

Appendix A

CEQA Guidelines Amendments.
Appendix G – Environmental Checklist.

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Effective March 18, 2010

This analysis incorporates the text changes to Appendix G of the CEQA Guidelines pursuant to the CEQA Guidelines Amendments (adopted December 2009), which formally take effect on March 18, 2010. This analysis incorporates the new checklist questions for Agricultural and Forestry Resources, Greenhouse Gas Emissions, and Transportation and Circulation. Changes to the environmental checklist since the January 2010 CEQA Guidelines are highlighted, with text additions shown in underline and text deletions shown in strikeout.

A-I: Agricultural and Forestry Resources

	Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporated	Less-than- Significant Impact	No Impact
Would the project:				
a) Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland) to non-agricultural use?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Conflict with existing zoning for agricultural use, or with a Williamson Act contract?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) <u>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))?</u>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d) <u>Result in the loss of forest land or conversion of forest land to non-forest use?</u>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
e) Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use <u>or conversion of forest land to non-forest use?</u>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

a) Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland) to non-agricultural use?

and

e) Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use or conversion of forest land to non-forest use?

Less than Significant Impact. Please refer to **Section II, Agricultural Resources** of the Draft Initial Study/Mitigated Negative Declaration (IS/MND) for a discussion of the conversion of farmland.

b) Conflict with zoning for agricultural use, or with a Williamson Act contract?

and

c) Conflict with existing zoning for, or cause rezoning of, forest land, timberland, or timberland zoned Timberland Production?

No Impact. The project site is not zoned for forest land or timberland use. The project would therefore not conflict with existing zoning for forest land, timberland, or Timberland Production. No mitigation is required.

d) Result in the loss of forest land or conversion of forest land to non-forest use?

No Impact. The project site is currently vacant and does not contain any forest lands. The project site is bordered by urban development to the north and west.

While there are three small, non-native tree located on the project site, the project site is bordered by urban development to the north and west and is not used for forest land activities. Therefore, the project would not result in the conversion of forest land to non-forest use and no mitigation is required.

A-II: Greenhouse Gas Emissions

	Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporated	Less-than-Significant Impact	No Impact
Would the project:				
a) <u>Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?</u>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b) <u>Conflict with any applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases?</u>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

a) Generate greenhouse gas emissions that may have a significant effect on the environment?

Potentially Significant Unless Mitigation Incorporated. Both construction period and operational period project activities have the potential to generate greenhouse gas (GHG) emissions.

Regulatory Setting

Global climate change, the warming of the earth’s temperature, is caused by the emission of GHGs into the atmosphere. Naturally occurring GHGs include carbon dioxide (CO₂), commonly emitted through the burning of fossil fuel; methane (CH₄), typically emitted through agriculture (animal waste) and the out-gassing of landfills; and nitrous oxide (N₂O), emitted through the burning of fossil fuel and agricultural soil management.¹ Several classes of halogenated substances that contain fluorine, chlorine, or bromine are also GHGs, but they are primarily products of specialized industrial activities. Chlorofluorocarbons (CFCs) and hydrochlorofluorocarbons (HCFCs), and halons are stratospheric ozone depleting substances. While other fluorine containing substances do not deplete stratospheric ozone, including hydrofluorocarbons (HFCs), perfluorocarbons (PFCs), and sulfur hexafluoride (SF₆), they are considered powerful GHGs. When these gases are released into the atmosphere, they block heat and energy from being radiated back into space, and deflect this energy back to the earth’s surface in what is known as the greenhouse effect. Emissions of CO₂ (the most abundant GHG) are byproducts of fossil-fuel combustion, while methane emissions are

¹ California Health and Safety Code, Section 38505. (January 2009); California Assembly Bill 32, California Global Warming Solutions Act of 2006. (2006); CEQA Guidelines, Section 15364.5.

primarily related to the off-gassing associated with agricultural practices and landfills. The CO₂ equivalent is a figure that enables all GHG emissions to be considered as a group despite their varying global warming potential.

Although the greenhouse effect is a naturally occurring process, the release of GHGs through human activities is increasing the amount of heat and energy deflected back to the earth, and therefore increasing the earth's overall temperature to abnormally high levels.

