INITIAL STUDY AND MITIGATED NEGATIVE DECLARATION

FINAL

FOR THE

VINE HILL RESIDENTIAL PROJECT

OCTOBER 2014

Prepared for:

City of Martinez – City Hall
525 Henrietta Street
Martinez, CA 94553
925-372-3500

Prepared by:

De Novo Planning Group
1020 Suncast Lane, Suite 106
El Dorado Hills, CA 95762
(916) 580-9818

De Novo Planning Group

A Land Use Planning, Design, and Environmental Firm

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INITIAL STUDY CHECKLIST

PROJECT TITLE

Vine Hill Residential Project

LEAD AGENCY NAME AND ADDRESS

City of Martinez
525 Henrietta Street
Martinez, CA 94553

CONTACT PERSON AND PHONE NUMBER

Dina Tasini, Contract Project Manager
(dinatasini@comcast.net)

PROJECT SPONSOR'S NAME AND ADDRESS

Mr. Derek Pampe
DeNova Homes
1500 Willow Pass Court
Concord, California 94520

PROJECT LOCATION AND SETTING

The project site, which consists of a golf course, pro shop and restaurant, is located on the southwest corner of the intersection between Vine Hill Way and Rolling Hill Way in a residential area of Martinez, California (Figure 1 and 2). The project site totals approximately 25.9 acres and is improved with a single-story building totaling approximately 2,634 square feet. The project site is currently occupied by Pine Meadow's Golf Course. On-site operations include golfing, golf course maintenance, retail, and food service activities. In addition to the single-story building, the project site is improved with several storage units and maintenance sheds, a pond, asphalt-paved parking areas and associated landscaping. The Assessor's Parcel Number (APN) for the subject property is 162-020-0019. The project site currently has natural gas and electricity provided by Pacific Gas and Electric (PG&E), and municipal potable water and sewage disposal services.

GENERAL PLAN AND ZONING

The project site has an OS (Open Space & Recreation, Permanent) General Plan Land Use Designation and M-OS/RF (Mixed Use-Open Space/Recreation Facilities) Zoning Designation.

PROJECT DESCRIPTION

The proposed project is General Plan Amendments, Rezone, and a Vesting Tentative Map (Figure 3) that would facilitate the development of 100 single family residential units on approximately 25.9 acres at the intersection of Center Avenue and Vine Hill Way. The proposed project would also require a tree removal permit to remove 47 trees protected under the City of Martinez Tree Protection Ordinance. The project applicant has submitted a preliminary landscape plan, preliminary grading and drainage plan, preliminary utility plan, preliminary stormwater control plan, and a preliminary tree removal and demolition plan. These preliminary plans are contained in Appendix A.

The 25.9-acre project site (APN 162-020-019) is located within the City of Martinez and currently has an OS (Open Space & Recreation, Permanent) General Plan Land Use Designation and M-OS/RF (Mixed Use-Open Space/Recreation Facilities) Zoning Designation. The proposed project would require a General Plan Amendment to change the land use designation from OS to R 0-6. The proposed project would require a rezone from M-OS/RF to R-7.~~0~~5.

The proposed project contemplates lot sizes that range from 5,700 square feet to 14,000 square feet with an average of 7,100 square feet. The overall site density is one dwelling unit per 11,282 square feet. Special consideration has been taken to create a visual buffer and open space amenity between the subdivision and the existing neighborhood. Along Center Avenue and Vine Hill Way, the preliminary landscape plan includes a meandering walking trail surrounded by landscaping.

The applicant has also proposed General Plan text amendments to four policies, two within the General Plan Land Use Element, and two within the Hidden Lakes Specific Area Plan. The proposed text changes are as follows:

General Plan Land Use Element

- 21.21 Land to remain for open uses is designated Public Permanent Open Space or Open Space/Conservation Use Land. These designations shall apply where the following conditions are prevalent: natural conditions such as steep or potentially unstable slope, hazardous geologic conditions, watershed stability and floods hazard, seismic hazard, and fire hazard, which constitute major constraints to development or threats to life and property, where soils, land forms, vegetation, watersheds, creekways, and water bodies combine to provide either a significant habitat for wildlife or agricultural resource and where land forms, vegetation, waterways and surfaces constitute a major scenic and recreational resource which should be preserved either for purposes of public use or protection and shaping of the scenic setting of the community. This designation shall not apply to ~~private recreational resources such as~~ the private golf course~~, or other facilities where the City has no vested ownership~~.

- ~~21.22 Zoning and other regulatory powers shall be used to maintain open space use where there are substantial threats to life and property or where private open space uses are appropriate. Appropriate private open space uses include agricultural, grazing, open space recreational uses such as camp facilities or residential uses where such uses and related facilities such as roads and parking areas constitute less than two percent of the entire land area where the balance of the land is retained in a natural state or agricultural state.~~ **(Note: This Policy was originally proposed to be amended, but has been removed from the proposed General Plan Amendment)**

Hidden Lakes Specific Area Plan

- ~~32.31 The major portion of the site area shall be retained for open space use, primarily preserved as public open space, with a portion preserved in private ownership.~~ **(Note: This Policy was originally proposed to be amended, but has been removed from the proposed General Plan Amendment)**

- ~~32.32 The existing golf course is an appropriate use within the Plan area.~~

The proposed project would connect to existing City infrastructure to provide water, and storm drainage utilities. ~~Mountain~~Mt. View Sanitary District (MVSD) would provide wastewater

collection, treatment, and disposal services. Police protection service would be provided by the City of Martinez. Contra Costa County Fire Protection District (CCCFPD) would provide fire protection service. School services would be provided by the Mt. Diablo Unified School District. The project site currently has gas and electricity provided by Pacific Gas & Electric, which will continue to provide these services to the future residences.

OTHER PUBLIC AGENCIES WHOSE APPROVAL IS REQUIRED (E.G., PERMITS, ETC.)

The City of Martinez is the Lead Agency for the proposed project, pursuant to the State Guidelines for Implementation of the California Environmental Quality Act (CEQA), Section 15050.

- Regional Water Quality Control Board (RWQCB) – Construction activities would be required to be covered under the National Pollution Discharge Elimination System (NPEDES), which would require the development to prepare a Storm Water Pollution Prevention Plan (SWPPP) and file a Notice of Intent with the RWQCB.

- Bay Area Air Quality Management District (BAAQMD) – Indirect Source Review.

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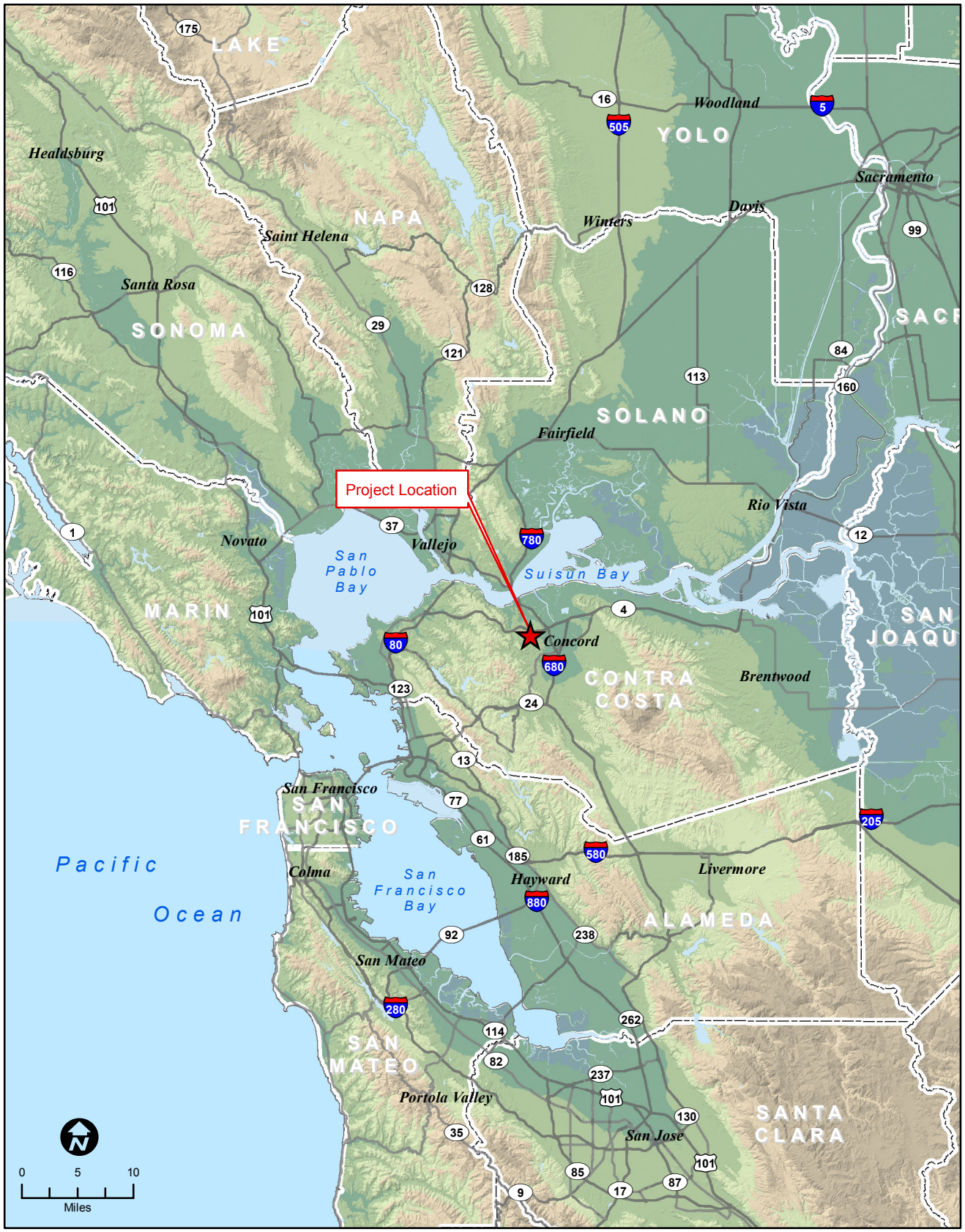

VINE HILL

Figure 1: Regional Location Map

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December 19, 2013

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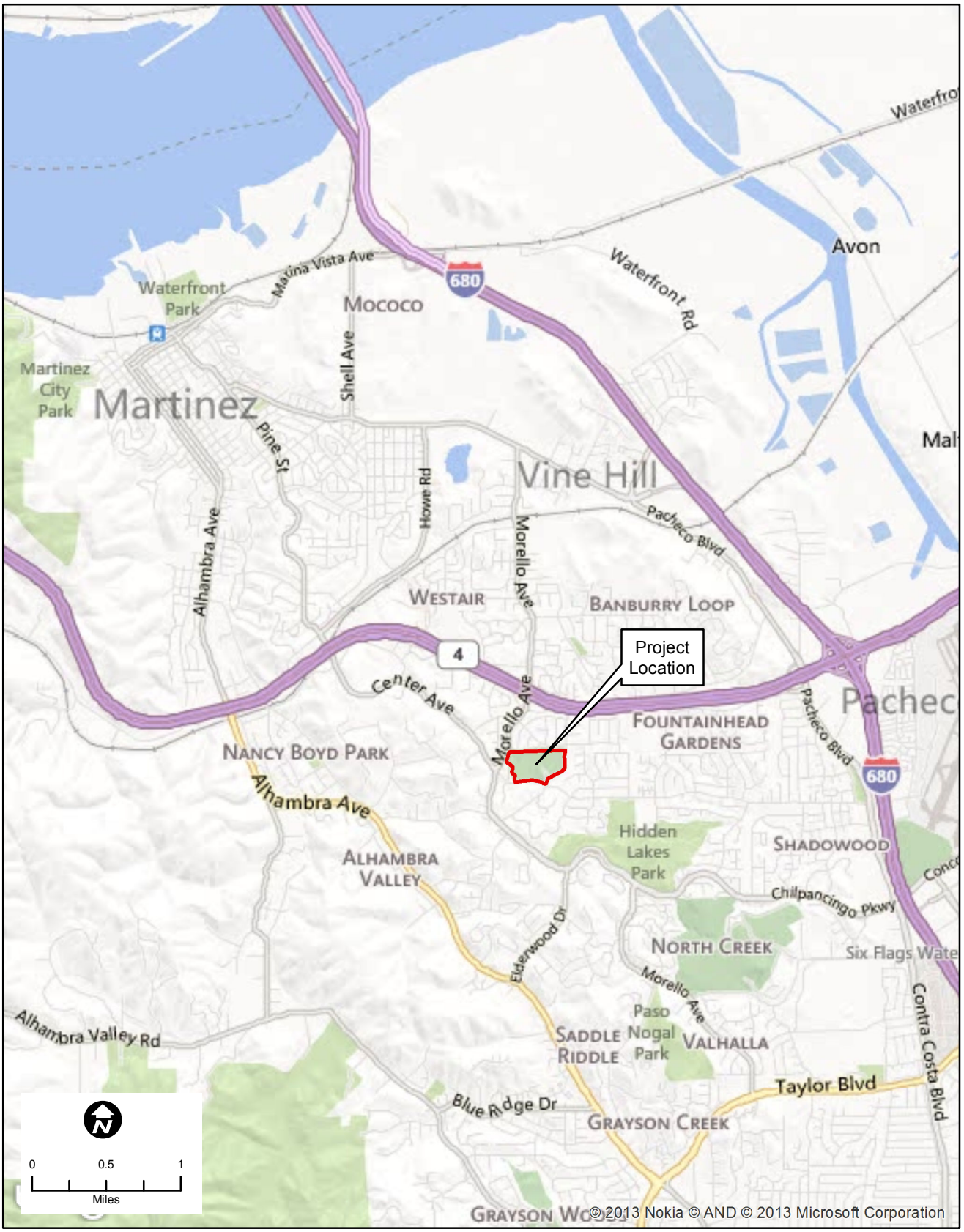

VINE HILL

Figure 2: Project Vicinity

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LEGEND:

EXISTING	PROPOSED	DESCRIPTION
		PROPERTY LINE
		LOT LINE
		RIGHT-OF-WAY LINE
		CENTER LINE
		EASEMENT LINE
		TOP OF CURB

0' 60' 180' 240'

Carlson, Barbee & Gibson, Inc., September 27, 2013

VINE HILL

Figure 3: Vesting Tentative Subdivision Map

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ENVIRONMENTAL FACTORS POTENTIALLY AFFECTED:

None of the environmental factors listed below would be potentially affected by this project, as described on the following pages.

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

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 because revisions in the project have been made by or agreed to by the project proponent. A MITIGATED NEGATIVE DECLARATION will be prepared.
	I find that the proposed project MAY have a significant effect on the environment, and an ENVIRONMENTAL IMPACT REPORT is required.
	I find that the proposed project MAY have a "potentially significant impact" or "potentially significant unless mitigated" impact on the environment, but at least one effect 1) has been adequately analyzed in an earlier document pursuant to applicable legal standards, and 2) has been addressed by mitigation measures based on the earlier analysis as described on attached sheets. An ENVIRONMENTAL IMPACT REPORT is required, but it must analyze only the effects that remain to be addressed.
	I find that although the proposed project could have a significant effect on the environment, because all potentially significant effects (a) have been analyzed adequately in an earlier EIR or NEGATIVE DECLARATION pursuant to applicable standards, and (b) have been avoided or mitigated pursuant to that earlier EIR or NEGATIVE DECLARATION, including revisions or mitigation measures that are imposed upon the proposed project, nothing further is required.

Title Date

EVALUATION INSTRUCTIONS:

1) A brief explanation is required for all answers except "No Impact" answers that are adequately supported by the information sources a lead agency cites in the parentheses following each question. A "No Impact" answer is adequately supported if the referenced information sources show that the impact simply does not apply to projects like the one involved (e.g., the project falls outside a fault rupture zone). A "No Impact" answer should be explained where it is based on project-specific factors as well as general standards (e.g., the project will not expose sensitive receptors to pollutants, based on a project-specific screening analysis).
2) All answers must take account of the whole action involved, including off-site as well as on-site, cumulative as well as project-level, indirect as well as direct, and construction as well as operational impacts.
3) Once the lead agency has determined that a particular physical impact may occur, then the checklist answers must indicate whether the impact is potentially significant, less than significant with mitigation, or less than significant. "Potentially Significant Impact" is appropriate if there is substantial evidence that an effect may be significant. If there are one or more "Potentially Significant Impact" entries when the determination is made, an EIR is required.
4) "Negative Declaration: Less Than Significant With Mitigation Incorporated" applies where the incorporation of mitigation measures has reduced an effect from "Potentially Significant Impact" to a "Less Than Significant Impact." The lead agency must describe the mitigation measures, and briefly explain how they reduce the effect to a less than significant level (mitigation measures from Section XVII, "Earlier Analyses," may be cross-referenced).
5) Earlier analyses may be used where, pursuant to the tiering, program EIR, or other CEQA process, an effect has been adequately analyzed in an earlier EIR or negative declaration. Section 15063(c)(3)(D). In this case, a brief discussion should identify the following:
    a) Earlier Analysis Used. Identify and state where they are available for review.
    b) Impacts Adequately Addressed. Identify which effects from the above checklist were within the scope of and adequately analyzed in an earlier document pursuant to applicable legal standards, and state whether such effects were addressed by mitigation measures based on the earlier analysis.
    c) Mitigation Measures. For effects that are "Less than Significant with Mitigation Measures Incorporated," describe the mitigation measures which were incorporated or refined from the earlier document and the extent to which they address site-specific conditions for the project.
6) Lead agencies are encouraged to incorporate into the checklist references to information sources for potential impacts (e.g., general plans, zoning ordinances).

Reference to a previously prepared or outside document should, where appropriate, include a reference to the page or pages where the statement is substantiated.

7) Supporting Information Sources: A source list should be attached, and other sources used or individuals contacted should be cited in the discussion.

8) This is only a suggested form, and lead agencies are free to use different formats; however, lead agencies should normally address the questions from this checklist that are relevant to a project's environmental effects in whatever format is selected.

9) The explanation of each issue should identify:
   a) The significance criteria or threshold, if any, used to evaluate each question; and
   b) The mitigation measure identified, if any, to reduce the impact to less than significant.

EVALUATION OF ENVIRONMENTAL IMPACTS:

In each area of potential impact listed in this section, there are one or more questions which assess the degree of potential environmental effect. A response is provided to each question using one of the four impact evaluation criteria described below. A discussion of the response is also included.

- Potentially Significant Impact. This response is appropriate when there is substantial evidence that an effect is significant. If there are one or more "Potentially Significant Impact" entries, upon completion of the Initial Study, an EIR is required.
- Less than Significant With Mitigation Incorporated. This response applies when the incorporation of mitigation measures has reduced an effect from "Potentially Significant Impact" to a "Less Than Significant Impact". The Lead Agency must describe the mitigation measures and briefly explain how they reduce the effect to a less than significant level.
- Less than Significant Impact. A less than significant impact is one which is deemed to have little or no adverse effect on the environment. Mitigation measures are, therefore, not necessary, although they may be recommended to further reduce a minor impact.
- No Impact. These issues were either identified as having no impact on the environment, or they are not relevant to the Project.

ENVIRONMENTAL CHECKLIST

This section of the Initial Study incorporates the most current Appendix "G" Environmental Checklist Form, contained in the CEQA Guidelines. Impact questions and responses are included in both tabular and narrative formats for each of the 18 environmental topic areas.

I. AESTHETICS

Would the project:	***Potentially Significant Impact***	***Less Than Significant with Mitigation Incorporation***	***Less Than Significant Impact***	***No Impact***
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*		

Responses to Checklist Questions

Response a, c): The General Plan does not contain any policies that specifically address scenic vistas, nor does it define or identify any scenic vistas. In general, a scenic vista would include areas with views of scenic resources, scenic water resources, and other scenic resources from, or to a project site.

For analysis purposes, a scenic vista can be discussed in terms of a foreground, middleground, and background viewshed. The middleground and background viewshed is often referred to as the broad viewshed. Examples of scenic vistas can include mountain ranges, valleys, ridgelines, or water bodies from a focal point of the forefront of the broad viewshed, such as visually important trees, rocks, or historic buildings. An impact would generally occur if a project would change the view to the middle ground or background elements of the broad viewshed, or remove the visually important trees, rocks, or historic buildings in the foreground.

The proposed project will not significantly disrupt middleground or background views from public viewpoints. The proposed project would result in changes to the foreground views from the public viewpoint by adding residential homes to a site that is largely open and vegetated. In order to assess the foreground impacts, as well as the changes to the existing visual character or quality of the site and its surroundings two visual simulations were performed for the proposed project by Carl M. Maxey, AICP, Licensed Architect. The visual simulations have a 46 degree field of view using a 50 mm lens. The proposed project is not pre-plotted with homes; therefore, two story homes were used to simulate the worst-case-scenario. The locations of the visual simulations are presented below. The visual simulations are provided following this text as Figure 4 and 5.

- Visual Simulation: View 1: Vine Hill Way View Southwest
- Visual Simulation: View 2: Existing and Proposed

View 1 illustrates an existing view of the golf course with a chain link fence and frontage landscaping (mature trees) that are moderately blocking views across the course. The topography rolls slightly down and then back up. The visual simulation illustrates a foreground with frontage landscaping that largely maintains the existing topography. This foreground area also maintains the openness of the existing foreground view. The developed residential subdivision is visible in the background view of this simulation. The landscaping buffer provides visual relief through separation from the public right-of-way.

View 2 illustrates an existing view of the golf course with a chain link fence and frontage landscaping (mature trees) that are moderately blocking views across the course. The topography rolls slightly down. The visual simulation illustrates a foreground with frontage landscaping and modified topography that slopes sharply upward toward the back yard of proposed residential housing. This landscaping area provides some visual relief through separation from the public right-of-way; however, the slope up to the residential backyards combined with the two story building is a potential impact. There is no background view from this view point because of the residential structures that are elevated by the topography modification.

There are 23 lots that back up to existing residences along the northern property line (Lots 1-23) and one along the southern property line (Lot 47). A two story building with 25-foot minimum setbacks on these lots pursuant to the City's development standards for this zoning district could be intrusive to the existing property owners living on the adjacent properties because the project site slopes upward causing the new homes to be elevated above the existing homes. This is a potentially significant impact. Implementation of the following mitigation measure would reduce this impact to a **less than significant** level.

> ***Mitigation Measure Vis-1:*** *To minimize visual impacts of the buildings from the backyards of existing residents, the project proponent shall implement the following first story and second story building setbacks on Lots 1-23:*
>
> - ***First Story Setback****: Backyard setbacks to the first story of a building on Lots 1-23 shall be not less than 30 feet from the backyard property line;*
> - ***Second Story Setback****: Backyard setbacks to the second story of a two-story building on Lots 1-23 shall be not less than 35 feet from the backyard property line. Note: This second story setback requirement does not prohibit the construction of a single-story portion of a two-story building in accordance with the above requirement for a first story setback.*

Response b): There are two designated State Scenic Highways in Contra Costa County. State Route 24 is a designated State Scenic Highway from the east portal of the Caldecott Tunnel to State Route 680 near Walnut Creek. This designation then continues onto State Route 680 to the Alameda County line. The project site is not located within either of these a State Scenic Highways, nor is it visible for either highway. The proposed project would not substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway. Implementation of the proposed project would have ***no impact*** relative to this topic.

Response d): There is a potential for the proposed project to create new sources of light and glare. Examples would include construction lighting, street lighting, security lighting along

walkway, exterior building lighting, interior building lighting, automobile lighting, and reflective building materials. The Martinez Municipal Code Chapter 21.28, Section 21.28.020 states that the subdivider shall provide a street lighting system that shall conform to City specifications. The locations of street lights shall be prescribed by the City Engineer. (Ord. 1103 C.S. § I (part), 1987; Prior code § 4522.). The City Engineer reviews street lighting plans with improvement plan submittals to ensure that the street lighting is designed to meet minimum safety and security standards and to avoid spillover lighting to sensitive uses. To avoid a potential impact, residential building lighting must be consistent with the surrounding residential areas and must include luminaries that cast low-angle illumination to minimize incidental spillover of light onto adjacent residences. Fixtures that project light upward or horizontally would cause a potential impact. Additionally, luminaries must be shielded and directed away from areas adjacent to the project site. The City also reviews building plan submittals to ensure that the reflective building materials are minimized to avoid glare. To avoid a potential impact, residential building materials must be consistent with the surrounding residential areas and must include materials that minimize incidental glare. Materials such as metal siding are an example of building materials that could cause a potential impact. The following mitigation measures are intended to ensure that the proposed project would not create a new source of substantial light or glare which would adversely affect day or nighttime views in the area. Implementation of the proposed project would have a **less than significant** impact relative to this topic.

Mitigation Measure Vis-2: *Outdoor lighting at the residential lots, including building and landscape lighting, shall be designed so that light is not directed off the site (i.e. onto adjacent lots or into the public right-of-way) and the light source is shielded downward from overhead viewing and from direct off-site viewing. Light spill and glare shall not exceed 0.1 foot-candle on adjacent properties or the public right-of-way. These requirements shall be shown on the plot plans for each single family unit.*

Mitigation Measure Vis-3 *Street light fixtures shall use LED or other similar lighting fixture approved by the City of Martinez and shall be installed and shielded in such a manner that no light rays are emitted from the fixture at angles above the horizontal plane of the light source. High-intensity discharge lamps shall be prohibited. Street lighting plans shall be submitted with project improvement plans for City review and approval.*

Mitigation Measure Vis-4 *Building plans shall incorporate materials that minimize glare to the extent feasible. Metal siding for roofing shall be prohibited, unless paint or other non-glare materials are applied to the material to minimize the glare. Building plans shall be submitted to the City for review and approval.*

Figure 4

Visual Simulation: View 1

Vine Hill Way View Southwest
Field of View: 46 degrees (50 mm lens)

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Figure 5

Visual Simulation: View 2

Existing and Proposed
Field of View: 46 degrees (50 mm lens)

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II. AGRICULTURE AND FOREST RESOURCES

Would the project:	***Potentially Significant Impact***	***Less Than Significant with Mitigation Incorporation***	***Less Than Significant Impact***	***No Impact***
a) Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?				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 1222(g)) or timberland (as defined in Public Resources Code section 4526)?				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 result in conversion of Farmland, to non-agricultural use or conversion of forest land to non-forest use?				X

Responses to Checklist Questions

Response a): The project site does not contain prime farmland, unique farmland, or farmland of statewide importance as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency. The proposed project would not result in the conversion of land to non-agricultural use. Implementation of the proposed project would have ***no impact*** relative to this issue.

Response b): The project site is not zoned for agricultural use nor is it under a Williamson Act contract. The proposed project would not conflict with existing zoning for agricultural use, or a Williamson Act contract. Implementation of the proposed project would have ***no impact*** relative to this issue.

Response c): The Project site is not forest land (as defined in Public Resources Code section 1222(g)) or timberland (as defined in Public Resources Code section 4526). The proposed project would not conflict with existing zoning for, or cause rezoning of, forest land or timberland. Implementation of the proposed project would have ***no impact*** relative to this issue.

Response d): The project site is not forest land. The proposed project would not result in the loss of forest land or conversion of forest land to non-forest use. Implementation of the proposed project would have ***no impact*** relative to this issue.

Response e): The project site does not contain agricultural land or forest land. The proposed project does not involve changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use, or conversion of forest land to non-forest use. Implementation of the proposed project would have ***no impact*** relative to this issue.

III. AIR QUALITY

Would the project:	*Potentially Significant Impact*	*Less Than Significant with Mitigation Incorporation*	*Less Than Significant Impact*	*No Impact*
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 (including releasing emissions which exceed quantitative thresholds for ozone precursors)?		X		
d) Expose sensitive receptors to substantial pollutant concentrations?		X		
e) Create objectionable odors affecting a substantial number of people?			X	

Responses to Checklist Questions

Responses a): CEQA requires lead agencies to determine whether a project is consistent with all applicable air quality plans.

2010 CAP Consistency Analysis

In order to make the required consistency determination, the BAAQMD recommends the following methodology. The lead agency must consider the following questions and recommendations:

1. Does the project support the primary goals of the AQP?

The primary goals of the 2010 Bay Area Clean Air Plan (CAP), the current AQP to date, are to:

- Attain air quality standards;
- Reduce population exposure and protect public health in the Bay Area; and
- Reduce greenhouse gas emissions and protect the climate.

The BAAQMD indicates that if approval of a project would not result in significant and unavoidable air quality impacts, after the application of all feasible mitigation, the project may be considered to support the primary goals of the AQP and is consistent with the 2010 CAP. As shown in the discussion contained in Responses b, c, d, and e (Section III Air Quality) of this Initial Study, the proposed project would not result in significant and unavoidable air quality impacts, after the application of all feasible mitigation. As such, the project is considered consistent with the 2010 CAP.

2. Does the project include applicable control measures from the AQP?

The BAAQMD indicates that agencies approving projects should require that they include all air quality plan control measures that can feasibly be incorporated into the project design or applied as mitigation, or justify the reasons, supported by substantial evidence, why a measure or measures are not incorporated into the project. Projects that incorporate all feasible air quality plan control measures may be considered consistent with the 2010 CAP.

