at Cam-Estrada, and side-street stop signs at other cross streets. The intersections are all within the City of Concord. East of Yolanda Circle, within the City of Clayton, is a signalized intersection with Eagle Peak Avenue and Indian Wells Way, a second signal at Eagle Peak Avenue which also includes a golf cart crossing, and a third traffic signal (three-way) at Indianhead Way.

- Yolanda Circle - Yolanda Circle is a residential collector street that connects to Oakhurst Drive at two locations, each with a side-street stop control. Left-turn lanes exist for each intersection. Pedestrian crosswalks are not provided.

Significance Criteria

Based on standards established by the City of Clayton, a project-related impact on a signalized intersection is considered significant if project-related traffic causes the level of service (LOS) rating to deteriorate from LOS D or better to LOS E or F, or from LOS E to LOS F. For unsignalized intersections, project-related operational impacts are considered significant if project-generated traffic causes the worst-case movement (or average of all movements for all-way stop-controlled intersections and roundabouts) to deteriorate from LOS D or better to LOS E or F.

The intersection of Kirker Pass Road and Concord Boulevard is located in the City of Concord and LOS D is considered the maximum acceptable LOS according to the Growth Management Element of the City of Concord General Plan.

Project Trip Generation

Operational Traffic

The Institute of Transportation Engineer's (ITE) publication, *Trip Generation Manual, 9th Edition*, is the standard reference used by jurisdictions throughout the country for the estimation of potential vehicular trips from all types of land use development. The trip generation rate for the 59 units was based on the ITE category for single family homes (Land Use Category 210, see Table 7).

Table 7
Institute of Transportation Engineer's Trip Generation Rate for Single Family Homes

Land Use	ITE Code	ADT	AM Peak Hour			PM Peak Hour		
			In	Out	Total	In	Out	Total
Single-Family Detached Housing	LU-210	9.52	0.19	0.56	0.75	0.64	0.36	1.00

Source: Institute of Transportation Engineers. Trip Generation Manual, 9th Edition. September 2012.

Based upon the trip generate rate for single family homes shown in Table 7, the proposed project would result in the generation of a total of 562 daily trips, with 45 vehicle trips occurring during the AM peak hour (7:30-8:30 am) and 59 trips occurring during the PM peak hour (5-6 pm), as shown in Table 8.

Table 8
Trip Generation Calculations For Silver Oak Estates

Land Use	Size	ADT	AM Peak Hour			PM Peak Hour		
			In	Out	Total	In	Out	Total
Single Family Dwellings	59 units	562	11	34	45	38	21	59

Source: Trip rates based upon the Institute of Transportation Engineers' (ITE) Trip Generation Manual, 9th Edition.

Construction Traffic

The weekday work for the project is expected to begin around 7:00 AM and end around 4:00 PM. The construction worker arrival peak would occur between 6:30 AM and 7:30 AM, and the departure peak would occur between 4:00 PM and 5:00 PM. These peak hours are slightly before the citywide commute peaks. During the peak hours of commute traffic Abrams Associates has estimated that construction of the project could potentially generate up to 30 trips per hour. It should be noted that the number of trips generated during construction would not only be temporary, but would also be less than the traffic estimated to be generated by the proposed project at buildout. Therefore, as is the case with the proposed project itself, the construction traffic would not be expected to result in any significant impacts to intersection traffic operations in the study area.

Existing Conditions

As shown in Table 9, the intersection capacity results reveal that the intersection of Oakhurst Drive and Yolanda Circle operates acceptably during existing conditions. The

average vehicle delay for traffic on Yolanda Circle entering Oakhurst Drive is 13.1 seconds in the AM and 12.2 seconds in the PM. It should be noted that this is well below the standards where a traffic signal would be considered.[38] Table 9 also shows the intersection capacity conditions at Kirker Pass Road and Concord Boulevard. The existing conditions show a Level of Service (LOS) "C" during both the AM and PM peak periods. The results show that although the overall intersection has acceptable operations (i.e. the average delay is well within established standards), the westbound Concord Boulevard approach operates close to capacity during the AM peak period.

The Traffic Impact Analysis also verified that the intersections of Oakhurst Drive / Eagle Peak Avenue and Oakhurst Drive / Clayton Road operate acceptably (A or B) under existing conditions.

Table 9
Existing Intersection LOS

Intersection	Control	Peak Hour	Existing	
			Delay	LOS
1. Oakhurst Drive and Yolanda Circle/Silver Oak Estates Drive	Side Street Stop	AM	13.1	B
		PM	12.2	B
2. Kirker Pass Road and Concord Blvd	Traffic Signal	AM	34.5	C
		PM	30.0	C

Source: Abrams Associates, 2013.

