

**CITY OF MARTINEZ
PLANNING DIVISION**



JARDINE ON MORELLO

**INITIAL STUDY / MITIGATED NEGATIVE
DECLARATION**

July 2016



1501 SPORTS DRIVE • SUITE A • SACRAMENTO • CA • 95834
OFFICE 916.372.6100 • FAX 916.419.6108

TABLE OF CONTENTS

A. BACKGROUND 2

B. SOURCES..... 3

C. ENVIRONMENTAL FACTORS POTENTIALLY AFFECTED 4

D. DETERMINATION 5

E. BACKGROUND AND INTRODUCTION..... 6

F. PROJECT DESCRIPTION 6

G. ENVIRONMENTAL CHECKLIST 16

I. AESTHETICS.....17

II. AGRICULTURE AND FOREST RESOURCES.....22

III. AIR QUALITY.....24

IV. BIOLOGICAL RESOURCES.....37

V. CULTURAL RESOURCES.....43

VI. GEOLOGY AND SOILS.....49

VII. GREENHOUSE GAS EMISSIONS.....53

VIII. HAZARDS AND HAZARDOUS MATERIALS.....56

IX. HYDROLOGY AND WATER QUALITY.....62

X. LAND USE AND PLANNING.....70

XI. MINERAL RESOURCES.....72

XII. NOISE.....73

XIII. POPULATION AND HOUSING.....85

XIV. PUBLIC SERVICES.....86

XV. RECREATION.....89

XVI. TRANSPORTATION AND CIRCULATION.....90

XVII. UTILITIES AND SERVICE SYSTEMS.....99

XVIII. MANDATORY FINDINGS OF SIGNIFICANCE.....103

APPENDICES

- Appendix A: Air Quality and Greenhouse Gas Emissions Assessment
- Appendix B: Biological Resources Report
- Appendix C: Arborist Report
- Appendix D: Historic Resource Assessment Report
- Appendix E: Geotechnical Investigation
- Appendix F: Preliminary Storm Water Control Plan
- Appendix G: Phase I Environmental Site Assessments
- Appendix H: Environmental Noise Assessment
- Appendix I: Transportation Impact Analysis

INITIAL STUDY

July 2016

A. BACKGROUND

1. Project Title: Jardine on Morello
2. Lead Agency Name and Address: City of Martinez
Planning Division
525 Henrietta Street
Martinez, CA 94553
3. Contact Person and Phone Number: Cindy Gnos
Contract Planner
(916) 372-6100
4. Project Location: 42, 44, 54, and 68 Morello Avenue
Martinez, CA
5. Project Sponsor's Name and Address: DeNova Homes
1500 Willow Pass Court
Concord, CA 94520
(925) 685-0110
6. General Plan Designation: Single Family Residential (R0-6)
7. Zoning: Single Family Residential (R-10)
8. Project Description Summary:

The proposed project includes approval of a General Plan Amendment, Rezone, and Tentative Subdivision Map to allow the development of 49 single-family, detached homes and a community garden with a picnic area on the project site. The development would include nine different plan combinations, ranging from 1,609 to 1,971 square feet. The approximately five-acre site is identified by seven legal parcels located at 42, 44, 54, and 68 Morello Avenue in northern Martinez, California, that are designated and zoned for single-family residential development. The southern portion of the site contains an abandoned church and school with buildings, extensive pavement, and a softball field. The northern portion of the site contains two existing homes. A constructed storm drain ditch runs through the site from west to east and then runs north along the east edge of the site. The existing on-site development would be demolished and the storm drain ditch would be piped beneath the proposed roadways as part of the project.

B. SOURCES

The following documents are referenced information sources utilized by this analysis:

1. Abrams Associates Traffic Engineering, Inc. *Transportation Impact Analysis, Morello Avenue Residential Project, City of Martinez*. March 8, 2016.
2. Advanced GeoEnvironmental, Inc. *Phase I Environmental Site Assessment, Morello Avenue Baptist Church*. February 10, 2015.
3. Advanced GeoEnvironmental, Inc. *Phase I Environmental Site Assessment, Morello Avenue Properties*. June 17, 2015.
4. Baefsky & Associates. *Arborist Report for Trees Located on and Adjacent to 68, 42-44 & 54 Morella Ave., Martinez, CA*. August 28, 2015.
5. Bay Area Air Quality Management District. *California Environmental Quality Act Air Quality Guidelines*. May 2011.
6. Bay Area Air Quality Management District. *Recommended Methods for Screening and Modeling Local Risks and Hazards*. May 2012.
7. Bruce Leslie, Bond Coordinator, Martinez Unified School District. *Request for Review and Comment; 42, 44, 54, and 68 Morello Avenue*. March 25, 2016.
8. California Air Resources Board. *Air Quality and Land Use Handbook: A Community Health Perspective*. April 2005.
9. CalRecycle. *Facility/Site Summary Details: Keller Canyon Landfill (07-AA-0032)*. Available at: <http://www.calrecycle.ca.gov/SWFacilities/Directory/07-AA-0032/Detail/>. Accessed May 2016.
10. CalREcycle. *Per Capita Disposal Rate Trends Martinez*. Available at: <http://www.calrecycle.ca.gov/LGCentral/Reports/Viewer.aspx?P=JurisdictionID%3d292%26ReportName%3dDPGraphPopEmpNumbers%26ShowParameters%3dfalse%26AllowNullParameters%3dFalse>. Accessed May 2016.
11. City of Martinez. *Draft General Plan 2035*. September 2015.
12. City of Martinez. *Martinez General Plan*. 1973.
13. De Novo Planning Group. *Draft Environmental Impact Report for the Martinez General Plan (SCH#2015052064)*. September 11, 2015.
14. ENVIRON International Corporation and the California Air Districts. *California Emissions Estimator Model User's Guide Version 2013.2*. July 2013.
15. Environmental Science Associates (ESA). *City of Martinez Climate Action Plan*. June 2009.
16. Federal Emergency Management Agency. *Flood Insurance Rate Map, Panel ID 06013C0088G*. September 30, 2015.
17. Illingworth & Rodkin, Inc. *Jardine on Morello Project Air Quality & Greenhouse Gas Emissions Assessment*. December 22, 2015.
18. Illingworth & Rodkin, Inc. *Jardine on Morello Project Environmental Noise Assessment*. January 19, 2016.
19. Mark Seedall, Contra Costa Water District. *Comment Letter Regarding the Jardine Subdivision Project*. April 1, 2016.
20. Meridian Associates, Inc. *Preliminary Hydrology Study for Jardine, Subdivision 9409*. April 13, 2016.

21. Meridian Associates, Inc. *Preliminary Storm Water Control Plan for Subdivision 9409 – Jardine, Martinez, California*. January 19, 2016.
22. Moore Biological Consultants. *Biological Resources Assessment at the 5.2+/- Acre “Jardine (Subdivision 9409)”*, Martinez, California. September 3, 2015.
23. Peter Wollman, Mt. View Sanitary District. *Subdivision 9404, Vesting Tentative Map, Jardine MVSD Conditions of Approval*. March 17, 2016.
24. Republic Services. *Contra Costa County Community Partner Services*. Available at: <http://site.republicservices.com/site/pacheco-ca/en/pages/community-partner.aspx>. Accessed May 2016.
25. Sacramento Metropolitan Air Quality Management District. *Guide to Air Quality Assessment in Sacramento County*. December 2009.
26. State of California. Division of Mines and Geology. *Generalized Mineral Land Classification Map of the South San Francisco Bay Production—Consumption Region*. Published 1996.
27. Stevens, Ferrone & Bailey Engineering Company, Inc. *Geotechnical Investigation, Morello Avenue Residential Development*. June 19, 2015.
28. U.S. Census Bureau. *QuickFacts, Martinez city, California*. Available at: <http://www.census.gov/quickfacts/table/PST045214/0646114>. Accessed May 2016.
29. WSA, Inc. *Historic Resource Assessment Report, 42, 44, and 68 Morello Avenue, Martinez, Contra Costa County, California*. March 2016.

C. ENVIRONMENTAL FACTORS POTENTIALLY AFFECTED

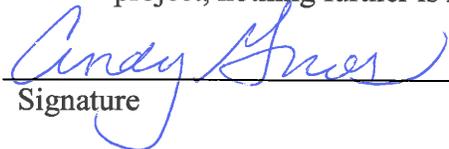
The environmental factors checked below would be potentially affected by this project, involving at least one impact that is a “Potentially Significant Impact” as indicated by the checklist on the following pages.

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

D. DETERMINATION

On the basis of this initial study:

- I find that the Proposed Project COULD NOT have a significant effect on the environment, and a NEGATIVE DECLARATION will be prepared.
- I find that although the Proposed Project could have a significant effect on the environment, there will not be a significant effect in this case because revisions in the project have been made by or agreed to by the applicant. A MITIGATED NEGATIVE DECLARATION will be prepared.
- I find that the Proposed Project MAY have a significant effect on the environment, and an ENVIRONMENTAL IMPACT REPORT is required.
- I find that the proposed project MAY have a “potentially significant impact” or “potentially significant unless mitigated” on the environment, but at least one effect 1) has been adequately analyzed in an earlier document pursuant to applicable legal standards, and 2) has been addressed by mitigation measures based on the earlier analysis as described on attached sheets. An ENVIRONMENTAL IMPACT REPORT is required, but it must analyze only the effects that remain to be addressed.
- I find that although the proposed project could have a significant effect on the environment, because all potentially significant effects (a) have been analyzed adequately in an earlier EIR pursuant to applicable standards, and (b) have been avoided or mitigated pursuant to that earlier EIR, including revisions or mitigation measures that are imposed upon the proposed project, nothing further is required.



Signature

Cindy Gnos

Printed Name

7-5-14

Date
Contract Planner
City of Martinez

For

E. BACKGROUND AND INTRODUCTION

This Initial Study/Mitigated Negative Declaration (IS/MND) identifies and analyzes the potential environmental impacts of the Jardine on Morello Project (proposed project). The information and analysis presented in this document are organized in accordance with the order of the CEQA checklist in Appendix G of the CEQA Guidelines. If the analysis provided in this document identifies potentially significant environmental effects of the project, mitigation measures that should be applied to the project are prescribed.

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

The currently adopted *Martinez General Plan* is dated 1973. The City of Martinez is in the process of updating their General Plan. On September 15, 2015, the City of Martinez released a Notice of Availability for the City of Martinez 2035 General Plan and associated Draft Program Environmental Impact Report (EIR). The General Plan EIR is a program EIR, prepared pursuant to Section 15168 of the CEQA Guidelines (Title 14, California Code of Regulations, Sections 15000 *et seq.*). The EIR includes an analysis of the full implementation of the City of Martinez 2035 General Plan, identifies the potential impacts, and sets forth measures necessary to mitigate significant adverse impacts associated with the General Plan. The City of Martinez 2035 General Plan addresses and updates all elements of the current General Plan. The updated General Plan and associated EIR have not yet been adopted or certified by the City. Because, as discussed in further detail below, the proposed project entitlements include a General Plan Amendment, the environmental analysis contained in this IS/MND cannot be tiered from the City's currently adopted or proposed General Plan EIR in accordance with CEQA Guidelines Section 15152. Rather, the analysis herein is based on project-specific technical studies.

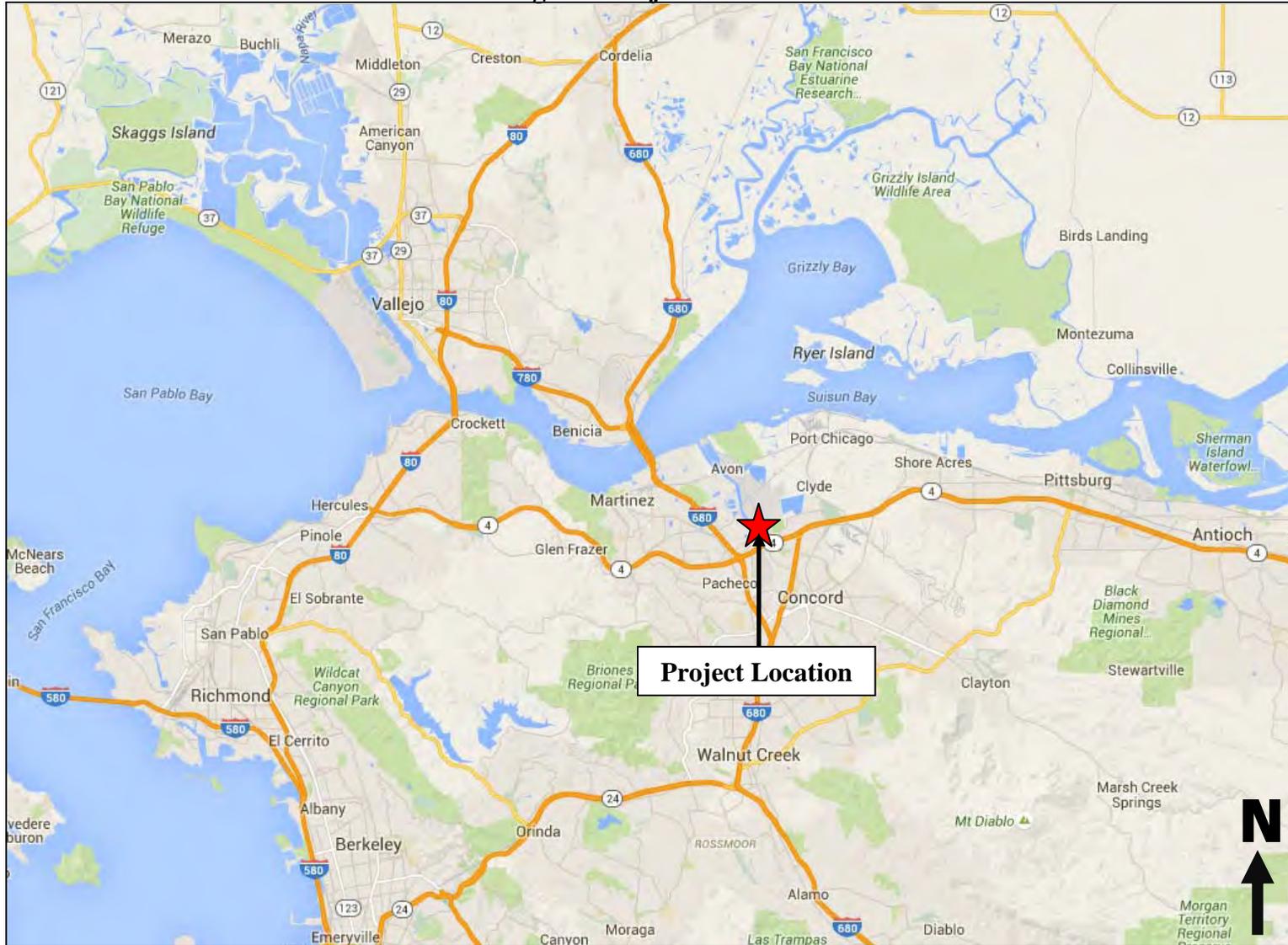
F. PROJECT DESCRIPTION

A description of the proposed project, including the location and setting, components, and discretionary actions, is provided below.

Project Location and Setting

The proposed project site consists of seven parcels, totaling approximately five acres, located at 42, 44, 54, and 68 Morello Avenue in northern Martinez, California (see Figure 1, Regional Project Location). The project site is identified by the Contra Costa County Assessor as Assessor's Parcel Numbers (APNs) 161-212-019, -020, -021, -022, -024, -037, and -038.

Figure 1
Regional Project Location



An Ace Hardware is located to the north of the site, with Pacheco Boulevard located further north. The City of Martinez City Limit Line and planning area boundary is located along the eastern border of the project site. Single-family residences are located east and south of the project site. Morello Avenue is located west of the site with single-family residences beyond (see Figure 2, Project Vicinity Map). Two existing single-family residences are located along Morello Avenue on the western boundary of the site along, as shown in Figure 2.

The project site is currently designated by the City of Martinez General Plan as R0-6 and is within the City of Martinez R-10 residential zoning district. Two abandoned buildings that were previously the Morello Avenue Baptist Church and the New Vistas Christian School are located on the southern portion of the site, along with associated pavement and a softball field. Two existing single-family residences are located in the northern portion of the site, along with related structures, an unpaved storage yard, trees, and vegetation. The remainder of the site predominantly consists of annual grassland that has been moderately to highly disturbed due to grading and other human activities. An existing drainage currently runs through the project site from west to east and then north along the eastern edge of the site, which would connect to a new 48-inch storm drain pipe that would replace the existing 36-inch storm drain pipe located at the northeastern corner of the site and crosses Pacheco Boulevard to an outfall 150 feet north of Pacheco Boulevard.

Proposed Project Components

The proposed project would involve the development of single-family, detached residences and a community garden with a picnic area on an approximately five-acre site. Further details regarding each of the proposed project components are described in further detail below.

General Plan Amendment

The project site is currently designated by the City of Martinez General Plan as R0-6, which allows for single-family homes with a density of up to six dwelling units per acre. The proposed project would involve the development of 49 single-family homes over the site's approximately five acres, which equates to a density of approximately 10 dwelling units per acre. Because the proposed project would have a higher density than allowable under the City's existing land use designation for the site, a General Plan Amendment would be required. The proposed project requests a General Plan Amendment to modify the land use designation for the site from R0-6 to R7-12, which would allow single-family development of densities between seven and 12 dwelling units per acre.

Rezone

The project site has an existing City of Martinez zoning designation of R-10 Single Family Residential, which allows for single-family residential development with a minimum lot size of 10,000 square feet. The proposed project would involve the development of 49 single-family homes on varying sized lots ranging from 2,400 square feet to 4,862 square feet, with an average lot size of 2,893 square feet. Because the proposed project would not meet the minimum lot size requirement for an R-10 Single Family Residential zone, the proposed project includes a request for rezone of the site to a Planned Unit Development (PUD) zone.

Figure 2
Project Vicinity Map



The PUD zone would allow for the establishment of development standards specific to the proposed project, subject to review and approval by the City, rather than compliance with the standard zoning requirements for the R-10 residential zoning district.

Tentative Subdivision Map

The Tentative Subdivision Map includes single-family, detached lots, a central roadway with connections to courts, and storm drainage and utility improvements (see Figure 3, Tentative Subdivision Map). The various components of the Tentative Subdivision Map are discussed in further detail below.

Single-Family Development

The Tentative Subdivision Map contains 49 single-family detached lots. Primary access to the subdivision would be provided from Morello Avenue by means of a new connection on the southern portion of the site opposite Gilrix Drive. The proposed internal roadway network would consist of a central roadway, Jardine Way, and 10 courts for access to the residences. Emergency vehicle access would be provided at the northern border of the site through an easement along the Ace Hardware property. A secondary entrance for emergency vehicles only would be provided on Kennedy Way at De Normandie Way.

The proposed residences would include a mixture of three varying plan types with three varying elevations each, for a total of nine different plan combinations. The elevation styles would be a mix of Cottage, Regency, and Mediterranean styles (see Figure 4, Front Elevation Styles). The plan sizes would range from 1,609 square feet to 1,971 square feet.

The existing development on the project site would be demolished and removed as part of the proposed project. Mass grading of the site would create pads for the proposed residences and garden area, as well as grading for streets, utilities, and stormwater detention basins.

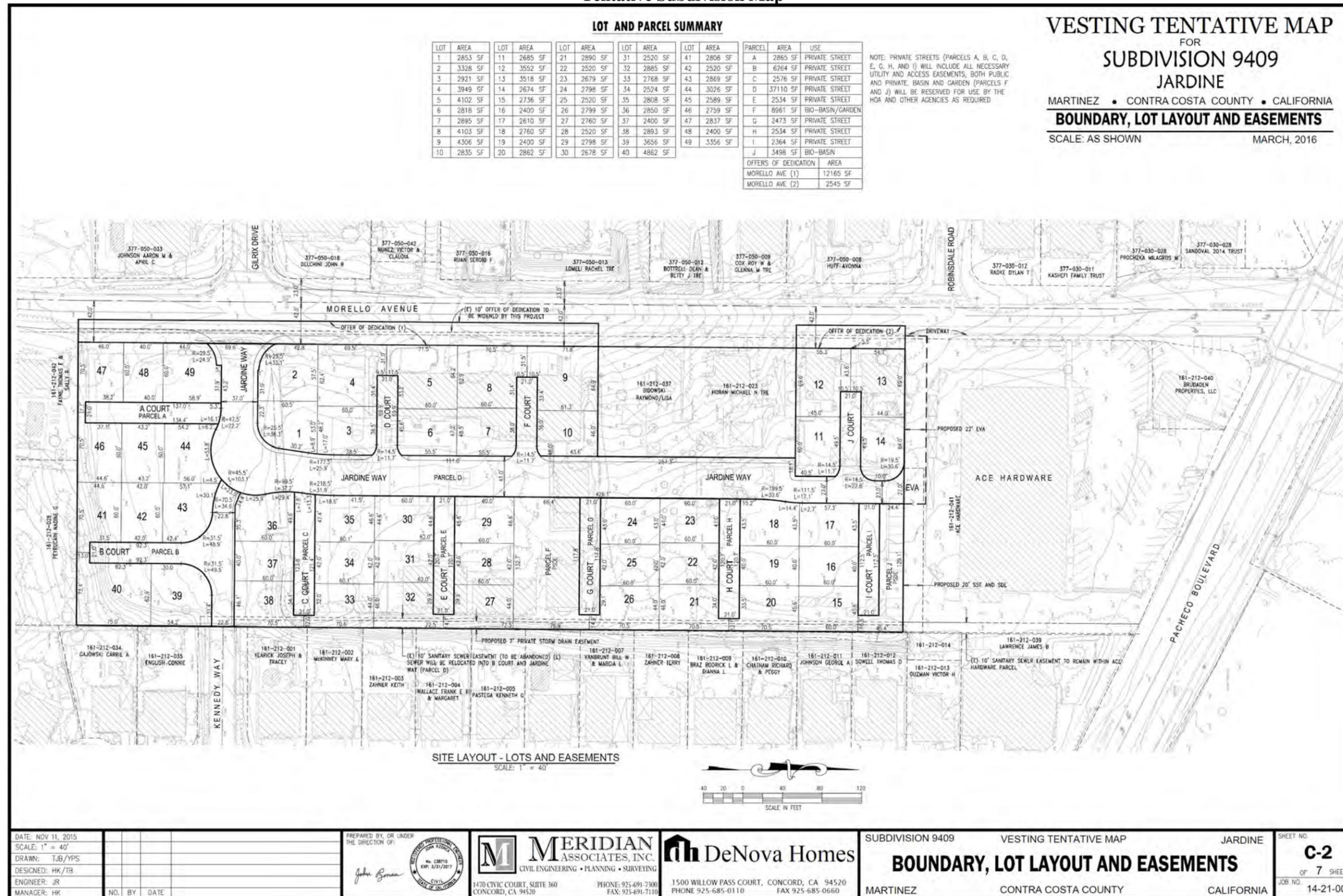
Landscaping

As could be seen in the Preliminary Landscaping Plan (see Figure 5), the project would include a common area that would be used as a community garden and picnic area near the center of the site. Several planting beds, benches, a tool shed, and other features would be included in the community garden for use by future residents. All front yard and streetscape landscaping has been designed to be drought-tolerant with low water usage plants and drip irrigation systems, consistent with Chapter 22.35, Water Conservation in Landscape, of the City's Municipal Code.

Water, Sewer, and Stormwater Infrastructure

The proposed project would connect to existing City water, sewer, and storm drainage lines located along Morello Avenue. Water service would be provided by the Contra Costa Water District (CCWD) and sanitary sewer service would be provided by the Mountain View Sanitary District (MVSD). The water, sewer, and storm drainage lines for the proposed project would connect near the intersection of Morello Avenue and Jardine Way and would be located within Jardine Way and the internal roadway network.

