

LOCUST STREET / MT. DIABLO BOULEVARD SPECIFIC PLAN

Draft Environmental Impact Report

Prepared for
City of Walnut Creek

December 2008

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CHAPTER I

Introduction

The City of Walnut Creek has drafted the Locust Street / Mt. Diablo Boulevard Specific Plan (“Specific Plan” or “Plan”) for a key portion of the Traditional Downtown, north of Mt. Diablo Boulevard. The Specific Plan addresses approximately 5.3 acres that include several significant vacant and transitional commercial properties that offer opportunities for infill development. The primary goal of the Specific Plan is to “maintain and enhance the viability of downtown Walnut Creek as a regional, as well as a local, retail destination.” The Specific Plan includes objectives, policies, development standards, and design guidelines intended to guide new development in the Specific Plan Area over the next five to ten years in a way that builds upon, enhances and expands the existing pedestrian-oriented retail district, while preserving the diverse and eclectic character of the Traditional Downtown.

Generally, implementation of the Specific Plan *as envisioned by the City* will develop approximately 202,000 square feet of net new retail, office, and residential (46 units) uses; approximately 555 net new parking spaces, including a new public parking garage, and a network of new public pedestrian paseos and plaza/courtyards.¹ A detailed description of the Specific Plan and the Specific Plan Area is presented in Chapter III (Project Description) of this document.

A. Environmental Review

Initial Study and Scoping

The City of Walnut Creek (“City”) is the Lead Agency responsible for administering the environmental review for the project, which is the Locust Street / Mt. Diablo Boulevard Specific Plan. Pursuant to CEQA section 15063, the City prepared an Initial Study Environmental Review Checklist (“Initial Study”) to evaluate preliminarily whether the Specific Plan will have a significant effect on the environment and to focus the EIR on topics that may have significant impacts or that require additional investigation and analysis prior to making an impact determination. The information and analysis presented in the Initial Study provides substantial evidence to conclude, for topics not analyzed in this EIR, that CEQA standards triggering preparation of further environmental review did not exist for those topics. The Initial Study is included as part of this EIR by reference.

¹ This EIR also evaluates a more intensive development scenario that could potentially occur pursuant to the proposed land use and development standards of the Specific Plan, which will entail up to an additional 60,000 square feet of new retail and office use, hotel development, and nearly 120 additional parking spaces.

On September 11, 2008, the City issued a Notice of Preparation (“NOP”) for 30 calendar days to announce its intent to prepare and distribute an EIR for the Specific Plan. The NOP was distributed to governmental agencies, organizations, and persons interested in the Specific Plan and requested their input on the scope and content of the environmental information that should be addressed in the EIR. The NOP and written comments that the City received in response to the NOP are included as Appendix A to this Draft EIR. This Draft EIR addresses environmental topics identified in the Initial Study as those that could result in a potentially significant impact with the Specific Plan and considers all comments received in response to NOP and Initial Study. The Initial Study and comments received in response are available for review at the City of Walnut Creek, Community Development Department, under reference Work Order Number WO-708-134.

EIR Analysis Overview

This is a Program EIR that presents a programmatic analysis of the Specific Plan. Specifically, it evaluates the physical and land use changes that could occur with adoption of the Specific Plan (the goals, objectives, policies, development standards, design guidelines therein), as well as with potential development that could occur consistent with the Specific Plan. Further, as CEQA specifies, a Program EIR is appropriate for the Specific Plan, under which there will be a series of actions (future development proposals) that are 1) related geographically, 2) logical parts in a chain of contemplated actions, 3) connected as part of a continuing program, and 4) carried out under the same authorizing stature or regulatory authority and have similar environmental impacts that can be mitigated in similar ways (CEQA *Guidelines* section 15168). No specific future development projects are identified at the time this Draft EIR was prepared. The analysis herein is prepared to a level of detail that is sufficient for a program level analysis in conformance with CEQA.

All components of the Specific Plan, including amendments proposed to the General Plan and Zoning Ordinance, are considered part of the Specific Plan. Therefore, specific policies and development standards identified in the Plan are discussed within the various *Impact Analysis* sections throughout Chapter IV (Setting, Environmental Impacts and Mitigation Measures) of the EIR, as these Plan elements in many cases effectively avoid potential significant impacts by virtue of implementation of the Plan. In other words, in many topic areas, the Specific Plan is “self-mitigating.”

The EIR analysis considers changes that will occur in the Specific Plan Area compared to existing conditions as well as the potential development that could occur pursuant to the existing land use and development standards of the Walnut Creek General Plan 2025 and Zoning Ordinance, without changes proposed with the Specific Plan. Buildout of the Plan is anticipated within five to ten years, and the EIR assesses cumulative effects that may occur with the development under the Specific Plan combined with other development that exists, is currently under construction, or that is reasonably foreseeable to occur by 2025. The EIR also analyzes feasible alternatives that reduce the potential impacts of the Specific Plan, pursuant to section 15126 of the CEQA Guidelines.

Technical studies prepared for the environmental analysis of the Specific Plan include a transportation study and utility infrastructure study prepared by Kimley-Horn and Associates, Inc. (KHA, 2008). The substantial analysis from those reports is incorporated into this EIR. These technical studies are detailed data reports and are available for review at the City of Walnut Creek Community Development Offices, under reference Work Order Number WO-708-134.

EIR Process and Review

While this Draft EIR is available for public review, written comments on the adequacy of the environmental analysis herein may be submitted to the City. Responses to all substantive comments received on the adequacy of this Draft EIR analysis and submitted within the specified review period will be included and responded to in a Responses to Comments document, which, together with this Draft EIR will constitute the Final EIR. Prior to approval of the Specific Plan, the City must certify the Final EIR and adopt a mitigation monitoring and reporting program (“MMRP”) for any mitigation measures identified in the Final EIR.

B. Purpose and Intended Use of this EIR

This EIR is intended to provide the information and objective environmental analysis necessary to assist the Lead Agency, the City of Walnut Creek, in considering all the approvals and actions necessary to adopt the Specific Plan. It is prepared to aid and streamline the review and decision-making process by disclosing the potential for significant environmental impacts to occur with implementation of the Specific Plan.

The CEQA Guidelines help define the purpose of the EIR:

- **Information Document.** An EIR is an informational document which will inform public agency decision-makers and the public generally of the significant environmental effect(s) of a project, identify possible ways to minimize the significant effects, and describe reasonable alternatives to the project. The public agency shall consider the information in the EIR along with other information which may be presented to the agency (CEQA Guidelines section 15121(a)).
- **Standards for Adequacy of an EIR.** An EIR should be prepared with a sufficient degree of analysis to provide decision-makers with information which enables them to make a decision which intelligently takes account of environmental consequences. An evaluation of the environmental effects of a proposed project need not be exhaustive, but the sufficiency of an EIR is to be reviewed in the light of what is reasonably feasible. Disagreement among experts does not make an EIR inadequate, but the EIR should summarize the main points of disagreement among the experts. The courts have looked not for perfection but for adequacy, completeness, and a good faith effort at full disclosure (CEQA Guidelines section 15151).

As discussed above, this Program EIR includes a programmatic analysis intended to provide a comprehensive environmental review of the Specific Plan and that may also be used to evaluate future specific development proposal. If the City determines that the potential environmental

effects associated with a specific development proposal have been adequately assessed in this EIR, the City may require limited additional study assess site-specific impacts.

C. Public Participation

The CEQA Guidelines strongly encourages, and in some cases, requires, public participation in the planning and environmental review processes. For environmental review, these opportunities will occur during the public review and comment period for this Draft EIR and subsequent public hearings before the Walnut Creek Planning Commission and City Council consider the Final EIR prior to adoption of the Specific Plan.

As discussed in detail in the Specific Plan, the planning process to draft the Specific Plan involved extensive public outreach led by City staff and consultants and a 13-member Advisory Committee for the Plan. The process involved review and refinement of alternative Specific Plan development scenarios and urban design recommendations. The City published the Administrative Draft Specific Plan in October of 2008 to initiate the formal public review and comment process, which will include public hearings by the City Commissions and City Council. Public hearings regarding the EIR (which may occur parallel and/or consecutive to the Specific Plan hearings) also will occur prior to certification of the EIR, which is required prior to adoption of the Specific Plan.

D. Organization of this Draft EIR

Following this Chapter I (Introduction), this Draft EIR is organized as follows:

Chapter II (Summary) contains a brief summary of the Specific Plan and allows the reader to easily reference the analysis presented in the Draft EIR. Table II-1, Summary of Impacts, Mitigation Measures, and Residual Impacts, is provided at the end of Chapter II as a reader-friendly reference to each of the environmental effects, proposed mitigation measures and residual environmental impacts after mitigation is implemented, presented by environmental topic. Chapter II also summarizes the analysis of alternatives to the Proposed Project, areas of controversy, and issues to be resolved.

Chapter III (Project Description) describes in detail the Specific Plan, its objectives and other components, and the Specific Plan Area and surroundings. Chapter III also identifies the approvals and actions required for the City to adopt the Specific Plan.

Chapter IV (Environmental Setting, Impacts, and Mitigation Measures) discusses regulatory setting, existing conditions, applicable plans and policies, significance criteria, and the environmental impact analysis and mitigation measures identified for the Specific Plan.

Chapter V (Alternatives) evaluates a range of alternatives to the Specific Plan and identifies an environmentally superior alternative.

Chapter VI (Impact Overview and Growth-Inducing Impacts) summarizes the less than significant, significant and avoidable, and cumulative impacts that could result with the Specific Plan, as they are identified throughout Chapter IV. Chapter VI also describes the Specific Plan's potential to induce growth not previously considered.

Chapter VII (Report Preparation) identifies the authors of the EIR, including City staff and the EIR consultant team.

Appendices to the Draft EIR are provided at the end of the document and include the NOP and certain supporting background documents and technical reports used for the impact analyses for specific topics. All reference documents and persons contacted to prepare this EIR are listed at the end of each topical analysis section in Chapter IV, Environmental Setting, Impacts, and Mitigation Measures. References are available for review at the City of Walnut Creek Community Development Offices, under reference Work Order Number WO-708-134.

CHAPTER II

Summary

A. Specific Plan Overview

The City of Walnut Creek, Lead Agency and project sponsor, proposes the Locust Street / Mt. Diablo Boulevard Specific Plan. The Specific Plan Area is approximately 5.3 acres within the urban downtown area of the City of Walnut Creek and is intended to guide incremental redevelopment over the next five to ten years. The Specific Plan Area is comprised of 24 parcels, generally located east of N. California Boulevard, north of Mt. Diablo Boulevard, south of Cypress Street, and west of N. Main Street. The Area lies within the northern part of the 1974 Mt. Diablo Redevelopment Area that supports retail, office, residential, hotel, and parking uses.

The purpose of the Specific Plan is “to guide new development in a way that builds upon, enhances and expands the existing pedestrian-oriented retail district, while preserving the diverse and eclectic character of the Traditional Downtown.” The Specific Plan Area is divided into two subareas: the Primary Study Area, which includes six “Opportunity Sites” poised for redevelopment in the near future, and the Secondary Study Area, where the traditional downtown framework will be retained.

The Specific Plan proposes to retain the existing General Plan land use designation and zoning for the Specific Plan Area (The exception is an Alternative B scenario described below for Opportunity Site 4.) However, it will require amendments to the Walnut Creek General Plan 2025, the Zoning Ordinance, the Mt. Diablo Redevelopment Project Plan, and the East Mt. Diablo Boulevard Specific Plan to implement the land uses and design guidelines and standards described in the Specific Plan. Chapter III identifies the specific amendments required for implementation of the Plan.

B. Environmental Impacts and Mitigation Measures

All impacts and mitigation measures identified in this EIR and in the Initial Study Checklist are summarized in Table II-1 at the end of this chapter. This table lists potential impacts, recommended mitigation measures and the level of significance of the impact after any recommended mitigation measures are implemented. The Specific Plan will maintain the existing, cumulative significant and unavoidable roadway condition on Ygnacio Valley Road that will occur within or without the project.

C. Alternatives

Chapter V of this EIR analyzes a range of reasonable alternatives to the proposed project. The three alternatives to the project that are analyzed in detail in this Draft EIR are:

- **No Project Alternative** - The No Project Alternative is provided in this EIR to compare the impacts of approving the Specific Plan to not approving the Specific Plan (CEQA Guidelines, Section 15126.6[e]). No Project Alternative generally maintains existing 2008 conditions within the Specific Plan Area with a growth rate of 2 percent each year over the next decade. This alternative also incorporates additional growth on Opportunity Sites 2 and 6, based on the likelihood that these two Sites may redevelop within the next ten years.
- **Reduced Density / Height Alternative** - The Reduce Density / Height Alternative varies from the Specific Plan on Opportunity Site 3 (Parking Garage) and Opportunity Site 5 (Cypress Street / N. California Boulevard Corner/McDonalds) only. On Site 5, 52 residential units will occur instead of 80,000 square feet of office, above the ground floor retail. The maximum building heights on both Sites 3 and 5 reduced from 70 feet (as proposed with the Specific Plan) to 60 feet and would maintain a reduced FAR compared to the Specific Plan.
- **Primary Study Area Buildout Alternative** - The Primary Study Area Buildout Alternative is provided in this EIR to compare the impacts of approving the Specific Plan to those associated a more intensive development within the Primary Study Area – the Opportunity Sites poised for redevelopment in the next few years. The alternative is provided in this EIR and analyzed at a substantially greater level of detail to provide the City maximum flexibility to streamline future site specific proposals that may emerge on the Opportunity Sites, if such proposals are consistent with the Specific Plan. A total of approximately 59,480 more square feet of commercial would occur with this alternatives compared to the Specific Plan.
- **Environmentally Superior Alternative** - CEQA requires that the EIR identify an environmentally superior alternative that, when compared to the proposed project and all other alternatives considered, would avoid (or reduce to the greatest extent) more of the adverse environmental effects identified for the project, particularly any significant impacts. The Reduced Density / Height Alternative is considered environmentally superior based on its reduced contribution of new peak hour vehicle trips to the unacceptable roadway conditions on Ygnacio Valley Road - an existing cumulative condition that will persist with any alternative, or no development at all.

D. Areas of Controversy

CEQA Guidelines Section 15123 specifies that the EIR summary shall identify “areas of controversy” known to the Lead Agency, including issues raised by agencies and the public, and issues to be resolved, including the choice among alternatives and whether or how to mitigate the significant effects. No areas of controversy are known to the City based on comments received in response to the Notice of Preparation of this EIR or any other information received by the City prior to publication of this EIR.

**TABLE II-1
SUMMARY OF IMPACTS, MITIGATION MEASURES AND RESIDUAL IMPACTS**

Environmental Impact	Mitigation Measures	Level of Significance after Mitigation
A. Land Use, Plans and Policies		
Impact LU-1: Conflict with any applicable land use plans, policy, or regulation of an agency with jurisdiction over the project adopted for the purpose of avoiding or mitigating an environmental effect (criterion b). (Less than Significant)	None Required	None Required
Impact LU-2: Implementation of the Specific Plan, combined with past, present, and reasonably foreseeable probable future projects, will not result in a significant cumulative impact to land use, plans, and policies. (Less than Significant)	None Required	None Required
B. Aesthetics		
Impact AES-1: Have a substantial adverse effect on a scenic vista (criterion a). (Less than Significant)	None Required	None Required
Impact AES-2: Substantially damage the existing visual character or visual quality of the Specific Plan Area and its surroundings (criterion c). (Less than Significant/Beneficial)	None Required	None Required
Impact AES-3: Cast shadows that substantially impair the beneficial use of any public park, plaza or open space area (criterion e). (Less than Significant)	None Required	None Required
Impact AES-4: Implementation of the Specific Plan, when combined with other past, present, and reasonably foreseeable probable future development in the vicinity, will not result in a cumulative aesthetics impact. (Cumulative Impact: Less than Significant)	None Required	None Required
C. Population and Housing		
Impact POP-1: Induce substantial population growth in the Specific Plan Area either directly or indirectly (criterion a). (Less than Significant)	None Required	None Required
Impact POP-2: Implementation of the Specific Plan, combined with past, present, and reasonably foreseeable probable future projects, will not result in substantial cumulative population and housing impacts. (Less than Significant)	None Required	None Required

**TABLE II-1 (Continued)
SUMMARY OF IMPACTS, MITIGATION MEASURES AND RESIDUAL IMPACTS**

Environmental Impact	Mitigation Measures	Level of Significance after Mitigation
<p>D. Transportation and Parking</p>		
<p>Impact TRAF-1: Cause an increase in traffic that 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), or exceed, either individually or cumulatively, an LOS standard established by the Contra Costa Transportation Authority for designated roads or highways (criteria a and b) (Less than Significant)</p>	None Required	
<p>Impact TRAF-2: Cause an increase in traffic that 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), or exceed, either individually or cumulatively, an LOS standard established by the Contra Costa Transportation Authority for designated roads or highways (criteria a and b) (Less than Significant)</p>	None Required	
<p>Impact TRAF-3: Conflict with adopted policies, plans, or programs supporting alternative transportation (e.g., bus turnouts, bicycle racks) (criterion g) (Less than Significant)</p>	None Required	
<p>Impact TRAF-4: Result in inadequate parking capacity. (criterion f) (Less than Significant)</p>	None Required	
<p>Impact TRAF-5: Cause an increase in traffic that 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), or exceed, either individually or cumulatively, an LOS standard established by the Contra Costa Transportation Authority for designated roads or highways (criteria a and b) (Less than Significant)</p>	None Required	
<p>Impact TRAF-6: Cause an increase in traffic that 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), or exceed, either individually or cumulatively, an LOS standard established by the Contra Costa Transportation Authority for designated roads or highways (criteria a and b). (Less than Significant)</p>	None Required	

**TABLE II-1 (Continued)
SUMMARY OF IMPACTS, MITIGATION MEASURES AND RESIDUAL IMPACTS**

Environmental Impact	Mitigation Measures	Level of Significance after Mitigation
D. Transportation and Parking (cont.)	None Required	
<p>Impact TRAF-7: Conflict with adopted policies, plans, or programs supporting alternative transportation (e.g., bus turnouts, bicycle racks) (criterion g) (Less than Significant)</p>		
E. Air Quality		
<p>Impact AIR-1: Violate any air quality standard or contribute substantially to an existing or projected air quality violation or result in cumulatively considerable net increase of any criteria pollutant for which the project region is in non-attainment under an applicable federal or state ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors) (criteria b and c). (Potentially Significant)</p>	<p>Mitigation Measure AIR-1: Implement control measures for remediation and construction-related air emissions. The project applicant shall ensure that the contractor reduces particulate emissions by complying with the Bay Area Air Quality Management District ("BAAQMD"). During construction, the project applicant shall require the construction contractor to implement the following measures required as part of BAAQMD's basic and enhanced dust control procedures required for construction sites. These include:</p> <p><u>Basic Controls that Apply to All Construction Sites</u></p> <ul style="list-style-type: none"> a) Water on a continuous and as-needed basis (at least twice daily) all earth surfaces during cleaning, grading, earthmoving and other site preparation activities. Watering should be sufficient to prevent airborne dust from leaving the site. b) Use watering to control dust generation during demolition of structures or break-up of pavement. c) Cover all trucks hauling construction and demolition debris, including soil, sand and other loose material form the site. d) Pave, apply water three times daily, or apply (non-toxic) soil stabilizers on all unpaved access roads, parking areas and staging areas at construction sites. e) Sweep daily (with water sweepers or vacuum/street sweepers) all paved access roads, parking areas and staging areas at construction sites. f) Sweep streets daily (with water sweepers or vacuum/street sweepers) if visible soil material is carried onto adjacent paved roads. 	Less than Significant

**TABLE II-1 (Continued)
SUMMARY OF IMPACTS, MITIGATION MEASURES AND RESIDUAL IMPACTS**

Environmental Impact	Mitigation Measures	Level of Significance after Mitigation
<p>E. Air Quality (cont.) Impact AIR-1 (cont.)</p>	<p><u>Enhanced Controls that Apply to Sites Greater than 4 Acres</u></p> <ul style="list-style-type: none"> g) All "Basic" controls listed above, plus h) Apply (non-toxic) soil stabilizers to previously graded portions of the site inactive for more than ten days, or cover or hydroseed these areas. i) Enclose, cover, water twice daily or apply (non-toxic) soil stabilizers to exposed stockpiles of debris, soil, sand or other materials that can be blown by the wind. j) Limit traffic speeds on unpaved roads to 15 miles per hour. k) Install sandbags or other erosion control measures to prevent silt runoff to public roadways. l) Replant vegetation in disturbed areas as quickly as possible. m) Properly maintain all construction equipment. n) Reduce equipment idling time. o) Opacity is an indicator of exhaust particulate emissions from off-road diesel powered equipment. The project shall ensure that emissions from all construction diesel powered equipment used on the project site do not exceed 40 percent opacity for more than three minutes in any one hour. Any equipment found to exceed 40 percent opacity (or Ringelmann 2.0) shall be repaired immediately. Essentially any diesel construction equipment that produces dark emissions for three continuous minutes is out of compliance with this measure. p) The contractor shall install temporary electrical service whenever possible to avoid the need for independently powered equipment (e.g. compressors). q) Clear signage should be posted indicating that diesel equipment standing idle for more than five minutes shall be turned off. This would include trucks waiting to deliver or receive soil, aggregate or other bulk materials. Rotating drum concrete trucks could keep their engines running continuously as long as they were on-site and away from residences. 	

**TABLE II-1 (Continued)
SUMMARY OF IMPACTS, MITIGATION MEASURES AND RESIDUAL IMPACTS**

Environmental Impact	Mitigation Measures	Level of Significance after Mitigation
E. Air Quality (cont.)	<p>r) Properly tune and maintain equipment for low emissions.</p> <p>s) The applicant shall ensure that during renovation and demolition activities, removal or disturbance of any materials contains asbestos, lead paint or other hazardous pollutants will be conducted in accordance with BAAQMD rules and regulations as well as other applicable rules and regulations of other agencies.</p>	
<p>Impact AIR-1 (cont.)</p> <p>Impact AIR-2: Violate any air quality standard or contribute substantially to an existing or projected air quality violation or result in cumulatively considerable net increase of any criteria pollutant for which the project region is in non-attainment under an applicable federal or state ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors) (criteria b, and c). (Less than Significant)</p>	None Required	
<p>Impact AIR-3: Expose sensitive receptors to substantial pollutant concentrations (criterion d). (Less than Significant)</p>	None Required	
<p>Impact AIR-4: The Specific Plan is consistent with the Bay Area Clean Air Plan, therefore the project will not have a cumulative air quality impact. (Less than Significant)</p>	None Required	
F. Global Climate Change and Greenhouse Gases	None Required	
<p>Impact GHG-1: Greenhouse gas (GHG) emissions from implementation of the Specific Plan would not conflict with the state goal of reducing GHG emissions in California, consistent with AB 32. (Less than Significant)</p>	None Required	
<p>Impact GHG-2: Implementation of the Specific Plan, combined with past, present, and reasonably foreseeable probable future projects, considering construction and operation activities, would not result in a substantial cumulative increase GHG emissions. (Less than Significant)</p>	None Required	
G. Noise		
<p>Impact NOI-1: Development of the Specific Plan will result in temporary noise or vibration impacts related to construction activities (criteria a, b and d). (Potentially Significant)</p>	<p>Mitigation Measure NOI-1: The construction contractor will conduct crack surveys before pile driving that could cause architectural damage to nearby structures. The survey will include any buildings within 50 feet of pile driving locations and</p>	Less than Significant

**TABLE II-1 (Continued)
SUMMARY OF IMPACTS, MITIGATION MEASURES AND RESIDUAL IMPACTS**

Environmental Impact	Mitigation Measures	Level of Significance after Mitigation
<p>G. Noise (cont.) Impact NOI-1 (cont.)</p>	<p>within 100 feet of historical buildings or buildings in poor condition. The surveys will be done by photographs, video tape, or visual inventory, and will include inside as well as outside locations. All existing cracks in walls, floors, and driveways should be documented with sufficient detail for comparison after construction to determine whether actual vibration damage occurred. A post-construction survey should be conducted to document the condition of the surrounding buildings after the construction is complete. The construction contractor will be liable for construction vibration damage to adjacent structures.</p>	Less than Significant
<p>Impact NOI-2: Residential uses built as part of the Specific Plan could be exposed to excessive exterior and interior noise levels (criterion a). (Less than Significant)</p>	None Required	Less than Significant
<p>Impact NOI-3: Operational activities (non-transportation) associated with the Specific Plan could affect residences developed as part of the Specific Plan (criteria a and c). (Potentially Significant)</p>	<p>Mitigation Measure NOI-3a: All development under the Specific Plan shall be constructed to comply with the General Plan Standards in Tables IV.G-1 as well as the relevant noise insulation standards contained in Title 24 of the California Code of Regulations (Part 2, Appendix Chapter 12A).</p> <p>Mitigation Measure NOI-3b: Loading, unloading, opening, closing or otherwise handling boxes, crates, containers, building materials, garbage cans or similar objects, when such activities result in noise levels greater than 45 dBA for the one hour Leq (or the existing ambient noise level if the level is already above 45 dBA) at the exterior of noise sensitive receptors shall be prohibited between the hours of 10:00 p.m. and 6:00 a.m.</p> <p>Mitigation Measure NOI-3c: The project applicant shall incorporate the following design features into the final site plans:</p> <ul style="list-style-type: none"> • Building equipment (e.g., HVAC units) shall be located away from off-site and on-site residences, on building rooftops, or within an enclosure that effectively blocks the line of site of the source from receivers. • Truck delivery areas shall be located as far from residents as possible. To the extent feasible, project buildings shall be located such that they block noise related to truck deliveries and waste collection from residential or other sensitive receptors. 	Less than Significant

**TABLE II-1 (Continued)
SUMMARY OF IMPACTS, MITIGATION MEASURES AND RESIDUAL IMPACTS**

Environmental Impact	Mitigation Measures	Level of Significance after Mitigation
G. Noise (cont.)		
Impact NOI-4: Project-generated vehicle traffic associated with the Specific Plan will result in an increase in ambient noise levels on local roadways (criterion c). (Less than Significant)	None Required	None Required
Impact NOI-5: Implementation of the Specific Plan, combined with other past, present, and reasonably foreseeable development in the vicinity, will not result in cumulative noise impacts. (Less than Significant)	None Required	None Required
H. Geology, Soils and Seismicity		
Impact GEO-1: Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving strong seismic ground shaking (criterion a.ii). (Less than Significant)	None Required	None Required
Impact GEO-2: Expose people or structures to potential substantial adverse effects including the risk of loss, injury, or death involving seismic-related ground failure, including liquefaction (criterion a.iii). (Less than Significant)	None Required	None Required
Impact GEO-3: 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 (criterion c). (Less than Significant)	None Required	None Required
Impact GEO-4: Be located on expansive soil, as defined in the California Building Code, creating substantial risks to life or property (criterion d). (Less than Significant)	None Required	None Required
Impact GEO-5: Implementation of the Specific Plan, combined with past, present, and reasonably foreseeable probable future projects will not result in adverse cumulative impacts to geology, soils, or seismic hazards. (Less than Significant)	None Required	None Required

**TABLE II-1 (Continued)
SUMMARY OF IMPACTS, MITIGATION MEASURES AND RESIDUAL IMPACTS**

Environmental Impact	Mitigation Measures	Level of Significance after Mitigation
I. Hazards and Hazardous Materials		
<p>Impact HAZ-1: Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials, create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment, or 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 create a significant hazard to the public or the environment (criteria a, b and d). (Less than Significant)</p>	None Required	None Required
<p>Impact HAZ-2: Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials, or create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment (criteria a and b). (Less than Significant)</p>	None Required	None Required
<p>Impact HAZ-3: Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment (criteria b). (Less than Significant)</p>	None Required	None Required
<p>Impact HAZ-4: Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school (criteria c). (Less than Significant)</p>	None Required	None Required
<p>Impact HAZ-5: Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials, or create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment (criteria a and b). (Less than Significant)</p>	None Required	None Required
<p>Impact HAZ-6: Implementation of the Specific Plan, combined with other past, present, and reasonably foreseeable probable future development in the vicinity, will not result in cumulative hazardous materials impacts. (Less than Significant)</p>	None Required	None Required

**TABLE II-1 (Continued)
SUMMARY OF IMPACTS, MITIGATION MEASURES AND RESIDUAL IMPACTS**

Environmental Impact	Mitigation Measures	Level of Significance after Mitigation
J. Hydrology, Water Quality, and Flooding		
Impact HYD-1: Violate any water quality standards or waste discharge requirements (criterion a). (Less than Significant)	None Required	None Required
Impact HYD-2: Substantially deplete groundwater supplies such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level (criterion b). (Less than Significant)	None Required	None Required
Impact HYD-3: Substantially alter the existing drainage pattern of the Specific Plan Area, including through the alteration of the course of a stream or river in a manner that would result in substantial erosion or siltation on-site or off-site, or such that the rate or amount of surface runoff would be substantially increased, in a manner which would result in flooding on- or off-site (criteria c and d). (Less than Significant)	None Required	None Required
Impact HYD-4: Create or contribute runoff water that would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff (criterion e). (Less than Significant)	None Required	None Required
Impact HYD-5: Expose people or structures to a significant risk of loss, injury, or death involving flooding, including flooding that could result from the failure of a levee or dam (criterion f). (Less Than Significant)	None Required	None Required
Impact HYD-6: Implementation of the Specific Plan, combined with past, present, or reasonably foreseeable probable future projects, will not result in a cumulative reduction in groundwater levels or increase in flood flows. (Less than Significant)	None Required	None Required
K. Public Services		
Impact PUB-1: 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 police protection (criterion a). (Less than Significant)	None Required	None Required

**TABLE II-1 (Continued)
SUMMARY OF IMPACTS, MITIGATION MEASURES AND RESIDUAL IMPACTS**

Environmental Impact	Mitigation Measures	Level of Significance after Mitigation
<p>K. Public Services (cont.)</p>	<p>None Required</p>	<p>None Required</p>
<p>Impact PUB-2: Result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities. need for new or physically altered governmental facilities the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times, or other performance objectives for fire protection (criterion a). (Less than Significant)</p>	<p>None Required</p>	<p>None Required</p>
<p>Impact PUB-3: 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 schools (criterion a). (Less than Significant)</p>	<p>None Required</p>	<p>None Required</p>
<p>Impact PUB-4: 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; include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment; or 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 for parks (criteria a, b and c). (Less than Significant)</p>	<p>None Required</p>	<p>None Required</p>
<p>Impact PUB-5: Implementation of the Specific Plan, combined with past, present, or reasonably foreseeable probable future projects, will not result in a cumulative public services impact. (Less than Significant)</p>	<p>None Required</p>	<p>None Required</p>
<p>L. Utilities and Service Systems</p>	<p>None Required</p>	<p>None Required</p>
<p>Impact UTIL-1: Require or result in the construction of new wastewater treatment facilities or expansion of existing facilities, construction of which could cause significant environmental effects, or result in a determination by the wastewater treatment provider that would serve the project</p>	<p>None Required</p>	<p>None Required</p>