It should be noted that the queue in the westbound left-turn lane has been observed to extend back beyond the turn pocket in the AM peak period to the point where the queue blocks one of the two through lanes, thereby increasing delay. While this condition inconveniences motorists, said condition does not cause any significant safety problems or cause any adjacent intersections to degrade below established LOS standards. The City of Concord only has standards for the *overall* intersection delay and has not established any standards for side-street delay at a signalized intersection. In the case of the Kirker Pass Road/Concord Boulevard intersection, the City of Concord's overall LOS standard for the intersection is D. Therefore, because the overall LOS is C under existing conditions (see Table 9), this intersection meets Concord's established intersection operating standards.

Existing Plus Project Conditions

The Existing Plus Project scenario is intended to evaluate the existing traffic conditions with the addition of traffic from the proposed project. The proposed 59 residential units are anticipated to generate a total of 562 average daily trips, with 45 vehicle trips during the AM peak hour and 59 trips during the PM peak hour. During the AM peak hour 34 vehicles would exit from the development and 11 vehicle trips would enter. During the critical PM peak hour, 38 vehicles would enter the project and 21 vehicle trips would depart. Generally, a project would need to generate at least 100 vehicle trips per hour before a full traffic impact study is required. The Silver Oak Estates project falls well

[38] *Manual on Uniform Traffic Control Devices, Part 4 – Highway Traffic Signals*, Caltrans, Sacramento, CA, 2012.

below this standard.

With the development of the Silver Oak Estates project, changes would occur to the access at the intersection of Oakhurst Drive and Yolanda Circle. A new roadway will be constructed to line up opposite Yolanda Circle. A left-turn lane will be constructed in the median of Oakhurst Drive for traffic turning into Silver Oak Estates Drive (see Mitigation Measure 40 under Question (d) below). This will result in the removal and relocation of existing lighting poles in the median.

Silver Oak Estates Drive itself will be a 36-foot wide street at the intersection with Oakhurst Drive, with a single lane approaching the intersection. A stop sign and stop bar will be constructed on the Silver Oak Estates Drive approach to Oakhurst Drive (see Mitigation Measure 39 under Question (d) below). In addition, the existing sidewalk on Oakhurst Drive will be modified and ADA accessible ramps will be constructed.

The traffic conditions at the study intersections under the Existing Plus Project scenario are presented below in Table 10. As shown in the table, a small change in the average vehicle delay would occur during the weekday AM and PM peak hours. The change in delay for traffic on Yolanda Circle would be essentially unchanged, and the average delay for traffic on Silver Oak Estates Avenue would be about 13.0 seconds per vehicle, the same as for Yolanda Circle. At Kirker Pass Road and Concord Boulevard, the average delay would be unchanged. The project would add 27 vehicle trips during the AM peak hour to the Kirker Pass/Concord Boulevard intersection, of which approximately 10 would be added to the left-turn movement on the westbound Concord Boulevard approach. Because the proposed project would not cause the study intersections to degrade to an unacceptable LOS, the project would not result in an impact to the study intersections under Existing Plus Project conditions. Please see the below section entitled, "Kirker Pass Road/Concord Boulevard Intersection Westbound Queuing," for a detailed discussion of the project's contribution of traffic to the westbound queue at this intersection.

Table 10
Existing Plus Project Intersection LOS

Intersection	Control	Peak Hour	Existing		Existing Plus Project	
			Delay	LOS	Delay	LOS
1. Oakhurst Drive and Yolanda Circle/Silver Oak Estates Drive	Side Street Stop	AM	13.1	B	13.4	B
		PM	12.2	B	16.0	B
2. Kirker Pass Road and Concord Blvd	Traffic Signal	AM	34.5	C	35.0	C
		PM	30.0	C	31.3	C

Source: Abrams Associates, 2013.

Baseline Plus Project Conditions

The Baseline Plus Project scenario is intended to evaluate the traffic conditions with the addition of new traffic from reasonably foreseeable projects in the area at the time the project is completed as well as from the proposed project. The project was assumed to be

completed and available for occupancy within three years, or by about 2017.

While the Clayton Community Church is reconsidering their application for the construction of a church in the downtown area, this analysis, for conservative purposes, has assumed the church project would be built in the downtown area. The EIR for this project (Clayton Community Church Project EIR, LSA Associates, 2010) estimates that approximately 37 PM peak hour trips and 16 AM peak hour trips would be added to Oakhurst Drive in the vicinity of the Silver Oaks Estates Project. In addition to this, based on the Contra Costa Transportation Authority's (CCTA) travel demand model, it has been forecast that the through traffic on Oakhurst Drive would increase by an additional 2 percent per year, which would also account for other baseline projects outside of the immediate area.