Methodology

The BAAQMD released draft GHG thresholds in October 2009 and revised draft thresholds in December 2009. The draft BAAQMD proposes operational-related thresholds of significance for GHG emissions, but does not propose a threshold of significance for construction-period GHG emissions. As of December 2009, the BAAQMD proposed a draft GHG threshold of 4.6 metric tons of CO₂ equivalent per capita (resident) per year for residential projects. However, this threshold remains in draft form and has not yet been formally adopted. At the January 6, 2010 BAAQMD Board of Directors Meeting, the consideration of the adoption of the GHG thresholds was postponed until at least April 2010.

Further, the City has not yet adopted a Climate Action Plan,² nor has the City established a specific threshold for determining the level of significance of GHG emissions for a residential project.

Additionally, as the precise causal link between an individual project's emissions and global climate change has not yet been developed, it is reasonable to conclude that an individual development project cannot generate a high enough quantity of GHG emissions to independently affect global climate change. However, the combination of individual projects can cumulatively impact global climate change, especially when a project is taken in combination with all other past, present, and reasonably foreseeable future projects. Thus, for the purposes of this analysis, the GHG emissions associated with project development are quantified but are not measured against a specific emission threshold since there is no formalized and/or adopted guidance or thresholds available at the time of preparation of this Initial Study. For this project, the URBEMIS2007 model (Version 9.2.4) was used to estimate both construction period and operational period GHG emissions.

Construction Impacts

The proposed project would generate GHG emissions during the temporary (short term) construction activities. Construction activities produce combustion emissions from various sources, such as site grading, equipment engines, on-site heavy duty construction vehicles, equipment hauling materials to and from the project site, asphalt paving, and motor vehicles used by the construction workers. On-site construction activities would vary depending on the level of construction activity. Based on the URBEMIS2007 model for the project, it is estimated that temporary construction emissions would average at approximately 324.75 metric tons of CO₂ equivalent per year for the

² The City plans to prepare a Climate Action Plan, with preparation of the document beginning in early 2010.

entire four-year construction phase. As previously stated, there are no established thresholds for construction period GHG emissions. Thus, construction related GHG emissions would be localized and temporary. The construction control measures identified in **Mitigation Measure III-1** in **Section III, Air Quality** of the Draft IS/MND and **Mitigation Measure A-II-1** would minimize construction related GHG emissions.

Mitigation Measure A-II-1: To the extent feasible and to the satisfaction of the City, the following measures shall be incorporated into the design and construction of the project:

- Project plans shall be revised to indicate use of building materials or products that have been extracted, harvested, or recovered, as well as manufactured within 500 miles of the project site, unless demonstrated to the satisfaction of the City to be infeasible.
- Prior to issuance of grading or building permits, the project applicant shall revise project plans to incorporate a construction waste management plan in accordance with City Ordinance 6-3.203 which requires at least 50% of all construction and demolition debris generated by the project to be diverted.

Operational Impacts

Long-term, operational GHG emissions would result from area and mobile sources, as well as indirect emissions from stationary sources that produce electricity to be consumed, water conveyance, and wastewater generation. Specifically, operational GHG emissions would result from project generated vehicular traffic, on-site combustion of natural gas, operation of landscaping equipment, use of consumer products, off-site generation of electrical power over the life of the project, and the energy required to convey water to and wastewater from the project site.

Based on the URBEMIS2007 emissions factors for fossil fuel combustion, the project would result in the emission of approximately 1,991 metric tons of unmitigated CO₂ equivalent annually during project operation. As the project would include a residential population of approximately 356 new residents (refer to **Section XII, Population and Housing** of the Draft IS/MND), the project would have a per capita CO₂ equivalent emission rate of approximately 5.59 metric tons of CO₂ equivalent emissions per resident per year. While these GHG emissions would exceed the proposed BAAQMD GHG threshold of 4.6 metric tons of CO₂ equivalent per capita (resident) per year, these thresholds remain in draft form and have not yet been adopted by the BAAQMD. Additionally, the project includes multiple green building techniques included as part of the project design (identified in the Project Description of this Initial Study). Through the incorporation of the green building techniques, including energy efficient design elements, water-efficient landscape features, and meeting the minimum requirements of the most recent version of the New Home Construction Green Building Guidelines, published by Build It Green, the project would further reduce project GHG emissions. **Mitigation Measure A-II-2** would ensure that such design features are incorporated into project design and construction plans as part of the project approval.