**TABLE II-1 (Continued)
SUMMARY OF IMPACTS, MITIGATION MEASURES AND RESIDUAL IMPACTS**

Environmental Impact	Mitigation Measures	Level of Significance after Mitigation
<p>L. Utilities and Service Systems (cont.)</p> <p>that it does not have adequate capacity to serve the project's projected demand in addition to the provider's existing commitments, or exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board (criteria a, b and e). (Less than Significant)</p> <p>Impact UTIL-2: Require or result in the construction of new water treatment facilities or expansion of existing facilities, construction of which could cause significant environmental effects, or have sufficient water supplies available to serve the project from existing entitlements and resources, or are new or expanded entitlements needed (criteria b and d). (Less than Significant)</p> <p>Impact UTIL-3: 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 (criterion c). (Less than Significant)</p> <p>Impact UTIL-4: Implementation of the Specific Plan will increase demand for electricity and natural gas services. (Less than Significant)</p> <p>Impact UTIL-5: Implementation of the Specific Plan, combined with past, present and reasonably foreseeable probable future projects, will not result in a significant cumulative impact to utilities.</p>	<p>None Required</p> <p>None Required</p> <p>None Required</p> <p>None Required</p>	<p>None Required</p> <p>None Required</p> <p>None Required</p> <p>None Required</p>

LESS THAN SIGNIFICANT IMPACTS IDENTIFIED IN INITIAL STUDY

Aesthetics

- Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway corridor (Less than Significant)
- Substantially degrade the existing visual character or quality of the site and its surroundings (Less than Significant with Policies, Standards, Guidelines)
- Create a new source of substantial light or glare which would adversely affect daytime or nighttime views in the area (Less than Significant)

**TABLE II-1 (Continued)
SUMMARY OF IMPACTS, MITIGATION MEASURES AND RESIDUAL IMPACTS**

Environmental Impact	Mitigation Measures	Level of Significance after Mitigation
<p>Agricultural Resources</p>	<p>Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance, as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use (No Impact)</p>	None Required
<p>Conflict with existing zoning for agricultural use, or a Williamson Act contract (No Impact)</p>	None Required	None Required
<p>Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland of Statewide Importance to non-agricultural use (No Impact)</p>	None Required	None Required
<p>Air Quality</p>	<p>Conflict with or obstruct implementation of the applicable air quality plan (Less than Significant with Policies, Standards, Guidelines)</p>	None Required
<p>Create objectionable odors affecting a substantial number of people (Less than Significant)</p>	None Required	None Required
<p>Biological Resources</p>	<p>Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the California Department of Fish and Game or U.S. Fish and Wildlife Service (No Impact)</p>	None Required
<p>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 (No Impact)</p>	None Required	None Required
<p>Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites (Less than Significant)</p>	None Required	None Required
<p>Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance (Less than Significant with Policies, Standards, Guidelines)</p>	None Required	None Required

**TABLE II-1 (Continued)
SUMMARY OF IMPACTS, MITIGATION MEASURES AND RESIDUAL IMPACTS**

Environmental Impact	Mitigation Measures	Level of Significance after Mitigation
Biological Resources (cont.)	None Required	Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan (No Impact)
Cultural Resources	None Required	Cause a substantial adverse change in the significance of a historical resource as defined in §15064.5 (Less than Significant with Policies, Standards, Guidelines)
Cause a substantial adverse change in the significance of a unique archaeological resource pursuant to §15064.5 (Less than Significant with Mitigation Incorporated)	Less than Significant	Mitigation Measure CR-1: If prehistoric or historic-period archaeological resources, or any paleontological resources, are encountered during grading or excavation during site-specific development of future development projects in the Specific Plan area, all construction activities within 50 feet must immediately stop and the City shall be notified. A qualified archaeologist will inspect the findings within 24 hours of the discovery. Cultural resources shall be recorded on California Department of Parks and Recreation (DPR) Form 523 (Historic Resources Recordation form). If it is determined that the proposed development project could damage a unique archaeological or paleontological resource, mitigation shall be implemented in accordance with Public Resources Code Section 21083.2 and CEQA Guidelines Section 15126.4, with a preference for preservation in place. Additionally, in accordance with Public Resources Code Section 5097.993, the project sponsor shall inform project personnel that collection of any Native American artifact is prohibited by law.
Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature (Less than Significant with Mitigation Incorporated)	Mitigation Measure CR-1: (see above)	Less than Significant
Disturb any human remains, including those interred outside of formal cemeteries (Less than Significant with Policies, Standards, Guidelines)	None Required	
Geology, Soils and Seismicity	None Required	Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving landslides (No Impact)

**TABLE II-1 (Continued)
SUMMARY OF IMPACTS, MITIGATION MEASURES AND RESIDUAL IMPACTS**

Environmental Impact	Mitigation Measures	Level of Significance after Mitigation
Geology, Soils and Seismicity (cont.)		
Result in substantial soil erosion or the loss of topsoil (Less than Significant)	None Required	None Required
Have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of wastewater (No Impact)	None Required	None Required
Hazards and Hazardous Materials		
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 (Less than Significant)	None Required	None Required
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 (No Impact)	None Required	None Required
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 (No Impact)	None Required	None Required
Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan (No Impact)	None Required	None Required
Expose people or structures to a significant risk of loss, injury or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands (Less than Significant)	None Required	None Required
Hydrology and Water Quality		
Substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g., the production rate of pre-existing nearby wells would drop to a level which would not support existing land uses or planned uses for which permits have been granted) (Less than Significant)	None Required	None Required

**TABLE II-1 (Continued)
SUMMARY OF IMPACTS, MITIGATION MEASURES AND RESIDUAL IMPACTS**

Environmental Impact	Mitigation Measures	Level of Significance after Mitigation
Hydrology and Water Quality (cont.)		
Substantially alter the existing drainage pattern of a site or area through the alteration of the course of a stream or river, or by other means, in a manner that would result in substantial erosion or siltation on- or off-site (No Impact)	None Required	
Substantially alter the existing drainage pattern of a site or area through the alteration of the course of a stream or river or, by other means, substantially increase the rate or amount of surface runoff in a manner that would result in flooding on- or off-site (No Impact)	None Required	
Place housing within a 100-year flood hazard area as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other authoritative flood hazard delineation map (No Impact)	None Required	
Place within a 100-year flood hazard area structures that would impede or redirect flood flows (No Impact)	None Required	
Expose people or structures to a significant risk of loss, injury or death involving inundation by seiche, tsunami, or mudflow (No Impact)	None Required	
Land Use and Land Use Planning		
Physically divide an established community (No Impact)	None Required	
Conflict with any applicable habitat conservation plan or natural community conservation plan (No Impact)	None Required	
Mineral Resources		
Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state (No Impact)	None Required	
Result in the loss of availability of a locally important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan (No Impact)	None Required	

**TABLE II-1 (Continued)
SUMMARY OF IMPACTS, MITIGATION MEASURES AND RESIDUAL IMPACTS**

Environmental Impact	Mitigation Measures	Level of Significance after Mitigation
Noise	For a project located within an airport land use plan area, or, where such a plan has not been adopted, in an area within two miles of a public airport or public use airport, would the project expose people residing or working in the area to excessive noise levels (No Impact)	None Required
For a project located in the vicinity of a private airstrip, would the project expose people residing or working in the project area to excessive noise levels (No Impact)	None Required	None Required
Population and Housing	Displace substantial numbers of existing housing units, necessitating the construction of replacement housing elsewhere (No Impact)	None Required
Displace substantial numbers of people, necessitating the construction of replacement housing elsewhere (No Impact)	None Required	None Required
Recreation	Include recreational facilities or require the construction or expansion of recreational facilities that might have an adverse physical effect on the environment (No Impact)	None Required
Transportation and Traffic	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 (Less than Significant)	None Required
Conflict with adopted policies, plans, or programs supporting alternative transportation (e.g., conflict with policies promoting bus turnouts, bicycle racks, etc.) (No Impact)	None Required	None Required
Utilities and Service Systems	Be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs (Less than Significant)	None Required
Comply with federal, state, and local statutes and regulations related to solid waste (Less than Significant)	None Required	None Required

CHAPTER III

Project Description

This chapter includes a detailed description of the proposed project, which is the Locust Street / Mt. Diablo Boulevard Specific Plan (“Specific Plan” or “Plan”). Specifically, this chapter describes the existing characteristics of the Specific Plan Area, the objectives and key characteristics of the Specific Plan, and approvals required to implement development envisioned with the Specific Plan.

The Specific Plan Area is approximately 5.3 acres within the urban downtown core of the City of Walnut Creek and is intended to guide incremental redevelopment over the next five to ten years. The primary goal of the Specific Plan is to “maintain and enhance the viability of downtown Walnut Creek as a regional, as well as a local, retail destination.” The Plan includes objectives and policies intended to guide new development over the next five to ten years. Implementation of the Specific Plan will require amendments to the Walnut Creek General Plan 2025 (“General Plan”) and to the City of Walnut Creek Zoning Ordinance, Title 10, Chapter 2 of the Walnut Creek Municipal Code (“Zoning Ordinance”). These amendments are included as a part of, and will be adopted concurrently with, the Specific Plan. Upon adoption, the objectives and policies contained within the Specific Plan will supersede guidelines in the 1996 *East Mt. Diablo Boulevard Specific Plan* and the 1974 *Redevelopment Plan, Mt. Diablo Redevelopment Project* (as amended in 1982).

A. Location and Setting

Regional Setting

The Specific Plan Area is within downtown Walnut Creek, in the central part of the County. Walnut Creek is located at the foot of Mt. Diablo, 23 miles east of San Francisco, and 70 miles southwest of Sacramento (see **Figure III-1**, Specific Plan Area Location). Regional access to the Specific Plan Area is provided from Interstate 680 (I-680) via N. Main Street (from approximately one mile north of the Specific Plan Area) and via S. Main Street (from approximately one mile south of the Specific Plan Area). Access from State Highway 24 (located approximately one-half mile west) is also provided via Mt. Diablo Boulevard. The Bay Area Rapid Transit (“BART”) Walnut Creek Station is located less than one mile north of the Specific Plan Area. Regional bicycle and pedestrian access is available from the Iron Horse Regional Trail, located approximately one-half mile east of the Specific Plan Area.

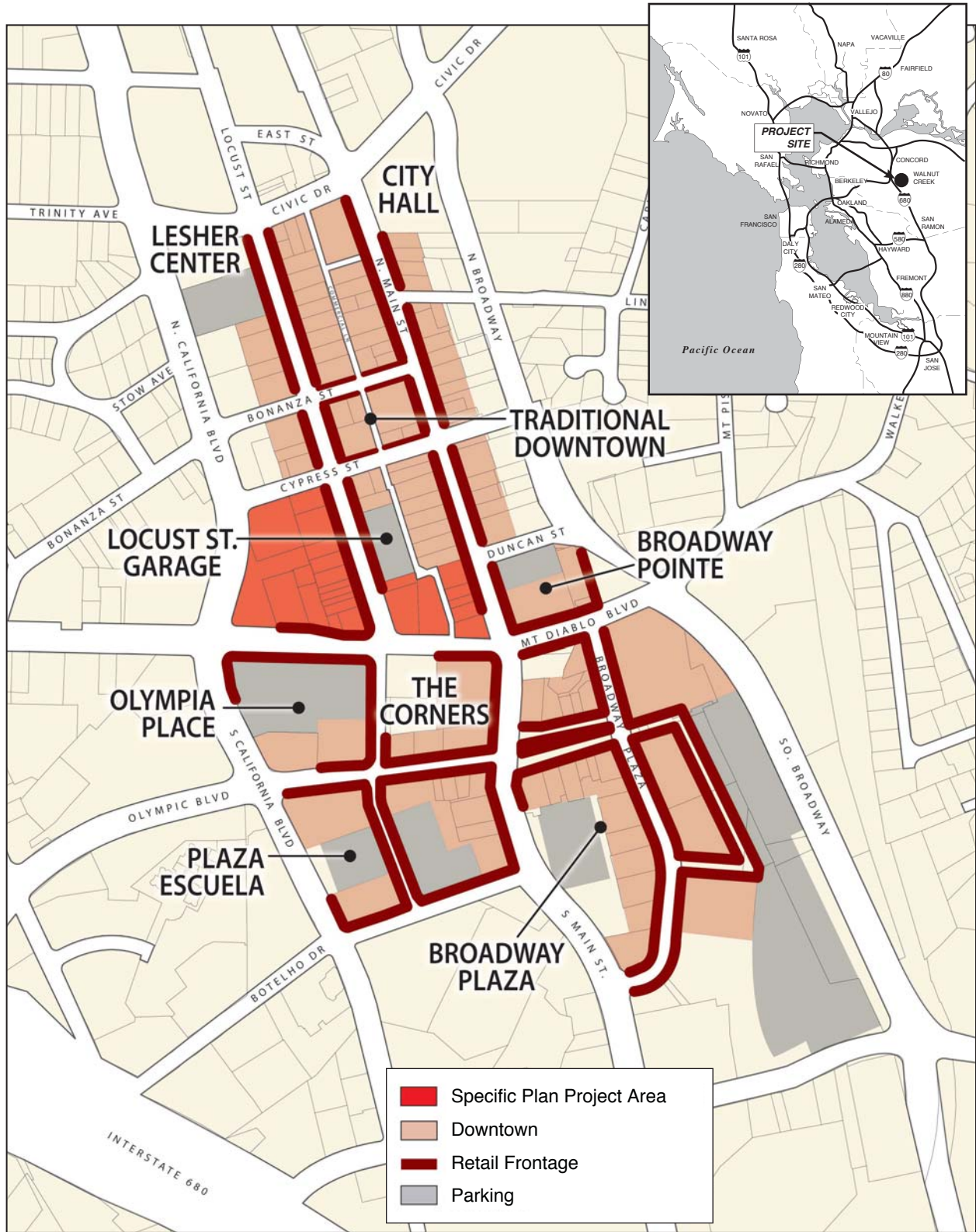


Figure III-1
Project Location

Local Setting

The 5.3-acre Specific Plan Area is comprised of 24 parcels generally located east of N. California Boulevard, north of Mt. Diablo Boulevard, south of Cypress Street, and west of N. Main Street (see **Figure III-2**, Specific Plan Area and Opportunity Sites). The Specific Plan Area occupies one of Walnut Creek's most prominent crossroads at Mt. Diablo Boulevard and N. Main Street, where the city was first settled. Mt. Diablo Boulevard, a major arterial roadway with high traffic volumes, is the primary gateway to Walnut Creek from State Highway 24. N. Main Street, which borders the Specific Plan Area on the west, extends both south (as S. Main Street) and north of Mt. Diablo Boulevard to I-680, as discussed above.

The Specific Plan is proposed for an area within Walnut Creek's pedestrian retail district. Land uses in the vicinity of the Specific Plan Area consist of a mix of retail, office, residential, service commercial and automotive uses as well as surface parking. (See **Figure III-3**, Aerial Photo of Specific Plan Area.) Buildings in the vicinity typically are one- and two-story buildings that reflect a variety of architectural building types and dates of construction, from late 1800s Victorian style residential architecture to late 20th-century strip commercial architecture. However, a large office complex is located directly west of the Specific Plan Area, and newer retail development exists to the east and south.

The City's most intense retail commercial and multi-family residential development, Broadway Plaza, exists directly southeast of the Specific Plan Area, across Mt. Diablo Boulevard and N. / S. Main Street. The Broadway Plaza shopping center is to the southeast and contains major department stores and approximately 86 other national retailers, specialty shops, services, cafes and restaurants. It has an open air layout with free-standing and in-line buildings and two parking structures – a two-level garage east (along S. Broadway) of the shopping center and a five-level garage to the west (along S. Main Street).

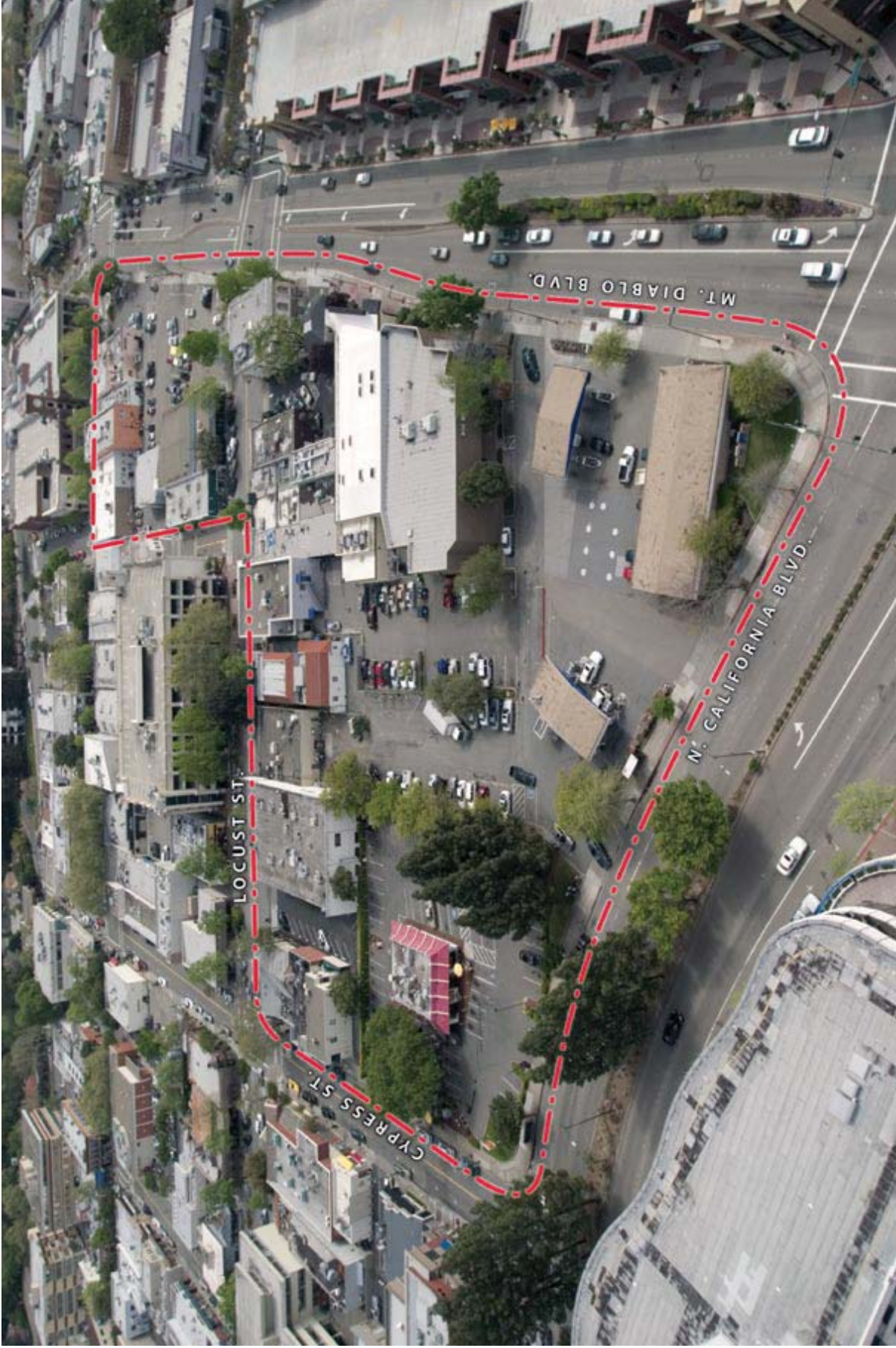
The Specific Plan Area is currently occupied with approximately 91,450 square feet retail space comprised of a mix of specialty retail, restaurants, and automotive uses. These include a McDonald's restaurant, Chevron Gas station, Big 5 Sporting Goods, Post Office, Z Galleries, Walnut Creek Automotive along with several smaller retail stores. In addition, approximately 244 surface parking spaces are provided throughout the Specific Plan Area.

Existing General Plan and Zoning

All parcels within the Specific Plan Area fall within the General Plan land use designation of "Pedestrian Retail" and are within the "Pedestrian Retail (P-R)" zoning district. The General Plan also defines other planning boundaries separate from the land use designation areas. The Specific Plan Area falls entirely within the City's "Core Area," planning area, which the General Plan considers the hub of Walnut Creek and where the City anticipates most future growth in the City will occur. Portions of the Specific Plan Area are within the "Pedestrian Retail District" planning area, which encompasses the "Traditional Downtown" planning area.



Note: Square footages represent parcel sizes.



SOURCE: ROMA Design Group, 2008

Locust Street/ Mt. Diablo Boulevard Specific Plan . 204164

Figure III-3
Aerial Photo of Specific Plan Area

The Specific Plan Area lies within the northern part of the 1974 Mt. Diablo Redevelopment Area that supports retail, office, residential, hotel, and parking uses. In addition, the Specific Plan Area is within the 1996 East Mt. Diablo Boulevard Specific Plan, which provides policies and planning and design guidelines that aim to create interest and diversity along public streets and encourage pedestrian activity.

The P-R zoning district limits building heights in most of the Specific Plan Area to 35 feet along street fronts, and to 50 feet on additional floors above 35 feet; the floors above 35 feet must be stepped back from the street front at least 10 feet. The existing maximum building height for Opportunity Site 5 (McDonald’s restaurant) and Opportunity Site 3 (Parking Garage) is limited to the lesser of six stories or 89 feet, pursuant to the 1985 voter-adopted Measure A, the Building Height Freeze Initiative. The existing maximum floor area ratio (FAR)¹ is 2.0 for the eastern portion of the Specific Plan Area (generally along Locust Street and N. Main Street, and the eastern length of Mt. Diablo Boulevard), and 1.25 FAR for the western portion of the Specific Plan Area (generally along N. California Boulevard and the western length of Mt. Diablo Boulevard and Cypress Street). The Specific Plan proposes an increase in FAR on Opportunity Site 5 from 1.25 to 2.0.



Maximum Density (Floor Area Ratio)

*Bonus from 1.25 to 2.0 FAR subject to compliance with Specific Plan policies.

All relevant aspects of the General Plan, Zoning Ordinance, other applicable land use regulations, the applicable Redevelopment Plan, as well as pertinent building height and FAR standards are discussed in greater detail in Section A., *Land Use, Plans, and Policies*, in Chapter IV.

B. Specific Plan Characteristics

The purpose of the Specific Plan is “to guide new development in a way that builds upon, enhances and expands the existing pedestrian-oriented retail district, while preserving the diverse and eclectic character of the Traditional Downtown.” The Specific Plan Area is divided into two subareas: the Primary Study Area, which includes six “Opportunity Sites” poised for redevelopment in the near future, and the Secondary Study Area, where the Traditional Downtown framework will be retained. The Primary and Secondary Study Areas are delineated in

¹ Floor area ratio (FAR) is defined as the ratio of developed building floor area to net lot area, expressed in square feet.

Figure III-2. The City of Walnut Creek, as Lead Agency and project sponsor, seeks to encourage compatible uses and buildings on the six Opportunity Sites while complementing, preserving and enhancing the diverse character and smaller scale of the Traditional Downtown, which is primarily included in the Secondary Study Area.

Primary Study Area

The Primary Study Area consists of 3.9 acres (approximately 72 percent of the Specific Plan Area) and generally encompasses the largest and/or most visually prominent parcels along the west and south areas of the Specific Plan. Existing site characteristics in the Primary Study Area include a kitchen supply and cooking school, a home furnishings store, a sporting goods store, a fast food restaurant, a Mexican restaurant, a post office, a real estate office, a gas station, automotive services providers and a public parking lot. As stated above, the Primary Study Area includes six “Opportunity Sites.” These sites (some comprised of multiple parcels) are underutilized or vacant or poised for redevelopment in the next few years. Further, these sites currently include (1) uses that are nonconforming with the General Plan and Redevelopment Plan designations; (2) locations where improvements have less value than the underlying property; (3) properties for which the owner has expressed interest in redevelopment opportunities; and (4) areas for proposed public improvements.

The Opportunity Sites are outlined in Figure III-2 and described below. The existing development on each Site is specified in **Table III-1**.

SITE 1 – N. Main Street / Mt. Diablo Boulevard Corner: 0.18 acres (5,000 sq.ft.) currently used as metered public parking lot (15 spaces) owned by the City of Walnut Creek.

SITE 2 – Locust Street / Mt. Diablo Boulevard Corner: 0.75 acres (28,000 sq.ft) (two properties) one currently vacant and one occupied by an automotive service uses.

SITE 3 – Future Parking Garage: 0.5 acres (22,000 sq.ft.) at the center of the block between N. California Boulevard and Locust Street, currently occupied by portions of the Chevron Gas Station, an sporting goods store, and surface parking lot (51 spaces), with service and pedestrian access easements to Mt. Diablo Boulevard and Locust Street.

SITE 4 – Mt Diablo Boulevard / N. California Boulevard Corner (Chevron): 0.47 acres (21,000 sq.ft.) currently occupied by the primary Chevron Gas Station (service pumps, cashier stations, auto repair bays).

SITE 5 – Cypress Street / N. California Boulevard Corner: 0.67 acres (28,000 sq.ft.) currently occupied by McDonald’s Restaurant and associated surface parking lot (50 spaces).

SITE 6 – 1373 – 75 Locust Street: 0.34 acres (15,000 sq.ft.) occupied by a home goods retail store, offices and a surface parking lot (20 spaces).

**TABLE III-1
SPECIFIC PLAN DEVELOPMENT PROGRAM, BY SITE – EXISTING AND PROPOSED**

	Retail (SF)	Office (SF)	Residential (SF) / (DU)	Hotel (SF) / (Rms)	Total Development (SF)	On Site Parking (Spaces)
Existing Conditions 2008						
Opportunity Site 1 (Parking Lot)	0				0	15
Opportunity Site 2 (Auto Service)	9,950				9,950	48
Opportunity Site 3 (Parking Lot)	0				0	51
Opportunity Site 4 (N. California / Mt. Diablo / Chevron)	2,300				2,300	4
Opportunity Site 5 (N. California / Cypress / Mcdonald's)	2,000				2,000	62
Opportunity Site 6 (Locust St.)	7,200				7,200	20
Remaining Parcels ^{a,b}	70,000				70,000	44
Total Sq Ft.^b	91,450	0	0	0	91,450	244
Specific Plan (Option A)						
Opportunity Site 1 (Main / Mt. Diablo)	4,300	4,300			8,600	0
Opportunity Site 2 (Locust / Mt. Diablo)	19,500		45,000 (36)		64,500	124
Opportunity Site 3 (Parking Garage)						335
Opportunity Site 4 (N. California / Mt. Diablo / Chevron)	17,000	13,000			30,000	0
Opportunity Site 5 (N. California / Cypress / Mcdonald's)	13,420	80,000			93,420	265
Opportunity Site 6 (Locust St.)	10,500		15,000 (10)		25,500	21
Remaining Parcels ^{a,c}	71,400				71,400	54
Total Sq Ft.^b	136,120	97,300	60,000 (46)	0	293,420	799
Specific Plan (Option B)						
Opportunity Site 4 (N. California / Mt. Diablo / Chevron)	2,300				2,300	0
All Other Sites And Remaining Parcels ^{a,c} (Same As Alternative A)	119,120	84,300	60,000 (46)		263,420	799
Total Sq Ft.^b	121,420	84,300	60,000 (46)	0	265,720	799

NOTES AND ASSUMPTIONS:

^a Secondary Study Area^b Sites 1 through 6 comprise 8 parcels; No change assumed to Opportunity Sites 1, 3, 4 and 5; Opportunity Sites 2 and 6 calculated as General Retail with a built-out Floor Area Ratio of 1.0. Remaining Parcels (16) assumed total 2 percent growth rate over 10 yrs.^c "Project / Specific Plan" + Remaining Parcels with assumed total 2 percent growth rate over 10 yrs.

SOURCE: Draft Locust Street / Mt. Diablo Boulevard Specific Plan, October 2008

Secondary Study Area

The Secondary Study Area consists of 1.4 acres (approximately 28 percent of the Specific Plan Area) along the west sides of N. Main Street and Locust Street (excluding Opportunity Site 6 [Locust Street] described above and shown in Figure III-2). Secondary Study Area is comprised of 12 parcels and is part of the Traditional Downtown, which has smaller lots on pedestrian-oriented streets. As shown in Figure III-2, eight parcels in the Secondary Study Area are located on the west side of Locust Street and include restaurants, food shops, a bar and retail shops. Four parcels on the west side of N. Main Street include a men's clothing store, a shoe store and two restaurants, including the potentially historic La Fogata restaurant building, and the Duncan Arcade, a public access easement connecting N. Main Street and Commercial Lane. The Specific Plan does not propose substantial new growth or change in the Secondary Study Area, reflected in Table III-1 as "Remaining Parcels."

Specific Plan Objectives and Policies

The Specific Plan consists of general objectives and policies that will apply to the overall Specific Plan Area, and specific guidelines directing all aspects of development on the six Opportunity Sites. Supporting the Specific Plan's primary goal to "maintain and enhance the viability of downtown Walnut Creek as a regional, as well as a local, retail destination," the objectives and policies primarily pertain to Land Use and Urban Design, and Circulation and Parking. The Specific Plan objectives are presented below. Specific policies supporting these objectives are presented in the Specific Plan and are presented throughout the analysis in this EIR where they apply to the environmental analysis.

Land Use and Urban Design

The following Specific Plan objectives pertain to Land Use and Urban Design ("LU"). Associated policies are identified to support each objective.

- **Objective LU-1** – Link the North and South sides of Mt. Diablo Boulevard: Create a stronger pedestrian and activity connection between the Traditional Downtown, the Broadway Plaza shopping area and the retail district south of Mt. Diablo Boulevard, by infilling underutilized sites along N. Main Street, Locust Street and N. California Boulevard with compatible retail frontage, and by introducing public amenities such as plazas and appropriate upper-floor uses. Enhance pedestrian crossings of Mt. Diablo Boulevard to reduce the barrier effect of the wide street.
- **Objective LU-2** – Infill Development Opportunities: Provide opportunities for infill development that are both financially feasible, and respectful of the smaller scale and character of the shops and buildings in the Traditional Downtown.
- **Objective LU-3** – Retail Destination: Promote and reinforce the Specific Plan Area and the Traditional Downtown as a vibrant and viable retail destination.
- **Objective LU-4** – Pedestrian-Oriented: Require street-level uses, including outdoor dining and cafés, which provide activity and visual interest at the sidewalk level. Minimize

blank walls, blank or screened windows, parking and other inactive uses that discourage pedestrian activity.

- **Objective LU-5 – Upper-Level Mixed-Use:** Promote upper level land uses, including office, hotel and residential, that enliven and complement the downtown as a retail destination.
- **Objective LU-6 – Town Scale:** Preserve and enhance the character of the Traditional Downtown, which is associated with smaller parcels, a diversity of architectural styles, a strong pedestrian-orientation and a human scale.
- **Objective LU-7 – Sidewalks and Building Setbacks:** Enhance pedestrian accessibility and safety through appropriate sidewalk dimensions and building setbacks on Mt. Diablo Boulevard, Locust Street, Cypress Street and N. California Boulevard. In most locations adjacent to the Opportunity Sites, the City desires to have new development provide minimum 15-foot wide sidewalks.
- **Objective LU-8 – Preservation:** Provide for the preservation and/or rehabilitation of historic or locally important structures throughout the Specific Plan Area.
- **Objective LU-9 – Arts and Cultural Enhancements.** To continue the expansion of the Traditional Downtown as an arts and culture destination, facilitate the potential for development of a small hotel in the Specific Plan Area.
- **Objective LU-10 – Sustainability:** Promote development patterns and building designs that reduce auto dependency and that foster energy conservation and resource protection.