The 2010 CAP contains 55 control measures aimed at reducing air pollution in the Bay Area. The 2010 CAP control measures are available for review in full text at (http://www.baaqmd.gov/~/media/Files/Planning%20and%20Research/Plans/2010%20Clean%20Air%20Plan/CAP%20Volume%20II_Sections%20A-F.ashx).

Stationary Source Measures: The following eighteen control measures are aimed at reducing stationary source emissions:

- SSM 1 - Metal Melting Facilities SSM 2 - Digital Printing SSM 3 - Livestock Waste
- SSM 4 - Natural Gas Production and Processing
- SSM 5 - Vacuum Trucks
- SSM 6 - General Particulate Matter Emission Limitation
- SSM 7 - Open Burning
- SSM 8 - Sulfur Dioxide from Petroleum Coke Calcining
- SSM 9 - Cement Kilns
- SSM 10 - Refinery Boilers and HeatersSSM 11 – Residential Fan Type Furnaces
- SSM 12 - Large Residential and Commercial Space Heating
- SSM 13 - Dryers, Ovens, and Kilns
- SSM 14 - Glass Furnaces
- SSM 15 - Greenhouse Gases in Permitting, Energy Efficiency
- SSM 16 - New Source Review Addressing PM2.5
- SSM 17 - New Source Review for Toxic Air Contaminants
- SSM 18 - Revisions to Air Toxics Hotspots Program

None of these stationary source measures are applicable to the proposed project; therefore, the proposed project does not conflict with these measures.

Mobile Source Measures: The following ten control measures are aimed at reduced mobile source emissions.

- MSM A-1 - Promote Clean, Fuel-Efficient Light and Medium-Duty Vehicles
- MSM A-2 - Zero Emission Vehicles (ZEV) and Plug-in Hybrids
- MSM A-3 - Green Fleets
- MSM A-4 - Replacement or Repair of High-Emission Vehicles
- MSM B-1 - Fleet Modernization for Medium- and Heavy-Duty On-Road Vehicles
- MSM B-2 - Low NOx Retrofits in Heavy-Duty On-Road Vehicles
- MSM B-3 - Efficient Drive Trains
- MSM C-1 - Construction and Farming Equipment
- MSM C-2 - Reduce Emissions from Lawn and Garden Equipment
- MSM C-3 - Reduce Emissions from Recreational Watercraft

These measures are structured as programs to be implemented by the BAAQMD to ensure mobile source emissions are reduced. These ten measures are not applicable to a specific

development project like the proposed project. The proposed project does not conflict with these measures.

Transportation Control Measures: The following seventeen control measures are aimed at reducing emissions through transportation control measures.

- TCM A-1 – Local and Area-wide Bus Service Improvements
- TCM A-2 - Local and Regional Rail Service Improvements
- TCM B-1 - Freeway and Arterial Operations Strategies
- TCM B-2 - Transit Efficiency and Use Strategies
- TCM B-3 - Bay Area Express Lane Network
- TCM B-4 - Goods Movement Improvements and Emission Reduction Strategies
- TCM C-1 - Voluntary Employer-Based Trip Reduction Programs
- TCM C-2 - Safe Routes to Schools and Safe Routes to Transit Programs
- TCM C-3 - Ridesharing Services and Incentives
- TCM C-4 - Conduct Public Outreach & Education
- TCM C-5 - Smart Driving
- TCM D-1 - Bicycle Access and Facilities Improvements
- TCM D-2 - Pedestrian Access and Facilities Improvements
- TCM D-3 - Local Land Use Strategies
- TCM E-1 - Value Pricing Strategies
- TCM E-2 - Promote Parking Policies to Reduce Motor Vehicle Travel
- TCM E-3 - Implement Transportation Pricing Reform

These measures are structured as programs to be implemented for the regional transportation network, including motorized and non-motorized transportation. These measures are largely implemented by the Metropolitan Planning Organization/Regional Transportation Planning Agency (MPO). While these measures are funded and implemented through the regional planning efforts of the MPO, the local land use authorities are encouraged by the MPO to implement relevant measures on a project by project basis. For instance, the City of Martinez requires new development to include bicycle and pedestrian facilities and access within the public right-of-way as part of their roadway standard. The City's roadway standards are consistent with the intent of TCM C-2, TCM D-1, and TCM D-2. The proposed project does not conflict with these measures.

Land Use Measures: The following six control measures are aimed at reduced emissions associated with land uses:

- LUM 1 - Goods Movement
- LUM 2 - Indirect Source Review
- LUM 3 - Updated CEQA Guidelines and Enhanced CEQA Review
- LUM 4 - Land Use Guidance
- LUM 5 – Reduce and Track Health Risk in Impacted Communities
- LUM 6 - Enhanced Air Quality Monitoring

The BAAQMD encourages project developers and lead agencies to incorporate these Land Use and Local Impact (LUM) measures into proposed project designs and plan elements. Each LUM is discussed below.

- ***LUM 1*** is structured to reduce emissions and population exposure related to movement of freight in the Bay Area by means of incentives, enforcement, research, strategic partnerships, and outreach. The project site is not located in close proximity to a freight movement facility. State Route 4 is the closest freeway and is located over 1,150 feet from the project site. The project site is consistent with the *CARB Minimum Separation Recommendations on Siting Sensitive Land Uses* (2005). Implementation of the proposed project would not result in an increased population exposure to localized concentrations of emissions from freight movement. The proposed project does not conflict with this measure.

- ***LUM 2*** is structured to require the BAAQMD to develop an indirect source review (ISR) rule to address potential increases in air pollutant emissions related to economic and population growth in the region. Indirect sources are development projects that generate or attract motor vehicle trips and area source emissions. This measure is applicable to a specific development project like the proposed project. The ISR requires an applicant to file an Air Quality Impact Assessment with the BAAQMD for residential projects. The following mitigation measure would ensure that the project is consistent with this measure.

Mitigation Measure Air-1: *Prior to approval of improvement plans, the project applicant shall submit an Air Quality Impact Assessment to the BAAQMD for an Indirect Source Review. The submittal shall be subject to the BAAQMD fees. The project applicant shall consider opportunities for incorporating renewable energy sources into buildings as an emissions offset option. The BAAQMD shall consider all mitigation incorporated into the design, as well as the mitigation measures and conditions of approval incorporated into the project through the CEQA process. The intent of the Indirect Source Review is to require a payment to the BAAQMD as compensation for the air quality impact, and for the compensation to then be used by the BAAQMD to fund programs and measures within the region that would directly and/or indirectly reduce emissions on behalf of the project.*

- ***LUM 3*** is structured to require the Air District to update its California Environmental Quality Act (CEQA) guidelines to provide guidance on evaluating air quality impacts of development projects and local plans, determining whether an impact is significant, and mitigating significant air quality impacts related to new or modified projects. On June 2, 2010, the BAAQMD's Board of Directors unanimously adopted thresholds of significance to assist in the review of projects under the CEQA. These Thresholds are designed to establish the level at which the BAAQMD believed air pollution emissions would cause significant environmental impacts under CEQA and were posted on the BAAQMD's website and included in the BAAQMD's updated CEQA Guidelines (updated May 2012).

  On March 5, 2012 the Alameda County Superior Court issued a judgment finding that the BAAQMD had failed to comply with CEQA when it adopted the Thresholds. The court did not determine whether the Thresholds were valid on the merits, but found that the adoption of the Thresholds was a project under CEQA. The court issued a writ of mandate ordering the BAAQMD to set aside the Thresholds and cease dissemination of them until the BAAQMD had complied with CEQA. The BAAQMD has appealed the Alameda County Superior Court's decision. The Court of Appeal of the State of California, First Appellate District, reversed the trial court's decision. The Court of Appeal's decision was appealed to the California Supreme Court, which granted limited review, and the matter is pending there as of January 16, 2014.

In view of the trial court's order which remains in place pending final resolution of the case, the BAAQMD is no longer recommending that the Thresholds be used as a generally applicable measure of a project's significant air quality impacts. The BAAQMD has indicated that lead agencies will need to determine appropriate air quality thresholds of significance based on substantial evidence in the record. Although lead agencies may rely on the BAAQMD's updated CEQA Guidelines (updated May 2012) for assistance in calculating air pollution emissions, obtaining information regarding the health impacts of air pollutants, and identifying potential mitigation measures, the BAAQMD has been ordered to set aside the Thresholds and is no longer recommending that these Thresholds be used as a general measure of project's significant air quality impacts. The BAAQMD has indicated that lead agencies may continue to rely on the BAAQMD's 1999 Thresholds of Significance and they may continue to make determinations regarding the significance of an individual project's air quality impacts based on the substantial evidence in the record for that project. The proposed project does not conflict with this measure.

- ***LUM 4*** is structured to provide resources to local governments that support local land use patterns that reduce mobile source emissions and population exposure to toxic air contaminants, as well as reduce emissions related to energy use and waste disposal. This measure is applicable to a specific development project like the proposed project. Mitigation measures have been incorporated into the project (See Mitigation Measure Air 1, Air 2, Air 3, and Air 4) to reduce air emissions. The proposed project does not conflict with this measure.

- ***LUM 5*** is structured to address the cumulative air quality impacts of emissions of toxic air contaminants and directly-emitted PM2.5 from stationary, mobile, indirect sources, magnet sources, and area sources in impacted communities. These measures are largely implemented by the BAAQMD and lead agencies for stationary sources associated with industrial and commercial uses. This measure applies to residential uses relative to toxic emissions and hot spots that affect residential uses. The project site is not located such that it is affected by toxic emissions or hot spots. The proposed project does not conflict with this measure.

- ***LUM 6*** requires the Air District to evaluate and enhance its capabilities to monitor air quality on a region-wide basis, as well as on a localized basis in the impacted communities identified under the District's Community Air Risk Evaluation (CARE) program. The project site is not located in an "impacted community" as identified under the CARE program. The proposed project does not conflict with this measure.

Energy Control Measures: The following four control measures are aimed at reduced emissions associated with energy use:

- ECM 1 - Energy Efficiency
- ECM 2 - Renewable Energy
- ECM 3 - Urban Heat Island Mitigation
- ECM 4 - Shade Tree Planting

BAAQMD encourages project developers and lead agencies to incorporate the applicable Energy and Climate measures (ECM) into proposed project designs and plan elements. Each ECM is discussed below.

- ***ECM 1*** is structured as a program to be implemented by the BAAQMD to provide education and outreach, as well as technical assistance to local governments, to increase energy efficiency in residential and commercial buildings and industrial facilities. This measure is not applicable to a specific development project like the proposed project. The proposed project does not conflict with this measure.

- ***ECM 2*** is structured to promote renewable energy sources in new developments and redevelopment projects as an emissions offset option included in both the District's new Indirect Source Review Rule, and as a mitigation measure within the CEQA process. This measure is also designed to foster innovative renewable energy projects and approaches through existing and new incentive programs. This measure is applicable to a specific development project like the proposed project. The proposed project does not specifically include renewable energy sources in this new development; however, Mitigation Measure Air-1 requires compliance with the BAAQMD Indirect Source Rule which will result in either the incorporation of renewable energy sources into buildings on the project site as an emissions offset option, or emission offsets that are funded by the project and implemented by the BAAQMD where opportunities are available in the region. Mitigation Measure Air- would ensure that the project made consistent with this measure.

- ***ECM 3*** is structured as a program to be implemented by the BAAQMD to mitigate the urban heat island (UHI) phenomenon. This measure includes regulatory and educational approaches to reduce the "urban heat island" (UHI) phenomenon by increasing the application of "cool roofing" and "cool paving" technologies. This measure is not applicable to a specific development project like the proposed project. The proposed project does not conflict with this measure.

- ***ECM 4*** is structured to promote tree planting standards for new developments as an approach to reduce the UHI. This measure is applicable to a specific development project like the proposed project. The proposed project includes a tree planting plan that provides extensive tree plants along the internal streets, as well as the perimeter streets. The proposed project does not conflict with this measure.

3. Does the project disrupt or hinder implementation of any AQP control measures?

   If approval of a project would not cause the disruption, delay or otherwise hinder the implementation of any air quality plan control measure, it may be considered consistent with the 2010 CAP. Examples of how a project may cause the disruption or delay of control measures include a project that precludes an extension of a transit line or bike path, or proposes excessive parking beyond parking requirements.

As described above, the proposed project supports the primary goals of the 2010 Clean Air Plan, includes applicable control measures from the 2010 Clean Air Plan, and it does not disrupt or hinder implementation of any 2010 Clean Air Plan control measures. As such, the proposed project would not conflict with or obstruct implementation of the 2010 Clean Air Plan. With implementation of the referenced mitigation measures, the proposed project would have a ***less than significant*** impact relative to this topic.

Responses b):

Operational Phase: The California Emission Estimator Model (CalEEMod)™ (v.2013.2) was used to estimate project-level operational emissions for the proposed project. Table 1 shows the emissions, which include mobile source, area source, and energy emissions of criteria pollutants that would result from operations of the proposed project. The full calculations, inputs, and assumptions are provided in Appendix B.

Table 1: Operational Emissions (Unmitigated)

	ROG	***NOx***	***PM_{10}***	***$PM_{2.5}$***
Threshold	**80lbs/day**	**80 lbs/day**	**80 lbs/day**	**80 lbs/day**
Summer (maximum daily lbs/day)				
Area	183.9904	2.4657	30.4307	30.4298
Energy	0.1507	1.2882	0.1042	0.1042
Mobile	9.7247	7.7850	4.8658	1.3662
Total	**193.8658**	**11.5389**	**35.4006**	**31.9001**
Winter (maximum lbs/day)				
Area	183.9904	2.4657	30.4307	30.4298
Energy	0.1507	1.2882	0.1042	0.1042
Mobile	11.1930	8.7221	4.8665	1.3669
Total	**195.3341**	**12.4760**	**35.4013**	**31.9008**

SOURCES: CALEEMOD (V.2013.2)

As shown in the table above, operational ROG emissions exceed threshold of significance under the unmitigated model run. The primary source of the emission exceedance is associated with the use of wood burning fireplaces. This is a potentially significant impact.

Some basic mitigation was input into the model to ensure that air emissions are reduced to the extent possible. Mitigation inputs included the following:

Area Source:

- Natural gas fireplaces/stoves.
- Low Volatile Organic Compound architectural coatings (100 - 150 g/L).

Energy Source

- Install high efficiency appliances (refrigerator, fans, washers)

Indoor Water Use

- Install low-flow faucets, toilets, showers
- Use water-efficient irrigation systems

As shown in Tables 2 below, ROG emissions are significantly reduced with the inclusion of these basic mitigation measures and would be below the thresholds of significance established by the BAAQMD.

Table 2: Operational Emissions (Mitigated)

	ROG	***NOx***	***PM_{10}***	***$PM_{2.5}$***
Threshold	**80lbs/day**	**80 lbs/day**	**80 lbs/day**	**80 lbs/day**
Summer (maximum daily lbs/day)				
Area	5.0417	0.0990	0.2015	0.1998
Energy	0.1309	1.1184	0.0904	0.0904
Mobile	9.7247	7.7850	4.8658	1.3662
Total	**14.8972**	**9.0024**	**5.1577**	**1.6564**
Winter (maximum lbs/day)				
Area	5.0417	0.0990	0.2015	0.1998
Energy	0.1309	1.1184	0.0904	0.0904
Mobile	11.1930	8.7221	4.8665	1.3669
Total	**16.3656**	**9.9395**	**5.1584**	**1.6571**

NOTE: THE ABOVE THRESHOLDS ARE BASED ON THE 1999 CEQA GUIDELINES; HOWEVER, THE OPERATIONAL EMISSION LEVELS ARE BELOW THE 2010 THRESHOLDS THAT ARE NOT IN EFFECT PENDING LITIGATION.

SOURCES: CALEEMOD (V.2013.2)

With the implementation of the following mitigation measure, operational air emissions from the proposed project would have a **less than significant** impact.

> ***Mitigation Measure Air-2:*** *As part of the City's design review and entitlement process, the City shall require future building plans to implement the following:*
>
> - *Only natural gas burning fireplaces shall be installed in the housing units to reduce Area Source criteria pollutants.*
> - *Only low Volatile Organic Compound paint (150 g/L) (interior and exterior) shall be used on the project site.*
> - *The developer shall install high efficiency appliances (refrigerator, fans, washers).*
> - *The developer shall install low-flow faucets, toilets, showers.*
> - *The developer shall install water-efficient irrigation systems.*

Construction Activities/Schedule: Construction activities can be described as site improvements (grading, underground infrastructure, and topside improvements) and vertical construction (building construction and architectural coatings).

Site Grading: The site grading phase of construction will begin with demolition of existing facilities and preparation for grading. This step will include the use of dozers, backhoes, and loaders to strip (clear and grub) all existing pavement/concrete and organic materials and the upper half-inch to inch of soil from the site. Given the size of the project site, this task will take approximately two weeks and will include vehicle trips from construction workers.

After the project site is prepared grading will begin. This activity will involve the use of, graders, dozers, loaders, and backhoes to move soil around the project site to create specific engineered grade elevations and soil compaction levels. Due to the size of the project site, grading would likely take less than a week and will include vehicle trips from construction workers.

Building Construction/Architectural Coatings: Building construction involves the vertical construction of structures and site improvements, including paving/concrete and landscaping. This task will involve the use of forklifts, generator sets, welders and small tractors/loaders/backhoes. Architectural coatings involve the interior and exterior painting

associated with the structures. The building construction/architectural coatings phase will take six to nine months for each residential structure.

Construction Emissions: The Bay Area Air Quality Management District recommends that the determination of significance with respect to construction emissions should be based on a consideration of the control measures to be implemented. From the Bay Area Air Quality Management District's perspective, quantification of construction emissions is not necessary, although a Lead Agency may elect to do so. The Bay Area Air Quality Management District's 1999 CEQA Guidelines do not include thresholds of significance for construction emissions when the Lead Agency elects to quantify such emissions. The quantified emissions provided below are intended to be for information purposes.

A quantification of the maximum daily emissions of ROG, NOx, PM_{10}, and $PM_{2.5}$ that will be emitted by construction (expressed in pounds per day) has been performed. The California Emission Estimator Model (CalEEMod)™ (v.2013.2) was used to estimate construction emissions for the proposed project. Table 3 shows the construction emissions.

Table 3: Construction Emissions

	ROG	***NOx***	***PM_{10}***	***$PM_{2.5}$***
Category	Unmitigated	Unmitigated	Unmitigated	Unmitigated
Summer (maximum lbs/day)				
2015	77.5596	87.5497	21.3257	12.8182
2016	77.1763	32.1567	2.6619	2.1912
2017	3.9105	27.5206	2.2102	1.7991
Total	**158.6464**	**147.2271**	**26.1978**	**16.8085**
Winter (maximum lbs/day)				
2015	77.7786	88.0217	21.3257	12.8182
2016	77.3772	32.2568	2.6620	2.1914
2017	4.0733	27.6028	2.2104	1.7992
Total	**159.2290**	**147.8812**	**26.1981**	**16.8088**

SOURCES: CALEEMOD (V.2013.2)

The Bay Area Air Quality Management District has identified a set of feasible control measures for construction activities. Some control measures ("Basic Measures") should be implemented at all construction sites, regardless of size. The Bay Area Air Quality Management District recommends that the determination of significance with respect to construction emissions should be based on a consideration of the control measures to be implemented. If all of the applicable control measures will be implemented, then air pollutant emissions from construction activities would be considered a less than significant impact. If all of the appropriate control measures will not be implemented, then construction impacts would be considered to be significant. Implementation of the following mitigation measure would require the City to implement the BAAQMD Basic Construction Mitigation Measures. The Bay Area Air Quality Management District Basic 1999 CEQA Guidelines indicate that with the implementation of these measures construction related air quality impacts are reduced to a **less than significant** level.

Mitigation Measure Air-3: *To reduce construction related emissions, the project applicant shall implement the following the Bay Area Air Quality Management District Construction Mitigation Measures during project construction:*

- *Water all active construction areas at least twice daily.*
- *Cover all trucks hauling soil, sand, and other loose materials or require all trucks to maintain at least two feet of freeboard.*
- *Pave, apply water three times daily, or apply (non-toxic) soil stabilizers on all unpaved access roads, parking areas and staging areas at construction sites.*
- *Sweep daily (with water sweepers) all paved access roads, parking areas and staging areas at construction sites.*
- *Sweep streets daily (with water sweepers) if visible soil material is carried onto adjacent public streets.*

Responses c): The operational emissions were compared to the Bay Area Air Quality Management District's thresholds as established in the 1999 CEQA Guidelines. The results of the quantitative analysis presented above shows that the proposed project would not exceed adopted thresholds with the implementation of mitigation. As such, implementation of the proposed project would have a **less than significant** cumulative impact with the implementation of Mitigation Measure Air-1, Air-2, and Air 3 and is **less than cumulatively considerable** relative this topic.

Responses d):

Construction-related Impacts on Sensitive Receptors: The residents surrounding the project site are considered sensitive receptors. The proposed project would place additional sensitive receptors in the area. The operations of the proposed project would not contribute substantial concentrations of pollutants to sensitive receptors. The construction phase of the proposed project has the potential to increase pollution concentrations that would impact sensitive receptors. However, the Bay Area Air Quality Management District has identified a set of feasible control measures for construction activities and recommends that the determination of significance with respect to construction emissions should be based on a consideration of the control measures to be implemented. If all of the applicable control measures will be implemented, then air pollutant emissions from construction activities would be considered a less than significant impact. Mitigation Measure Air-3 (presented above) would require the implementation of the BAAQMD Basic Construction Mitigation Measures. Implementation of the Mitigation Measure Air-3 (above) would reduce this impact to a **less than significant** level.

Toxic Air Contaminant Impacts on Sensitive Receptors: A toxic air contaminant (TAC) is defined as an air pollutant that may cause or contribute to an increase in mortality or in serious illness, or that may pose a hazard to human health. TACs are usually present in minute quantities in the ambient air. However, their high toxicity or health risk may pose a threat to public health even at very low concentrations. In general, for those TACs that may cause cancer, there is no concentration that does not present some risk. This contrasts with the criteria pollutants for which acceptable levels of exposure can be determined and for which the state and federal governments have set ambient air quality standards.

The California Air Resources Board (CARB) published the *Air Quality and Land Use Handbook: A Community Health Perspective* (2007) to provide information to local planners and decision-makers about land use compatibility issues associated with emissions from industrial,

commercial and mobile sources of air pollution. The CARB Handbook indicates that mobile sources continue to be the largest overall contributors to the State's air pollution problems, representing the greatest air pollution health risk to most Californians. The most serious pollutants on a statewide basis include diesel exhaust particulate matter (diesel PM), benzene, and 1,3-butadiene, all of which are emitted by motor vehicles. These mobile source air toxics are largely associated with freeways and high traffic roads. Non-mobile source air toxics are largely associated with industrial and commercial uses. Table 4 provides the California Air Resources Board minimum separation recommendations on siting sensitive land uses.

Table 4: CARB Minimum Separation Recommendations on Siting Sensitive Land Uses

Source Category	*Advisory Recommendations*
Freeways and High-Traffic Roads	• Avoid siting new sensitive land uses within 500 feet of a freeway, urban roads with 100,000 vehicles/day, or rural roads with 50,000 vehicles/day.1
Distribution Centers	• Avoid siting new sensitive land uses within 1,000 feet of a distribution center (that accommodates more than 100 trucks per day, more than 40 trucks with operating transport refrigeration units (TRUs) per day, or where TRU unit operations exceed 300 hours per week). • Take into account the configuration of existing distribution centers and avoid locating residences and other new sensitive land uses near entry and exit points.
Rail Yards	• Avoid siting new sensitive land uses within 1,000 feet of a major service and maintenance rail yard. • Within one mile of a rail yard, consider possible siting limitations and mitigation approaches.
Ports	• Avoid siting of new sensitive land uses immediately downwind of ports in the most heavily impacted zones. Consult local air districts or the CARB on the status of pending analyses of health risks.
Refineries	• Avoid siting new sensitive land uses immediately downwind of petroleum refineries. Consult with local air districts and other local agencies to determine an appropriate separation.
Chrome Platers	• Avoid siting new sensitive land uses within 1,000 feet of a chrome plater.
Dry Cleaners Using Perchloro- ethylene	• Avoid siting new sensitive land uses within 300 feet of any dry cleaning operation. For operations with two or more machines, provide 500 feet. For operations with 3 or more machines, consult with the local air district. • Do not site new sensitive land uses in the same building with perc dry cleaning operations.
Gasoline Dispensing Facilities	• Avoid siting new sensitive land uses within 300 feet of a large gas station (defined as a facility with a throughput of 3.6 million gallons per year or greater). A 50 foot separation is recommended for typical gas dispensing facilities.

SOURCES: AIR QUALITY AND LAND USE HANDBOOK: A COMMUNITY HEALTH PERSPECTIVE" (CARB 2005)

The Project includes residential uses which are considered sensitive land uses. There are no source categories listed above that are proposed. Additionally, there are no source categories listed above that are within screening distances or minimum separation distances suggested for sensitive uses. State Route 4 is the closest freeway and is located over 1,150 feet from the project site. The Project is consistent with the *CARB Minimum Separation Recommendations on Siting Sensitive Land Uses* (2005). A health risk assessment is not warranted for any further assessment. Implementation of the proposed project would not result in an increased exposure of sensitive receptors to localized concentrations of TACs. This Project would have a **less than significant** impact relative to this topic.

Responses e): The proposed project would not generate objectionable odors. People in the immediate vicinity of construction activities may be subject to temporary odors typically associated with construction activities (diesel exhaust, hot asphalt, etc.). However, any odors generated by construction activities would be minor and would be short and temporary in duration. Implementation of the proposed project would have a ***less than significant*** impact relative to this topic.

IV. BIOLOGICAL RESOURCES

Would the project:	*Potentially Significant Impact*	*Less Than Significant with Mitigation Incorporation*	*Less Than Significant Impact*	*No Impact*
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, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?			X	
d) Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?			X	
e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?		X		
f) Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?				X

Background

A *Biological Resources Report* (Mosaic Associates 2011) was prepared for the proposed project. De Novo Planning Group peer reviewed the report for use in the Initial Study. The full report is contained in Appendix C. This report contains the findings of a reconnaissance-level biological resources evaluation that was conducted for the project site. The purpose of the biological resources evaluation is to characterize the habitats that are present on project site, and to provide an inventory of existing biological resources.

The project site is located at 451 Vine Hill Way, Martinez, CA, east of the intersection of Morello Road and Center Avenue. A nine-hole golf course with club house, tavern, outbuildings and irrigation infrastructure are present on the site. There is a single paved road providing access to the clubhouse and two parking lots, one paved, and one unpaved with gravel. A landscaping yard which contains piles of sand, soil and rock that are associated with golf course maintenance is located south of the clubhouse.

Vegetation within the study area includes mixed planted woodland along the perimeter of the course, patches of non-native annual grassland, and golf course turf on the fairways and tees, interspersed with landscape vegetation. The golf course is irrigated nightly via a system of groundwater wells and City of Martinez water. The water is held in an artificial holding pond, which hosts a perimeter of wetland vegetation. The woodlands and turf, as well as the pond, provide habitat for a number of bird species. Landscape vegetation is present adjacent to the club house, and planted trees and shrubs are scattered throughout the course and fairways.

Judy Bendix and Amy Richey of Mosaic Associates performed a reconnaissance level survey of the site on May 31, 2011. The site was surveyed on foot and by golf cart during daylight hours. Additionally, two surveys of the pond feature were undertaken after sunset on warm, still nights to survey for amphibian life using the methods described in the *California red legged frog survey protocol* (USFWS 2005). These surveys were conducted on June 14 and June 23, 2011.

The project site is located approximately one-half mile south of Highway 4, off Morello Drive. Surrounding land use is single-family residential. An unnamed tributary to Grayson Creek is located off site, approximately 250 feet to the south. Briones Regional Open Space is located approximately two miles southwest of the site.

The project site is situated within surrounding suburban development. Elevations on site range from 310 feet on the hill on the southeast side of the project site, to 160 feet in the northwestern edge of the project site. Vegetation on project site is maintained for a parklike appearance conducive to its current use as a golf course.

This project site has been home to a golf course for the last 46 years. Prior to its development as a golf course, this site had been a part of a farm and ranch, where walnuts, almonds, and then grapes were grown.

Mature woodland vegetation is present on the borders of the site. Landscape vegetation is present around the buildings and in the golf course greens. A man-made pond feature serves the golf course as a holding area for irrigation water. The site borders are wooded with a mature mixed woodland canopy, consisting of blue and red gum eucalyptus (*Eucalyptus globulus and E. camaldulensis*), coast live oak (*Quercus agrifolia*), valley oak (*Quercus lobata*), deodar cedar (*Cedrus deodara*), coast redwood (*Sequoia sempervirens*) and Monterey pine (Pinus radiata), among others. Most of the cover in this type is provided by introduced species that were planted at the perimeter of the site. Members of the shrub layer in this area include cotoneaster (*Cotoneaster pannosus*), oleander (*Nerium oleander*), mulberry (*Morus* sp.) and toyon (*Heteromeles arbutifolia*). These borders are not irrigated.