Figure 3
Tentative Subdivision Map



DATE: NOV 11, 2015 SCALE: 1" = 40' DRAWN: TJB/YPS DESIGNED: HK/TB ENGINEER: JR MANAGER: HK	PREPARED BY, OR UNDER THE DIRECTION OF: 	 MERIDIAN ASSOCIATES, INC. CIVIL ENGINEERING • PLANNING • SURVEYING 1470 CIVIC COURT, SUITE 360 CONCORD, CA 94520 PHONE: 925-491-7300 FAX: 925-691-7110	 DeNova Homes 1500 WILLOW PASS COURT, CONCORD, CA 94520 PHONE 925-685-0110 FAX 925-685-0660	SUBDIVISION 9409 VESTING TENTATIVE MAP JARDINE BOUNDARY, LOT LAYOUT AND EASEMENTS MARTINEZ CONTRA COSTA COUNTY CALIFORNIA	SHEET NO. C-2 OF 7 SHEETS JOB NO. 14-21-00
---	---	--	---	--	---

Figure 4
Front Elevation Styles



PLAN 2A - MEDITERRANEAN
Scheme - cc



NOTE: Artist's Conception. Colors
Materials and Application May Vary.

PLAN 2B - REGENCY
Scheme - ee



PLAN 2C - COTTAGE
Scheme - hh



PLAN 3A - MEDITERRANEAN
Scheme - aa



NOTE: Artist's Conception. Colors
Materials and Application May Vary.

PLAN 3B - REGENCY
Scheme - ff



PLAN 3C - COTTAGE
Scheme - ii



PLAN 1A - MEDITERRANEAN
Scheme - bb



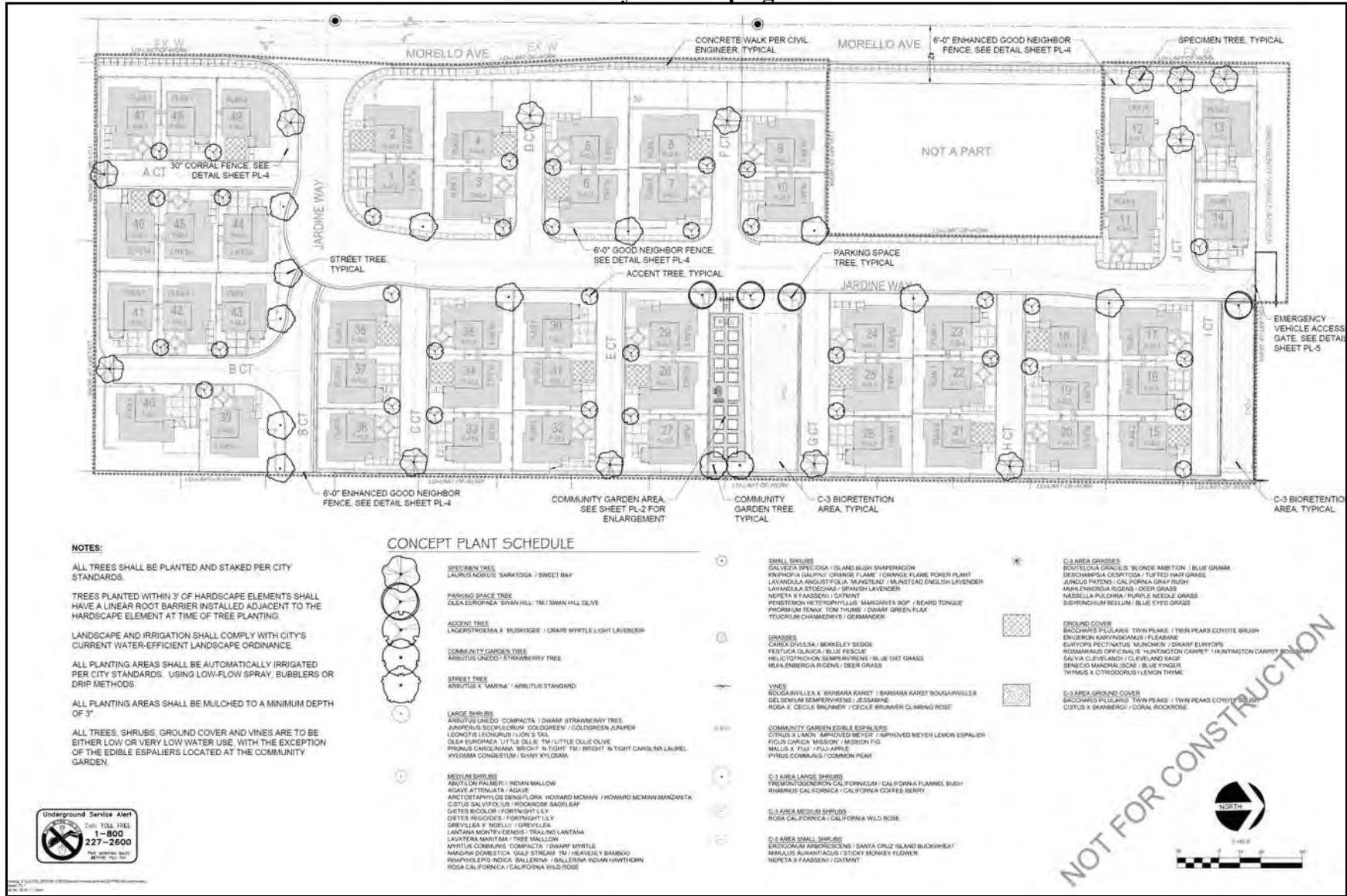
NOTE: Artist's Conception. Colors
Materials and Application May Vary.

PLAN 1B - REGENCY
Scheme - dd



PLAN 1C - COTTAGE
Scheme - gg

Figure 5
Preliminary Landscaping Plan



A portion of the existing sewer line along Morello Avenue would be upgraded from an eight-inch pipe to a 10-inch pipe. The sewer line would flow through the project site and connect to an existing sewer line at the northeastern corner of the project site. The existing sewer line and easement along the eastern boundary of the site would be abandoned and a new easement through the Ace Hardware site for the sewer line and connection at the northeastern border of the site would be required.

The existing on-site drainage would be abandoned as part of the mass grading of the site. Stormwater associated with the proposed project would be collected through a series of new storm drains located throughout the site that would convey the stormwater primarily to a main 36-inch storm drain to be located within Jardine Way and along the northeastern border of the site through a new easement on the Ace Hardware site. The proposed project would include upgrading the existing 36-inch storm drain pipe located at the northeastern corner of the project site to a 48-inch pipe at the same location. Improvements would include 150 feet of new 48-inch pipe downstream of the project. The City Engineer and Contra Costa County Flood Control District may consider other alternative improvements should the project applicant choose an alternative final design for the project, such as a parallel storm drain pipe to accommodate the proposed project's increase in stormwater flows or an expanded on-site stormwater drainage system; however, this IS/MND assumes the proposed project would include 150 feet of a new 48-inch stormwater pipe.

The new 48-inch stormwater pipe would cross Pacheco Boulevard to an outfall 150 feet north of Pacheco Boulevard. In addition, a retaining wall would be placed within the existing storm drainage ditch located along the eastern border of the site in order to separate the proposed project stormwater runoff from the adjacent development stormwater runoff. Stormwater runoff associated with the adjacent development would continue to flow to the existing drainage ditch. However, any stormwater runoff associated with the proposed project site would be piped and conveyed to the new 48-inch storm drain pipe located at the northeastern border of the project site. Thus, stormwater associated with the proposed project site would not be collected or conveyed using the existing ditch.

Lot Line Adjustment

The proposed project would require a lot line adjustment for the southeastern-most portion of the project site (see Figure 6). The aforementioned portion of the site is currently owned by Bidowski as part of APN 161-212-037. The lot line adjustment would transfer said portion of land into Brudaden Properties, LLC ownership as part of APN 161-212-024.

Design Review

In accordance with the City of Martinez Municipal Code, Chapter 22.34 each application for a building permit to construct or alter the exterior of a structure is subject to architectural and site design review by the Community Development Department prior to issuance of the permit. The design review process is intended to foster appropriate design character through consideration of aesthetic and functional relationships to surrounding development. The City would consider the proposed project designs shown in Figure 4 for consistency with the surrounding area.

Figure 6
Lot Line Adjustment



Discretionary Actions

Implementation of the proposed project would require the following discretionary actions by the City of Martinez:

- Approval of a General Plan Amendment;
- Approval of a Rezone;
- Approval of a Tentative Subdivision Map;
- Approval of a Lot Line Adjustment; and
- A Design Review.

G. ENVIRONMENTAL CHECKLIST

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

For this checklist, the following designations are used:

Potentially Significant Impact: An impact that could be significant, and for which no mitigation has been identified. If any potentially significant impacts are identified, an EIR must be prepared.

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

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

No Impact: The project would not have any impact.

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

Discussion

a,b. The City of Martinez is located in the north-central portion of Contra Costa County. Martinez is largely defined by the open space areas to the north, west, and south of the City. The open spaces provide City and community identity by offering visual relief from continuous urbanization. The City of Martinez has recognized views of the City’s ridgelines and open space areas as important visual resources to be preserved, but does not designate any scenic vistas. Examples of typical scenic vistas would include views of mountain ranges, valleys, ridgelines, or bodies of water. In general, a project’s impact to a scenic vista would occur if development of the project would substantially change or remove a scenic vista. The City’s adopted General Plan does not contain any policies that specifically address scenic vistas, nor does the adopted General Plan define or identify any scenic vistas. However, the adopted General Plan does contain Goal 30.24, which sets the goal of protecting scenic vistas, but does not define or identify scenic vistas within the Planning Area.

The project site is relatively flat, is not located along a ridgeline or on a hillside, is not in an open space area, contains existing development including residential and commercial land uses, and is surrounded by other existing development. Due to the currently developed and disturbed nature of the site and surrounding area, views that would be considered of high scenic value are not offered on the project site or in the immediate vicinity. Overall, the proposed project would not have any effects on a scenic vista or scenic resources.

The City of Martinez General Plan Update designates certain sections of roadways as scenic roadways, including, but not limited to, portions of State Route (SR) 4, Alhambra Avenue, Alhambra Valley Road, and Reliez Valley Road. The proposed project is not located in the immediate vicinity of any of the locally-designated scenic roadways and is not visible from any such roadway. According to the California Scenic Highway Mapping System, two highways in Contra Costa County are officially-designated State scenic highway corridors: Interstate 680 (I-680), from the Alameda County line to the junction with SR 24; and SR 24

from the east portal of the Caldecott tunnel to I-680 near Walnut Creek.¹ Neither of the aforementioned corridors provides views of Martinez or the immediate surrounding areas. Accordingly, the proposed project is not located near or in view from any State scenic highway.

Based on the above, the proposed project would not have a substantial adverse effect on a scenic vista or substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a State scenic highway. Therefore, impacts related to such would be considered *less than significant*.

- c. Two abandoned buildings that were previously the Morello Avenue Baptist Church and the New Vistas Christian School are located on the southern portion of the site, along with associated pavement and a softball field. Two existing single-family residences are located in the northern portion of the site, along with related buildings, an unpaved storage yard, trees, and vegetation. The remainder of the site predominantly consists of annual grassland that has been moderately to highly disturbed due to grading and other human activities. In addition, the project site is predominantly surrounded by existing single-family residential development, with an existing commercial use to the north.

Due to the existing on-site development, current views of the site are predominantly of the existing on-site homes, buildings, and associated structures and pavement, with the exception of the annual grassland on the southern portion of the site. Figure 7 is representative of the majority of the current views offered of the site. Figure 8 presents the current view of the site offered from Morello Avenue near the southwestern corner of the site looking northeast. The proposed project would slightly modify the existing visual character of the site by converting the currently vacant church and school buildings, and the currently undeveloped and disturbed grassland portions of the site, to a single-family residential development. However, the proposed project would be considered consistent with the existing single-family residential development on-site and in the immediate area.

In addition, although a General Plan Amendment is proposed as part of the project to allow for the density proposed, the project site has been planned by the City for single-family residential uses. The proposed project includes a request for rezone of the site to a PUD zone, which would allow for the establishment of development standards specific to the proposed project. The development standards established for the proposed project would be prepared in coordination with, and subject to review and approval by, the City of Martinez in order to ensure that the proposed project is designed consistent with City standards, the architecture of surrounding development and/or other single-family residential development within the City, and high quality development. The City would consider the proposed project designs shown in Figure 4 for consistency with the established development standards and surrounding development. Consistency with the established development standards, which would be verified by the City's Design Review process, would reduce any potential for the project to degrade the existing visual character or quality of the site or surrounding area.

¹ California Department of Transportation. California Scenic Highway Mapping System. Available at: http://www.dot.ca.gov/hq/LandArch/16_livability/scenic_highways/. Accessed April 2016.

Figure 7
Existing View of Site from Morello Avenue Looking Southeast



Figure 8
Existing View of Site from Morello Avenue Looking Northeast



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

- d. The project site contains existing development including residential and commercial land uses and is surrounded by other existing development. Accordingly, sources of light and glare currently exist on the project site and in the immediate surrounding area. The proposed project would introduce a greater intensity of development on the project site than what currently exists, which, in turn, would result in an increase in intensity of light and glare sources. However, due to the predominantly developed nature of the area, the increase in light and glare sources would not be expected to substantially increase the potential for sky glow. The light and glare associated with the proposed project site would be typical of suburban residential areas and would be consistent with the surrounding developed area. In addition, the project site has been planned by the City for single-family residential uses.

As discussed above, as part of the proposed rezone to a PUD zone, project-specific development standards would be established in coordination with, and subject to review and approval by, the City of Martinez, which would ensure that the proposed project is designed consistent with City standards, the architecture of surrounding development and/or other single-family residential development within the City. Consistency with the established development standards would be verified by the City's Design Review process. As part of the Design Review process, the City would review project plans for consistency with City policies, as well as the criteria and standards set forth in Section 22.34.045 of the City's Municipal Code. The adopted City of Martinez General Plan does not currently contain any policies specific to light and glare impacts. However, one of the City's criteria and standards included in Section 22.34.045 of the City's Municipal Code requires that projects have exterior lighting appropriately designed with respect to convenience, safety, and effect on occupants as well as neighbors. Accordingly, the City's Design Review process would ensure that the proposed project would be adequately designed to avoid potential light and glare effects on neighboring properties.

In order to further ensure that the project is designed to minimize the effects of light and glare on day and nighttime views in the area, the mitigation measures below shall be implemented. Without implementation of mitigation, the proposed project's increase in light and glare could be considered a *potentially significant* impact.

Mitigation Measure(s)

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

- I-1. *In conjunction with the submittal of Improvement Plans, the applicant shall submit a lighting plan for review and approval by the City of Martinez Community Development Department. The lighting plan shall indicate the provision of shielding for all light fixtures to avoid nighttime lighting spillover effects on adjacent properties and into the night sky. The lighting plan shall also address limiting light trespass and glare through the use of*

shielding and directional lighting methods including, but not limited to, fixture location, design, and height. The applicant shall implement the approved lighting plan in conjunction with development of the proposed project.

- I-2. *Prior to issuance of Building Permits, the plans shall show the incorporation of 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 of Martinez Community Development Department for review and approval.*

II. AGRICULTURE AND FOREST RESOURCES. <i>Would the project:</i>	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	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 Program of the California Resources Agency, to non-agricultural use?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	✘
b. Conflict with existing zoning for agricultural use, or a Williamson Act contract?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	✘
c. Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code section 12220(g)), timberland (as defined by Public Resources Code section 4526), or timberland zoned Timberland Production (as defined by Government Code section 51104(g))?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	✘
d. Result in the loss of forest land or conversion of forest land to non-forest use?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	✘
e. Involve other changes in the existing environment which, due to their location or nature, could individually or cumulatively result in loss of Farmland to non-agricultural use?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	✘

Discussion

- a.e. The project area is designated as Urban and Built-Up Land on the Contra Costa County Important Farmland 2010 map. Urban and Built-Up Land is occupied by structures with a building density of at least one unit to 1.5 acres, or approximately six structures to a ten-acre parcel. The project area is currently developed with residential and commercial uses. Agricultural operations do not exist in the project vicinity, and agriculture could not be conducted in an economical manner on the property, given the project location and surrounding uses. The project site is designated and zoned for residential uses and development of this area was contemplated in the City’s 1973 General Plan. As such, development of the proposed project would not convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance to a non-agricultural use. Therefore, ***no impact*** related to agricultural resources would occur.

- b. The project site is not under Williamson Act contract, nor is the site zoned for agricultural use. The current zoning designation for the project site is R-10. Therefore, the project would have ***no impact*** with respect to conflicting with agricultural zoning or Williamson Act contracts.

- c,d. The project site is not considered forest land (as defined in Public Resources Code section 12220[g]), timberland (as defined by Public Resources Code section 4526), and is not zoned Timberland Production (as defined by Government Code section 51104[g]). Therefore, the

proposed project would have *no impact* with regard to conversion of forest land or any potential conflict with forest land, timberland, or Timberland Production zoning.

III. AIR QUALITY. <i>Would the project:</i>	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less- Than- Significant Impact	No Impact
a. Conflict with or obstruct implementation of the applicable air quality plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b. Violate any air quality standard or contribute substantially to an existing or projected air quality violation?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
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)?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d. Expose sensitive receptors to substantial pollutant concentrations?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
e. Create objectionable odors affecting a substantial number of people?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Discussion

The following discussion is predominantly based on the Air Quality and Greenhouse Gas Emissions Assessment prepared for the proposed project by Illingworth & Rodkin, Inc. (see Appendix A to this IS/MND).²

- a. The City of Martinez is located within the San Francisco Bay Area Air Basin (SFBAAB), which is under the jurisdiction of the Bay Area Air Quality Management District (BAAQMD). The SFBAAB is currently designated as a nonattainment area for State and federal ground-level ozone, State and federal fine particulate matter 2.5 microns in diameter (PM_{2.5}), and State respirable particulate matter 10 microns in diameter (PM₁₀) ambient air quality standards (AAQS). It should be noted that on January 9, 2013, the U.S. Environmental Protection Agency (USEPA) issued a final rule to determine that the Bay Area has attained the 24-hour PM_{2.5} federal AAQS. Nonetheless, the Bay Area must continue to be designated as nonattainment for the federal PM_{2.5} AAQS until such time as the BAAQMD submits a redesignation request and a maintenance plan to the USEPA, and the USEPA approves the proposed redesignation.

In compliance with regulations, due to the nonattainment designations of the area, the BAAQMD periodically prepares and updates air quality plans that provide emission reduction strategies to achieve attainment of the AAQS, including control strategies to reduce air pollutant emissions via regulations, incentive programs, public education, and partnerships with other agencies. The current air quality plans are prepared in cooperation with the Metropolitan Transportation Commission and the Association of Bay Area Governments. The most recent federal ozone plan is the 2001 Ozone Attainment Plan, which

² Illingworth & Rodkin, Inc. *Jardine on Morello Project Air Quality & Greenhouse Gas Emissions Assessment*. December 22, 2015.

was adopted on October 24, 2001 and approved by the California Air Resources Board (CARB) on November 1, 2001. The plan was submitted to the EPA on November 30, 2001 for review and approval. The most recent State ozone plan is the 2010 Clean Air Plan (CAP), adopted on September 15, 2010. The 2010 CAP was developed as a multi-pollutant plan that provides an integrated control strategy to reduce ozone, PM, toxic air contaminants (TACs), and greenhouse gases (GHGs). Although the California Clean Air Act does not require the region to submit a plan for achieving the State PM₁₀ standard, the BAAQMD has prioritized measures to reduce PM in developing the control strategy for the 2010 CAP. The control strategy serves as the backbone of the BAAQMD's current PM control program. In addition, to fulfill federal air quality planning requirements, the BAAQMD adopted a PM_{2.5} emissions inventory for year 2010, which was submitted to the USEPA on January 14, 2013 for inclusion in the State Implementation Plan (SIP).

The aforementioned air quality plans contain mobile source controls, stationary source controls, and transportation control measures (TCMs) to be implemented in the region to attain the State and federal standards within the SFBAAB. Adopted BAAQMD rules and regulations, as well as the thresholds of significance, have been developed with the intent to ensure continued attainment of AAQS, or to work towards attainment of AAQS for which the area is currently designated nonattainment, consistent with applicable air quality plans. Thus, by exceeding the BAAQMD's thresholds of significance or not complying with BAAQMD rules and regulations, a project would be considered to conflict with or obstruct implementation of the BAAQMD's air quality planning efforts.

It should be noted that a series of recent court cases have called into question the BAAQMD resolutions adopting and revising their 2010 significance thresholds, asserting that the adoption of such would be considered a project under CEQA, necessitating environmental review. None of the courts have indicated whether the thresholds were valid on the merits or that the thresholds lack evidentiary support. Nonetheless, BAAQMD has withdrawn their revised quantitative significance thresholds for the time being. However, because the BAAQMD's thresholds of significance are supported by substantial evidence and remain the best available option, the City, as lead agency, has chosen to use the BAAQMD's thresholds of significance for evaluation of the proposed project.

As presented in further detail below, the proposed project would result in emissions below the BAAQMD thresholds of significance. Therefore, the proposed project would not be considered to conflict with or obstruct implementation of regional air quality plans, and impacts would be *less than significant*.

- b,c. As stated above, adopted BAAQMD rules and regulations, as well as the thresholds of significance, have been developed with the intent to ensure continued attainment of AAQS, or to work towards attainment of AAQS for which the area is currently designated nonattainment, consistent with applicable air quality plans. The BAAQMD's established significance thresholds associated with development projects for emissions of the ozone precursors reactive organic gases (ROG) and oxides of nitrogen (NO_x), as well as for PM₁₀, and PM_{2.5}, expressed in pounds per day (lbs/day) and tons per year (tons/yr), are listed in Table 1.

Pollutant	Construction	Operational	
	Average Daily Emissions (lbs/day)	Average Daily Emissions (lbs/day)	Maximum Annual Emissions (tons/year)
ROG	54	54	10
NO _x	54	54	10
PM ₁₀	82	82	15
PM _{2.5}	54	54	10

Source: BAAQMD, CEQA Guidelines, May 2010.

Construction Emissions

The proposed project’s construction emissions were quantified using the California Emissions Estimator Model (CalEEMod) software version 2013.2.2 - a statewide model designed to provide a uniform platform for government agencies, land use planners, and environmental professionals to quantify air quality emissions, including GHG emissions, from land use projects. The model applies inherent default values for various land uses, including construction data, trip generation rates based on the Institute of Transportation Engineers (ITE) Trip Generation Manual, 9th Edition, vehicle mix, trip length, average speed, etc. Where project-specific information is available, such information should be applied in the model. As such, a construction buildout scenario, including equipment list and phasing schedule, was developed based on information provided by the project applicant and applied to the model. The project schedule assumes that the project would be built out over a period of approximately 12 months beginning in late 2016, or an estimated 240 construction workdays (based on an average of 20 workdays per month). A conservative value of 50 dwelling units was applied into CalEEMod as “Single Family Housing” on a 5.0-acre site. Demolition of approximately 28,112 square feet of existing structures and 1,000 cubic yards of existing asphalt was applied in the model, which is estimated to generate 266 truck trips during construction. Although the site work is not anticipated to include import or export of fill material, 250 truck trips were conservatively included in the model. Approximately 444 trips of cement trucks are anticipated during the building construction phase and 105 truck trips are anticipated during the paving phase, which were also applied to the model. Further details regarding modeling assumptions and modeling results are included in Appendix A.

According to the CalEEMod results, the proposed project would result in average daily construction criteria air pollutant emissions as shown in Table 2. Average daily emissions were computed by dividing the total construction emissions by the number of construction days. As shown in the table, the proposed project’s construction emissions would be below the applicable thresholds of significance.

Pollutant	Project Construction Emissions	Thresholds of Significance	Exceeds Threshold?
ROG	6.9	54	NO
NO _x	16.7	54	NO
PM ₁₀	2.25	82	NO
PM _{2.5}	1.42	54	NO
<i>Source: Illingworth & Rodkin, Inc., December 2015 (see Appendix A).</i>			

In addition, all projects under the jurisdiction of the BAAQMD, including the proposed project, are required to implement all of the BAAQMD’s Basic Construction Mitigation Measures, which include the following:

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

Based on the above, the proposed project would not be considered to violate any AAQS or contribute substantially to an existing or projected air quality violation during construction.