Circulation and Parking

The Parking and Circulation (“CIRC”) objectives focus on improvements to the pedestrian environment including expanding sidewalks, linking promenades and paseos to form a pedestrian network, and repositioning loading and parking away from the pedestrian circulation by facilitating rear service access. As stated above, specific policies that support each of the following objectives are presented and discussed in the Specific Plan and addressed throughout this EIR where relevant to the environmental analysis.

- **Objective CIRC-1 – Pedestrian Network:** Expand and reinforce a pedestrian-scaled network of paseos, plazas and courtyards between N. Main Street and N. California Boulevard.
- **Objective CIRC-2 – Public Parking:** Augment the supply of off-street public parking north of Mt. Diablo Boulevard to improve the ease of public parking, to encourage visitors to “park once and walk.” Support existing and future retail uses in the Traditional Downtown, intercept traffic entering the downtown, and allow properties to improve or redevelop modestly, if appropriate, without the burden of on-site parking.
- **Objective CIRC-3 – Service Access:** Provide access to parking and services from alleys, wherever possible, to minimize interruptions of the sidewalk and maintain the continuity of retail frontage.

- **Objective CIRC-4 – Commercial Lane Enhancements:** Improve Commercial Lane to provide for more efficient service vehicle access to existing and future development. Study the feasibility of creating a pedestrian paseo on Commercial Lane between the Duncan Arcade and Mt. Diablo Boulevard.

Proposed Land Uses

The Specific Plan proposes to retain the existing General Plan land use designation and zoning for the Specific Plan Area. The intent of the existing Pedestrian Retail land use designation is to provide for a range of retail and personal service uses that are accessed by pedestrians. The intent of the existing Pedestrian Retail (P-R) zoning district is to reinforce the pedestrian environment by reducing on-site parking, concentrating parking in central locations, and concentrating retail uses.

In part because the opportunities for additional on-site parking in the Specific Plan Area are limited, the Specific Plan envisions a new primary parking structure to accommodate the parking needs of future development. The Specific Plan promotes pedestrian-oriented shopping and pedestrian linkage between the Traditional Downtown and the newer retail south of Mt. Diablo Boulevard. New automobile repair uses and drive-through restaurants are not permitted uses under the Specific Plan; existing nonconforming uses and related buildings (such as the auto repair facility on Opportunity Site 2) will be allowed to remain indefinitely but will not be permitted to be expanded, remodeled or structurally altered. (The exception is an Option B scenario described below for Opportunity Site 4 [Chevron]). The analysis in this EIR considers the physical and land use changes that could occur with implementation of the Specific Plan and potential development that could occur as a result.

Land Use Option B (Opportunity Site 4)

The Specific Plan includes a different future land use scenario that could occur on Opportunity Site 4 (Chevron), referred to in the Specific Plan and throughout this EIR as “Option B.” (The proposed scenario described above and in Table III-1 is considered “Option A.”). Option B will allow redevelopment and reinvestment in a portion (approximately 12,500 sq.ft.) of Site 4 (approximately 21,000 sq.ft.), while maintaining the existing gas station use. The portion of Site 4 that will not continue to be part of the service station use will be used to facilitate the new parking garage proposed for Opportunity Site 3 (Future Parking Garage). Service station use is not permitted in the Pedestrian Retail district planning area pursuant to the General Plan, and is therefore an existing nonconforming use. As such, any expansion or enhancement of the existing gas station use or property is not permitted and would require an amendment to the General Plan and Zoning Ordinance.

Development Standards

The General Plan establishes the overall goals and vision of the future for the City’s Core Area and includes several policies and actions in its Built Environment chapter. The General Plan goals are the context for the additional development standards proposed by the Specific Plan and are intended to implement the General Plan goals and facilitate new development projects that fulfill this vision of both the General Plan and the Specific Plan.

The development standards proposed in the Specific Plan are summarized below and are designed to shape building envelopes and encourage pedestrian friendly streetscapes. The analysis in this EIR considers the physical changes that could occur under the Specific Plan pursuant to the proposed development standards.

Proposed changes to maximum building heights in the Specific Plan Area are depicted in **Figure III-4**, Existing and Proposed Height Limits and Step-back. **Figures III-5** and **III-6** are conceptual illustrations of development that could occur pursuant to the policies, development standards, and design guidelines discussed in this chapter for the six Opportunity Sites and the entire Specific Plan Area, respectively; the figures are conceptual plans provided in the Specific Plan and this EIR for illustrative purposes and do not reflect specific development projects. **Figure III-7** depicts the proposed public pedestrian network described in the Specific Plan's objectives, policies, development standards and guidelines.

Building Standards

Minimum Building Setbacks

New development along Mt. Diablo and N. California Boulevards shall be set back so that sidewalks have an average width of 15-feet as measured along the property frontage from the existing face of curb to the outermost projection of the building at street level. In no case shall the sidewalk be less than 12 feet wide. Along Cypress Avenue and Locust Street, new development shall be set back so that sidewalks are a minimum of 12 feet wide. (The Specific Plan proposes a General Plan Amendment to incorporate this standard.)

Build-to Lines

New structures shall be built to the applicable front property line or setback line to create a well-defined and active street edge.

Maximum Height

Height limits shall be increased to 70 feet at Opportunity Site 5 (McDonald's restaurant) and at the northern portion of Opportunity Site 4 (Chevron). Any portion of a building over 35 feet shall be stepped back at least 10 feet from the face of the building. (The Specific Plan proposes a General Plan amendment to incorporate this standard.)

Floor Area Ratio

The FAR of Opportunity Site 5 (McDonald's restaurant) would be increased from 1.25 to 2.0, subject to compliance with Specific Plan policies and development guidelines. (The Specific Plan proposes a General Plan amendment to incorporate this standard.)

Active Ground Floor Frontage

At least 80 percent of lot frontage of newly developed sites shall be occupied by retail, restaurants, and other active uses. Uses shall conform to design guidelines for ground-floor retail space.



Existing height limits



- 60' HEIGHT
- 50' HEIGHT
- 35' HEIGHT
- 10' STEP-BACK ABOVE 35'

Proposed height limits and step-backs





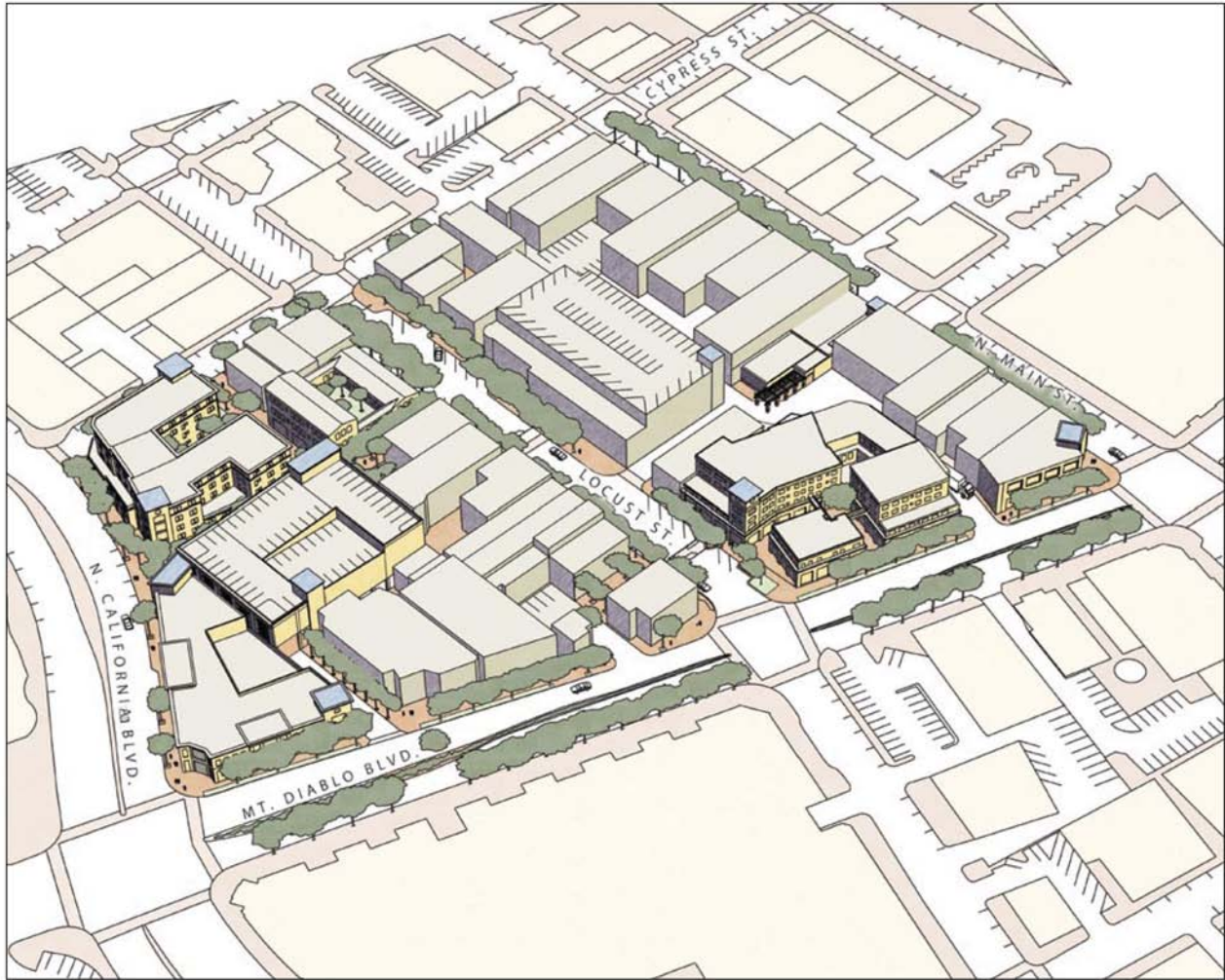
- 1. N. MAIN ST. / MT. DIABLO BLVD. CORNER SITE
- 2. LOCUST ST. / MT. DIABLO BLVD. SITE
- 3. PARKING GARAGE SITE
- 4. MT. DIABLO BLVD. / N. CALIFORNIA BLVD. SITE
- 5. CYPRESS ST. / N. CALIFORNIA BLVD. SITE
- 6. 1373-75 LOCUST SITE



SOURCE: ROMA Design Group, 2008

Locust Street/ Mt. Diablo Boulevard Specific Plan . 204164

Figure III-5
 Illustrative Specific Plan Area
 and Opportunity Sites

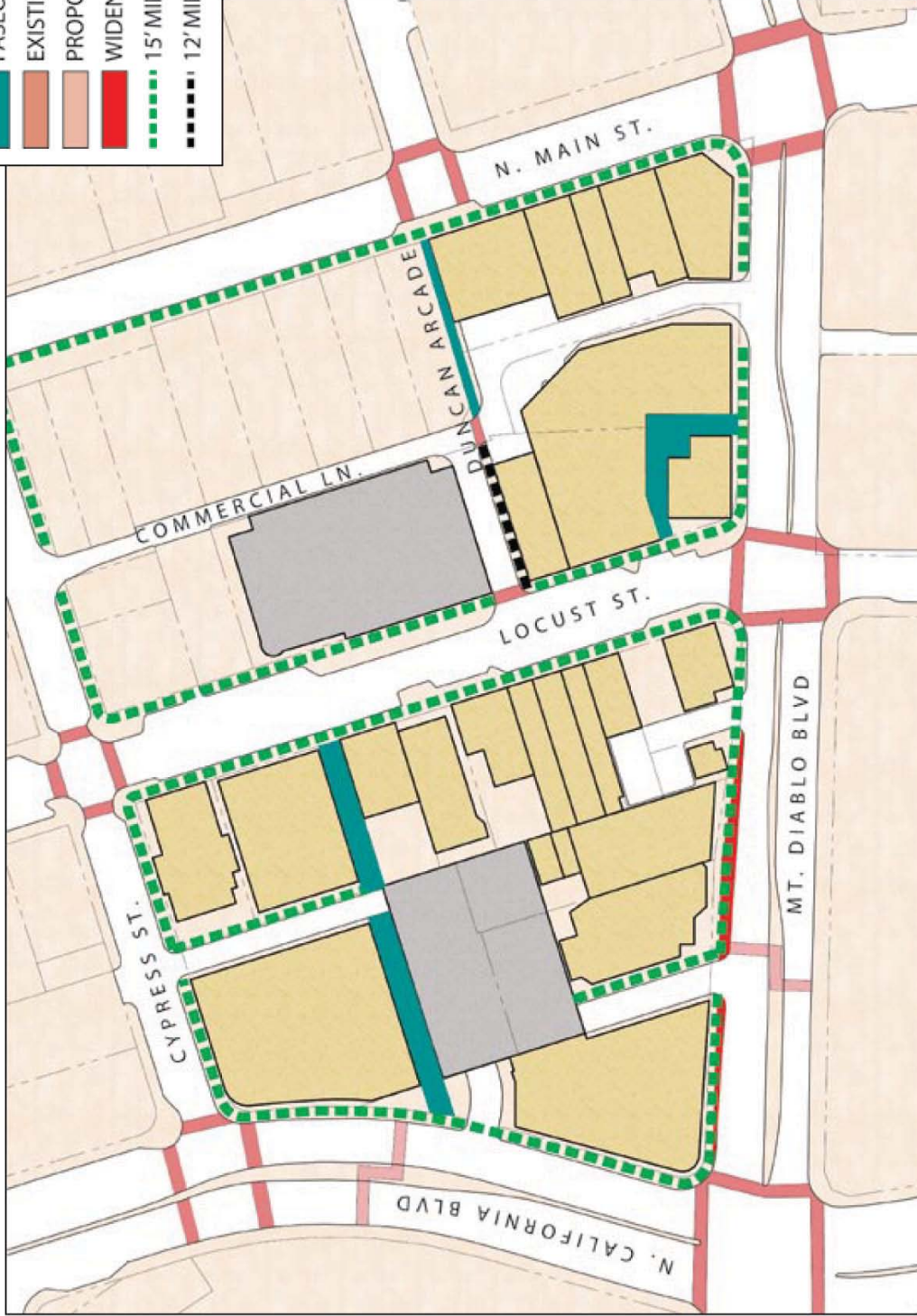


SOURCE: ROMA Design Group, 2008

Locust Street/ Mt. Diablo Boulevard Specific Plan . 204164

Figure III-6
Illustrative Concept of Specific Plan Buildings, Looking Northeast

- PASEOS
- EXISTING CROSSWALKS
- PROPOSED CROSSWALKS
- WIDENED SIDEWALK
- 15' MINIMUM SIDEWALK
- 12' MINIMUM SIDEWALK



Locust Street/ Mt. Diablo Boulevard Specific Plan - 204164
Figure III-7
 Proposed Public Pedestrian Ways

SOURCE: ROMA Design Group, 2008

Ground-Floor Retail Space

The minimum requirements for ground-floor retail space include guidelines regarding floor-to-floor dimensions, pedestrian access, and storefront glass.

Façade Articulations

New buildings shall be designed to break up massing with architectural treatments, changes in plane and volume, and varying parapet heights.

Architectural Treatment

New buildings shall use materials that are durable, resistant to vandalism, and easy to maintain. Substantial and authentic materials are encouraged on storefronts, such as stone, tile, brick, terra cotta, precast concrete, and wood-framed doors and windows.

Signage and Real Time Parking Availability Displays

Store front signage is encouraged to include shingle signs at pedestrian level. The signage program for the proposed parking garage shall facilitate clear way-finding from key entry points downtown and include real-time displays indicating availability of parking spaces.

Streetscape Design Standards

Sidewalks: Sidewalks in the Specific Plan Area will be widened to an average width of 15 feet, with a minimum width of 12 feet.

Paving

New sidewalks will continue the use of interlocking concrete pavers that exist in much of the downtown area.

Street Trees and Tree Grates

Street trees shall be planted at regular intervals, ranging from 20 to 40 feet. On Mt. Diablo Boulevard, trees shall be planted in parkway strips six feet wide.

Mt. Diablo Boulevard Landscaping

As the principal entry into the downtown, Mt. Diablo Boulevard will feature extensive landscaping and a canopy of trees on both sides of the street.

Locust Street Landscaping

The informal and varied layout of a variety of tree species along Locust Street shall be maintained and filled in as appropriate.

Other Streets Landscaping

All other streetscapes shall be planted with a variety of trees, using large trees like the London plane when placed in wide sidewalks away from building façades (i.e., sidewalk widths greater than 12 feet) and smaller trees, such as Locust trees, where there are narrower sidewalks.

Street Lights

New and replacement street lights shall resemble the existing decorative streetlights in the downtown. Other proposed improvements include the installation of street furniture and other features such as planters, water features, and art pieces.

Sidewalk Cafes

Sidewalk cafes will also be encouraged with the allowance for a six-foot unobstructed walking width.

Street Furniture

As sidewalk space allows, benches, planters, water features and art pieces shall be encouraged in the public right-of-way.

Design Guidelines

The Specific Plan identifies design guidelines that are intended to augment the development standards outlined above and provide specific direction to future development on each of the six Opportunity Sites. The design guidelines address recommended ground-level uses and retail design criteria, building massing and setbacks, corner-site treatments, architectural design, lobby locations, signage pedestrian links, parking areas, and service access and loading areas.

A complete discussion of the design guidelines is provided in the Specific Plan, and the following summarizes those relevant to the environmental analysis. The Specific Plan also includes concept plans illustrating a potential development scenario for each Opportunity Site in accordance with the proposed guidelines. Therefore, the analysis in this EIR considers the overall physical changes that could occur with implementation of the Specific Plan pursuant to the proposed design guidelines.

OPPORTUNITY SITE 1 – N. Main Street / Mt. Diablo Boulevard Corner

This 5,000 sq.ft. parcel currently contains a City-owned public parking lot (15 spaces) that could be redeveloped with two stories of new retail uses and a corner plaza.

Recommended Land Use: Ground-floor and second-story retail

Building Height / FAR: Two story building; reduce maximum height from 35/50 to 35 feet at corner most building; maintain 2.0 FAR

<i>Building Massing / Design:</i>	“100 percent corner” with special architectural treatment; second-floor access shall not disrupt continuous ground-floor retail frontage
<i>Paseo / Plazas:</i>	Corner plaza
<i>Setbacks:</i>	Corner plaza minimum 25 feet deep
<i>Parking / Garage Access:</i>	Within any Site 2 on-site parking, or in-lieu
<i>Service Access / Loading:</i>	From Commercial Lane only

OPPORTUNITY SITE 2 – Locust Street / Mt. Diablo Boulevard Corner

This 28,000 sq.ft site (two parcels) includes automotive service uses and a vacant parcel. More intensive ground-level retail uses could be developed at this site with second-story retail, office, residential, or a boutique hotel, served by below-grade parking and substantial courtyards and paseos.

<i>Recommended Land Use:</i>	Active ground-floor retail/restaurant (outdoor uses encouraged); two to three retailers Second-story retail, office, residential (36 units), or a boutique hotel
<i>Building Height / FAR:</i>	Maintain 35/50 feet maximum (35 feet max at corner); maintain 2.0 FAR
<i>Building Massing / Design:</i>	To appear as 2-3 separate buildings
<i>Paseo / Plazas:</i>	Public promenade of paseos and courtyards: Ground-floor plaza/courtyard accessible from public sidewalk; interior block courtyard (minimum 1,000 sq.ft.); paseos (minimum 20-foot wide openings) from site frontage
<i>Setbacks:</i>	Set development back from Commercial Lane
<i>Parking / Garage Access:</i>	Two levels below grade onsite, or rooftop; no curb cuts on Mt. Diablo Blvd.; curb cuts discouraged on Locust Street
<i>Pedestrian Access / Links:</i>	Improve pedestrian linkage from Locust Street to Duncan Arcade
<i>Service Access / Loading:</i>	From Commercial Lane and existing south Locust Street Garage driveway

OPPORTUNITY SITE 3 – Future Parking Garage

This 21,000 sq. ft. surface parking lot (51 spaces) would be redeveloped with a new parking structure. The maximum building height on the site will be increased to 70 feet.

<i>Recommended Land Use:</i>	Public parking garage with approximately 335 spaces Ground-floor commercial, retail, or restaurant uses along N. California Blvd. frontage
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<i>Building Height / FAR:</i>	70 feet maximum (increased from 35 / 50- foot maximum per zoning); maintain 1.25 FAR
<i>Building Massing / Design:</i>	High-quality material and architectural treatments; conceal sloped floors/ramps; Minimum 14-foot ground-level ceiling clearance; use of energy conservation/resources protection features
<i>Paseo / Plazas:</i>	20-foot wide paseo between N. California and Locust Street
<i>Parking / Garage Access:</i>	Nine parking levels possible, including two underground and one rooftop level; access via new service alley (see <i>Service Access / Loading</i> below) and N. California Blvd.; highly-visible signage and “real time” parking space countdown system Priority parking to be allocated for replacement parking, expanded or new retail, and then possible as incentive for redevelopment
<i>Pedestrian Access / Links:</i>	New north-south access from Mt. Diablo Blvd.; improve existing adjacent sidewalks New east-west paseo (see <i>Paseo / Plaza</i> above)
<i>Service Access / Loading:</i>	New service alley between Cypress Street and Mt. Diablo Blvd.

OPPORTUNITY SITE 4 – Mt Diablo Boulevard / N. California Boulevard Corner (Chevron)

This 21,000-sq.ft. site contains an existing Chevron gas station. Under Option A of the Specific Plan, more intensive uses could be developed on most of the site (portion attributed to Opportunity Site 3, Parking Garage), including ground-level retail uses with second story retail or mixed use retail/office development, served by parking in the proposed new parking garage on Site 3. The maximum height will be reduced from what is currently allowed. Under Option B of the Specific Plan, the existing gas station will remain, with the potential for accessory retail uses at the corner.

Land Use Option A

<i>Recommended Land Use:</i>	Ground-floor retail Second-story retail or mixed use retail/office 12,000 square feet attributed for new garage on Site 3
<i>Building Height / FAR:</i>	Two story building; maintain 1.25 FAR
<i>Building Massing / Design:</i>	Incorporate gateway element for entry to Pedestrian Retail District; transparent storefronts; façade and roof line changes to break up massing
<i>Parking / Garage Access:</i>	Provided in new Parking Garage on Site 3; shared driveway access from N. California Blvd. (minimum 100 feet from Mt. Diablo Blvd.) to new garage on Site 3
<i>Pedestrian Access / Links:</i>	Direct access between new garage on Site 3 and second-story uses, as appropriate

Service Access / Loading: From interior of block

Land Use Option B

Recommended Land Use: Maintain existing Chevron gas station with fueling as dominant use; auto repair as secondary use is desired but not required

Accessory retail use at corner of N. California and Mt. Diablo Blvds.

12,000 square feet attributed to Site 3 for new parking garage

Building Massing / Design: Corner retail use shall have street orientation and be consistent with development standards and design guidelines that apply to ground-level retail use for Option A (proposed Specific Plan), above

Service Access / Loading: Access easements shall be provided from N. California and Mt. Diablo Blvds.

OPPORTUNITY SITE 5 –Cypress Street / N. California Boulevard Corner

This 28,000 sq.ft. site contains an existing McDonald's restaurant and associated surface parking lot (50 spaces). More intensive uses could be developed here, including ground-level retail uses, upper-level office, hotel, or residential uses and underground parking. The maximum building height will be increased from what is currently allowed. The existing floor area ratio will also be increased.

Recommended Land Use: Active ground-floor retail/restaurant along street frontages
Second-story office, hotel, or residential

Building Height / FAR: 70 feet maximum with 10-foot step-back above 35 feet, (increased from 35/50-foot maximum per zoning), increase to 2.0 FAR

Building Massing / Design: Articulate vertically, and horizontally and to distinguish building base and top

*Paseo / Plazas
Pedestrian Access:* Create dedicated pedestrian paseo between N. California Blvd. and Locust Street along south edge of Site

Parking / Garage Access: Provided in new Parking Garage on Site 3, if available, otherwise provide onsite in two underground levels; create dedicated north-south alley through block for parking access (similar to existing Commercial Lane at Site 2)

Pedestrian Access / Links: Create dedicated pedestrian paseo between N. California Blvd. and Locust Street along south edge of Site

Service Access / Loading: Create dedicated north-south alley through block for service access (similar to existing Commercial Lane at Site 2)

OPPORTUNITY SITE 6 – 1373 – 75 Locust Street

This 15,000 sq.ft. site contains an existing two-story building occupied by retail uses and related surface parking (20 spaces). More intensive uses could be developed here and may include upper-

level office or loft units, with existing ground-level retail uses maintained on Locust Street. The Specific Plan seeks to develop the surface parking that fronts Locust Street.

- Recommended Land Use:* Maintain/intensify ground-floor retail, restaurant or commercial use along Locust and new paseo (see *Paseo / Plazas* below)
 Second-story office or lofts (10 units) minimize lobby frontages on Locust Street and located along new paseo (see *Paseo / Plazas* below)
- Building Height / FAR:* Maintain 35/50 feet maximum height (35 feet or two stories along street frontage) and the existing 2.0 FAR
- Building Massing / Design:* Reflect smaller development increments along Locust Street, including horizontal and vertical plane changes
- Paseo / Plazas:* Dedicate and improve a pedestrian paseo along the Site to connect N. California Blvd. and Locust Street
- Setbacks:* Upper new development shall extend back from the existing building frontage for at least 20 feet.
- Parking / Service Access:* From planned north-south service alley (see Sites 3, 4 and 5) or existing easements; no curb cuts or driveway access from Locust Street

OTHER SITES

The Specific Plan includes policies intended to provide design direction for any improvements that may be pursued on four other sites in the Specific Plan Area and are summarized below:

Viking / Homechef Parking Lot (Northwest Corner of Locust Street and Mt. Diablo Boulevard)

- Plaza / Courtyard:* Encourage redevelopment of the existing parking lot on the north side of the Viking / Homechef building on the northwest corner of Locust Street and Mt. Diablo Boulevard, as either an infill building to reinforce the continuity of the Locust Street store fronts, or as a public plaza or courtyard.

**Duncan Arcade Building (1341 N. Main Street)
 (North of Opportunity Site 1 and Opportunity Site 2)**

- Pedestrian / Architectural Improvements:* Improve the Duncan Arcade as a more attractive publicly-oriented and pedestrian-friendly corridor, with improved identity for the tenants. Improvements might include additional, architecturally compatible lighting, skylights, raising or removing the arcade roof, installing planted screening between the arcade and Commercial Lane, etc.
- Sightline / Safety:* Correct existing sightline and safety problems at the intersection of Commercial Lane, particularly from vehicles traveling from the north.

Commercial Lane (from Mt. Diablo Boulevard to Duncan Arcade) (North of Opportunity Site 1 and Opportunity Site 2)

Lane Realignment / Access: With development of Opportunity Site 2 (Locust Street / Mt. Diablo Boulevard Corner), realign or “straighten” Commercial Lane, the mid-block service alley where it intersects with the Duncan Arcade exit and the driveway into the S. Locust Street garage.

Multi-Purpose Paseo: Further study the feasibility of transforming Commercial Lane into a “multi-purpose paseo” or periodic “auto-free” zone to enhance the rear façades of businesses facing Commercial Lane and create another pedestrian-oriented street front.

Rear of 1359 Locust Street (Taqueria and Vietnamese Restaurants) (East of Opportunity Site 2)

*Plaza / Courtyard /
Outdoor Dining:* The building at 1359 Locust Street has a 60-foot deep rear yard, now used as a parking lot and service area. If planned paseos are developed, reconfigure the rear yard parking lot of 1359 Locust as a mid-block plaza or courtyard, providing a possible outdoor dining location. Replacement parking (of approximately 10 spaces) could be provided in the new parking garage (Opportunity Site 3) and the site could be serviced from the north-south service alley.

Amendments to Existing Plans and Zoning Ordinance

As previously discussed, the Specific Plan will retain the existing Pedestrian Retail General Plan land use designation and P-R zoning established by the General Plan and Zoning Ordinance, respectively. However, to implement the land uses and design guidelines and standards described in the Specific Plan and summarized throughout this chapter, the Specific Plan proposes the following amendments to the General Plan, the Zoning Ordinance, the previous East Mt. Diablo Boulevard Specific Plan or the Mt. Diablo Redevelopment Project Plan to:

1. **Increase the Maximum FAR.** Increase maximum FAR from 1.25 to 2.0 on Opportunity Site 5 (McDonald’s restaurant);
2. **Building Setbacks.** Adopt building setbacks for new development to maintain a minimum 12- to 15-foot public sidewalk from curb to building face. Specifically, along Mt. Diablo and N. California Boulevards, new development shall be set back an average width of 15 feet (as measured along the property frontage from the existing face of curb to the outermost projection of the building at street level). Along Cypress Avenue and Locust Street, new development shall be set back no less than 12 feet.
3. **Height Increase.** Increase maximum building height from 50 feet to 70 feet on Opportunity Site 3 (Parking Garage) and Opportunity Site 5 (McDonald’s restaurant), with building height step-backs at street frontages; and
4. **Define Building Height Stepbacks.** Define building step-backs from the face of the building as a minimum 10-foot step-back above a 35-foot maximum building height along street frontages.

As previously discussed, implementation of Option B on Opportunity Site 4 will maintain an existing nonconforming gas station use not currently permitted by the current General Plan, Zoning Ordinance or other applicable local land use regulations. If Option B is pursued, amendments to the General Plan and Zoning Ordinance will be required to:

5. **Designate Conforming Land Use.** Remove prohibition of gas station use on Opportunity Site 4 from the applicable General Plan land use designations and policies, zoning districts, and any relevant sections of the Redevelopment Plan, to bring the gas station use into conformance with the General Plan and zoning.

C. Phasing and Implementation

The City anticipates that development implementing the Specific Plan will commence over the next five to ten years. However, the timing and sequence of development will depend upon numerous factors, including future market conditions, public investment, and private initiative and investment. The analysis in this EIR assumes full buildout will occur prior to year 2025.

This EIR is a comprehensive environmental review of potential future development that may occur in the Specific Plan Area. Together, preparation of a Specific Plan and EIR work to streamline the approval process of future development consistent with the City's vision for the area. Individual development proposals will be evaluated for consistency with the Specific Plan and, if determined consistent, will be evaluated to consider whether all potential environmental effects associated with the specific development proposal have been adequately assessed in this EIR. Further assessment may be limited to certain site-specific impacts of the development proposal.

D. Required Approvals and Actions

This EIR is intended to provide the information and environmental analysis necessary to assist the City in considering all the approvals and actions necessary to adopt the Locust Street / Mt. Diablo Boulevard Specific Plan. To summarize previous discussions in this chapter, the following actions are required by the City for adoption of the Specific Plan:

- **Certification of the EIR.** Certify the Locust Street / Mt. Diablo Boulevard Specific Plan EIR and environmental findings pursuant to CEQA.
- **Amendments to General Plan 2025.** Amend General Plan text relevant to the General Plan land use classifications, goals, objectives, policies, actions, or specific land use and development standards necessary to (1) increase FAR, (2) adopt building setbacks, (3) increase maximum building heights, and (4) define building height step backs for the Specific Plan Area.
- **Amendments to the Walnut Creek Zoning Ordinance.** Amend Zoning Ordinance text relevant to the P-R zoning district and development standards necessary.
- **Amendments to the Mt. Diablo Redevelopment Project Plan.** Amend plan text necessary to change allowable land uses for Opportunity Site 4 and as necessary ensure compliance with Specific Plan.