The woodlands provide habitat for a number of bird species, including bushtit (*Psaltriparus minimus*), western scrub jay (*Aphelocoma californica*), black phoebe (*Sayornis nigricans*), and Swainson's thrush (*Catharus ustulatus*), among others. Raccoons (*Procyon lotor*) and domestic cats (*Felis domesticus*) are expected to forage on site.

Non-native annual grassland consists of a ground layer of annual grasses and herbs, where emergent trees and shrubs may be present. Fall temperatures and precipitation are major factors determining grassland composition, along with microclimatic differences (Sawyer et al. 2009). On the site, these areas are dominated by various non-native grasses, including Italian ryegrass (*Lolium multiflorum*), hare barley (*Hordeum murinum*), and wild oat (*Avena fatua*); and non-native herbaceous species including cut leaf geranium (*Geranium dissectum*), bristly ox-tongue (*Picris echiodes*), bedstraw (*Gallium aparine*) and hedgeparsley (*Torilis arvensis*).

Non-native annual grassland is present in small areas of un-irrigated grasslands where mature woodland does not dominate on site. There is a steep hillside on the western border of the site that does not receive regular maintenance that also hosts this community. Non-native annual grassland on site would conform to the California annual grassland series as classified by Sawyer et al. (2009).

Vegetation on the fairways and greens is golf course-maintained turf grasses. These areas are irrigated nightly via a system of groundwater pumping and municipal water. Landscape trees and shrubs have been planted around the buildings, including Monterey pine, incense cedar (*Calocedrus decurrens*), oleander, and gum trees. Typical landscaping, with Kentucky bluegrass (*Poa pratensis*) and lilies-of-the-Nile (*Agapanthus* spp.), and cultivated roses, surrounds the club house and parking lot. The maintenance yard consists of two buildings and two sheds, all surrounded by trees and shrubs, and a large compacted-soil area where several vehicles are parked. The landscape yard is fringed with several large piles of landscaping materials used for the golf course.

There is a man-made pond feature in the center portion of the golf course. This feature is unlined, and filled by groundwater well pumping and city water. Two wells are present on the golf course property. Groundwater pumped from the wells to the pond supplies approximately 40% of the water used to irrigate the golf course, with the balance coming from the City of Martinez. The golf course manager reports that it takes approximately 12 hours to fill the pond with pumped water. The purpose of this pond is to hold water for nightly irrigation of the fairways and greens on the golf course, and it would not exist if pumping to this feature were discontinued. The golf course maintenance crew clears wetland vegetation from the perimeter of the pond twice yearly to maintain open water for irrigation. The crew was clearing vegetation during the May 31 site visit.

The pond on site is fringed with cattails (*Typha angustifolia*) and bulrushes (*Schoenoplectus actutus*), and patches of umbrella sedge (*Cyperus eragrostis*) and creeping spikerush (*Eleocharis macrostachya*). A vacant red-winged blackbird (*Agelaius phoeniceus*) nest was observed in the cattails; numerous individuals of this species were present during all site visits. A pair of mallards (*Anas platyrhynchos*) nested in the pond in 2011. Mosquito fish (*Gambusia affinis*) are abundant in the pond, as well as aquatic insects, including giant diving beetle (*Dytiscus* sp.). Bats likely forage over the pond and the golf course during the evening hours. Dozens of Pacific treefrogs (*Hyla regilla*) were observed in this pond during the two nighttime surveys.

Additionally, there are a series of vegetated swales on site that convey water to the municipal storm drain system. These occur along the northern and eastern boundaries of the site. The swale along the northern boundary likely receives runoff from the pond as well as much of the northern portion of the site during rainy periods. A portion of it is perched against the fences and yards that abut the site. A short section of eroded ditch near the northeast corner of the site drains golf course runoff to the municipal storm drain system. There is a concrete U-ditch that conveys water from the western hillside to the northwestern corner of the site.

Responses to Checklist Questions

Response a): A total of 65 rare plants are listed as occurring within a nine-quadrangle area surrounding the project site. Due to continuous site disturbance, first from agriculture and subsequently from golf course maintenance activities; as well as surrounding site disturbance by suburban development, it is extremely unlikely that any special-status plant would occur within or in the vicinity of the study area. No rare plants were detected during the survey conducted for this assessment, and none are expected to occur on site. For these reasons,

modification of the project site from a golf course to a residential subdivision is not expected to have an adverse effect on special status plants. For a complete list of special-status plants known from the vicinity of the site, please see Appendix A of the Biological Resources Report (Appendix C).

Historical and continuing site disturbance makes the presence of special-status animals on the project site extremely unlikely. However, nesting birds may utilize the trees and open areas afforded by golf course landscape vegetation. For the thirteen federal- or state-listed special-status animals were considered for their potential to occur in the vicinity of the project site, please see Appendix B of the Biological Resources Report (Appendix C). Habitat affinities and reported distributions were analyzed to determine if there is potential for their occurrence within the study site. Twelve species were disqualified from further consideration because suitable habitat is not present for them at the project site.

Suitable habitat for one species, the California red-legged frog (*Rana draytonii*, CRLF) is present, but CRLF is extremely unlikely to occur on the project site, and was not detected during the two evening surveys of the irrigation water pond and surrounding habitat. Although raccoons (*Procyon lotor*), known predators of CRLF were not observed during the evening site visits, they are likely to be abundant on the project site and in the surrounding neighborhood. Continuous maintenance of the project site as a golf course, the nightly draining and refilling of the irrigation pond as a source of irrigation water, the developed nature of the surrounding suburban landscape, and isolation of the project site from source populations in the region, preclude presence of this species. The nearest CRLF occurrence is located 3.45 miles from the project site in Briones Regional Park, and the unnamed tributary of Grayson Creek south of the project site does not provide suitable habitat for this species. Mosaic biologists surveyed the man-made pond on June 14, and June 23, 2011. Pacific treefrogs were observed, but no California red-legged frogs of any life stage were observed on the project site, nor were any other special-status animals observed on the project site. The proposed project would eliminate all potential CRLF habitat on the project site; however, the site is not designated critical habitat, CRLF has not been observed on the project site, and they are not believed to have used the project site based on its habitat conditions. For these reasons, modification of the project site from a golf course to a residential subdivision is not expected to have an adverse effect on CRLF.

The project site does provide suitable nesting and foraging habitat for a variety of birds, both special-status and non-special-status, but protected under the Migratory Bird Treaty Act (MBTA). The trees on the project site might provide nesting habitat for special-status birds, including Cooper's hawk (*Accipiter cooperii*) and white-tailed kite (*Elanus leucurus*). Shrubs and small trees on site also provide nesting habitat for a variety of birds protected under the MBTA, including western bluebird (*Sialia Mexicana*), American goldfinch (*Carduelis tristis*), oak titmouse (*Baeolophus inornatus*) and others.

There are a variety of raptors and/or birds protected by the MBTA that could utilize this habitat for nesting or foraging. The project would eliminate foraging habitat on the project site and would require the removal of all trees. However, the project site is not considered a high quality foraging or nesting site given its limited size and surrounding residential uses. Modification of the project site from a golf course to a residential subdivision would not have a significant adverse effect from the loss of this low quality foraging and nesting habitat. However, construction activities that occur during the nesting season (generally March 1-August 31) would disturb nesting sites for birds protected by the MBTA and California Fish and Game Code. This is a potentially significant impact. Implementation of the following mitigation measure would reduce this impact to a ***less than significant*** level.

Mitigation Measure Bio-1: *If project construction activities, including vegetation clearing, are to occur during the nesting season for birds protected under the California Fish and Game Code and Migratory Bird Treaty Act (approximately March 1-August 31) the project applicant shall retain a qualified biologist to perform preconstruction surveys for protected birds, including nesting raptors, on the project site and in the immediate vicinity. At least two surveys shall be conducted no more than 15 days prior to the initiation of construction activities, including vegetation clearing. In the event that protected birds, including nesting raptors, are found on the project site, offsite improvement corridors, or the immediate vicinity, the project applicant shall:*

- *Locate and map the location of the nest site. Within 2 working days of the surveys prepare a report and submit to the City and CDFW;*
- *A no-disturbance buffer of 250 feet shall be established;*
- *On-going weekly surveys shall be conducted to ensure that the no disturbance buffer is maintained. Construction can resume when a qualified biologist has confirmed that the birds have fledged.*

In the event of destruction of a nest with eggs, or if a juvenile or adult raptor should become stranded from the nest, injured or killed, the qualified biologist shall immediately notify the CDFW. The qualified biologist shall coordinate with the CDFW to have the injured raptor either transferred to a raptor recovery center or, in the case of mortality, transfer it to the CDFW within 48 hours of notification. If directed/authorized by the CDFW during the notification, the qualified biologist may transfer the injured raptors to a raptor recovery center.

The project site provides foraging habitat for bats, and the trees and structures on the project site could be used for roosting, although none were observed during field surveys. The proposed project would require permanent disturbance to the habitat. This is a potentially significant impact. Implementation of the following mitigation measure would reduce the impact to a ***less than significant*** level.

Mitigation Measure Bio-2*: A tree and building preconstruction survey for bat roosting habitat shall be conducted by a qualified biologist 15 days prior to commencing construction. Tree canopies and cavities and any structures slated for removal shall be examined for evidence of bat roosting. All bat surveys shall be conducted by a biologist with known experience surveying for bats. If no bats are found during the survey, structure demolition and tree removal work shall be conducted within one month of the survey.*

If a maternity colony is found during the surveys, the project proponent shall consult with CDFW. No eviction/exclusion shall be allowed during the maternity season (typically between April 15 and July 30), and impacts to this tree/structure shall be avoided until the young have reached independence. If a non-reproductive group of bats are found within a building or roost tree, the project proponent will consult with CDFW, and they shall be evicted by a qualified biologist and excluded from the roost site prior to work activities during the suitable time frame for bat eviction/exclusion (i.e., February 20 to April 14, and July 30 to October 15).

Response b): Riparian habitat is found in the interface between land and a river or stream. This habitat is significant in ecology, environmental management, and civil engineering because of their role in soil conservation, their habitat biodiversity, and the influence they have on fauna and aquatic ecosystems, including grassland, woodland, wetland or even non-vegetative.

Sensitive natural communities are those that are considered rare in the region, support special-status plant or wildlife species, or receive regulatory protection (i.e., §404 and 401 of the Clean Water Act, the CDFG §1600 et seq. of the California Fish and Game Code, and/or the Porter-Cologne Act). In addition, the California Natural Diversity Data Base (CNDDB) has designated a

number of communities as rare; these communities are given the highest inventory priority (Holland 1986, CDFG 2003e).

The project site does not support any riparian habitat or sensitive natural communities. Implementation of the proposed project would result in ***no impact*** relative to this topic.

Response c): Monk and Associates (M&A) conducted a formal delineation of waters of the U.S. (which includes wetlands) on the project site on September 24, 2013. M&A used the Corps' 1987 Wetlands Delineation Manual in conjunction with the regional supplement for the Arid West Region. There is a man-made pond feature in the center portion of the golf course. This feature plastic lined~~is unlined~~, and filled by groundwater well pumping and city water. The banks of this irrigation detention basin are reinforced with concrete, and the bottom is lined to prevent loss of water via lateral percolation. Two wells are present on the golf course property. Groundwater pumped from the wells to the pond supplies approximately 40% of the water used to irrigate the golf course, with the balance coming from the City of Martinez. The golf course manager reports that it takes approximately 12 hours to fill the pond with pumped water. The purpose of this pond is to hold water for nightly irrigation of the fairways and greens on the golf course, and it would not exist if pumping to this feature were discontinued. A total of 88,000 gallons of water is pumped into the holding pond daily and then dispersed to the 578 sprinklers onsite in the evenings for irrigation. The golf course maintenance crew clears vegetation from the perimeter of the pond twice yearly to maintain open water for irrigation. The crew was clearing vegetation during the May 31 site visit.

The man-made golf course pond was excavated in dry land as an ornamental feature for the golf course, and thus would not be regulated pursuant to Section 1600 et seq. of the Fish and Game Code. Water is provided to this pond through a piped irrigation system that otherwise supports the golf course. The pond is otherwise completely isolated within turf play areas and would be upland without artificial irrigation. In addition, the pond has no hydrologic connectivity to any tributary that would be regulated by the Department pursuant to Section 1600 et seq. of the Fish and Game Code.

Additionally, there are a series of vegetated swales on site that convey water to the municipal storm drain system. These occur along the northern and eastern boundaries of the site. The swale along the northern boundary likely receives runoff from the pond as well as much of the northern portion of the site during rainy periods. A portion of it is perched against the fences and yards that abut the site. A short section of eroded ditch near the northeast corner of the site drains golf course runoff to the municipal storm drain system. ~~There is a concrete U-ditch that conveys water from the western hillside to the northwestern corner of the site.~~ A concrete V-ditch that conveys stormwater to a concrete culvert at the northwestern end of the project site and there are two extended drain inlets that are shaped to collect stormwater for delivery into the City storm drain system. These extended drain inlet basin areas do no support a bed or bank, and therefore are not subject to regulation pursuant to Section 1600 et seq. of the Fish and Game Code. The storm drain inlets will be retained by the proposed project, and thus will not be impacted. Development of the proposed project would not impact features subject to regulation pursuant to Section 1600 et seq. of the Fish and Game Code

Despite the presence of wetland vegetation and the unconfirmed, but likely, presence of hydric soils due to decades of inundated conditions in the irrigation pond, this irrigation feature cannot be considered a jurisdictional wetland by the US Army Corps of Engineers because its hydrology is entirely dependent on pumped groundwater and municipal sources. Additionally, the vegetated swales on site that convey water to the municipal storm drain system, and the

concrete ~~U~~V-ditch that conveys water from the western hillside to the northwestern corner of the site cannot be considered a jurisdictional wetland by the US Army Corps of Engineers because they are man-made storm drainage features designed into the golf course to direct stormwater into the municipal storm drainage system.

Development of the proposed project would not have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.), Section 401 of the Clean Water Act, the Section 1600 et seq. of the California Fish and Game Code, and/or the Porter-Cologne Act, through direct removal, filling, hydrological interruption, or other means. Implementation of the proposed project would result in a ***less-than-significant*** impact relative to this topic.

Response d): The project site is an existing golf course and does not serve as a wildlife corridor, or nursery site. The project site does not connect to other open space. The proposed project would not interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites. Implementation of the proposed project would result in a ***less-than-significant*** impact relative to this topic.

Response e):

General Plan Policies: The General Plan includes two policies related to the protection of biological resources within the Hidden Lakes Specific Area Plan as listed below:

- 32.34 Proposed development must be compatible with the Specific Area Plan with respect to natural terrain and vegetation, architectural and site design quality, adequacy of access and traffic impact.

- 32.341 Roads and buildings should be located in a manner which minimizes disturbance of the natural terrain and vegetation.

The proposed project would include alteration of the topography on the entire project site; however, the preliminary grading plan (Appendix A) is designed to minimize any significant modifications to the topography. Additionally, the proposed project includes a drainage plan that is designed to capture and treat stormwater, which would prevent severe erosion and hydrologic hazard. The project site does not contain high quality natural vegetation; rather it is irrigated turf and ornamentals associated with a golf course. The project does not conflict with the above referenced policies. Ultimately, the City will make a policy consistency determination as they consider the project for approval or denial. Implementation of the project would have a ***less than significant*** impact relative to this topic.

Tree Protection Ordinance: The City of Martinez Tree Protection Ordinance regulates the removal of protected trees on private property (Chapter 8.12, Trees on Private Property – Preservation, Protection and Removal). The Ordinances defines protected trees as all oak trees and indigenous trees measuring 20 inches or larger in circumference (approximately 6.5 inches in diameter), measured 4 1/2 feet from ground level. Oak trees include but are not limited to: *Quercus agrifolia* (California or Coast Live Oak), *Quercus douglasi* (Blue Oak), *Quercus kelloggii* (California Black Oak) or *Quercus lobata* (Valley Oak). Indigenous trees include but are not limited to: *Sequoia Sempervirens* (Coast Redwood), *Alnus Rhombifolia* (White Alder), *Alnus Oregona* (Red Alder), *Acer Macrophyllum* (Bigleaf Maple), *Aesculus Californica* (California Buckeye), *Arbutus Menziesii* (Madrone), *Umbellularia Californica* (California Bay or Laurel),

Juglans Hindsii (California Black Walnut), *Platanus Racemosa* (California Sycamore), or *Sambucus Calliarpa* (Coast Red Elderberry).

A *Preliminary Arborist Evaluation* (Baefsky & Associates 2011) was prepared to evaluate the trees on the project site and to identify the trees that are protected under the City of Martinez Tree Protection Ordinance. De Novo Planning Group peer reviewed the report for use in the Initial Study. The full report is contained in Appendix D. Trees were identified to species and measured four and one-half feet above grade in the field. They were tagged in the field using blue metal tags and located on a map.

Forty-seven trees that are protected under the City of Martinez Tree Protection Ordinance were identified to species, measured, mapped, tagged and evaluated for their conditions. Fifty trees were originally considered protected, but their sizes precluded this designation. Species included *Quercus agrifolia, Q. douglasii, Q. lobata, Sequoia sempervirens,* and *Juglans hindsii*.

Indigenous tree species identified were *Q. agrifolia* (cost live oak), *Q. douglasii* (blue oak) and *Q. lobata* (valley oak). These trees were probably planted by birds, and their irregular distribution on the course reflects the lack of discernible planting plan and localized soil conditions. Other CA native species that are not indigenous to the project site, but are protected include *S. sempervirens* (coast redwood), and *J. hindsii* (CA black walnut). The redwoods were planted as landscape amenities and the walnuts are remnant stump sprouts from a historic orchard planting.

The largest tree measured 178 inches in circumference, the smallest 19.5 inches, and the average tree circumference measured 51.4 inches. Tree condition ranged from very poor to good-excellent, averaging fair.

The proposed project would result in the loss of 47 trees protected under the Martinez Municipal Code Title 8 Health and Safety Chapter 8.12 Preservation of Trees on Private Property - Preservation, Protection and Removal. Section 8.12.020 of the Municipal Code requires a Permit prior to the removal of any protected tree. Under the Municipal Code, the Community Development Director or his/her designee shall grant or deny tree permits in accordance with Chapter 8.12. If a permit is granted, the Director may attach conditions to insure compliance with this Chapter. These conditions may include a requirement to replace any or all trees on a comparable ratio of either size or quantity. The following mitigation measure includes a condition to re-plant trees removed at a 3:1 ratio with indigenous species at a minimum of 24 inch box. The project has the potential to conflict with the City of Martinez Tree Protection Ordinance; however, the project applicant is requesting a tree removal permit as part of the application package. The City will make a determination for approval or denial with their consideration of the overall application package. Implementation of the following mitigation measure would ensure that the potential impact is reduced to a ***less than significant*** level.

> *Mitigation Measure Bio-1: If a tree removal permit is granted for the removal of the 47 trees on the project site that are protected under the Martinez Municipal Code (Title 8 Health and Safety Chapter 8.12 Preservation of Trees on Private Property - Preservation, Protection and Removal), the project applicant shall re-plant at a 3:1 ratio (141 trees) on the project site. The trees shall be indigenous tree species (i.e. Q. agrifolia (cost live oak), Q. douglasii (blue oak) and Q. lobata (valley oak)) and shall be 24 inch box at a minimum. The 141 trees shall be planted in the landscape buffer area located along Vine Hill Way, Center Avenue, and Morello Avenue so that they also function to provide visual relief from adjacent properties.*

Response f): The boundary of the East Contra Costa County Habitat Conservation Plan/Natural Community Conservation Plan (HCP/NCCP or Plan) is approximately 15 miles east of the City of Martinez. There are no other HCP/NCCPs applicable to the project site. Implementation of the proposed project would have ***no impact*** relative to this issue.

V. CULTURAL RESOURCES

Would the project:	*Potentially Significant Impact*	*Less Than Significant with Mitigation Incorporation*	*Less Than Significant Impact*	*No Impact*
a) Cause a substantial adverse change in the significance of a historical resource as defined in '15064.5?		X		
b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to '15064.5?		X		
c) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?		X		
d) Disturb any human remains, including those interred outside of formal cemeteries?		X		

Background

A *Determination of Eligibility and Effect for the Proposed Subdivision of the Vine Hill Property, Martinez* (Peak and Associates 2013) was prepared for the proposed project (Appendix E) under contract to De Novo Planning Group. The following is based on that study.

The study included a review of literature maintained by the Northwest Information Center (NWIC) of the California Historical Resources Information System at Sonoma State University. This indicated that the area had not been surveyed in the past and no resources were known in the immediate project vicinity.

The Native American Heritage Commission (NAHC) was contacted by Peak & Associates for a Sacred Lands review. Correspondence requesting information and/or comment and a topographic map showing the Project were sent to the Indian Canyon Mutsun Band of Costanoan (Ann Marie Sayers, Chairperson), the Ione Band of Miwok Indians (Yvonne Miller, Chairperson), the Trina Marine Ruano Family (Ramona Garibay, Representative) and The Ohlone Indian Tribe (Andrew A. Galvan).

A field reconnaissance of the Area of Potential Effect (APE), defined by the property boundaries, was conducted on December 29, 2013 by Peak & Associates' Senior Archeologist Robert Gerry. No evidence of prehistoric occupation or use of this area was observed. Although the land is generally heavily disturbed due to development of the golf course, the periphery of the property is in relatively pristine condition and offered excellent ground visibility. The course itself was not in a verdant state at the time of the inspection, so surface visibility was still good.

The process of taking out the previously existing orchard on the property would have been tremendously destructive to any prehistoric properties in the APE. Additionally, the absence of a reliable surface water supply in the immediate area makes this an unlikely location for prehistoric settlement.

The only structures in the area are the clubhouse and associated sheds. All of these are modern and the clubhouse is a small one story frame structure of no architectural distinction.

Responses to Checklist Questions

Response a-b): As a result of the identification and evaluation efforts, there are no historic properties or archaeological resources present. As with any surface inspection, there is some

possibility that a buried site may exist in the area and be obscured by vegetation, fill, or other historic activities, leaving no surface evidence. Should artifacts or unusual amounts of stone, bone, or shell be uncovered during construction activities, an archeologist should be consulted for an evaluation. Implementation of the following mitigation measure would require investigations and avoidance methods in the event that a previously undiscovered cultural resource is encountered during construction activities. This mitigation measure would reduce this impact to a ***less than significant*** level.

> ***Mitigation Measure Cul-1:*** *If cultural resources (i.e., prehistoric sites, historic sites, isolated artifacts/features, and paleontological sites) are discovered work shall be halted immediately within 50 meters (165 feet) of the discovery, the City of Martinez shall be notified, and a qualified archaeologist that meets the Secretary of the Interior's Professional Qualifications Standards in prehistoric or historical archaeology (or a qualified paleontologist in the event paleontological resources are found) shall be retained to determine the significance of the discovery. The City of Martinez shall consider recommendations presented by the professional for any unanticipated discoveries and shall carry out the measures deemed feasible and appropriate. Such measures may include avoidance, preservation in place, excavation, documentation, curation, data recovery, or other appropriate measures. Specific measures are developed based on the significance of the find.*

Response c): The project site is located in an area that was previously developed as a golf course, which is generally considered to have less potential to encounter previously unknown paleontological resources relative to projects in undisturbed/undeveloped areas. However, improvements and modifications within existing developed area still have the potential to damage or destroy undiscovered paleontological resources especially during deeper excavations.

Implementation of Mitigation Measure Cul-1 above would require investigations and avoidance methods in the event that a previously undiscovered paleontological resource is encountered during construction activities. This mitigation measure would reduce this impact to a ***less than significant*** level.

Response d): Indications are that humans have occupied Contra Costa County for at least 10,000 years and it is not always possible to predict where human remains may occur outside of formal burials. Therefore, excavation and construction activities, regardless of depth, may yield human remains that may not be interred in marked, formal burials. Under CEQA, human remains are protected under the definition of archaeological materials as being "any evidence of human activity." Additionally, Public Resources Code Section 5097 has specific stop-work and notification procedures to follow in the event that human remains are inadvertently discovered during construction. Implementation of the following mitigation measure would reduce this potential impact to a ***less than significant*** level.

> ***Mitigation Measure Cul-2:*** *If any human remains are found during grading and construction activities, all work shall be halted immediately within 50 meters (165 feet) of the discovery and the County Coroner must be notified, according to Section 5097.98 of the State Public Resources Code and Section 7050.5 of California's Health and Safety Code. If the remains are determined to be Native American, the coroner shall notify the Native American Heritage Commission, and the procedures outlined in CEQA Section 15064.5(d) and (e) shall be followed. Additionally, if the Native American resources are identified, a Native American monitor, following the Guidelines for Monitors/Consultants of Native American Cultural, Religious, and Burial Sites established by the Native American Heritage Commission, may also be required and, if required, shall be retained at the applicant's expense.*

VI. GEOLOGY AND SOILS

Would the project:	*Potentially Significant Impact*	*Less Than Significant with Mitigation*	*Less Than Significant Impact*	*No Impact*
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 or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42.			X	
ii) Strong seismic ground shaking?			X	
iii) Seismic-related ground failure, including liquefaction?			X	
iv) Landslides?		X		
b) Result in substantial soil erosion or the loss of topsoil?		X		
c) Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse?		X		
d) Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial risks to life or property?		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

Background

A *Geotechnical Feasibility Investigation* and *Supplemental Grading Recommendations* (Stevens, Ferrone & Bailey Engineering Company, Inc. 2011) was prepared for the proposed project. De Novo Planning Group peer reviewed the report for use in the Initial Study. The full reports are contained in Appendix F and G. The following responses are based on those studies.

Responses to Checklist Questions

Response a.i-iii): The project site is located in the seismically active San Francisco Bay Area. Moderate to severe earthquakes on any of the numerous faults in the area could impact the project site. Of particular concern is the Concord/Green Valley Fault, which is located approximately 1.5 miles east of the project site. The active Concord/Green Valley Fault is capable of producing an earthquake with a moment magnitude (Mw) of about 6.9. The project site is located outside the Alquist-Priolo earthquake fault zone and surface rupture from known active faults is not anticipated.

Liquefaction typically requires a significant sudden decrease of shearing resistance in cohesionless soils and a sudden increase in water pressure, which is typically associated with an earthquake of high magnitude. Soils most susceptible to liquefaction are clean, loose, saturated, uniformly graded, fine-grained sands. Soil data from the NRCS Web Soil Survey indicates that the project site soils have bedrock within 12 inches of the surface and the upper soil is approximately 31 percent clay, 35.4 percent sand, 33.6 percent silt. This soil composition is not considered to be a high risk of liquefaction. Additionally, liquefaction is less likely in areas with shallow bedrock. According to ABAG and the U.S. Geological Survey, the project site is located in an area mapped as having a very low likelihood of liquefaction in an earthquake and has been characterized as having very low liquefaction susceptibility. The liquefaction potential of the project site and surrounding area has not been evaluated by the State of California.

There will always be a potential for groundshaking caused by seismic activity anywhere in California, including the project site. Seismic activity could come from a known active fault such as the Concord/Green Valley Fault, or any number of other faults in the region. In order to minimize potential damage to the buildings and site improvements, all construction in California is required to be designed in accordance with the latest seismic design standards of the California Building Code. The California Building Code, Title 24, Part 2, Chapter 16 addresses structural design and Chapter 18 addresses soils and foundations. Collectively, these state requirements, which have been adopted by the City of Martinez, include design standards and requirements that are intended to minimize impacts to structures in seismically active areas of California. Section 1613 specifically provides structural design standards for earthquake loads. Section 1803.5.11 and 1803.5.12 provide requirements for geotechnical investigations for structures assigned varying Seismic Design Categories in accordance with Section 1613. Design in accordance with these standards and policies would reduce any potential impact to a less than significant level. Because development of the proposed project must be designed in conformance with these state and local standards and policies, any potential impact would be ***less than significant***.

Response a.iv): There are several categories of landslides including: rockfalls, deep slope failure, and shallow slope failure Factors such as the geological conditions, drainage, slope, vegetation, and others directly affect the potential for landslides. One of the most common causes of landslides is construction activity that is associated with road building (i.e. cut and fill).

According to U.S. Geological Survey Open-File Report 97-745 (landslide folio of the San Francisco Bay Area), the project site is not mapped as having previously identified landslides or earthflows nor is it located within an area having debris flow source potential. Based on the results of the geotechnical reconnaissance and review of documents, Stevens, Ferrone & Bailey Engineering Company, Inc. (2011) did not observe evidence of adverse slope stability, erosion, or drainage conditions at the site. Additionally, they did not observe evidence of active, deep seated slope movement onsite or in the vicinity of the project site.

The project site is rolling with gentle slopes. The grading plan would require approximately 116,000 cubic yards of cut and 107,000 cubic yards of fill. The end result will be a net export of 9,000 cubic yards. The topography of the developed subdivision will be more flat then the existing condition; however, some slope will remain. The potential for landslides is considered minimal after the grading and compaction of soils to a specified geotechnical standard. Mitigation Measure Geo-1 requires a geotechnical evaluation and design for the proposed

project prior to approval of a grading permit. Implementation of the following mitigation measure would reduce the impact to a ***less-than-significant*** level.