As the BAAQMD and the City have not established a methodology to quantify the GHG emission reductions associated with the specific green building techniques or other mitigation measures, it would be speculative to quantify the specific level of reduction for each green building feature. While this analysis cannot determine the level of GHG emission reduction associated with the project's green building techniques, it is assumed that these elements would substantially reduce the project's GHG emissions. **Mitigation Measure A-II-3** would further require the project to comply with any formalized thresholds or guidance that are in place at the time of the issuance of building permits, which would reduce project GHG emission impacts to a less than significant level.

Mitigation Measure A-II-2: As a condition of project approval, the project applicant shall incorporate the green building design and construction measures identified in the project Residential Allocation Application and the project's checklist for the New Home Construction Green Building Guidelines into final project design and construction plans, or ensure that equivalent measures are included in the project.

Mitigation Measure A-II-3: While there are no formalized GHG emission thresholds or quantifiable reduction strategies available at the time of the preparation of this Initial Study, the project applicant shall comply with any formalized GHG thresholds and/or reduction measures at the time of issuance of building permits.

Significance after Mitigation: Mitigation Measures III-1 (in **Section III, Air Quality** of the Draft IS/MND) and **A-II-1** include all feasible measures for reducing construction-related GHG emissions. **Mitigation Measure A-II-2** would require the project applicant to apply the required green building techniques into the final project design and construction plans, while **Mitigation Measure A-II-3** would require the project to comply with any future formalized GHG thresholds or quantifiable reduction strategies that are in place at the time of the issuance of building permits to reduce project GHG emissions. Implementation of all of the measures described above would reduce GHG emission impacts to a less than significant level.

b) Conflict with any applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases?

Less-than-Significant Impact: The City of Antioch has not adopted any plans, policies or regulations for the purpose of reducing the emissions of greenhouse gases. Applicable legislation on reducing the emissions of greenhouse gases is at the state level and is summarized below:

State of California Executive Order S-3-05

In June 2005, the Governor of California signed Executive Order S-3-05, which identified CalEPA as the lead coordinating State agency for establishing climate change emission reduction targets in California. The "Climate Action Team", a group of state agencies, was set up to implement Executive Order S-3-05. Under this order, the State plans to reduce greenhouse gas emissions to 80 percent below 1990 levels by 2050. GHG emission reduction strategies and measures to reduce global warming were identified in the 2006 Climate Action Team Report.

Assembly Bill 32 - The California Global Warming Solutions Act of 2006

In 2006, the governor of California signed Assembly Bill 32 (AB 32), the Global Warming Solutions Act, into law. The Act requires California to cap its greenhouse gas emissions at 1990 levels by 2020. This legislation requires the California Air Resources Board (CARB) to establish a program for statewide GHG emissions reporting, and monitoring/enforcement of that program. CARB recently published a list of discrete GHG emission reduction measures that can be implemented immediately. CARB was also required to adopt rules and regulations to achieve the maximum technologically feasible and cost-effective GHG emission reductions. CARB's Early Action Plan identified regulations and measures that could be implemented in the near future to reduce GHG emissions.

Many of the measures to reduce GHG emissions from transportation will come from CARB. AB 1493, the Pavley Bill, directed CARB to adopt regulations to reduce emissions from new passenger vehicles. CARB's AB32 Early Action Plan released in 2007 included a strengthening of the Pavley regulation for 2017 and included a commitment to develop a low carbon fuel standard (LCFS). Current projections indicate that with implementation of a strengthened Pavley Regulation, including LCFS, California will still fall short of the 1990 level targets for transportation emission reductions. Under the Bush Administration, the U.S. EPA blocked California's efforts to implement an LCFS, however, the Obama Administration has directed the U.S. EPA to reconsider its action. Nonetheless, the earlier U.S. EPA action and pending legal challenges by the automotive industry could continue to delay California's efforts to achieve emission reduction targets.

CARB is targeting other sources of emissions. The main measures to reduce GHG emissions will be contained in the AB32 Scoping Plan. A draft of that plan was released in June 2008 and was approved by CARB in December 2008. The regulatory process to implement the plan began in 2009. The details in regulating emissions and developing targeted fees to administer the program will be developed through this process and must be enacted by 2012.