Operational Emissions

According to the Air Quality and Greenhouse Gas Emissions Assessment prepared for the proposed project by Illingworth & Rodkin, Inc., due to the proposed project’s size, operational emissions would be expected to be less than significant, based on BAAQMD screening criteria for the sizes of land use projects that could result in significant air pollutant emissions. Specifically, the BAAQMD operational criteria pollutant screening

criteria for a single-family residential development is if the development is less than or equal to 325 dwelling units. The proposed project would involve the construction of 49 units, which is well below the BAAQMD operational screening criteria for a single-family residential development. Therefore, the project would not be expected to result in emissions in excess of the applicable thresholds of significance, and the proposed project would not be considered to violate any AAQS or contribute substantially to an existing or projected air quality violation during operations.

Cumulative Emissions

Past, present and future development projects contribute to the region's adverse air quality impacts on a cumulative basis. By nature, air pollution is largely a cumulative impact. A single project is not sufficient in size to, by itself, result in nonattainment of AAQS. Instead, a project's individual emissions contribute to existing cumulatively significant adverse air quality impacts. If a project's contribution to the cumulative impact is considerable, then the project's impact on air quality would be considered significant. In developing thresholds of significance for air pollutants, BAAQMD considered the emission levels for which a project's individual emissions would be cumulatively considerable. The thresholds of significance presented in Table 1 represent the levels at which a project's individual emissions of criteria air pollutants or precursors would result in a cumulatively considerable contribution to the SFBAAB's existing air quality conditions. If a project exceeds the significance thresholds presented in Table 1, the proposed project's emissions would be cumulatively considerable, resulting in significant adverse cumulative air quality impacts to the region's existing air quality conditions. Because the proposed project would result in emissions below the applicable thresholds of significance, the project would not be expected to result in a cumulatively considerable contribution the region's existing air quality conditions.

Conclusion

Because the proposed project would not violate any air quality standards or contribute substantially to an existing or projected air quality violation, or result in a cumulatively considerable net increase in any criteria air pollutant, impacts would be considered *less than significant*.

- d. Some land uses are considered more sensitive to air pollution than others, due to the types of population groups or activities involved. According to CARB, the following persons are most likely to be affected by air pollution: children under age 14; the elderly over age 65; athletes; and people with cardiovascular and chronic respiratory diseases. Locations that may contain a high concentration of such sensitive population groups are classified as sensitive receptors and include residential areas, hospitals, daycare facilities, elder care facilities, elementary schools, and parks. The proposed project involves the creation of new residences; thus, the proposed project would be considered a sensitive receptor. The closest sensitive receptors to the project site are single-family residences on the east, south and west sides of the project.

The major pollutant concentrations of concern are localized carbon monoxide (CO) emissions and TAC emissions, which are addressed in further detail below.

Localized CO Emissions

Emissions of CO are of potential concern, as the pollutant is a toxic gas that results from the incomplete combustion of carbon-containing fuels such as gasoline or wood. Localized concentrations of CO are related to the levels of traffic and congestion along streets and at intersections. High levels of localized CO concentrations are only expected where background levels are high, and traffic volumes and congestion levels are high. Air pollutant monitoring data indicate that CO levels have been at healthy levels (i.e., below State and federal AAQS) in the Bay Area since the early 1990s. As a result, the region has been designated as attainment for the AAQS. The highest measured level over any 8-hour averaging period during the last three years in the Bay Area is less than 3.0 parts per million (ppm), compared to the AAQS of 9.0 ppm.

In order to provide a conservative indication of whether a project would result in localized CO emissions that would exceed the applicable threshold of significance, the BAAQMD has established screening criteria for localized CO emissions, including whether a project would increase traffic at an affected intersection to more than 44,000 vehicles per hour. According to the Air Quality and Greenhouse Gas Emissions Assessment prepared for the proposed project, intersections affected by the proposed project would have traffic volumes less than the BAAQMD screening criteria and, thus, would not cause a violation of the CO AAQS or have a considerable contribution to cumulative violations of the CO AAQS. Accordingly, the proposed project would not be expected to result in substantial levels of localized CO at surrounding intersections or generate localized concentrations of CO that would exceed standards.

TAC Emissions

Another category of environmental concern is TAC emissions. Health risks from TACs are a function of both the concentration of emissions and the duration of exposure. Health-related risks associated with DPM in particular are primarily associated with long-term exposure and associated risk of contracting cancer. The CARB's *Air Quality and Land Use Handbook: A Community Health Perspective* (Handbook) provides recommended setback distances for sensitive land uses from major sources of TACs, including, but not limited to, freeways and high traffic roads, distribution centers, rail yards, dry cleaning operations, and gasoline dispensing facilities. The CARB has identified diesel particulate matter (DPM) from diesel-fueled engines as a TAC; thus, high volume freeways, stationary diesel engines, and facilities attracting heavy and constant diesel vehicle traffic are identified as having the highest associated health risks from DPM.

Project impacts related to increased community risk could occur either by introducing a new sensitive receptor in proximity to an existing source of TACs or by introducing a new source of TACs with the potential to adversely affect existing sensitive receptors in the project vicinity. The BAAQMD recommends using a 1,000-foot screening radius around a project

site for purposes of identifying community health risk from siting a new sensitive receptor or a new source of TACs. According to the BAAQMD, a significant impact related to TAC concentrations would occur if a project would result in any of the following:

- An increase in cancer risk levels of more than 10 in one million, or a non-cancer (chronic or acute) hazard index greater than 1.0; or
- An incremental increase in annual average PM_{2.5} emissions of more than 0.3 micrograms per cubic meter ($\mu\text{g}/\text{m}^3$).

A cumulatively considerable impact associated with TACs would occur if the cumulative total of sources within a 1,000-foot radius of the fence line of a source or from the location of a receptor, plus the contribution from the project, would exceed the following:

- An increase in cancer risk levels of more than 100 in one million or a chronic non-cancer hazard index (from all sources) greater than 10.0; or
- An incremental increase in annual average PM_{2.5} emissions of more than 0.8 $\mu\text{g}/\text{m}^3$ annual average PM_{2.5}.

The proposed project would not involve any land uses or operations that would involve major sources of TAC emissions such as substantial diesel engine exhaust. Accordingly, the proposed project would not generate any localized emissions that could expose sensitive receptors to unhealthy air pollutant levels during operations. Construction-related activities would generate pollutant concentrations associated with dust and equipment exhaust on a temporary basis that could affect nearby sensitive receptors. Existing sources of TACs within 1,000 feet of the project site were assessed by using data or screening tools provided by BAAQMD, or by modeling the impact of the source upon the project in comparison to the BAAQMD thresholds of significance for TACs. Details regarding the methodology and assumptions used to determine concentrations and cancer risk levels are provided in Appendix A.

Existing Sources of TAC Emissions

Existing sources of TAC emissions within 1,000 feet of the project site include the following: Pacheco Boulevard; Burlington Northern Santa Fe Railway (BNSF) rail line; and two stationary sources. Each of the aforementioned sources of TAC emissions are discussed in further detail below.

Pacheco Boulevard

For local roadways, BAAQMD has provided a screening calculator to determine if roadways with traffic volumes of over 10,000 vehicles per day may have a significant effect on a proposed project. Pacheco Boulevard is the only nearby roadway that has traffic volumes greater than 10,000 average daily trips. Based on Cumulative Plus Project volumes and assuming that average daily traffic is approximately ten times peak hour volumes, Pacheco Boulevard would have an ADT volume of about 22,000 in the project area. Using the BAAQMD *Roadway Screening*

Analysis Calculator for Contra Costa County for east-west directional roadways and at a distance of approximately 230 feet south of the roadway, the estimated cancer risk from Pacheco Boulevard at the project site would be 3.4 persons per million and PM_{2.5} concentrations would be 0.06 micrograms per cubic meter ($\mu\text{g}/\text{m}^3$). The chronic or acute hazard index (HI) for the roadway would be below 0.03 $\mu\text{g}/\text{m}^3$. Therefore, the potential risk from traffic along Pacheco Boulevard would be below the BAAQMD significance thresholds for community risk from a single source.

BNSF Rail Line

The project site is located approximately 700 feet north of the BNSF line used for freight service, which generates TAC and PM_{2.5} emissions from diesel locomotives. According to U.S. Department of Transportation, 13 trains pass a crossing in Martinez either during the day or night. Four freight trains use the rail line on a daily basis. Due to the proximity of the rail line to the proposed project, potential community risks to future residents at the proposed project from DPM emissions from diesel locomotive engines were evaluated.

The modeling conducted for the Air Quality and Greenhouse Gas Emissions Assessment prepared for the proposed project included receptors within 500 feet of the rail line for conservative purposes. Because the proposed project is located further away, concentrations and effects would be less. According to the Air Quality and Greenhouse Gas Emissions Assessment, the annual PM_{2.5} concentration at 500 feet north of the rail line was calculated to be 0.006 $\mu\text{g}/\text{m}^3$. Assuming the entire PM_{2.5} concentration is DPM, the increased cancer risk at 500 feet from the rail line was computed to be 9.3 persons in one million and the associated HI would be less than 0.01. Because the proposed project is located further than 500 feet away from the rail line, the concentration and associated cancer risks would be less at the proposed project site. Therefore, the potential risk from the BNSF rail line would be below the BAAQMD significance thresholds for community risk from a single source.

Stationary Sources

Permitted stationary sources of air pollution near the project site were identified using BAAQMD's *Stationary Source Screening Analysis Tool*, which is a mapping tool that uses Google Earth to identify the location of stationary sources and their estimated risk and hazard impacts. The BAAQMD tool identified two stationary sources within a 1,000-foot radius of the project site, which are identified by the *Stationary Source Screening Analysis Tool* as Plant 14281 and Plant G7345.

According to the BAAQMD tool, Plant 14281 is an emergency backup generator located on Morello Boulevard, operated by the MVSD. According to the BAAQMD screening data, the facility would result in an excess cancer risk of less than 0.1 people per million, a PM_{2.5} concentration of 0.00 $\mu\text{g}/\text{m}^3$, and a HI of less than 0.01,

all of which would be below BAAQMD thresholds of significance for community risk from a single source.

Plant G7345 is a gas-dispensing facility located at 3700 Pacheco Boulevard, approximately 230 feet north of the project site, operated by Tri-Convenience Store. At BAAQMD’s direction, risk from the source was adjusted for distance based on BAAQMD’s *Distance Adjustment Multiplier Tool for Gasoline Dispensing Facilities (GDF)*. According to the BAAQMD screening data (and adjusted for the 230-foot distance from the project site), the facility would result in an excess cancer risk of 3.2 persons per million, a HI of less than 0.01, and a PM_{2.5} concentration less than 0.00 µg/m³, all of which would be below BAAQMD thresholds of significance for community risk from a single source.

Table 3 presents the cancer risk associated with each source affecting the project site that was described above. As shown in the table, the cumulative total from the combined sources would be below the BAAQMD thresholds of significance. Therefore, the proposed project would not be subjected to cumulatively considerable pollutant concentrations associated with existing nearby sources of TACs.

Table 3 Combined Community Risk			
Source	Cancer Risk (persons per million)	Annual PM_{2.5} (µg/m³)	Acute or Chronic HI
BNSF Rail Line at 700 feet south ¹	9.3	0.01	< 0.01
Pacheco Boulevard at 230 feet north ²	3.4	0.06	< 0.03
Plant 14281, diesel generator over 500 feet away ³	< 0.1	0.00	< 0.01
Plant G7543, Tri-Convenience Store Gas Station at 230 feet north ³	3.2	0.00	< 0.01
<i>BAAQMD Single-Source Threshold</i>	<i>> 10.0</i>	<i>> 0.3</i>	<i>> 1.0</i>
Significant?	No	No	No
Cumulative-Source Total	< 16.0	0.1	< 0.06
<i>BAAQMD Cumulative-Source Threshold</i>	<i>> 100.0</i>	<i>> 0.8</i>	<i>> 10.0</i>
Significant?	No	No	No
Notes: ¹ Modeled at 500 feet north of railroad. ² Estimated using BAAQMD’s Roadway Screening Analysis Calculator. ³ Estimated using BAAQMD’s Stationary Source Screening Analysis Tool.			
<i>Source: Illingworth & Rodkin, Inc., December 2015 (see Appendix A).</i>			

Project TAC Emissions

Construction equipment and associated heavy-duty truck traffic generates DPM, which is a known TAC. Although such exhaust air pollutant emissions would not be considered to contribute substantially to existing or projected air quality violations, the emissions may still

pose community risks to nearby sensitive receptors. Accordingly, the Air Quality and Greenhouse Gas Emissions Assessment prepared for the proposed project included a community risk assessment of the proposed project's construction activities and the potential health effects on nearby sensitive receptors. The closest sensitive receptors to the project site are existing residences to the east, south and west of the site.

Dispersion modeling was conducted to predict the off-site DPM concentrations resulting from project construction activities, which was then used to estimate the associated cancer risks and non-cancer health effects. The total annual PM_{2.5} exhaust emissions (assumed to be DPM) were estimated to be 0.107 tons (214 pounds) for project construction using CalEEMod. The total annual fugitive PM_{2.5} emissions were estimated to be 0.056 tons (112 pounds) for project construction using CalEEMod. The emissions obtained using CalEEMod were applied to the USEPA ISCST3 dispersion model, a BAAQMD-recommended model, to determine the associated concentrations of DPM at nearby sensitive receptors. The concentrations were then used to calculate the associated cancer risks and non-cancer hazards at the nearest sensitive receptor. Cancer risk calculations assumed that an infant would be present at each residential receptor, resulting in the most conservative analysis of cancer risk. Further details regarding modeling assumptions and modeling results are included in Appendix A.

Based on the dispersion modeling, the maximum DPM and PM_{2.5} concentrations occurred in the residential area along De Normandie Drive, located east of the project site (see Figure 9). The estimated cancer risk, non-cancer hazard, and annual PM_{2.5} concentrations at the maximally exposed individual (MEI) are presented in Table 4. As shown in the table, the annual PM_{2.5} concentrations and non-cancer hazards would be below the applicable thresholds of significance, as well as the cumulatively considerable threshold of significance for combined sources. However, assuming infant exposure, cancer risk levels associated with project construction would exceed the cancer risk threshold of significance. It should be noted that, as discussed above, the proposed project would be required to implement the BAAQMD's Basic Construction Mitigation Measures, which are considered to reduce exhaust emission by five percent and fugitive dust emissions by 50 percent. Accordingly, implementation of the BAAQMD's Basic Construction Mitigation Measures would reduce the cancer risk levels associated with project construction. Nonetheless, without further mitigation, project construction activities could be considered to expose sensitive receptors to substantial pollutant concentrations.

Conclusion

Because the proposed project would result in construction-related emissions of DPM in excess of the applicable threshold of significance, the proposed project could expose sensitive receptors to substantial pollutant concentrations, and impacts would be considered *potentially significant*.

Figure 9
Nearby Sensitive Receptors and Location of Maximum TAC Concentration



Source	Cancer Risk (persons per million)	Annual PM _{2.5} (µg/m ³)	Acute or Chronic HI
Project Construction	18.8	0.13	0.01
BNSF Rail Line at 700 feet south ¹	< 9.3	< 0.01	< 0.01
Pacheco Boulevard at 230 feet north ²	1.9	0.03	< 0.03
Plant 14281, diesel generator over 500 feet away ³	< 0.1	0.00	0.00
Plant G7543, Tri-Convenience Store Gas Station at 230 feet north ³	< 3.2	0.00	< 0.01
<i>BAAQMD Single-Source Threshold</i>	<i>> 10.0</i>	<i>> 0.3</i>	<i>> 1.0</i>
Significant?	Yes	No	No
Cumulative-Source Total	< 33.3	< 0.17	< 0.06
<i>BAAQMD Cumulative-Source Threshold</i>	<i>> 100.0</i>	<i>> 0.8</i>	<i>> 10.0</i>
Significant?	No	No	No
Notes: ¹ Modeled at 500 feet north of railroad. ² Estimated using BAAQMD's Roadway Screening Analysis Calculator. ³ Estimated using BAAQMD's Stationary Source Screening Analysis Tool.			
<i>Source: Illingworth & Rodkin, Inc., December 2015 (see Appendix A).</i>			

Mitigation Measure(s)

Requiring all heavy duty, diesel-powered, off-road equipment to be used during construction to meet USEPA particulate matter emissions standards for Tier 2 engines or equivalent would result in an associated increase in cancer risk of 9.4 in one million for the MEI, which would be below the applicable BAAQMD threshold of significance of 10 in one million. Therefore, implementation of the following mitigation measure would reduce the above impact to a *less-than-significant* level.

III-1. Prior to grading permit issuance, the applicant shall demonstrate to the City Community Development Department that all heavy duty, diesel-powered, off-road equipment (more than 50 horsepower) (including owned, leased, and subcontractor vehicles) that would be used during construction of the project and operate on the project site for more than two consecutive days shall, at a minimum, meet USEPA particulate matter emissions standards for Tier 2 engines or equivalent.

Or

During construction, the project contractor shall implement measures to minimize construction period DPM emissions sufficient to reduce the predicted cancer risk to below the applicable threshold of significance. Such measures could include, but would not be limited to, the use of alternative powered equipment (e.g., liquefied-petroleum-gas-powered lifts), alternative fuels (e.g., biofuels), added exhaust devices, or a combination of measures,

subject to review and approval by the City Community Development Department. Prior to grading permit issuance, the project applicant shall demonstrate to the City Community Development Department that the approved measures would reduce the predicted cancer risk associated with construction DPM to below the applicable threshold of significance.

- e. Due to the subjective nature of odor impacts, the number of variables that can influence the potential for an odor impact, and the variety of odor sources, quantitative methodologies to determine the presence of a significant odor impact do not exist. According to the BAAQMD, examples of land uses that have the potential to generate considerable odors include, but are not limited to, wastewater treatment plants, landfills, confined animal facilities, composting stations, food manufacturing plants, refineries, and chemical plants. The proposed project would not introduce any such land uses and is not located in the vicinity of any such existing or planned land uses. Furthermore, residential land uses are not typically associated with the creation of substantial objectionable odors. As a result, the proposed project operations would not create any objectionable odors that would affect a substantial number of people.

Although less common, diesel fumes associated with substantial diesel-fueled equipment and heavy-duty trucks, such as from construction activities, freeway traffic, or distribution centers, could be found to be objectionable. The proposed project activities could cause diesel fumes, which could be considered objectionable, during the temporary construction period. Although diesel fumes from construction equipment are often found to be objectionable, construction is temporary and construction equipment would operate intermittently throughout the course of a day, would be restricted to daytime hours per the City of Martinez Municipal Code Section 8.34.030(B), and would likely only occur over portions of the improvement area at a time. In addition, all construction equipment and operation thereof would be regulated per the statewide In-Use Off-Road Diesel Vehicle Regulation. Construction equipment would also be required to comply with applicable BAAQMD rules and regulations, particularly associated with permitting of air pollutant sources, and Mitigation Measure III-1 set forth in this IS/MND. The aforementioned regulations would help to minimize air pollutant emissions as well as any associated odors. Considering the short-term nature of construction activities and the regulated and intermittent nature of the operation of construction equipment, construction of the proposed project would not be expected to create objectionable odors affecting a substantial number of people.

For the aforementioned reasons, construction and operation of the proposed project would not create objectionable odors, nor would the project site be affected by any existing sources of substantial objectionable odors; and a *less-than-significant* impact related to objectionable odors would result.

IV. BIOLOGICAL RESOURCES.

Would the project:

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	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 Wildlife or U.S. Fish and Wildlife Service?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b. Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, and regulations or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d. Interfere substantially with the movement of any resident or migratory fish or wildlife species or with established resident or migratory wildlife corridors, or impede the use of wildlife nursery sites?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
e. Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
f. Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Conservation Community Plan, or other approved local, regional, or state habitat conservation plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Discussion

The following discussion is based on the Biological Resources Assessment prepared for the proposed project by Moore Biological Consultants (see Appendix B of this IS/MND)³, as well as an Arborist Report Prepared by Baefsky & Associates (see Appendix C).⁴

- a. A field survey was conducted on June 22, 2015. The survey consisted of walking throughout the site making observations of current habitat conditions and noting surrounding land uses, general habitat types, and plant and wildlife species present. The majority of habitat on the

³ Moore Biological Consultants. *Biological Resources Assessment at the 5.2+/- Acre "Jardine (Subdivision 9409)", Martinez, California*. September 3, 2015.

⁴ Baefsky & Associates. *Arborist Report for Trees Located on and Adjacent to 68, 42-44 & 54 Morella Ave*. August 28, 2015.

project site is dominated by annual grassland, which has been moderately to highly disturbed by grading and other human activities. The southern portion of the site contains an abandoned church and a school building, extensive pavement, and a softball field. The northern portion of the site contains two existing homes, and a constructed storm drain ditch runs through the site from west to east and then runs north along the east edge of the site.

According to the Biological Resources Assessment, the high levels of disturbance, low value of the existing annual grassland habitat make the site unsuitable for all special-status plants known to occur in the area. The history of site disturbance and the low value of the isolated grassland habitat present on the site make the project site unlikely to provide habitat to any special-status wildlife species. Although it is unlikely that the site provides habitat to special-status wildlife, the possibility remains that special-status birds may fly over the site on occasion, but few would be expected to nest in the area. In addition, the foraging habitat value of the project site is minimal due to the high levels of disturbance from farming, development, and other activities in and adjacent to the site. Ground squirrel burrows or other burrows that might be suitable for use by burrowing owls were not observed in or near the site.

While the project site may have provided habitat for special-status wildlife species at some time in the past, agricultural use, urban development, and other activities have substantially modified the natural habitats on the site and in the greater project vicinity. Of the wildlife species identified by the Biological Resources Assessment, the tricolored blackbird, discussed further below, is the only special-status species that has potential to occur in the site on more than a transitory or very occasional basis.

Tricolored Blackbird

The tricolored blackbird is a State of California Species of Concern and is also protected by the federal Migratory Bird Treaty Act and Fish and Wildlife Code of California. Tricolors are colonial nesters requiring very dense stands of emergent wetland vegetation and/or dense thickets of wild rose or blackberries adjacent to open water for nesting. The species is endemic to California.

The nearest occurrence of tricolored blackbird in the CNDDDB search area is approximately one mile north of the site. The small patches of tules and cattails in the constructed ditch provide low quality, yet potentially suitable habitat for tricolored blackbird. This species usually nests in much more expansive patches of tules or cattails, or in dense thickets of blackberry or wild rose. According to the Biological Resources Assessment, it is considered unlikely that tricolored blackbird would nest in the small patches of cattails and tules in the on-site ditch. Tricolored blackbirds were not observed during the June 2015 survey.

Other Migratory Birds

The possibility exists that the grasslands, shrubs, and trees on the project site could be used by birds protected by the Migratory Bird Treaty Act, and construction of the project could disrupt nesting behavior of migratory birds if occupied nests are present within on-site trees.

Removal of, or impacts to, on-site trees could result in impacts to nesting birds.

Conclusion

Special-status plants are unlikely to occur in the site due to high levels of disturbance, past development, ongoing activities, and an associated lack of suitable habitat. With the exception of tricolored blackbird and various migratory bird species, special-status wildlife species do not have the potential to occur at the site on more than a very occasional or transitory basis. Due to historic and ongoing disturbance of the project site, the presence of the aforementioned species on the site may be hindered. Nonetheless, the potential exists for species to occur on-site and further surveys would be necessary to determine the absence of the previously mentioned species. If species are present on the project site, disturbance of the site associated with project development could impact the species resulting in harm or incidental take of species of special concern. Without implementation of mitigation measures, impacts to special-status species would be considered *potentially significant*.