The Baseline Plus Project LOS for weekday AM and PM peak hour conditions are presented in Table 11 below. As shown in the table, the intersections of Oakhurst Drive and Yolanda Circle/Silver Oak Estates Drive, as well as Kirker Pass Road at Concord Boulevard, would both continue to operate at acceptable conditions (LOS D or better) during the weekday AM and PM peak hours. While the intersection of Kirker Pass Road at Concord Boulevard is projected to degrade to LOS D in the AM peak hour under Baseline conditions, this is a result of increases in background traffic on Kirker Pass Road and from additional traffic forecast to be generated by approved projects in the area. In other words, the intersection is forecast to operate at LOS D in the AM peak hour regardless of whether or not the proposed Silver Oak Estates Project is implemented. As shown in Table 11, the proposed project itself would be expected to increase the average intersection delay by no more than about one second during either of the peak commute hours. Therefore, the project would not result in an impact to the study intersections under Baseline Plus Project conditions.

Table 11
Baseline Plus Project Intersection LOS

Intersection	Control	Peak Hour	Baseline		Baseline Plus Project	
			Delay	LOS	Delay	LOS
1. Oakhurst Drive and Yolanda Circle/Silver Oak Estates Drive	Side Street Stop	AM	13.5	B	14.0	B
		PM	12.6	B	16.9	B
2. Kirker Pass Road and Concord Blvd	Traffic Signal	AM	37.1	D	37.9	D
		PM	32.5	C	33.8	C

Source: Abrams Associates, 2013.

Cumulative Plus Project Conditions

The Cumulative scenario in intended to evaluate the traffic conditions at the time when the General Plan development in the City of Clayton has been projected to be in place. For the cumulative conditions, the intersection traffic volumes have been based on the existing turning movements plus the addition of growth estimated by the County's traffic model, which is updated by the CCTA. Based on the CCTA's model forecasts, the 2030 cumulative traffic volumes have been developed to be consistent with the model by

applying a 1.2 percent/year increase to the background traffic volumes. This equates to an increase in the traffic stream of 23 percent for the 17-year period through 2030. The traffic from the Clayton Community Church project in downtown Clayton is assumed to be included in this estimate.

Table 12 below summarizes the associated LOS for the Cumulative (Year 2030) weekday AM and PM peak hour traffic conditions both with and without the proposed project. As shown in the table, the intersection at Oakhurst Drive and Yolanda Circle/Silver Oak Estates Drive, as well as Kirker Pass Road at Concord Boulevard, would both continue to operate at acceptable conditions (LOS D or better) during the weekday AM and PM peak hours under Cumulative Plus Project conditions.

Table 12
Cumulative Plus Project Intersection LOS

Intersection	Control	Peak Hour	Cumulative		Cumulative Plus Project	
			Delay	LOS	Delay	LOS
1. Oakhurst Drive and Yolanda Circle/Silver Oak Estates Drive	Side Street Stop	AM	15.7	C	16.2	C
		PM	14.4	B	21.0	C
2. Kirker Pass Road and Concord Blvd	Traffic Signal	AM	45.4	D	46.9	D
		PM	39.0	D	40.4	D

Source: Abrams Associates, 2013.

It is important to reiterate that the increased delay at the intersection of Kirker Pass Road and Concord Boulevard is a result of forecast increases to through-traffic on Kirker Pass Road and also from additional traffic forecast to be generated by future projects in the area, such as the Concord Naval Weapons Station Reuse Plan. The intersection is forecast to operate at LOS D in the future regardless of whether or not the proposed project is implemented. As mentioned above, LOS D is the City of Concord's established LOS threshold for acceptable operations at this intersection. While increases in background traffic are forecast to increase the overall peak hour delay by as much as 10 seconds (a 30 percent increase) the proposed project itself is forecast to increase the average intersection delay by no more than about one to two seconds during either of the peak commute hours.

Kirker Pass Road/Concord Boulevard Intersection Westbound Queuing

As mentioned previously, the queue in the westbound left-turn lane of the Kirker Pass/Concord Boulevard intersection has been observed to extend back beyond the left-turn pocket in the AM peak period to the point where it blocks one of the two through lanes, thereby increasing delay. However, this does not cause any significant safety problems or cause any adjacent intersections to exceed any established standards. Because the overall delay and LOS still meets Concord's established standards, the queuing that occurs on the Concord Boulevard approach to Kirker Pass Road is *not* considered a violation of any established standards.