This plan includes a range of GHG reduction actions. Central to the draft plan is a cap and trade program covering 85 percent of the state's emissions. This program will be developed in conjunction with the Western Climate Initiative, comprised of seven states and three Canadian provinces, to create a regional carbon market. The plan also proposes that utilities produce a third of their energy from renewable sources such as wind, solar and geothermal, and proposes to expand and strengthen existing energy efficiency programs, such as building and appliance standards. The plan also includes full implementation of the Pavley standards to provide a wide range of less polluting and more efficient cars and trucks to consumers who will save on operating costs through reduced fuel use. The plan also calls for development and implementation of the Low Carbon Fuel Standard, which would require oil companies to make cleaner, domestically produced fuels.

Senate Bill 97 – CEQA Greenhouse Gas Emissions

Senate Bill 97 (SB 97) directed the Office of Planning and Research (OPR) to prepare, develop, and transmit to the Resources Agency guidelines for the feasible mitigation of GHG emissions or their effects by July 1, 2009. OPR issued draft guidelines on April 13, 2009, which encourage each jurisdiction to define and determine what amount of GHG emissions would have a significant impact on the environment.

The proposed amendments to the CEQA guidelines have been reviewed by the State's Office of Administrative Law, were adopted in December 2009, and will formally take effect on March 18, 2010.

Senate Bill 375 - California's Regional Transportation and Land Use Planning Efforts

California enacted legislation (SB 375) to expand the efforts of AB 32 by controlling indirect GHG emissions. SB 375 would develop emission-reduction goals which regions could apply to planning activities. SB 375 provides incentives, such as transportation funding, for local governments and developers to implement new conscientiously planned growth patterns. This includes incentives for creating attractive, walkable and sustainable communities and revitalizing existing communities. The legislation also allows developers to bypass certain environmental reviews under CEQA if they build projects consistent with the new sustainable community strategies. Development of more alternative transportation options that would reduce vehicle trips and miles traveled, along with traffic congestion, would be encouraged. SB 375 enhances CARB's ability to reach the AB 32 goals by directing the agency to develop regional GHG emission reduction targets to be achieved from the transportation sector for 2020 and 2035. CARB would work with the metropolitan planning organizations (e.g., ABAG and MTC) to align their regional transportation, housing and land use plans to reduce vehicle miles travelled and demonstrate the region's ability to attain its GHG reduction targets.

California's Energy Efficiency Standards for Residential Buildings, Title 24, Part 6, of the California Code of Regulations

The Energy Efficiency Standards for Residential Buildings were established in 1978 in response to a legislative mandate to reduce California's energy consumption. The standards are updated periodically to allow consideration and possible incorporation of new energy efficiency technologies and methods. The latest standards went into effect in January 1, 2010. Projects that apply for a building permit on or after this date must comply with the 2008 Standards. Typically every three years energy efficiency standards are revised and performance requirements are more stringent. It is expected that one more update may occur prior to the development of the project.

Project Consistency with Applicable Plans, Policies, and Regulations

As described in the Project Description of this Initial Study, pursuant to City of Antioch Resolution No. 2008/10 regarding the City Council's approval of the residential development allocations for the project, the project applicant would be required to incorporate energy efficient appliances and design features as standard unit equipment in each new residential unit. In addition, the project applicant is required to install 4,300 square feet of photovoltaic solar panels, to be located on the roof of the decorative arbors in the park and open space areas. These panels are to supply all of the common area electrical needs, including streetlights, bollard lights, pathway lights, and irrigation controllers. Under the same Resolution, the project would also be required to meet the minimum point threshold of a green home as defined in the most recent version of the New Home Construction Green Building Guidelines published by Build It Green, which would further reduce project related GHG emissions.

The project would incorporate these design features and would be required to comply with **Mitigation Measures III-1** (in **Section III, Air Quality** of the Draft IS/MND), **A-II-1**, **A-II-2**, and **A-II-3**, which would reduce GHG emissions generated by the project and in alignment with the local, regional, and state goals to reduce GHG emissions. Given the above, the project would not substantially impede efforts statewide to reduce GHG emissions.