- **Amendments to the East Mt. Diablo Specific Plan.** Amend the East Mt. Diablo Specific Plan by adopting Locust Street / Mt. Diablo Boulevard Specific Plan objectives and policies for the Specific Plan Area.
- If Land Use Option B on Opportunity Site 4 is also to be implemented, the following actions will be required for adoption of the Specific Plan
- **Amendments to General Plan 2025, Zoning Ordinance, East Mt. Diablo Boulevard Specific Plan or the Mt. Diablo Redevelopment Project Plan.** Amend text in each of these plans and ordinance to allow continuation of a gas station use on Opportunity Site 4 as a conforming use.

Although not required to approve the Specific Plan, the City and other relevant responsible agencies that may be identified will be required to review and approve separate applications, conduct environmental review, and consider discretionary approvals required for the development of specific development proposals that cannot be known at this time. As previously discussed, the City will review actual future development proposals within the Specific Plan Area for consistency with the Specific Plan and for potential site specific significant environmental impacts.

A. Land Use, Plans, and Policies

This section describes the regulatory framework and existing conditions related to land use in the Locust Street / Mt. Diablo Boulevard Specific Plan Area and vicinity, and the potential for the Specific Plan to result in environmental impacts related to land use and land use plans and policies.

1. Regulatory Setting

General Plan 2025

The General Plan, adopted by the City April 4, 2006, establishes comprehensive, long-term land use policies for the City. The General Plan includes the following chapters that address the required general plan elements required by state law: Quality of Life, Natural Environment and Public Spaces, Built Environment, Transportation, and Safety and Noise. The Housing Element was adopted in 2003 under a separate update process and was certified by the California Department of Housing and Community Development in 2002. The General Plan identifies goals, policies, and actions specific to each of its elements.

General Plan Policies

The General Plan contains several goals, policies, and actions regarding land use that are relevant to development that may occur with the proposed Specific Plan, including the following (listed under the General Plan chapter, or element):

Quality of Life

GOAL 2. Sustain the community's quality of life with a vigorous and diverse economy.

- Policy 2.1. Promote Walnut Creek as a regional destination.
- Policy 2.6. For areas designated for commercial or business use, plan for adequate sites that allow for expansion of local businesses.
 - Action 2.6.1. Encourage the development of high-quality small professional office spaces, including those in a mixed-use setting.

Built Environment

GOAL 2. Encourage housing development that helps to reduce the increase in traffic congestion.

- Policy 2.1. Develop flexible policies and regulations that facilitate new housing development.
 - Action 2.1.1. Permit multifamily housing in all commercial districts (except the Shadelands Business Park and Auto Sales and Service) through a conditional use permit, subject to project density and development regulations to protect existing urban form.

GOAL 3. Encourage housing and commercial mixed-use development in selected locations that enhances pedestrian access and reduces traffic.

Policy 3.1. Create opportunities for mixed-use developments.

GOAL 5. Require that infill development is compatible with its surroundings.

Policy 5.1. Require infill development to be compatible with adjacent and nearby uses.

GOAL 6. Maintain and enhance Walnut Creek's thriving Core Area, while keeping the Pedestrian Retail District lively and walkable.

Policy 6.1. Retain and encourage a balance of local- and regional-serving retail businesses in the Core Area.

Policy 6.2. Focus development in the Pedestrian Retail District on retail and restaurants, and expand the area's potential to host arts and cultural events.

Action 6.2.1: In the Pedestrian Retail District, require pedestrian-oriented uses at street level.

Action 6.2.2: Promote building layouts and designs that create pedestrian interest and encourage people to "park once and walk".

Policy 6.3. Retain and encourage a variety of small stores and businesses in the Traditional Downtown.

GOAL 9. Manage the community's orderly growth.

Policy 9.1. Mete out the amount of commercial development allowed annually.

Action 9.1.1: Limit the amount of commercial development permitted citywide, outside of the Shadelands Business Park, to no more than 75,000 square feet per year from 2006 through 2015, allotting no more than 15,000 square feet in any 2-year period.

Action 9.1.2: Allow un-allocated commercial development square footage to be carried over to the next development cycle.

Land Use Designation

The General Plan's Pedestrian Retail land use designation for the Specific Plan Area is intended to "provide for a range of retail and personal service uses that are accessed by pedestrians." This area encompasses the highest concentration of retail in Walnut Creek. Pedestrian activity, centralized parking, and ground floor retail uses are encouraged throughout this area. The Pedestrian Retail designation states that "ground floor uses should be retail, with non-retail uses only on the second floor or above." A floor area ratio of 0.75 to 2.0¹ is currently allowed in the Pedestrian Retail designation.

¹ Floor area ratio ("FAR") is defined as the ratio of developed building floor area to net lot area, expressed in square feet.

Other Planning Areas and Designations

The Specific Plan Area falls entirely within the City's Core Area, which the General Plan considers the hub of Walnut Creek and is where the City anticipates most growth to occur city-wide over the next ten to fifteen years. Land uses in this 1.2-square mile central district are mostly commercial with some residential, public, and civic uses.

Two other planning boundaries are within the Core Area: the Pedestrian Retail zoning district; and the Traditional Downtown. The Pedestrian Retail district boundary is identical to the Pedestrian Retail land use designation. The Pedestrian Retail district also includes the Traditional Downtown, a smaller area that is characterized by a regular street grid, small parcels, narrow lot widths, smaller locally-owned businesses, continuous retail frontages, sidewalk seating, and a unified streetscape. Most of the lots on Locust Street and N. Main Street within the Specific Plan Area are located in the Traditional Downtown.

East Mt. Diablo Boulevard Specific Plan

The City adopted the East Mt. Diablo Boulevard Specific Plan ("EMDSP") in 1996. The EMDSP provides policies and planning and design guidelines for the development of three areas along Mt. Diablo Boulevard and recommends design elements that create interest and diversity along public streets and encourage pedestrian activity. These elements include minimum setbacks in order to create a strong street edge, orientating entrances to the street, upper-story setbacks, and corner treatments (angled or rounded corners) for buildings at intersections.

Opportunity Sites 1 and 2, and the Post Office (adjacent to Opportunity Site 2), of the proposed Specific Plan, are also located within the EMDSP. The EMDSP recommends that these parcels be developed with retail/restaurant space and/or a multi-story parking structure. Upon adoption, the Locust Street / Mt. Diablo Boulevard Specific Plan will supersede the EMDSP.

Mt. Diablo Redevelopment Area

The Specific Plan Area also lies within the northern part of the Mt. Diablo Redevelopment Area. The Redevelopment Plan was adopted in 1974 and intended to eliminate the sale and service of automobiles in this area of the City. In 1982, the City amended the Redevelopment Plan to limit land uses in the area to retail, office, residential (including hotels), and parking.

Zoning Ordinance

The purpose of the P-R zoning district, which includes the Specific Plan Area, is to provide a concentration of retail activity that is destination-oriented, within the City's designated Core Area. The P-R zoning district is designed for the more intensely developed downtown retail area, where public parking lots are available in central locations and on-site parking is limited. This zone allows for multi-story structures but requires that the first floor be primarily retail with retail, office, residential and other non-retail uses allowed on upper levels.

The P-R zone limits building heights to 35 feet along the street front and 50 feet on floors above 35 feet that are setback from the street frontage. In 1985, the residents of Walnut Creek voted to adopt Measure A, the “Building Height Freeze Initiative”. Measure A restricts the heights of buildings to the lesser of six stories or a maximum of 89 feet. The parcels within the Specific Plan Area are within the 35-foot/50-foot height limit zone, except for Opportunity Site 5 (McDonald’s restaurant) and Opportunity Site 3 (the proposed public parking garage site), which are currently limited to the lesser of six stories or 89 feet.

2. Existing Conditions

Specific Plan Area

The 5.3-acre Specific Plan Area is located between Mt. Diablo Boulevard, N. California Boulevard, Cypress Street, and N. Main Street. The area includes several small-scale retail and commercial buildings oriented to N. Main and Locust Streets, as well as service-commercial and automotive uses along Mt. Diablo Boulevard.

Primary Study Area

The Specific Plan is comprised of a Primary and Secondary Area, as shown in Figure III-2, Specific Plan Area and Opportunity Sites, in the Project Description. The 3.87-acre Primary Study Area consists of 11 lots, seven of which cover the southern and western sides of the block bounded by Cypress Street to the north, Locust Street to the east, Mt. Diablo Boulevard to the south, and California Boulevard to the west, and four lots located on the southern end of the block bounded by Cypress Street to the north, N. Main Street to the east, Mt. Diablo Boulevard to the south, and Locust Street to the east. The Primary Study Area contains a mix of retail, office, automotive uses, restaurants, and parking lots. Specifically, the seven lots located on the block west of Locust Street include kitchen supply and home furnishings stores, a sporting goods retailer, a realty company, a gas station, a free-standing food restaurant, and a public parking lot. The other four lots east of the Primary Study Area (west of Locust Street) contain a post office, automotive and tire services, and a parking lot.

While the majority of Walnut Creek’s retail core in downtown is characterized by narrow streets with buildings that abut the sidewalks and vast storefronts that encourage pedestrian activity, the Primary Study Area includes buildings that front the sidewalk as well as buildings that are setback and separated from the street by parking or outdoor dining areas. This interrupted building frontage and streetscape is unlike the continuous street building frontages that characterize the other streets in the vicinity of the Specific Plan Area.

There are several underutilized or vacant properties in the Primary Study Area that the Specific Plan identifies as Opportunity Sites likely to be developed in the near future and that are depicted in Figure III-5, Illustrative Specific Plan Area and Opportunity Sites, in the Project Description (Chapter III). These Opportunity Sites include a small public parking lot owned by the Walnut Creek Redevelopment Agency, automobile sales and service businesses, a gasoline service station, a sporting goods store, and an automobile-oriented fast-food restaurant.

Secondary Study Area

The 1.41-acre Secondary Study Area contains 13 lots on N. Main and Locust Streets. These lots are part of the Traditional Downtown and are typified by smaller lots on narrow, pedestrian-oriented streets.

The Secondary Area is comprised of two noncontiguous sections. Nine of the 13 lots are located along the west side of Locust Street, and the remaining four lots are on the west side of N. Main Street. Land uses along the west side of Locust Street include several restaurants, a coffee shop, a bagel shop, and a bar/lounge, as well as specialty retail shops. The four lots on the west side of N. Main Street contain a men's clothing store, a shoe store, and a restaurant. Existing development within the Secondary Study Area is intended to be preserved at a scale and size similar to that which currently exists.

Project Vicinity

As mentioned above, the Specific Plan is located in the highest concentration of commercial retail development in Walnut Creek. Uses immediately surrounding the Specific Plan Area largely comprise retail stores and restaurants, structured parking, and office uses. Specifically, large retail centers were recently developed adjacent to the Specific Plan Area along N. Main Street and Mt. Diablo Boulevard. Broadway Point, a square block located directly east of the Specific Plan Area, contains two large home furnishing stores, a coffee shop, and a bank. To the south, across Mt. Diablo Boulevard, are other new retail establishments including a jewelry store, a clothing store, and an Italian restaurant. Olympia Place, which is located on the south side of Mt. Diablo Boulevard between Locust Street and California Boulevard, includes a large furniture store, several restaurants, and specialty retail shops including a 14-screen movie theatre. Smaller retail stores and national chain restaurants line Cypress Street between California Boulevard and N. Broadway and line N. Main Street between Cypress and Duncan Streets. In addition, Broadway Plaza, a regional outdoor mall, is located to the southeast. The mall contains two major department stores as well as a variety of smaller specialty retail stores and restaurants. Two large parking structures are located adjacent to Broadway Plaza and Olympia Place. Office uses in the immediate vicinity include a small office complex located to the west on a block bounded by California Boulevard to the east, Mt. Diablo Boulevard to the south, Bonanza Street to the north and west.

3. Standards of Significance

According to Appendix G of the state CEQA Guidelines, the project would result in a significant impact related to land use planning if it would:

- (a) Physically divide an established community;
- (b) Conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to the general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect; or

- (c) Conflict with any applicable habitat conservation plan or natural community conservation plan.

Topics Determined Less than Significant in the Initial Study

Land use and land use planning was previously analyzed in the Locust Street / Mt. Diablo Boulevard Specific Plan Initial Study. As stated in the Initial Study, the Specific Plan Area is part of an established larger community, and new development or redevelopment anticipated to occur with implementation of the Specific Plan will not divide this community (criterion a). The Specific Plan proposes amendments to the General Plan and the Zoning Ordinance to allow for changes in the massing and architectural character of new development. Proposed amendments include changes to the floor area ratio (“FAR”), building setbacks, height restrictions, and building height step-backs. However, the policies, development standards and design guidelines that will be adopted as a part of the Specific Plan build upon those in the General Plan and the Zoning Ordinance and align with the City’s existing Design Review Guidelines to ensure new development is compatible with the existing larger context. In addition, the Initial Study determined that the Specific Plan Area is not located within a habitat or natural community conservation plan area. Therefore, implementation of the Specific Plan will have no impact to such plans since none exist in the Specific Plan Area (criterion c). Therefore, these topics are not analyzed further in this EIR, as indicated in the Initial Study.

4. Impact Discussion

Specific Plan Impacts

Impact LU-1: Conflict with any applicable land use plans, policy, or regulation of an agency with jurisdiction over the project adopted for the purpose of avoiding or mitigating an environmental effect (criterion b). (Less than Significant)

The primary goal of the Specific Plan is to maintain and enhance Walnut Creek’s downtown core as a lively and walkable pedestrian retail district. This goal is consistent with those expressed in the General Plan, which designates the Specific Plan Area for Pedestrian Retail district and calls for new development to focus on retail and restaurant activities. The proposed use of upper building levels for office and residential use and expansion of off-street parking are also consistent with the Pedestrian Retail district land use designation.

The Specific Plan seeks to complement the diverse character and smaller scale of the Traditional Downtown, which is associated with smaller parcels, a diversity of architectural styles, a strong pedestrian-orientation, and a human scale. The Specific Plan will achieve these objectives by guiding compatible uses and buildings on the six Opportunity Sites with site-specific guidelines and standards, and preservation and enhancement of the Secondary Study Area.

The Specific Plan builds on the existing General Plan policies and the City of Walnut Creek Zoning Ordinance. Where existing regulations could inhibit the realization of the Specific Plan’s objectives, appropriate incentives, including modification of existing development regulations are

proposed. The Specific Plan will maintain the existing Pedestrian Retail District General Plan land use designation and the P-R zoning designation. The exception would be implementation of Option B on Opportunity Site 4 (Chevron), as discussed below.

As discussed in detail in the Project Description (Chapter III), to implement the land use and design guidelines described in the Specific Plan, including redevelopment of Opportunity Site 4 with Pedestrian Retail commercial uses, the General Plan and Zoning Ordinance (and other applicable plans) will require the following amendments, which would be adopted concurrently with the Specific Plan:

- **Floor Area Ratio:** The General Plan will be amended to increase the maximum allowable FAR from 1.25 to 2.0 on Opportunity Site 5 (McDonald's).
- **Building Setbacks:** The General Plan will be amended to achieve the following:
 - New development on Mt. Diablo and N. California Boulevards shall have sidewalks with an average width of 15-feet as measure along the property frontage from the existing face of curb to the outermost projection of the building at street level. Sidewalks shall be a minimum of 12-feet wide.
 - New development on Cypress Avenue and Locust Street shall have a minimum 12-foot sidewalk.
- **Height Increase:** The General Plan will be amended to allow new buildings on Opportunity Sites 3 (Parking Garage) and 5 (McDonald's restaurant) to reach a maximum height of 70 feet, with building height step-backs at the street frontages.
- **Building Height Step-back:** Within the Specific Plan Area, building height step-backs from the street frontages are defined as a minimum 10-foot step-back from the face of the building from a 35-foot maximum height along the street frontage.

On Opportunity Site 4 (Chevron), under Option B, the existing gas station will remain as an exiting use that will be permitted to be expanded, remodeled or structurally altered. The Specific Plan will allow redevelopment and reinvestment on a portion of the gas station site to facilitate the proposed parking garage on Opportunity Site 3. Because the General Plan, Redevelopment Plan, and the Zoning Ordinance do not currently permit the use of this site as a gas station, implementation of Option B will require an amendment to these regulations to make the gas station a conforming use, provided it conforms to the policies, development standards, and design guidelines of the Specific Plan.

Amendments to the General Plan, Zoning Ordinance, East Mt. Diablo Specific Plan, and the Mt. Diablo Redevelopment Plan, as described above, will be adopted to avoid inconsistencies between the Specific Plan and the City's plans and policies. Therefore, the Specific Plan will not conflict with adopted land use plans and policies and the impact will be less than significant.

Mitigation: None required.

Cumulative Impacts

Impact LU-2: Implementation of the Specific Plan, combined with past, present, and reasonably foreseeable probable future projects, will not result in a significant cumulative impact to land use, plans, and policies. (Less than Significant)

The geographic context for cumulative land use is the downtown area of Walnut Creek, generally the area south of Civic Drive, north of Broadway Plaza (generally Botelho Drive), west of S. Broadway, and east of California Boulevard, as shown in Figure III-1, Specific Plan Area Location Map, in the Project Description (Chapter III). Other past, present, and reasonably foreseeable future projects in and around the City will be subject to review and permitting, including environmental review in accordance with CEQA. Cumulative land use impacts could occur if other past, present, and reasonably foreseeable probable future projects are found to be incompatible with existing land uses, divide an existing community, or are found to be inconsistent with the plans and policies listed above. As with the Specific Plan, in order to be approved and built, future projects will be required to be consistent with the General Plan, Zoning Ordinance, applicable Specific Plans and other pertinent land use regulations, and be compatible with surrounding land uses. As a result, the Specific Plan, combined with past, present, and reasonably foreseeable probable projects will not result in a significant, adverse land use impact. The impact will be less than significant.

Mitigation: None required.

References – Land Use, Plans, and Policies

City of Walnut Creek, *Broadway Plaza Retail Project Draft Environmental Impact Report*, June 20, 2008.

City of Walnut Creek, *Broadway Plaza Retail Project Environmental Impact Report*, September 16, 2008.

City of Walnut Creek, *City of Walnut Creek Zoning Ordinance*, June 15, 2004, as amended.

City of Walnut Creek, *City of Walnut Creek Zoning Ordinance*, Section 10-2.1.202.B, Building Height Zones (Measure A), adopted March 29, 1985.

City of Walnut Creek, *Draft Locust Street / Mt. Diablo Boulevard Specific Plan*, 2008.

City of Walnut Creek, *East Mt. Diablo Boulevard Specific Plan*, August 1996.

City of Walnut Creek, *General Plan 2025*, adopted April 4, 2006, as amended.

City of Walnut Creek, *General Plan 2025 Draft Environmental Impact Report*, August 5, 2005.

City of Walnut Creek, *General Plan 2025 Environmental Impact Report*, December 9, 2005.

City of Walnut Creek, *Mt. Diablo Redevelopment Plan*, 1974, as amended.

B. Aesthetics

This section examines the existing visual conditions of the Locust Street / Mt. Diablo Boulevard Specific Plan Area and vicinity and analyzes how implementation of the Specific Plan may affect the visual character or quality of the project area, views from surrounding public areas, and effects associated with light and glare. The primary sources of information provided in this section are from the General Plan, the Locust Street / Mt. Diablo Boulevard Specific Plan, and from visual observations of the Specific Plan Area and vicinity.

1. Regulatory Setting

City

The City's General Plan, Zoning Ordinance, and Design Review Guidelines are adopted to guide the design quality and compatibility of development in Walnut Creek. Policies, regulations, and guidelines in these documents combine to preserve the existing pedestrian-scale of development in the vicinity of the Specific Plan Area. Each of these documents is described below.

City of Walnut Creek General Plan 2025

The City adopted its General Plan on April 4, 2006. Issues addressed in the General Plan relevant to aesthetics issues or visual quality in or around the Specific Plan Area include the following: height, scale, and character of development; treatment of city gateways, scenic corridors, and scenic views; and views of Mt. Diablo and hillside open space areas. The Specific Plan Area is within the Pedestrian Retail District General Plan land use designation, which is intended to “provide for a range of retail and personal service uses that are accessed by pedestrians,” as specified in the General Plan. The General Plan includes the following Built Environment goals and policies that are applicable to visual resources in the Specific Plan Area:

Built Environment

GOAL 13. Maintain and enhance high quality building design and urban design.

- Policy 13.1. Maintain urban design and architectural standards for evaluating the scale, appearance, and compatibility of new development proposals.
- Policy 13.2. Regulate building placement and upper-floor setbacks along important streets in the Core Area.
- Policy 13.3. Coordinate the building heights allowed under the General Plan, Zoning Ordinance, and Measure A.

GOAL 16. Maintain and enhance Walnut Creek's identity and sense of place.

- Policy 16.1. Foster the preservation, restoration, and compatible reuse of architecturally significant structures and sites.

GOAL 18. Preserve and enhance the visual amenity provided by the open spaces, hills, and creeks.

Policy 18.1. Preserve and enhance the urban connections to scenic views that are important to residents and visitors.

GOAL 20. Reinforce the urban design and character of the Pedestrian Retail District as a gathering place for local residents as well as a regional retail destination.

Policy 20.1. Strengthen the identity of the Pedestrian Retail District as a pedestrian-oriented shopping destination for local residents and regional shoppers.

Policy 20.2. Maintain the special “small town” character, fine-grain development (narrow lots, slender buildings, many different uses in proximity), and pedestrian orientation of the Traditional Downtown.

City of Walnut Creek General Plan / Zoning Ordinance / Measure A

The City of Walnut Creek General Plan establishes height and setback criteria for new development that can affect views and urban design related to the Specific Plan Area. The Core Area Building Height Zone map in the Zoning Ordinance also depicts the height limits for both commercial and residential parcels in the Core Area. The Specific Plan Area is within the “Pedestrian-Retail” (P-R) zoning district. The P-R zone provides for a concentration of retail activity that is destination-oriented within the City’s designated Core Area. New development in the P-R zone is subject to a 35-foot/50-foot height limit. Specifically, a 35-foot height limit has been established along the street frontages, with an average 10-foot step-back above 35 feet, allowing interior portions of the block to develop up to 50 feet in height. This stepped arrangement is intended to provide more pedestrian-scale development along the street frontages, while allowing for taller developments to occur toward the interior of a lot.

In 1985, Walnut Creek residents passed Measure A, the “Building Height Freeze Initiative”, which froze the 1985 zoning height limits up to a maximum of six stories or 89 feet, whichever is less. In Opportunity Site 5 (McDonalds), a General Plan amendment is required to allow new development that will exceed the existing 50-foot height limit up to a Measure A permissible height limit of 70 feet.

Design Review Guidelines

All projects must meet specific standard conditions under the Design Review Ordinance, listed in Title 10, Chapter 4 of the Walnut Creek Municipal Code. Specifically, the City’s Design Review Guidelines address site planning, architecture, parking, landscaping, lighting, fencing, screening and signage. The Guidelines also address residential and commercial development, with special considerations for the Pedestrian Retail zoning district that includes the Specific Plan Area. The design objective in the City’s Pedestrian Retail zone is to “create a high quality, pedestrian scale, and walkable areas with a Traditional Downtown atmosphere.” Emphasis is placed on addressing pedestrian needs and developing creative approaches to improving pedestrian interest, access and

enjoyment. For commercial architecture, the Guidelines stress compatible scale, mass, form and height, consistency in detailing of side and rear facades; coordination of actual and apparent height, especially where buildings are located close to one another; and the incorporation of outdoor spaces like courtyards, patios, plazas, covered walkways, passages and gardens. The Guidelines call for uninterrupted and continuous pedestrian activity; active building frontages; pedestrian open spaces; and outdoor seating and dining.

2. Existing Conditions

City and Surrounding Area

The City of Walnut Creek is located in the Diablo Valley. At a peak elevation of 3,849 feet, Mt. Diablo and its surrounding ridgelines form a natural backdrop to the City, dominating the view from many locations within the City. Within this surrounding natural environment, the City is comprised of a variety of urban forms and is surrounded by low-density suburban residential development on the perimeter. These forms vary from the low-rise but densely developed pedestrian retail, to mid-rise commercial office buildings on the periphery of the Pedestrian Retail zoning district, to low- to mid-rise strip commercial development along N. Main Street and Mt. Diablo Boulevard.

Specific Plan Area

The Specific Plan Area is approximately 5.3 acres located in the highly urbanized area of downtown Walnut Creek. Overall, the Specific Plan Area is comprised of 24 commercial lots within the pedestrian-oriented retail core, north of Mt. Diablo Boulevard, as show in Figure III-2, Specific Plan Area and Opportunity Sites, in Chapter III (Project Description). Buildings in the Specific Plan Area are typically one story in height and abut the sidewalk. Structures reflect a variety of architectural building types and dates of construction, from late 1800s Victorian style residential architecture to late 20th-century automobile-oriented strip commercial architecture.

Although many of the older buildings in the Specific Plan Area contribute visually to the small-scale, pedestrian-oriented retail environment, some have been heavily modified (both externally and internally) over the years and no longer retain their original appearance. Examples include La Fogata Restaurant (former Sherburne Store, one of the oldest¹ commercial stores in Walnut Creek) and to a lesser degree, the Viking HomeChef (former 1916 Masonic Temple), and Z Gallerie (a former early twentieth century commercial store) (see **Figure IV.B-1**, Existing Views of the Specific Plan Area). The Empire Realty Building (former Dole House) is a circa 1879 Victorian residence converted to commercial uses, representing one of the last residential examples within the old downtown. These buildings contrast with the mid- to late-twentieth century automobile-oriented commercial uses located primarily along N. California and Mt. Diablo Boulevard. (A full discussion of these specific older structures in the Specific Plan

¹ Historical marker indicates that this structure was constructed in 1863 as a general store, burned in 1879, and rebuilt in 1880.



La Fogata Restaurant, Rear View



Westerly view from Locust Street

Area is provided in Cultural Resources discussion the Initial Study prepared for the Specific Plan.) Parking lots dominate the interior of the portion of the Primary Study Area.

The Secondary Study Area, which is primarily centered on downtown's pedestrian-oriented retail core along Locust Street, consists of one- to two-story commercial and retail development (see Figure IV.B-1). An east-west pedestrian passageway (paseo) through the middle of the Secondary Study Area connects Locust Street with N. Main Street. Similar to the Primary Study Area, there are a variety of architectural styles present. There are also a number of the older buildings in this area that have been modified over the years and no longer retain their original character.

Views of the Specific Plan Area

Views of the Specific Plan Area are available from each of the boundary streets: Mt. Diablo Boulevard, N. California Boulevard, Cypress Street, and Locust Street. There are open views from the south (Mt. Diablo Boulevard) and west (California Boulevard) due to the large surface parking lots. As a result, expansive parking areas also are visible although landscaping and street trees near the corner of Mt. Diablo Boulevard and California Boulevard screen some views of the parking areas. Commercial Lane, a narrow alley-like street, connects Mt. Diablo Boulevard to Cypress Street, although it is not visible from most off-site areas due to the surface parking lots and automotive service uses along Mt. Diablo Boulevard. The rear (or service) entrances of the N. Main Street shops and restaurants that back onto Commercial Lane (but that are not included in the Specific Plan Area, except for La Fogata Restaurant) are visible from Mt. Diablo Boulevard because of the open views across the surface parking areas associated with the auto service businesses.

Views of the Specific Plan Area when traveling north on California Boulevard are dominated by the automobile-oriented development, such as a gas station, a free-standing fast food chain restaurant, and associated surface parking lots, in addition to a sporting goods store. Mature trees exist in the center of the Specific Plan Area and are visible from N. California Boulevard and Locust Street.

Project Vicinity and Views from the Specific Plan Area

The Specific Plan Area vicinity is dominated by the intersections of large arterial streets such as Mt. Diablo Boulevard and N. California Boulevard. These five- and six-lane arterials are designed for high-capacity traffic movement. Locust Street and N. Main Street are narrower roadways. Large blocks of recently-constructed commercial and retail development exist immediately south of the Specific Plan Area, fronting Mt. Diablo Boulevard. Relatively recent development on the Olympic Boulevard / Mt. Diablo Boulevard block (Olympia Place) consists of a two-story commercial development with street-level retail and internal parking. Similarly, a two-story commercial and retail development (The Corners) was recently constructed and spans the block of Mt. Diablo Boulevard, between Locust Street and N. Main Street. This development also has internal parking and continues the pedestrian-oriented retail uses that extend along the south side of Mt. Diablo Boulevard.

Views looking west from the Specific Plan Area are dominated by a modern, six-story office development fronting California Boulevard, with smaller-scale pedestrian retail structures on the corner of N. California Boulevard and Bonanza Street. A row of mature trees exists at the terminus of Cypress Street into N. California Boulevard. Views looking north from the Specific Plan Area include one- and two-story retail structures along Cypress Street. Views looking east from the Specific Plan Area include low-rise retail structures, a four-story parking structure, and a four-story clock tower above Broadway Pointe (the northeast corner of Mt. Diablo Boulevard and Main St.). The parking structure and clock tower are prominent visual landmarks rising above other structures within the Specific Plan Area or the immediate vicinity. Distant views looking east include the Mt. Diablo foothills, with Mt. Diablo itself visible to the southeast.

Major Viewsheds

Major viewsheds that could be affected by redevelopment of the Specific Plan Area include views of Mt. Diablo when traveling eastward on Mt. Diablo Boulevard. As stated above, views of Mt. Diablo are visible from the Specific Plan Area, looking southeast. Views of Lime Ridge and Shell Ridge, which form the foothills of Mt. Diablo and rise to about 1,700 feet above the valley floor are also clearly visible when looking due east from this vantage point and could be affected by redevelopment of the Specific Plan Area. The open spaces on Mt. Diablo and its surrounding foothills typically appear green from early spring to early summer, turning a golden brown from late summer lasting into winter. Snow occasionally caps the highest peaks around Mt. Diablo in winter, and portions of the ridge are often shrouded in cloud cover.

3. Standards of Significance

According to Appendix G of the State CEQA Guidelines, and as supplemented by the City, the project would result in a significant impact related to visual quality if it would:

- (a) Have a substantial adverse effect on a scenic vista;
- (b) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway;
- (c) Substantially degrade the existing visual character or quality of the site and its surroundings; or
- (d) Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area.
- (e) Cast shadows that substantially impair the beneficial use of any public park, plaza or open space area.

Topics Determined Less than Significant in the Initial Study

The Initial Study prepared for the Specific Plan determined that adoption and implementation of the Specific Plan will not damage scenic resources within a state scenic highway (criterion b) because there are no Scenic Highways near the Specific Plan Area. The Initial Study also

determined that adoption and implementation of the Specific Plan will not result in a less than significant light and glare impact (criterion d) because, while the Specific Plan may increase light and glare, it would not create new substantial sources that would adversely affect daytime or nighttime views in the area. Therefore these topics are not analyzed in this EIR, as indicated in the Initial Study.

4. Impact Discussion

Specific Plan Impacts

Impact AES-1: Have a substantial adverse effect on a scenic vista (criterion a). (Less than Significant)

A scenic vista is typically a view of a valued resource, such as waterways, the ocean, hills, valleys, or mountains, as designated in the General Plan. The General Plan identifies views of Mt. Diablo from Mt. Diablo Boulevard, west of the Specific Plan Area, as integral to the City's identity, sense of place, and character. The General Plan seeks to "preserve and enhance the urban connections to scenic views that are important to residents and visitors." (General Plan Built Environment Policy 18.1).