Mitigation Measure(s)

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

IV-1. Removal of trees and/or grading shall occur between September 1st and January 31st, outside the bird nesting season, to the extent feasible. If tree removal and/or grading must occur during the avian breeding season (February 1st to August 31st), a qualified biologist shall conduct a survey for nesting birds of all trees and shrubs within 75 feet of the entire project site 14 days prior to the commencement of construction, and submit the findings of the survey to the City of Martinez Planning Division. If nesting passerines are identified during the survey within 75 feet of the project site, a 75-foot buffer around the nest tree shall be fenced with orange construction fencing. If the nest tree is located off the project site, then the buffer shall be demarcated as per above. The size of the buffer may be altered if a qualified biologist conducts behavioral observations and determines the nesting passerines are well acclimated to disturbance. If acclimation has occurred, the biologist shall prescribe a modified buffer that allows sufficient room to prevent undue disturbance/harassment to the nesting passerines. Construction or earth-moving activity shall not occur within the established buffer until a qualified biologist has determined that the young have fledged (that is, left the nest) and have attained sufficient flight skills to avoid project construction zones, which typically occurs by July 15th. However, the date may be earlier or later, and would have to be determined by a qualified biologist. If a qualified biologist is not hired to watch the nesting passerines, then the buffers shall be maintained in place through the month of August and work within the buffer may commence September 1st.

b,c. The field survey conducted by Moore Biological Consultants included an assessment of the site for presence or absence of jurisdictional Waters of the U.S. (including wetlands) as

defined by the U.S. Army Corps of Engineers (USACE). Potentially jurisdictional waters of the U.S. or wetlands were not observed on-site. In addition, vernal pools, seasonal wetlands, marshes, ponds, creeks, or lakes of any type are not located within the site. The majority of the site consists of developed parcels and ruderal upland grassland habitats, and the site does not contain any areas which would have the potential to fall under the jurisdiction of the USACE, CDFW, or Regional Water Quality Control Board (RWQCB).

As described above, a constructed storm drain ditch crosses through the site from west to east and then runs north along the east edge of the site (see Figure 10, Constructed Storm Drain Ditch). The ditch varies in width from approximately three to six feet. The City's storm drain system under Morello Avenue that collects urban runoff from developed areas to the west dumps water into the ditch. At the northeast corner of the site, the ditch returns water into the City's storm drain system. During the June 2015 site survey, a short section of ditch immediately adjacent to Morello Avenue held a few inches of landscape and/or nuisance water; the remainder of the ditch was dry.

Google Earth's 1938 aerial photograph of the site does not show evidence of a natural creek or drainage of any type in the site. In the 1938 photograph, the site is a leveled field apparently being farmed in hay crops; lands to the west were not developed and appear to be farmed in hay and orchard crops. By 1987, the lands to the west of the site are residential subdivisions and the constructed storm drain ditch is apparent. The ditch was likely constructed concurrent with or following development to the west of the site, such that the newly created nuisance water would pass through the site with minimal disruption of farming activities or other uses on the site.

The constructed storm drain ditch crosses through the site from west to east and then runs north along the east edge of the site. As part of the project, the ditch would be piped when the site is developed. Pursuant to the June 2015 Final Rule on the definition of Waters of the U.S., this ditch with ephemeral flows, which is not a relocated tributary, and was not excavated in a tributary, is not a jurisdictional Water of the U.S. The constructed storm drain ditch is a constructed ditch, not a river, stream, or lake. Therefore, piping this ditch would not require a Streambed Alteration Agreement pursuant to Section 1600 of Fish and Wildlife Code of California

Therefore, the project would not require a permit from the U.S. Army Corps of Engineers (USACE) pursuant to Section 404 of the federal Clean Water Act. In addition, the project would not require water quality certification from the RWQCB pursuant to Section 401 of the federal Clean Water Act (CWA). Therefore, a *less-than-significant* impact would occur.

Figure 10
Constructed Storm Drain Ditch



- d. The proposed project site is partially developed by structures, highly disturbed and surrounded by developed properties. Surrounding land uses include single-family residential to the east and south, Morella Avenue to the west, and Ace Hardware to the north. Because the project site is surrounded by development, and is not located near high quality habitat areas, the project site is not believed to be routinely used as a movement corridor for wildlife passing through the area. Although the proposed project would increase the amount of development present on the project site, such development would be unlikely to interfere with any existing movement corridors. Therefore, the project would result in a ***less-than-significant*** impact related to the movement of wildlife in the area.
- e. According to the Arborist Report prepared for the proposed project, the site contains 47 trees, 22 of which are protected by the City of Martinez. The proposed project would involve the removal of all on-site trees, resulting in the loss of 22 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 Chapter 8.12. The conditions may include a requirement to replace any or all trees on a comparable ratio of either size or quantity. Because the proposed project involves the removal of protected trees the project could conflict with the City's Chapter 8.12 of the City's Municipal Code, Tree Preservation, Protection and Removal, which would result in a ***potentially significant*** impact.

Mitigation Measure(s)

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

IV-2. Prior to issuance of a grading permit, a tree removal permit shall be obtained for the removal of the 22 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 comparable ratio of either size or quantity on the project site. The trees shall be indigenous tree species (i.e. Q. agrifolia (coast live oak), Q. douglasii (blue oak) and Q. lobata (valley oak)) and shall be 24-inch box at a minimum. The replacement shall be planted in the landscape buffer area located along Vine Hill Way, Center Avenue, and Morello Avenue.

- f. The boundary of the East Contra Costa County Habitat Conservation Plan/Natural Community Conservation Plan (HCP/NCCP) is approximately 15 miles east of the City of Martinez. The City is not located within the boundaries of any HCP/NCCP; therefore, the proposed project would have ***no impact*** related to conflict with the provisions of an adopted HCP, NCCP, or other approved local, regional, or State habitat conservation plan.

V. CULTURAL RESOURCES.

Would the project:

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less-Than-Significant Impact	No Impact
a. Cause a substantial adverse change in the significance of a historical resource as defined in Section 15064.5?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b. Cause a substantial adverse change in the significance of a unique archaeological resource pursuant to Section 15064.5?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c. Directly or indirectly destroy a unique paleontological resource on site or unique geologic features?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d. Disturb any human remains, including those interred outside of formal cemeteries.	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
e. Adversely affect tribal cultural resources?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Discussion

The following discussion is based on the Historic Resource Assessment Report prepared for the proposed project by WSA, Inc. (see Appendix D of this IS/MND).⁵

- a. The Historic Resource Assessment Report includes a records search and architectural assessment, for 42, 44, and 68 Morello Avenue in the City of Martinez. In accordance with CEQA, the existing structures on the properties were subject to a historic evaluation. The three evaluated parcels (APNs 161-212-038, 161-212-019 and 161-212-022) currently include single-family residences at 42 and 44 Morello Avenue and the Morello Avenue Baptist Church property at 68 Morello Avenue, which includes the main church building and four associated church/school buildings that were used as classroom space for the New Vistas Christian School, which operated on church property.

WSA, Inc. architectural historian Aimee Arrigoni, M.A., conducted a site visit to survey the properties on February 19, 2016. During the visit, Ms. Arrigoni documented the buildings' layout and architectural features with photographs and field notes. Additionally, various area maps, and primary sources were consulted to determine the age of the existing structures and historic land uses. Further investigation of potential cultural resources within the project vicinity was conducted through a records search conducted on behalf of WSA, Inc. staff at the California Historical Resources Information System, Northwest Information Center at Sonoma State University on February 23, 2016 (File No. 15-1186). The study included a review of records on file at the California Archaeological Inventory. In addition, the Office of Historic Preservation (OHP) indices for Martinez and the *California Inventory of Historic Resources* listings for Martinez were consulted. Results of the record search indicate that the structures within the project area are not listed in the OHP Historic Properties Directory and

⁵ WSA, Inc. *Historic Resource Assessment Report, 42, 44, and 68 Morello Avenue, Martinez, Contra Costa County, California*. March 2016.

that previous cultural resources studies have not included the project area. Eight cultural resources studies have been conducted within 0.25-mile of the project area.

The records search indicates that three cultural resources have been recorded within 0.25-mile of the project area. They include the Contra Costa Canal (P-07-002695), the single-family property at 3845 Pacheco Boulevard (P-07-002715), and the single-family property at 3907 Pacheco Boulevard (P-07-003052). While the identified resources are within a 0.25-mile area of the project site, the proposed project would not be expected to impact such resources as they are outside of the project boundaries.

Criteria for Evaluation

Under CEQA, both public and private projects with financing or approval from a public agency must assess the projects' effects on cultural resources (Public Resources Code Section 21082, 21083.2 and 21084 and California Code of Regulations 10564.5). Cultural resources are buildings, sites, cultural landscapes, traditional cultural properties, structures, or objects that may have historical, architectural, cultural, or scientific importance. CEQA states that if a project will have a significant impact on important cultural resources, then project alternatives and mitigation measures must be considered.

CEQA defines *historical resources* as “resources listed or eligible for listing in the California Register of Historical Resources (CRHR)” (Public Resources Code Section 5024.1). A property may be considered a historical resource if it meets one of the following criteria for listing on the CRHR:

1. It is associated with events that have made a significant contribution to the broad patterns of California's history and cultural heritage;
2. It is associated with the lives of persons important to California's past;
3. It embodies the distinctive characteristics of a type, period, region, or method of construction, or represents the work of an important creative individual, or possesses high artistic values; or
4. It has yielded or is likely to yield information important in prehistory or history [Public Resources Code Section 5024.1].

A resource included in a local register of historical resources, as defined in section 5020.1(k) of the Public Resources Code or identified as significant in an historical resource survey meeting the requirements section 5024.1(g) of the Public Resources Code, shall be presumed to be historically or culturally significant. Public agencies must treat any such resource as significant unless the preponderance of evidence demonstrates that it is not historically or culturally significant.

The fact that a resource is not listed in, or determined to be eligible for listing in the CRHR, not included in a local register of historical resources (pursuant to section 5020.1(k) of the Public Resources Code), or identified in an historical resources survey (meeting the criteria in section 5024.1(g) of the Public Resources Code) does not preclude a lead agency from

determining that the resource may be an historical resource as defined in Public Resources Code sections 5020.1(j) or 5024.1.

Integrity

In addition to meeting one or more of the four specific criteria listed above, an archaeological site or architectural resource must possess “integrity” to qualify for listing in the CRHR. Integrity is generally evaluated with reference to seven aspects, which include location, design (i.e., site structure), materials, workmanship, setting, feeling, and association. A potentially eligible site must retain the integrity of the values that would make it significant.

Typically, for architectural resources, integrity is indicated by the retention of the features that maintain contextual association with those historical developments or personages that render them significant (Criteria 1, 2, and/or 3). The preservation of this context is typically determined by the level of preservation of historic and architectural features that associate a property with significant events, personages, or styles.

Integrity refers both to the authenticity of a property’s historic identity, as shown by the survival of physical characteristics that existed during its historic period, and to the ability of the property to convey its significance. This is often not an all-or-nothing scenario (determinations can be subjective); however, the final judgment must be based on the relationship between a property’s features and the property’s significance.

Evaluation of 42 and 44 Morello Avenue

The two small residences under consideration were built in 1930 and 1938 during the period that the Vine Hill neighborhood was sparsely populated and home primarily to vineyards and the Shell Oil Refinery. While agricultural land use and industrial growth along the shoreline characterized many local communities during this period, the residences in question do not have an important association with events that have made a significant contribution to the broad patterns of California's history and cultural heritage. 42 and 44 Morello are not eligible for listing in the CRHR under Criterion 1.

Archival research conducted to date does not indicate that the residences in question are associated with the lives of persons important to California's past. While census research did not identify the first residents of 42 and 44 Morello, they were likely local vineyard or refinery workers. Additional research did not identify subsequent owners or tenants of the two homes who may be considered important to California's past. As a result, the residences are not eligible for listing in the CRHR under Criterion 2.

Both 42 and 44 Morello are modest single-family homes built with little ornamentation. The exterior of 44 Morello, with its Spanish tile roof, stucco finish, modern windows, and rear addition no longer reflects its original architectural style. While 42 Morello retains more original features, neither home embodies the distinctive characteristics of a type, period, region, or method of construction. In addition, they do not represent the work of an

important creative individual or possess high artistic values. Consequently, the residences at 42 and 44 Morello Avenue are not eligible for listing in the CRHR under Criterion 3.

Finally, Criterion 4 is not typically applied to built resources, and is not considered in relation to the potential eligibility of 42 and 44 Morello Avenue.

Evaluation of 68 Morello Avenue

The main church building (Building 1) and the other permanent structure on site (Building 4), both built in 1962, are evaluated below based on the CRHR criteria presented above. The modern modular classrooms (Buildings 2, 3, and 5) do not warrant individual evaluation.

The Morello Avenue Baptist Church was constructed in 1962 during the period that the Vine Hill neighborhood shifted away from agricultural land use (vineyards) to a residential suburb in conjunction with the construction of Highway 4 and I-680. The church served the growing population east of downtown Martinez. Both the Morello Avenue Baptist Church and the New Vistas Christian School, which operated on church property, served the community's religious and educational needs, although neither the church nor the school have an important association with events that have made a significant contribution to the broad patterns of California's history and cultural heritage. 68 Morello Avenue is not eligible for listing in the CRHR under Criterion 1.

Archival research conducted to date does not indicate that either the church or the school is associated with the lives of persons important to California's past. As a result, 68 Morello Avenue is not eligible for listing in the CRHR under Criterion 2.

The church building is characteristic of contemporary design in the 1960s and features a long, low profile with a shallow-pitched roof, angular vertical supports under the eaves, geometric stained glass, and decorative brick veneer. While the repeating, vertical windows were once also a distinctive design element, in most cases the original windows have been removed and replaced with shorter vinyl windows, requiring the lower portion of the framed opening to be filled in with wood. While the church is a typical example of the contemporary style, it is not a particularly important example of the architectural style and has been compromised since the time of its original construction. As a result, the church no longer embodies the distinctive characteristics of a type, period, region, or method of construction. In addition, it does not represent the work of an important creative individual or possess high artistic values. Consequently, 68 Morello Avenue is not eligible for listing in the CRHR under Criterion 3.

Finally, Criterion 4 is not typically applied to built resources, and is not considered in relation to the potential eligibility of 68 Morello Avenue.

As discussed above, in order to be eligible for the CRHR, a resource must meet one or more of the criteria for listing and must also possess "integrity," which includes consideration of the resource's location, design (i.e., site structure), materials, workmanship, setting, feeling, and association. While the residences and church retain certain aspects of integrity,

particularly location, setting, and association, they do not meet any of the criteria discussed above (Criteria 1-4) and a broader discussion of integrity is not warranted.

Conclusion

Based on the recommendations of the Historic Resources Assessment, neither of the single-family residential homes at 42 or 44 Morello Avenue, nor the buildings associated with the Morello Avenue Baptist Church (68 Morello Avenue) meet any of the criteria for listing in the CRHR. As a result, the buildings are not considered historical resources for the purposes of this analysis and the proposed project would have a *less-than-significant* impact on historical resources.

- b-d. Known significant archaeological resources are located within the City of Martinez (p. 3.5-19). Prehistoric Native American sites are most likely to occur where several environmental factors combine to provide readily available resources, such as at the interface between valley and hills, coastal areas, and watersheds. The proposed project site has been heavily disturbed through the development of residential units, and structures associated with the church, as well as historic disturbance through agricultural practices indicated in the Historic Resource Assessment Report. Because the project site has been previously disturbed it is unlikely that ground disturbance associated with the currently proposed project would lead to the discovery of previously unknown archaeological or cultural resources.

While surficial archaeological or cultural resources are unlikely to exist on the project site, the possibility remains that unknown archaeological, cultural or paleontological resources could exist underground. Although construction activity would be unlikely to disturb surficial resources, the possibility remains that ground disturbing construction activity related to grading and/or utility placement could impact unknown subsurface resources. Consequently, the project has the potential to cause an adverse change in the significance of a unique archaeological, paleontological, or geologic feature, and disturb human remains interred outside of a formal cemetery thereby resulting in a *potentially significant* impact.

Mitigation Measure(s)

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

- V-1. *Prior to the issuance of a grading permit, the developer shall note on the plans for the City of Martinez Engineer, for review and approval, that if historic and/or cultural resources are encountered during site grading or other site work, all such work shall be halted immediately within the area of discovery and the developer shall immediately notify the Planning Division of the discovery. In such case, the developer shall be required, at its own expense, to retain the services of a qualified archaeologist for the purpose of recording, protecting, or curating the discovery as appropriate. The archaeologist shall be required to submit to the Planning Division, for review and approval, a report of the findings and method of curation or protection of the resources. Further grading or site work within the area of discovery shall not be allowed until the preceding work has occurred.*

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

- e. Tribal cultural resources are generally defined by Public Resources Code 21074 as sites, features, places, cultural landscapes, sacred places, and objects with cultural value to a California Native American tribe. In compliance with Assembly Bill (AB) 52, tribal consultation requirements, a project notification letter was distributed to the Ione Band of Miwok Indians on March 9, 2016. The mandatory 30-day response period closed on April 8, 2016 and a request for consultation was not received. In the absence of information supplied by the tribe, the City relied on other sources of information to determine whether the project could cause a substantial adverse change in the significance of a tribal cultural resource.

The Native American Heritage Commission (NAHC) was contacted on January 19, 2016, requesting a search of their Sacred Lands File for traditional cultural resources within or near the project area. The search failed to indicate the presence of Native American cultural resources in the immediate project area. In addition, as discussed above, the records search performed for the project area did not identify any cultural resources on the project site. Given the results of the NAHC Sacred Lands File search and historical resources records search, as well as the existing disturbed, developed environment of the project site, the project would result in a *less-than-significant* impact to tribal cultural resources.

VI. GEOLOGY AND SOILS.

Would the project:

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	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 based on other substantial evidence of a known fault?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
ii. Strong seismic ground shaking?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
iii. Seismic-related ground failure, including liquefaction?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
iv. Landslides?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b. Result in substantial soil erosion or the loss of topsoil?		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d. Be located on expansive soil, as defined in Table 18-1B of the Uniform Building Code?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
e. Have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of wastewater?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Discussion

The following discussion is based on the Geotechnical Investigation prepared for the proposed project by Stevens, Ferrone & Bailey Engineering Company, Inc. (see Appendix E of this IS/MND).⁶

a.i-ii. According to the Geotechnical Investigation, the project site is not within an Alquist-Priolo earthquake fault zone. Earthquake intensities will vary throughout the San Francisco Bay Area, depending upon numerous factors including the magnitude of earthquake, the distance of the site from the causative fault, and the type of materials underlying the site. The U.S. Geological Survey (USGS) indicates that a 63 percent chance exists of at least one magnitude 6.7 or greater earthquake striking the San Francisco Bay region between 2008 and 2037. Therefore, the site would likely be subjected to at least one moderate to severe earthquake that will cause strong ground shaking.

⁶ Stevens, Ferrone & Bailey Engineering Company, Inc. *Geotechnical Investigation Morello Avenue Residential Development*. June 19, 2015.

According to the Probabilistic Seismic Hazard Analysis (NSHMP PSHA) interactive deaggregation model developed by USGS, the site has a 10 percent probability of exceeding a peak ground acceleration (g) of about 0.5 in 50 years (ground motion based on stiff soil site condition and having a mean return time of 475 years). The actual ground surface acceleration might vary depending upon the local seismic characteristics of the underlying bedrock and the overlying unconsolidated soils.

Thirteen active faults are located within an approximate 50-mile radius of the project site. The nearest State of California zoned, active faults are the Concord and Green Valley faults, located approximately 1.7 miles northeast and 5.2 miles north, respectively. All structures proposed for the project would be designed in accordance with the adopted edition of the California Building Code (CBC) requirements in place at the time of construction. Structures built according to the seismic design provisions of current building codes should be able to: 1) resist minor earthquakes without damage; 2) resist moderate earthquakes without structural damage but with some nonstructural damage; and 3) resist major earthquakes without collapse but with some structural as well as nonstructural damage. Given the project's adherence to the CBC requirements, the proposed project would not expose people or structures to substantial adverse effects including the risk of loss, injury, or death involving the rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zone Map, or strong seismic ground shaking. Therefore, the proposed project would have a *less-than-significant* impact.

- a.iii. Soil liquefaction is a phenomenon primarily associated with saturated, cohesionless, soil layers located close to the ground surface. The soils lose strength during cyclic loading, such as imposed by earthquakes. During the loss of strength, the soil acquires mobility sufficient to permit both horizontal and vertical movements. Soils that are most susceptible to liquefaction are clean, loose, uniformly graded, saturated, fine-grained sands that lie close to the ground surface. According to the Association of Bay Area Governments (ABAG) and the USGS, the site is located in an area that has been characterized as having very low liquefaction susceptibility.

Based on a review of available literature and the results of exploratory borings at the site, the potential for ground surface damage at the site resulting from liquefaction is low due to the lack of saturated liquefiable soils and presence of bedrock at relatively shallow depth. Therefore, impacts related to seismic-related ground failure, including liquefaction, would be *less than significant*.

- a.iv. Seismically-induced landslides are triggered by earthquake ground shaking. The risk of this hazard is greatest in the late winter when groundwater levels are highest and hillside colluvium is saturated. The risk is also present at the project site to varying degrees depending on the slope conditions and time of year.

According to USGS Open-File Report 97-745 (landslide folio of the San Francisco Bay Area), the site is not mapped as having previously-identified landslides or earthflows nor is the site located within an area having debris flow source potential. Based on the results of the reconnaissance, field exploration, and review of documents, evidence of adverse slope

stability, erosion, or drainage conditions were not observed at the site. In addition, evidence of active, deep-seated slope movement was not observed on-site or in the vicinity of the site. According to the Geotechnical Investigation, a low potential for slope instability exists at the site. However, relatively shallow slope movements have the potential to occur within the soils blanketing the site and the vicinity. The slope movements may include downslope creep, erosion, and slumping.

In conclusion, although unlikely, relatively shallow slope movements have the potential to occur on-site with certain conditions. Should final project design not incorporate the recommendations in the Geotechnical Investigation prepared for the project site, a ***potentially significant*** impact would occur to the project as a result of landslides.

Mitigation Measure(s)

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

VI-1. *All grading and foundation plans for the development shall be designed by a Civil and Structural Engineer and reviewed and approved by the Director of Public Works/City Engineer, Chief Building Official, and a qualified Geotechnical Engineer prior to issuance of grading and building permits to ensure that all geotechnical recommendations specified in the geotechnical report are properly incorporated and utilized in the project design.*

- b. Short-term construction activities can result in soil erosion or the loss of topsoil. Short-term and long-term erosion control are critical for the stability of any exposed cut and fill slopes, and may be necessary for the natural slopes on-site in order to reduce sediment accumulation in drainage systems. The Geotechnical Investigation recommends that all exposed cut and fill slopes be seeded or planted with appropriately designed erosion-resistant vegetation and fertilizer, and the vegetation should be appropriately irrigated in order to establish and maintain growth. Over-watering should be avoided in order to reduce surficial instability and erosion. Vegetation should be deeply rooted to aid in the interlocking of the near-surface soils. Additional seeding and planting may be necessary in localized areas if the initial seeding or planting is unsuccessful. After seeding, fertilizing, and planting, staked erosion control blankets may be necessary to further stabilize the surficial soils. The Geotechnical Investigation recommends that additional erosion control measures be designed and implemented prior to the rainy season, based upon the site's configuration. The measures could include straw wattles, silt fencing, hay bales, sediment collection basins, and filtration systems.

Topsoil exposure would be temporary during site preparation and would cease after construction of buildings and structures occurs. However, temporary construction-related impacts associated with the potential for soil erosion and the loss of topsoil on the project site would be ***potentially significant***.

Mitigation Measure(s)

Implementation of the following mitigation measures would reduce the above impact to a

less-than-significant level.

VI-2. *Prior to issuance of a grading permit, the project applicant shall submit, for review and approval by the City Engineer, an erosion control plan that utilizes standard construction practices to limit erosion effects during construction of the proposed project. The erosion control plan shall be inspected, modified, and/or remediated during the rainy season in order to comply with regulatory requirements. Measures shall include, but are not limited to, the following:*

- *Hydro-seeding;*
- *Placement of erosion control measures within drainageways and ahead of drop inlets;*
- *The temporary lining (during construction activities) of drop inlets with “filter fabric” (a specific type of geotextile fabric);*
- *The placement of straw wattles along slope contours;*
- *Directing subcontractors to a single designation “wash-out” location (as opposed to allowing them to wash-out in any location they desire);*
- *The use of siltation fences; and*
- *The use of sediment basins and dust palliatives.*

c,d. Expansive soils shrink/swell when subjected to moisture fluctuations, which can cause heaving and cracking of slabs-on-grade, pavements, and structures founded on shallow foundations. Building damage due to volume changes associated with expansive soils can be reduced by performing proper moisture conditioning and compaction of fill materials within selected ranges to reduce their swell potential, and using structurally reinforced “rigid” mats or post-tensioned mats designed to resist the deflections associated with soil expansion.