A-III. Transportation and Traffic

	Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporated	Less-than-Significant Impact	No Impact
Would the project: ³				
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) <u>Conflict with an applicable plan, ordinance or policy establishing measures of effectiveness for the performance of the circulation system, taking into account all modes of transportation including mass transit and non-motorized travel and relevant components of the circulation system, including but not limited to intersections, streets, highways and freeways, pedestrian and bicycle paths, and mass transit?</u>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b) Exceed, either individually or cumulatively, a Conflict with an applicable congestion management project, including, but not limited to level of service standards and travel demand measures, or other standards established by the county congestion management agency for designated roads or highways?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input 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 feature (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 type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

³ The transportation and traffic analysis is consistent with the December 2009 CEQA Guidelines, Appendix G, which take effect March 18, 2010.

	Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporated	Less-than-Significant Impact	No Impact
f) Result in inadequate parking capacity?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
g) Conflict with adopted policies, plans or programs regarding public transit, bicycle, or pedestrian facilities, or otherwise decrease the performance or safety of such facilities supporting alternative transportation (e.g. bus turnouts, bicycle racks)?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

For a discussion of the project setting, please refer to **Section XV, Traffic and Transportation** of the Draft IS/MND.

Project Impacts

a) **Conflict with an applicable plan, ordinance or policy establishing measures of effectiveness for the performance of the circulation system, taking into account all modes of transportation including mass transit and non-motorized travel and relevant components of the circulation system, including but not limited to intersections, streets, highway and freeways, pedestrian and bicycle paths, and mass transit?**

and

b) **Conflict with an applicable congestion management program, including but not limited to level of service standards and travel demand measures, or other standards established by the county congestion management agency for designated roads or highways?**

Potentially Significant Unless Mitigation Incorporated. Refer to **Section XV, Traffic and Transportation** of the Draft IS/MND for a discussion of impacts to the transportation and circulation system.

Consistency With Measures of Effectiveness of the Circulation System

As previously discussed under the heading “Significance Criteria” above, the City has established significance thresholds related to LOS and average delay to measure the effectiveness of the circulation system. However, as of April 1, 2009, Contra Costa County no longer imposes requirements for local performance standards and LOS standards for non regional routes of significance.⁴ For routes of regional significance, Contra Costa County Transportation Authority

⁴ City of Antioch General Plan, Growth Management Chapter. Measure J, approved in 2004, is a 25-year extension of the previous Measure C Contra Costa Transportation Improvement and Growth Management Program, approved in 1988. Beginning on April 1, 2009, Measure J eliminates the previous Measure C requirements for local performance standards and LOS standards for non regional routes of significance.

(CCTA) established LOS and delay thresholds similar to those used by the City, i.e. where streets and intersections operating at LOS D or better are considered acceptable. With the exception of Lone Tree Way, all other roadways evaluated as part of this analysis are considered non regional routes of significance. As such, the City's established significance thresholds for delay and LOS for all streets and intersections are more conservative than the measures established by CCTA.

Additionally, the East County Action Plan, which serves as a multi-jurisdictional planning document related to transportation and circulation, also includes LOS and delay measures of effectiveness. The East County Action Plan requires that traffic impacts as a result of future development be mitigated to the standards of the CCTA.

With implementation of **Mitigation Measures XV-1 and XV-2**, discussed below, the project would be in accordance with the City, CCTA, and East County Action Plan plans and policies measuring the effectiveness of the circulation system. With the mitigation, the project traffic impacts would be mitigated acceptable operating conditions of LOS D or better at the study intersections and streets. Project effects on the SR4 Bypass would also be considered less than significant as the project would not result in the degradation of freeway operating conditions. Refer to the discussion under item f) below for an evaluation of the project's consistency with transit, bicycle, and pedestrian plans and policies.

c) Result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks?

No Impact. Refer to **Section XV, Traffic and Transportation** of the Draft IS/MND for a discussion of air traffic patterns.

d) Substantially increase hazards to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?

Potentially Significant Unless Mitigation Incorporated. Refer to **Section XV. Traffic and Transportation** for a discussion of design features.

e) Result in inadequate emergency access?

Less-than-Significant Impact. Refer to **Section XV, Traffic and Transportation** of the Draft IS/MND for a discussion of emergency access.

f) Conflict with adopted policies, plans or programs regarding public transit, bicycle, or pedestrian facilities, or otherwise decrease the performance or safety of such facilities?

Less-than-Significant Impact. Refer to **Section XV, Traffic and Transportation** of the Draft IS/MND for a discussion of public transit, bicycle, and pedestrian facilities.