Using the Synchro 8.0 software model that was developed for the LOS analysis a detailed

review of queuing was prepared for this intersection under all scenarios that were studied in this report. The detailed calculations are included in the technical appendix to this report, which is available at Clayton City Hall for review. Please note that the queues referred to in this section represent the 95th percentile average queues, meaning that, on average, the queues should remain within the 95th percentile values for 95 percent of the time during the peak hour (and should exceed them less than 5 percent of the time).

The results indicate the existing 95th percentile queues on the westbound approach average about 440 feet during the critical AM peak hour. With the addition of project traffic the average queues are only forecast to increase by an average of about 6 feet. Under cumulative conditions the average queues on the westbound approach are forecast to increase by about 100 feet to 546 feet. This is due to the forecast increases in traffic on Kirker Pass Road and the traffic from the planned Concord Naval Weapons Station Reuse Plan. Under Cumulative Conditions the proposed project's incremental contribution would still only increase the average queue by about 6 feet during the AM peak hour. This was verified based on the fact the proposed project is forecast to add less than one vehicle per signal cycle to the westbound approach during the morning peak hour.

It should be noted that Clayton, like most cities, does not have an established exacerbation standard for a significant impact on a queue that already extends beyond the existing turn pocket storage area. However, some cities have established 25 feet (approximately one car length) as the threshold for a significant impact, but only for existing plus project and baseline plus project conditions. Cumulative forecasts involve more uncertainty and are generally excluded from the queuing impact analysis.[39]

Conclusion

As discussed above, the study intersections would continue to operate at acceptable levels with implementation of the proposed project under near-term and long-term scenarios. Because the project would not cause an increase in traffic which is substantial in relation to the existing traffic load and capacity of the street system, nor exceed an established LOS standard, impacts would be ***less than significant***.

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?..... No Impact

Discussion (c.)

The proposed project would not require any changes to existing regional air traffic activity and the project area is not located in the vicinity of an airport. Therefore, ***no impact*** would occur associated with a change in air traffic patterns or change in location that would result in any safety risks.

[39] *City of Oakland Transportation Impact Study Guidelines*, City of Oakland Transportation Planning and Funding Division, Oakland, CA, April 4, 2013.

d. Would the project substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)? ..... Less-Than-Significant With Mitigation Incorporated

Discussion (d.)

This section will address the potential safety issues associated with site access and internal circulation, Lydia Lane access for the project's seven single family homes, and short-term construction-related increases in traffic.

Site Access/Internal Circulation

The Transportation Impact Analysis prepared for the proposed project also included review of the project plan and internal roadway with regards to vehicle delay and traffic safety. Internal site circulation or access issues that would cause a traffic safety problem or any unusual traffic congestion or delay have not been identified. The proposed internal roadways would meet the City's minimum width requirements and have gradual curves that will allow for sufficient visibility (with proper maintenance of the landscaping). For example, Silver Oak Estates Drive has a 24-foot paved cross-section, which is consistent with the City's standards for streets with no parking allowed. The exception is the area where on-street parking would be provided on one side, near the cul-de-sac; however, the cross-section here is 44 feet.

It should be noted that the volumes of traffic anticipated on the internal roadways would be light enough such that conflicts with vehicles backing out of garages and/or parking spaces within the project would not be expected. This is supported by the fact that the access to the majority of townhomes would be located on side driveways, and only 12 homes would front on the main roadway.

Lydia Lane Access and Bridge

As part of the Transportation Impact Analysis prepared for the proposed project, an access and safety analysis of the project's Lydia Lane connection was performed to address the public comments expressed during the Silver Oak Estates Project informational meeting held by the City of Clayton. The seven single-family units proposed for the project would have gated access via a cul-de-sac at the end of Silver Oak Estates Drive, as well as gated access at Lydia Lane. Two gated accesses within the project site would eliminate any through-traffic between Lydia Lane and the remaining 52 residences of Silver Oak Estates. Because only seven units are located within the gated portion of the project, only approximately seven vehicle trips per hour would use Lydia Lane during the AM and PM peak hours. This estimate is based on the established ITE trip generation rates for single family homes.[40]

[40] ITE peak hour trip generation rate for single family dwellings (Code 210) is 1 trip per dwelling unit in the PM peak hour and 0.75 trip per hour in the AM peak hour (see Table 4).