According to the Geotechnical Investigation prepared for the project, the near-surface soils have a high plasticity and high expansion potential. Therefore, due to the presence of expansive soils on the site, a ***potentially significant*** impact could occur.

Mitigation Measure(s)

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

VI-3. *Implement Mitigation Measure VI-1.*

e. The proposed project would connect to the existing sewer system, and does not include the construction or use of septic systems. Therefore, the proposed project would have ***no impact*** related to soils incapable of adequately supporting the use of septic tanks.

VII. GREENHOUSE GAS EMISSIONS.

Would the project:

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less-Than-Significant Impact	No Impact
a. Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?	<input type="checkbox"/>	<input type="checkbox"/>	✘	<input type="checkbox"/>
b. Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gasses?	<input type="checkbox"/>	<input type="checkbox"/>	✘	<input type="checkbox"/>

Discussion

The following discussion is based on the Air Quality and Greenhouse Gas Emissions Assessment prepared for the proposed project by Illingworth & Rodkin, Inc. (see Appendix A to this IS/MND).⁷

a,b. Gases that trap heat in the atmosphere, greenhouse gases (GHGs), regulate the earth’s temperature. The phenomenon, known as the greenhouse effect, is responsible for maintaining a habitable climate. The most common GHGs are carbon dioxide (CO₂) and water vapor; however, several others exist, most importantly methane (CH₄), nitrous oxide (N₂O), hydrofluorocarbons (HFCs), perfluorocarbons (PFCs), and sulfur hexafluoride (SF₆). The aforementioned GHGs are released into the earth’s atmosphere through a variety of natural processes and human activities. Common sources of GHGs related to human activities included the following:

- CO₂ and N₂O are byproducts of fossil fuel combustion.
- N₂O is associated with agricultural operations such as fertilization of crops.
- CH₄ is commonly created by off-gassing from agricultural practices (e.g., keeping livestock) and landfill operations.
- Chlorofluorocarbons (CFCs) were widely used as refrigerants, propellants, and cleaning solvents, but their production has been stopped by international treaty.
- HFCs are now used as a substitute for chlorofluorocarbons in refrigeration and cooling.
- PFCs and SF₆ emissions are commonly created by industries such as aluminum production and semi-conductor manufacturing.

Each GHG has an associated potency and effect upon the earth’s energy balance, which is expressed in terms of a global warming potential (GWP), with CO₂ being assigned a value of one and SF₆ being several orders of magnitude stronger with a GWP of 23,900. In GHG emission inventories, the weight of each gas is multiplied by the gas’s GWP and is measured in units of CO₂ equivalents (CO₂e).

GHG emissions associated with development of the proposed project would occur over the short-term from construction activities, consisting primarily of emissions from construction equipment exhaust and worker and vendor trips, as well as over the long-term operational

⁷ Illingworth & Rodkin, Inc. *Jardine on Morello Project Air Quality & Greenhouse Gas Emissions Assessment*. December 22, 2015.

activities associated with project traffic, energy and water usage, and solid waste disposal. The proposed project’s short-term construction-related and long-term operational GHG emissions were estimated using CalEEMod. An operational year of 2018 was applied to the model, assuming that would be the year the built-out project could conceivably be occupied for a full year. The most recent Pacific Gas and Electric Company (PG&E) CO₂ intensity factor was also applied to the modeling. An assumed buildout of 50 single-family residential units instead of the proposed 49 units, and the default trip generation rate, which is higher than the actual project-specific trip generation determined by the traffic consultant, was applied to the model in order to provide a conservative GHG emissions estimate. Further details regarding GHG emissions modeling assumptions and modeling results are included in Appendix A.

According to the CalEEMod results, the proposed project would result in a total of 225 metric tons CO_{2e} per year (MTCO_{2e}/yr) during construction. Construction GHG emissions are a one-time release and are, therefore, not typically expected to generate a significant contribution to global climate change. Neither the City nor BAAQMD have an adopted threshold of significance for construction-related GHG emissions, though BAAQMD recommends quantifying and disclosing GHG emissions that would occur during construction. The proposed project’s long-term operational GHG emissions were estimated using CalEEMod and are presented in Table 5.

Source Category	GHG Emissions (MTCO_{2e}/yr)
Area	10
Energy Consumption	160
Mobile	409
Solid Waste Generation	27
Water Usage	9
Total	615
Note: Some values may not total exactly due to rounding.	
<i>Source: Illingworth & Rodkin, Inc., December 2015 (see Appendix A).</i>	

As shown in the table, the proposed project would result in a total of 615 MTCO_{2e}/yr during operations. The BAAQMD threshold of significance for operational GHG emissions is 1,100 MTCO_{2e}/yr. Even if the proposed project’s total construction GHG emissions of 225 MTCO_{2e}/yr are included with the annual operational GHG emissions, the resultant total GHG emissions of 840 MTCO_{2e}/yr would still be below the 1,100 MTCO_{2e}/yr threshold of significance. Therefore, the proposed project would not be considered to generate GHG emissions that may have a significant impact on the environment.

The City of Martinez has created a Climate Action Plan, which establishes strategies to reduce the GHG 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 GHG emissions, including policies, programs, and actions to facilitate change and work towards meeting the GHG emission reduction goals established by AB 32. The CAP strategies are described only

at a schematic level of detail at this time. As noted in the CAP, an additional, more in-depth round of planning prior to implementation would be required. In the later round of planning, strategies would be described in more detail, including specific priorities for implementation, costs, funding sources, and staffing. Accordingly, the CAP does not set any specific targets for GHG emissions reductions within the City beyond those required by AB 32, and does not specify any requirements for individual development projects to comply with in order to be considered compliant with the CAP. However, the proposed project would be required to comply with all applicable State regulations set forth with regards to reducing GHG emissions, including the California Green Building Standards Code, referred to as the CALGreen Code, and the California Building Energy Efficiency Standards Code. As such, the proposed project would subsequently result in a reduction of GHG emissions related to energy and water usage, which would contribute towards the City's overall goals within the CAP.

Overall, because the proposed project would result in GHG emissions below the applicable threshold of significance and would be required to comply with the applicable plans, policies, and regulations adopted for the purpose of reducing emissions of GHGs, the proposed project would be considered to result in a *less-than-significant* impact related to GHG emissions and global climate change.

VIII. HAZARDS AND HAZARDOUS MATERIALS.

Would the project:

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	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?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b. Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the likely release of hazardous materials into the environment?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c. Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
g. Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
h. Expose people or structures to the risk of loss, injury or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Discussion

- a,b. The following discussion addresses potential hazards associated with existing site conditions, as well as the potential use of hazardous materials during operation of the project. In order to analyze the potential risks of recognized environmental conditions (RECs), historical RECs, and controlled RECs on the proposed project site, Phase I Environmental Site Assessments were prepared for the project site by Advanced GeoEnvironmental, Inc.^{8,9}

⁸ Advanced GeoEnvironmental, Inc. *Phase I Environmental Site Assessment, Morello Avenue Properties*. June 17, 2015.

A REC is defined as the presence or likely presence of any hazardous substances or petroleum products in, on, or at a property: (1) due to release to the environment; (2) under conditions indicative of a release to the environment; or (3) under conditions that pose a material threat of a future release to the environment. An historical REC (HREC) is a past release of any hazardous substances or petroleum products that has occurred in connection with the property and has been addressed to the satisfaction of the applicable regulatory authority or meeting unrestricted use criteria established by a regulatory authority, without subjecting the property to any required controls. A controlled REC (CREC) is a REC resulting from a past release of hazardous substances or petroleum products that has been addressed to the satisfaction of the applicable regulatory authority, with hazardous substances or petroleum products allowed to remain in place subject to the implementation of required controls.

Existing Site Conditions and Associated Hazards

Preparation of the Phase I ESAs included records reviews (including historical use information, property records, and environmental agency record sources), interviews, screening for volatile organic compound vapors (VOCs), and site reconnaissance. The purpose of obtaining and reviewing project site and site vicinity historical and physical setting, and regulatory records is to help identify RECs in connection with the project site.

The project site is located within a mixed residential and commercial area of the City of Martinez. The northern portion of the project site is currently developed with two single-family dwellings. Based on a review of historical documents, the northern portion of the project site was used for agriculture until approximately the 1930s, when the current residences were built. A portion of the site is developed with the 28,112-square-foot, two-story Morello Avenue Baptist Church building with two halls and several classrooms. An asphalt parking lot and structures are also on the project site associated with the Morello Avenue Baptist Church. The site contains one sump, located in the parking lot, east of the main church building. The sump is used to prevent flooding of the structures. Two drainage ditches border the southern and eastern region of the central parking lot. The southern portion of the project site is unsurfaced and used as a playground and softball field.

Current uses of adjacent properties include existing single-family residential uses and an ACE Hardware store. According to the Phase I ESAs, the adjoining properties do not appear to be of potential environmental concern to the project site. In addition, historical uses of adjoining properties do not appear to be of environmental concern. Furthermore, during site reconnaissance, items of potential environmental concern were not identified at the project site.

⁹ Advanced GeoEnvironmental, Inc. *Phase I Environmental Site Assessment, Morello Avenue Baptist Church*. June 17, 2015.

Additional Site Vicinity Record Sources

The CCCHS and Regional Board maintain records for, and are responsible for, enforcement of State underground storage tank (UST) and hazardous waste laws. Advanced GeoEnvironmental, Inc. commonly reviews files for up-gradient sites under active environmental regulation to ascertain the current site status and the potential for such to impact the subject property. According to the additional project site vicinity records search, two sites under active or past environmental regulation were identified by the database search within the required search radius of potential concern to the project site. The two sites include Tri-Convenience Store/Arco (3700 Pacheco Boulevard) and Shell Oil Pipeline (3575-3700 Pacheco Boulevard). A case closure letter was issued to 3700 Pacheco Boulevard in July 2010, indicating that no further action was necessary regarding the UST investigation. Based on the case closure letter, the extent of contamination, and the direction of Tri-Convenience Store/Arco to the subject property, Tri-Convenience Store/Arco is not of environmental concern to the subject property. In 2007, contamination was found adjacent to a Shell Oil Pipeline in the vicinity of 3700 Pacheco Boulevard, the location of the aforementioned Tri-Convenience Store/Arco site. Shell denied owning an oil pipeline beneath Pacheco Boulevard, and information was not found to the contrary. Due to the close proximity to the Tri-Convenience/Arco, the contamination found was likely due to the LUST investigation at 3700 Pacheco Boulevard. Consequently, Advanced GeoEnvironmental, Inc. determined that the Shell Oil Pipeline SLIC case is not of environmental concern to the subject property.

Asbestos-Containing Building Material and Lead-based Paint

For buildings constructed prior to 1980, the Code of Federal Regulations (29 CFR 1926.1101) states that all thermal system insulation (boiler insulation, pipe lagging, and related materials) and surface materials must be designated as “presumed asbestos-containing material” unless proven otherwise through sampling in accordance with the standards of the Asbestos Hazard Emergency Response Act. Asbestos-containing materials could include but are not limited to: plaster, ceiling tiles, thermal systems insulation, floor tiles, vinyl sheet flooring, adhesives, and roofing materials. In addition, lead-based paints were phased out of use in the 1970s. Buildings constructed after 1978 are not likely to contain lead-based paint.

The existing structures were built prior to 1978. Accordingly, the potential exists that asbestos-containing materials and lead-based paints were used in the construction of the existing buildings on-site.

Uses Associated with the Proposed Project

The proposed project has limited potential for the routine transport, use, or disposal of hazardous materials. The proposed single-family residential uses would not involve the routine transport, use, or dispose of hazardous materials, or present a reasonably foreseeable release of hazardous materials. Hazardous materials associated with the residential uses

would consist mostly of typical household-type cleaning products, which would be utilized in small quantities and in accordance with label instructions.

Overall, according to the Phase I ESAs, evidence of RECs, HRECs, or CRECs was not revealed in connection with the proposed project site. However, due to the age of construction of the existing buildings on-site that will be demolished with implementation of the project, asbestos-containing materials (ACMs) and lead-based paint could be present on-site and potentially released or encountered during demolition.

Conclusion

RECs, HRECs, or CRECs were not identified on the proposed project site or in the vicinity of the site. However, because the project would include demolition of buildings that could contain ACMs or lead-based paint, the proposed project could create a significant hazard to the public or the environment through the upset of hazardous materials or through the reasonably foreseeable upset and accident conditions involving the likely release of hazardous materials to the environment resulting in a **potentially significant** impact.

Mitigation Measure(s)

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

VIII-1. Prior to issuance of a demolition permit for any on-site structures, the developer shall consult with certified Asbestos and Lead Risk Assessors to complete and submit for review to the Community Development Department an asbestos and lead survey. If asbestos-containing materials (ACMs) or lead-containing materials are not discovered during the survey, further mitigation related to ACMs or lead containing materials will not be required. If ACMs and/or lead-containing materials are discovered by the survey, the project applicant shall prepare a work plan to demonstrate how the on-site ACMs and/or lead-containing materials shall be removed in accordance with current California Occupational Health and Safety (Cal-OSHA) Administration regulations and disposed of in accordance with all California Environmental Protection Agency regulations, prior to the demolition and/or removal of the on-site structures. The plan shall include the requirement that work shall be conducted by a Cal-OSHA registered asbestos and lead abatement contractor in accordance with Title 8 CCR 1529 and Title 8 CCR 1532.1 regarding asbestos and lead training, engineering controls, and certifications. The applicant shall submit the work plan to the City and the Contra Costa County Department of Conservation and Development for review and approval. Materials containing more than one (1) percent asbestos that is friable are also subject to BAAQMD regulations. Removal of materials containing more than one (1) percent friable asbestos shall be completed in accordance with BAAQMD Section 11-2-303.

- c. The school nearest the project site, John Muir Elementary School, is located approximately 1.13 miles to the southwest of the project site. However, the proposed single-family residential uses would not involve the routine transport, use, or dispose of hazardous materials, or present a reasonably foreseeable release of hazardous materials. Therefore, a *less-than-significant* impact would result.
- d. The project site has not been identified on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5. As a result, the proposed project would not create a significant hazard to the public or the environment. Therefore, *no impact* would occur.
- e,f. The project site is located approximately 2.21 miles northwest of the nearest airport, the Buchanan Field Airport. However, according to Figure 3A of the Contra Costa County Airport Land Use Compatibility Plan, the site is located within the Airport Influence Area for the Buchanan Field Airport. According to Figures 3B and 3C of the Contra Costa County Airport Land Use Compatibility Plan, the site is not located within the Contra Costa County Airport's composite noise contour areas or safety zone areas, respectively. Therefore, *a less-than-significant impact* would occur related to the project resulting in a safety hazard for people residing or working in the project area.
- g. Implementation of the proposed project site would not result in any modifications to the existing roadway system and would not interfere with potential evacuation or response routes used by emergency response teams. Emergency vehicle access would be provided at the northern border of the site through an easement along the Ace Hardware property. A secondary entrance for emergency vehicles only would be provided on Kennedy Way at De Normandie Way. During project development, all construction equipment would be staged on-site so as to prevent obstruction of local and regional travel routes in the City that could be used as exit routes during emergency events (e.g., SR 4 and Highway 680). In addition, the adopted General Plan and the General Plan Update includes policies that are intended to manage emergency situations. Overall, the proposed project would not impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan, and impacts would be *less than significant*.
- h. Within the City of Martinez, hilly, vegetated areas in the western portion of the City are designated as High and Moderate local responsibility Fire Hazard Severity Zones. The proposed project site is not located in the western portion of the City, nor is the site located in a hilly, vegetated area.

The City of Martinez Municipal Code Chapter 15.28, Fire Prevention Code, adopts the Contra Costa County Fire Protection District's Fire Prevention Code by reference. The Fire Prevention Code includes policies and requirements intended to protect residents of Contra Costa County from potential fire hazards. The Fire Prevention Code includes requirements for vegetation, and the installation of automatic sprinkler systems among other requirements. The proposed project would comply with the aforementioned Municipal Code Chapter and the Fire Prevention Code. In addition, the City maintains adequate water supply and water

flow availability, ensures adequate emergency access, and promotes public awareness regarding fire safety.

Therefore, the project would result in a *less-than-significant* impact related to exposure of people or structures to the risk of loss, injury or death involving wildland fires.

IX. HYDROLOGY AND WATER QUALITY.

Would the project:

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less-Than-Significant Impact	No Impact
a. Violate any water quality standards or waste discharge requirements?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b. Substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level (i.e., the production rate of pre-existing nearby wells would drop to a level which would not support existing land uses or planned uses for which permits have been granted)?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
f. Otherwise substantially degrade water quality?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
g. Place housing within a 100-year floodplain, as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
h. Place within a 100-year floodplain structures which would impede or redirect flood flows?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
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.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
j. Inundation by seiche, tsunami, or mudflow?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Discussion

- a.f. During the early stages of construction activities, topsoil would be exposed due to grading and partial leveling of the site. After grading and leveling and prior to overlaying the ground surface with impervious surfaces and structures, the potential exists for wind and water erosion to discharge sediment and/or urban pollutants into stormwater runoff, which would adversely affect water quality.

The State Water Resources Control Board (SWRCB) regulates stormwater discharges associated with construction activities where clearing, grading, or excavation results in a land disturbance of one (1) or more acres. Performance Standard NDCC-13 of the City's National Pollutant Discharge Elimination System (NPDES) permit requires applicants to show proof of coverage under the State's General Construction Permit prior to receipt of any construction permits. The State's General Construction Permit requires a Storm Water Pollution Prevention Plan (SWPPP) to be prepared for the site. A SWPPP describes Best Management Practices (BMPs) to control or minimize pollutants from entering stormwater and must address both grading/erosion impacts and non-point source pollution impacts of the development project, including post-construction impacts.

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

Mitigation Measure(s)

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

IX-1. Prior to issuance of grading permits, the contractor shall prepare a Storm Water Pollution Prevention Plan (SWPPP). The applicant shall file the Notice of Intent (NOI) and associated fee to the SWRCB. The SWPPP shall serve as the framework for identification, assignment, and implementation of BMPs. The contractor shall implement BMPs to reduce pollutants in stormwater discharges to the maximum extent practicable, which may include but are not necessarily limited to the following practices, or other BMPs identified in the California Stormwater Quality Association (CASQA) Construction BMP Handbook.

- *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) will be employed to control erosion from disturbed areas;*
- *Use a dry stormwater quality basin (which is typically dry except after a major rainstorm, when it will temporarily fill with stormwater), designed to decrease runoff during storm events, prevent flooding, and allow for off-peak discharge. Basin features will include maintenance schedules for the periodic removal of sediments, excessive vegetation, and debris that may clog basin inlets and outlets;*
- *Cover, or apply nontoxic soil stabilizers to, inactive construction areas (previously graded areas inactive for 10 days or more) that could contribute sediment to waterways;*

- *Enclose and cover exposed stockpiles of dirt or other loose, granular construction materials that could contribute sediment to waterways;*
- *Ensure that no earth or organic material will be deposited or placed where it may be directly carried into a stream, marsh, slough, lagoon, or body of standing water;*
- *Prohibit the following types of materials from being rinsed or washed into the streets, shoulder areas, or gutters: concrete, solvents and adhesives, thinners, paints, fuels, sawdust, dirt, gasoline, asphalt and concrete saw slurry, and heavily chlorinated water; or,*
- *Ensure that grass or other vegetative cover will be established on the construction site as soon as possible after disturbance.*

The SWPPP shall be submitted to the Director of Public Works/City Engineer for review and approval and shall remain on the project site during all phases of construction. Following implementation of the SWPPP, the contractor shall subsequently demonstrate the SWPPP's effectiveness and provide for necessary and appropriate revisions, modifications, and improvements to reduce pollutants in stormwater discharges to the maximum extent practicable.

- b. The proposed project would be provided potable water service by the CCWD, which obtains surface water from the San Joaquin River Delta. The project would not involve the placement or use of a groundwater well. As such, groundwater supplies would not be used to serve the proposed project. The project site contains existing development including residential and commercial land uses and is surrounded by other existing development. Accordingly, the project site would not be considered a substantial groundwater recharge area. In addition, although the proposed project would introduce new impervious areas, the proposed project would include two bio-retention areas that would allow for some percolation of water into the underlying soils and potentially some contribution towards groundwater recharge. Therefore, 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, and impacts would be *less than significant*.
- c-e. All municipalities within Contra Costa County (and the County itself) are required to develop more restrictive surface water control standards for new development projects to comply with Provision C.3 of the RWQCB Municipal Regional Stormwater NPDES Permit order No. R2-2015-0049. The Contra Costa County Clean Water Program developed a Stormwater C.3 Guidebook for implementing the RWQCB Municipal Regional Stormwater NPDES Permit C.3 requirements, known as the "C.3 Standards." New development and redevelopment projects that create or replace 10,000 or more square feet of impervious surface area must contain and treat stormwater runoff from the site. The proposed project is a C.3 regulated project and is required to include appropriate site design measures, source controls, and hydraulically-sized stormwater treatment measures.

A SWCP has been prepared for the proposed project (see Appendix F). According to the

SWCP, consistent with C.3 requirements as per the Contra Costa County Clean Water Program Stormwater C.3 Guidebook, the proposed project would include a series of coordinated BMPs to remove pollutants, slow runoff, and release runoff to the downstream storm drain system at a level comparable to the pre-development flow volume. The proposed project would include two C.3 areas or Drainage Management Areas (DMAs) (see Figure 10 for locations), each of which would contain a bio-retention area for water quality treatment purposes, as well as flow control. Generally, one bio-retention area would be located south of “G” Court (DMA A-1), while the second bio-retention area would be located north of “I” Court (DMA B-1). Runoff from the rooftops, streets, walkways, and driveways fronting lots 1 through 10 and 27 through 49, “A” Court through “F” Court, and half of “G” Court and Jardine Way would be collected at DMA A-1. DMA A-1 would be sized for treatment of runoff only, as the associated portion of the project site contains impervious area to be removed. Runoff from the rooftops, streets, walkways, and driveways fronting lots 11 through 26, half of “G” Court, “H” Court through “J” Court, and Jardine Way would be collected at DMA B-1, which would be sized for treatment and flow control of runoff.

The SWCP prepared for the proposed project includes calculations for the minimum treatment area and volume needed as per the Stormwater C.3 Guidebook. Based on the calculations, the bioretention facilities have been designed to exceed the minimum volume needed to treat and control runoff from all proposed impervious surfaces (see Table 6).

IMP Name	Minimum Area or Volume	Proposed Area or Volume
DMA A-1	3,781 square feet (area)	3,785 square feet (area)
DMA B-1	2,690 square feet (area)	2,700 square feet (area)

Source: Meridian Associates, Inc., January 2016 (see Appendix F).

Increases in runoff leaving the site would likely only occur in the case of heavy storms, where excess runoff not captured by the on-site Integrated Management Practices (IMPs) would be discharged to the curb gutter system. Consequently, runoff from the site would occur in select circumstances.

Runoff from upstream areas, mainly south of Gilrex Drive, currently drains to the existing ditch located along the easterly property line, which subsequently drains to the existing 36-inch storm drain pipe located at the northeast corner of the project site. With implementation of the proposed project, the aforementioned runoff would be collected and conveyed via a new pipe system through the proposed project site to the same northeastern point.

A preliminary drainage study was prepared for the proposed project by Meridian Associates, Inc. and was submitted to the City and Contra Costa County Flood Control District for review.¹⁰ The purpose of preliminary drainage study was to determine the proposed project's effects on the peak flow for a 10-year storm, to verify the capacity of the existing 36-inch pipe downstream of the project site, and to identify potential improvements to mitigate any of the proposed project's effects, if necessary. According to the preliminary drainage study, the post-development condition peak flow would increase by approximately three cubic feet per second (cfs) (or 3.5 percent of the existing flow of 90.9 cfs). In order to accommodate the proposed project's increase in stormwater flow, the proposed project would include a new 48-inch storm drain pipe that would replace the existing 36-inch storm drain pipe located at the northeastern corner of the site. Such improvements would include 150 feet of new 48-inch pipe downstream of the project. The City Engineer and Contra Costa County Flood Control District may consider other alternative improvements should the project applicant choose an alternative final design for the project, such as a parallel storm drain pipe to accommodate the proposed project's increase in stormwater flows or an expanded on-site stormwater drainage system; however, this IS/MND assumes the proposed project would include 150 feet of a new 48-inch stormwater pipe. Improvements to the existing pipe would require a Drainage Permit from the Contra Costa County Flood Control District in accordance with Contra Costa County Drainage Ordinance 1010.