> ***Mitigation Measure Geo-1:*** *The project proponent shall incorporate the recommendations from the Geotechnical Feasibility Investigation and Supplemental Grading Recommendations into project plans and specifications. In addition, prior to earthmoving activities, a certified geotechnical engineer shall be retained to perform a geotechnical evaluation of the soils at a design-level as required by the California Building Code Title 24, Part 2, Chapter 18, Section 1803.1.1.2 related to expansive soils and other soil conditions. The evaluation shall be prepared in accordance with the standards and requirements outlined in California Building Code, Title 24, Part 2, Chapter 16, Chapter 17, and Chapter 18, which addresses structural design, tests and inspections, and soils and foundation standards. The geotechnical evaluation shall include design recommendations to ensure that soil conditions do not pose a threat to the health and safety of people or structures. The grading and building plans shall be designed in accordance with the recommendations provided in the geotechnical evaluation.*

Responses b): The proposed project involves construction on an existing golf course that has rolling slopes. Soil data from the NRCS Web Soil Survey indicates that the project site soils have an Erosion Factor K of 0.24. Factor K indicates the susceptibility of a soil to sheet and rill erosion by water. Values range from 0.02 to 0.69 and the higher the value, the more susceptible the soil is to sheet and rill erosion by water. The 0.24 value for the project site is considered low to moderate.

The project site is currently a golf course that is not at significant risk of erosion under the existing conditions. Construction activities including grading could temporarily increase soil erosion rates during and shortly after project construction. Construction-related erosion could result in the loss of a substantial amount of nonrenewable topsoil and could adversely affect water quality in nearby surface waters. The RWQCB requires a project specific Storm Water Pollution Prevention Plan (SWPPP) to be prepared for each project that disturbs an area one acre or larger. The SWPPP will include project specific best management measures that are designed to control drainage and erosion. Furthermore, proposed project will include detailed project specific drainage plan that control storm water runoff and erosion, both during and after construction. The SWPPP and the project specific drainage plan would reduce the potential for erosion. Implementation of the following mitigation measure would ensure that the proposed project would result in a ***less-than-significant*** impact relative to this topic.

> *Mitigation Measure Geo-2: The Project Applicant shall submit a Notice of Intent (NOI) and Storm Water Pollution Prevention Plan (SWPPP) to the RWQCB in accordance with the NPDES General Construction Permit requirements. The SWPPP shall be designed to control pollutant discharges utilizing Best Management Practices (BMPs) and technology to reduce erosion and sediments. BMPs may consist of a wide variety of measures taken to reduce pollutants in stormwater runoff from the project site. Measures shall include temporary erosion control measures (such as silt fences, staked straw bales/wattles, silt/sediment basins and traps, check dams, geofabric, sandbag dikes, and temporary revegetation or other ground cover) that will be employed to control erosion from disturbed areas. Final selection of BMPs will be subject to approval by the City of Martinez and the RWQCB. The SWPPP will be kept on site during construction activity and will be made available upon request to representatives of the RWQCB.*

Response c): 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-grained sands. Soil data from the NRCS Web Soil Survey indicates that the project site soils have bedrock within 12 inches of the surface and the upper soil is approximately 31 percent clay, 35.4 percent sand, 33.6 percent silt. This soil composition is not considered to be a high risk of liquefaction. Additionally, liquefaction is less likely in areas with

shallow bedrock. According to ABAG and the U.S. Geological Survey, the project site is located in an area mapped as having a very low likelihood of liquefaction in an earthquake and has been characterized as having very low liquefaction susceptibility. The liquefaction potential of the project site and surrounding area has not been evaluated by the State of California. Implementation of proposed project would have a ***less than significant*** impact relative to this topic.

Lateral spreading typically results when ground shaking moves soil toward an area where the soil integrity is weak or unsupported, and it typically occurs on the surface of a slope, although it does not occur strictly on steep slopes. Oftentimes, lateral spreading is also directly associated with areas of liquefaction. The project site is rolling with gentle slopes. The grading plan would require approximately 116,000 cubic yards of cut and 107,000 cubic yards of fill. The end result will be a net export of 9,000 cubic yards. The topography of the developed subdivision will be more flat then the existing condition; however, some slope will remain. The potential for lateral spreading could exist in the open space buffer areas where there are slopes. Overall the potential for lateral spreading is considered minimal after the grading and compaction of soils to a specified geotechnical standard. Mitigation Measure Geo-1 provides the requirement for a geotechnical evaluation in accordance with the standards and requirements outlined in the California Building Code, Title 24, Part 2, Chapter 16, Chapter 17, and Chapter 18, which addresses structural design, tests and inspections, and soils and foundation standards. The geotechnical evaluation includes design recommendations to ensure that soil conditions do not pose a threat to the health and safety of people or structures. The grading and building plans are required to be designed in accordance with the recommendations provided in the geotechnical evaluation. The City Engineer reviews the geotechnical evaluation with the improvement plan and grading plan submittal to ensure that the geotechnical recommendations have been incorporated into the final plans. Implementation of Mitigation Measure Geo-1 (presented under Response a-iv above) would ensure that the proposed project would have a ***less than significant*** impact relative to this topic.

Landslides include rockfalls, deep slope failure, and shallow slope failure. Factors such as the geological conditions, drainage, slope, vegetation, and others directly affect the potential for landslides. One of the most common causes of landslides is construction activity that is associated with road building (i.e. cut and fill). The project site is rolling with gentle slopes. The grading plan would require approximately 116,000 cubic yards of cut and 107,000 cubic yards of fill. The end result will be a net export of 9,000 cubic yards. The topography of the developed subdivision will be more flat then the existing condition; however, some slope will remain. The potential for landslides is considered minimal after the grading and compaction of soils to a specified geotechnical standard. Mitigation Measure Geo-1 provides the requirement for a geotechnical evaluation in accordance with the standards and requirements outlined in the California Building Code, Title 24, Part 2, Chapter 16, Chapter 17, and Chapter 18, which addresses structural design, tests and inspections, and soils and foundation standards. The geotechnical evaluation includes design recommendations to ensure that soil conditions do not pose a threat to the health and safety of people or structures. The grading and building plans are required to be designed in accordance with the recommendations provided in the geotechnical evaluation. The City Engineer reviews the geotechnical evaluation with the improvement plan and grading plan submittal to ensure that the geotechnical recommendations have been incorporated into the final plans. Implementation of Mitigation Measure Geo-1 (presented under Response a-iv above) would ensure that the proposed project would have a ***less than significant*** impact relative to this topic.

Land subsidence is the gradual settling or sinking of an area with little or no horizontal motion due to changes taking place underground. It is a natural process, although it can also occur (and is greatly accelerated) as a result of human activities. Common causes of land subsidence from human activity include: pumping water, oil, and gas from underground reservoirs; dissolution of limestone aquifers (sinkholes); collapse of underground mines; drainage of organic soils; and initial wetting of dry soils. Soil data from the NRCS Web Soil Survey indicates that the project site soils have bedrock within 12 inches of the surface. Land subsidence is highly unlikely in areas with shallow bedrock. Implementation of proposed project would have a ***less than significant*** impact relative to this topic.

Responses d): Expansive soils are those that shrink or swell with the change in moisture content. The volume of change is influenced by the quantity of moisture, by the kind and amount of clay in the soil, and by the original porosity of the soil. Shrinking and swelling can damage roads and other structures unless special engineering design is incorporated into the project plans.

Linear extensibility is a soil property that is used to determine the shrink-swell potential of soils. The shrink-swell potential is low if the soil has a linear extensibility of less than 3 percent; moderate if 3 to 6 percent; high if 6 to 9 percent; and very high if more than 9 percent. If the linear extensibility is more than 3, shrinking and swelling can cause damage to buildings, roads, and other structures and to plant roots. Special design commonly is needed.

The California Building Code Title 24, Part 2, Chapter 18, Section 1803.1.1.2 requires specific geotechnical evaluation when it is determined that expansive or other special soil conditions are present, which, if not corrected, would lead to structural defects. The soils on the project site are LcE—Lodo Clay Loam, 9 to 30 percent slopes. The linear extensibility on these soils is 4.5, which represents a moderate shrink-swell potential on the project site. Development of the proposed project would be subject to expansive soils and would require specific geotechnical evaluation and foundation design as a result.

Mitigation Measure Geo-1, presented above, provides the requirement for a geotechnical evaluation in accordance with the standards and requirements outlined in the California Building Code, Title 24, Part 2, Chapter 16, Chapter 17, and Chapter 18, which addresses structural design, tests and inspections, and soils and foundation standards. The geotechnical evaluation would include design recommendations to ensure that soil conditions do not pose a threat to the health and safety of people or structures. The grading and building plans are required to be designed in accordance with the recommendations provided in the geotechnical evaluation. Implementation of Mitigation Measure Geo-1 would ensure that the proposed project would have a ***less than significant*** impact relative to this topic.

Response e): The proposed project would not require the use of septic tanks or alternative waste water disposal systems for the disposal of waste water. Implementation of the proposed project would result in ***no impact*** relative to this topic.

XII. GREENHOUSE GAS EMISSIONS

Would the project:	*Potentially Significant Impact*	*Less Than Significant with Mitigation Incorporation*	*Less Than Significant Impact*	*No Impact*
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 gasses?			X	

Responses to Checklist Questions

Response a-b): GHG emissions generated by operation and construction of the proposed project would consist primarily of CO2 emissions, with very limited quantities of methane (CH4) also generated. Carbon dioxide equivalents (CO2e) provide a universal standard of measurement against which the impacts of releasing (or avoiding the release of) different greenhouse gases can be evaluated.

The California Emission Estimator Model (CalEEMod)™ (v.2013.2) was used to estimate operational and construction GHG emissions for the proposed project. Table 5 shows the CO2e emissions, which include mobile source, area source, waste, water, and energy emissions that would result from operations of proposed project. Table 6 shows the construction related GHG emissions. The full calculations, inputs, and assumptions are provided in Appendix B.

Table 5: Operational GHG Emissions (Unmitigated)

	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	MT/yr					
Area	13.8325	5.0897	18.9222	0.0310	7.3000e-004	19.8004
Energy	0.0000	474.5611	474.5611	0.0144	6.8800e-003	476.9968
Mobile	0.0000	912.6345	912.6345	0.0445	0.0000	913.5679
Waste	24.3833	0.0000	24.3833	1.4410	0.0000	54.6445
Water	2.0670	14.4383	16.5053	0.2130	5.1500e-003	22.5733
Total	40.2828	1,406.7236	1,447.0064	1.7438	0.0128	1,487.5830

SOURCES: CALEEMOD (V.2013.2)

Table 6: Construction GHG Emissions

	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	MT/yr					
2015	0.0000	387.1901	387.1901	0.0899	0.0000	389.0788
2016	0.0000	387.6092	387.6092	0.0810	0.0000	389.3098
2017	0.0000	133.9797	133.9797	0.0279	0.0000	134.5653
Total	0.0000	908.7790	908.7790	0.1988	0.0000	912.9539

SOURCES: CALEEMOD (V.2013.2)

As shown in Table 5, proposed project operations would result in estimated operational GHG emissions of 1,487.6 metric tons per year of GHGs. As shown in Table 6, construction of the proposed project would result in between 134.6 and 389.3 metric tons per year between 2015 and 2017. This GHG release would occur as a single event (2015-2017 construction years) and

is not considered continuous throughout the life of the project. The total construction release is estimated at 913 metric tons.

The quantification of GHG emissions was provided above for information purposes; however, there is not a quantitative threshold of significance established in the 1999 BAAQMD CEQA Guidelines. As such, in order to determine if the proposed project would generate GHGs that may have a significant effect on the environment, the City of Martinez has relied on the proposed project's consistency with The City of Martinez Climate Action Plan (CAP). The CAP establishes strategies to reduce the greenhouse gas emissions known to contribute to climate change, to conserve energy and other natural resources, and to prepare the community for the expected effects of global warming. The CAP includes specific goals and objectives to reduce greenhouse gas emissions, including policies, programs, and actions that facilitate the efforts of residents and businesses to reduce their own greenhouse gas emissions.

The CAP has the following three primary goals:

1. To reduce GHG emissions from sources within the City of Martinez;
2. To shift to renewable energy sources;
3. To prepare for a changing climate.

The following CAP policies provide more specific intent and guidelines:

1. Strategies for reducing GHGs and for adapting to climate change should build on actions already completed or in progress. The CAP should focus on low-cost, simple, and comprehensive strategies.
2. Through the planning process, and also through implementation of strategies specified in the CAP, the City should increase awareness of climate change among Martinez residents and businesses, and facilitate individual actions to reduce GHG emissions and prepare for the effects of climate change.
3. The City should establish an institutional structure (including General Plan policies, ordinances, City government structure and staffing) to enable implementation of CAP programs.
4. The City should cooperate with state agencies and other local governments to broaden greenhouse gas reduction and adaptation programs, and to make them more effective.
5. The City should encourage and facilitate a shift from reliance on fossil fuels to renewable energy sources, including development of local renewable energy generation capacity.

The following principles are intended to ensure that the CAP policies and programs reflect community interests and has the best chance of achieving the CAP's goals. The guiding principles provide a foundation for the evaluation and selection of strategies, and will facilitate a balanced approach to the CAP.

1. Sustainable function follows sustainable form.
2. Look for opportunities of greatest leverage.

3. Invest incrementally in new technologies.
4. Change behavior through education and example.
5. Choose strategies that build broad, long-term self-sufficiency.
6. Reduce, reuse, and recycle.
7. Evaluate strategies against realistic benefits and drawbacks.
8. Consider that every solution can potentially create new problems.
9. Take personal, business, and governmental responsibility for green living.
10. Look to Nature for Solutions.

These principles will be used to guide development of CAP strategies, specifically for moving from the conceptual strategies for GHG reduction, to more specific strategies.

Additionally, the CAP establishes priorities in four key GHG emissions categories for adapting to the local physical changes in the environment that are already being felt as a result of global climate change, and that are expected to intensify in the coming years. Below is a list of the four key GHG emission categories addressed in the CAP.

1. Transportation - The largest contributing factor in Martinez's GHG emissions, related to the use of GHG emitting motor vehicles.
2. Energy - The consumption and waste of electric energy from power plants and natural gas from fossil sources of methane.
3. Solid Waste - Transporting and disposing of GHG emitting solid waste including organic wastes deposited in landfill, and energy and associated greenhouse gas emissions embodied in products that we purchase, use, and discard.
4. Water - Not included in the Inventory, but part of the Strategic Targets.

The proposed project does not conflict with the CAP goals, principles, and strategies for reducing the City's GHG emissions. Implementation of the proposed project would not hinder the City's ability to fully implement the CAP, nor would it interfere with the City's achievement of the GHG emissions reductions that are projected with full implementation of the CAP. Implementation of the CAP would assist the City in meeting the GHG emissions reduction established by AB 32. In addition to the proposed project's consistency with the CAP, the proposed project would be subject to the California Green Building Standards Code referred to as CALGreen. CALGreen would help reduce GHG emissions, and would further ensure that the proposed project would be consistent with all applicable plans and policies adopted for the purpose of reducing GHG emissions. Implementation of the proposed project would have a ***less than significant*** impact relative to this topic.

VIII. HAZARDS AND HAZARDOUS MATERIALS

Would the project:	*Potentially Significant Impact*	*Less Than Significant with Mitigation Incorporation*	*Less Than Significant Impact*	*No Impact*
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 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) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard for people residing or working in the project area?				X
f) For a project within the vicinity of a private airstrip, would the project result in a safety hazard for people residing or working in the project area?				X
g) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?				X
h) Expose people or structures to a significant risk of loss, injury or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands?				X

Background

Phase I Environmental Site Assessment: A Phase I Environmental Site Assessment (ESA) was prepared by AEI Consultants (AEI) in general conformance with the scope and limitations of ASTM Standard Practice E1527-05 and the Environmental Protection Agency Standards and Practices for All Appropriate Inquiries (40 CFR Part 312) for the property located at 451 Vine Hill Way in the City of Martinez, Contra County, California. De Novo Planning Group peer reviewed the report for use in the Initial Study. The following is a summary of the report, which is contained in Appendix H.

Recognized Environmental Conditions (RECs) are defined by the ASTM Standard Practice E1527-05 as the presence or likely presence of any hazardous substances or petroleum

products on a property under conditions that indicate an existing release, a past release, or a material threat of a release of any hazardous substances or petroleum products into structures on the property or into the ground, groundwater, or surface water of the property. AEI's assessment has revealed the following RECs associated with the subject property or nearby properties:

- The subject property has been used as a golf course since 1970 and agricultural land/orchard since at least 1939. The nature of use at the subject property involves the application, storage, and mixing of pesticides and herbicides at the subject property. A weed and feed storage shed was located adjacent to the maintenance building. The weed and feed storage shed was locked during AEI's site reconnaissance. The chemicals are reportedly utilized to service the golf greens/fairways located on the subject property. Based on the duration of use as a golf course and the tendency of these constituents to remain in near surface soils, the application and storage of pesticides and herbicides at the subject property may have impacted the subject property. Soil sampling would be recommended prior to any redevelopment of the subject property to determine whether the application of pesticides and herbicides has adversely impacted the subject property.

Business Environmental Risks (BERs) include risks which can have a material environmental or environmentally-driven impact on the business associated with the current or planned use of the subject property, not necessarily limited to those environmental issues required to be investigated in the standard ASTM scope. BERs may affect the liabilities and financial obligations of the property owner, the health & safety of site occupants, and the value and marketability of the subject property. AEI's assessment has revealed the following BERs associated with the subject property or nearby properties:

- Due to the age of the subject property building, there is a potential that asbestos-containing materials (ACMs) are present. All suspect ACMs were observed in good condition and are not expected to pose a health and safety concern to the occupants of the subject property at this time. In the event that building renovation or demolition activities are planned, an asbestos survey adhering to the Asbestos Hazard Emergency Response Act (AHERA) sampling protocol should be performed prior to demolition or renovation activities that may disturb suspect ACMs.

- Due to the age of the subject property building, there is a potential that lead-based paint (LBP) is present. All observed painted surfaces were in good condition and are not expected to pose a health and safety concern to the occupants of the subject property at this time. Local regulations may apply to LBP in association with building demolition/renovations and worker/occupant protection. Actual material samples would need to be collected or an XRF survey performed in order to determine if LBP is present. It should be noted that construction activities that disturb materials or paints containing any amount of lead may be subject to certain requirements of the Occupational Safety and Health Administration (OSHA) lead standard contained in 29 CFR 1910.1025 and 1926.62.

AEI's assessment did not reveal any Historical Recognized Environmental Conditions (HRECs) as defined by the ASTM Standard Practice E1527-05 or De Minimis Environmental Conditions as defined by the ASTM Standard Practice E1528-05.

AEI's assessment revealed no evidence of RECs in connection with the property except for those previously identified above. AEI recommended a Phase II subsurface investigation to determine whether the application of pesticides and herbicides has adversely impacted the subject property.

Phase II Soil Investigation: At the recommendation of the Phase I ESA, a Phase II Soils Investigation was prepared by AEI Consultants (AEI). The following is a summary of the report, which is contained in Appendix I.

The investigation included the collection and analyses of shallow soil samples from twenty-nine (29) locations throughout the property. AEI was requested to assess whether shallow soils of the property had been impacted by onsite storage of petroleum hydrocarbons and the historical applications of pesticides associated with prior agricultural / orchard use of the land and of the golf course since the early 1970s.

Relatively low, trace concentrations of the pesticides DDT, dieldrin, and endosulfan II were detected in the composite samples from the golf course and putting green areas. Aldrin was detected at a low concentration in a sampling location advanced immediately adjacent to the pesticide and fertilizer shed. Low concentrations of a-chlordane and g-chlordane were detected in the sludge sample collected from the pond. No other pesticides were detected exceeding laboratory reporting limits in the composite or discrete samples analyzed. Herbicides were not detected in the two sampling locations adjacent to the pesticide and fertilizer shed. Arsenic, total chromium, and lead were detected in the samples analyzed at concentrations representative of naturally-occurring background conditions. However, significant concentrations of heavy-range petroleum hydrocarbons were detected in shallow soil adjacent to the petroleum hydrocarbon storage shed.

For comparison, sample analytical data was compared to the San Francisco Bay Regional Water Quality Control Board (RWQCB) Environmental Screening Levels (ESLs2) and Cal-EPA Human Health Screening Levels (CHHSLs3) in Table 1 of the Soils Investigation (Appendix I). The ESLs selected for comparison were the default residential ESL and CHHSL screening values, as well as the ESL value for residential land use considering a direct exposure pathway. Residential ESLs are primarily calculated assuming 30-year residential exposure via incidental ingestion, dermal contact, and inhalation of airborne chemical constituents from affective soil media. The ESL direct exposure value presented in Table 1 of the Soils Investigation (Appendix I) considers residential and construction worker exposure scenarios and is the lowest direct exposure value (target carcinogenic risk of 1 x 10^-6 and a hazard quotient of 0.2). None of the pesticide detections in the composite/discrete soil samples or sludge within the pond exceed applicable ESLs or the CHHSLs. Motor oil detected in the borings adjacent to the petroleum hydrocarbon storage shed exceeds both the default and direct exposure ESLs. Diesel detected in one sample adjacent to the petroleum hydrocarbon storage shed, AEI-22-0.5', exceeds both the default and direct exposure ESLs. Although arsenic exceeds the default ESLs and CHHSLs, based on AEI's experience, the observed detections are consistent with naturally occurring background concentrations commonly observed in the Bay Area and not indicative of an anthropogenic source.

Based on the findings of the investigation, no indication of a significant release of pesticides, herbicides, or metals was identified on the property. No further investigation relating to the current or previous use or storage of pesticides and herbicides on the property is recommended at this time. However, sample analytical results indicate that a release of diesel and oil range petroleum hydrocarbons occurred in the area of the petroleum product storage

shed. AEI recommends mitigation of the petroleum impacted soil prior to development. It is expected that mechanical excavation and disposal of impacted soil in the area of the storage shed following its dismantling would be a viable, cost-effective approach to mitigate the release prior to redevelopment. Based on the low mobility of oil in soil, it is expected that impact does not extend beyond a depth of 3 to 4 feet bgs in this area. Confirmation soil samples following excavation would be needed to confirm that the release has been effectively removed.

Responses to Checklist Questions

Responses a): Operation of the proposed project would not result in the routine transport, use or disposal of hazardous materials. Some hazardous materials may be used during construction. This includes fuels and petroleum products, which are anticipated to be in such small quantities that it would pose no significant hazard or risk to the public or the environment. The use, clean up, and disposal of potentially hazardous construction materials is managed according to standard procedures to protect air quality, water quality, and the environment Implementation of the proposed project would result in a ***less than significant*** impact relative to this topic.

> ***Mitigation Measure Haz-1:*** *All construction activities must have designated staging/maintenance areas, standard operating procedures, and emergency response planning. To minimize the potential for accidental spills from equipment and to provide for a planned response in the event that an accidental spill does occur, the project proponent shall implement the following construction best management practices:*
>
> - *Designate a restricted area for on-site fueling of vehicles and construction equipment, and for handling and storage of hazardous materials;*
> - *The restricted area must be equipped with a spill containment basin;*
> - *Maintain spill cleanup equipment onsite; and,*
> - *Ensure that construction personnel are trained in proper material handling, cleanup, and disposal procedures.*

Responses b): Operation of the proposed project would not result in a hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment. Some hazardous materials may be used during construction. This includes fuels and petroleum products, which are anticipated to be in such small quantities that it would pose no significant hazard or risk to the public or the environment. The use, clean up, and disposal of potentially hazardous construction materials will be managed according to standard procedures to protect air quality, water quality, and the environment as per state laws and is not expected to result in a reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment.

The Phase I ESA identified the need to perform a Phase II Soil Investigation to determine whether the application of pesticides and herbicides has adversely impacted the project site. A Phase II Soils Investigation was subsequently prepared. Based on the findings of the investigation, no indication of a significant release of pesticides, herbicides, or metals was identified on the project site. No further investigation relating to the current or previous use or storage of pesticides and herbicides on the project site was recommended. The findings indicated that there was a release of diesel and oil range petroleum hydrocarbons that occurred in the area of the petroleum product storage shed. The soils investigation indicated that mechanical excavation and disposal of impacted soil in the area of the storage shed following its dismantling would be a viable, cost-effective approach to mitigate the release prior to development. Based on the low mobility of oil in soil, it is expected that impact does not extend

beyond a depth of 3 to 4 feet bgs in this area. Confirmation soil samples following excavation would be needed to confirm that the release has been effectively removed.

The Phase I ESA indicated that due to the age of the buildings on the project site, there is a potential that asbestos-containing materials (ACMs) and lead-based paint (LBP) to be present. All suspect ACMs were observed in good condition and are not expected to pose a health and safety concern to the occupants of the subject property at this time. All observed painted surfaces were in good condition and are not expected to pose a health and safety concern to the occupants of the subject property at this time.

In the event that building renovation or demolition activities are planned, an asbestos survey adhering to the Asbestos Hazard Emergency Response Act (AHERA) sampling protocol must be performed prior to demolition or renovation activities that may disturb suspect ACMs. Additionally, building demolition/renovations would warrant material sampling or XRF survey performed in order to determine if LBP is present. It should be noted that construction activities that disturb materials or paints containing any amount of lead may be subject to certain requirements of the Occupational Safety and Health Administration (OSHA) lead standard contained in 29 CFR 1910.1025 and 1926.62.

The proposed project has the potential to result in a hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials asbestos-containing materials (ACMs), lead-based paint (LBP), and/or diesel and oil range petroleum hydrocarbons that were released in the area of the petroleum product storage shed. This is a potentially significant impact. Implementation of the following mitigation measures would reduce this impact to a ***less than significant*** level.

> ***Mitigation Measure Haz-2:*** *All demolition activities shall be performed in accordance with the Bay Area Air Quality Management District Regulation 11 Hazardous Pollutants, Rule 2 Asbestos Demolition, Renovation, and Manufacturing. The purpose of this Rule is to control emissions of asbestos to the atmosphere during demolition, renovation, milling and manufacturing and establish appropriate waste disposal procedures. These requirements specify the appropriate methods for survey, demolition/removal, and disposal of asbestos materials to control emissions and prevent hazardous conditions. Specifications developed for the demolition activities shall include the proper packaging, manifesting, and transport of demolition wastes by trained workers to a permitted facility for disposal, in accordance with local, State, and federal requirements.*
>
> ***Mitigation Measure Haz-3:*** *Prior to demolition or renovation activities that may disturb suspect lead-based paint (LBP), actual material samples shall be collected or an XRF survey performed in order to determine if LBP is present. It should be noted that construction activities that disturb materials or paints containing any amount of lead are subject to certain requirements of the Occupational Safety and Health Administration (OSHA) lead standard contained in 29 CFR 1910.1025 and 1926.62. If lead-based paint is identified, the paint shall be removed by a qualified lead abatement contractor. Specifications developed for the demolition activities shall include the proper packaging, manifesting, and transport of demolition wastes by trained workers to a permitted facility for disposal, in accordance with local, State, and federal requirements.*
>
> ***Mitigation Measure Haz-4:*** *Prior to grading, mechanical excavation and disposal of the diesel and oil range petroleum hydrocarbons release (area of the petroleum product storage shed) shall be completed by a qualified contractor. Specifications developed for the excavation and disposal activities shall include the proper packaging, manifesting, and transport of demolition wastes by trained workers to a permitted facility for disposal, in accordance with local, State, and federal requirements. Confirmation soil samples following excavation shall be performed to confirm that the release has been effectively removed.*

Responses c): The project site is outside a ¼ mile radius of the nearest school. The closest school is Hidden Valley Elementary School located approximately .5 miles to the east of the project site. Other schools in the region include: John Muir Elementary School located approximately 1.1 miles to the northwest, Morello Park Elementary School located approximately .75 miles to the north, John Swett Elementary located approximately 1.1 miles to the west, Las Juntas Elementary located approximately 1.1 miles to the northeast, Alhambra High School located approximately 1.9 miles to the northwest, and Martinez Junior High School located approximately two miles to the north west. The operations of a residential subdivision would not emit hazardous emissions or result in the storage or handling of hazardous or acutely hazardous materials, substances or waste above the level of existing conditions. Implementation of the proposed project would result in a ***less than significant*** impact relative to this topic.

Responses d): The Phase I ESA, which included a review of a list of hazardous materials sites compiled by the State of California pursuant to Government Code Section 65962.5, indicates no recorded documentation of hazardous materials violations or discharge on the property has been recorded other then what has already been discussed in Response b above. The proposed project has the potential to result in a hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials asbestos-containing materials (ACMs), lead-based paint (LBP), and/or diesel and oil range petroleum hydrocarbons that were released in the area of the petroleum product storage shed. This is a potentially significant impact. Implementation of the mitigation measures listed above would reduce this impact to a ***less than significant*** level.

Response e): The project is not located within an airport land use area and is located further than two miles from the nearest public or public use airport, and from the nearest private airstrip. Buchanan Field in the City of Concord is approximately 6 miles southeast of the project site. The proposed project would not create an aircraft safety hazard for people residing or working in the project area. Implementation of the proposed project would result in ***no impact*** relative to this topic.