With implementation of the Specific Plan, development in the form of new, modified, and/or replacement buildings will be constructed along the three major corridors around and through the Specific Plan Area: N. Main Street, Locust Street, and N. California Boulevard. Although the Specific Plan will involve amendments to the General Plan to increase the maximum building height from 50 feet to 70 feet on Opportunity Site 3 (Parking Garage), which is on the interior portion of the Primary Study Area, and Opportunity Site 5 (McDonald's restaurant), which is on the corner of N. California Boulevard and Cypress Street, the proposed height increase will not substantially obstruct existing views of Mt. Diablo from any public areas or viewsheds, including Mt. Diablo Boulevard or N. Main Street.

Consistent with General Plan Policy 18.1, the Specific Plan proposes the following Land Use and Urban Design ("LU") policy to ensure that implementation of the Plan will not adversely affect scenic vistas:

Policy LU-6.3: Respect the height limits and stepback rules in the General Plan, limiting height to 50 feet with a stepback along the street frontage at 35 feet, but allow height bonuses within the envelope of the Measure A limits. The McDonald's Restaurant and public parking garage sites fall within the Measure A height limit of the lesser of 89 feet and 6 stories. On these parcels, allow buildings to a height of 70 feet, as an incentive for achieving key public objectives including an east-west paseo and a new public parking garage.

Therefore, implementation of the Specific Plan will result in a less than significant impact to scenic vistas.

Mitigation: None required.

Impact AES-2: Substantially damage the existing visual character or visual quality of the Specific Plan Area and its surroundings (criterion c). (Less than Significant/Beneficial)

The Specific Plan Area currently consists of a variety of architectural styles and building types in a range of physical conditions. As described in detail in the Project Description (Chapter III), the Primary Study Area includes six “Opportunity Sites” that are underutilized or vacant and suited for redevelopment in the near future. Surface parking lots separate retail buildings and in some areas are the most prominent visual feature from the roadway. In addition, large surface parking lots visually place stores and offices in the background. The Specific Plan supports opportunities for infill development in the Specific Plan Area that are respectful of the smaller scale and character of the shops and buildings in the Traditional Downtown north of Mt. Diablo Boulevard.

Key existing General Plan policies relevant to the visual character and quality of the Specific Plan Area address strengthening the identity of the Pedestrian Retail zoning district as a pedestrian-oriented shopping destination (General Plan Built Environment Policy 20.1), fostering the preservation, restoration, and compatible reuse of architecturally significant structures and sites (General Plan Built Environment Policy 16.1), and maintaining the special ‘small town’ character, fine-grain development of the Traditional Downtown (General Plan Built Environment Policy 20.2). Although the Specific Plan is intended to result in development and land use changes in the Specific Plan Area, these changes are not considered significant or adverse. Future development of residential, commercial, and mixed use development at the heights and intensities proposed in the Specific Plan will not visually conflict with the context or existing uses in the area. Although buildings taller than the existing low-rise buildings will be possible under the Specific Plan, similar-scaled development currently exists in the surrounding area and is expected to continue to exist after implementation of the Specific Plan.

Simulations of development that could occur in accordance with Specific Plan policies, development standards, and design guidelines are depicted in **Figures IV.B-2** through **IV.B-4**.

Overall, the Specific Plan encourages the gradual redevelopment of underutilized infill properties and vacant sites currently used for surface parking. The Specific Plan includes policies and development and design standards for infill development to promote human-scale development, with an emphasis on building façade treatments and appropriate materials, and incorporating pedestrian amenities such as directional signage and landscaping throughout the area. Development under the Specific Plan will be guided to maximize retail frontages and minimize blank areas along the street front, widen sidewalks along major streets and adjacent to taller buildings, incorporate attractive and distinctive paving and street landscaping treatments, incorporate special architectural treatments on buildings at landmark intersections, reduce or eliminate expansive surface parking, and integrate open space paseos and courtyards – all of which will enhance the existing visual character and quality of the Specific Plan Area.



Existing



Proposed



Existing



Proposed



Existing



Proposed

NOTE: Opportunity Site 4 (Option B) would generally maintain existing low rise automobile service station.

The Specific Plan includes policies and development and design standards that, in combination with City's existing General Plan policies and Design Guidelines, address the visual character and visual quality of the Specific Plan Area. Consistent with the General Plan policies previously identified in this chapter, the Specific Plan proposes several Land Use and Urban Design ("LU") and Circulation and Parking ("CIRC") policies relevant to enhancing the visual character and visual quality of the Specific Plan Area:

Policy LU-1.1: In configuring development sites, give priority to the marketability of ground-floor retail space, including visibility, signage, transparency, access, ceiling heights, bay depths, and service requirements. Upper level uses should not compromise the viability of ground-floor retail space.

Policy LU-1.2: Give priority to the provision of well-sited public plazas, walkways, and public amenities in configuring significant development sites.

Policy LU-1.3: Create pedestrian linkages and streetscape enhancements within development sites.

Policy LU-4.1: Activate the majority of the frontages of newly developed sites with retail, restaurants, building lobbies and other lively and visually interesting uses.

Policy LU-6.1: Promote architecture and site design that breaks down the scale of large blocks.

Policy LU-6.2: Vary buildings, in width, height, and façade design to reflect the existing scale and diversity of the buildings on Locust and N. Main Streets, and along Mt. Diablo Boulevard in the study area.

Policy LU-6.3: Retain and encourage a variety of small stores and businesses in the Traditional Downtown.

Policy LU-8.2: Contingent upon the adoption of a Historic Preservation Ordinance by the City of Walnut Creek, all alterations of structures in the Specific Plan Area shall comply with the provisions of the Historic Preservation Ordinance.

Policy CIRC-3.1: Assemble land and public access easements to provide a north-south alley from Cypress Street to Mt. Diablo Boulevard adequate for WB-40 trucks to navigate the west block. Align the alley to provide rear service access to existing and future businesses along Locust Street and Mt. Diablo Boulevard.

In summary, implementation of the Specific Plan will result in a less than significant impact to the visual character and visual quality of the Specific Plan Area, and will result in beneficial effects to the area since new development and redevelopment will occur consistent with the policies and development and design standards in the Specific Plan.

Mitigation: None required.

Impact AES-3: Cast shadows that substantially impair the beneficial use of any public park, plaza or open space area (criterion e). (Less than Significant)

There are no existing public parks, plazas or open space areas within or in proximity to the Specific Plan Area that could be adversely affected by development that could occur pursuant to the Specific Plan. The Specific Plan encourages the development of new outdoor spaces and pedestrian ways (paseos, plazas and courtyards) throughout the Specific Plan Area (see Figure III-7, Proposed Public Pedestrian Ways, in Chapter III, Project Description. Specific development standards and design guidelines are specified for these spaces, and for buildings, to ensure adequate light and openness to these public areas. Consistent with the General Plan policies previously identified in this chapter, the Specific Plan proposes several Land Use and Urban Design (“LU”) and Circulation and Parking (“CIRC”) policies relevant to ensuring the beneficial use of public open spaces:

Policy LU-1.2: Give priority to the provision of well-sited public plazas, walkways, and public amenities in configuring significant development sites.

Policy LU-6.3: Respect the height limits and stepback rules in the General Plan, limiting height to 50 feet with a stepback along the street frontage at 35 feet, but allow height bonuses within the envelope of the Measure A limits. The McDonald’s and public parking garage sites fall within the Measure A height limit of the lesser of 89 feet and 6 stories. On these parcels, allow buildings to a height of 70 feet, as an incentive for achieving key public objectives including an east-west paseo and a new public parking garage.

Policy LU-10.1: Create a safe, comfortable and engaging pedestrian environment that encourages walking as a viable alternative to vehicular travel.

Policy CIRC 1.1: Coordinate with the owners of the Duncan Arcade to improve the attractiveness and safety of this important public passageway between N. Main Street and Commercial Lane, and secure it as a public pedestrian easement.

Policy CIRC 1.2: Widen the sidewalk on the north side of the building located at 1320 Locust Street between Commercial Lane and Locust Street, by removing the existing planter strip against the face of the building.

Policy CIRC 1.4: Require designated opportunity sites to contribute to the system of paseos and courtyards at the time of redevelopment (e.g., Mark Morris/Walnut Creek Automotive site, McDonald’s site), consistent with the Specific Plan diagram. Incentives have been incorporated into the Specific Plan, where possible, to compensate for the loss of developable property to paseos or service alleys. Incentives include height and floor area ratio increases, changes in land use restrictions for projects that comply with the plan development vision, and provision of in-lieu parking opportunities to support redevelopment that is consistent with Specific Plan goals. Although not all incentives have been directed to all Opportunity Sites, sites will benefit from the City’s initiative in preparation of an Environmental Impact Report, which will reduce the time and cost to process future project development applications.

Policy CIRC 1.6: Explore the potential for, and feasibility of, enhancements to Commercial Lane and other service lanes, to make them more pedestrian friendly and to allow for pedestrian-oriented activities including outdoor cafes during certain hours of the day.

As described in detail in the Project Description (Chapter III), the Specific Plan proposes amendments to the General Plan and Zoning Ordinance to increase maximum building height from 50 feet to 70 feet on Opportunity Site 3 (Parking Garage) and Opportunity Site 5 (McDonald's restaurant), as well as to define building height step-backs (above 35 feet) from the building façade along street frontages. The increased maximum height on these two Opportunity Sites will be matched with upper-story step-backs that will reduce potential shadows cast by future development. Further, no existing public open spaces exist near these Opportunity Sites 3 and 5.

The proposed amendments to increase maximum height on these two Opportunity Sites are coupled with Specific Plan design guidelines for 45-degree chamfer buildings to accommodate public spaces (and safe sight-lines between pedestrians and vehicles), minimum plaza/paseo dimensions, and streetscape design standards addressing paving, street trees, landscaping, street lights and furniture. As a result, new development in the Specific Plan Area will incorporate these standards and guidelines and be consistent with General Plan and Specific Plan policies and therefore will not impair the use of public open spaces. In summary, implementation of the Specific Plan will result in a less than significant impact to the beneficial use of any public park, plaza or open space area since new development and redevelopment will occur consistent with the policies and development and design standards in the Specific Plan.

Mitigation: None required.

Cumulative Impacts

Impact AES-4: Implementation of the Specific Plan, when combined with other past, present, and reasonably foreseeable probable future development in the vicinity, will not result in a cumulative aesthetics impact. (Cumulative Impact: Less than Significant)

The geographic context for cumulative impacts is the downtown area of Walnut Creek, generally the area south of Civic Drive, north of Broadway Plaza (generally Botelho Drive), west of S. Broadway, and east of California Boulevard, as shown in Figure III-1, Specific Plan Area Location Map, in the Project Description (Chapter III), as well as the areas within the existing viewsheds to Mt. Diablo to the south and southwest. Implementation of the Specific Plan, together with other past, present and reasonably foreseeable probable future development in the City, including the recently approved Broadway Plaza Retail Project immediately southeast of the Specific Plan Area (Opportunity Site 1), will result in new development and redevelopment throughout the area. As with all past projects in the area, all present and other future development – including the Broadway Plaza Retail Project and development that will occur under the Specific Plan – will be required to adhere to the City's existing zoning development regulations, including but not limited to Measure A, Design Review Guidelines and review process, applicable General Plan policies that address building appearance, height, bulk, configuration and suitability to the environmental context. In particular, the City's Design Review process ensures that future development is reviewed prior to approval to ensure that it is compatible in its context and

adheres to standards that preserve existing views of identified visual resources. Future development is expected to result in greater density of buildings. However, with adherence to the required regulations, polices and processes, past, present, and reasonably foreseeable probable projects will not result in significant adverse changes to the area's scenic vistas or resources (primarily distant views of Mt. Diablo and open spaces to the southeast), visual character and visual quality, or light and glare effects. Therefore, the impact is less than significant.

Mitigation: None required.

References – Aesthetics

City of Walnut Creek, *General Plan 2025*, adopted April 4, 2006, as amended.

City of Walnut Creek, *City of Walnut Creek Zoning Maps*, July 21, 2004, as amended.

City of Walnut Creek, *City of Walnut Creek Zoning Ordinance*, June 15, 2004, as amended.

City of Walnut Creek, *City of Walnut Creek Zoning Ordinance*, Section 10-2.1.202.B, Building Height Zones (Measure A), adopted March 29, 1985.

City of Walnut Creek, *Draft Locust Street / Mt. Diablo Boulevard Specific Plan*, 2008.

C. Population and Housing

This section addresses existing and projected population, housing, and employment in the local and regional context and discusses the potential environmental impacts related to changes that may result with implementation of the Specific Plan.

1. Regulatory Setting

General Plan 2025 Policies

The General Plan contains, in the Built Environment chapter, the following goals, policies, and actions regarding population, housing, and economic considerations that are relevant to development that may occur with implementation of the Specific Plan:

Built Environment

GOAL 1. Maintain the balance of open space and public and private land uses existing in Walnut Creek in 2005.

- Policy 1.1. Strive to maintain the balance of housing, commerce, and open space in the community.
- Policy 1.2. Work to balance the number and types of jobs and the amount and kind of housing available in Walnut Creek.

GOAL 2. Encourage housing development that helps to reduce the increase in traffic congestion.

- Policy 2.1. Develop flexible policies and regulations that facilitate new housing development.
 - Action 2.1.1. Permit multifamily housing in all commercial districts (except the Shadelands Business Park and Auto Sales and Service) through a conditional use permit, subject to project density and development regulations to protect existing urban form.

GOAL 3. Encourage housing and commercial mixed-use development in selected locations that enhances pedestrian access and reduces traffic.

- Policy 3.1. Create opportunities for mixed-use developments.

The City's certified 2001-2006 Housing Element Update also includes the following relevant goals and policies.

GOAL 1. To promote the availability of housing types for all economic segments of the community consistent with the infrastructure and service capacities of the City and consistent with the need to preserve and protect hillside vistas, open space resources and natural features.

- Policy 1. Encourage a mix of land uses and residential densities in the downtown Core Area to increase the supply of housing.

- Program 1.2. Continue to use the specific plan process in the Core Area as a means of accomplishing planned residential development. The specific plans should include an incentive package for projects where a certain percentage of new units will be affordable to low- and moderate-income households.
 - Program 1.4 Study possible incentives and develop guidelines for residential use of floor space above ground floor commercial establishments, such as height bonuses within Measure A limits, parking strategies, fee deferrals, flexible development standards, and priority processing of mixed use projects. Development standards to be evaluated include density, parking requirements, lot coverage, and setbacks.
- Policy 3. Locate higher density residential development in the Core Area, especially near public transit, major thoroughfares, shopping and employment centers.
- Program 3.1. Identify and designate commercially zoned properties in the Core Area where development should include a residential component.

2. Existing Conditions

This section describes existing conditions related to population, housing, and employment in Walnut Creek and in the Specific Plan Area.

Population

Table IV.C-1 shows population, housing and employment trends and projections for Walnut Creek from 2000 to 2025. The fourth largest city in the County of Contra Costa, Walnut Creek's population grew from 64,296 in 2000 to 65,036 in 2008, an increase of approximately one percent (CA Dept. of Finance, 2008). The Association of Bay Area Governments ("ABAG") projects that Walnut Creek will add roughly 7,100 new residents between 2005 and 2025, which represents an increase of approximately 10.7 percent. The County's population as a whole is projected to increase by nearly 18 percent between 2005 and 2025.

With a somewhat more affluent and older population compared to the rest of the County and region, Walnut Creek had a relatively low 2.13 persons per household in 2005. The City's average household size is expected to continue to decline to 2.08 by 2025.

The City's certified 2002 Housing Element projects a city-wide population of 70,200 by 2020, which is less than the above-stated ABAG projections. The General Plan projects a population increase of approximately 6 percent between 2004 and 2020, whereas ABAG Projections 2003 estimate an approximate 12 percent increase in Walnut Creek's population over the same period. According to ABAG Projections 2003, cities adjacent to Walnut Creek, and the County itself, are

**TABLE IV.C-1
 POPULATION, HOUSEHOLD, AND EMPLOYMENT – 2000–2025^a**

	2000	2005	2010	2025	Change 2005–2025	
					Number	Percent
Population	64,296	66,200	67,500	73,300	7,100	10.7
Households	30,301	31,050	31,960	35,210	4,160	13.4
Household Size	2.12	2.13	2.11	2.08		
Jobs	62,040	62,140	64,190	71,720	9,580	15.4
Employed Residents	39,139	38,020	40,410	48,460	10,440	27.5
Jobs/Employed Residents Ratio	1.59	1.63	1.59	1.48		

^a Jobs, Employed Residents, and Jobs/Employed Residents Ratio are reported for the City's Sphere of Influence

SOURCE: ABAG (2006)

expected to experience comparable increases in population growth - between 1 and 6 percent between 2004 and 2010. Changes in population between 2010 and 2020 vary from a decrease of approximately 1 percent (Danville and Pleasant Hill) and an increase of between 3 and 11 percent elsewhere.

Housing

Walnut Creek's housing growth has been modest in recent years. The number of multiple family units, including units in mixed-use developments, has been increasing more rapidly than single-family construction, with most of those units built in the Core Area. No housing currently exists within the Specific Plan Area.

Table IV.C-2 presents the range of housing types currently provided in Walnut Creek, the County of Contra Costa, and the Bay Area.

The City contains approximately 32,343 housing units in 2008, with single-family housing accounting for 53 percent and multi-family housing at 47 percent. Compared to other housing in the County and the Bay Area, the City has a lower proportion of single-family housing and higher proportion of multi-family housing.

Employment

Walnut Creek serves as an important employment center in the County and the Bay Area. Walnut Creek's major employment sectors include health care, retail trade, professional and scientific services, and finance and insurance. Major employers in the City include the John Muir Medical Center, Kaiser Permanente, Long's Drugs, Safeway, Contra Costa Newspapers, Verizon, Macy's, Manor Care Health Services, Target, Prudential California Realty, and PMI.

**TABLE IV.C-2
 EXISTING HOUSING TYPES (2008)**

Housing Type	City of Walnut Creek	Distribution %		
		City of Walnut Creek	Contra Costa County	Bay Area
Single-Family				
Detached	12,257	38%	66%	54%
Attached	4,857	15%	8%	9%
Multi-family Residences				
2-4 Units in Structure	4,316	13%	7%	10%
5 Units or More in Structure	10,865	34%	17%	25%
Mobile Homes	48	>1%	2%	2%
Total	32,343	100%	100%	100%

SOURCE: Department of Finance (2008)

Walnut Creek’s employment base grew 46.3 percent in the 1990s, from a total employment of 36,929 jobs in 1991 to 54,726 jobs in 2000, more than double the growth rate for the County and state. ABAG projects significant continued employment growth in Walnut Creek. The City is expected to host 71,720 jobs in 2025, an increase of 9,580 positions from 2005. Walnut Creek had a ratio of 1.63 jobs to employed residents in 2005, as compared to 0.74 for the County. In 2000, approximately 29 percent of the City’s employed residents worked in Walnut Creek, while county-wide this was less than 20 percent. The City’s balance of jobs to employed residents is forecast to decline slightly in 2025 to 1.48.

In 2005, there was an estimated 15.7 million square feet of commercial land uses in Walnut Creek. In 1993, the City Council amended the 1989 General Plan to include a “Growth Limitation Program,” which limited new commercial growth to 150,000 square feet every two years for ten years. This program was extended and ultimately amended and adopted into the current General Plan. Action 9.1.1 accompanying Policy 9.1 of the General Plan limits the rate of commercial growth outside of the Shadelands Business Park to 1.25 million square feet between 2005 and 2015, to be metered at a rate of 250,000 square feet every two years. Several large commercial development projects were constructed in the project vicinity in the past ten years, including Broadway Pointe (42,000 square feet), The Corners (20,000 square feet), Plaza Escuela (74,900 square feet) and Olympic Place (89,900 square feet).

Assuming an employment generation rate for retail uses of 450 square feet per employee (ABAG, 1995), the Specific Plan Area employs approximately 200 people.

3. Standards of Significance

According to Appendix G of the state CEQA Guidelines, the project would result in a significant environmental impact related to population and housing if it would:

- (a) Induce substantial population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure);
- (b) Displace substantial numbers of existing housing units, necessitating the construction of replacement housing elsewhere; or
- (c) Displace substantial numbers of people, necessitating the construction of replacement housing elsewhere.

Topics Determined Less than Significant in the Initial Study

Population and Housing was previously analyzed in the Locust Street / Mt. Diablo Boulevard Specific Plan Initial Study. As stated in the Initial Study, implementation of the Specific Plan would not displace existing housing units or people (criteria b and c) since no residential uses exist in the Specific Plan Area. Therefore, implementation of the Specific Plan would have no environmental impact with regard to displacing housing units or people and these topics are not analyzed further in this EIR, as indicated in the Initial Study.

4. Impact Discussion

Impact POP-1: Induce substantial population growth in the Specific Plan Area either directly or indirectly (criterion a). (Less than Significant)

Implementation of the Specific Plan will result in more intensive uses within the Specific Plan Area compared to existing conditions. Development could increase retail uses by approximately 44,670 square feet; office by 97,300 square feet; and would also include approximately 60,000 square feet of residential uses (46 dwelling units).

The increased retail use in the Specific Plan Area would generate approximately 100 new jobs, and office employees would increase by 325.¹ Total new employment would result in an estimated 425 net new jobs. Proposed residential units would result in a residential population of approximately 100 persons.²

Development under the City's General Plan would add an estimated 5,342 new housing units to the existing housing stock within the City limits by 2025, which is more than the amount ABAG allocated as the City's "fair share" of regional housing needs. The projected increase in population within the existing City limits that would occur under the General Plan would not exceed ABAG projections.

¹ Assumes employment generation rates of one employee per 450 square feet for retail uses and 300 square feet for office. (ABAG, 1995)

² Assumes an average household size of 2.13. (ABAG 2006)

In addition, General Plan Policy 9.1 limits the rate of commercial growth between 2005 and 2015, which would allow the creation of over 4,000 new jobs. The intent of this policy is to balance residential and commercial growth with the provision of infrastructure. The metering of new commercial development seeks to moderate the growth-inducing impacts of new employment-generating commercial uses relative to projected increases in population under the General Plan. The City's growth management policies do not restrict the rate or amount of residential development.

The General Plan and the Housing Element both encourage the construction of mixed-use development that includes residential uses in the City's downtown Core Area, in order to increase the City's overall housing supply. Furthermore, it is expected that most new employees that may result from implementation of the Specific Plan would be existing residents of Walnut Creek, central County, and the East Bay, and would not relocate to Walnut Creek or the region. Some of the new employees could potentially move into the proposed residential units. (Additional discussion of growth-inducing impacts is presented in Chapter VI (CEQA-Required Assessment Conclusions).

In conclusion, General Plan 2025 adequately plans for additional commercial and residential development proposed for the Specific Plan Area. Implementation of the Specific Plan would not induce substantial unexpected population growth or growth for which inadequate planning has occurred. Therefore, increased population resulting from implementation of the Specific Plan would be less than significant.

Mitigation: None required.

Cumulative Impacts

Impact POP-2: Implementation of the Specific Plan, combined with past, present, and reasonably foreseeable probable future projects, will not result in substantial cumulative population and housing impacts. (Less than Significant)

The geographic context for cumulative population and housing impacts is the City. The Specific Plan, together with other past, present and reasonably foreseeable probable future projects in Walnut Creek, would result in a cumulative total of 314 new dwelling units, 1.19 million square feet of non-residential floor area, 624 new residents and 3,724 new jobs. The cumulative increase of 1.19 million square feet of non-residential floor area City-wide was included in the 2025 buildout estimate analyzed in the General Plan EIR certified in 2006. Additionally, General Plan Policy 9.1 and accompanying Action 9.1.1 limits the rate of commercial growth to 125,000 square feet per year and a maximum of 1.25 million square feet of new development over a 10-year period. Cumulative population and housing impacts would be less than significant. Cumulative projects will not result in significant displacement of housing or people but will instead result in 314 new

housing units. Further, the estimated 3,724 new jobs in Walnut Creek that would occur with cumulative development City-wide could be considered a beneficial cumulative impact.

Mitigation: None required.

References – Population and Housing

Association of Bay Area Governments (“ABAG”), *1987 Input-Output Model and Economic Multipliers for the San Francisco Bay Region, Working Paper 95-3*, March 1995.

Association of Bay Area Governments (“ABAG”), *Projections 2007*, December 2006.

California Department of Finance, *E-5 Population and Housing Estimates for Cities, Counties and the State, 2001-2008, with 2000 Benchmark*, May 2008.

City of Walnut Creek, *2001-2006 Housing Element Update*, adopted October 1, 2002.

City of Walnut Creek, *Broadway Plaza Retail Project Draft Environmental Impact Report*, June 20, 2008.

City of Walnut Creek, *General Plan 2025*, adopted April 4, 2006.

City of Walnut Creek, *General Plan 2025 Draft Environmental Impact Report*, August 5, 2005.

D. Transportation and Parking

This section presents the results of the transportation impact analysis conducted for the proposed Specific Plan.¹ This traffic analysis evaluates potential Specific Plan-related impacts at 21 key study intersections that provide local and regional access to the Specific Plan Area. The general location of the Specific Plan Area in relation to the study locations and surrounding roadway system is presented in **Figure IV.D-1**.

1. Regulatory Setting

Walnut Creek General Plan 2025 Goals and Policies

Adopted in 2006, the City of Walnut Creek *General Plan 2025* includes several goals and policies that address a range of transportation issues. The following are most relevant to the Locust Street / Mt. Diablo Boulevard Specific Plan area:

Natural Environment

GOAL 4: Provide a system of safe well-developed, well connected, and well-maintained trails.

Policy 4.1: Plan for a full complement of interconnected trails and paths for walkers, joggers, bicyclists, and equestrians, from the regional trails to downtown trails and paths.

Built Environment

GOAL 6: Maintain and enhance Walnut Creek's thriving Core Area, while keeping the Pedestrian Retail District lively and walkable.

Policy 6.1: Retain and encourage a balance of local-and regional service retail business in Core Area.

Policy 6.2: Focus development in the Pedestrian Retail District on retail and restaurants, and expand the area's potential to host arts and cultural events.

GOAL 15: Enhance connectivity and mobility throughout the City.

GOAL 20: Reinforce the urban design and character of the Pedestrian Retail District as a gathering place for local residents as well as a regional retail destination.

¹ This section of the Draft EIR was prepared on the basis of information and analysis findings contained in a technical resource document (Kimley-Horn and Associates, *Locust Street / Mount Diablo Boulevard Specific Plan Administrative Draft Environmental Impact Report Transportation Element*, November 2008). The Transportation Element and its technical documentation appendices available for review at the City of Walnut Creek Community Development Offices, under reference Work Order Number WO-708-134.

Transportation

GOAL 3: Maintain a transportation network that provides mobility for all ages and abilities and for all areas of the community.

GOAL 5: Provide a safe and attractive environment for bicycle travel throughout the community.

Policy 5.1: Promote bicycle use as an alternative way to get to work, school, shopping, recreation facilities, and transit stops.

GOAL 6: Provide a safe and attractive walking environment accessible to all.

Policy 6.1: Provide safe and attractive pedestrian routes along arterials and collectors leading to schools, along arterials or collectors that carry high traffic volumes, on all downtown streets, along major streets leading to the downtown, and on all streets leading to transit facilities.

Policy 6.2: Require full-frontage curb and sidewalk improvements in all commercial areas.

Policy 6.4: Facilitate use of public sidewalks throughout the City.

GOAL 7: Increase transit ridership and service to employment, schools, shopping, and recreation.

Policy 7.2: Encourage improvements to transit systems that connect Walnut Creek residents to regional locations.

GOAL 8: Serve as a model for other cities by providing a comprehensive TDM program that strives to decrease the use of automobile and reduce peak-period traffic congestion.

GOAL 9: Promote a pedestrian friendly downtown.

GOAL 10: Promote safe bicycling to and through downtown.

GOAL 12: Provide convenient and adequate parking.

Policy 12.2: Promote a wide variety of public and private parking options.

Policy 12.3: Allow the payment of in-lieu parking fees in new development only if parking can be provided within easy walking distance.

Policy 12.4: Provide additional parking based on actual and projected demand and vacancy rates.

Policy 12.5: Make parking garages safe, friendly, and easy to use.

GOAL 13: Provide convenient and adequate loading facilities in the Core Area.

Policy 13.2: Make efficient use of existing loading facilities.

Applicable Plans, Policies and Regulations

Transportation Demand Management

Transportation Demand Management (“TDM”) is a set of strategies, measures and incentives that result in more efficient use of transportation resources. The City has committed to strategies that would reduce the number of single-occupant vehicles. There are many different TDM strategies with a variety of transportation impacts that vary depending on land uses and trip purposes.

Transportation Demand Management Ordinance

The City has adopted strategies to reduce vehicle trips, congestion, and emissions. Strategies to date include trip reduction programs, transit service expansion, incentive programs for residents and commuters, increased bicycle facilities, Intelligent Transportation Systems (“ITS”) technology, school trip matching, and coordination of land use policies. City efforts will continue to expand the list of acceptable and effective TDM strategies.

511 Contra Costa

The TRANSPAC/TRANSPLAN TDM program covers central and east Contra Costa County. The 511 Contra Costa program is a combination of efforts and projects to encourage alternative commute travel modes, including transit, carpool, and vanpool incentive programs, guaranteed ride home program, school access programs, and college commute programs.

Telecommuting

Telecommuting is a method of allowing employees to electronically connect to their employer, and thereby reduce or eliminate the need to travel to work. The City supports telecommuting as a TDM strategy.

2. Existing Conditions

Roadway System

General Roadway Classifications

Within the Specific Plan Area, the streets are classified according to the City’s General Plan as follows:

Routes of Regional Significance

Routes of Regional Significance are major roadway and freeway corridors serving regional traffic. The routes are identified in Action Plans adopted by the Contra Costa Transportation Authority as part of the countywide Measure C program.

Arterials

Arterial roadways provide intra-city travel and access regional roadways. They also provide access to surrounding communities such as Concord, Pleasant Hill, Lafayette, and Alamo.

Collectors

Collector streets provide access within and between neighborhoods. Collectors carry trips from Local Streets to Arterials.

Local Streets

Local streets are those streets not otherwise classified. They provide direct access to fronting properties. Travel speeds and traffic volumes are generally low on local streets.

Area Roadway Network

The roadway system within the Specific Plan Area is comprised of roadways representing nearly all of the General Plan classifications. The Specific Plan Area is generally bounded by North Main Street to the east, Mt. Diablo Boulevard to the south, Cypress Avenue to the north, and North California Boulevard to the west. Locust Street bisects the Specific Plan Area, connecting Mt. Diablo Boulevard and Cypress Street.

Routes of Regional Significance

The routes identified as Routes of Regional Significance include all freeway and highway segments in Walnut Creek as well as other high volume roads, including the following: Interstate 680 (“I-680”); State Route 24 (“SR 24”); Ygnacio Valley Road; Treat Boulevard; Geary Road; North Main Street (I-680 to northern city limits); and Pleasant Hill Road. While these routes are not located within the Specific Plan Area, they provide primary regional access to the downtown.