In order to ensure that the proposed project's stormwater treatment facilities remain adequate, long-term maintenance would be required. The SWCP prepared for the proposed project includes a discussion regarding the maintenance of the on-site stormwater facilities. The SWCP indicates that responsibility for upkeep of the bioretention areas would be held by the future Homeowners Association, as well as each future homeowner.

In conclusion, the proposed project would not substantially alter the existing drainage pattern of the site or area in a manner which would result in erosion or siltation on- or off-site, or provide substantial additional sources of polluted runoff. Without improvements to the existing 36-inch storm drain pipe located at the northeastern border of the site, the proposed project's increase in rate and amount of surface runoff could exceed the capacity of existing downstream stormwater drainage systems. Consequently, the proposed project could result in a *potentially significant* impact.

Mitigation Measure(s)

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

- IX-2. Prior to approval of Improvement Plans, the plans shall show the detailed design of the removal of the existing 36-inch storm drain pipe and placement of the new 48-inch storm drain pipe located at the northeast border of the project site and extending for 150 feet downstream of the project site to the satisfaction of the City Engineer and Contra Costa County Flood Control District. The project applicant shall obtain a Drainage Permit from the*

¹⁰ Meridian Associates, Inc. *Preliminary Hydrology Study for Jardine, Subdivision 9409*. April 13, 2016.

Contra Costa County Flood Control District in accordance with Contra Costa County Drainage Ordinance 1010 prior to any work within the Contra Costa County Flood Control District right of way. Should the project applicant submit for review a final design for the project with an alternative measure for improvement of the existing off-site 36-inch storm drain pipe (e.g., parallel pipe, expanded on-site stormwater drainage system, or other), the design shall likewise be subject to review and approval by the City Engineer and Contra Costa County Flood Control District.

- g-i. According to the September 30, 2015 FEMA Flood Insurance Rate Maps (FIRM), Panel ID 06013C0088G, the proposed project site is located within Flood Hazard Zone X, which is described by FEMA as an area of minimal flood hazard, usually above the 500-year flood level. Thus, development of the proposed project would not place housing within a 100-year flood hazard zone nor place structures within a 100-year floodplain that would impede or redirect flood flows, and restrictions on development or special requirements associated with flooding are not requisite for the project.

Development of the proposed project would not involve an increase, or any modification, in the potential for dam failure. Earthquakes centered close to a dam are typically the most likely cause of dam failure. The Martinez Dam, which contains the Martinez Reservoir, is located over 1,400 feet west of the site. As discussed in further detail in Section VI, Geology and Soils, of this IS/MND, the project site is located in a seismically-active zone. A dam inundation map was prepared as part of the City's General Plan Update. Although the General Plan Update and associated EIR have not yet been certified and adopted by the City, the inundation map included in the General Plan Update is the best available and most recent information regarding Martinez Dam inundation. Thus, the City, as lead agency, has chosen to use the dam inundation map for this analysis. According to the dam inundation map, the proposed project site is located outside of the Martinez Dam inundation zone, which would generally occur north of Martinez Reservoir towards the Carquinez Strait.

Based on the above, the proposed project would not expose people or structures to a risk of loss, injury, or death involving flooding, including flooding as a result of a failure of a levee or dam, and impacts would be *less than significant*.

- j. Tsunamis are defined as sea waves created by undersea fault movement, which could cause damage to shallow or exposed shorelines. Areas at risk of inundation from tsunamis along waterfront within the City of Martinez are mostly mudflats, which are designated as open space areas or for parks and recreation. The project site is not located immediately adjacent to the open ocean, the San Francisco Bay, or the Carquinez Strait. As such, the proposed project would not be expected to be at risk of inundation from tsunamis.

A seiche is a long-wavelength, large-scale wave action set up in a closed body of water such as a lake or reservoir, whose destructive capacity is not as great as that of tsunamis. Seiches are known to have occurred during earthquakes, but none have been recorded in the Bay Area. The project site is located approximately 1,400 feet east of the Martinez Reservoir. Although unlikely, if a seiche were to occur at the Martinez Reservoir, similar effects as

discussed above regarding tsunamis could be expected at the project site. As such, the project site would not be expected to be risk of inundation from seiche.

Mudflow events are caused by a combination of factors, including soil type, soil profile, precipitation, and slope. Mudflow may be triggered by heavy rainfall that the soil is not able to sufficiently drain or absorb. Mudflows typically occur in mountainous or hilly terrain. The project site is relatively flat and is not located along a ridgeline, on a hillside, or in an open space area. Therefore, the project site would not be expected to be risk of inundation from mudflow.

In addition to the above, the project site contains existing development including residential and commercial land uses and is surrounded by other existing development. Although the proposed project would increase the number of residents at the site in comparison to the existing conditions, development of the proposed project would not directly cause an increase, or any modification, in the potential for inundation by seiche, tsunami, or mudflow. Overall, the proposed project would result in a *less-than-significant* impact related to inundation by seiche, tsunami, or mudflow.

X. LAND USE AND PLANNING. <i>Would the project:</i>	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less-Than- Significant Impact	No Impact
a. Physically divide an established community?	<input type="checkbox"/>	<input type="checkbox"/>	✘	<input type="checkbox"/>
b. Conflict with any applicable land use plans, policies, or regulations of an agency with jurisdiction over the project (including, but not limited to the general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating on environmental effect?	<input type="checkbox"/>	<input type="checkbox"/>	✘	<input type="checkbox"/>
c. Conflict with any applicable habitat conservation plan or natural communities conservation plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	✘

Discussion

- a. Buildout of the adopted General Plan, as well as the General Plan Update would consist of new growth at in-fill locations within existing urbanized areas of the City, as well as new growth adjacent to existing urbanized areas. In-fill buildout and buildout of areas adjacent to existing urbanized areas would not create a physical division within the existing community. New development projects within the City would be required to be designed around existing communities and neighborhoods, and provide connectivity between existing development and new development.

The proposed project would involve the development of single-family, detached residences. The project site currently contains development, including the abandoned Morello Avenue Baptist Church, New Vistas Christian School, and two abandoned single-family residences, which would be removed as part of the proposed project. Single-family residential land uses predominantly surround the project site to the east, south, and west. Because the project site currently contains development with some similar uses to what is proposed, and is predominantly surrounded by other similar residential development, the proposed project would be considered consistent with the surrounding area. Therefore, the proposed project would not be considered to physically divide an established community, and impacts would be *less than significant*.

- b. The project site is currently designated and zoned for residential development; however, the current zoning designation for the site allows for single-family residential development with a minimum lot size of 10,000 square feet. The proposed project would involve single-family residential development on varying lot sizes ranging from 2,400 square feet to 4,862 square feet, with an average lot size of 2,893 square feet. Therefore, the proposed project includes a request for a General Plan Amendment to modify the land use designation for the site from R0-6 to R7-12, which would allow single-family development up to 12 dwelling units per acre, as well as Rezone from R-10 to a PUD overlay district to allow for the establishment of development standards specific to the proposed project, including the minimum lot size. Because the project site is planned for single-family development, the proposed project is considered to be generally consistent with the goals and policies of the adopted General Plan. In addition, the proposed project includes a request for a Lot Line Adjustment for the

southeastern-most portion of the project site (APN 161-212-037). The Lot Line Adjustment would transfer a portion of land into Brudaden Properties, LLC ownership as part of APN 161-212-024. Furthermore, the proposed project requests the approval of a Tentative Subdivision Map, which includes 49 single-family detached lots, and per Section 22.34.030 of the City of Martinez Municipal Code, the project requires architectural and site Design Review by the Community Development Department prior to issuance of the permit.

The requested General Plan Amendment, Rezone, Lot Line Adjustment, Tentative Subdivision Map, and Design Review are policy issues under the purview of the Martinez City Council. Should City Council approve the requested entitlements, the project would not conflict with any applicable land use plans, policies, or regulations of an agency with jurisdiction over the project (including, but not limited to the general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating on environmental effect. As a result, a *less-than-significant* impact would occur.

- c. The boundary of the East Contra Costa County HCP/NCCP is approximately 15 miles east of the City of Martinez. The City is not located within the boundaries of any HCP/NCCP; therefore, the proposed project would have *no impact* related to conflict with the provisions of an adopted HCP, NCCP, or other approved local, regional, or State habitat conservation plan.

XI. MINERAL RESOURCES.

Would the project:

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	✘
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	✘

Discussion

a,b. The State Division of Mines and Geology, indicates that the proposed project site does not contain any identified mineral resources of regional or Statewide significance (Mineral Resource Zone [MRZ] 2).¹¹ The Martinez Planning Area does contain some areas classified as MRZ-1 (areas where adequate information indicates that no significant mineral resources are present, or of little likelihood), MRZ-3 (an area containing mineral deposits the significance of which cannot be evaluated from the available data), and an MRZ-4 (areas where available information is inadequate for assignments to any other MRZ). The Martinez General Plan Update EIR does not specifically address mineral resources; thus this issue was determined to be less-than-significant during the General Plan Update EIR scoping stage of the analysis, and further assessment was not performed by the City. The construction of the proposed project would not result in the loss of any known mineral resources. Therefore, ***no impact*** to mineral resources would occur.

¹¹ State of California. Division of Mines and Geology. *Generalized Mineral Land Classification Map of the South San Francisco Bay Production—Consumption Region*. Published 1996.

XII. NOISE.

Would the project result in:

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	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?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b. Exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c. A substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d. A substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Discussion

The Noise section of this IS/MND is based on the Environmental Noise Assessment prepared by Illingworth & Rodkin, Inc. for the proposed project (see Appendix H).¹²

- a,c. The Noise Assessment prepared for the proposed project analyzed whether implementation of the project would result in generation of noise levels in excess of established standards or exposure of people to such noise levels, as well as whether the project would create a substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project. The discussion below addresses these potential impacts.

Proposed Project's Increase in Traffic Noise Levels

Traffic noise levels at residences along Pacheco Boulevard and Morello Avenue currently exceed and are anticipated to continue to exceed 60 dBA Ldn (the normally acceptable noise level standard for residences). As a result, a significant noise impact would be identified if

¹² Illingworth & Rodkin, Inc. *Jardine on Morello Project Environmental Noise Assessment*. January 19, 2016.

traffic generated by the project would increase noise levels at noise-sensitive receptors by 3 dBA Ldn or greater.

Traffic volumes were prepared for the project by Abrams Associates Traffic Engineering, Inc. for four intersections in the vicinity of the project. Traffic volumes under the Existing Plus Project scenario were compared to the Existing scenario to calculate the relative increase in traffic noise attributable to the proposed project. The comparison of the traffic volumes under these scenarios indicates that traffic noise levels are calculated to increase by less than one dBA at all study intersections as a result of the project; therefore, traffic noise levels would not be substantially increased (i.e., by 3 dBA or more) as a result of the project.

Future Exterior Noise Environment

Exterior noise levels at proposed residences would be considered compatible with the noise environment if noise levels in common and private outdoor use areas are maintained at 60 dBA Ldn or less. Assuming a one dB increase in traffic noise levels under cumulative conditions, noise levels at the boundaries of the project site would range from 68 dBA Ldn along Morello Avenue, to 64 dBA Ldn on the northern boundary of the site adjacent to ACE Hardware (assumes that the noise generated by Shell Refinery operations would not change), to 60 dBA Ldn or less in the southern and eastern portions of the site.

Morello Avenue

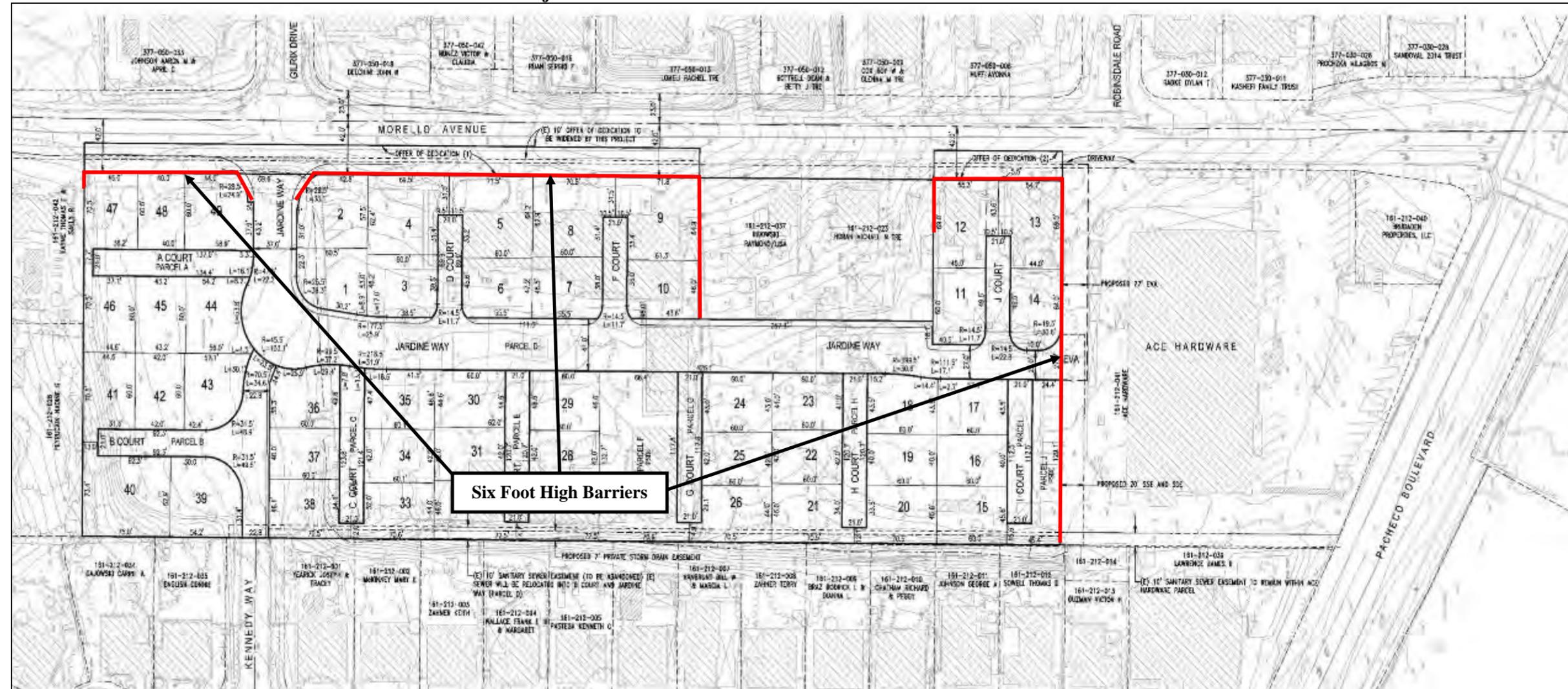
Based on the Vesting Tentative Map for the project, first row residences proposed along Morello Avenue would have backyards or side yards backing onto the roadway. Noise levels in these private outdoor use areas would exceed 60 dBA Ldn. Noise levels in the community garden would exceed 60 dBA Ldn within approximately 150 feet of the center of Morello Avenue, which would encompass the majority of the garden area.

The results of the traffic noise modeling conducted for residences adjacent to Morello Avenue are summarized in Table 7.

Table 7					
Traffic Noise Modeling Results for Residences Nearest to Morello Avenue					
Receptor	Future Noise Level, Ground Level				Future Noise Level, 2nd Floor
	No Barrier	6-Foot Barrier	8-Foot Barrier	10-Foot Barrier	
1 st Row Nearest Morello Avenue	68 dBA Ldn	59 dBA Ldn	57 dBA Ldn	55 dBA Ldn	68 dBA Ldn
<i>Source: Illingworth & Rodkin, Inc., January 2016 (see Appendix H).</i>					

Based on the results of the noise modeling, a six-foot-tall property line noise barrier would be required to reduce exterior noise levels to below the City’s standard of 60 dBA Ldn. See Figure 12 for the approximate locations of required noise barriers.

Figure 12
Project Site Noise Barrier Locations to Meet 60 dBA Ldn Criterion



Northern Portion of Project Site

Noise levels in the first row of homes facing the ACE Hardware Store to the north would also exceed 60 dBA Ldn, due primarily to a nighttime noise source generated by Shell Refinery to the north. Because outdoor areas would typically be used during daytime hours, daytime noise sources in this location (traffic and ACE Hardware activities) are controlled to meet 60 dBA Leq, to be consistent with the intent of the City of Martinez’s 1985 General Plan Noise Element and Municipal Code. Nighttime noise levels are controlled to be 35 dBA Leq or less inside homes to limit sleep disturbance, as described in the Future Interior Noise Environment section, below.

The primary daytime noise source for homes in the northern portion of the site is distant traffic (primarily from Pacheco Boulevard). Pacheco Boulevard runs on a diagonal relative to the northern property line of the site through this area. As a result, homes proposed for the northwestern portion of the project site would be farther from Pacheco Boulevard and experience less noise than homes proposed for the northeastern portion of the project site. Assuming a one dB increase in traffic noise levels under cumulative conditions, daytime noise levels at the northern boundary of the site would range from 52 to 62 dBA Leq, depending on location and time of day. In addition to traffic noise, these homes would be exposed to loading dock and parking noise from the ACE Hardware Store. While the maximum and average noise levels generated by commercial activities are no higher than those generated by traffic on the surrounding roadways, the characteristics of noise sources such as backup beepers, vehicle doors being closed, engines starting, and people talking, is typically more noticeable as compared to roadway noise and could be annoying to residents.

Based on noise modeling of Pacheco Boulevard, distant traffic noise levels would be reduced at this location by approximately three dBA with a six-foot-tall noise barrier and by four dBA with an eight-foot-tall noise barrier. Noise from a five-foot-high point source located at the ACE Hardware loading dock is calculated to be reduced by six dBA with the construction of a six-foot-tall barrier and by nine dBA with the construction of an eight-foot-tall barrier. Table 8 summarizes the results of the combined noise sources, assuming various noise barrier heights. A six-foot-tall noise barrier located along the northern site boundary would be required to reduce daytime exterior noise levels to 60 dBA Leq or less.

Table 8			
Noise Modeling Results for Residences Nearest to ACE Hardware			
Receptor	Future Noise Level, Ground Level		
	No Barrier	6-Foot Barrier	8-Foot Barrier
1 st Row Nearest ACE Hardware	52 to 62 dBA Leq	49 to 59 dBA Leq	48 to 58 dBA Leq
<i>Source: Illingworth & Rodkin, Inc, January 2016 (see Appendix H).</i>			

Future Interior Noise Environment

Noise levels inside project residences would be considered compatible with the noise environment if interior noise levels are maintained at 45 dBA Ldn or less. For portions of the

site where nighttime noise levels control the Ldn, nighttime noise levels are controlled to be 35 dBA Leq or less inside homes to limit sleep disturbance.

The 1985 Noise Element of the City of Martinez General Plan specifies that 10 dBA of exterior to interior noise reduction should be expected for residences with windows open. However, newer standard residential construction methods provide approximately 15 dBA of exterior to interior noise reduction assuming the windows are partially open for ventilation. Standard construction with the windows closed provides approximately 20 to 25 dBA of noise reduction in interior spaces.

Residences proposed along Morello Avenue would be exposed to future exterior noise levels of up to 68 dBA Ldn (see Table 7). Residences proposed in the northern portion of the site, adjacent to ACE Hardware, would be exposed to future exterior noise levels of up to 64 dBA Ldn, due primarily to a nighttime noise source generated by Shell Refinery. Nighttime noise levels at these locations are in the range of 49 to 60 dBA Leq. The southeastern portion of the site would be exposed to a future noise level of about 60 dBA Ldn, with nighttime hourly average noise levels in the range of 49 to 55 dBA Leq.

In exterior noise environments of 60 dBA Ldn or less with nighttime hourly average levels of 50 dBA Leq or less, standard construction would be expected to reduce interior noise levels to 45 dBA Ldn and 35 dBA Leq or less during the nighttime. In exterior noise environments ranging from 60 dBA Ldn to 65 dBA Ldn and nighttime hourly average noise levels ranging from 50 to 55 dBA Leq, interior noise levels can typically be maintained below City standards with the incorporation of an adequate forced-air mechanical ventilation system in each residential unit. Preliminary calculations indicate that this measure would be applicable to the central, eastern, and southern portions of the site. Standard dual-insulated thermal-pane residential windows with a Sound Transmission Class (STC) minimum rating of 28 would be installed in the effected residences to avoid potential impacts.

In exterior noise environments of 65 dBA Ldn or greater or with exterior nighttime noise levels of 55 dBA Leq or higher, a combination of forced-air mechanical ventilation and sound-rated construction methods is often required to meet the interior noise level limit. Attaining the necessary noise reduction from exterior to interior spaces is readily achievable in noise environments less than 75 dBA Ldn and 65 dBA Leq (nighttime) with proper wall construction techniques, the selections of proper windows and doors, and the incorporation of forced-air mechanical ventilation systems.

Preliminary calculations show that windows/doors with ratings of STC 28 to 30 would be required in residences adjacent to Morello Avenue to achieve an interior Ldn of 45 dBA or less. For residences in the northern portion of the site, preliminary calculations show that an interior Ldn of 45 dBA or less and nighttime hourly average noise levels of 35 dBA Leq or less would be achieved with windows/doors with ratings of STC 28 to 30.

Incorporation of properly STC rated windows and forced air systems would avoid significant impacts related to nighttime interior noise. However, such noise reducing measures could be circumvented by future residences leaving windows open for ventilation, instead of using the

forced air systems discussed above. Therefore, it would be necessary to notify all future residents of the reason for the design features and the source of nighttime noise. Without such notification potential impacts could persist despite the integration of all noise reducing measures.

Conclusion

Exterior noise levels in the proposed outdoor use areas in the western and northern portions of the project site would exceed 60 dBA Ldn and 60 dBA Leq (daytime). As a result, noise levels could also exceed 45 dBA Ldn and 35 dBA Leq inside residences. Therefore, the proposed project would result in a *potentially significant* impact.

Mitigation Measure(s)

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

- XII-1. *Prior to approval of Improvement Plans, the plans shall show six-foot-high sound walls, as indicated in Figure 12, to reduce exterior noise levels in outdoor use areas to acceptable levels. Sound barriers shall be constructed with a solid material with no gaps in the face of the wall or at the base. Suitable materials for sound wall construction should have a minimum surface weight of three pounds per square foot (such as one-inch-thick wood, masonry block, concrete, or metal). The site plans shall be submitted for review and approval by the City Community Development Department.*

- XII-2. *Prior to issuance of a building permit, the project building plans shall note that a suitable form of forced-air mechanical ventilation is provided for all proposed residences, for the purpose of allowing windows to be kept closed at the occupant's discretion to control interior noise and achieve the interior noise standards. The suitable form of ventilation shall be determined by the City of Martinez Building and Construction Department and the building plans shall be submitted for review and approval by the City Planning Division.*

- XII-3. *Prior to issuance of a building permit, the project building plans shall note that sound-rated windows and doors with a minimum Sound Transmission Class rating of 28 shall be installed for residences nearest to Morello Avenue and residences nearest to ACE Hardware to maintain interior noise levels at acceptable levels. The building plans shall be submitted for review and approval by the City Community Development Department.*

- XII-4. *Prior to issuance of a building permit, the project building plans shall note that sound-rated windows with a minimum Sound Transmission Class rating of 28 shall be installed for residences in the eastern, southern, and central portion of the project site to maintain nighttime interior noise levels at*

acceptable levels. The building plans shall be submitted for review and approval by the City Community Development Department.