Response f): The proposed project is located further than two miles from the nearest public or public use airport, and from the nearest private airstrip. Buchanan Field in the City of Concord is approximately 6 miles southeast of the project site. The proposed project would not create an aircraft safety hazard for people residing or working in the project area. Implementation of the proposed project would result in ***no impact*** relative to this topic.

Response g): The project site is served by an existing network of City streets. The proposed project would be located in areas currently occupied by a golf course. Access to the project site would not change. The proposed internal circulation is adequate for emergency personnel to access. The project would not impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan. Implementation of proposed project would have ***no impact*** relative to this topic.

Response h): The project site is within an urbanized area not adjacent to significantly large areas subject to wildland fires. Implementation of the proposed project would result in ***no impact*** relative to this topic.

IX. HYDROLOGY AND WATER QUALITY

Would the project:	*Potentially Significant Impact*	*Less Than Significant with Mitigation Incorporation*	*Less Than Significant Impact*	*No Impact*
a) Violate any water quality standards or waste discharge requirements?		X		
b) Substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g., the production rate of pre-existing nearby wells would drop to a level which would not support existing land uses or planned uses for which permits have been granted)?			X	
c) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner which would result in substantial erosion or siltation on- or off-site?		X		
d) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site?		X		
e) Create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff?		X		
f) Otherwise substantially degrade water quality?		X		
g) Place housing within a 100-year flood hazard area 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 flood hazard area 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
j) Inundation by seiche, tsunami, or mudflow?		X		

Responses to Checklist Questions

Responses a): Implementation of proposed project would not violate any water quality or waste discharge requirements. Construction activities including grading could temporarily increase soil erosion rates during and shortly after project construction. Construction-related erosion could result in the loss of soil and could adversely affect water quality in nearby surface waters. The RWQCB requires a project specific Storm Water Pollution Prevention Plan (SWPPP) to be prepared for each project that disturbs an area one acre or larger. The SWPPP is required

to include project specific best management measures that are designed to control drainage and erosion. Mitigation Measure Geo-2 would require the preparation of a SWPPP to ensure that the proposed project prepares and implements a SWPPP throughout the construction phase of the project. Furthermore, the proposed project includes a preliminary grading and drainage plan that has a specific drainage plan designed to control storm water runoff and erosion, both during and after construction. The SWPPP (Mitigation Measure Geo-2) and the project specific drainage plan would reduce the potential for the proposed project to violate water quality standards during construction. Implementation of the proposed project would result in a ***less-than-significant*** impact relative to this topic.

Response b): The proposed project would connect to the City of Martinez Water System, which provides water from the City's water treatment plant. The project site is not located in an area that is a significant recharge area for the aquifer. The proposed project would not substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g., the production rate of pre-existing nearby wells would drop to a level which would not support existing land uses or planned uses for which permits have been granted). Implementation of the proposed project would have a ***less-than-significant*** impact relative to this environmental topic.

Response c-e): The project site is a nine-hole golf course, with club house, tavern, outbuildings and irrigation infrastructure. There is a single paved road providing access to the clubhouse and two parking lots, one paved, and one unpaved with gravel. A landscaping yard which contains piles of sand, soil and rock that are associated with golf course maintenance is located south of the clubhouse. Vegetation within the project site includes mixed planted woodland along the perimeter of the course, patches of non-native annual grassland, and golf course turf on the fairways and tees, interspersed with landscape vegetation. The golf course is irrigated nightly via a system of groundwater wells and City of Martinez water. The water is held in an artificial holding pond, which hosts a perimeter of wetland vegetation. There are a series of vegetated swales on site that convey water to the municipal storm drain system. These occur along the northern and eastern boundaries of the site. The swale along the northern boundary likely receives runoff from the pond as well as much of the northern portion of the site during rainy periods. A portion of it is perched against the fences and yards that abut the project site. A short section of eroded ditch near the northeast corner of the site drains golf course runoff to the municipal storm drain system. There is a concrete U-ditch that conveys water from the western hillside to the northwestern corner of the project site.

The proposed project would increase impervious surfaces throughout the project site. The proposed project would require the installation of storm drainage infrastructure to ensure that storm waters properly drain from the project site. The proposed storm drainage plan includes an engineered network of storm drain lines, manholes, inlets, catch basins, and bio-retention areas. The storm drainage plan was designed and engineered to ensure proper construction of storm drainage infrastructure to control runoff and prevent flooding, erosion, and sedimentation. The City Engineer reviews all storm drainage plans as part of the improvement plan submittal to ensure that all facilities are designed to the City's standards and specifications. The City Engineer also reviews all storm drainage plans to ensure that post-project runoff does not exceed pre-project runoff. The City Engineer's review of pre- and post-project runoff in intended to ensure that the capacity of the existing storm drainage system is not exceeded. This determination is ultimately made by the City Engineer during the improvement plan review and approval. Mitigation Measure Hydro-1 will require that post-project runoff is equal to or less

than pre-project runoff, which would ensure that the proposed project would not substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site. The storm drainage plan will require the construction of new storm water drainage facilities on the project site; however, the construction of these facilities would not substantially alter the existing drainage pattern of the area, or alter the course of a stream or river. . Implementation of the proposed project with the following mitigation measure would have a ***less-than-significant*** impact relative to this environmental topic.

> ***Mitigation Measure Hydro-2:*** *The storm drainage plan shall be designed and engineered to ensure that post-project runoff is equal to or less than pre-project runoff. The applicant shall provide the City Engineer with all stormwater runoff calculations with the improvement plan submittal.*

Response f): Construction activities including grading could temporarily increase soil erosion rates during and shortly after project construction. Construction-related erosion could result in the loss of soil and could adversely affect water quality in nearby surface waters. The RWQCB requires a project specific Storm Water Pollution Prevention Plan (SWPPP) to be prepared for each project that disturbs an area one acre or larger. The SWPPP is required to include project specific best management measures that are designed to control drainage and erosion. Mitigation Measure Geo-2 would require the preparation of a SWPPP to ensure that the proposed project prepares and implements a SWPPP throughout the construction phase of the project. Furthermore, the proposed project includes a detailed project specific drainage plan that controls storm water runoff and erosion after construction. The SWPPP (Mitigation Measure Geo-2) and the project specific drainage plan would reduce the potential for polluted runoff and/or degradation of water quality. Implementation of the proposed project would result in a ***less-than-significant*** impact relative to this topic.

Response g-h): The project site is located within Flood Zone X, which is not within the 100-year flood zone as shown on the Flood Insurance Rate Map (FIRM). Implementation of the proposed project would have ***no impact*** relative to this environmental topic.

Response i): The project site is not located within an area with a control levee or dam. The proposed project would not expose people or structures to a significant risk of loss, injury or death involving flooding as a result of the failure of a levee or dam. Implementation of the proposed project would have ***no impact*** relative to this environmental topic.

Response j): The project site is not anticipated to be inundated by a tsunami because it is located at an elevation of 187 feet above sea level and is 3.42 miles away from the Carquinez Strait which is the closest ocean/bay water body. Implementation of the proposed project would have ***no impact*** relative to this environmental topic.

The project site is not anticipated to be inundated by a seiche because it is not located in close proximity to a water body capable of creating a seiche. Implementation of the proposed project would have ***no impact*** relative to this environmental topic.

A mudflow is a category of landslide that is associated with heavy saturation of soils and sometimes is associated with seismicity. Factors such as the geological conditions, drainage, slope, vegetation, and others directly affect the potential for mudflow. According to U.S. Geological Survey Open-File Report 97-745 (landslide folio of the San Francisco Bay Area), the project site is not mapped as having previously identified landslides or earthflows nor is it located within an area having debris flow source potential. Based on the results of the geotechnical reconnaissance and review of documents, Stevens, Ferrone & Bailey Engineering Company, Inc. (2011) did not observe evidence of adverse slope stability, erosion, or drainage

conditions at the site. Additionally, they did not observe evidence of active, deep seated slope movement onsite or in the vicinity of the project site.

As discussed in the Geology and Soils section of this Initial Study, the project site is rolling with gentle slopes. The grading plan would require approximately 116,000 cubic yards of cut and 107,000 cubic yards of fill. The end result will be a net export of 9,000 cubic yards. The topography of the developed subdivision will be more flat than the existing condition; however, some slope will remain. The potential for landslides, including mudflow, is considered minimal after the grading and compaction of soils to a specified geotechnical standard. Mitigation Measure Geo-1 presented in the Geology and Soils section of this Initial Study requires a geotechnical evaluation and design for the proposed project prior to approval of a grading permit. Implementation of Mitigation Measure Geo-1 would reduce the potential for landslides, including mudflows, to a ***less-than-significant*** level.

X. LAND USE AND PLANNING

Would the project:	*Potentially Significant Impact*	*Less Than Significant with Mitigation Incorporation*	*Less Than Significant Impact*	*No Impact*
a) Physically divide an established community?			X	
b) Conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to the general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect?		X		
c) Conflict with any applicable habitat conservation plan or natural community conservation plan?				X

Responses to Checklist Questions

Response a): The proposed project is a residential subdivision on an existing golf course that is surrounded by residential subdivisions. The proposed residential subdivision is consistent with the surrounding uses and would not physically divide an established community. Implementation of the proposed project would have a ***less than significant*** impact relative to this topic.

Response b): The key planning documents that are directly related to, or that establish a framework within which the proposed project must be consistent, include:

- City of Martinez General Plan
- City of Martinez Zoning Ordinance

The City of Martinez General Plan provides the following policies relevant to the proposed project. Following each relevant policy is an analysis of the project in relation to each policy.

General Plan Land Use Element

Open Use Area

- 21.21 Land to remain for open uses is designated Public Permanent Open Space or Open Space/Conservation Use Land. These designations shall apply where the following conditions are prevalent: natural conditions such as steep or potentially unstable slope, hazardous geologic conditions, watershed stability and floods hazard, seismic hazard, and fire hazard, which constitute major constraints to development or threats to life and property, where soils, land forms, vegetation, watersheds, creekways, and water bodies combine to provide either a significant habitat for wildlife or agricultural resource and where land forms, vegetation, waterways and surfaces constitute a major scenic and recreational resource which should be preserved either for purposes of public use or protection and shaping of the scenic setting of the community.
    - Analysis: The project site is designated as an Open Space & Recreation land use with a "Permanent" designation. The development of a residential subdivision in an area with such a designation is inconsistent with this policy; however, the project applicant has included a General Plan Amendment in the application to amend the language of this policy to exclude the existing golf course because it is

not a public facility and to change the land use designation to enable residential development. If the City Council were to approve the General Plan Amendment and land use change, the proposed project would not be in conflict with this policy.

- 21.22 Zoning and other regulatory powers shall be used to maintain open space use where there are substantial threats to life and property or where private open space uses are appropriate. Appropriate private open space uses include agricultural, grazing, open space recreational uses such as camp facilities or residential uses where such uses and related facilities such as roads and parking areas constitute less than two percent of the entire land area where the balance of the land is retained in a natural state or agricultural state.

    - Analysis: The project site is zoned as Mixed Use-Open Space/Recreation Facilities use. The development of a residential subdivision in an area with such a designation is inconsistent with this policy; however, the project applicant has included a General Plan Amendment in the application ~~amend the language of this policy~~ to exclude the existing golf course and to change the zoning designation to enable residential development. If the City Council were to approve the General Plan Amendment and zone change, the proposed project would not be in conflict with this policy.

Protected Neighborhoods

- 21.311 Existing neighborhoods shall retain their present housing roles and the existing residential character preserved and enhanced. Non-residential uses, other than those providing services primarily to residents within the neighborhoods, shall be prohibited.

    - Analysis: The proposed project would not directly affect the existing neighborhoods; however, it would indirectly affect the residential houses along the perimeter roadways by changing the uses of the property that neighbors their property. The existing golf course would be changed to residential uses. The change to residential uses would be consistent in character to the existing residential uses along these perimeter roadways. The proposed residential uses would not conflict with the residential character of the neighborhood. The proposed project does not conflict with this policy.

- 21.312 To respect the established physical patterns of these neighborhoods, new residential structures should be similar in scale and type of accommodations to existing units.

    - Analysis: The proposed project would include the construction of residential homes on the project site. Visual simulations were prepared to simulate the views of the developed project. It was determined that the proposed project could degrade the existing visual character or quality of the site and its surroundings as a result of two story structures combined with the modified topography. A two story building could be intrusive to the existing property owners living on the adjacent properties in some locations due to topography and building orientation/siting. Mitigation Measures Vis-1 would reduce this impact to a less than significant level by limiting setbacks on specific lots based

on the number of stories. The proposed project with Mitigation Measures Vis-1 does not conflict with this policy.

General Plan Parks and Recreation Element

- 23.30 It is the policy of the City of Martinez to provide a variety of parks and recreational facilities to meet the recreational needs of the community through the development of a well-balanced park and trail system. It is recognized that new development will increase the need for park and recreational uses. Therefore, it is the policy of the City of Martinez to ensure that new development shall be responsible for providing facilities to serve this new growth. In order to implement this policy, the City shall require new development to finance the full cost of park and recreational improvements required as a result of such development. Fees may be accepted by the City to finance the required improvements in-lieu of construction of those improvements.

    - Analysis: All new housing in the City is required to adhere to the park dedication standards in the City, whether it is payment of the impact fee and/or creating and dedicating new parkland in accordance with the City of Martinez Municipal Code Chapter 21.46 – Park Dedication. The requirements outlined in the Municipal Code are consistent with the Quimby Act. The standard provided in the Municipal Code is as follows:

        21.46.030 - Basic Standard. It is found and determined that the public interest, convenience, health, welfare and safety require that five (5) acres of property for each one thousand (1000) persons residing within the City be devoted to local park and recreational purposes.

      The Municipal Code Section 21.46.040 provides that the formula for calculating park dedication is 2.8 people per dwelling unit

      The proposed project would add 100 residential units, which is expected to generate a population of 280 people according to the Municipal Code Section 21.46.040 formula for calculated park dedication. This increase in people would result in an increased demand for 1.4 acres of parkland under the Municipal Code Chapter 21.46 – Park Dedication (five acres of parkland per 1,000 people).

      The City park dedication in-lieu fee (as of September 2013) requires payment of $5,095 for each single family residential unit constructed in the City. The project applicant does not propose any park development and dedication within the project site and the General Plan does not identify the project site for a public park. As such, the proposed project is subject to the City park dedication in-lieu fees.

      The total project contribution under the current fee schedule would be $509,500; however, the fees are subject to future changes. The City of Martinez uses the park dedication in-lieu fees to acquire and develop park facilities based on demands. In addition to the park dedication in-lieu fees, the City of Martinez charges an Impact/Mitigation Fee for parks and recreation. The current fee for parks and recreation impacts is $2,509 per single-family residential unit. The

total project contribution under the current fee schedule would be $250,900; however, the fees are subject to future changes.

The payment of the City park dedication in-lieu fees and the Impact/Mitigation Fee for park and recreation by the project proponent would ensure that the proposed project does not conflict with this policy.

General Plan Housing Element

- 2.7 Energy Conservation Improvements. Encourage energy conservation improvements and promote energy conservation programs through rehabilitation loan programs, City staff training and the distribution of information on energy conservation improvements.
    - Analysis: Mitigation Measure Air-1 requires compliance with the BAAQMD Indirect Source Rule which will result in either the incorporation of renewable energy sources into buildings on the project site as an emissions offset option, or emission offsets that are funded by the project and implemented by the BAAQMD where opportunities are available in the region. This is a significant energy conservation measure. Mitigation Measure Air-2 was incorporated into this project to require the developer to install high efficiency appliances (refrigerator, fans, washers), low-flow faucets, toilets, showers, and water-efficient irrigation systems. The proposed project does not conflict with this policy.
- 3.6 Variety of Housing Choices. Encourage a mix of housing units throughout the City including:
    a) Lower income seniors, families with children, single parents, young families, victims of domestic violence, and the disabled.
    b) Housing that is affordable to first time buyers and renters of all income levels.
    c) A variety of rental and ownership housing opportunities for low and moderate income households.
    d) Recognition that higher priced residential opportunities must also be provided.
    e) Smaller size housing units.
    f) Single level multi-family housing.
    - Analysis: The proposed project includes the development of single-family residential housing in an area of the City that is predominately single-family residential housing. Mitigation Measure Land-1 requires either a reduction of the project site to be below 100 residential units or to include a minimum of 10 % and a maximum of 20 % of all the dwelling units for low and moderate income residents. This mitigation measure is intended to encourage a broader mix of housing units for a variety of future tenants and/or owners. The proposed project does not conflict with this policy.

- 3.10 Housing for New Employees and their Families. Given the amount of commercial and retail development expected through build-out of the City, encourage an adequate supply and variety of rental and ownership housing that meets the needs of new employees and their families.

    - Analysis: The proposed project includes the development of an existing golf course for residential uses. The new residential uses would support this policy by supplying single family homes that could be a source of rental and ownership units for new employees and their families. The proposed project does not conflict with this policy.

General Plan Growth Management Element

- GM-P-2.1 Continue to require new development to pay its fair share of needed transportation improvements. The City has adopted and implemented a development mitigation program requiring developers to either construct facilities or pay the costs necessary to mitigate impacts of their development projects on the local transportation system. In addition to the local transportation impact fee program already in place, require mitigation of the impacts of development projects on the regional transportation system, through the establishment of a regional transportation impact fee or equivalent program. The City will continue to adhere to the requirements for consultation with affected jurisdictions and implementation of regional development mitigation fees or other mitigations In accordance with TRANSPAC adopted Sub-regional Transportation Mitigation Program (STMP).

    - Analysis: The proposed project is subject to the City of Martinez Impact/Mitigation fees for transportation. The project applicant will be required to pay this fee. This Initial Study includes a Traffic Analysis prepared to assess the proposed project's traffic related impacts. The analysis is contained in Section XVI Transportation/Traffic. The project applicant will be responsible for the construction of all roads internal to the project site as well as the perimeter improvements to Morello Avenue, Center Avenue, and Vine Hill Way where frontage improvements are required. The proposed project does not conflict with this policy.

- GM-P-2.3 Approval of development projects are contingent upon the project meeting the following conditions: 1) No revenue from Measure J has been used to replace or provide the developer funding for any mitigation project; 2) the development project will fully fund public facilities and infrastructure necessary for mitigating any impacts from the project; and 3) Full payment of mitigation fees for facilities and improvements in proportion to the project impacts.

    - Analysis: No revenue from Measure J has been used to replace or provide the developer funding for any mitigation project. The proposed project will fully fund public facilities and infrastructure necessary for mitigating any impacts from the project. Full payment of mitigation fees for facilities and improvements in proportion to the project impacts are required. The proposed project does not conflict with this policy.

- GM-P-6.1 Ensure and require that new development contribute to and maintain adopted an accepted performance standards for police, fire and emergency medical response and services.

    - Analysis: The City of Martinez has adopted Impact/Mitigation Fees for police services that are required to be paid by all new development in the City. The proposed project is required to pay these fees. There are not any fire and emergency medical response Impact/Mitigation fees included in the City's fee schedule. Fees collected by the Contra Costa County Fire Protection District (CCCFPD) are limited to plan review and inspection fees. The CCCFPD is currently constrained financially and has closed a fire station in the City of Martinez as well as in other communities. The closure has reduced the ability of the CCCFPD to provide adequate emergency response within the City of Martinez. The proposed project would require fire protection service from the already constrained CCCFPD; however, funding for the fire protection service would come from the new property tax revenue generated by the 100 new homes. As discussed in the Section XIV Public Services, the courts have provided several opinions relative to mitigating the need for additional fire service. For instance, in *Goleta Union School District v. Regents of University of California* (1995) 37 Cal.App.4th 1025, the court held that the need for additional fire protection service is not an environmental impact that CEQA requires a project to mitigate. This was reaffirmed in *City of Hayward v. Board of Trustees of the California State University* (2012) Cal.App.4th, 2012 WL 2832858 (cert. for pub. 6/28/12) when the court also found that no mitigation was necessary to address the need for additional fire protection services due to the potential increase in response time caused by the increase in population under the project. Furthermore, in *City of Hayward v. Board of Trustees of the California State University* (2012) Cal.App.4th, 2012 WL 2832858 (cert. for pub. 6/28/12) the court cited CEQA Guidelines § 15382 and *Goleta Union School District v. Regents of University of California* (1995) 37 Cal.App.4th 1025, in holding that the need for additional fire protection service is not an environmental impact that CEQA requires a project to mitigate. Furthermore, the court found that the potential dangers associated with delayed response times do not mandate a finding of significance under CEQA Guidelines § 15065(a)(4).

      The policy as written, suggests that the proposed project could be in conflict with this policy because fire service levels are lower than desired; however, based on the fact that the proposed project would contribute property tax revenues to the CCCSFPD for fire service consistent with all property owners within the CCCFPD, and the decisions to provide service (including all financial and staff decisions) is not controlled by the project or City, the proposed project is not in conflict with this policy.

- GM-P-6.2 Adopt and maintain in place a development mitigation program to ensure new growth is paying its share of the costs associated with that growth.

    - Analysis: The City of Martinez has adopted Impact/Mitigation Fees that are required to be paid by all new development in the City. The proposed project is required to pay these fees. The proposed project does not conflict with this policy.

Hidden Lakes Specific Area Plan

The project site is located within the Hidden Lakes area, which prior to its original development consisted of 565 acres of undeveloped pasture lands largely surrounded by subdivisions. The Martinez General Plan describes this area as having natural knolls and ridges on the south and southwest and its unique "hidden valley" running through the eastern portion. This Hidden Lakes area includes areas of open space well suited for preservation and the specific area plan responds to this opportunity by setting forth the methods and policies to guide preservation. The plan includes sections devoted to Land Use and Development, Open Space and Conservation, Housing, Circulation and Trails.

Land Use and Development

- 32.31 The major portion of the site area shall be retained for open space use, primarily preserved as public open space, with a portion preserved in private ownership.
    - Analysis: The development of residential units on the project site would require removal of the golf course, which is a privately owned open space area that is operated as a business. This facility is not considered a park, and is not parkland that has been acquired through the use of park dedication in-lieu fees or park dedication. The City of Martinez, including the citizens of the community, has no vested ownership in the privately held golf course. The project applicant has included a General Plan Amendment in the application package that would amend ~~this policy to remove the reference to privately owned lands~~the land use designation. If the City Council were to approve the General Plan Amendment, the proposed project would not be in conflict with this policy.
- 32.32 The existing golf course is an appropriate use within the Plan area.
    - Analysis: The development of residential units on the project site would require removal of the golf course and would eliminate a recreational amenity that is available to the citizens of Martinez. The golf course, however, is not a public recreational facility. The golf course is a privately owned and operated business with no guarantee of future availability to the public for recreational use. This facility is not considered a park, and is not parkland that has been acquired through the use of park dedication in-lieu fees or park dedication. The City of Martinez, including the citizens of the community, has no vested ownership in the privately held golf course. The project applicant has included a General Plan Amendment in the application package that would include the removal of this policy from the General Plan. If the City Council were to approve the General Plan Amendment, the proposed project would not be in conflict with this policy.
- 32.341 Roads and buildings should be located in a manner which minimizes disturbance of the natural terrain and vegetation.
    - Analysis: The proposed project would include alteration of the topography on the entire project site similar to the alteration of topography that occurred when the neighboring properties were graded for development of a residential subdivision. The alteration will include terracing of lots to ensure flat building pads for home construction, while also balancing the cut and fill to maintain the natural slope of the project site from property line to project line. The effect of

the terracing will minimize the total alteration of the topography by minimizing the total cut and export of soil. The alterations will also include grading of roadways to ensure roadway surfaces properly drain and are travelable by automobiles, bicycles, pedestrians, and disabled people. The preliminary grading plan (Appendix A) is designed to minimize any significant modifications to the topography to the extent possible while providing these functions. The project site does not contain high quality natural vegetation; rather it is irrigated turf and ornamentals associated with a golf course. The project does not conflict with this policy.

Housing

- 32.4211 Consistent with the trends in the adjoining lands, as well as with the Martinez General Plan, the housing units should be single family sale units to the extent feasible.
    - Analysis: The proposed project includes single family sale units. The proposed project does not conflict with this policy.
- 32.4222 All properties shown on the Specific Area Plan Map as yielding 100 or more dwelling units shall provide a minimum of 10% and a maximum of 20% of all the dwelling units to accommodate low and moderate income residents. These units must be distributed throughout the development and be indistinguishable from the majority. Owners of these units should have full-fledged membership in any owner's corporation or association.
    - Analysis: The project site is not shown on the Specific Area Plan map for residential uses; however, the proposed yield is 100 dwelling units. The proposed project does not include any specifications that a minimum of 10% and a maximum of 20% of all the dwelling units would accommodate low and moderate income residents. Implementation of the following mitigation measure would ensure consistency with this policy.

      Mitigation Measure Land-1: *Prior to approval of the Tentative Map, the project applicant shall either*

      - *Reduce the project site to be below 100 dwelling units, or*
      - *Include a minimum of 10% and a maximum of 20% of all the dwelling units for low and moderate income residents.*
- 32.4231 The base density for the Plan area shall permit one dwelling unit per 7,500 square feet of site area as allocated under a R-1 Zoning classification.
    - Analysis: The project site is 25.9 acres (1,128,204 square feet) and proposes 100 residential lots, six open space/drainage areas, and public right-of-way for roads, sidewalks, and landscaping. The residential lot sizes proposed range from 5,700 square feet to 14,441 square feet with the average residential lot being 7,102 square feet. The base density for the entire project site is 11,282 square feet per dwelling unit. The proposed project does not conflict with this policy.

Summary

The above analysis indicates that the proposed project is substantially consistent with the General Plan. In the few areas where there is the potential for a conflict, the project applicant has proposed General Plan Amendments and zone changes to ensure that there is no conflict. The proposed project, including the proposed General Plan Amendments (policy text and land use designation) and the Zone Changes, would not conflict with any applicable land use plan, policy, or regulation of the City of Martinez. Implementation of the proposed project would have a ***less than significant*** impact relative to this issue.

Response c): The boundary of the East Contra Costa County Habitat Conservation Plan/Natural Community Conservation Plan (HCP/NCCP or Plan) is approximately 15 miles east of the City of Martinez. There are no other HCP/NCCPs applicable to the project site. Implementation of the proposed project would have ***no impact*** relative to this issue.

XI. MINERAL RESOURCES

Would the project:	***Potentially Significant Impact***	***Less Than Significant with Mitigation Incorporation***	***Less Than Significant Impact***	***No Impact***
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

Responses to Checklist Questions

Response a): The project site does not contain a known mineral resource that would be of value to the region and the residents of the state. The proposed project would not result in loss of a mineral resource. Implementation of the proposed project would have ***no impact*** relative to this issue.

Response b): The project site does not contain a locally-important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan. The proposed project would not result in loss of a mineral resource. Implementation of the proposed project would have ***no impact*** relative to this issue.

XII. NOISE

Would the project result in:	*Potentially Significant Impact*	*Less Than Significant with Mitigation Incorporation*	*Less Than Significant Impact*	*No Impact*
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) Exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels?			X	
c) A substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project?			X	
d) A substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project?		X		
e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?				X
f) For a project within the vicinity of a private airstrip, would the project expose people residing or working in the project area to excessive noise levels?				X

Background

An E*nvironmental Noise Assessment* (2013) was prepared by JC Brennan Associates for the proposed project under contract to De Novo Planning Group. The following is a summary of the report, which is contained in Appendix J.

Regulatory Framework

City of Martinez General Plan Noise Element: The goal of the City of Martinez is to maintain or reduce noise intrusion levels in all areas of the City to levels considered acceptable by the community. The General Plan Noise Element provides the following policies:

To achieve the goal of acceptable noise levels in all sections of the City, the following objectives and statement of policy are presented:

- 1. The preservation and enhancement of the acoustical environment of the City of Martinez is recognized. In recent years, noise has been identified as a major environmental pollutive agent with substantial evidence documenting its detrimental effects on human health and well-being. The U.S. Environmental Protection Agency has stated that some 80 million people are significantly impacted by noise, half of whom are exposed to levels that can damage hearing or otherwise affect health. In addition to its potential hearing damage effects, noise acts as a source of annoyance, discomfort, sleep

interference and disrupts communication and relaxation. The City, therefore, should adopt specific plans and anti-noise measures to prevent and suppress objectionable noise levels throughout the community.