The access point for the project's Lydia Lane entrance would cross a one-lane bridge and then pass through the parking area of Lydia Lane Park. Given the volume of traffic forecast to use the entrance, the presence of the 13-foot wide one-lane bridge would not be expected to result in any traffic safety or capacity problems. The Lydia Lane Park parking lot has eight head-in parking spaces with a two-way parking aisle behind them. The parking lot has at least 40 feet of width, allowing for the required 18 feet for the head-in parking spaces, plus two 11-foot travel lanes. Traffic from the proposed project would be light enough so as not to conflict with vehicles backing out of parking spaces. As is the case with any parking lot, if a vehicle is backing out of a parking space they could temporarily block one or both of the adjacent travel lanes. However, given the number of parking spaces and traffic volumes involved in this case, significant safety or capacity problems are not expected to occur. In general, the parking lot is of adequate dimensions and should be able to continue to safely accommodate existing park traffic along with up to seven cars during each peak hour from the proposed seven residences that would have gated access to Lydia Lane.

Traffic added by the proposed project would not change the existing geometric conditions; therefore, the addition of the traffic from the proposed project would not be expected to create any new or elevated safety impacts in the area. According to the Transportation Impact Analysis, all evidence indicates that significant safety problems would not be created or substantially worsened by the traffic from the proposed project.

The Lydia Lane access would also need to cross the George Cardinet Trail; and, based on the treatment of trail crossings with similar light volumes, the traffic consultant for the project has recommended installation of pedestrian stop signs on the trail, at each approach to Lydia Lane, to warn trail users of the active motor vehicle crossing.

L&M Consulting Engineers, Inc. conducted an evaluation of the Yolanda Estates/Hurd Ranch Bridge (aka, Lydia Lane Bridge) to assess the existing bridge condition and capacity to carry 10 Ton vehicle loading.[41] To assess the bridge, both visual inspection and a radar survey were performed. Based on the approximate age of this bridge (i.e., 1930s) the physical condition is well maintained. Normal deterioration was found at isolated concrete areas, particularly under arch, within the railing elements and the asphalt road surface. Bridge total length is approximately 52 ft., with arch span of 16 ft. and vertical rise of 8 ft. A double layer of reinforcing was found at the arch and spandrel walls, which appeared to be either #4 or #5 bars spaced between 12 and 24 inches on center. The extent of deterioration was limited to minor cracking and spalling. According to the evaluation, the bridge meets the rated load capacity for 10-ton vehicle traffic with sufficient safety factors. The evaluation identifies cosmetic repairs; however, such repairs are not necessary for bridge use.[42]

[41] L&M Consulting Engineers, Inc. *Yolanda Estate/Hurd Ranch Bridge Evaluation Report*. April 9, 2014.
[42] L&M Consulting Engineers, Inc., *Yolanda Estate/Hurd Ranch Bridge Evaluation Report*, p. 9.

Short-term Construction-related Traffic

The short-term and temporary increase in traffic as a result of demolition and construction activities associated with the proposed project was quantified assuming a worst-case single phase construction period of 12 months. This assumption represents a potential worst-case scenario. If the project is built in phases over time, the effects of each phase would be expected to be less.

Heavy Equipment

Approximately four pieces of heavy equipment are estimated to be transported on and off the site each month throughout the 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. The eight loads of heavy equipment being hauled to and from the site each month would be short-term and temporary. Nonetheless, a Traffic Control Plan should be prepared in order to ensure a safe flow of traffic in the project area 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. Additionally, 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 if the project were to be constructed in a one-year period. In order to ensure that parking associated with construction of the proposed project does not conflict with nearby residential areas, a Traffic Control Plan would be required.

Construction Material Import

The project would require the importation of construction material, including raw materials for the building pads, the buildings, the parking area, and landscaping. Based on past construction of similar projects, importing such material is estimated to require a substantial amount of truck traffic during the construction period. A Traffic Control Plan would be required to ensure that if importation and exportation of material becomes a traffic nuisance, the City Engineer could limit the hours that the activities could take place.

Conclusion

As discussed above, in order to ensure the project would not result in any traffic safety or circulation impacts, as well as safety impacts associated with the Lydia Lane connection, improvements must be made to the project access roadways consistent with the Transportation Impact Analysis. In addition, to ensure that the short-term increase in traffic associated with construction of the proposed project does not result in any safety or circulation impacts, a Traffic Control Plan would be required. Without the recommended improvements or Traffic Control Plan, the proposed project could result in a ***potentially significant*** impact associated with hazards due to design features.

Mitigation Measure(s)

Implementation of the following mitigation measures would ensure that the above impact is reduced to a *less-than-significant* level.