Arterials

Arterial roadways within the downtown and in the vicinity of the Specific Plan Area include the following: California Boulevard; South Main Street (Newell Avenue to I-680); Broadway; Civic Drive; Olympic Boulevard; and Mt. Diablo Boulevard. Segments of Olympic Boulevard, North California Boulevard and Mt. Diablo Boulevard are located within the Specific Plan Area, while many of the other arterial streets listed provide primary and local access to the downtown.

Collectors

Collector streets are located in both neighborhoods and in the downtown area. Collectors within or near the Specific Plan Area include the following: Bonanza Street (Mt. Diablo Boulevard to California Boulevard); Main Street (Ygnacio Valley Road to Newell Avenue); Alpine Road (north of Olympic Boulevard) ; and Mt. Diablo Boulevard (east of Broadway).

Local Streets

Local streets near the Specific Plan Area include but are not limited to, Locust Street; Cypress Avenue; Duncan Street; Bonanza Street (east of California Boulevard); Botelho Drive; and Broadway Plaza. Commercial Lane within the Specific Plan Area is classified as a local street, but operates like an alley.

Truck Routes

The City has designated roads as truck routes that include the following: Ygnacio Valley Road; Treat Boulevard; Geary Road; Oak Grove Road north of Ygnacio Valley Road; North Main Street north of Ygnacio Valley Road; California Boulevard north of Newell Avenue; Lawrence Way; Olympic Boulevard west of California Boulevard; Mt. Diablo Boulevard west of California Boulevard; Newell Avenue between California Boulevard and South Main Street; and South Main Street south of Newell Avenue. Additional streets have been designated as prohibited for trucks over 3 tons. Most truck prohibitions occur downtown or on residential streets.

Regional and Local Access

Regional Access

I-680, SR 24, Mount Diablo Boulevard, and Olympic Boulevard provide access to the Specific Plan Area at the regional level. Mount Diablo Boulevard and Olympic Boulevard are the only two arterials that have interchanges with SR 24 and I-680 within the Specific Plan Area. I-680 serves Walnut Creek and central County by connecting I-80 to the north and U.S. 101/I-280 to the south. SR 24 also serves Walnut Creek and is one of the primary connections between central County and west County. It also connects to I-580, I-980, I-880, and I-80 towards the west (which eventually provides connection to the City of San Francisco).

Local Access

Roadways including Mount Diablo Boulevard, California Boulevard, Main Street, Locust Street, and Cypress Street provide access to the Specific Plan Area at the local level.

Existing Bicycle and Pedestrian System

Bicycle Circulation

Walnut Creek has an extensive bicycle network. The city has level terrain and a variety of land uses in the Specific Plan Area. The City's General Plan classifies bikeways according to the California Streets and Highway Code Classifications as follows:

Class I Bikeways (Bike Path or Trail)

Separate rights-of-way from the roadway with minimal automobile cross-flows, minimum paved width of eight feet for two-way path.

Class II Bikeways (Bike Lane)

Restricted rights-of-way for exclusive use of bicycles normally striped within paved areas of roadways, providing minimum width of five feet for one direction.

Class III Bikeways (Bike Routes)

On-street routes designated by signs or other markings.

Near the Specific Plan Area, Class I bikeways include Contra Costa Canal Trail, Iron Horse Trail, and Ygnacio Canal Trail. The Iron Horse Trail is located less than 1/2-mile east of the Specific Plan Area. Class II bikeways near the Specific Plan Area are located on North California Boulevard from Ygnacio Valley Road to Mt. Diablo Boulevard, and on Olympic Boulevard from I-680 to California Boulevard. Class III bikeways within and near the Specific Plan Area are located on Ygnacio Valley Road (Oakland Boulevard to Walnut Avenue).

Pedestrian Circulation

Pedestrian facilities vary throughout the City. The General Plan classifies three types of pedestrian facilities: sidewalks in urban and suburban areas; walkways in rural and semi-rural areas; and hiking and walking paths. Sidewalks are separated from vehicular traffic by the standard concrete curb and gutter, and are often buffered from moving traffic with planting strips and on-street parking. A walkway is a walking area separate from vehicular traffic using an asphalt berm or roadside drainage depression.

The Specific Plan Area is in a pedestrian-friendly urbanized downtown area with sidewalks located on both sides of the roadways. The pedestrian environment is of high importance in Walnut Creek's Pedestrian Retail District. Many of the district's streets such as Locust, North Main, Mt. Diablo, California, Botelho and Broadway have substantial pedestrian amenities including buildings oriented to the street, pedestrian-scaled lighting, benches, plazas, street cafes, and street trees. Newer developments such as Olympia Place, Broadway Pointe, and Plaza Escuela have pedestrian-friendly frontages with wide sidewalks, lighting, trees, and public art. These streets are integrated with the urban design of the adjacent buildings.

Although accommodating high levels of traffic, the streets within the Specific Plan Area remain highly pedestrian-oriented. Mt. Diablo Boulevard carries over 20,000 vehicles per day, yet has some of the highest pedestrian crossings within the Pedestrian Retail District. Some of the arterial streets use in-street flashing lights at high-volume unsignalized crossings such as at Mt. Diablo Boulevard / Broadway Plaza and at Broadway / Duncan Street. All of the signalized crossings in downtown Walnut Creek have countdown pedestrian signals (identifying the time remaining for pedestrians to cross the street). Lower volume streets such as Locust Street provide diagonal parking, street cafes, bulbouts at intersections and mid-block crossings to enhance the pedestrian environment.

Existing Transit Circulation

Walnut Creek transit service is provided by Bay Area Rapid Transit ("BART"), County Connection (including a free Downtown shuttle), and miscellaneous paratransit services.

Bay Area Rapid Transit ("BART")

BART provides rail transit to many areas of the San Francisco Bay. The Walnut Creek BART station is located near downtown on California Boulevard and Ygnacio Valley Road. The next closest BART stations are located in Pleasant Hill (two miles north) and Lafayette (four miles west).

Parking is provided at the Walnut Creek BART station for a nominal daily fee, along with bicycle, moped, and wheelchair lockers. In addition, County Connection provides service to and from the Walnut Creek and Pleasant Hill BART stations.

County Connection

The County Connection serves Walnut Creek, Concord, Martinez, Lafayette, Orinda, Clayton, Moraga, Pleasant Hill, Alamo, and San Ramon. County Connection is operated by the Central Contra Costa Transit Authority (“CCCTA”). There are currently 15 bus routes in Walnut Creek with service between 6:00 AM and 7:00 PM. During peak periods, buses usually operate on 30- to 60-minute frequencies.

County Connection operates a number of routes close to the Specific Plan Area as follows, and as shown in **Figure IV.D-2**:

Route 101

Rossmoor, the Walnut Creek BART station, downtown Walnut Creek, Kaiser Hospital, John Muir Medical Center, and Shadelands Business Park are served by this route.

Route 102

Diablo Valley College, the Sun Valley Mall, Pleasant Hill Road, Kaiser Hospital, San Miguel Drive, and the Walnut Creek BART station are served by this route.

Route 104

This route is known as the Downtown Shuttle and serves downtown, Broadway Plaza, and the Walnut Creek BART station. The shuttle makes 23 stops and is free to riders.

Route 105

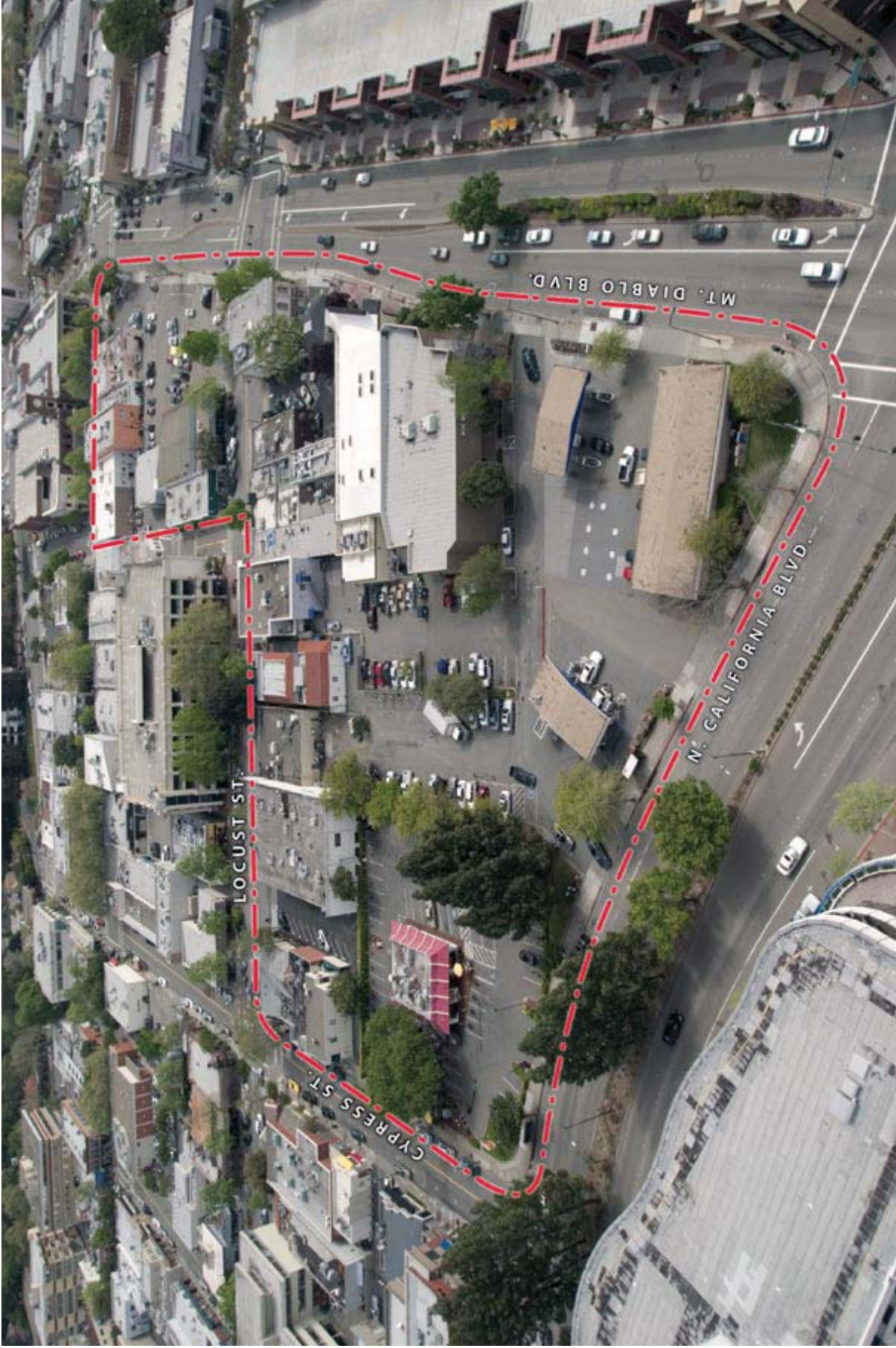
The Walnut Creek BART station, Broadway, and Creekside Drive are served by this route.

Route 121

This route is inter-city, servicing the Walnut Creek BART station, Kaiser Hospital, Alamo, Danville Park-N-Ride, San Ramon High, San Ramon Transit Center, and the Dublin / Pleasanton BART station.

Paratransit Services

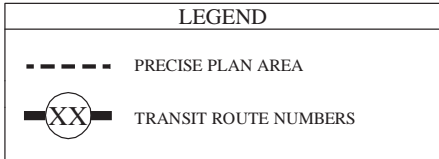
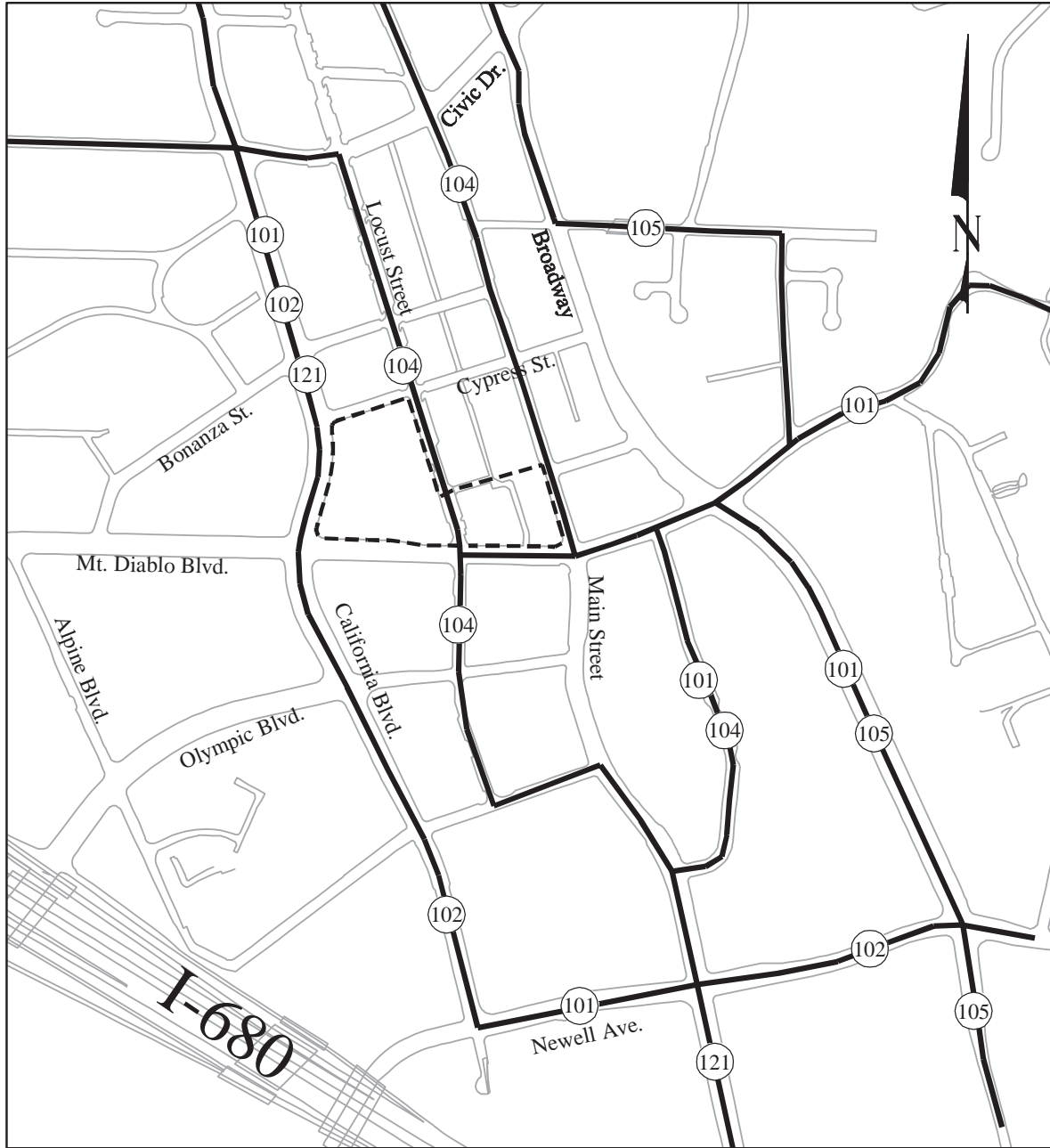
The LINK paratransit service is operated by the CCCTA and serves the central County area. Trips taken on LINK are mostly for medical, work, and school related trips. LINK was expanded in 2000 to provide early morning, late evening, and weekend services.



SOURCE: ROMA Design Group, 2008

Locust Street/ Mt. Diablo Boulevard Specific Plan . 204164

Figure IV.D-1
Aerial Photo of Specific Plan Area



SOURCE: Kimley-Horn and Associates, Inc.

Figure IV.D-2
Existing Conditions
Transit Routes

Planned and Proposed Transportation Improvements

This section summarizes planned and proposed improvements to streets and intersections from sources including the Walnut Creek General Plan, the region's transportation authority action plan for central County, and traffic impacts studies for individual developments. However, because no improvements were identified for the Specific Plan Area by those sources, the following descriptions are presented for general information purposes.

General Plan Roadway Improvements

General Plan 2025 is the principal policy document for guiding future development throughout the City. The transportation element of the General Plan defines the City's existing and future roadway, transit, and non-motorized transportation systems. The analysis in this EIR is based on the transportation element of the General Plan and its associated EIR. The General Plan identifies a number of roadway segments and intersections that will operate at unacceptable levels of service ("LOS") under year 2025 conditions and suggests improvements to mitigate the impact wherever feasible. However, most of the roadway impacts in the Core Area were identified as significant and unavoidable due to the infeasibility of widening streets in this built-out environment. For intersections operating at unacceptable LOS in the future, which includes some of the intersections analyzed in this EIR, no physical improvements were identified.

Central Contra Costa County Updated Action Plan

The Central Contra Costa County Updated Action Plan ("Action Plan") dated July 13, 2000 is a part of the Contra Costa Transportation Authority's ("CCTA") comprehensive transportation plan adopted in 2004. The Action Plan identifies a number of planned improvements for freeways and arterial streets within the central County area. The Draft 2008 Central County Action Plan project list identifies a number of roadway improvements within Walnut Creek. However, none of the improvements in the Action Plans are within the Specific Plan Area analyzed in this EIR.

John Muir Medical Center – Phase 4, EIR Traffic Study

The John Muir Medical Center – Phase 4 study, conducted in May 2005 to compare the 1998 Approved Master Plan for John Muir Medical Center to the Amended Master Plan, recommends a number of transportation improvements, none of which are located in the Specific Plan Area analyzed in this EIR.

Broadway Plaza Retail Project EIR

The recent EIR for the Broadway Plaza Retail Project (September 2008) identifies transportation improvements that are specific to Broadway Plaza (North and South Garage access) area. None of the identified improvements affect the study intersections for this EIR.

Existing Conditions Analysis

Study Intersections

A total of 21 intersections were identified for the analysis. The intersections were determined to be those where the majority of the trips would be focused and where potential traffic impacts resulting from implementation of the Specific Plan are most likely to occur. These intersections (all signalized, except one) are listed below and shown in **Figure IV.D-3**.

- | | |
|--|---|
| 1. Mt. Diablo Boulevard at Broadway | 13. Cypress Street at California Boulevard
(<i>unsignalized</i>) |
| 2. Mt. Diablo Blvd at California Blvd | 14. Mt. Diablo Boulevard at Camino Diablo |
| 3. Olympic Blvd at California Blvd | 15. Mt. Diablo Boulevard at Bonanza Street |
| 4. Mt. Diablo Boulevard at Main Street | 16. Olympic Boulevard at Locust Street |
| 5. Mt. Diablo Boulevard at Locust Street | 17. Botelho Drive at South California Blvd |
| 6. Bonanza Street at California Boulevard | 18. Botelho Drive at South Main Street |
| 7. Mt. Diablo Blvd at Oakland Blvd | 19. Broadway Plaza at South Main Street |
| 8. Mt. Diablo Blvd at Alpine Blvd | 20. Newell Avenue at South California Blvd |
| 9. Olympic Boulevard at South Main Street | 21. Newell Avenue at South Main Street |
| 10. Olympic Boulevard at Alpine Boulevard | |
| 11. Olympic Blvd at I-680 Northbound Ramps | |
| 12. Olympic Boulevard at I-680 Southbound
Off-Ramp / Paulson Lane | |

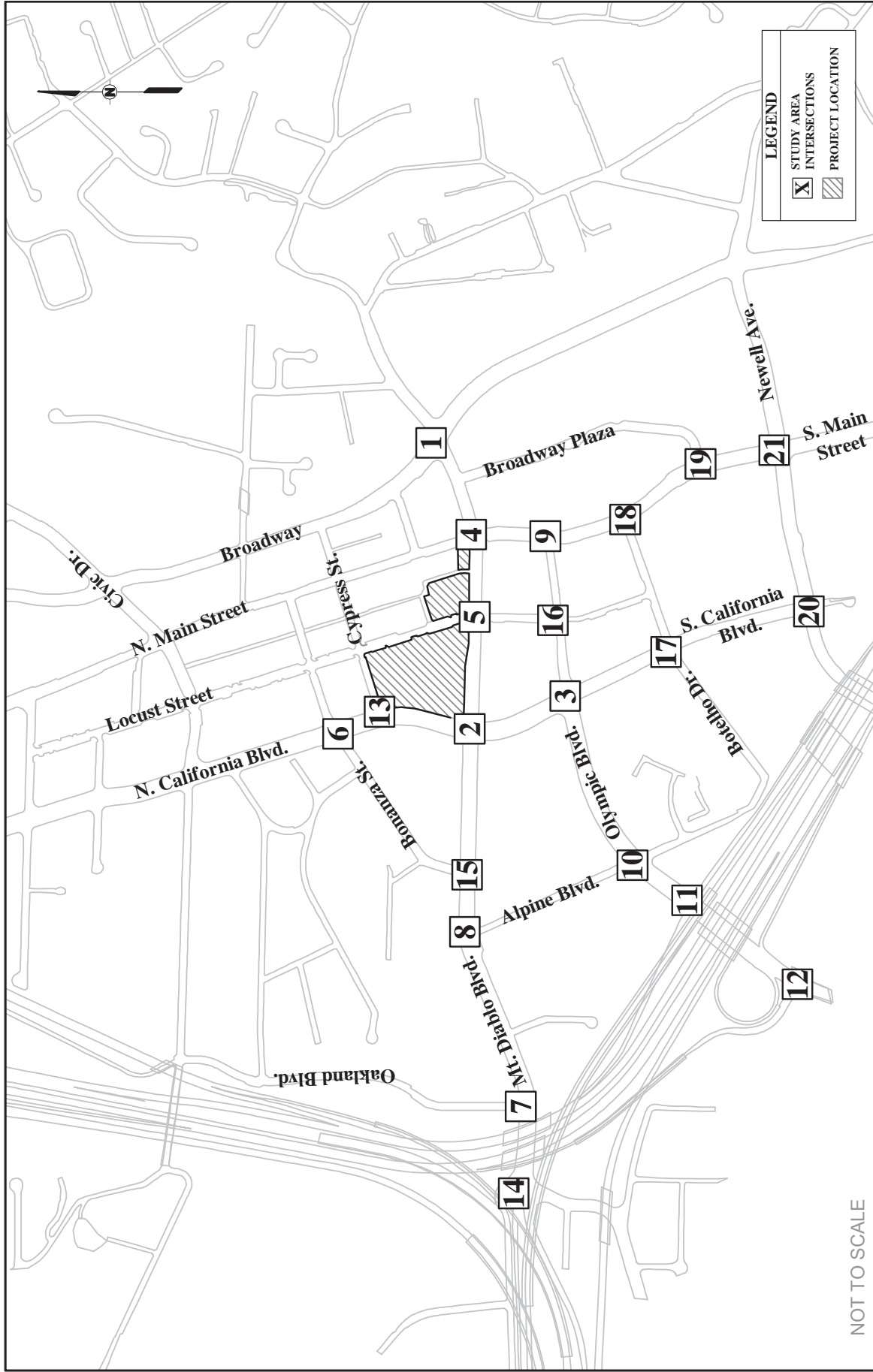
Existing Traffic Volumes

The intersection turning movement counts for all intersections were taken from the *Metropolitan Transportation Commission Regional Signal Timing Project* for the City. These counts were conducted during the years 2006 and 2007. For the intersection of California Boulevard / Cypress Street, turning movement counts were conducted in February 2008. The intersections in this analysis were evaluated using the current volumes and lane configurations.

Lane configurations and type of intersection control at each of the above noted intersections are shown in **Figures IV.D-4a and IV.D-4b**. Existing AM and PM peak hour turning movement volumes for the intersections are shown in **Figures IV.D-5a and IV.D-5b**.

Level of Service - Methodology

Capacity constraints in urban areas usually take place at intersections. Intersection operational conditions are typically determined based on LOS analysis. In most cases, the LOS analysis is undertaken using intersection turning movement volumes during each of the AM and PM peak hours. LOS is a qualitative term describing the conditions a driver will experience while traveling on a particular street or at an intersection during a specific time interval. It ranges from LOS A (very little delay) to LOS F (long delays and congestion). The LOS is based on delay or on volume-to-capacity (“v/c”) ratio. **Table IV.D-1** presents the definitions of levels of service with corresponding v/c ratios.



Locust Street/ Mt. Diablo Boulevard Specific Plan . 204164

Figure IV.D-3
Study Area
Intersection Locations

SOURCE: Kimley-Horn and Associates, Inc.

General Plan 2025 specifies that LOS be based on the CCTA methodology, which provides analysis of signalized intersections by the v/c ratio of critical movements. The City has established and adopted LOS standards for intersections and non-regional routes that are consistent with the Measure C Growth Management Program. **Table IV.D-2** depicts the relationship between roadway classifications and the LOS standard with corresponding v/c ratios. The analyzed intersections are located in the Core Area (downtown Walnut Creek and neighboring areas) and have a LOS standard of low E (maximum v/c = 0.94).

Existing Conditions – Intersection Level of Service

Results of the existing conditions LOS analysis of the intersections analyzed in this EIR during the AM and PM peak hours are summarized in **Table IV.D-3**. Detailed intersection LOS calculations for all intersections are included in the Appendix to the technical traffic analysis document.

All of the analyzed intersections currently operate at acceptable LOS during the AM and PM peak hours, except for the intersection of Olympic Boulevard / I-680 Northbound Ramps, which operates at LOS E during the PM peak hour. Field observations during the PM peak hour indicate that northbound I-680 backs up prior to the SR 24 interchange, and some motorists on I-680 use the intersection of Olympic Boulevard / I-680 Northbound Ramps to bypass the congestion, by exiting the freeway and immediately re-entering I-680 to access the northbound off-ramp to Ygnacio Valley Road. This behavior causes the intersection to experience high traffic demand and to operate at an unacceptable LOS.

Existing Conditions on Routes of Regional Significance

Routes of Regional Significance are major routes serving regional rather than purely local traffic. These routes are identified in adopted Action Plans by CCTA. Within the City, Routes of Regional Significance include the following: Ygnacio Valley Road; Treat Boulevard; Geary Road; North Main Street (from I-680 to north City limits); and Pleasant Hill Road. **Table IV.D-4** shows the existing conditions on Routes of Regional Significance. Existing measures of performance, or Traffic Service Objectives (“TSOs”), are taken from CCTA’s 2007 TSO Monitoring Report. TSOs for Routes of Regional Significance include average travel speed (in mph) and a Delay Index, which is the ratio of free flow speed to congested speed during the peak hour.

Existing Parking Conditions

Parking plays a critical role in downtown Walnut Creek, particularly in the Pedestrian Retail District. Because retail is the primary economic engine in the district, an adequate supply of public and private parking is particularly important in attracting visitors.

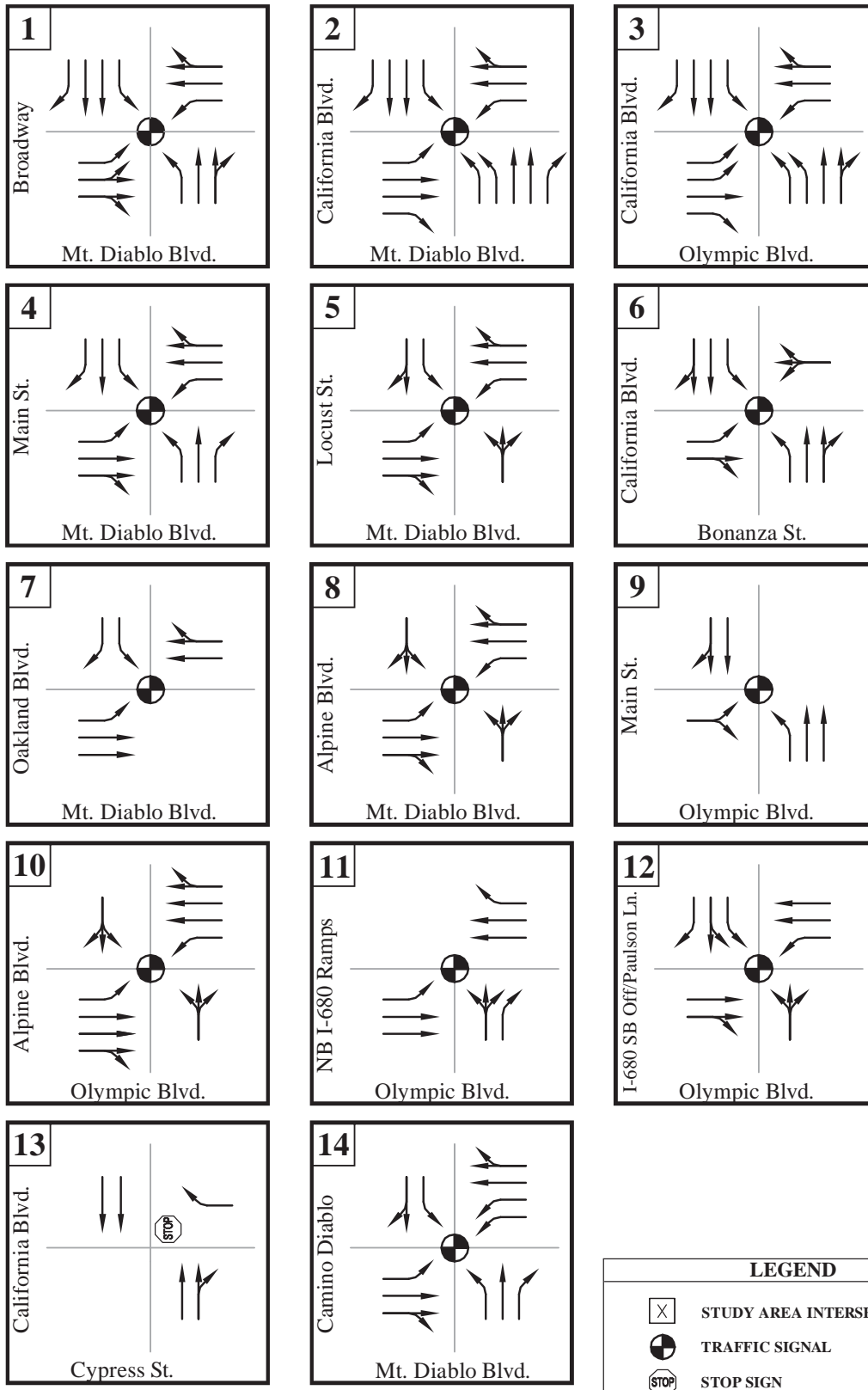
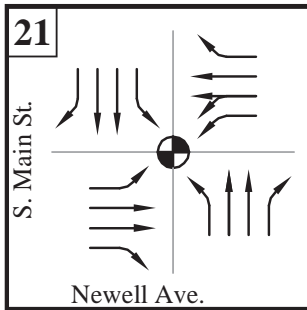
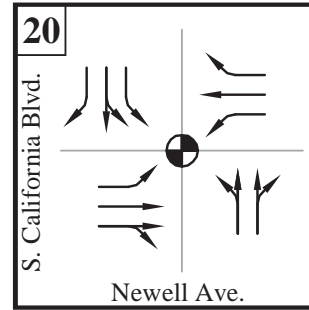
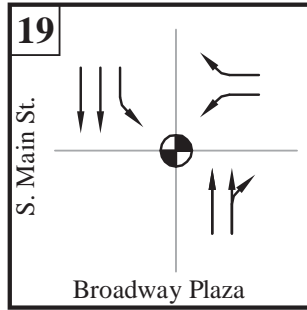
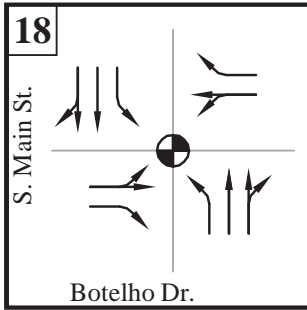
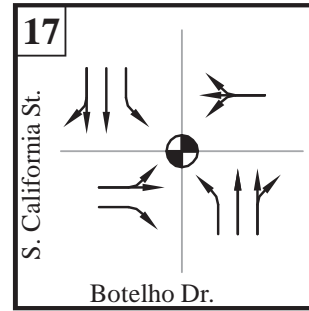
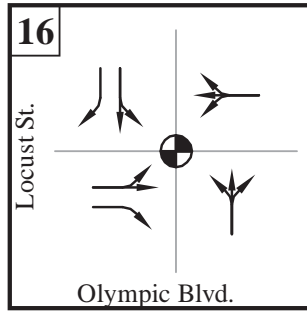
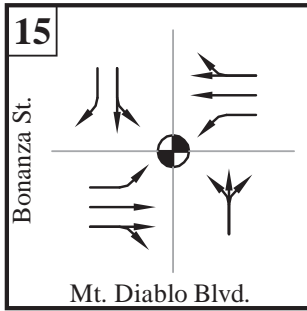