- 2. The City of Martinez should cooperate with Contra Costa County, the State of California, the Federal Government and private companies in a joint effort to plan, control and attain the preservation of a quiet environment.
- 3. The City should encourage private interests to devote resources to the cause of a quiet environment and its preservation.
- 4. The City should integrate the Noise Element into the Land Use and Circulation Elements and develop a local Noise Ordinance guided by noise data from the Noise Element.
- 5. The City should develop and implement an effective noise ordinance having appropriate noise level limits for various equipment, activities and land use categories~ including recreational activities.
- 6. The City should amend the building code to include the Noise Insulation Standards of the California Administrative Code, Title 25, Article 4, Section 1092, effective August 22, 1974, Ref. 2. The State's standards apply to all applications for building permits for multifamily dwellings, hotels and motels.
- 7. Parks and recreational areas should be protected from excessive noise to permit the enjoyment of sports and .other leisure time activities.
- 8. Open space should be used, wherever practical, to isolate noise sources from sensitive land uses by the employment of adequate separation distances.
- 9. The City should discourage the establishment of acoustically incompatible land uses in juxtaposition or adjacency to each other.
- 10. The City should require the use of noise mitigating devices, such as wall barriers, berms, mufflers, sound traps, baffles, etc., to reduce noise intrusion from transportation and fixed sources.
- 11. The City should initiate an on-going noise assessment program for the purpose of determining changes in noise levels over time.

City of Martinez Municipal Code, Chapter 8.34 (Noise Control): The City of Martinez Municipal Code establishes acceptable noise level standards of 60 dB Ldn (exterior) and 45 dB Ldn (interior).

Additionally, the hours of operation for noise-producing construction equipment are also restricted through the Municipal Code. The operation of pile drivers, steam shovels, and pneumatic hammers used in construction, demolition, or other repair work, should be prohibited before 7:00 a.m. or after 7:00 p.m. Monday through Friday, and before 9:00 a.m. or after 5:00 p.m. on Saturdays, Sundays, and State, federal, or local holidays.

Contra Costa County Airport Land Use Compatibility Plan: The proposed project is located within the Airport Influence Area for the Buchanan Field Airport, as shown by Figure 3. The Buchanan Field Airport Policies contained within the Contra Costa County Airport Land Use Compatibility Plan establishes acceptable exterior aircraft noise levels of 55 dB CNEL for single-family residential uses.

Existing Traffic Noise Levels

The FHWA Highway Traffic Noise Prediction Model (FHWA-RD 77-108) was used to develop Ldn (24-hour average) noise contours for the primary project-area roadways. The model is based upon the CALVENO noise emission factors for automobiles, medium trucks, and heavy trucks, with consideration given to vehicle volume, speed, roadway configuration, distance to the receiver, and the acoustical characteristics of the site. The FHWA Model predicts hourly Leq values for freeflowing traffic conditions, and is generally considered to be accurate within 1.5 dB. To predict Ldn values, it is necessary to determine the hourly distribution of traffic for a typical 24-hour period.

Existing traffic volumes were obtained from the traffic study prepared for the project (Abrams Associates Traffic Engineering, Inc., December 10, 2013). Day/night traffic distributions were based upon file data for similar roadways. Using these data sources and the FHWA traffic noise prediction methodology, traffic noise levels were calculated for existing conditions. Table 7 shows the results of this analysis. Appendix A in the Noise Report (Appendix J) provides the complete inputs and results for the FHWA traffic noise modeling.

Traffic noise levels are predicted at the sensitive receptors located at the closest typical setback distance along each project-area roadway segment. In some locations sensitive receptors may be located at distances which vary from the assumed calculation distance and may experience shielding from intervening barriers or sound walls. However, the traffic noise analysis is believed to be representative of the majority of sensitive receptors located closest to the project-area roadway segments analyzed in the report.

The actual distances to noise level contours may vary from the distances calculated by the FHWA model due to roadway curvature, grade, shielding from local topography or structures, elevated roadways, or elevated receivers. The distances reported in Table 7 are generally considered to be conservative worst-case calculations of noise exposure along the project-area roadways.

Table 7: Existing Traffic Noise Levels

Roadway	*Segment*	*Noise Level at Closest Receptors (LDN)*	*Distances to Traffic Noise Contours LDN (Feet)*		
			70dB	**65 dB**	**60 dB**
Morello Ave.	North of SR 4	62.5	19	41	88
Morello Ave.	North of Muir Rd.	61	15	32	70
Morello Ave.	Muir Rd. to Center Ave.	60.9	15	32	69
Morello Ave.	West Project Entrance to Center Ave.	N/A	N/A	N/A	N/A
Morello Ave.	South of Center Ave.	57.9	9	20	43
Center Ave.	West of Morello Ave.	54.6	6	12	26
Center Ave.	Morello Ave to Vine Hill Way	52.9	4	9	20
Center Ave.	East of Vine Hill Way	53.4	5	10	22
Muir Rd.	West of Morello Way	57.1	8	18	38
Muir Rd.	East of Morello Way	57.1	8	18	38
Vine Hill Way	South of Center Ave.	52.2	4	8	18
Vine Hill Way	Center Ave. To East Project Entrance	50.4	3	6	14
Vine Hill Way	North of Project Entrance	N/A	N/A	N/A	N/A

SOURCE: J.C. BRENNAN & ASSOCIATES, INC. - 2013

Community Noise Survey

A community noise survey was conducted to document existing ambient noise levels at the project site and neighboring properties along the perimeter roadways (Vine Hill Way, Center Avenue, and Morello Avenue). The data collected included the hourly average (Leq), median (L50), and the maximum level (Lmax) during the measurement period. Noise monitoring sites and the measured noise levels at each site are summarized in Table 8. Figure 1 shows the locations of the noise monitoring sites.

Community noise monitoring equipment included a Larson Davis Laboratories (LDL) Model 824 precision integrating sound level meter equipped with an LDL ½" microphone. The measurement system was calibrated using a LDL Model CAL200 acoustical calibrator before and after testing. The measurement equipment meets all of the pertinent requirements of the American National Standards Institute (ANSI) for Type 1 (precision) sound level meters.

Table 8: Existing Ambient Noise Monitoring Results

Location Site	*LDN(DBA)*	*Measured Hourly Noise Levels (dBA)*					
		Daytime (7am-10-pm)			*Nightime (10pm-7am)*		
		LEQ	*L50*	*LMAX*	*LEQ*	*L50*	*LMAX*
West side of site. 60 feet centerline of Morello Avenue. A	NAto	62.3	57.3	72.0	N/A		
East side of site. 60 feet centerline of Vine Hill Way. B	NAto	52.6	49.5	66.6	N/A		
South side of site. 75 feet centerline of Center Avenue. C	NAto	53.3	47.6	64.3	N/A		

SOURCE: J.C. BRENNAN & ASSOCIATES, INC. - 2013

Noise Standards

The noise standards applicable to the project include the relevant portions of the City of Martinez General Plan and Zoning Ordinance as described in the Regulatory Framework section above. The City of Martinez has established acceptable standards for noise levels as follows:

1. A day-night noise level (Ldn) of 45 dB is the standard for interior noise levels. An Ldn of 45 dBA is achieved by an allowable interior noise level of 35 dBA between 10 p.m. — 7 a.m. and 45 dBA between 7 a.m. — 10 p.m.

2. A day-night level (Ldn) of 60 dB is the standard for exterior noise. An Ldn of 60 dBA is a maximum noise level of 50 dBA between 10 p.m. — 7 a.m. and 60 dBA between 7 a.m. — 10 p.m.

Vibration Standards

Vibration is like noise in that it involves a source, a transmission path, and a receiver. While vibration is related to noise, it differs in that noise is generally considered to be pressure waves transmitted through air, whereas vibration usually consists of the excitation of a structure or surface. As with noise, vibration consists of an amplitude and frequency. A person's perception to the vibration will depend on their individual sensitivity to vibration, as well as the amplitude and frequency of the source and the response of the system which is vibrating.

Vibration can be measured in terms of acceleration, velocity, or displacement. A common practice is to monitor vibration measures in terms of peak particle velocities in inches per second. Standards pertaining to perception as well as damage to structures have been developed for vibration levels defined in terms of peak particle velocities. The City of Martinez does not have specific policies pertaining to vibration levels. However, vibration levels

associated with construction activities and railroad operations are addressed as potential noise impacts associated with project implementation.

Human and structural response to different vibration levels is influenced by a number of factors, including ground type, distance between source and receptor, duration, and the number of perceived vibration events. The threshold for damage to structures ranges from 0.2 to 0.6 peak particle velocity in inches per second (in/sec p.p.v). The general threshold at which human annoyance could occur is notes as 0.1 in/sec p.p.v.

Responses to Checklist Questions
Responses a, c):

Traffic Noise at Existing Receptors

To describe future noise levels due to traffic, the Federal Highway Administration Highway Traffic Noise Prediction Model (FHWA RD-77-108) was used. Inputs to the model included traffic volumes for the proposed project provided by Abrams Associates. The FHWA model is based upon the Calveno reference noise factors for automobiles, medium trucks and heavy trucks, with consideration given to vehicle volume, speed, roadway configuration, distance to the receiver, and the acoustical characteristics of the site. The FHWA model was developed to predict hourly Leq values for free-flowing traffic conditions. To predict Ldn/CNEL values, it is necessary to determine the day/night distribution of traffic and adjust the traffic volume input data to yield an equivalent hourly traffic volume.

Tables 9 and 10 show the noise levels associated with traffic on the local roadway network under the existing/background and existing/background plus project traffic conditions. As indicated by Tables 9 and 10, the related noise level increases under development of the proposed project are predicted to range between 00.0 to 0.5 dB. The data also shows the noise levels at various distances from the centerline of the roadways. These noise contours are developed to identify noise levels at existing noise sensitive residential uses along the roadway. The proposed project is not predicted to expose existing receptors to exterior or interior noise levels that exceed the City's allowable standards under the existing vs existing plus project scenario or the background vs. background plus project scenario. Therefore, the impact of traffic noise on existing receptors would be considered ***less than significant***.

Table 9: Existing Traffic Noise Levels vs. Existing Plus Project Traffic Noise Levels

Roadway	*Segment*	*Existing*	*Noise Levels (Ldn, dB) Existing + Project*	*Change (dB)*	*Distance to Existing + Project Traffic Noise Contours, feet[1]*		
					70 dB Ldn	*65 dB Ldn*	*60 dB Ldn*
Morello Ave	North of SR-4	62.5	62.5	0.0	19	41	88
Morello Ave	North of Muir Rd	61.0	61.4	0.5	16	35	75
Morello Ave	Muir Rd to Center Ave	60.9	61.2	0.3	15	33	72
Morello Ave	West Project Entrance to Center Ave	N/A	57.6	N/A	9	19	41
Morello Ave	South of Center Ave	57.9	57.9	0.0	9	20	43
Center Ave	West of Morello Ave	54.6	54.7	0.1	6	12	27
Center Ave	Morello Ave to Vine Hill Way	52.9	53.0	0.1	4	9	20
Center Ave	East of Vine Hill Way	53.4	53.5	0.1	5	10	22
Muir Rd	West of Morello Way	57.1	57.2	0.1	8	18	39
Muir Rd	East of Morello Way	57.1	57.2	0.1	8	18	39

Vine Hill Way	South of Center Ave	52.2	52.2	0.0	4	8	18
Vine Hill Way	Center Ave to East Project Entrance	50.4	50.8	0.4	3	7	15
Vine Hill Way	North of Project Entrance	N/A	51.0	N/A	3	7	15

[1] DISTANCES TO TRAFFIC NOISE CONTOURS ARE MEASURED IN FEET FROM THE CENTERLINES OF THE ROADWAYS. ACTUAL DISTANCES MAY VARY DUE TO SHIELDING FROM EXISTING NOISE BARRIERS OR INTERVENING STRUCTURES. TRAFFIC NOISE LEVELS MAY VARY DEPENDING ON ACTUAL SETBACK DISTANCES AND LOCALIZED SHIELDING.

SOURCE: FHWA-RD-77-108 WITH INPUTS FROM ABRAMS ASSOCIATES AND J.C. BRENNAN & ASSOCIATES, INC. 2013.

Table 10: Background Traffic Noise Levels vs. Background Plus Project Traffic Noise Levels

Roadway	*Segment*	*Existing*	*Noise Levels (Ldn, dB) Existing + Project*	*Change (dB)*	*Distance to Existing + Project Traffic Noise Contours, feet[1]*		
					70 dB Ldn	*65 dB Ldn*	*60 dB Ldn*
Morello Ave	North of SR-4	62.6	62.6	0.0	19	41	89
Morello Ave	North of Muir Rd	61.4	61.5	0.1	16	35	76
Morello Ave	Muir Rd to Center Ave	61.0	61.2	0.2	16	34	72
Morello Ave	West Project Entrance to Center Ave	N/A	57.7	N/A	9	19	42
Morello Ave	South of Center Ave	57.9	58.0	0.0	9	20	44
Center Ave	West of Morello Ave	53.4	54.8	1.3	6	12	27
Center Ave	Morello Ave to Vine Hill Way	53.0	53.0	0.1	4	10	21
Center Ave	East of Vine Hill Way	53.5	53.6	0.1	5	10	22
Muir Rd	West of Morello Way	57.2	57.3	0.1	9	18	39
Muir Rd	East of Morello Way	57.2	57.3	0.1	8	18	39
Vine Hill Way	South of Center Ave	52.2	52.3	0.0	4	8	18
Vine Hill Way	Center Ave to East Project Entrance	50.5	50.9	0.4	3	7	15
Vine Hill Way	North of Project Entrance	N/A	50.7	N/A	3	7	14

1 DISTANCES TO TRAFFIC NOISE CONTOURS ARE MEASURED IN FEET FROM THE CENTERLINES OF THE ROADWAYS. ACTUAL DISTANCES MAY VARY DUE TO SHIELDING FROM EXISTING NOISE BARRIERS OR INTERVENING STRUCTURES. TRAFFIC NOISE LEVELS MAY VARY DEPENDING ON ACTUAL SETBACK DISTANCES AND LOCALIZED SHIELDING.

SOURCE: FHWA-RD-77-108 WITH INPUTS FROM ABRAMS ASSOCIATES AND J.C. BRENNAN & ASSOCIATES, INC. 2013.

The cumulative context for noise impacts associated with the proposed project consists of the existing and future noise sources that could affect the project or surrounding uses. Noise generated by construction would be temporary, and would not add to the permanent noise environment or be considered as part of the cumulative context. The total noise impact of the proposed project would be fairly small and would not be a substantial increase to the existing future noise environment.

Cumulative noise impacts would occur primarily as a result of increased traffic on local roadways due to the proposed project and other projects within the area. Tables 12 show cumulative traffic noise levels with and without the proposed project. Under cumulative conditions, there would not be significant increases in noise levels compared to the no project conditions. However, the 60, 65 and 70 dB Ldn contours would extend farther under cumulative conditions and potentially impact additional sensitive receptors. As shown, the proposed

project would contribute no more than 1.3 dB Ldn to noise levels on roadways fronting residential uses along the study area roadways. Additionally, the proposed project would not cause new exceedances of the City of Martinez 60 dB Ldn exterior noise level standard. The traffic noise from the proposed project is not expected to produce noise levels that would exceed City standards. Increased project related traffic would increase traffic noise levels by less than the City standards at existing sensitive receptors. Consequently, this would result in a ***less than significant*** and ***less than cumulatively considerable contribution*** to cumulative noise levels.

Table 12: Cumulative No Project vs. Cumulative Plus Project

Roadway	*Segment*	*Cumulative No Project*	*Noise Levels (Ldn, dB) Cumulative + Project*	*Change (dB)*	*Distance to Cumulative + Project Traffic Noise Contours, feet[1]*		
					70 dB Ldn	*65 dB Ldn*	*60 dB Ldn*
Morello Ave	North of SR-4	63.0	63.0	0.0	21	44	96
Morello Ave	North of Muir Rd	61.9	62.0	0.2	18	38	82
Morello Ave	Muir Rd to Center Ave	60.8	60.9	0.2	15	32	69
Morello Ave	West Project Entrance to Center Ave	N/A	58.1	N/A	10	21	45
Morello Ave	South of Center Ave	58.4	58.4	0.0	10	22	47
Center Ave	West of Morello Ave	55.1	55.2	0.1	6	13	29
Center Ave	Morello Ave to Vine Hill Way	53.4	53.5	0.0	5	10	22
Center Ave	East of Vine Hill Way	53.9	54.0	0.1	5	11	24
Muir Rd	West of Morello Way	57.6	57.7	0.1	9	20	42
Muir Rd	East of Morello Way	57.6	57.7	0.1	9	20	42
Vine Hill Way	South of Center Ave	52.7	52.7	0.0	4	9	20
Vine Hill Way	Center Ave to East Project Entrance	50.9	51.2	0.4	3	7	16
Vine Hill Way	North of Project Entrance	N/A	51.5	N/A	3	8	16

[1] *DISTANCES TO TRAFFIC NOISE CONTOURS ARE MEASURED IN FEET FROM THE CENTERLINES OF THE ROADWAYS. ACTUAL DISTANCES MAY VARY DUE TO SHIELDING FROM EXISTING NOISE BARRIERS OR INTERVENING STRUCTURES. TRAFFIC NOISE LEVELS MAY VARY DEPENDING ON ACTUAL SETBACK DISTANCES AND LOCALIZED SHIELDING.*

SOURCE: FHWA-RD-77-108 WITH INPUTS FROM ABRAMS ASSOCIATES, INC. AND J.C. BRENNAN & ASSOCIATES, INC. 2013.

Traffic Noise at New Receptors

The existing vs existing plus project scenario and the background vs. background plus project scenario is not performed for "New" receptors because these receptors are not present under the existing or background conditions. As such, there is no impact to new receptors under these scenarios. The focus of this discussion is the cumulative plus project condition on new receptors.

The FHWA traffic noise prediction model was used to predict Cumulative + Project traffic noise levels at the proposed residential uses associated with the project. Table 11 shows the predicted traffic noise levels at the proposed residential uses adjacent to the major project-area roadways. Appendix B in the Noise Report (Appendix J) provides the complete inputs and results to the FHWA traffic noise prediction model.

Table 11: Cumulative + Project Transportation Noise Levels at Proposed Residential Uses

Roadway	*Receptor Description*	*Approximate Residential Setback, feet[1]*	*ADT*	*Predicted Traffic Noise Levels, Ldn*			
				No Wall	*6' Wall*	*7' Wall*	*8' Wall*
Morello Ave.	Lot 1 Backyard / First Floor Façade	130'	15,060	56 dB	--	--	--
Center Ave.	Lots 35-47 Backyards / First Floor Façade	80'	2,710	52 dB	--	--	--
Vine Hill Way	Lots 24-34 Backyards / First Floor Façade	75'	1,710	50 dB	--	--	--

[1] SETBACK DISTANCES ARE MEASURED IN FEET FROM THE CENTERLINES OF THE ROADWAYS TO THE CENTER OF RESIDENTIAL BACKYARDS.

-- MEETS THE CITY OF MARTINEZ EXTERIOR NOISE STANDARD WITHOUT MITIGATION.

SOURCE: FHWA-RD-77-108 WITH INPUTS FROM ABRAMS ASSOCIATES, AND J.C. BRENNAN & ASSOCIATES, INC. 2013.

The Table 11 data indicate that no additional noise control measures would be required to achieve compliance with the City of Martinez 60 dB Ldn exterior noise level standard for the proposed residential uses.

Interior Noise Impacts: Modern construction typically provides a 25 dB exterior-to-interior noise level reduction with windows closed. Therefore, sensitive receptors exposed to exterior noise of 70 dB Ldn, or less, will typically comply with the City of Martinez 45 dB Ldn interior noise level standard. Additional noise reduction measures, such as acoustically rated windows are generally required for exterior noise levels exceeding 70 dB Ldn.

It should be noted that exterior noise levels are typically 2-3 dB higher at second floor locations. The proposed residential uses are predicted to be exposed to first floor exterior transportation noise levels ranging between 50 to 56 dB Ldn. Therefore, second floor facades are predicted to be exposed to exterior noise levels of up to 53-59 dB Ldn. Based upon a 25 dB exterior-to-interior noise level reduction, interior noise levels are predicted to range between 28 to 34 dB Ldn. With windows open a 15 dB exterior-to-interior noise level reduction is typically achieved. Therefore, interior noise levels are predicted to be 38-44 dB Ldn with the windows open. These interior noise levels would comply with the City of Martinez 45 dB Ldn interior noise level standard and no interior noise mitigation would be required.

The proposed project is not predicted to be exposed to exterior or interior noise level exceeding the City's allowable standards. Therefore, this impact would be considered ***less than significant***.

Responses b): The primary vibration-generating activities associated with the proposed project would occur during construction when activities such as grading, utilities placement, and roadway construction occur. Sensitive receptors which could be impacted by construction related vibrations, especially vibratory compactors/rollers, are located approximately 50 feet or further from the project site. At this distance construction vibrations are not predicted to exceed acceptable levels. Additionally, construction activities would be temporary in nature and would likely occur during normal daytime working hours. Construction vibration impacts include human annoyance and building structural damage. Human annoyance occurs when construction vibration rises significantly above the threshold of perception. Building damage can take the form of cosmetic or structural. Table 13 shows the typical vibration levels produced by construction equipment.

Table 13: Vibration Levels for Varying Construction Equipment

Type of Equipment	*Peak Particle Velocity @ 25 Feet (Inches/Second)*	*Peak Particle Velocity @ 50 Feet (Inches/Second)*	*Peak Particle Velocity @ 100 Feet (Inches/Second)*
Large Bulldozer	0.089	0.031	0.011
Loaded Trucks	0.076	0.027	0.010
Small Bulldozer	0.003	0.001	0.000
Auger/drill Rigs	0.089	0.031	0.011
Jackhammer	0.035	0.012	0.004
Vibratory Hammer	0.070	0.025	0.009
Vibratory Compactor/roller	0.210 (<0.200 @ 26')	0.074	0.026

SOURCE: FEDERAL TRANSIT ADMINISTRATION, TRANSIT NOISE AND VIBRATION IMPACT ASSESSMENT GUIDELINES, MAY 2006

The closest exterior residential wall along Vine Hill Way to the project site is 65 feet. The closest exterior residential wall along Center Avenue to the project site is between 75 feet. The closest exterior residential wall along Morello Avenue to the project site is 95 feet. The Table 13 data indicate that construction vibration levels anticipated for the project are less than the 0.2 in/sec p.p.v. threshold of damage to buildings and less than the 0.1 in/sec threshold of annoyance criteria at distances of 50 feet. All of the closest exterior residential walls along the perimeter roadways are beyond 50 feet but less than 100 feet, therefore, construction vibrations are not predicted to cause damage to existing the buildings along the perimeter roadways or cause annoyance to sensitive receptors in those buildings.

There are 18 residential homes that back to the northern boundary of the project site. Additionally, there are eight residential homes that back to the southwestern boundary of the project site. The distance from the project boundary to the residential walls varies from between 10 and 30 feet. Vibratory equipment would be limited to the internal roadways during asphalt installation. The distance from these neighboring homes is equal to the depth of the lots, which is 110 feet or more for each lot that backs to the neighboring homes. The use of grading equipment adjacent to these neighboring homes will approach the 0.1 in/sec threshold of annoyance criteria; however, the grading phase will be the shortest phase of construction and grading in the area adjacent to these houses will take a day or two to complete. Therefore, this impact would be considered ***less than significant***.

Responses d): The proposed project could result in temporary or periodic increases in ambient noise levels in the project vicinity above levels existing without the project. These temporary or periodic increases in noise would be associated with the construction phase of the project. The new development, maintenance of roadways, installation of public utilities, and infrastructure improvements associated with the project will require construction activities. These activities include the use of heavy equipment and impact tools. Table 14 provides a list of the types of equipment which may be associated with construction activities and the associated noise levels.

Table 14: Construction Equipment Noise

Type of Equipment	*Predicted Noise Levels, Lmax dB*				*Distances to Noise Contours (feet)*	
	Noise Level at 50'	*Noise Level at 100'*	*Noise Level at 200'*	*Noise Level at 400'*	*70 dB Lmax contour*	*65 dB Lmax contour*
Backhoe	78	72	66	60	126	223
Compactor	83	77	71	65	223	397
Compressor (air)	78	72	66	60	126	223
Concrete Saw	90	84	78	72	500	889
Dozer	82	76	70	64	199	354
Dump Truck	76	70	64	58	100	177
Excavator	81	75	69	63	177	315
Generator	81	75	69	63	177	315
Jackhammer	89	83	77	71	446	792
Pneumatic Tools	85	79	73	67	281	500

SOURCE: ROADWAY CONSTRUCTION NOISE MODEL USER'S GUIDE. FEDERAL HIGHWAY ADMINISTRATION. FHWA-HEP-05-054. JANUARY 2006. J.C. BRENNAN & ASSOCIATES, INC. 2013.

Activities involved in project construction would typically generate maximum noise levels ranging from 85 to 90 dB at a distance of 50 feet. The closest exterior residential wall along Vine Hill Way to the project site is 65 feet. The closest exterior residential wall along Center Avenue to the project site is between 75 feet. The closest exterior residential wall along Morello Avenue to the project site is 95 feet. All of the closest exterior residential walls along the perimeter roadways are beyond 50 feet but less than 100 feet, therefore, construction noise levels are expected to range between 70 dB and 90 dB depending on the particular piece of construction equipment used and the actual distance of the particular receptors located along the perimeter roadway. It is important to note that this noise model does not reflect noise shielding that is created in the home building phase of construction from homes that are built backing up to the perimeter roadways.

There are 18 residential homes that back to the northern boundary of the project site. Additionally, there are eight residential homes that back to the southwestern boundary of the project site. The distance from the project boundary to the residential walls varies from between 10 and 30 feet. Construction grading equipment would be required to grade up to the property line, which is within 10 feet of a few existing homes located along the northern property line. Depending on the actual piece of equipment used, the noise levels could temporarily reach between 82 dB to 86 dB at these existing sensitive receptors.

As discussed above, construction could result in a temporary or periodic increase in ambient noise levels and the potential for annoyance. The City of Martinez Municipal Code exempts noise from construction activities during the daytime hours of 7:00 a.m. to 7:00 p.m. daily, except Saturday, Sunday, and State, Federal or Local Holidays, when the allowable time would be 9:00 a.m. to 5:00 p.m. There are also several best management practices that can reduce noise levels during construction including: utilizing critical grade mufflers and silencers on ~~eqiupment~~equipment, tuning backup beepers on equipment, and positioning stationary sources away from sensitive receptors. While there will be a construction-related noise impact from the temporary or periodic increase in ambient noise levels and the potential for annoyance on existing residents, the requirements of the City of Martinez Municipal Code relative to construction noise and best management practices discussed above are intended to minimize

the impact to the extent practicable. With the implementation of the following Mitigation Measures, the proposed project would have a ***less than significant*** impact relative to this topic.

> ***Mitigation Measure Noise-1:*** *All project construction activities shall comply with the City of Martinez Municipal Code requirements for construction noise which limits noise generating construction activities to the hours between 7:00 a.m. and 7:00 p.m. on weekdays and 9:00 a.m. and 5:00 p.m. on Saturdays, Sundays, and holidays.*
>
> ***Mitigation Measure Noise-2:*** *All construction equipment utilizing combustion engines shall be equipped with "critical" grade (rather than "stock" grade) noise mufflers or silencers that are in good condition. Back up "beepers" shall be tuned to insure lowest possible noise levels while also serving the safety purpose of the backup sound indicator.*
>
> ***Mitigation Measure Noise-3:*** *Stationary noise sources shall be located at least 300 feet from any occupied residential dwellings unless noise-reducing engine housing enclosures or other appropriate noise screens are provided.*

Responses e): The project site is not located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport. The closest airstrip is Buchanan Field in the City of Concord approximately 6 miles southeast of the project site. Implementation of the proposed project would result in ***no impact*** relative to this topic.

Responses f): The project site is not located within the vicinity of a private airstrip. The closest airstrip is Buchanan Field in the City of Concord approximately 6 miles southeast of the project site. Implementation of the proposed project would result in ***no impact*** relative to this topic.

XIII. POPULATION AND HOUSING

Would the project:	***Potentially Significant Impact***	***Less Than Significant with Mitigation Incorporation***	***Less Than Significant Impact***	***No Impact***
a) Induce substantial population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?			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

Responses to Checklist Questions

Response a): According to the 2010 US Census, the population in Martinez is 35,824 people. The proposed project would result in the construction of residential housing that would generate an estimated 242 people (2.42 people per household, source 2010 US Census). This is an estimated 0.67 percent growth in Martinez. An estimated 0.67 percent growth in Martinez is not considered substantial growth in Martinez or the region. The 242 people may come from Martinez or surrounding communities. The proposed project would not include upsizing of offsite infrastructure or roadways. The installation of new infrastructure would be limited to the internal subdivision. The sizing of the infrastructure would be specific to the number of units proposed within the project site. Implementation of the proposed project would not induce substantial population growth in an area, either directly or indirectly. Implementation of the proposed project would have a ***less than significant*** impact relative to this topic.

Responses b-c): The project site is located on an existing golf course and does not currently have housing. The proposed project would not displace housing or people. Implementation of the proposed project would have ***no impact*** relative to this topic.

XIV. PUBLIC SERVICES

	Potentially Significant Impact	*Less Than Significant with Mitigation Incorporation*	*Less Than Significant Impact*	*No Impact*
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 any of the public services:				
Fire protection?			X	
Police protection?			X	
Schools?			X	
Parks?			X	
Other public facilities?				X

Responses to Checklist Questions

Responses a):

Fire Protection. The project site is currently under the jurisdiction of the Contra Costa County Fire Protection District (CCCFPD), which has three fire stations within the City limits. The nearest Fire Station is located at 251 Church St, near Pleasant Hill Road, approximately 1.42 miles west of the project site.