Mitigation Measure 39 *Prior to approval of improvement plans for the project, the plans shall show installation of a stop sign and stop bar pavement markings on the Silver Oak Estates Drive approach to Oakhurst Drive. In addition, the existing sidewalk on Oakhurst Drive shall be modified and ADA accessible ramps shall be constructed. The improvements shall be reviewed and approved by the City Engineer prior to approval of improvement plans.*

Mitigation Measure 40 *Prior to approval of improvement plans for the project, the plans shall show a separate westbound left-turn pocket at Oakhurst Drive for traffic turning into Silver Oak Estates Drive (i.e., project entrance) to provide for a safe left-turn movement into the proposed project entrance. The improvements shall be reviewed and approved by the City Engineer prior to approval of improvement plans.*

Mitigation Measure 41 *Prior to approval of improvement plans for the project, the plans shall show pedestrian stop signs on the George Cardinet trail at each approach to Lydia Lane to warn trail users of the active motor vehicle crossing. The improvements shall be reviewed and approved by the City Engineer prior to approval of improvement plans.*

Mitigation Measure 42 *Signage shall be posted at the project's Lydia Lane access point, which shall read: "Truck Deliveries Prohibited". Signage shall be reviewed and approved by the Community Development Director and City Engineer prior to issuance of building permits.*

Mitigation Measure 43 *Prior to approval of improvement plans for the project, the applicant shall hire an experienced contractor to repair the cracks and spalls identified in the Yolanda Estate/Hurd Ranch Bridge Evaluation Report prepared by L&M Engineers, Inc., to the satisfaction of the City Engineer. The repairs shall be made with Simpson FX-763 Low-Modulus Trowel-Grade Epoxy or an equivalent product, consistent with the recommendations of the evaluation report.*

Mitigation Measure 44 *Prior to issuance of grading and building permits, the project applicant shall submit a Traffic Control Plan to the City for review and approval by the City Engineer. Each phase of construction would be subject to the Traffic Control Plan and oversight by the City Engineer. The Traffic Control Plan shall include, but would not necessarily be limited to, the following requirements:*

- *Truck drivers shall be notified of and required to use the most direct route between the project site and Ygnacio Valley Road, as determined by the City Engineering 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 shall 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 Oakhurst Drive;*
- *Debris and mud on main driveways, Oakhurst Drive, and other 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;*
- *If importation and exportation of material becomes a traffic nuisance, then the City Engineer shall limit the hours such activities are able to take place; and*
- *Additional worker parking measures shall be implemented during the last phase of construction, as necessary, depending on the circumstances, as remaining vacant land may not be available on the site for parking.*

e. Would the project result in inadequate emergency access? ..... Less-Than-Significant Impact

Discussion (e.)

Primary access to the project site would be provided via a private roadway (referred to as Silver Oak Estates Drive) off of Oakhurst Drive, located opposite the eastern Yolanda Circle intersection. All units would be able to access the project from Oakhurst Drive. The seven single-family detached homes would have a gated access at the cul-de-sac terminus of Silver Oak Estates Drive, via a private driveway. In addition, restricted

access to the project would be provided via the northern terminus of Lydia Lane, over the existing bridge. Only the seven single-family detached homes (Lots 53-59) would be able to utilize the Lydia Lane bridge access point, which would be gated.

As part of the proposed project design, the project would include emergency vehicle access (EVA), per the CCCFPD standards as well as the City's standards. One EVA point is included at the northwestern end of the project site, near Lots 57 and 58. This EVA point would connect to Oakhurst Drive. The EVA would include a locked gate that can be opened by emergency response personnel via a Knox Box. Use of the bridge is only intended for residents associated with the seven single-family detached homes and not for delivery or emergency vehicles. As required per Mitigation Measure 42, signage would be posted at the Lydia Lane access point notifying vehicle operators of the truck restriction on the bridge.

Because major modifications to the existing area roadways and circulation system would not occur as a result of the proposed project, and adequate EVA would be provided at the site, a ***less-than-significant*** impact associated with emergency access would occur.

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? ..... Less-Than-Significant Impact

Discussion (f.)

The project area is currently provided transit service by the Central Contra Costa Transit Authority. A school bus stop currently exists along the project's Oakhurst Drive frontage, at the approximate location of Oakhurst Drive and Yolanda Circle. General ridership is available at stops along Bus Route 10, which currently provides transit service from the Concord BART station through Clayton along Clayton Road and Marsh Creek Road. In addition, Route 93x, Kirker Pass Express, provides transit service from the Walnut Creek BART station along Ygnacio Valley Road/Kirker Pass Road through Clayton to the Antioch Park and Ride lot. Route 310 provides transit service from the Concord BART station to Ygnacio Valley Road/Kirker Pass Road. Although the project would increase the population in the area, the increase is not expected to be substantial enough to require expanded transit services within the project area. Thus, the performance or safety associated with transit services or facilities would not decrease with implementation of the proposed project.