XII-5. Prior to any project construction activities, a qualified acoustical consultant shall review the final site plan, building plans, and floor plans to ensure that interior noise levels would not exceed 45 dBA Ldn and 35 dBA Leq (nighttime) inside project residences. Results of the analysis, including the description of the necessary noise control treatments, shall be submitted to the City Planning Division, along with the building plans and approved design, prior to issuance of a building permit.

XII-6. The project developer shall ensure that residential purchase agreements for all proposed homes on-site include a written disclosure to potential buyers indicating the potential for nighttime noise generated by operations at Shell Refinery.

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

For structural damage, the California Department of Transportation uses a vibration limit of 0.5 inches/second, peak particle velocity (in/sec, PPV), for buildings structurally sound and designed to modern engineering standards; 0.3 in/sec PPV for buildings that are found to be structurally sound but where structural damage is a major concern; and a conservative limit of 0.08 in/sec PPV for ancient buildings or buildings that are documented to be structurally weakened.

A significant impact would be identified if the construction of the project would generate groundborne vibration levels at adjacent structures exceeding 0.3 in/sec PPV because these levels would have the potential to result in “architectural” damage to normal buildings.

Construction activities would include demolition of existing structures, excavation, site preparation work, foundation work, new building framing and finishing, and paving. Pile driving would not be needed for project construction. Project construction activities, such as drilling, the use of jackhammers, rock drills and other high-power or vibratory tools, and rolling stock equipment (tracked vehicles, compactors, etc.) may generate substantial vibration in the immediate vicinity of the work area. Vibration levels would vary depending on soil conditions, construction methods, and equipment used.

Table 9 presents typical vibration levels that could be expected from construction equipment at a distance of 25 feet.

Equipment	PPV at 25 Feet (in/sec)	Approximate Lv at 25 Feet (VdB)
Pile Driver (Impact)	Upper Range	1.158
	Typical	0.644
Pile Driver (Sonic)	Upper Range	0.734
	Typical	0.170
Clam Shovel Drop	0.202	94
Hydromill (Slurry Wall)	In Soil	0.008
	In Rock	0.017
Vibratory Roller	0.210	94
Hoe Ram	0.089	87
Large Bulldozer	0.089	87
Caisson Drilling	0.089	87
Loaded Trucks	0.076	86
Jackhammer	0.035	79
Small Bulldozer	0.003	58
<i>Source: Illingworth & Rodkin, Inc., January 2016 (see Appendix H).</i>		

The nearest existing structures to project construction areas include residences backing up to the eastern and southern project property lines. These residences are as close as about 40 feet from the shared property lines. Based on the levels shown in Table 9, vibration levels produced by heavy equipment (vibratory rollers, clam shovel drops) during construction are calculated to be 0.1 in/sec PPV or less at a distance of 40 feet. Pile driving would not be needed for project construction. Vibration levels would be lower at structures located further from the construction and as construction moves away from the outer property lines of the site. Vibration levels may be perceptible when construction is located directly adjacent to residences, but would not approach the 0.3 in/sec PPV threshold for architectural damage. Therefore, the project would result in a *less-than-significant* impact related to exposing persons to or generating excessive groundborne vibration levels.

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

Construction would be conducted in compliance with the City of Martinez Municipal Code, which limits construction activities to between the hours of 7:00 AM and 7:00 PM on weekdays, and to between the hours of 9:00 AM and 5:00 PM on weekends and holidays.

Noise impacts resulting from construction depend upon the noise generated by various pieces of construction equipment, the timing and duration of noise-generating activities, and the distance between construction noise sources and noise-sensitive areas. Construction noise impacts primarily result when construction activities occur during noise-sensitive times

of the day (e.g., early morning, evening, or nighttime hours), the construction occurs in areas immediately adjoining noise-sensitive land uses, or when construction lasts over extended periods of time.

Construction noise levels would vary by phase and vary within phases based on the amount of equipment in operation and location where the equipment is operating. Typical construction noise levels at a distance of 50 feet are shown in Table 10 and Table 11. Table 10 shows the average noise level range by construction phase and Table 11 shows the maximum noise level range for different construction equipment. Table 10 levels are consistent with construction noise levels calculated for the project in the FHWA Roadway Construction Noise Model, including the anticipated equipment that would be used for each phase of the project. Most demolition and construction noise is in the range of 80 to 90 dBA at a distance of 50 feet from the source.

Table 10								
Typical Ranges of Construction Noise Levels at 50 Feet (dBA Leq)								
	Domestic Housing		Office Building, Hotel, Hospital, School, Public Works		Industrial Parking Garage, Religious, Amusement & Recreations, Store, Service Station		Public Works Roads & Highways, Sewers, Trenches	
	I	II	I	II	I	II	I	II
Ground Clearing	83	83	84	84	84	83	84	84
Excavation	88	75	89	79	89	71	88	78
Foundations	81	81	78	78	77	77	88	88
Erection	81	65	87	75	84	72	79	78
Finishing	88	72	89	75	89	74	84	84

Source: Illingworth & Rodkin, Inc., January 2016 (see Appendix H).

Table 12 shows the calculated construction noise levels for each phase of construction, based on the equipment specified for the project, at distances of 50 and 100 feet from the center of the construction activity. As indicated in Table 12, construction noise levels would reach 90 dBA Lmax and 86 to 87 dBA Leq at a distance of 50 feet from demolition and grading/excavation activities, which are anticipated to occur for a total of 23 days. Construction noise would reach 84 dBA Lmax and 80 to 81 dBA Leq at a distance of 100 feet from demolition and grading/excavation activities. Noise levels from other phases of construction are lower.

Equipment Category	Lmax Level (dBA)^{1,2}	Impact/Continuous
Arc Welder	73	Continuous
Auger Drill Rig	85	Continuous
Backhoe	80	Continuous
Boring Jack Power Unit	80	Continuous
Chainsaw	85	Continuous
Compressor ³	70	Continuous
Compressor (Other)	80	Continuous
Concrete Mixer	85	Continuous
Concrete Pump	82	Continuous
Concrete Saw	90	Continuous
Concrete Vibrator	80	Continuous
Crane	85	Continuous
Dozer	85	Continuous
Excavator	85	Continuous
Front End Loader	80	Continuous
Generator	82	Continuous
Generator (25 KVA or less)	70	Continuous
Grader	85	Continuous
Grinder Saw	85	Continuous
Horizontal Boring Hydro Jack	80	Continuous
Impact Pile Driver	105	Impact
In-situ Soil Sampling Rig	84	Continuous
Jackhammer	85	Impact
Mounted Impact Hammer (Hoe Ram)	90	Impact
Paver	85	Continuous
Pneumatic Tools	85	Continuous
Pumps	77	Continuous
Rock Drill	85	Continuous
Scraper	85	Continuous
Slurry Trenching Machine	82	Continuous
Soil Mix Drill Rig	80	Continuous
Street Sweeper	80	Continuous
Tractor	84	Continuous
Truck (Dump, Delivery)	84	Continuous
Vacuum Excavator Truck	85	Continuous
Vibratory Compactor	80	Continuous
Vibratory Pile Driver	95	Continuous
All Other Equipment with Engines Larger than 5 HP	85	Continuous
<p>Notes:</p> <p>¹ Measured at 50 feet from the construction equipment with a “slow” (1 second) time constant.</p> <p>² Noise limits apply to total noise emitted from equipment and associated components operating at full power while engaged in its intended operation.</p> <p>³ Portable Air Compressor rated at 75 cfm or greater and that operates at greater than 50 psi.</p> <p><i>Source: Illingworth & Rodkin, Inc., January 2016 (see Appendix H).</i></p>		

Construction Phase	At Distance of 50 Feet		At Distance of 100 Feet	
	Leq, dBA	Leq, dBA	Leq, dBA	Leq, dBA
Demolition, 10 days	86	90	80	84
Site Preparation, 5 days	82	82	76	76
Grading/Excavation, 13 days	87	87	81	81
Trenching, 10 days	81	81	75	75
Building – Exterior, 230 days	82	82	76	76
Building – Interior, 20 days	74	78	68	72
Paving, 10 days	82	82	76	76

Source: Illingworth & Rodkin, Inc., January 2016 (see Appendix H).

Residences to the east and south are located within 50 feet of project construction and residences to the west are located about 100 feet from project construction. Construction noise levels would exceed 60 dBA Leq and at least 5 dBA Leq above the ambient noise environment during construction at these closest residences. Noise levels from construction typically drop off at a rate of 6 dB per doubling of distance between the noise source and receptor. Intervening structures or terrain provide additional noise reduction, typically on the order of 10 to 20 dBA. As construction moves away from residences or into shielded locations, noise exposures would be lower.

The proposed project is expected to be constructed over a total period of 13 months, with only 10 of those months being periods of active construction. Noise generated by construction activities would temporarily elevate noise levels at adjacent noise-sensitive receptors; however, this would not be considered a significant impact due to the duration of active noise-generating construction activities being less than one year. Nonetheless, if construction activity is not conducted in accordance with construction best management practices the proposed project could result in a *potentially significant* impact.

Mitigation Measure(s)

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

XII-7. The following criteria shall be included in the grading plan submitted by the project applicant for review and approval by the Community Development Department prior to issuance of grading permits:

- *The construction contractor shall provide the City with details regarding their noise management procedures, as well as demonstration of a successful track record of construction noise management on prior projects;*
- *Pursuant to the City of Martinez Municipal Code, noise-generating activities, including construction traffic at the construction site or in areas adjacent to the construction site, shall be restricted to the hours of 7:00 AM to 7:00 PM, Monday through Friday and 9:00 AM*

to 5:00 PM on weekends and holidays. Any such work beyond said hours and days is strictly prohibited unless previously specifically authorized in writing by the City Engineer or designee, or by project conditions of approval;

- *All internal combustion-engine-driven equipment shall be equipped with intake and exhaust mufflers that are in good condition and appropriate for the equipment;*
- *Unnecessary idling of internal combustion engines shall be strictly prohibited;*
- *Stationary noise-generating equipment shall be located as far as practical from noise-sensitive receptors at all times during project grading and construction;*
- *“Quiet” air compressors and other stationary noise sources shall be used where technology exists;*
- *All construction traffic to and from the project site shall be routed via designated truck routes where possible. Construction-related heavy truck traffic shall be prohibited in residential areas where feasible;*
- *Noise from construction workers’ radios shall be controlled to a point where they are not audible at existing residences bordering the project site; and*
- *Owners and occupants of residential and non-residential properties located within 300 feet of the construction site shall be notified of the construction schedule in writing.*

XII-8. Prior to the issuance of grading permits, the construction contractor shall designate a “disturbance coordinator” who shall be responsible for responding to any local complaints about construction noise. The disturbance coordinator shall determine the cause of the noise complaint (e.g., starting too early, bad muffler, etc.) and require that reasonable measures warranted to correct the problem be implemented to the satisfaction of the City Engineer. A telephone number for the disturbance coordinator shall be conspicuously posted at the construction site and included in the notice sent to neighbors regarding the construction schedule (required per Mitigation Measure XII-7).

e.f. The project site is located approximately 2.21 miles northwest of the nearest airport, the Buchanan Field Airport. However, according to Figure 3A of the Contra Costa County Airport Land Use Compatibility Plan, the site is located within the Airport Influence Area for the Buchanan Field Airport. According to Figures 3B and 3C of the Contra Costa County Airport Land Use Compatibility Plan, the site is not located within the Contra Costa County Airport’s composite noise contour areas or safety zone areas, respectively.

Although aircraft-related noise could occasionally be audible at the project site, noise would be minimal. Exterior and interior noise levels resulting from aircraft would be compatible with the proposed project. Therefore, a ***less-than-significant*** impact would occur.

XIII. POPULATION AND HOUSING.

Would the project:

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	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 (e.g., through projects in an undeveloped area or extension of major infrastructure)?	<input type="checkbox"/>	<input type="checkbox"/>	✘	<input type="checkbox"/>
b. Displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere?	<input type="checkbox"/>	<input type="checkbox"/>	✘	<input type="checkbox"/>
c. Displace substantial numbers of people, necessitating the construction of replacement housing elsewhere?	<input type="checkbox"/>	<input type="checkbox"/>	✘	<input type="checkbox"/>

Discussion

- a. The proposed project would directly induce population growth in the area through the proposed construction of 49 single family dwelling units. However, as discussed below, the utility systems (e.g., water and sewer) serving the project can accommodate the additional demands created by the project and the project includes infrastructure improvements needed to connect the project to these existing utility systems. In addition, public service providers, such as police and fire, can accommodate the additional demands for service created by the project. As a result, the project would have a ***less-than-significant*** impact with respect to inducing population growth because the demands resulting from said growth could be accommodated by existing utility systems and service providers.

- b,c. The project site contains two residences, a church, and a school. Thus, development of the proposed project would involve displacement of the existing occupants of the two residences. However, displacement of two houses and the associated residents would not be considered displacement of substantial numbers of housing or people. In addition, because the project would introduce 49 additional single-family units to the City’s housing stock, construction of replacement housing off-site would not be necessary as a result of the proposed project. Therefore, the proposed project would not be considered to displace substantial numbers of existing housing or people, necessitating the construction of replacement housing elsewhere, and a ***less-than-significant*** impact would occur.

XIV. PUBLIC SERVICES.

Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the public services:

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less-Than-Significant Impact	No Impact
a. Fire protection?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b. Police protection?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c. Schools?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d. Parks?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
e. Other Public Facilities?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Discussion

a. The proposed project is located within the jurisdiction of the Contra Costa County Fire Protection District. Of the 25 fire stations within the district, two are located within Martinez. Station 13 is located at 251 Church Street and Station 14 is located at 521 Jones Street, both stations are within two miles of the project site. The existing developments on the proposed project site are currently served by the Contra Costa County Fire Protection District, and service to the area would not be changed as a result of the project. To ensure that new developments do not result in negative impacts to the existing fire service provided by CONFIRE, all new developments are required by Contra Costa County Fire Protection District Ordinance 2013-25 to complete a plan review and inspection and pay associated fees. Additionally, the City of Martinez Municipal Code Chapter 21.20 requires the installation of fire hydrants, where applicable, in accordance with standards established by the National Board of Fire Underwriters and the determination of the Chief of the Contra Costa County Fire Protection District and City Engineer. The project would further be required to comply with all Contra Costa County Fire Protection District standard conditions of approval related to provision of fire flow, roadway widths, etc.

Because Contra Costa County Fire Protection District already serves the existing developments on the project site with current resources, and the project would pay the required development fees, the proposed project would not result in substantial adverse physical impacts associated with the provision of new or physically altered Contra Costa County Fire Protection District facilities. Therefore, the project would result in a *less-than-significant* impact with respect to Contra Costa County Fire Protection District facilities in the project area.

b. The City of Martinez Police Department provides police protection services to the existing developments at the project site. Police Department services to the area would not be changed as a result of the proposed project, and the proposed project would be served by the Police Department. The City’s fiscal year 2014-2015 budget allowed for 38 sworn officers and 15 support personnel. To offset new demand for police services the City of Martinez charges an Impact/Mitigation Fee for new developments. Payment of the police

Impact/Mitigation fee would ensure that the proposed project would not result in substantial adverse physical impacts associated with the provision of new or physically altered police facilities. Therefore, the project would result in a *less-than-significant* impact with respect to police facilities in the project area

- c. The project site is located within the Martinez Unified School District (MUSD). MUSD serves over 4,000 K-12 students and operates four elementary schools, one middle school, one high school, two alternative/independent study schools, and one Adult Education school. Given the project's location, the project would be served by Morello Park Elementary School, Martinez Junior High School, and Alhambra High School. For the 2014-2015 school year Morello Park Elementary school had 530 students enrolled, Martinez Junior High School had 978 students enrolled, and Alhambra High School had 1,181 students enrolled. Morello Park Elementary School is currently at capacity.¹³ Because the proposed project may add students to MUSD, the applicant is required to pay school developer fees. Proposition 1A/Senate Bill No. 50 prohibits local agencies from using the inadequacy of school facilities as a basis for denying or conditioning approvals of any "[...] legislative or adjudicative act...involving ...the planning, use, or development of real property" (Government Code 65996(b)). Satisfaction of the Proposition 1A/Senate Bill No. 50 statutory requirements by a developer is deemed to be "full and complete mitigation."

Because the proposed project would comply with Proposition 1A/Senate Bill No. 50 through the payment of developer fees, the proposed project would not result in substantial adverse physical impacts associated with the provision of new or physically altered school facilities. Therefore, the project would result in a *less-than-significant* impact with respect to schools in the project area.

- d. The proposed project would involve the development of 49 single-family, detached residences and a community garden with a picnic area (Parcel F) on an approximately five-acre site. The community garden includes several planting beds, benches, and tool shed. Applying the City of Martinez standard of 2.8 residents per single-family dwelling unit, the proposed project is expected to generate housing for approximately 138 additional residents. Chapter 21.46 of the City of Martinez Municipal Code requires five acres of property for each 1,000 residents within the City be devoted to local park and recreational purposes. Therefore, due to the proposed projects increase demand in park acreage within the City and per the Martinez Municipal Code, the project is required to provide a minimum of 0.69 acres of property devoted to local park and recreational purposes. The proposed project includes an 8,961-square foot (0.2 acres) parcel (Parcel F) consisting of a community garden with a picnic area, which also serves as a C.3 water treatment basin. As a result, the proposed project does not meet the City of Martinez Park requirement.

According to Section 21.46.050B of the Martinez Municipal Code, a subdivision consisting of 50 parcels or less, consistent with the proposed project, the subdivider may be required to only pay a fee equal to the land value of the portion of the local park required to serve the needs of the residents of the proposed subdivision as prescribed in Section 21.46.040 and in

¹³ Bruce Leslie, Bond Coordinator, Martinez Unified School District. *Request for Review and Comment; 42, 44, 54, and 68 Morello Avenue*. March 25, 2016.

an amount determined in accordance with the provisions of Section 21.46.070 of the Martinez Municipal Code. The parkland dedication in-lieu fee shall be based, on the average estimated fair market value of the land being purchased in the City for single-family and multi-family residential development, which is established by Council resolution. Payment of the parkland dedication in-lieu fee would ensure that the proposed project would not result in substantial adverse physical impacts associated with the provision of new or physically altered park facilities. Therefore, the proposed project would result in a *less-than-significant* impact in regards to public parks.

- e. Other public facilities in the project area include the Martinez Public Library, the Martinez Senior Center, the Martinez Marina, the Martinez Waterfront Amphitheater, and the Martinez Historic Museum among other facilities. The proposed project would increase demands for the aforementioned facilities and general City maintenance services. However, these demands would not be considered significant given the scale of the proposed development relative to the overall population of the area. Payment of user fees or taxes to the appropriate service providers is expected to off-set potential impacts to such public facilities, the additional demands for other governmental services would result in a *less-than-significant* impact.

XV. RECREATION.

Would the project:

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	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?	<input type="checkbox"/>	<input type="checkbox"/>	✘	<input type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	✘	<input type="checkbox"/>

Discussion

- a.b. The proposed project would include 49 single-family, detached homes and a community garden with a picnic area on the project site. Other recreational or park facilities are not proposed as part of the proposed project. Morello Park is located less than half of a mile south of the project site. Waterbird Regional Preserve is located just over half of a mile northeast of the site. In addition, pedestrian and recreational trails are located throughout the community. The relatively small amount of population growth induced by the proposed project would not be expected to lead to the substantial acceleration in the deterioration of recreational facilities or require the expansion of existing recreational facilities. As discussed in Section XIV, Public Services, of this IS/MND, payment of a parkland dedication in-lieu fee in accordance with Section 21.46.070 of the Martinez Municipal Code would help to avoid any deterioration of existing recreational facilities. Because the project would not be expected to substantially increase the use of existing parks or recreational facilities such that substantial physical deterioration of the facilities would occur or be accelerated, and the project would not include or require the construction or expansion of recreational facilities, a *less-than-significant* impact would occur.

XVI. TRANSPORTATION AND CIRCULATION.
Would the project:

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	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)?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b. Exceed, either individually or cumulatively, a level of service standard established by the county congestion management agency for designated roads or highways?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d. Substantially increase hazards due to a design features (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
e. Result in inadequate emergency access?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
f. Conflicts with adopted policies supporting alternative transportation (e.g., bus turnouts, bicycle racks)?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Discussion

a.b. The following discussion is based on the Transportation Impact Analysis (TIA) prepared for the Jardine on Morello Project by Abrams Associates Traffic Engineering, Inc. (see Appendix I).¹⁴

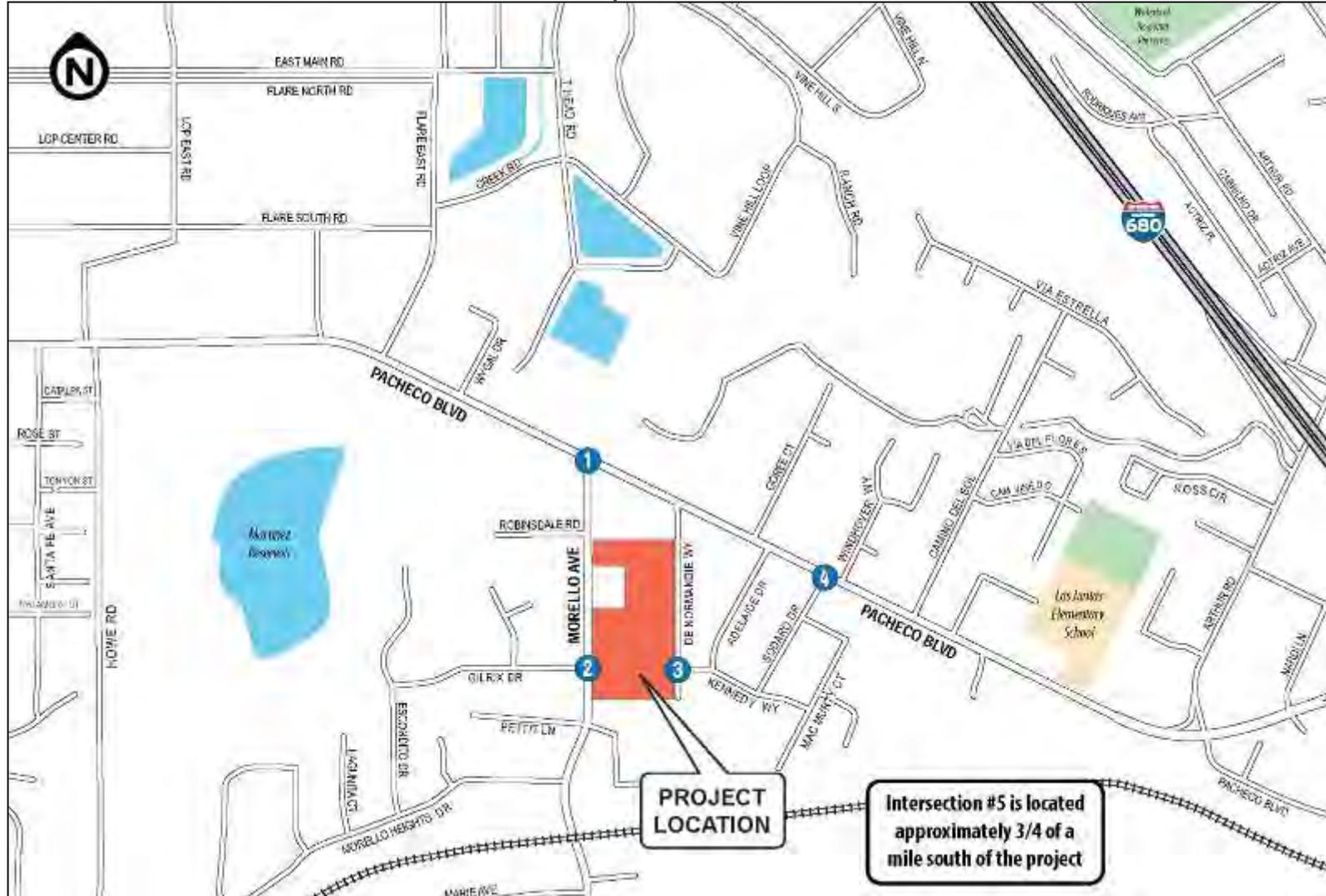
Based on the project’s trip generation and the potential for traffic impacts, the TIA evaluates the following intersections (see Figure 13, Study Intersections):

1. Morello Avenue at Pacheco Boulevard;
2. Morello Avenue at Gilrix Drive and the Proposed Project Entrance;
3. Kennedy Way and De Normandie Way; and
4. Pacheco Boulevard and Sodaro Drive.