The CCCFPD receives ongoing revenues from existing and new developments that come mainly from property tax revenues. New developments are required to pay fees to the CCCFPD for plan review and inspection services. The fees are charged at the time of the plan review. These fees do not provide a significant revenue source for the CCCFPD according to their budgets.

Since the recession began in 2008, property tax revenue for the CCCFPD has declined by approximately $32 million. During this period, the Fire District has taken a number of actions to reduce costs in order to maintain essential service delivery. From 2008 to 2012, the CCCFPD utilized $25 million in reserve funds to keep all of their fire stations staffed. In an effort to obtain needed revenue, the District placed a parcel tax measure on the ballot but it did not receive the votes necessary for passage. As of 2012, the reserve funds have been expended and the CCCFPD can no longer afford to maintain current service levels. As such, the CCCFPD instituted a station closure plan that included the closure of Fire Station #12 located at 1240 Shell Avenue, Martinez.

The CCCFPD continues to operate Station 13 located at 251 Church St, near Pleasant Hill Road, and Station 14 located at 521 Jones Street. These stations operate at least one Paramedic Engine, each operated by a three-person company, including one paramedic. The CCCFPD's response-time goal for fire calls is 5 minutes or less 90 percent of the time. The station closure reduces resources and exacerbates the CCCFPD's already challenging financial situation. The CCCFPD's service delivery model is based on community threat, industry standards, (e.g. response time, staffing levels, operational capabilities), the risk level the community is willing to accept, and services the community expects/demands.

The CCCFPD currently provides fire services to the residential neighborhoods immediately surrounding the project site, as well as the existing golf course. It is anticipated that the CCCFPD would continue to provide fire service for the project site and the surrounding neighborhoods from the Fire Station #13 located at 251 Church St, near Pleasant Hill Road, approximately 1.42 miles west of the project site. It is anticipated that the CCCFPD would continue to maintain their response-time goal for fire calls of 5 minutes or less 90 percent of the time.

The CCCFPD would receive ongoing revenues from each parcel through property tax assessments. These property tax revenues by the proposed project would provide the CCCFPD with funds for ongoing fire protection service; however, the CCCFPD's current financial condition and existing service levels would not be fixed or reversed as a result of the new property tax revenue generated by the proposed project.

In *Goleta Union School District v. Regents of University of California* (1995) 37 Cal.App.4th 1025, the court held that the need for additional fire protection service is not an environmental impact that CEQA requires a project to mitigate. This was reaffirmed in *City of Hayward v. Board of Trustees of the California State University* (2012) Cal.App.4th, 2012 WL 2832858 (cert. for pub. 6/28/12) when the court also found that no mitigation was necessary to address the need for additional fire protection services due to the potential increase in response time caused by the increase in population under the project. The court noted that, under the California Constitution, the obligation to provide adequate fire and emergency medical services fell to the city. Furthermore, in *City of Hayward v. Board of Trustees of the California State University* (2012) Cal.App.4th, 2012 WL 2832858 (cert. for pub. 6/28/12) the court cited CEQA Guidelines § 15382 and *Goleta Union School District v. Regents of University of California* (1995) 37 Cal.App.4th 1025, in holding that the need for additional fire protection service is not an environmental impact that CEQA requires a project to mitigate. Furthermore, the court found that the potential dangers associated with delayed response times do not mandate a finding of significance under CEQA Guidelines § 15065(a)(4).

The proposed project would not result in a need to construct a new fire station or physically alter an existing fire station. As previously stated, the CCCFPD is currently in a financial condition that has affected their ability to provide adequate response time, staffing levels, and operational capabilities to their service area. The CCCFPD would remain in the financial condition with the addition of the proposed project. The CCCFPD would receive property tax revenues from each parcel on the project site, and those funds are intended to pay for fire protection service. Based on the court decisions in *Goleta Union School District v. Regents of University of California* (1995) 37 Cal.App.4th 1025 and *City of Hayward v. Board of Trustees of the California State University* (2012) Cal.App.4th, 2012 WL 2832858 (cert. for pub. 6/28/12) as presented in the above paragraph, the proposed project's impact to fire service is considered ***less than significant***.

Police Protection. The project site is currently under the jurisdiction of the City of Martinez Police Department. The Patrol Division consists of two Lieutenants, four Sergeants (watch commanders), four Corporals and seventeen Officers. The City of Martinez Police Department would continue to the serve the project site and no changes in Police Services would occur.

The proposed project would add 100 residential units, which is anticipated to add 242 people to the City of Martinez. The additional of 242 people in the City of Martinez would place additional demands for police service on the City of Martinez Police Department.

To offset the new demands the City of Martinez charges an Impact/Mitigation Fee for new development. The fee is utilized by the City of Martinez Police Department to purchase new facilities and equipment as necessary to service new development. The current fee for police impacts is $411 per single-family residential unit. The total project contribution under the current fee schedule would be $41,100; however, the fees are subject to future changes. The payment of the fees by the project proponent would serve as adequate compensation for the police service impacts required by the proposed project. Additionally, the City of Martinez receives ongoing revenues that would come from property taxes, sales taxes, and other revenues generated by new development to fund ongoing police service. With the implementation of the following mitigation measure, and the ongoing tax revenues generated by the residential units, the proposed project's impact to police service is considered ***less than significant***.

> ***Mitigation Measure Public-2:*** *The applicant shall pay applicable Impact/Mitigation Fee for Police Services according to the City of Martinez Fee Schedule.*

Schools. The project site is currently under the jurisdiction of the Mt. Diablo Unified School District. The proposed project would result in new residential construction and would generate population such that there would be an increased demand for school services. School aged children would attend Hidden Valley Elementary School, Valley View Middle School, or College Park High School. Based on the student generation rates for Martinez, the proposed project would generate 22.4 K-5th grade students (0.224 students per single family detached unit), 12.8 6-8th grade students (0.128 students per single family detached unit), and 14.1 9-12th grade students (0.141 students per single family detached unit). The total student generation would be approximately 49.3 students. The Mt. Diablo Unified School District collects developer fees in order to assist in funding facility needs at sites. In accordance with Section 65995(h) of the California Government Code, the payment of statutory fees "…is deemed to be full and complete mitigation of the impacts of any legislative or adjudicative act, or both, involving, but not limited to, the planning, use, or development of real property, or any change in governmental organization or reorganization as defined in Section 56021 or 56073, on the provision of adequate school facilities." With the implementation of the following mitigation measure the proposed project's impact on schools is considered ***less than significant***.

> ***Mitigation Measure Public-3****: The applicant shall pay applicable school fees mandated by SB 50 to the Mt. Diablo Unified School District and provide a receipt of payment to the City of Martinez.*

Parks. The General Plan includes several policies that address park dedication within the Hidden Lakes Specific Area Plan as follows:

Park Dedication Policies

- 32.61 Full park land or full payment of fees shall be charged against such development in the planning area. No credits for the provision of private recreational facilities shall be granted against park dedication fees.

- 32.62 The proposed 25% density increase allowance, designed to encourage compliance with the plan and to compensate for the dedication of public open space, shall be the only compensation awarded for preserving and dedicating areas for public open space.

All new housing in the City is required to adhere to the park dedication standards in the City, whether it is payment of the impact fee and/or creating and dedicating new parkland in accordance with the City of Martinez Municipal Code Chapter 21.46 – Park Dedication. The

requirements outlined in the Municipal Code are consistent with the Quimby Act. The standard provided in the Municipal Code is as follows:

- 21.46.030 - Basic Standard. It is found and determined that the public interest, convenience, health, welfare and safety require that five (5) acres of property for each one thousand (1000) persons residing within the City be devoted to local park and recreational purposes.

The Municipal Code Section 21.46.040 provides that the formula for calculating park dedication is 2.8 people per dwelling unit.

The proposed project would add 100 residential units, which is expected to generate a population of 280 people according to the Municipal Code Section 21.46.040 formula for calculated park dedication. This increase in people would result in an increased demand for 1.4 acres of parkland under the Municipal Code Chapter 21.46 – Park Dedication (five acres of parkland per 1,000 people).

The City park dedication in-lieu fee (as of September 2013) requires payment of $5,095 for each single family residential unit constructed in the City. The project applicant does not propose any park development and dedication within the project site and the General Plan does not identify the project site for a public park. As such, the proposed project is subject to the City park dedication in-lieu fees.

The total project contribution under the current fee schedule would be $509,500; however, the fees are subject to future changes. The City of Martinez uses the park dedication in-lieu fees to acquire and development park facilities based on demands. In addition to the park dedication in-lieu fees, the City of Martinez charges an Impact/Mitigation Fee for parks and recreation. The current fee for parks and recreation impacts is $2,509 per single-family residential unit. The total project contribution under the current fee schedule would be $250,900; however, the fees are subject to future changes.

The payment of the City park dedication in-lieu fees and the Impact/Mitigation Fee for park and recreation by the project proponent would serve as adequate compensation for the park and recreational facilities required by the proposed project. The City currently meets their overall standard with 226.5 acres of parkland, which is equivalent to 6.22 acres of parkland per 1,000 people. With the implementation of the following mitigation measures the proposed project's impact to park and recreational facilities is considered ***less than significant***.

> ***Mitigation Measure Public-4:*** *The applicant shall pay applicable park in-lieu fees or dedicate parkland in accordance with the City of Martinez Municipal Code standards.*
>
> ***Mitigation Measure Public-5:*** *The applicant shall pay applicable Impact/Mitigation Fee for Parks and Recreation according to the City of Martinez Fee Schedule.*

Other Public Facilities. The proposed project would not result in a need for other public facilities that are not addressed above, or in Section XVII Utilities and Service Systems. Implementation of the proposed project would have ***no impact*** relative to this issue.

XV. RECREATION

	Potentially Significant Impact	*Less Than Significant with Mitigation Incorporation*	*Less Than Significant Impact*	*No Impact*
a) Would the project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?			X	
b) Does the project include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment?			X	

Responses to Checklist Questions

Responses a-b): The General Plan includes a policy that addresses the existing golf course within the project site. The Hidden Lakes Specific Area Plan Land Use and Development policy states the following:

- 32.32 The existing golf course is an appropriate use within the Plan area.

The project applicant has included a General Plan Amendment in the application package that would include the removal of this policy from the General Plan. If the City Council were to approve the General Plan Amendment, the proposed project would not be in conflict with this policy.

The removal of the golf course would eliminate a recreational amenity that is available to the citizens of Martinez. The golf course, however, is not a public recreational facility. The golf course is a privately owned and operated business with no guarantee of future availability to the public for recreational use. This facility is not considered a park, and is not parkland that has been acquired through the use of park dedication in-lieu fees or park dedication. The City of Martinez, including the citizens of the community, have no vested ownership in the privately held golf course.

The General Plan includes several policies that address park dedication within the Hidden Lakes Specific Area Plan as follows:

Park Dedication Policies

- 32.61 Full park land or full payment of fees shall be charged against such development in the planning area. No credits for the provision of private recreational facilities shall be granted against park dedication fees.

- 32.62 The proposed 25% density increase allowance, designed to encourage compliance with the plan and to compensate for the dedication of public open space, shall be the only compensation awarded for preserving and dedicating areas for public open space.

All new housing in the City is required to adhere to the park dedication standards in the City, whether it is payment of the impact fee and/or creating and dedicating new parkland in accordance with the City of Martinez Municipal Code Chapter 21.46 – Park Dedication. The requirements outlined in the Municipal Code are consistent with the Quimby Act. The standard provided in the Municipal Code is as follows:

- 21.46.030 - Basic Standard. It is found and determined that the public interest, convenience, health, welfare and safety require that five (5) acres of property for each one thousand (1000) persons residing within the City be devoted to local park and recreational purposes.

The Municipal Code Section 21.46.040 provides that the formula for calculating park dedication is 2.8 people per dwelling unit (Note: the 2.8 number does not reflect the California Department of Finance's current estimate of 2.42 people per household in Martinez; however, the standard is used in the formula as required by the Municipal Code).

The proposed project would add 100 residential units, which is expected to generate a population of 280 people according to the Municipal Code Section 21.46.040 formula for calculated park dedication. This increase in people would result in an increased demand for 1.4 acres of parkland under the Municipal Code Chapter 21.46 – Park Dedication (five acres of parkland per 1,000 people).

The City park dedication in-lieu fee (as of September 2013) requires payment of $5,095 for each single family residential unit constructed in the City. The project applicant does not propose any park development and dedication within the project site and the General Plan does not identify the project site for a public park. As such, the proposed project is subject to the City park dedication in-lieu fees.

The total project contribution under the current fee schedule would be $509,500; however, the fees are subject to future changes. The City of Martinez uses the park dedication in-lieu fees to acquire and development park facilities based on demands. In addition to the park dedication in-lieu fees, the City of Martinez charges an Impact/Mitigation Fee for parks and recreation. The fee is utilized by the City of Martinez to fund parks and recreation. The current fee for parks and recreation impacts is $2,509 per single-family residential unit. The total project contribution under the current fee schedule would be $250,900; however, the fees are subject to future changes.

The payment of the City park dedication in-lieu fees and the Impact/Mitigation Fee for park and recreation by the project proponent would serve as adequate compensation for the park and recreational facilities required by the proposed project. The City currently meets their overall standard with 226.5 acres of parkland, which is equivalent to 6.22 acres of parkland per 1,000 people. With the implementation of Mitigation Measure Public-4 and Public 5 presented in Section XIV Public Services, the proposed project's impact to recreational is considered ***less than significant***.

XVI. TRANSPORTATION/TRAFFIC

Would the project:	***Potentially Significant Impact***	***Less Than Significant with Mitigation Incorporation***	***Less Than Significant Impact***	***No Impact***
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 feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?			X	
e) Result in inadequate emergency access?			X	
f) Result in inadequate parking capacity?			X	
g) Conflict with adopted policies, plans, or programs supporting alternative transportation (e.g., bus turnouts, bicycle racks)?			X	

Background

A *Traffic Impact Analysis* (2013) was prepared by Abrams Associates for the proposed project under contract to De Novo Planning Group. The following is a summary of the report, which is contained in Appendix K.

There are six study intersections that have been included in the analysis.

Project Study Intersections

1. Morello Avenue and the State Route 4 Westbound Ramps
2. Morello Avenue and the State Route 4 Eastbound Ramps
3. Morello Avenue at Center Avenue
4. Vine Hill Way and Center Avenue
5. Morello Avenue and the Main Project Entrance
6. Vine Hill Way and the Secondary Project Entrance

Traffic Analysis Scenarios

The study intersections were evaluated for the following six scenarios:

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

Existing Roadway Network

The following is a detailed description of the roadways that could be affected by the project:

- State Route 4 (SR 4) – SR 4 is the primary east-west corridor in Contra Costa County. It connects Interstate 80 in the city of Hercules to the west with SR 160 and the cities of Oakley and Brentwood to the east. SR 4 is currently a six-lane freeway in the vicinity of the proposed project.
- Morello Avenue – Morello Avenue is a north-south collector roadway that extends north from Taylor Boulevard to Pacheco Boulevard on the north. It provides the closest access to and underneath the SR 4 freeway for the proposed project.
- Center Avenue – Center Avenue is a two lane east-west collector street extending from Howe Road to terminate at Marsh Drive to the east. It serves primarily school and residential traffic from the adjacent neighborhoods.
- Vine Hill Way – Vine Hill Way is a two lane collector street extending north from Morello Avenue to Muir Road. It serves primarily residential traffic from the adjacent neighborhoods.

Intersection Analysis Methodology

Existing operational conditions at the seven (7) study intersections have been evaluated according to the requirements set forth by the City of Martinez. Analysis of traffic operations was conducted using the 2010 Highway Capacity Manual (HCM) Level of Service (LOS) methodology with Synchro software.[1] Level of service is an expression, in the form of a scale, of the relationship between the capacity of an intersection (or roadway segment) to accommodate the volume of traffic moving through it at any given time. The level of service scale describes traffic flow with six ratings ranging from A to F, with "A" indicating relatively free flow of traffic and "F" indicating stop-and-go traffic characterized by traffic jams.

As the amount of traffic moving through a given intersection or roadway segment increases, the traffic flow conditions that motorists experience rapidly deteriorate as the capacity of the intersection or roadway segment is reached. Under such conditions, there is general instability in the traffic flow, which means that relatively small incidents (e.g., momentary engine stall) can

[1] *2010 Highway Capacity Manual*, Transportation Research Board, Washington D.C., 2011

cause considerable fluctuations in speeds and delays that lead to traffic congestion. This near-capacity situation is labeled level of service (LOS) E. Beyond LOS E, the intersection or roadway segment capacity has been exceeded, and arriving traffic will exceed the ability of the intersection to accommodate it. Table 15 summarizes the relationship between LOS, average control delay, and the volume to capacity ratio at signalized intersections. Table 16 summarizes the relationship between LOS and delay at unsignalized intersections

For signalized intersections, The City of Martinez's LOS standards are based on the average delay for the entire intersection. The HCM methodology determines the capacity of each lane group approaching the intersection. The LOS is then based on average control delay (in seconds per vehicle) for the various movements within the intersection. A combined weighted average control delay and LOS are presented for the intersection. A summary of the HCM results and copies of the detailed HCM LOS calculations are included in the appendix to the traffic report.

For unsignalized (all-way stop controlled and two-way stop controlled) intersections, the average control delay and LOS operating conditions are calculated by approach (e.g., northbound) and movement (e.g., northbound left-turn) for those movements that are subject to delay. Operating conditions for unsignalized intersections are presented for the worst approach.

Table 15: Signalized Intersection Level of Service Definitions

Level of Service	*Description of Operations*	*Average Delay (sec/veh)*	*Volume to Capacity Ratio*
A	Insignificant Delays: No approach phase is fully used and no vehicle waits longer than one red indication.	< 10	< 0.60
B	Minimal Delays: An occasional approach phase is fully used. Drivers begin to feel restricted.	> 10 to 20	> 0.61 to 0.70
C	Acceptable Delays: Major approach phase may become fully used. Most drivers feel somewhat restricted.	> 20 to 35	> 0.71 to 0.80
D	Tolerable Delays: Drivers may wait through no more than one red indication. Queues may develop but dissipate rapidly without excessive delays.	> 35 to 55	> 0.81 to 0.90
E	Significant Delays: Volumes approaching capacity. Vehicles may wait through several signal cycles and long vehicle queues from upstream.	> 55 to 80	> 0.91 to 1.00
F	Excessive Delays: Represents conditions at capacity, with extremely long delays. Queues may block upstream intersections.	> 80	> 1.00

SOURCES: 2010 HIGHWAY CAPACITY MANUAL, TRANSPORTATION RESEARCH BOARD, 2011.

Table 16: Unsignalized Intersection Level of Service Definitions

Level of Service	*Description of Operations*	*Average Delay (seconds/vehicle)*
A	No delay for stop-controlled approaches.	0 to 10
B	Operations with minor delays.	> 10 to 15
C	Operations with moderate delays.	> 15 to 25
D	Operations with some delays.	> 25 to 35
E	Operations with high delays and long queues.	> 35 to 50
F	Operation with extreme congestion, with very high delays and long queues unacceptable to most drivers.	> 50

SOURCE: 2010 HIGHWAY CAPACITY MANUAL, TRANSPORTATION RESEARCH BOARD, 2011.

Existing Intersection Capacity Conditions

The existing intersection geometry at each of the project study intersections can be seen in Figure 3 of the Traffic Analysis (Appendix K). The traffic volumes at the study intersections for weekday AM and PM peak hours are presented in Figure 4 of the Traffic Analysis (Appendix K). Traffic counts at all of the study intersections were conducted in November of 2013. Table 17 summarizes the associated LOS computation results for the existing weekday AM and PM peak hour conditions. As shown in Table 17, all of the signalized study intersections currently have acceptable conditions (LOS B or better) during the weekday AM and PM peak hours.

Table 17: Existing Intersection Level of Service Conditions

INTERSECTION		CONTROL	PEAK HOUR	EXISTING		EXISTING PLUS PROJECT	
				Delay	LOS	Delay	LOS
1	MORELLO AVE & SR-4 WB RAMPS	Traffic Signal	AM	12.1	B	12.4	B
			PM	12.9	B	13.2	B
2	MORELLO AVE & SR-4 EB RAMPS	Traffic Signal	AM	11.2	B	11.4	B
			PM	14.3	B	14.7	B
3	MORELLO AVE & CENTER AVE	Traffic Signal	AM	13.1	B	13.1	B
			PM	13.8	B	13.9	B
4	VINE HILL WY & CENTER AVE	Traffic Signal	AM	8.3	A	8.3	A
			PM	8.2	A	8.2	A
5	MORELLO AVE & PROJECT ENTRANCE	Side Street Stop	AM	N/A	N/A	10.7	B
			PM	N/A	N/A	11.3	B
6	VINE HILL WY & PROJECT ENTRANCE	Side Street Stop	AM	N/A	N/A	9.3	A
			PM	N/A	N/A	9.1	A

SOURCE: ABRAMS ASSOCIATES, 2013

NOTES: HCM LOS RESULTS ARE PRESENTED IN TERMS OF AVERAGE INTERSECTION DELAY IN SECONDS PER VEHICLE. FOR STOP CONTROLLED INTERSECTIONS THE RESULTS FOR THE WORST SIDE STREET APPROACH ARE PRESENTED.

Pedestrian and Bicycle Facilities

Bicycle paths, lanes and routes are typical examples of bicycle transportation facilities, which are defined by Caltrans as being in one of the following three classes:

- *Class I* – Provides a completely separated facility designed for the exclusive use of bicyclists and pedestrians with crossing points minimized.
- *Class II* – Provides a restricted right-of-way designated lane for the exclusive or semi-exclusive use of bicycles with through travel by motor vehicles or pedestrians prohibited, but with vehicle parking and cross-flows by pedestrians and motorists permitted.
- *Class III* – Provides a right-of-way designated by signs or permanent markings and shared with pedestrians and motorists.

There are existing bike lanes on Morello Avenue and Center Avenue adjacent to the project.

Transit Service

The County Connection currently operates approximately 31 fixed-route bus routes on weekdays throughout Central Contra Costa County but has limited service in the project area. The route that serves the project area is Route 28. This route runs from the North Concord

BART station to the Downtown Martinez Amtrak station. This route has a frequency of 60 minutes during peak periods and 90 minutes during off peak periods. It runs from 5:45 am to 8:46 pm during the weekdays. Currently, the bus stop for Route 28 nearest to the proposed project is located at within walking distance on Morello Avenue, just north of Center Avenue.

Responses to Checklist Questions

Responses a-b):

Project Trip Generation

The proposed project will include 100 single family homes. The trip generation calculations are shown in Table 18. They are based on the average trip generation rates for (Land Use Code 210 – Single Family Detached Housing) from the Institute of Transportation Engineer's (ITE) Trip Generation Manual, 9th Edition.

Table 18: Trip Generation Calculations

Land Use	*Size*	*ADT*	*AM Peak Hour*			*PM Peak Hour*		
			In	*Out*	*Total*	*In*	*Out*	*Total*
Single Family Dwellings	100 units	952	19	56	75	63	37	100

The total trip generation reflects all vehicle trips that would be counted at the project driveways, both inbound and outbound. Since the project is residential there were no adjustments applied to account for pass-by or internal trips. Although there is a potential for transit use no reduction has been applied to the project trip generation. The project is forecast to generate a total of 75 vehicle trips during the AM peak hour and 100 trips during the PM peak hour.

For purposes of determining the reasonable worst-case impacts of traffic on the surrounding street network from a proposed project, the trips generated by this proposed development are estimated for the peak commute hours which represent the peak of "*adjacent street traffic*". This is the time period when the project traffic would generally contribute to the greatest amount of congestion.

Project Trip Distribution

The trip distribution assumptions have been based on the project's proximity to freeway interchanges, existing traffic count data including daily directional volume and peak-hour turning movements, the Contra Costa County travel demand model, and existing knowledge of the surrounding area such as commute patterns and the overall land use patterns in the area. Figure 5 from the Traffic Analysis (Appendix K) shows the project traffic that would be added at each of the study intersections.

Existing Plus Project Traffic Capacity Conditions

This scenario evaluates the existing conditions with the addition of traffic from the proposed project. The capacity calculations for the Existing Plus Project scenario are shown previously in Table 17. Please note that the corresponding LOS analysis calculation sheets are presented in the Traffic Analysis Appendix. As shown in Table 17, all of the signalized study intersections would continue to have acceptable conditions (LOS D or better) during the weekday AM and PM

peak hours. Figure 6 from the Traffic Analysis (Appendix K) presents the resulting existing plus project traffic volumes at each of the study intersections.

Baseline Traffic Capacity Conditions

The Baseline scenario evaluates the existing conditions with the addition of traffic from reasonably foreseeable projects in the area. This includes traffic from the Taco Bell and Dentist's Office project currently under construction on Arnold Drive. In addition, the general baseline growth in traffic was developed based on the assumption that the project completion date would be 2015. This scenario includes all reasonably foreseeable projects that would significantly affect the traffic volumes in the project study area. Figure 7 from the Traffic Analysis (Appendix K) presents the resulting baseline volumes at each of the project study intersections.

Table 19 summarizes the associated LOS computation results for the Baseline and Baseline Plus Project weekday AM and PM peak hour conditions. The corresponding LOS analysis calculation sheets are presented in the Traffic Analysis Appendix. As shown in Table 19, with addition of traffic from the proposed project all study intersections would continue have acceptable conditions (LOS D or better) during the weekday AM and PM peak hours.

Table 19: Baseline Plus Project Intersection Level of Service Conditions

	INTERSECTION	CONTROL	PEAK HOUR	BACKGROUND		BACKGROUND PLUS PROJECT	
				Delay	LOS	Delay	LOS
1	MORELLO AVE & SR-4 WB RAMPS	Traffic Signal	AM	12.4	B	12.8	B
			PM	13.1	B	13.8	B
2	MORELLO AVE & SR-4 EB RAMPS	Traffic Signal	AM	11.4	B	11.7	B
			PM	14.5	B	15.1	B
3	MORELLO AVE & CENTER AVE	All-Way Stop	AM	13.9	B	14.0	B
			PM	14.1	B	14.2	B
4	VINE HILL WY & CENTER AVE	All-Way Stop	AM	8.4	A	8.4	A
			PM	8.2	A	8.3	A
5	MORELLO AVE & PROJECT ENTRANCE	Side Street Stop	AM	N/A	N/A	10.9	B
			PM	N/A	N/A	11.4	B
6	VINE HILL WY & PROJECT ENTRANCE	Side Street Stop	AM	N/A	N/A	9.4	A
			PM	N/A	N/A	9.1	A

SOURCE: ABRAMS ASSOCIATES, 2013

NOTES: HCM LOS RESULTS ARE PRESENTED IN TERMS OF AVERAGE INTERSECTION DELAY IN SECONDS PER VEHICLE. FOR STOP CONTROLLED INTERSECTIONS THE RESULTS FOR THE WORST SIDE STREET APPROACH ARE PRESENTED.

Baseline Plus Project Intersection Capacity Conditions

The Baseline plus proposed project traffic forecasts were developed by adding project-related traffic to the baseline traffic volumes. Figure 8 from the Traffic Analysis (Appendix K) presents the Baseline Plus Project traffic volumes that were used in the analysis. As noted above, Table 19 summarizes the LOS results for the Baseline Plus Project weekday AM and PM peak hour conditions (i.e. the existing roadway network). Please note that the corresponding LOS analysis calculation sheets are presented in the appendix. As shown in Table 19, all of the signalized study intersections would continue to have acceptable conditions (LOS D or better) during the weekday AM and PM peak hours.

Cumulative Year 2035 Traffic Capacity Conditions

The Cumulative Scenario, which represents 2035 conditions, corresponds to the build-out of the City of Martinez and Contra Costa County General Plans which includes many significant land use changes. For the cumulative conditions, the intersection traffic volumes were based on the existing turning movements with the addition of traffic from all planned and approved projects plus the addition of growth estimated by the County's traffic model. Figure 9 from the Traffic Analysis (Appendix K) presents the future lane configurations used in the analysis. Figure 10 from the Traffic Analysis (Appendix K) presents the cumulative build-out traffic at the project study intersections (without the proposed project). As shown in Table 20, all of the signalized study intersections would continue to have acceptable conditions (LOS D or better) under this scenario during the weekday AM and PM peak.