A walking trail would be provided at the southeastern corner of the project site, which would connect to the existing trail located adjacent to the Oakhurst Golf Course and which provides connectivity to the George Cardinet Trail located south of the project site, across Mount Diablo Creek. Thus, the project would provide an extension and connection to existing bicycle and pedestrian facilities, which would be consistent with the City's goals and policies, such as Objective 7 of the Circulation Element and Policy 1d of the Open Space/Conservation Element, intended for preserving and enhancing pedestrian and bicycling trails.

Overall, the project design would not decrease the performance or safety of any public transit, bicycle, or pedestrian facilities, and would not conflict with any adopted policies, plans, or programs regarding alternative transportation. Therefore, the proposed project would result in a ***less-than-significant*** impact on alternative transportation.

16. WATER, SEWER, AND STORMWATER SYSTEMS.

Issues		Potentially Significant Impact	Less-Than-Significant With Mitigation Incorporated	Less-Than-Significant Impact	No Impact
Would the project:					
a.	Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board?	□	□	X	□
b.	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?	□	□	X	□
c.	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?	□	X	□	□
d.	Have sufficient water supplies available to serve the project from existing entitlements and resources, or are new or expanded entitlements needed?	□	X	□	□
e.	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?	□	□	X	□

a. Would the project exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board?..... Less-Than-Significant Impact

b. Would the project 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?..... Less-Than-Significant Impact

Discussion (a. and b.)

The wastewater collection system within the City of Clayton is owned by Clayton and maintained by the City of Concord. Concord has a contract with Central Contra Costa County Sanitary District (CCCSD) to treat the wastewater. The CCCSD treatment plant treats an average dry weather flow (adwf) of approximately 36 million gallons per day (MGD).[43] The CCCSD treatment plant's permitted physical capacity is 54 MGD. According to the Growth Management Element of the City's General Plan, the plant's maximum capacity of 54 MGD is projected to accommodate build out until the year 2040.[44]

[43] Personal communication with Curt Swanson, Director of Operations, Central Contra Costa County Sanitary District. February 11, 2014.

[44] City of Clayton. *City of Clayton General Plan Section XI: Growth Management Element* [page 16]. Available at: http://www.ci.clayton.ca.us/index.php?section=52. As amended February 5, 2008.

The proposed project would generate additional wastewater flows into the regional wastewater treatment plant operated by CCCSD, located north of Buchanan Field. However, the proposed project is consistent with the land use and zoning designations for the site. As such, the project is consistent with what is anticipated for buildout under the City's General Plan and would have been included in the capacity projection calculations for the wastewater treatment plant. The proposed project's creation of 59 single-family units would be expected to generate approximately 0.009 MGD of wastewater (255 gallons per day per single-family dwelling unit and 140 gallons per day per townhome [7*255 + 52*140 = 1,785 + 7,280 = 9,065 total gallons per day or 0.009 MGD]).[45] An increase of the adwf by 0.009 MGD would not be considered an adverse impact to the plant's current capacity because of the relatively small increase in demand and the remaining available capacity of the wastewater treatment plant.

In terms of other infrastructure, the proposed project includes a connection to the existing sanitary sewer manhole south of Mount Diablo Creek via a new eight-inch sanitary sewer line, which would be installed across Mount Diablo Creek. Section 5, Biological Resources, includes a detailed discussion regarding the new sanitary sewer line, as well as an analysis of the potential impacts to biological resources associated with the improvements. Mitigation measures included in this IS/MND, particularly Mitigation Measures 8 and 9, would ensure that construction of the new sewer connection would not cause any significant environmental effects.

Therefore, the proposed project would have a ***less-than-significant*** impact to existing wastewater facilities and infrastructure.

c. Would the project 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? ..... Less-Than-Significant With Mitigation Incorporated

d. Would the project have sufficient water supplies available to serve the project from existing entitlements and resources, or are new or expanded entitlements needed? ..... Less-Than-Significant With Mitigation Incorporated

Discussion (c. and d.)