Figure IV.D-4A
Existing Conditions
Intersection Geometry



LEGEND	
	STUDY AREA INTERSECTIONS
	TRAFFIC SIGNAL
	STOP SIGN

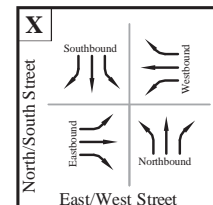
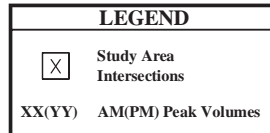
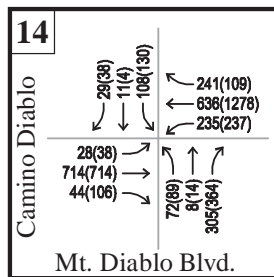
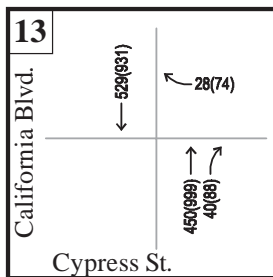
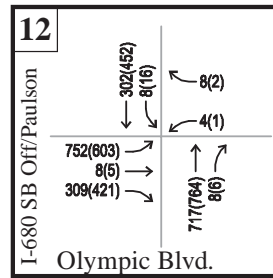
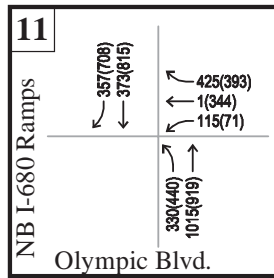
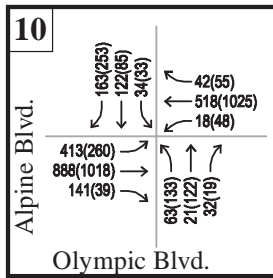
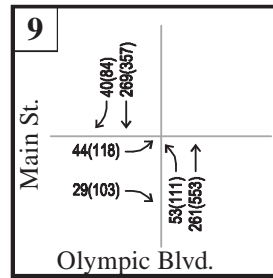
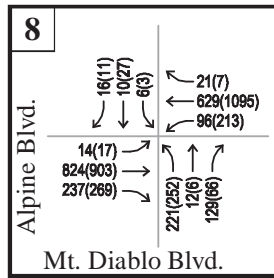
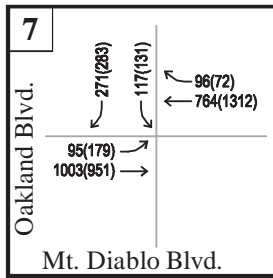
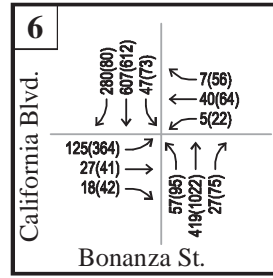
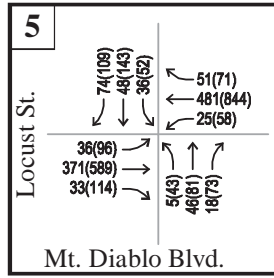
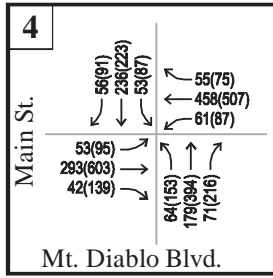
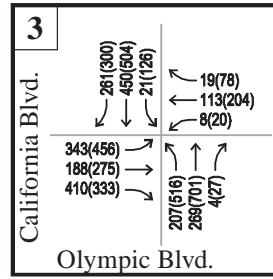
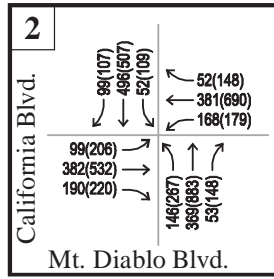
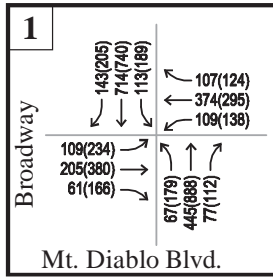
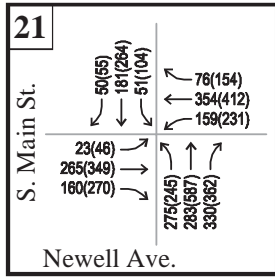
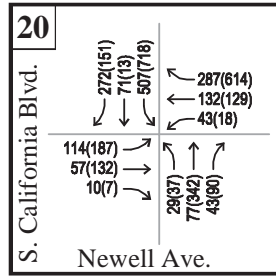
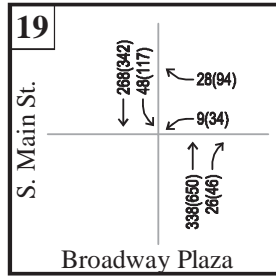
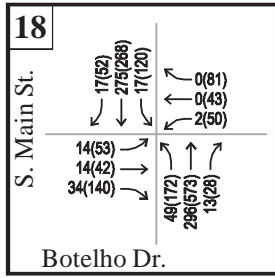
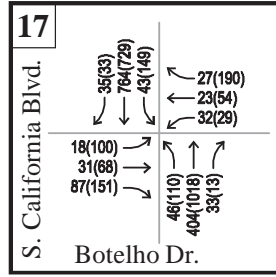
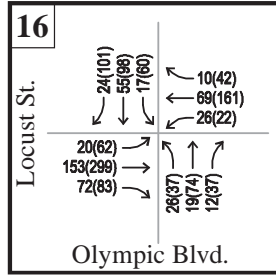
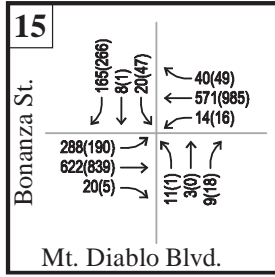


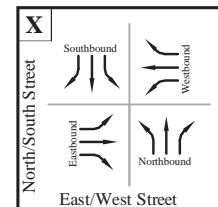
Figure IV.D-5A
Existing Conditions
Peak Hour Volumes



LEGEND

☒ Study Area Intersections

XX(YY) AM(PM) Peak Volumes



IV. Environmental Setting, Impacts and Mitigation Measures

D. Transportation and Parking

**TABLE IV.D-1
DEFINITIONS FOR INTERSECTION LEVEL OF SERVICE**

Unsignalized Intersections		Level of Service Grade	Signalized Intersections	
Description	Average Total Vehicle Delay (Seconds)		Description	Volume-to-Capacity (V/C) Ratio
No delay for stop-controlled approaches.	≤10.0	A	≤0.60	<u>Excellent</u> : No vehicle waits longer than one Red light, and no approach phase is fully used.
Operations with minor delay.	>10.0 and ≤15.0	B	>0.60 and ≤0.70	<u>Very Good</u> : An occasional approach phase is fully utilized; many drivers begin to feel somewhat restricted within groups of vehicles.
Operations with moderate delays.	>15.0 and ≤25.0	C	>0.70 and ≤0.80	<u>Good</u> : Occasionally, drivers may have to wait through more than one Red light; backups may develop behind turning vehicles.
Operations with increasingly unacceptable delays.	>25.0 and ≤35.0	D	>0.80 and ≤0.90	<u>Fair</u> : Delays may be substantial during portions of the rush hours, but enough lower-volume periods occur to permit clearing of developing queues, preventing excessive backups.
Operations with high delays, and long queues.	>35.0 and ≤50.0	E	>0.90 and ≤1.00	<u>Poor</u> : Represents the most vehicles that intersection approaches can accommodate; can have long lines of waiting vehicles through several signal cycles.
Operations with extreme congestion, and with very high delays and long queues unacceptable to most drivers.	>50.0	F	>1.00	<u>Failure</u> : Backups from nearby intersections or on cross streets may restrict or prevent movements of vehicles out of the intersection approaches. Lengthy delays with continuously increasing queue lengths.

SOURCES: Transportation Research Board, *Highway Capacity Manual*, updated 2000; Transportation Research Board, *Transportation Research Circular No. 212, Interim Materials on Highway Capacity*, 1980.

**TABLE IV.D-2
WALNUT CREEK ROADWAY LEVEL OF SERVICE STANDARDS
(See Transportation Policy 3.1)**

Roadway Classification	Standard
Residential Local: Streets and Intersections	LOS B (v/c ratio = 0.60 to 0.69)
Collectors: Streets and Intersections	LOS Low D (v/c ratio = 0.80 to 0.84)
Arterials: Streets and Intersections	LOS High D (v/c ratio = 0.85 to 0.89)
Regional Corridors: Streets and Intersections on Ygnacio Valley Road, Treat Boulevard, Geary Road, and Pleasant Hill Road	Delay Index = 2.0 Peak-hour Average Speed: 15 mph
Core Area Roadways and Intersections (bounded by I-680, Southern Pacific Right-of-Way, and Walden Road)	LOS Low E (v/c ratio = 0.90 to 0.94)

SOURCES: General Plan 2025, City of Walnut Creek.

**TABLE IV.D-3
EXISTING INTERSECTION LEVEL OF SERVICE (“LOS”)**

Int. No.	Intersection	Traffic Control	AM Peak Hour		PM Peak Hour	
			LOS	V/C or Delay ^a	LOS	V/C or Delay ^a
1	Mt. Diablo Boulevard / Broadway	Signal	A	0.55	C	0.76
2	Mt. Diablo Boulevard / California Boulevard	Signal	A	0.47	C	0.79
3	Olympic Boulevard / California Boulevard	Signal	A	0.49	B	0.62
4	Mt. Diablo Boulevard / Main Street	Signal	A	0.41	B	0.63
5	Mt. Diablo Boulevard / Locust Street	Signal	A	0.28	A	0.55
6	Bonanza Street / California Boulevard	Signal	A	0.44	C	0.72
7	Mt. Diablo Boulevard / Oakland Boulevard	Signal	A	0.50	B	0.66
8	Mt. Diablo Boulevard / Alpine Boulevard	Signal	B	0.61	C	0.72
9	Olympic Boulevard / Main Street	Signal	A	0.19	A	0.38
10	Olympic Boulevard / Alpine Boulevard	Signal	B	0.65	C	0.73
11	Olympic Boulevard / I-680 NB Ramps	Signal	B	0.62	E	1.00
12	Olympic Boulevard / I-680 SB Off-Ramp	Signal	A	0.48	A	0.50
13	Cypress Street / California Boulevard	SSSC	A	9.4	B	11.5
14	Mt. Diablo Blvd / Camino Diablo – Boulevard Road	Signal	A	0.57	C	0.74
15	Mt. Diablo Boulevard / Bonanza Street	Signal	A	0.43	A	0.51
16	Olympic Boulevard / Locust Street	Signal	A	0.20	A	0.40
17	California Boulevard / Botelho Drive	Signal	A	0.37	B	0.69
18	Main Street / Botelho Drive	Signal	A	0.16	A	0.36
19	Main Street / Broadway Place	Signal	A	0.18	A	0.32
20	California Boulevard / Newell Avenue	Signal	A	0.49	C	0.72
21	Main Street / Newell Avenue	Signal	A	0.48	A	0.55

^a The LOS at signalized intersections is based on the volume-to-capacity ratio (“v/c”), and represents conditions for the overall intersection. The level of service for the side-street stop-controlled unsignalized intersection is based on vehicle delay, and represents the worst movement or approach on the side street.

SB = Southbound; NB = Northbound; SSSC = Side-Street Stop Control

SOURCE: Kimley-Horn and Associates, Inc.

**TABLE IV.D-4
EXISTING CONDITIONS ON ROUTES OF REGIONAL SIGNIFICANCE**

Route	AM Peak Hour						PM Peak Hour					
	Average Speed			Delay Index			Average Speed			Delay Index		
	TSO	NB/EB	SB/WB	TSO	NB/EB	SB/WB	TSO	NB/EB	SB/WB	TSO	NB/EB	SB/WB
Ygnacio Valley Road (I-680 to Clayton Rd)	15	28.3	16.4	2.0	1.4	2.3	15	23.7	30.3	2.0	1.7	1.3
Treat Boulevard (Oak Grove Rd to I-680)	15	25.0	19.5	2.0	1.4	1.8	15	22.7	28.0	2.0	1.6	1.3
Geary Road (I-680 to Pleasant Hill Rd)	15	23.4	25.0	2.0	1.3	1.2	15	26.7	22.5	2.0	1.1	1.3
Pleasant Hill Road (Taylor Blvd to SR 24)	15	22.8	19.4	2.0	2.0	2.3	15	26.9	23.6	2.0	1.7	1.9

TSO = Traffic Service Objective; Delay Index = ratio of free-flow speed to congested speed

SOURCE: Contra Costa Transportation Authority

Parking and Loading Requirements and Regulations

The Specific Plan Area is located in downtown Walnut Creek and is included within the Pedestrian Retail Zoning Parking Regulations. The relevant Walnut Creek Municipal Code regulations are as follows:

- Required Parking Spaces: for commercial and community facilities, 1 space per 300 square feet of rentable area (eating and drinking establishments will exclude the floor area of permanent outdoor seating), and the parking requirement for residential uses is determined by the Planning Commission in the permit approval process.
- Loading Spaces Required: See **Table IV.D-5**.
- In-Lieu Fee: When it is not feasible or desirable to provide off-street parking (e.g., small infill buildings with little space for surface parking), the City Council may permit parking requirements to be satisfied by the payment of a fee in lieu of actually providing the parking spaces. The cost of the parking space shall be calculated by dividing the cost of the spaces in the public parking garage in which the in-lieu space is located, adjusted for inflation, by the number of stalls provided in the garage. The fee is discounted at 50 percent of the cost for the first stall, 75 percent for the second stall, 50 percent for the third stall, and 25 percent for four or more stalls.

Specific Plan Area Parking Supply

The public parking supply in the Specific Plan Area is comprised of on-street parking and off-street municipal parking garages. There are three municipal garages within walking distance of the Specific Plan Area: the South Locust Street garage closest to the Specific Plan Area (230 spaces); the Broadway garage (422 spaces); and the North Locust Street garage (640 spaces). Nearly all of the streets within the Specific Plan Area allow on-street parking, restricted to short-term visitor/shopper parking, except segments of the arterial streets. Within the Pedestrian Retail

**TABLE IV.D-5
LOADING SPACE REQUIREMENTS**

Gross Floor Area	Number of Loading Spaces Required	Size
Classification – Group 1		
Less than 10,000 square feet	0	
10,000 to 50,000 square feet ^a	1	12' x 35' x [14' Vertical Clearance]
50,001 and over ^a	2	12' x 35' x [14' Vertical Clearance]

^a Access:

- On a site adjoining an alley, a required loading space shall be accessible from the alley unless alternative access is approved.
- A required loading space shall be accessible without backing a truck across street property line unless alternative is approved.
- An occupied loading space shall not prevent access to a required off-street parking space.

Location: A loading area shall not be located in a front, side, or rear setback.

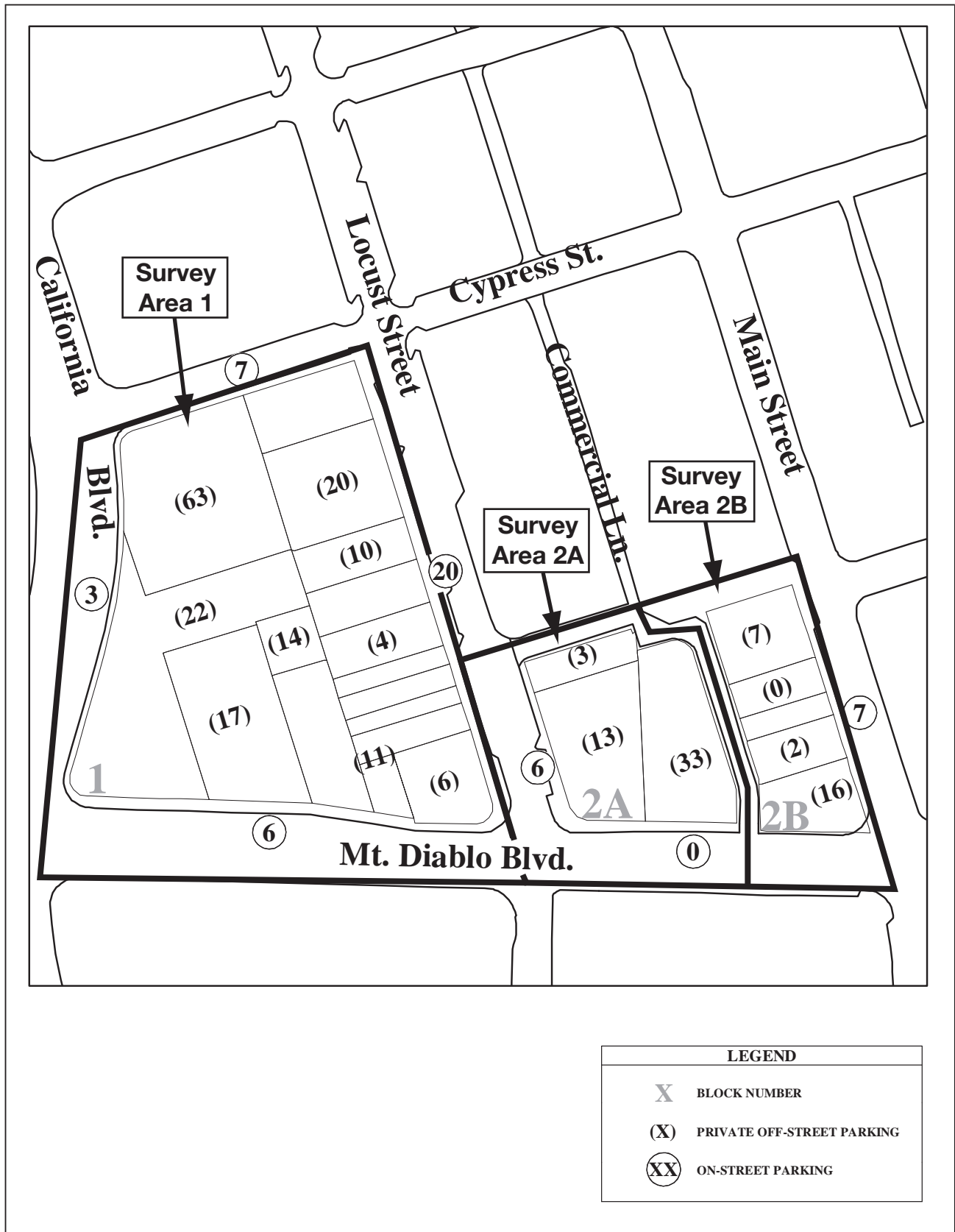
Screening: Excepting commercial district, a loading visible from street shall be screened on three sides.

SOURCE: Walnut Creek Municipal Code (Sec. 10-2.3.206 – Table B)

District (which encompasses a larger area than the Specific Plan Area), there are 663 on-street parking spaces.

The bulk of the downtown parking supply is comprised of private parking facilities owned and operated by private parties. Within the Pedestrian Retail District there are over 5,800 private parking spaces. Property owners are highly protective of their parking supply, particularly those that own smaller stores or shopping centers with limited spaces. While property owners of larger centers state that their parking facilities are for the sole use of their customers, the Pedestrian Retail District operates as a “park once and walk” area. As such, the entire Pedestrian Retail District frequently operates as a large shared parking facility, except in smaller parking lots that are enforced for customer use only.

The Specific Plan area is comprised of about a one-and-one-half block area made up of 24 individual privately owned parcels. **Figure IV.D-6** (page IV.D-22) shows the following survey areas (and number of parking spaces per location). Survey Area 1 (bounded by Cypress Street, California Boulevard, Mt. Diablo Boulevard and Locust Street) contains about 170 private off-street spaces and about 36 public on-street spaces. Survey Area 2 (bounded by existing alley / private property to the north, Locust Street to the west, Mt. Diablo Boulevard to the south, and North Main Street to the east) contains about 74 private off-street spaces and 13 public on-street spaces. Commercial Lane divides Survey Area 2 into two parts (Survey Area 2A and Survey Area 2B). Existing parking data (inventory of parking spaces and parking occupancy) was collected separately for Survey Areas 2A and 2B. [Note that the South Locust Street garage containing 230 spaces is located adjacent to, but not within, the Specific Plan Area.] Not all of the properties in the Specific Plan Area provide off-street parking, and many of the properties only provide a minimal number of spaces in the rear of buildings. All of the properties limit their parking supply to their customers.



SOURCE: Kimley-Horn and Associates, Inc.

Locust Street/ Mt. Diablo Boulevard Specific Plan . 204164

Figure IV.D-6
Existing Conditions
Parking Inventory

The Specific Plan Area was included in the Downtown Walnut Creek Parking Study (TJKM, 2002). That study included weekday and weekend parking occupancy surveys of the Pedestrian Retail District, including the above-cited Survey Areas. According to the study (see **Table IV.D-6**), off-street parking supply in Survey Area 1 is about 79 percent occupied during a weekday peak and 64 percent occupied during a Saturday peak. Off-street parking supply in Survey Areas 2A and 2B (combined) is about 58 percent occupied during a weekday and 70 percent occupied during Saturday peak. The majority of the on-street parking supply in these two areas is approximately 90 to 100 percent occupied during both a weekday and Saturday peak. The parking supply of individual blocks is summarized in the Appendix to the technical traffic analysis document).

**TABLE IV.D-6
SPECIFIC PLAN PARKING INVENTORY AND OCCUPANCY**

Type of Parking Space by Area	Number of Parking Spaces ^a	Time Period	Parking Occupancy
Survey Area 1			
Off-Street Spaces	167		
On-Street Spaces	36		
Total (Area 1)	203	Weekday Peak (10:00 a.m. to 4:00 p.m.)	79%
		Saturday peak (2:00 p.m.)	64%
Survey Area 2A			
Off-Street Spaces	49		
On-Street Spaces	6		
Survey Area 2B			
Off-Street Spaces	25		
On-Street Spaces	7		
Total (Survey Areas 2A + 2B)^b	87	Weekday Peak (10:00 a.m. to 4:00 p.m.)	58%
		Saturday peak (2:00 p.m.)	70%

^a Only marked parking spaces were counted.

^b In the 2002 Parking Study, percentages were based on entire blocks; however, Areas 2A and 2B are a portion of the evaluated block.

SOURCE: TJKM Transportation Consultants, *Downtown Walnut Creek Parking Study* (May 2002)

3. Standards of Significance

According to Appendix G of the state CEQA Guidelines, the project would result in a significant environmental impact related to transportation if it would:

- a) Cause an increase in traffic that is substantial in relation to the existing traffic load and capacity of the street system (i.e., result in a substantial increase in either the number of vehicle trips, the volume-to-capacity ratio on roads, or congestion at intersections);

- b) Exceed, either individually or cumulatively, an LOS standard established by the county congestion management agency for designated roads or highways;

For the City, a project-related traffic impact is considered to be significant if it meets any of the following criteria:

- Causes an intersection on residential local streets to operate at LOS C or worse.
- Causes an intersection on either arterial or collector street to operate at LOS E or worse.
- Causes an increase in volume-to-capacity (“v/c”) ratio of more than 0.05 at an intersection already operating at an unacceptable LOS.
- Conflicts with the traffic service objectives in the Central County Action Plan for Routes of Regional Significance, specifically:
 - Results in a Delay Index that exceeds 2.0 on Routes of Regional Significance
 - Results in peak-hour average speeds of 15 mph or less on Routes of Regional Significance segment within the City limits

All study intersections are located in the downtown core area on arterial or collector streets, where the LOS standard is low LOS E (v/c ratio = 0.91 to 0.95)

A significant project-related impact would also occur if the project would:

- c) Result in a change to air traffic patterns, including either an increase in traffic levels of a change in location that results in substantial safety risks;
- d) Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment);
- e) Result in inadequate emergency access;
- f) Result in inadequate parking capacity;
- g) Conflict with adopted policies, plans, or programs supporting alternative transportation (e.g., bus turnouts, bicycle racks).

CEQA Guidelines Appendix G topics that will not be discussed further in this EIR

Review and comparison of the proposed Specific Plan to the environmental setting clearly shows that the proposed Specific Plan would create no, or less-than-significant, impacts related to the following environmental topics listed in CEQA Guidelines Appendix G:

Result in a change to air traffic patterns, including either an increase in traffic levels of a change in location that results in substantial safety risks. (criterion c) (Less than Significant)

Potential impacts to air traffic patterns was previously analyzed in the Locust Street / Mt. Diablo Boulevard Specific Plan Initial Study, which determined the impact to be less than significant, and this topic is not analyzed in this section.

Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment) (criterion d) (No Impact)

The proposed Specific Plan would not involve redesign or reconfiguration of roadways. The less-than-significant individual and cumulative traffic volume effects (described below in Impacts TRAF-1, TRAF-2, TRAF-5, and TRAF-6) would assure no increase in hazard due to the additional vehicles accessing the Specific Plan Area. There would be no incompatible uses nor would there be roadway design changes. Therefore the proposed Specific Plan would have no impact on road hazards.

Result in inadequate emergency access (criterion e) (No Impact)

The proposed Specific Plan would not involve obstruction, redesign or reconfiguration of roadways. Nor would the proposed Specific Plan affect emergency services providers. Therefore the proposed Specific Plan would have no impact on emergency access.

4. Approach and Methodology

Analysis Scenarios

Intersection LOS analyses were conducted to study the impacts expected to be caused by implementation of the proposed Specific Plan. The following scenarios were evaluated:

1. Existing Plus Approved Projects Conditions
2. Existing Plus Approved Projects Plus Specific Plan Conditions
3. Cumulative (2025) No Project Conditions
4. Cumulative (2025) Plus Specific Plan Conditions

The Existing Plus Approved Projects scenario establishes a near-term baseline condition against which the Specific Plan's impacts are evaluated. The scenario represents traffic conditions that will exist with implementation of the Specific Plan. A total of five approved projects that are either approved, under construction, or built but not yet occupied, were identified in proximity to the Specific Plan Area.

The Cumulative (2025) No Project scenario conforms to the growth identified in the General Plan's Growth Management Alternative II. Intersection turning movement volumes for the following four intersections were taken from the appendix of the of the City's General Plan EIR.

- Mt. Diablo Boulevard / Broadway
- Mt. Diablo Boulevard / California Boulevard
- Olympic Boulevard / California Boulevard
- Mt. Diablo Boulevard / Main Street

The intersection of Olympic Boulevard / I-680 Northbound Ramp is also common between the General Plan traffic study and this EIR. However, future intersection volumes for this intersection were estimated from the CCTA Travel Demand Forecasting Model and in coordination with the Block C and Broadway Plaza Retail Project traffic studies.

Analysis of the Specific Plan under Existing Plus Approved Projects conditions is intended to identify project specific impacts – impacts for which the project would be fully responsible for implementation of identified mitigation measures. The analysis of cumulative traffic conditions identifies the aggregate impact of all development and the contribution of the project to these impacts.

5. Impact Discussion

Existing Plus Approved Projects Conditions

As described above, this scenario establishes a near-term baseline condition against which the project's impacts will be evaluated. It represents traffic conditions that will exist with implementation of the Specific Plan. Project descriptions for the approved projects along with their estimated trip generation estimates during the AM and PM peak hours are shown in **Table IV.D-7**. Trips from the approved projects were added to the existing volumes to evaluate existing plus approved projects conditions (the intersection turning movement volumes are shown in **Figures IV.D-7a and IV.D-7b**).

Specific Plan Impacts

Specific Plan Trip Generation, Distribution and Assignment

Trip Generation

The trip generation rates for the proposed Specific Plan (except retail uses) were estimated using the trip generation rates published by the Institute of Transportation Engineers (ITE, 2003). For the retail land uses within the Specific Plan Area, trip generation rates from the *Downtown Walnut Creek Retail Trip Generation Memorandum* (which reflect the unique trip generation characteristics of retail uses in downtown Walnut Creek) were used.

Trip generation estimates are presented in **Table IV.D-8** (for existing land uses in the Specific Plan Area), and **Table IV.D-9** (for the proposed Specific Plan). As shown in Table IV.D-9, when traffic from existing uses (176 AM peak-hour trips and 185 PM peak-hour trips) is subtracted, the proposed Specific Plan would generate 30 net new AM peak-hour trips, and 161 net new PM peak-hour trips.

Trip Distribution and Assignment

The geographic distribution of trips was based on several factors, such as type of land uses in the Specific Plan Area, the likely origins and destinations of future residents and visitors, and the characteristics of the surrounding street system (including freeways). The project trip distribution is shown in **Figure IV.D-8**. The project trips were assigned to specific routes using the trip

distribution percentages based on the most direct route to the project site using primarily major streets.

**TABLE IV.D-7
PEAK-HOUR TRIP GENERATION FOR APPROVED PROJECTS IN PROJECT AREA**

Project	Units	AM Peak Hour			PM Peak Hour		
		In	Out	Total	In	Out	Total
1. Metropole (Mixed Use Project)	181 Dwelling Units, and 21,000 SF Office & Retail	20	84	104	110	69	179
2. John Muir Medical Center (through Phase 8)	682,297 SF (net new) of Hospital Uses and 83,000 SF of low-intensity hospital uses	527	257	784	273	533	806
3. 555 Ygnacio Valley Road	87 Dwelling Units (condominiums)	6	24	30	20	13	33
4. Iron Horse Trail Office Plaza	6,570 SF Office Building	9	1	10	2	8	10
5. Downtown Library	32,500 SF	<u>29</u>	<u>11</u>	<u>40</u>	<u>91</u>	<u>98</u>	<u>189</u>
	Total Trips	591	377	968	496	721	1,217

SOURCE: Kimley-Horn and Associates, Inc.

Intersection Level of Service

Impact TRAF-1: Cause an increase in traffic that 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), or exceed, either individually or cumulatively, an LOS standard established by the Contra Costa Transportation Authority for designated roads or highways (criteria a and b) (Less than Significant)

Intersection turning movements during the AM and the PM peak hours for the study intersections are shown in **Figures IV.D-9a** and **IV.D-9b**. **Table IV.D-10** summarizes the study intersections LOS during the AM and the PM peak hours and compares it to Existing Plus Approved Project Conditions scenario.