Table 20: Cumulative Intersection Level of Service Conditions

	INTERSECTION	*CONTROL*	*PEAK HOUR*	*CUMULATIVE*		*CUMULATIVE PLUS PROJECT*	
				Delay	*LOS*	*Delay*	*LOS*
1	MORELLO AVE & SR-4 WB RAMPS	Traffic Signal	AM	13.7	B	14.1	B
			PM	14.6	B	14.9	B
2	MORELLO AVE & SR-4 EB RAMPS	Traffic Signal	AM	12.6	B	12.9	B
			PM	16.3	B	17.0	B
3	MORELLO AVE & CENTER AVE	All-Way Stop	AM	16.3	C	16.5	C
			PM	16.4	C	16.6	C
4	VINE HILL WY & CENTER AVE	All-Way Stop	AM	8.6	A	8.6	A
			PM	8.4	A	8.5	A
5	MORELLO AVE & PROJECT ENTRANCE	Side Street Stop	AM	N/A	N/A	11.3	B
			PM	N/A	N/A	11.9	B
6	VINE HILL WY & PROJECT ENTRANCE	Side Street Stop	AM	N/A	N/A	9.5	A
			PM	N/A	N/A	9.2	A

SOURCE: ABRAMS ASSOCIATES, 2013

NOTES: HCM LOS RESULTS ARE PRESENTED IN TERMS OF AVERAGE INTERSECTION DELAY IN SECONDS PER VEHICLE. FOR STOP CONTROLLED INTERSECTIONS THE RESULTS FOR THE WORST SIDE STREET APPROACH ARE PRESENTED.

Cumulative Plus Project Traffic Capacity Conditions

Figure 10 from the Traffic Analysis (Appendix K) presents the cumulative build-out traffic volumes including the traffic from the proposed residential project. Table 20 summarizes the LOS results for the Cumulative Plus Project (Year 2035) traffic conditions at each of the project study intersections. As shown on this table, all of the signalized study intersections would continue to have acceptable conditions during the weekday AM and PM peak commute hours.

Construction Related Traffic

The roadway network would be used for access for construction workers and construction vehicles. Construction would be limited to the construction phase of the project. The total volume of traffic is largely dependent on the construction phase and schedule. The construction phase that includes grading, underground infrastructure, and topside improvements are not anticipated to result in a high volume of construction traffic. It is estimated that based on the size of the project, there will be no more than ten construction workers on the project site during the grading, underground infrastructure, and topside improvements. There will be a one-time movement of construction equipment onto the project site at the start of this phase, and a one-time movement of construction equipment off of the project site at the conclusion of this phase. The home building phase will likely involve a higher volume of construction traffic;

however, it is largely dependent on the number of homes that are built at any given time. Production home building will generally involve the use of up to 40 different contractors with various trades (i.e. framing, plumbing, electrical, etc.). Under a worst case-scenario, the home building phase could result in up to 80 construction workers on the site on a given day; however, a more realistic estimate would be between 10 and 20 construction workers on the site on a given day. Under this estimate, the home building phase would result in an estimated 40 trips per day. This temporary trip volume would not result in a potentially significant impact.

Construction activities would cause temporary disruption in traffic along the perimeter roadways (i.e. Morello Avenue, Vine Hill Way, and Center Avenue) when the topside frontage improvements are installed (i.e. curb/gutter/sidewalk/landscaping). This construction effort will not require road closures on these streets and would not eliminate access by emergency service providers. This construction effort would temporarily disrupt pedestrian and/or bicycle movement on the project-side of Morello Avenue, Vine Hill Way, and Center Avenue while these improvements are installed. This construction effort would also result in the temporary elimination of on-street parking spaces on the project-side of Morello Avenue, Vine Hill Way, and Center Avenue while these improvements are installed.

Summary

As shown in the analysis above, the LOS calculations show that future conditions are anticipated to operate at acceptable levels of service. The proposed project would not 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. The proposed project is not expected to exceed, either individually or cumulatively, a level of service standard established by the county congestion management agency for designated roads or highways. Additionally, the construction related traffic is temporary and is not expected to have potentially significant impacts on the roadway network. Implementation of the proposed project would have a ***less than significant*** impact relative to this issue.

Responses c): The proposed project does not include airport or airstrip facilities, is not located adjacent to an airport or airstrip, and is not located within an airport land use area. Additionally, the proposed project does not include buildings over two stories, and there are no proposed towers or other elevated structures proposed. The proposed project would not 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. Implementation of proposed project would have ***no impact*** relative to this topic.

Responses d-e): No site circulation or access issues have been identified that would cause a traffic safety problem/hazard or any unusual traffic congestion or delay. The volumes on the internal residential roadways (with homes fronting on them) would be light enough so that no significant conflicts would be expected with through traffic and vehicles backing out of the driveways and/or garages within the project.

At the proposed project entrances on Morello Avenue and Vine Hill Way there were no safety, capacity, or sight distance problems identified and the intersections would meet all required design standards as planned. In addition, with the addition of project traffic none of the warrants for a traffic signal would be met at either location. The analysis indicates the

intersections would continue to have safe operations in the future with the side street stop control and a traffic signal would not be required under cumulative plus project conditions.

The project site is served by an existing network of City streets. The proposed project would be located in areas currently occupied by a golf course. Access to the project site would not change. The internal circulation is adequate for emergency personnel to access. The project would create no adverse impacts to emergency vehicle access or circulation. Implementation of proposed project would have a ***less than significant*** relative to this topic.

Responses f): The proposed project would provide an adequate supply of off-street parking based on the City's requirements of two covered parking spaces per residential unit. Each of the 100 residential units will provide an attached garage with a minimum of two covered parking spaces. The total covered parking spaces will be 200 spaces. This is consistent with the requirements of the City of Martinez Municipal Code Chapter 22.36 Off-street parking and Loading Facilities. The project is currently proposing to exceed the City's parking requirements and based on a review of the proposed project by Abrams (2013) there would be no significant impacts to the surrounding properties. Implementation of the proposed project would have a ***less than significant*** impact relative to this topic.

Responses g): The General Plan Transportation Element includes adopted policies that support alternative transportation as follows:

IV. Goal: Promote bicycle use.

- A. Policy: Implement the bikeway plan.
    - 1. Add bike lanes whenever possible in conjunction with road reconstruction or restriping projects in accordance with the bikeway plan.
    - 2. Seek funding sources to implement the bikeway plan in locations where more than restriping is required.
    - 3. Work with Contra Costa County and other agencies to implement the regional bikeway system.
- B. Policy: Provide ancillary facilities necessary to encourage bicycling.
    - 1. Provide secure bicycle parking at all parks, schools, and public buildings.
    - 2. Require large employers to provide secure bicycle parking, lockers, and showers for employees.
    - C. Policy: Increase bicycle safely.
    - 1. Sweep and repair bicycle lanes and paths on a continuing, regular basis.
    - 2. Ensure that bikeways are delineated and signed in accordance with Caltrans' standards.
    - 3 Ensure that all streets have bicycle-safe drainage grates and are free of hazards such as uneven pavement and gravel.
    - 4. Maintain curb lane widths of at least 14 feet (20 feet if parking is allowed) even on streets without bikeways.
- D. Promote bicycle education.
    - 1. Teach bike safely in schools.

- 2. Develop and distribute a map of Martinez and regional bikeways.

VI Goal: Encourage pedestrian travel.

- A. Policy: Provide and maintain sidewalks where required.
  - 1. Require new developments to include sidewalks except in rural residential areas.
  - 2. Promote the addition of sidewalks to existing streets, except in rural residential areas.
  - 3. Install handicapped curb cuts in existing street corners.
  - 4. Monitor and repair damaged sidewalks.

The proposed project does not conflict with any of the above listed policies from the General Plan Transportation Element. The proposed project would not generate a significant increase in traffic in the area compared to the existing and it would not decrease levels of service to unacceptable levels. In addition, the proposed project would not change the design of any existing pedestrian or bicycle facilities or create any new safety problems in the area. The proposed project will add a small amount of both pedestrians and bicyclists who will utilize both existing and planned facilities connecting the project site with the community at large. The internal streets will be designed to the City's standard for pedestrian sidewalks.

The proposed project would not interfere with any existing bus routes and would not remove or relocate any existing bus stops. The proposed project also would not conflict with any transit plans or goals of the City of Martinez and, based on the size of the project, it would be expected to generate only limited transit ridership. The project would be expected to provide a minimal amount of additional ridership for local bus companies.

Implementation of the proposed project would have a ***less than significant*** impact relative to this topic.

XVII. UTILITIES AND SERVICE SYSTEMS

Would the project:	*Potentially Significant Impact*	*Less Than Significant with Mitigation Incorporation*	*Less Than Significant Impact*	*No Impact*
a) Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board?			X	
b) Require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?			X	
c) Require or result in the construction of new storm water drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?		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) Result in a determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the projects projected demand in addition to the providers existing commitments?			X	
f) Be served by a landfill with sufficient permitted capacity to accommodate the projects solid waste disposal needs?			X	
g) Comply with federal, state, and local statutes and regulations related to solid waste?			X	

Responses to Checklist Questions

Responses a):

Waste Discharge Requirements (WDRs) Order No. R2-2010-0114 NPDES NO. CA0037770

The proposed project would be served by the ~~Mountain~~ Mt. View Sanitary District (MVSD), which owns and operates the ~~Mountain~~Mt. View Sanitary District Wastewater Treatment Plant (hereinafter the Plant) located at 3800 Arthur Road in unincorporated Contra Costa County near the City of Martinez, and its associated wastewater collection system (hereinafter collectively the Facility). The Plant and its associated Facility are permitted under Waste Discharge Requirements (WDRs) Order No. R2-2010-0114 NPDES NO. CA0037770 as adopted by the Regional Water Quality Control Board on November 10, 2010. The Order/Permit is effective through December 31, 2015 at which time the MVSD will seek the approval of a new Order/Permit. The MVSD Plant and Facility are currently incompliance with WDR Order No. R2-2010-0114 NPDES NO. CA0037770.

The MVSD owns and operates the Plant which provides advanced secondary treatment for domestic, commercial, and some industrial wastewater from unincorporated areas of Martinez

and portions of the City of Martinez. The MVSD has a current average dry weather design treatment capacity of 3.2 million gallons per day (MGD), and can treat peak wet weather flows up to 10.94 MGD. The current flow is estimated to be 1.007 MGD.

The treatment system consists of screening, primary clarification, trickling filtration, biotower nitrification, secondary sedimentation, advanced secondary sand filtration and UV disinfection. During periods of elevated wet weather influent flows, flows that exceed the biotower capacity are routed around the biotower nitrification treatment step. According to the permit, the MVSD's wastewater collection system includes ~~110~~ 72.5 miles of sewer collection lines, including two miles of force main, and four pump stations.

Discharge is secondary-treated, filtered, and disinfected effluent that is discharged from the Plant to Moorhen Marsh, a constructed wetland that is the final treatment process component. Moorhen Marsh flows to Peyton Slough, where it combines with surface runoff to supply the downstream 137 acre McNabney Marsh. Flows from McNabney Marsh re-enter Peyton Slough, which is tributary to Carquinez Strait.

Sludge is anaerobically digested and then dewatered by centrifuge. In dry weather months, the sludge volume is further reduced in drying beds, and the runoff from these beds is collected in a sump and pumped back to the Plant headworks. Biosolids are presently used as alternative daily cover at the B&J Landfill in Dixon.

Because all storm water is routed through the Plant headworks, it is exempt from coverage under the State Water Board's statewide storm water NPDES general permit (WDRs for Discharges of Storm Water Associated with Industrial Activities, Excluding Construction Activities, NPDES General Permit No. CAS000001).

Single family residential units in the City of Martinez have an estimated wastewater flow rate of 195 gallons per day per unit. The proposed project would generate an estimated 19,500 gallons per day (0.0195 MGD) to be treated at the Plant. Given that the current permitted capacity of the wastewater treatment plant is 3.2 MGD, and the current flow is 1.007 MGD, the Plant has adequate capacity to serve the 0.0195 MGD of wastewater generated by the proposed project. The proposed project would not require new or expanded facilities at the Plant. The proposed project would be covered under WDR Order No. R2-2010-0114 NPDES NO. CA0037770 and would not exceed the wastewater discharge requirements in this Order. Implementation of proposed project would have a ***less than significant*** impact relative to this topic.

Response b):

Water: Martinez provides water treatment and distribution services for residential, commercial, industrial, public and irrigation customers, as well as for fire protection uses. The City's water system infrastructure includes a water treatment plant, storage facilities, and the distribution system. The City owns and operates the Martinez Water Treatment Plant located at 3003 Pacheco. Martinez plans for capital needs through its Capital Improvement Program (CIP) that uses a five year planning horizon and is updated biannually with the City budget.

The *Contra Costa LAFCO: Water and Wastewater Municipal Services Review for Central Contra Costa County* (2008) indicates that the City's water distribution system infrastructure is generally in good condition; however the treatment plant is aging and has some recommended improvements to maintain adequate service levels based on demand projections for 2020. The City is implementing the recommendations as funding is available. These improvements are planned improvements that would occur regardless of the proposed project.

The City's sole source of water supply is untreated water purchased from Contra Costa Water District (CCWD). The City takes delivery of the water from the Martinez Reservoir, a terminal reservoir for the Contra Costa Canal. The City's water treatment facilities have a total filtration capacity of 14.7 million gallons per day (mgd). Average daily water use in 2006 was 5.2 mgd. According to the Contra Costa Water District Urban Water Management Plan (June 2011), single family residential units used an estimated 404 gallons per day in 2010. The proposed project would require 40,400 gallons per day. As such, the total filtration capacity of 14.7 million gallons per day is adequate capacity to serve the proposed project and would not require new or expanded facilities.

The proposed project would result in the installation of an underground network of water distribution infrastructure within the project site. The construction of an underground network of water distribution infrastructure would not cause environmental effects beyond the limits of the project site. Physical disturbance of the project site would be initiated with grading. The installation of an underground network of water distribution infrastructure would occur after grading during the trenching phase of construction. During this phase excavators/backhoes would dig trenches and workers would place water pipe into the trench to an engineering design and specification. After the water pipe is installed the excavators/backhoes would backfill the trench and the underground network of water distribution infrastructure would not be visible with the exception of manholes, valves, pipe stubs, and hydrants. The above described construction of these new water facilities would not cause significant environmental effects on the environment beyond the environmental effects that are addressed throughout this Initial Study regarding the proposed project as a whole. Implementation of the proposed project would have a ***less than significant*** impact relative to this topic.

Wastewater: The proposed project would be served by the MVSD, which provides wastewater collection, treatment, and disposal services to 4.73 square miles in the northeasterly portion of the City of Martinez and adjacent unincorporated lands to the northeast. The MVSD service area is contiguous on all sides with the Central Contra Costa Sanitary District (CCCSD). MVSD is an "island" within CCCSD's service area. The boundary of the MVSD and CCCSD service area is located along Center Street on the southern boundary of the project site.

The MVSD serves approximately 18,253 residents, with ~~908~~ 8,584 residential connections and 280 commercial and industrial connections. The MVSD service area population is expected to grow to between 24,500 and 25,322 over the next 20 to 25 years, an increase of approximately 29 to 33 percent. The MVSD includes a 3.2 mgd (design capacity) wastewater treatment plant, approximately ~~110~~ 72.5 miles of sewer main, includinge two miles of force main, and four pump stations. The Plant averages 1.007 mgd as measured in 2012 as part of the District's System Reliability Evaluation study. The primary disposal method is ~~tertiary~~ advanced secondary treatment and discharge into Peyton Slough and Moorhen Marsh area adjacent to MVSD's Plant.

Single family residential units in the City of Martinez have an estimated wastewater flow rate of 195 gallons per day per unit. The proposed project would generate an estimated 19,500 gallons per day (0.0195 MGD) to be treated at the Plant. Given that the current permitted capacity of the wastewater treatment plant is 3.2 MGD, and the current flow is 1.007 MGD, the Plant has adequate capacity to serve the 0.0195 MGD of wastewater generated by the proposed project.

The proposed project would result in the installation of an underground network of wastewater collection infrastructure within the project site. The construction of an underground network of wastewater collection infrastructure would not cause environmental effects beyond the limits of the project site. Physical disturbance of the project site would be initiated with grading. The

installation of an underground network of wastewater collection infrastructure would occur after grading during the trenching phase of construction. During this phase excavators/backhoes would dig trenches and workers would place wastewater collection pipe into the trench to an engineering design and specification. After the wastewater pipe is installed the excavators/backhoes would backfill the trench and the underground network of water distribution infrastructure would not be visible with the exception of manholes, cleanouts, and pipe stubs. The above described construction of these new wastewater facilities would not cause significant environmental effects on the environment beyond the environmental effects that are addressed throughout this Initial Study regarding the proposed project as a whole. Implementation of the proposed project would have a ***less than significant*** impact relative to this topic.

Response c): The project site is a nine-hole golf course, with club house, tavern, outbuildings and irrigation infrastructure. There is a single paved road providing access to the clubhouse and two parking lots, one paved, and one unpaved with gravel. A landscaping yard which contains piles of sand, soil and rock that are associated with golf course maintenance is located south of the clubhouse. Vegetation within the project site includes mixed planted woodland along the perimeter of the course, patches of non-native annual grassland, and golf course turf on the fairways and tees, interspersed with landscape vegetation. The golf course is irrigated nightly via a system of groundwater wells and City of Martinez water. The water is held in an artificial holding pond, which hosts a perimeter of wetland vegetation. There are a series of vegetated swales on site that convey water to the municipal storm drain system. These occur along the northern and eastern boundaries of the site. The swale along the northern boundary likely receives runoff from the pond as well as much of the northern portion of the site during rainy periods. A portion of it is perched against the fences and yards that abut the project site. A short section of eroded ditch near the northeast corner of the site drains golf course runoff to the municipal storm drain system. There is a concrete U-ditch that conveys water from the western hillside to the northwestern corner of the project site.

The proposed project will increase impervious surfaces throughout the project site. The proposed project would require the installation of storm drainage infrastructure to ensure that storm waters properly drain from the project site. The proposed storm drainage plan includes an engineered network of storm drain lines, manholes, inlets, catch basins, and bio-retention areas. The storm drainage plan was designed and engineered to ensure proper construction of storm drainage infrastructure to control runoff and prevent flooding, erosion, and sedimentation. The City Engineer reviews all storm drainage plans as part of the improvement plan submittal to ensure that all facilities are designed to the City's standards and specifications. The City Engineer also reviews all storm drainage plans to ensure that post-project runoff does not exceed pre-project runoff. The City Engineer's review of pre- and post-project runoff is intended to ensure that the capacity of the existing storm drainage system is not exceeded. This determination is ultimately made by the City Engineer during the improvement plan review and approval. Mitigation Measure Hydro-1 will require that post-project runoff is equal to or less than pre-project runoff, which would ensure that the proposed project would not substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site.

The proposed project would result in the installation of an underground network of storm drainage infrastructure within the project site. The construction of an underground network of storm drainage infrastructure would not cause environmental effects beyond the limits of the project site. Physical disturbance of the project site would be initiated with grading. The

installation of an underground network of storm drainage infrastructure would occur after grading during the trenching phase of construction. During this phase excavators/backhoes would dig trenches and workers would place stormwater collection pipe into the trench to an engineering design and specification. After the wastewater pipe is installed the excavators/backhoes would backfill the trench and the underground network of storm drainage infrastructure would not be visible with the exception of manholes, inlets, catch basins, bio-retention areas, and pipe stubs. The above described construction of these facilities would not cause significant environmental effects on the environment beyond the environmental effects that are addressed throughout this Initial Study regarding the proposed project as a whole. Implementation of the proposed project with Mitigation Measure Hydro-1 would have a ***less than significant*** impact relative to this topic.

Response d): Martinez provides water treatment and distribution services for residential, commercial, industrial, public and irrigation customers, as well as for fire protection uses. The City's sole source of water supply is untreated water purchased from Contra Costa Water District (CCWD). The City takes delivery of the water from the Martinez Reservoir, a terminal reservoir for the Contra Costa Canal. The City's water treatment facilities have a total filtration capacity of 14.7 million gallons per day (mgd). Average daily water use in 2006 was 5.2 mgd. According to the Contra Costa Water District Urban Water Management Plan (June 2011), single family residential units used an estimated 404 gallons per day in 2010. The proposed project would require 40,400 gallons per day. As such, the total filtration capacity of 14.7 million gallons per day is adequate capacity to serve the proposed project and would not require new or expanded facilities.

The City's water system includes eleven treated water storage reservoirs with a capacity of 9.6 million gallons (mg). The *Contra Costa LAFCO: Water and Wastewater Municipal Services Review for Central Contra Costa County* (2008) indicates that the City should have adequate water supplies to meet normal, single and multiple dry year periods through 2030 based on available supplies, CCWD activities to provide for reliable water supplies, and local water conservation. The proposed project would have sufficient water supplies available to serve the project from existing entitlements and resources. New or expanded entitlements are not needed. Implementation of the proposed project would have a ***less than significant*** impact relative to this topic.

Response e): The proposed project would be served by the MVSD, which owns and operates the ~~Mountain~~Mt. View Sanitary District Wastewater Treatment Plant (hereinafter the Plant) located at 3800 Arthur Road in unincorporated Contra Costa County near the City of Martinez, and its associated wastewater collection system (hereinafter collectively the Facility). The MVSD Plant has a current average dry weather design treatment capacity of 3.2 million gallons per day (MGD), and can treat peak wet weather flows up to 10.94 MGD. The current flow is estimated to be 1.007 MGD.

The MVSD serves approximately 18,253 residents, with ~~908~~ 8,584 residential connections and 280 commercial and industrial connections. The MVSD service area population is expected to grow to between 24,500 and 25,322 over the next 20 to 25 years, an increase of approximately 29 to 33 percent.

Single family residential units in the City of Martinez have an estimated wastewater flow rate of 195 gallons per day per unit. The proposed project would generate an estimated 19,500 gallons per day (0.0195 MGD) to be treated at the Plant. Given that the current permitted capacity of the Plant is 3.2 MGD and the current flow is 1.007 MGD, the Plant has adequate capacity to serve

the 0.0195 MGD of wastewater generated by the proposed project in addition to their existing commitments.

The collection system serving the proposed project consists of six inch sewer mains. The capacity of these downstream mains to serve the proposed project must be verified by the Project Engineer during the Improvement Plan preparation. If it is found that the downstream mains do not have capacity then the appropriate upsizing would be necessary. Because this engineering step is not performed until Improvement Plans are prepared, the potential exists for a lack of capacity under the existing conditions Implementation of the following mitigation measure would ensure that the proposed project would have a ***less than significant*** impact relative to this topic.

> ***Mitigation Measure Utilities-1:*** *Prior to the approval of Improvement Plans, the applicant shall study the capacity of downstream sewer mains. If it is found that capacity for the proposed project does not exist in the sewer mains, the applicant shall be responsible for upsizing the sewer mains to accommodate the capacity needed for the project. All capacity studies/calculations must be verified by the MVSD prior to approval. Additionally, any plans for upsizing must be approved by the MVSD.*

Response f): The City of Martinez's disposal and green waste services are handled by contract with Allied Waste Services. The City's contract provides for curbside recycling services, including green waste. Household hazardous waste (HHW) is handled through the HHW facility in Martinez, where residents must take their waste for proper disposal, although some hazardous waste, such as used oil, oil filters, and some electronic waste (televisions, computer monitors, keyboards, peripherals) can be placed for curbside pick-up. The *Contra Costa LAFCO: Water and Wastewater Municipal Services Review for Central Contra Costa County* (2008) states that the AB 939 diversion rate was 54% in 2004, and that a new system that focuses on capping disposal went into effect in 2009.

All non-recycled solid waste is processed at the Keller Canyon Landfill, which is a wholly-owned subsidiary of Allied Waste Industries. The Keller Canyon Landfill opened on May 7, 1992 as a Class II Landfill operating under permit number 07-AA-0032. The facility accepts municipal solid waste, non-liquid industrial waste, contaminated soils, ash, grit and sludges. Keller Canyon Landfill is closed to the public. Keller Canyon Landfill covers 2,600 acres of land; 244 acres are permitted for disposal. The site currently handles 2,500 tons of waste per day. The proposed project would generate an estimated 556.8 pounds per day (0.278 tons per day). The Keller Canyon Landfill is permitted to allow up to 3,500 tons of waste per day. This excess daily capacity is more than sufficient to serve the proposed project's estimated 0.278 tons per day.

The proposed project would be served by a landfill with sufficient permitted capacity to accommodate the project's estimated 0.278 tons per day solid waste disposal needs. Implementation of the proposed project would have a ***less than significant*** impact relative to this topic.

Response g): The Keller Canyon Landfill opened on May 7, 1992 as a Class II Landfill operating under permit number 07-AA-0032. The landfill has a composite liner system at the landfill designed to meet or exceed all state and federal regulations. The containment system consists of two feet of compacted clay with a maximum permeability of 1x10 -7 cm/sec covered by an 80-mil-thick high-density polyethylene (HDPE) textured geomembrane. Beneath the liner system is a one-foot thick layer of sand that intercepts groundwater and conveys it to an adjacent wetlands mitigation area. The leachate collection and removal system is located directly on top of the composite liner. This system consists of a 12 oz/yd 2-cushion geotextile, a

1-foot-thick granular layer and a 6 oz/yd 2 filter geotextile. HDPE pipes are located within the granular layer to increase the system's efficiency.

The landfill has a groundwater monitoring system that consists of 24 wells, 19 piezometers and 4 springs which are sampled or measured monthly, quarterly or annually. Leachate is sampled from the leachate holding tanks after 50,000 gallons have accumulated. The site has a sedimentation basin that is monitored during and after each rainfall or quarterly, whichever is greater. Radiation is monitored by radiation detectors located at the scalehouse. Landfill gas monitoring probes are located at 29 positions around the perimeter of the site.

The City of Martinez implements a Solid Waste and Recycling Program provides for the protection of public health, safety, and the environment through waste prevention, diversion, collection, transfer, and disposal services. City staff works with the City's franchised service provider, Allied Waste Disposal, along with the County and other local government agencies, to establish refuse, waste prevention, and recycling services designed to meet community needs and satisfy State waste reduction requirements.

The City provides a Single Stream ("Brown Cart") curbside recycling program for single- and multi-family residences. This allows residents to commingle ("mix") all household recyclables in their recycling cart for collection. Single family residences are given a brown 64 gallon wheeled cart, where all recyclables are placed. The cart is placed on the curb each week on garbage day for collection.

The City provides residents with the ability to recycle lawn clippings and other yard waste with their 96 gallon green recycling carts. Pick up is every other week on the same day as garbage collection. Acceptable Yard Waste includes grass clippings, brush, weeds and leaves, hay and straw, prunings, and tree trimmings.

The City provides an opportunity for residents who do their own auto upkeep to recycle their car batteries, used oil, and oil filters at the curb.

The goal of these programs is to make recycling and diversion more convenient for the residents of Martinez, encouraging greater participation which will result in a higher recycling and diversion rates.

The proposed project would not change the existing compliance measures implemented by the landfill, or cause the landfill to violate federal, state, and local statutes and regulations related to solid waste. Implementation of the proposed project would have a ***less than significant*** impact relative to this topic.

XVIII. MANDATORY FINDINGS OF SIGNIFICANCE

	Potentially Significant Impact	*Less Than Significant with Mitigation Incorporation*	*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 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		
c) Does the project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?		X		

Responses to Checklist Questions

Response a): This Initial Study includes an analysis of the project impacts associated with aesthetics, agricultural and forest resources, air quality, biological resources, cultural resources, geology and soils, greenhouse gas emissions, hazards and hazardous materials, hydrology and water quality, land use and planning, mineral resources, noise, population and housing, public services, recreation, transportation/traffic, and utilities and service systems. The analysis covers a broad spectrum of topics relative to the potential for the proposed project to have environmental impacts. This includes the potential for the proposed project to substantially 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. It was found that the proposed project would have either no impact, a less than significant impact, or a less than significant impact with the implementation of mitigation measures. For the reasons presented throughout this Initial Study, the proposed project would not substantially 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. With the implementation of mitigation measures presented in this Initial Study, the proposed project would have a ***less than significant*** impact relative to this topic.

Response b): This Initial Study includes an analysis of the project impacts associated with aesthetics, agricultural and forest resources, air quality, biological resources, cultural resources, geology and soils, greenhouse gas emissions, hazards and hazardous materials, hydrology and water quality, land use and planning, mineral resources, noise, population and housing, public

services, recreation, transportation/traffic, and utilities and service systems. The analysis covers a broad spectrum of topics relative to the potential for the proposed project to have environmental impacts. It was found that the proposed project would have either no impact, a less than significant impact, or a less than significant impact with the implementation of mitigation measures. These mitigation measures would also function to reduce the project's contribution to cumulative impacts.

The project would increase the population and use of public services and systems; however, it was found that there is adequate capacity to accommodate the project.

The project applicant has proposed General Plan and Zoning amendments (Land Use Designation and Policy Text Amendments) to ensure that the proposed project does not conflict with the General Plan. If the General Plan Amendments were approved by the City Council, the proposed project and General Plan would be consistent.

There are no significant cumulative or cumulatively considerable effects that are identified associated with the proposed project after the implementation of all mitigation measures presented in this Initial Study. With the implementation of all mitigation measures presented in this Initial Study, the proposed project would have a ***less than significant*** impact relative to this topic.

Response c): The construction phase could affect surrounding neighbors through increased air emissions, noise, and traffic; however, the construction effects are temporary and are not substantial. The operational phase could also affect surrounding neighbors through increased air emissions, noise, and traffic; however, mitigation measures have been incorporated into the proposed project that would reduce the impacts to a less than significant level. The proposed project would not cause substantial adverse effects on human beings. Implementation of the proposed project would have a ***less than significant*** impact relative to this topic.

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