Potable water service would be provided to the proposed project site by the Contra Costa Water District (CCWD). The anticipated water demand for the proposed project has been estimated to be approximately 0.02 MGD (450 gallons per day per single-family dwelling unit, and 350 gallons per day per townhome [7*450 + 52*350 = 21,350 gallons per day

[45] Email communication with Rick Angrisani, City Engineer, April 10, 2014. See also dk Consulting. *Silver Oak Estates – Sewer & Water Demand Clayton, California*. May 2, 2014.

or 0.02 MGD]). [46] According to the CCWD Will-Serve Letter for the proposed project, potable water service for the proposed project would be made available upon completion of financial arrangements and installation of all necessary water facilities to meet the requirements of domestic use and fire protection according to current CCWD standards.[47] The proposed project includes a connection to the existing 12-inch water main within Oakhurst Drive via an eight-inch water main to be extended in Silver Oak Estates Drive and throughout the residential areas for water service purposes. According to the comparison of available supply with projected demands from the 2010 Urban Water Management Plan (UWMP) for the CCWD, the CCWD does not anticipate any supply deficits in normal years through the year 2035. In future years, multiple-year drought conditions could cause supply shortfalls; however, any potential supply shortfalls experienced during a drought would be met through a combination of a short-term conservation program or short-term water purchases. Accordingly, the CCWD's currently available and planned supplies are sufficient to meet estimated water demands during normal, single dry and multiple dry years during the next 25 years.[48] Because the proposed project is consistent with the current land use and zoning designations for the site, development of the project would be considered consistent with the growth assumptions utilized to estimate the CCWD's projected water demands. Thus, the project's associated increase in water demand would have been accounted for in the CCWD's UWMP.

In addition, the project design would be required to adhere to State Building Code standards for water conservation, such as low-flow plumbing fixtures, as well as the City's water-conserving guidelines for landscaping, as set forth in Chapter 17.80 of the *Municipal Code*. Without compliance with the State Building Code and consistency with the City Municipal Code, the proposed project could be considered to result in a ***potentially significant*** impact on existing water supply, as well as related to the construction of new or expansion of existing water facilities.

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

Mitigation Measure 45 *Prior to approval of the construction drawings, the project design shall be reviewed and approved by the City Engineer and Contra Costa County Building Department for consistency with the adopted State Building Code standards for water conservation, as well as the water-conserving guidelines for landscaping included in Chapter 17.80 of the City's Municipal Code.*

e. Would the project require or result in the construction of new storm water drainage

[46] *Ibid.*
[47] Contra Costa Water District. *Subdivision 8516, Silver Oak Estates*. April 4, 2014.
[48] Contra Costa Water District. *Urban Water Management Plan*. June 2011.

facilities or expansion of existing facilities, the construction of which could cause significant environmental effects? ..... Less-Than-Significant Impact

Discussion (e.)

The proposed project's stormwater system is discussed in detail in Section 9, Hydrology and Water Quality, of this IS/MND. The proposed project would include treatment of runoff prior to discharging into outfalls at Mount Diablo Creek. Treated runoff from two on-site drainage areas would flow through an existing 18-inch storm drain pipe into an existing outfall at Mount Diablo Creek. Adequate capacity exists within the existing 18-inch pipe and associated outfall to accommodate treated runoff from the two drainage areas, as discussed in detail in Section 9, Hydrology and Water Quality, Questions 'a,b'.

A new 18-inch storm drain pipe and associated outfall into Mount Diablo Creek is proposed to discharge treated runoff from DMA 3. However, the project's stormwater outfall has been designed to avoid impacting Clean Water Act protected waters of the U.S. and State. In addition, with implementation of IMPs per C.3 Standards, post-development stormwater runoff flow would not exceed the pre-development stormwater runoff flow from the site, and, thus, would not be expected to exceed the capacity of the creek. Furthermore, the mitigation measures set forth in Section 9 of this IS/MND would help to ensure that construction of the new storm drain pipe would not cause environmental effects. Therefore, although the project would result in the construction of a new stormwater outfall, construction would not cause significant environmental effects, and the impact would be ***less than significant***.

17. MANDATORY FINDINGS OF SIGNIFICANCE.

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

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? ..... Less-Than-Significant Impact

Discussion (a.)

Development of the proposed project has the potential to affect the California red-legged frog, nesting raptors or passerine birds, riparian habitat, wetlands, and protected trees. 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 (see Mitigation Measures 4 through 15). 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. Does the project have the potential to achieve short-term, to the disadvantage of long-term, environmental goals? ..... Less-Than-Significant Impact

c. Does the project have impacts that are individually limited, but cumulatively considerable? ..... Less-Than-Significant Impact

Discussion (b. and c.)

The proposed project in conjunction with other development within the City of Clayton 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. Cumulatively considerable impacts would not occur due to implementation of the proposed project. 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. Does the project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly? ..... Less-Than-Significant Impact

Discussion (d.)

The proposed project site is primarily surrounded by existing similar development and is consistent with the land use and zoning designations 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***.

VII. STAFF AND SOURCES

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