The Pacheco Boulevard Morello Avenue intersection is currently controlled with a traffic signal and the other three intersections are controlled with stop signs. The Kennedy Way and De Normandie Way intersection would provide a secondary entrance location for emergency vehicles only.

¹⁴ Abrams Associates Traffic Engineering, Inc. *Transportation Impact Analysis, Morello Avenue Residential Project, City of Martinez*. March 8, 2016.

Figure 13
Study Intersections



Source: Abrams Associates, Inc. Transportation Impact Analysis, Jardine Residential Project. March 8, 2016

The study intersections were evaluated for the following six scenarios:

1. Existing Conditions – The Existing scenario Level of Service (LOS) is based on the existing peak hour volumes taken in early June 2015 when local schools were still in session and existing intersection configurations.
2. Existing Plus Project Conditions – The Existing Plus Project scenario is based on the Existing Conditions traffic volumes plus trips from the proposed project.
3. Background (No Project) Conditions – The Background scenario is based on the existing volumes plus growth in background traffic plus the traffic from all reasonably foreseeable developments that could substantially affect the volumes at the project study intersections.
4. Background Plus Project Conditions – The Background Plus Project scenario is based on the Background traffic volumes plus the trips from the proposed project.
5. Cumulative Conditions – The Cumulative scenario includes cumulative volumes based on the most recent release of the County’s Travel Demand Forecasting Model plus the trips from approved and pending projects in the study area.
6. Cumulative Plus Project Conditions – The Cumulative Plus Project scenario is based on the Cumulative Conditions traffic volumes plus trips from the proposed project.

Existing Roadway Network

The following local roadways were included in the analysis:

- Pacheco Boulevard – Pacheco Road is a two- to four-lane, mostly north-south roadway with an east-west orientation in the project study area. The roadway is designated as a route of regional significance and extends north from Contra Costa Boulevard to terminate at Jones Street in downtown Martinez. Some local traffic travels this route as a bypass to I-680 and the I-680/SR 4 interchange. In the project study area, the posted speed limit on Pacheco Boulevard is 45 mph to the west of Morello Avenue and 35 mph to the east.
- Morello Avenue – Morello Avenue is a two-lane collector road that extends south from Pacheco Boulevard to an interchange with SR 4 and then continues to terminate on the south at Taylor Boulevard. In the project study area, Morello Avenue has a speed limit of 25 mph. A new roadway connection to Morello Avenue at Gilrix Drive would serve as the primary access to the project.
- Kennedy Way, De Normandie Way, Gilrix Drive, and Sodaro Drive – Kennedy Way, De Normandie Way, Gilrix Drive, and Sodaro Drive are all two-lane residential roads with 25 mph speed limits.

Existing Conditions

Traffic counts at the study intersections were conducted in early June 2015 at times when local schools were in session. Table 13 summarizes the associated LOS computation results for the existing weekday AM and PM peak hour conditions.

Intersection	Control	Peak Hour	Existing	
			Delay	LOS
1. Morello Ave./Pacheco Blvd.	Signalized	AM	11.7	B
		PM	19.5	B
2. Morello Ave./Gilrix Dr.	Two-Way Stop	AM	14.3	B
		PM	13.2	B
3. De Normandie Way/Kennedy Way	Two-Way Stop	AM	8.6	A
		PM	8.6	A
4. Pacheco Blvd./Sodaro Dr.	Two-Way Stop	AM	18.6	C
		PM	23.1	C
5. Morello Ave./Midhill Rd./Village Oaks Dr.	All-Way Stop	AM	20.7	C
		PM	22.4	C
Note: HCM LOS results are presented in terms of average intersection delay in seconds per vehicle. For stopped controlled intersections, the results for the worst side street approach are presented.				
<i>Source: Abrams Associates, Inc., March 2016 (see Appendix I).</i>				

As shown in Table 13, all of the signalized study intersections currently operate under acceptable conditions (LOS D or better) during the weekday AM and PM peak hours.

Existing Plus Project Conditions

Project Trip Generation

The project is forecast to generate approximately 37 vehicle trips during the AM peak hour and 49 trips during the PM peak hour (see Table 14). For the purposes of determining the reasonable worst-case impacts of traffic on the surrounding street network from a proposed project, the trips generated by the proposed project are estimated for the peak commute hours of 7:30 AM and 8:30 AM and 4:30 PM and 5:30 PM, which represent the peak of “adjacent street traffic.” The peak commute time periods are the time during which the project traffic would generally contribute to the greatest amount of congestion.

Trip Distribution

The trip distribution assumptions have been based on the existing distribution of traffic in the area as determined from the latest traffic counts. The distribution also takes into consideration the project’s proximity to freeway interchanges, the existing directional split of local residential areas, and the overall land use patterns in the area. The resulting distribution indicated approximately 25 percent of the traffic would be to and from the west on Pacheco

Boulevard, about 30 percent of the traffic would be to and from the south on Morello Avenue, and 45 percent of the traffic would be to and from the east on Pacheco Boulevard.

Land Use/Category	ITE Code	Size	ADT	AM Peak Hour			PM Peak Hour		
				In	Out	Total	In	Out	Total
Single-Family Detached Housing	210	49 units	9.52	0.19	0.56	0.75	0.63	0.37	1.00
<i>New Trip Generation</i>			<i>466</i>	<i>9</i>	<i>28</i>	<i>37</i>	<i>31</i>	<i>18</i>	<i>49</i>
<i>Source: Abrams Associates, Inc., March 2016 (see Appendix I).</i>									

Existing Plus Project LOS Computations

For the Existing Plus Project scenario, project traffic was added to the existing volumes at the study intersections. The capacity calculations for the Existing Plus Project scenario are shown in Table 15.

Intersection	Control	Peak Hour	Existing		Existing Plus Project	
			Delay	LOS	Delay	LOS
1. Morello Ave./Pacheco Blvd.	Signalized	AM	11.7	B	12.1	B
		PM	19.5	B	21.4	C
2. Morello Ave./Gilrix Dr.	Two-Way Stop	AM	14.3	B	14.9	C
		PM	13.2	B	14.2	C
3. De Normandie Way/Kennedy Way	Two-Way Stop	AM	8.6	A	8.6	A
		PM	8.6	A	8.6	A
4. Pacheco Blvd./Sodaro Dr.	Two-Way Stop	AM	18.6	C	19.0	C
		PM	23.1	C	23.4	C
5. Morello Ave./Midhill Rd./Village Oaks Dr.	All-Way Stop	AM	20.7	C	22.2	C
		PM	22.4	C	23.8	C
Note: HCM LOS results are presented in terms of average intersection delay in seconds per vehicle. For stopped controlled intersections, the results for the worst side street approach are presented.						
<i>Source: Abrams Associates, Inc., March 2016 (see Appendix I).</i>						

As shown in Table 15, all of the project study intersections would have acceptable conditions (LOS D or better) during the weekday AM and PM peak hours. At the intersection of Morello Avenue and Gilrix Drive and the extension of Kennedy Way for emergency vehicle access only, the LOS calculations indicate the maximum delay would be approximately 17 seconds per vehicle during the AM peak hour. For the purposes of a conservative analysis, this intersection was analyzed assuming no additional left turn lanes on Morello Avenue. With this assumption, the peak period (85th percentile) queues would still be estimated to have an average length of less of than one vehicle on all approaches during the peak periods.

Background Conditions

The Background scenario evaluates the existing conditions with the addition of traffic from reasonably foreseeable projects in the area. Projects in the area include all reasonably foreseeable projects that would significantly affect the traffic volumes in the project study area and includes land use growth and transportation improvements as identified in the City’s General Plan 1992 Circulation Element.

Table 16 summarizes the associated LOS computation results for the Baseline weekday AM and PM peak hour conditions. As shown in Table 16, all study intersections would continue to have acceptable conditions (mid LOS D or better) during the weekday AM and PM peak hours in the Background No Project scenario. Figure 7 presents the volumes used in the Background scenario.

Intersection	Control	Peak Hour	Background		Background Plus Project	
			Delay	LOS	Delay	LOS
1. Morello Ave./Pacheco Blvd.	Signalized	AM	12.2	B	12.6	B
		PM	21.7	C	23.7	C
2. Morello Ave./Gilrix Dr.	Two-Way Stop	AM	14.7	B	15.4	C
		PM	13.4	B	14.4	B
3. De Normandie Way/Kennedy Way	Two-Way Stop	AM	8.6	A	8.6	A
		PM	8.6	A	8.6	A
4. Pacheco Blvd./Sodaro Dr.	Two-Way Stop	AM	19.2	C	19.5	C
		PM	24.1	C	24.4	C
5. Morello Ave./Midhill Rd./Village Oaks Dr.	All-Way Stop	AM	23.4	C	24.7	C
		PM	25.1	D	26.7	D

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

Source: Abrams Associates, Inc., March 2016 (see Appendix I).

Background Plus Project Conditions

The Background Plus Project traffic forecasts were developed by adding project-related traffic to the baseline traffic volumes. Table 16 also summarizes the LOS results for the Baseline and Background Plus Project weekday AM and PM peak hour conditions. As shown in Table 16, all study intersections would maintain acceptable conditions (LOS D or better) during weekday AM and PM peak hours under Background Plus Project conditions.

Cumulative and Cumulative Plus Project Conditions

For Cumulative Conditions, Year 2040 General Plan traffic volumes were obtained from traffic forecasts produced using the Contra Costa County traffic demand forecasting model.

The traffic forecasts include land use growth and transportation improvements associated with buildout of the City’s General Plan as identified in the City’s General Plan 1992 Circulation Element. Table 17 summarizes the LOS results for the Cumulative (Year 2040) traffic conditions at each of the project study intersections.

Intersection	Control	Peak Hour	Cumulative		Cumulative Plus Project	
			Delay	LOS	Delay	LOS
1. Morello Ave./Pacheco Blvd.	Signalized	AM	14.6	B	15.3	B
		PM	35.3	D	38.6	D
2. Morello Ave./Gilrix Dr.	Two-Way Stop	AM	16.2	C	17.1	C
		PM	14.4	B	15.5	C
3. De Normandie Way/Kennedy Way	Two-Way Stop	AM	8.6	A	8.6	A
		PM	8.6	A	8.6	A
4. Pacheco Blvd./Sodaro Dr.	Two-Way Stop	AM	22.0	C	22.3	C
		PM	28.7	D	29.0	D
5. Morello Ave./Midhill Rd./Village Oaks Dr.	All-Way Stop	AM	37.5	E	37.4	E
		PM	36.3	E	36.4	E

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

Source: Abrams Associates, Inc., March 2016 (see Appendix I).

Cumulative Plus Project Conditions

As shown in Table 17, with addition of traffic from approved projects all study intersections would maintain acceptable conditions (mid LOS D or better) during the weekday AM and PM peak hours, with the exception of the Morello Avenue at Midhill Road/Village Oaks Drive intersection, which is forecast to operate at LOS E under Cumulative and Cumulative Plus Project conditions. According to the TIA, based on a review of Caltrans Traffic Signal Warrants, this intersection is not forecast to ever meet any of the warrants for installation of a traffic signal with or without the additional traffic associated with the proposed project. In addition, the traffic forecast to be generated by the project would increase the traffic volumes at this intersection by less than two percent, which would not be considered a significant impact.

Conclusion

The proposed project would not cause any of the study intersections to exceed City of Martinez, Contra Costa County, or Caltrans standards, and vehicular traffic mitigations would not be required. In addition, although a General Plan Amendment and rezone would be required in order to change the type of residential development at the project site, the proposed project is generally consistent with what has been anticipated for the site by the City. As such, buildout of the site has already been assumed in all cumulative buildout traffic forecasts that have been used in the design of roadway and freeway facilities in the area.

Accordingly, the proposed project would not cause an increase in traffic that is substantial in relation to the existing traffic load and capacity of the street system or an increase in traffic that would exceed an established LOS standard. Therefore, the project would result in a ***less-than-significant*** impact.

- c. The project site is located approximately 2.75 miles northwest of the nearest airport, the Buchanan Field Airport. According to Figure 3A of the Contra Costa County Airport Land Use Compatibility Plan, the site is located within the Airport Influence Area for the Buchanan Field Airport. According to Figure 3C of the Contra Costa County Airport Land Use Compatibility Plan, the site is not located within the Contra Costa County Airport's safety zone areas. Therefore, the project would not result in a change in air traffic patterns, including an increase in traffic levels or change in location, and ***no impact*** would occur.
- d,e. The proposed project would not result in any sharp curves, dangerous intersections, or incompatible uses that would substantially increase hazards on the site or in the immediate vicinity. All access to the project site would be via a new connection from the site to Morello Avenue. Based on a review of the proposed site plan, the determination was made that the site circulation would function well and would not cause any safety or operational problems. The project site design has been required to conform to City design standards and the plan is not expected to create any significant impacts to pedestrians, bicyclists or traffic operations. Internal site circulation or access issues that would cause a traffic safety problem or any unusual traffic congestion or delay have not been identified.

Sufficient emergency access is determined by factors such as number of access points, roadway width, and proximity to fire stations. The main entrance to the project site would be located on Morello Avenue. A secondary entrance for emergency vehicles only would be provided on Kennedy Way at De Normandie Way. A connection to the property to the north would be restricted to emergency vehicles only. All lane widths within the project would meet the minimum width that can accommodate all emergency vehicles. In addition, the project site plan would be subject to review and approval by the Contra Costa County Fire Department.

However, according to the TIA for the project, based on the LOS analysis, the 95th percentile queue for the proposed southbound left-turn pocket is forecast to be one vehicle, which may not provide adequate throat distance for the left-turn pocket. Therefore, without implementation of the following mitigation measure, the project would result in a ***potentially significant*** impact.

XVI-1. Prior to issuance of a building permit, the site plans shall demonstrate that 75 feet of storage (for three vehicles) are provided for the proposed left turn pocket off Morello Avenue. The site plans shall be submitted for review and approval by the City Engineer.

- f. Bus service in the area is provided by the County Connection. Route 18 operates along Pacheco Boulevard and Morello Avenue with stops on Pacheco Boulevard approximately a block from the project site. This route operates on approximately 1.5-hour headways

between the Martinez Amtrak station and the Pleasant Hill BART station. Route 19 operates along Pacheco Boulevard and also has stops on Pacheco Boulevard approximately a block from the project site. This route operates on approximately two-hour headways between the Martinez Amtrak station and the Concord BART station.

The proposed project would generate additional pedestrian and bicycle traffic in the project vicinity, but the project is not expected to significantly impact or change the design of any existing pedestrian facilities or create any new safety problems in the area. A bicycle lane currently exists on Morello Avenue along the project site's western boundary. Although limited sidewalks exist in the project area, the project would include the construction of sidewalks along the site frontage on Morello Avenue, as well as along the proposed internal streets.

The project is not expected to contribute to any significant deficiencies in alternative transportation in the project vicinity. In addition, the project would not conflict with any adopted City of Martinez policies, plans, or programs related to public transit, bicycle, or pedestrian facilities. Therefore, the project's impact related to conflict with adopted policies supporting alternative transportation would be *less than significant*.

XVII. UTILITIES AND SERVICE SYSTEMS. <i>Would the project:</i>	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less-Than-Significant Impact	No Impact
a. Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d. Have sufficient water supplies available to serve the project from existing entitlements and resources, or are new or expanded entitlements needed?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
e. Result in a determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
f. Be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
g. Comply with federal, state, and local statutes and regulations related to solid waste?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Discussion

a,b,e. The proposed project would be provided sewer services by the MVSD. The project site contains existing development that is currently provided sewer service via connections to the existing MVSD sewer system. The proposed project would connect to the existing MVSD sewer lines located along Morello Avenue, near the intersection of Morello Avenue and Jardine Way, and extend along Jardine Way and the internal roadway network. A portion of the existing sewer line along Morello Avenue would be upgraded from an eight-inch pipe to a 10-inch pipe. The sewage generated at the project site would flow through the on-site sewer system and to a new connection with an existing sewer line at the northeastern corner of the project site. The existing sewer line and easement along the eastern boundary of the site would be abandoned and a new easement through the Ace Hardware site for the sewer line and connection at the northeastern border of the site would be required.

The MVSD has provided a letter to the City of Martinez indicating that the MVSD would provide sewer services to the proposed project.¹⁵ The project applicant would be required to obtain a sewer connection permit and pay permit fees for trunk sewer, plant capacity, and connection prior to connecting each future residence to the MVSD's system, which would help to ensure that adequate capacity is available to serve the project's projected demand for services. Accordingly, the proposed project would not require or result in the construction of new wastewater facilities or the expansion of existing facilities, as sufficient capacity is available to adequately serve the proposed project. The proposed project would not introduce any land uses or operations that would generate wastewater that could cause the MVSD to exceed any wastewater treatment requirements.

Based on the above, the proposed project would not exceed any wastewater treatment requirements of the applicable Regional Water Quality Control Board, require or result in the construction of new wastewater treatment facilities or expansion of existing facilities, or result in a determination by the wastewater treatment provider which serves or may serve the project that adequate capacity is not available to serve the project's projected demand. Therefore, impacts would be considered *less than significant*.

- c. Development of the proposed project would result in an increase in impervious surfaces on the project site, which would increase the amount of stormwater runoff generated on the project site from existing levels. However, as discussed in Section IX, Hydrology and Water Quality, of this IS/MND, the project would be required to comply with C.3 Standards and includes appropriate site design measures, source controls, and hydraulically-sized stormwater treatment facilities to remove pollutants, slow runoff, and release runoff to the downstream storm drain system at a level comparable to the pre-development flow volume. As stated in Section IX, the existing stormwater drainage system infrastructure would have sufficient capacity to handle the stormwater flows from the proposed project, and alterations to the existing stormwater infrastructure in the vicinity of the project site would not be necessary. Because the proposed project would not require the construction of new off-site stormwater drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects, a *less-than-significant* impact would occur.
- d. The proposed project would be provided potable water service by the CCWD, which obtains surface water from the San Joaquin River Delta. The water supplied by CCWD is treated at the Bollman Water Treatment Plant and distributed through a system of pipelines and pump stations. The project site contains existing development that is currently provided potable water service via connections to the existing CCWD water system. The proposed project would connect to the existing CCWD water lines located along Morello Avenue, near the intersection of Morello Avenue and Jardine Way, and extend along Jardine Way and the internal roadway network. Each proposed home would have a separate service connection and meter. The CCWD has provided a letter to the City of Martinez stating that the CCWD will provide treated water services to the proposed project.¹⁶ It should be noted that the proposed project would be required to comply with the CALGreen Code standards, which

¹⁵ Peter Wollman, Mt. View Sanitary District. *Subdivision 9404, Vesting Tentative Map, Jardine MVSD Conditions of Approval*. March 17, 2016.

¹⁶ Mark Seedall, Contra Costa Water District. *Comment Letter Regarding the Jardine Subdivision Project*. April 1, 2016.

would help to reduce water consumption at the site. Landscaping would be designed to incorporate drought tolerant landscaping and drip irrigation to reduce irrigation water consumption. Accordingly, the proposed project would not require or result in the construction of new water facilities or the expansion of existing facilities, as sufficient water supplies are available to adequately serve the proposed project. Therefore, impacts would be considered *less than significant*.

- f,g. The City is responsible for all solid waste collection within the City limits, including at the project site. Republic Services (formerly Allied Waste Services) has a franchise agreement with the City for the collection and disposal of solid waste and recyclable items. Republic Services operates both the Contra Costa Transfer Station and the Keller Canyon Landfill, which is projected to be capped in 2030. The company offers weekly curbside commercial and residential pick-up services as well as a drop off service for a limited variety of household hazardous waste materials. Keller Canyon Landfill has a maximum permitted throughput of 3,500 tons per day and maximum disposal acreage of 244 acres.¹⁷ The landfill is anticipated to be active until the year 2030. Approximately 3,000 tons of waste per day is currently handled at the Keller Canyon Landfill.¹⁸

According to the California Department of Resources Recycling and Recovery (CalRecycle), as of 2014, the City of Martinez had a per capita solid waste generation rate of 5.4 pounds per day (or 0.0027 tons per day).¹⁹ Based on the City's average persons per household of 2.53,²⁰ 124 people could be expected at the project site, which could result in the generation of approximately 670 pounds per day (or 0.34 tons per day) of solid waste. The proposed project's approximate increase of 0.34 tons per day of solid waste to be disposed of at Keller Canyon Landfill would not cause an exceedance of the maximum permitted throughput at the landfill. In addition, the project site contains existing development that is currently provided solid waste services, including disposal of waste at the Keller Canyon Landfill. As such, the actual increase in solid waste generation due to the proposed project would be less than estimated above. Therefore, sufficient capacity exists at the Keller Canyon Landfill to accommodate the proposed project's solid waste disposal needs.

The City is required by AB 939 to ensure that the diversion and recycling mandates of the State are achieved and maintained. The proposed project would be required to comply with CALGreen Code standards, which include construction and demolition debris recycling requirements. Generally, the proposed project would comply with federal, state, and local statutes and regulations related to solid waste.

¹⁷ CalRecycle. *Facility/Site Summary Details: Keller Canyon Landfill (07-AA-0032)*. Available at: <http://www.calrecycle.ca.gov/SWFacilities/Directory/07-AA-0032/Detail/>. Accessed May 2016.

¹⁸ Republic Services. *Contra Costa County Community Partner Services*. Available at: <http://site.republicservices.com/site/pacheco-ca/en/pages/community-partner.aspx>. Accessed May 2016.

¹⁹ CalREcycle. *Per Capita Disposal Rate Trends Martinez*. Available at: <http://www.calrecycle.ca.gov/LGCentral/Reports/Viewer.aspx?P=JurisdictionID%3d292%26ReportName%3dDPGrapPopEmpNumbers%26ShowParameters%3dfalse%26AllowNullParameters%3dFalse>. Accessed May 2016.

²⁰ U.S. Census Bureau. *QuickFacts, Martinez city, California*. Available at: <http://www.census.gov/quickfacts/table/PST045214/0646114>. Accessed May 2016.

Because the proposed project would be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs and comply with federal, state, and local statutes and regulations related to solid waste, the proposed project's impacts related to solid waste would be *less than significant*.

XVIII. MANDATORY FINDINGS OF SIGNIFICANCE.	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less-Than-Significant Impact	No Impact
a. Does the project have the potential to degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
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)?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c. Does the project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Discussion

- a. As discussed in the Biological Resources section of this IS/MND, the proposed project site is of low habitat value given the disturbed nature of the site as well as the site’s location within an urbanized area of the City of Martinez. Nevertheless, the development of the proposed project has the potential to affect a State of California Species of Concern, the Tricolored Blackbirds, as well as other birds also protected by the Migratory Bird Treaty Act. In addition, although unlikely, the possibility exists for subsurface excavation of the site during grading and other construction activities to unearth deposits of cultural significance. However, this IS/MND includes mitigation measures that would reduce any potential impacts to less-than-significant levels (see Mitigation Measures IV-1, V-1, and V-2). Therefore, the proposed project would have *less-than-significant* impacts related to degradation of the quality of the environment, reduction of habitat, threatened species, and/or California’s history or prehistory.
- b,c. The proposed project involves the development of an underused lot in a developed area of the City of Martinez. The proposed project would develop the site in a manner consistent with surrounding land uses and would be considered infill. substantial adverse effects on human beings are not anticipated with implementation of the proposed project. It should be noted that during construction and demolition activities, the project could result in potential impacts related to asbestos, lead-based paints, and noise. However, this IS/MND includes mitigation measures that would reduce any potential impacts to a less-than-significant level. In addition, the proposed project would be designed in accordance with all applicable building standards and codes to ensure adequate safety is provided for the future residents of

the proposed project. Because all potential impacts would be mitigated to less than significant levels the proposed project is not expected to have individually or cumulatively significant impacts. Therefore, impacts related to environmental effects that could cause adverse effects on human beings or that would be individually limited, but cumulatively significant would be *less than significant*.