With the addition of Specific Plan traffic to the City streets, all study intersections would operate within the LOS standard adopted for the Core Area during the AM and the PM peak hours, except for the intersection of Olympic Boulevard / I-680 Northbound Ramps, which is projected to operate at an unacceptable LOS F under the Existing Plus Approved Project conditions. The proposed Specific Plan traffic would increase the v/c ratio by 0.01, which is less than the increase of 0.05 required for determination of a significant traffic impact. Therefore it can be concluded that the proposed Specific Plan would not cause the intersections to operate at a level of service worse than the standard (low LOS E) identified for the Core Area, and would have a less-than-significant traffic impact.

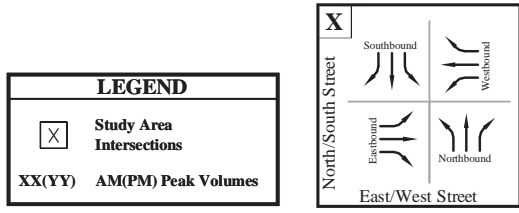
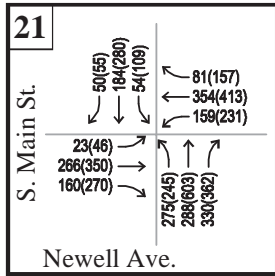
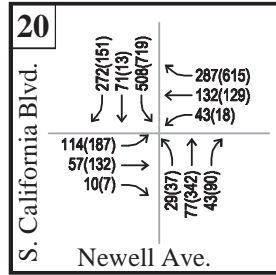
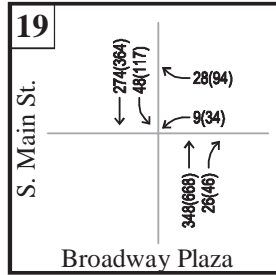
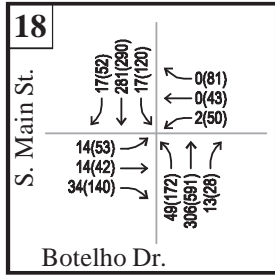
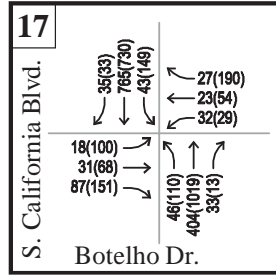
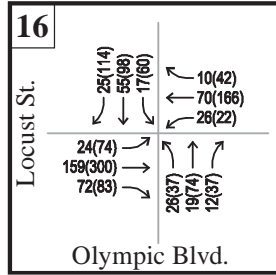
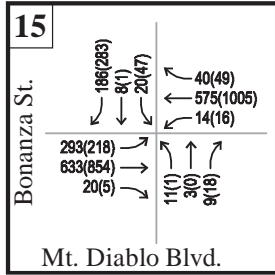


Figure IV.D-7B
Existing Plus Approved Projects
Peak Hour Volumes

IV. Environmental Setting, Impacts and Mitigation Measures

D. Transportation and Parking

**TABLE IV.D-8
PEAK-HOUR TRIP GENERATION FOR EXISTING LAND USES ON PROJECT SITE**

Land Use	Size	Units	Trip Generation Rates						Number of Vehicle Trips					
			AM Peak Hour			PM Peak Hour			AM Peak Hour			PM Peak Hour		
			In	Out	Total	In	Out	Total	In	Out	Total	In	Out	Total
Opportunity Site 2														
(Tire Store)	9.95	KSF	1.82	1.07	2.89	1.78	2.37	4.15	18	11	29	13	17	30
Opportunity Site 4														
(Gas Station)	14	Pumps	5.03	5.03	10.06	6.69	6.69	13.38	27	27	54	41	41	82
Opportunity Site 5														
(McDonalds)	2	KSF	26.32	17.55	43.87	13.34	12.81	26.15	53	35	88	27	25	52
Opportunity Site 6														
(Retail)	7.2	KSF	0.38	0.24	0.62	1.37	1.49	2.86	<u>3</u>	<u>2</u>	<u>5</u>	<u>10</u>	<u>11</u>	<u>21</u>
Total Displaced Trips									101	75	176	91	94	185

SOURCE: Kimley-Horn and Associates, Inc., derived from data in ITE Trip Generation (7th Edition), 2003, and *Downtown Walnut Creek Retail Trip Generation Memorandum*.

**TABLE IV.D-9
PEAK-HOUR TRIP GENERATION FOR PROPOSED SPECIFIC PLAN LAND USES**

Land Use	Size	Units	Trip Generation Rates						Number of Vehicle Trips					
			AM Peak Hour			PM Peak Hour			AM Peak Hour			PM Peak Hour		
			In	Out	Total	In	Out	Total	In	Out	Total	In	Out	Total
Opportunity Site 1														
(Retail)	4.3	KSF	0.38	0.24	0.62	1.37	1.49	2.86	2	1	3	6	6	12
(Office)	4.3	KSF	1.36	0.19	1.55	0.25	1.24	1.49	6	1	7	1	5	6
Opportunity Site 2														
(Retail)	19.5	KSF	0.38	0.24	0.62	1.37	1.49	2.86	7	5	12	27	29	56
(Residential)	36	Unit	0.06	0.28	0.34	0.24	0.14	0.38	2	10	12	9	5	14
Opportunity Site 3 (N/A)									0	0	0	0	0	0
Opportunity Site 4														
(Retail)	17	KSF	0.38	0.24	0.62	1.37	1.49	2.86	6	4	10	23	25	48
(Office)	13	KSF	1.36	0.19	1.55	0.25	1.24	1.49	18	2	20	3	16	19
Opportunity Site 5														
(Retail)	13.42	KSF	0.38	0.24	0.62	1.37	1.49	2.86	5	3	8	18	20	37
(Office)	80	KSF	1.36	0.19	1.55	0.25	1.24	1.49	109	15	124	20	99	119
Opportunity Site 6														
(Retail)	64.72	KSF	0.38	0.24	0.62	1.37	1.49	2.86	24	16	40	88	96	184
(Residential)	10	Unit	0.06	0.28	0.34	0.24	0.14	0.38	1	2	3	2	2	4
Total Specific Plan Trips									160	46	206	123	223	346
Total Displaced Trips (see Table IV.D-8)									-101	-75	-176	-91	-94	-185
Net New Trips (Specific Plan – Existing [Displaced])									59	-29	30	32	129	161

SOURCE: Kimley-Horn and Associates, Inc., derived from data in ITE Trip Generation (7th Edition), 2003, and Dowling Associates, Inc., *Downtown Walnut Creek Retail Trip Generation Memorandum*, 2008.

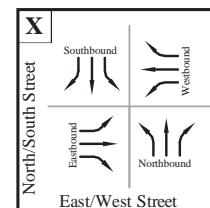
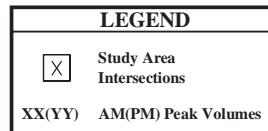
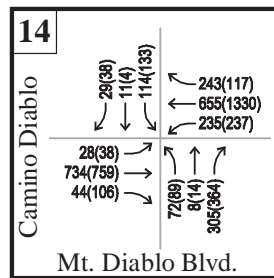
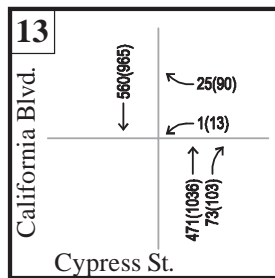
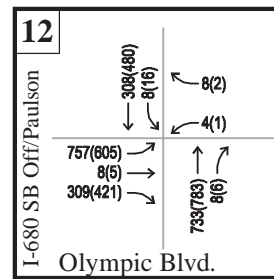
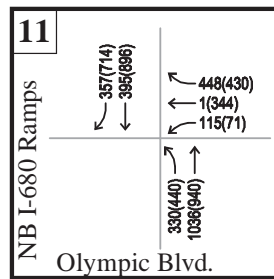
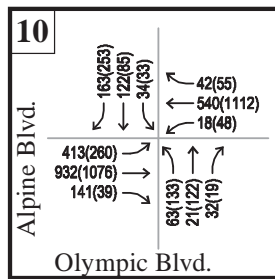
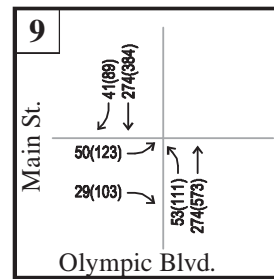
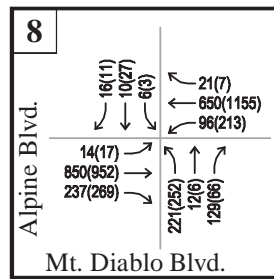
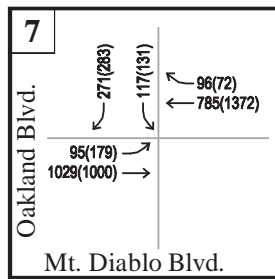
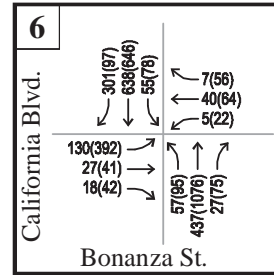
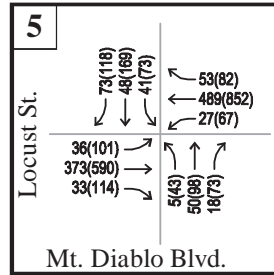
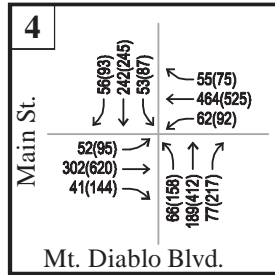
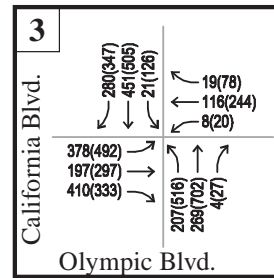
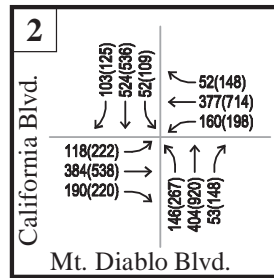
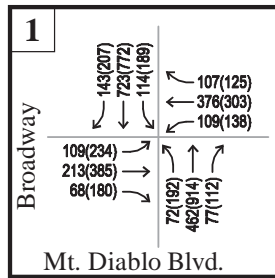


Figure IV.D-9A
Existing Plus Approved Plus Project
Peak Hour Volumes

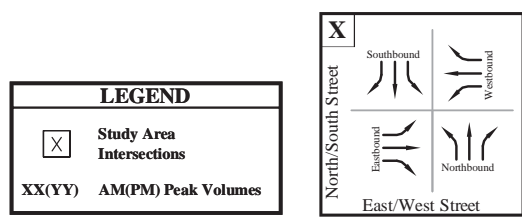
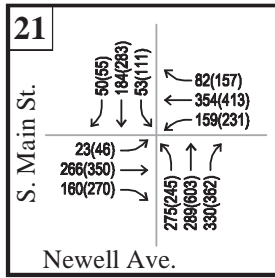
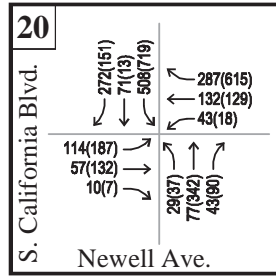
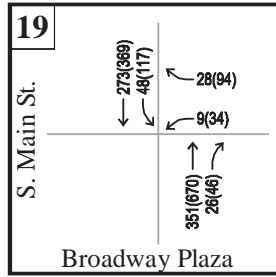
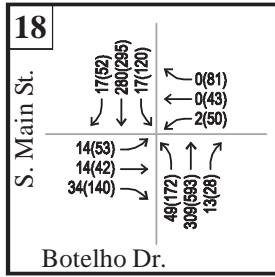
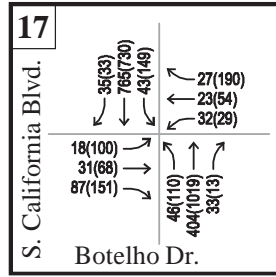
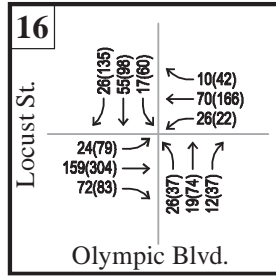
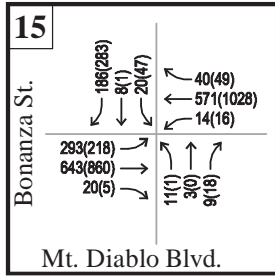


Figure IV.D-9B
Existing Plus Approved Plus Project
Peak Hour Volumes

**TABLE IV.D-10
COMPARISON OF PEAK-HOUR LEVELS OF SERVICE – EXISTING PLUS APPROVED PROJECTS
VERSUS EXISTING PLUS APPROVED PROJECTS PLUS SPECIFIC PLAN CONDITIONS**

Int. No.	Intersection	Traffic Control	AM Peak Hour				PM Peak Hour			
			Existing + Approved Projects		Existing + Approved Projects + Specific Plan		Existing + Approved Projects		Existing + Approved Projects + Specific Plan	
			LOS	V/C or Delay ^a	LOS	V/C or Delay ^a	LOS	V/C or Delay ^a	LOS	V/C or Delay ^a
1	Mt. Diablo Boulevard / Broadway	Signal	A	0.56	A	0.56	C	0.78	C	0.78
2	Mt. Diablo Boulevard / California Boulevard	Signal	A	0.48	A	0.48	D	0.81	D	0.82
3	Olympic Boulevard / California Boulevard	Signal	A	0.49	A	0.49	B	0.63	B	0.65
4	Mt. Diablo Boulevard / Main Street	Signal	A	0.41	A	0.41	B	0.64	B	0.65
5	Mt. Diablo Boulevard / Locust Street	Signal	A	0.28	A	0.28	A	0.56	A	0.58
6	Bonanza Street / California Boulevard	Signal	A	0.46	A	0.46	C	0.74	C	0.75
7	Mt. Diablo Boulevard / Oakland Boulevard	Signal	A	0.50	A	0.51	B	0.67	B	0.67
8	Mt. Diablo Boulevard / Alpine Boulevard	Signal	B	0.62	B	0.62	C	0.73	C	0.73
9	Olympic Boulevard / Main Street	Signal	A	0.20	A	0.20	A	0.39	A	0.40
10	Olympic Boulevard / Alpine Boulevard	Signal	B	0.66	B	0.66	C	0.74	C	0.75
11	Olympic Boulevard / I-680 NB Ramps	Signal	C	0.73	B	0.64	F	1.01	F	1.01
12	Olympic Boulevard / I-680 SB Off-Ramp	Signal	A	0.48	A	0.49	A	0.51	A	0.51
13	Cypress Street / California Boulevard	SSSC	A	9.7	A	9.8	C	18.5	C	18.1
14	Mt. Diablo Blvd / Camino Diablo – Boulevard Road	Signal	A	0.58	A	0.58	C	0.75	C	0.76
15	Mt. Diablo Boulevard / Bonanza Street	Signal	A	0.43	A	0.43	A	0.53	A	0.54
16	Olympic Boulevard / Locust Street	Signal	A	0.20	A	0.20	A	0.41	A	0.42
17	California Boulevard / Botelho Drive	Signal	A	0.37	A	0.37	B	0.69	B	0.69
18	Main Street / Botelho Drive	Signal	A	0.16	A	0.16	A	0.37	A	0.37
19	Main Street / Broadway Place	Signal	A	0.18	A	0.18	A	0.33	A	0.33
20	California Boulevard / Newell Avenue	Signal	A	0.49	A	0.49	C	0.72	C	0.72
21	Main Street / Newell Avenue	Signal	A	0.48	A	0.48	A	0.56	A	0.56

^a The level of service at signalized intersections is based on the volume-to-capacity ratio (V/C). The level of service for unsignalized intersections is based on vehicle delay. The LOS and delay for Side-Street Stop-Controlled ("SSSC") intersections represent the worst movement or approach; the LOS and delay for signalized intersections represent the overall intersection.

SOURCE: Kimley-Horn and Associates, Inc.

Mitigation Measures

No mitigation measures are required.

Roadway Operating Conditions

Impact TRAF-2: Cause an increase in traffic that 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), or exceed, either individually or cumulatively, an LOS standard established by the Contra Costa Transportation Authority for designated roads or highways (criteria a and b) (Less than Significant)

For roadway segment analysis, Ygnacio Valley Road between I-680 and Walnut Boulevard was studied. The Existing Plus Approved Projects analysis scenario is common between the recently published Broadway Plaza Retail Project EIR and this EIR, and the average operating speed and delay index for this segment of Ygnacio Valley Road was taken from the Broadway Plaza Retail Project Draft EIR. The change in those two TSO criteria was evaluated by adding the Specific Plan traffic (4 and 12 trips in the eastbound and westbound direction, respectively, during AM peak hour, and 17 and 10 trips in the eastbound and westbound direction, respectively, during PM peak hour) to the Existing Plus Approved Projects Conditions volumes. As shown in **Table IV.D-11**, the addition of project traffic on Ygnacio Valley Road would result in a negligible change in average operating speed and delay index during the AM and the PM peak hours. Therefore, it can be concluded that the proposed Specific Plan would not cause an exceedance of the LOS standard (i.e., TSO criteria), and significant reduction of its operating speed, or a change in its Delay Index would not cause the roadway to operate with at a level of service worse than the standard (low LOS E) identified for the Core Area, and the proposed Specific Plan would have a less-than-significant impact.

Mitigation Measures

No mitigation measures are required.

Alternative Transportation (Transit Services, and Pedestrian and Bicycle Circulation)

Impact TRAF-3: Conflict with adopted policies, plans, or programs supporting alternative transportation (e.g., bus turnouts, bicycle racks) (criterion g) (Less than Significant)

The proposed Specific Plan would not involve obstruction, redesign or reconfiguration of roadways, nor would it affect bus routes or bicycle racks. The proposed Specific Plan would have no impact on adopted policies, plans, or programs supporting alternative transportation.

**TABLE IV.D-11
EXISTING PLUS APPROVED PROJECT PLUS SPECIFIC PLAN –
ROADWAY OPERATING CONDITIONS**

Segment	Time	Direction	TSO	Existing (2007) ^a	Existing + Approved ^b	Existing + Approved + Specific Plan
Ygnacio Valley Road (I-608 to Walnut Boulevard)	AM Peak	EB	Average Speed (mph)	16.1	13.4	13.3
			Delay Index	1.9	2.2	2.2
		WB	Average Speed (mph)	26.6	23.7	23.6
			Delay Index	1.1	1.3	1.3
	PM Peak	EB	Average Speed (mph)	13.6	13.0	12.8
			Delay Index	2.2	2.3	2.3
		WB	Average Speed (mph)	12.7	12.0	11.9
			Delay Index	2.4	2.5	2.5

TSO = Traffic Service Objective; Delay Index = ratio of free-flow speed to congested speed

^a From 2007 CCTA TSO Monitoring Report

^b From Broadway Plaza Retail Project Draft EIR

SOURCE: Kimley-Horn and Associates, Inc.

Transit Services. Implementation of the Specific Plan would generate demand for transit trips, but would not exceed the existing transit capacity serving the City of Walnut Creek. The trip generation estimates for the Specific Plan did not account for any reduction in the total trips due to transit in order to reflect a worst-case analysis assuming all trips are made by automobile. If a conservative ten percent of the unadjusted project trips are assumed to be transit trips, then the project would generate a total of about 21 transit trips during the AM peak hour and 35 transit trips during the PM peak hour. Those estimated transit trips likely would be split between BART and County Connection buses. On the basis of observed ridership levels, those transit trips would not exceed existing transit capacity, and the project would have a less-than-significant impact on existing transit services. Further, increased transit ridership is considered beneficial as it reduces the total number of vehicle trips.

Pedestrian and Bicycle Circulation. Implementation of the Specific Plan would generate pedestrian and bicycle trips, but that demand would be accommodated by the combination of existing facilities and proposed Specific Plan design. As described in the Setting, the study area is well-served by bicycle facilities, surrounded by Class I, Class II, and Class III bikeways. The Iron Horse Trail (Class I path) is located less than one half mile east of the project site. Class II bike lanes are located on North California Boulevard and on Olympic Boulevard, and Class III bike routes are located on Ygnacio Valley Road.

The study area surroundings have substantial pedestrian amenities including a full and complete network of sidewalks and an urban environment that encourages walking. This environment includes buildings oriented to the street, pedestrian-scaled lighting, benches, plazas, street cafes, and street trees. Newer development projects such as Olympia Place, Broadway Pointe, and Plaza

Escuela have pedestrian-friendly frontages with wide sidewalks, lighting, trees, and public art. Some of the arterial streets utilize in-street flashing lights at high-volume unsignalized crossings such as at Mt. Diablo Boulevard / Broadway Plaza and at Broadway / Duncan Street. All of the signalized crossings in downtown Walnut Creek have countdown pedestrian signals identifying the time remaining for pedestrians to cross the street. Lower volume streets such as Locust Street provide diagonal parking, street cafes, bulbouts at intersections and mid-block crossings to enhance the pedestrian environment. A policy of the General Plan and the intent of the City’s Pedestrian Retail District is to provide a highly walkable downtown. The Specific Plan would contribute to this walkability through pedestrian-scaled blocks, building/site-orientation, urban design, and landscape.

Mitigation Measures

No mitigation measures are required.

Parking Impacts

The parking analysis compares the proposed parking supply against the City’s parking Code requirements and to the estimated parking demand to determine if the Specific Plan would provide sufficient parking.

Impact TRAF-4: Result in inadequate parking capacity. (criterion f) (Less than Significant)

Parking Supply

The project proposes to provide a total of 745 on-site parking spaces under the Specific Plan, as shown in **Table IV.D-12**.

**TABLE IV.D-12
PROPOSED PARKING SUPPLY**

Location	Existing	Specific Plan
Opportunity Site 1	15	0
Opportunity Site 2	48	124
Opportunity Site 3	51	335
Opportunity Site 4	4	0
Opportunity Site 5	62	265
Opportunity Site 6	20	21
TOTAL	200	745

City Code Requirements for Parking

The City Code requires 1.5 parking spaces per 1 bedroom unit, 2 parking spaces per 2 bedroom unit, and 2.25 spaces per 2+ bedroom units. Therefore a total of 86 parking spaces would be required for the residential component of the project.

For the commercial uses, the City Code requires 3.33 parking space per 1,000 R.F.A (Rentable Floor Area) for the retail and office uses. The RFA was assumed to be 80% of the Gross Floor Area (“GFA”). For the Hotel uses, the City Code requires 0.9 spaces per guest room. Therefore, a total of 431 spaces would be required for the commercial component of the project.

As shown in **Table IV.D-13**, the total parking requirement for the project under the City Code would be 517 parking spaces, and the proposed Specific Plan parking supply of 745 spaces would exceed the City requirement by 228 spaces. Some of the individual development sites within the project area would not have the necessary number of parking spaces to accommodate parking requirement, and those development sites would use the 335-space parking garage on Site 3.

Parking Demand

A consideration in addition to parking supply versus Code requirement is supply versus demand. Parking demand is estimated using parking demand rates published by the Institute of Transportation Engineers (ITE, 2004); see **Table IV.D-14**. For the residential component of the project, the peak parking demand would be about 75 spaces, including the demand generated by residential visitors. For the commercial uses, the peak parking demand would be about 448 spaces. The proposed parking supply of 745 spaces would fully accommodate the total peak parking demand.

Because different land uses peak at different times of the day, evaluation of a reduction in the peak parking demand due to shared parking was undertaken (ULI, 2005). Conventional regulations require that each development provide enough parking to serve its own peak demand, leaving unused parking spaces during the non-peak-use periods. Shared parking allows complementary land uses, whose peak parking demands do not coincide, to share the same pool of parking spaces, resulting in a more efficient use of those spaces. With shared parking, the total peak parking demand for the project would be about 508 spaces, and the proposed parking supply of 745 spaces would be about 237 spaces more than demand.

Mitigation Measures

No mitigation measures are required.

Cumulative Impacts

Cumulative (2025) No Project Traffic Projections

As described above, cumulative conditions reflect the Year 2025 and conform to the growth identified in the General Plan’s Growth Management Alternative II. Intersection turning movement volumes were taken from the appendix of the Draft EIR for the City’s General Plan, and from the CCTA Travel Demand Forecasting Model (in coordination with the Block C and Broadway Plaza traffic studies). Intersection turning movements during the AM and the PM peak hour are shown in **Figures IV.D-10A** and **IV.D-10B**.

**TABLE IV.D-13
CITY CODE PARKING REQUIREMENT**

Specific Plan Component / Land Use	City's Parking Code Requirement		Quantity	Units	Total Number of Parking Spaces Required	Off-Site Parking Supply	Parking Surplus / (Deficit)
Opportunity Site 1							
Retail	3.33	Spaces per 1,000 S.F. of RFA	3,440	S.F.	11		
Office	3.33	Spaces per 1,000 S.F. of RFA	3,440	S.F.	11		
Subtotal					22	0	(22)
Opportunity Site 2							
Retail	3.33	Spaces per 1,000 S.F. of RFA	15,600	S.F.	52		
Residential	1.5	Spaces per 1 Bedroom Unit	11	D.U.	17		
Residential	2.0	Spaces per 2 Bedroom Unit	22	D.U.	44		
Residential	2.25	Spaces per 2+ Bedroom Unit	3	D.U.	7		
Subtotal					120	124	4
Opportunity Site 4							
Retail	3.33	Spaces per 1,000 S.F. of RFA	13,600	S.F.	45		
Office	3.33	Spaces per 1,000 S.F. of RFA	10,400	S.F.	35		
Subtotal					80	0	(80)
Opportunity Site 5							
Retail	3.33	Spaces per 1,000 S.F. of RFA	10,736	S.F.	36		
Office	3.33	Spaces per 1,000 S.F. of RFA	64,000	S.F.	213		
Subtotal					249	265	16
Opportunity Site 6							
Retail	3.33	Spaces per 1,000 S.F. of RFA	8,400	S.F.	28		
Residential	1.5	Spaces per 1 Bedroom Unit	5	D.U.	8		
Residential	2.0	Spaces per 2 Bedroom Unit	5	D.U.	10		
Subtotal					46	21	(25)
Total Parking (including Site 3 supply [335 spaces]) =					517	745	228

Note: Because the exact Rentable Floor Area ("RFA") could not be determined at the time of this analysis, it is assumed that RFA is equal to 80% of the Gross Floor Area ("GFA").

SOURCES: Kimley-Horn and Associates, Inc., from City of Walnut Creek's Municipal Code.

IV. Environmental Setting, Impacts and Mitigation Measures

D. Traffic, Transportation, Circulation and Parking

**TABLE IV.D-14
PARKING DEMAND ESTIMATES**

Specific Plan Component / Land Use	Parking Demand Rate		Quantity	Units	Total Parking Demand	Total Parking Demand (With Shared-Use)	Off-Site Parking Supply	Parking Supply/(Deficit)	
								Without Shared-Use Parking	With Shared-Use Parking Analysis
Opportunity Site 1									
Retail	2.65	Spaces / 1,000 S.F.	4,300	S.F.	11	10			
Office	2.84	Spaces / 1,000 S.F.	4,300	S.F.	12	12			
Subtotal					23	22	0	(23)	(22)
Opportunity Site 2									
Retail	2.65	Spaces / 1,000 S.F.	19,500	S.F.	52	49			
Residential-Owner	1.46	Spaces / Dwelling Units	36	D.U.	53	53			
Residential-Visitor	0.15	Spaces / Dwelling Units	36	D.U.	5	1			
Subtotal					110	103	124	14	21
Opportunity Site 4									
Retail	2.65	Spaces / 1,000 S.F.	17,000	S.F.	45	43			
Office	2.84	Spaces / 1,000 S.F.	13,000	S.F.	37	37			
Subtotal					82	80	0	(82)	(80)
Opportunity Site 5									
Retail	2.65	Spaces / 1,000 S.F.	13,420	S.F.	36	34			
Office	2.84	Spaces / 1,000 S.F.	80,000	S.F.	227	227			
Subtotal					263	261	265	2	4
Opportunity Site 6									
Retail	2.65	Spaces / 1,000 S.F.	10,500	S.F.	28	27			
Residential-Owner	1.46	Spaces / Dwelling Units	10	D.U.	15	15			
Residential-Visitor	0.15	Spaces / Dwelling Units	10	D.U.	2	0			
Subtotal					45	42	21	(24)	(21)
Total Parking (including Site 3 supply [335 spaces]) =					523	508	745	222	237

SOURCES: ITE, *Parking Generation* (3rd Edition), 2004; Urban Land Institute, *Shared Parking* (2nd Edition), 2005

Cumulative (2025) Plus Project Conditions

Intersection Level of Service

Impact TRAF-5: Cause an increase in traffic that 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), or exceed, either individually or cumulatively, an LOS standard established by the Contra Costa Transportation Authority for designated roads or highways (criteria a and b) (Less than Significant)

Intersection turning movements during the AM and the PM peak hours for the study intersections are shown in **Figures IV.D-11a** and **IV.D-11b**. **Table IV.D-15** summarizes cumulative plus Specific Plan LOS conditions at the study intersections during the AM and the PM peak hours and compares it to Cumulative (2025) No Project LOS conditions.

Under Cumulative (2025) Plus Project conditions, all study intersections would operate within the LOS standard adopted for the Core Area during the AM and the PM peak hours, except for the following intersections (which are projected to operate at unacceptable LOS under Cumulative (2025) No Project conditions):

- Mt. Diablo Boulevard / California Boulevard (PM Peak Hour)
- Mt. Diablo Boulevard / Oakland Boulevard (PM Peak Hour)
- Olympic Boulevard / I-680 Northbound Ramps (AM and PM Peak Hours)

The Specific Plan traffic would increase the v/c ratio by no more than 0.01 at each of these intersections, which is less than the increase of 0.05 required for determination of a significant traffic impact. Therefore it can be concluded that the proposed Specific Plan would not cause the intersections to operate at a level of service worse than the standard (low LOS E) identified for the Core Area, and would have a less-than-significant cumulative traffic impact.

Mitigation Measures

No mitigation measures are required.

Roadway Operating Conditions

Impact TRAF-6: Cause an increase in traffic that 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), or exceed, either individually or cumulatively, an LOS standard established by the Contra Costa Transportation Authority for designated roads or highways (criteria a and b) . (Less than Significant)

Similar to circumstances described in Impact TRAF-2 above, the Cumulative (2025) No Project analysis scenario is common between the recently published Broadway Plaza Retail Project EIR and this EIR, and the average operating speed and delay index for this segment of Ygnacio Valley Road was taken from the Broadway Plaza Retail Project Draft EIR. The Specific Plan traffic (4 and 12 AM peak-hour trips in the eastbound and westbound direction, respectively, and 17 and 10 PM peak-hour trips in the eastbound and westbound direction, respectively) was added to the Cumulative (2025) No Project Conditions volumes (see **Table IV.D-16**).

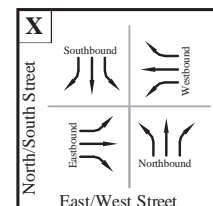
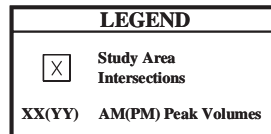
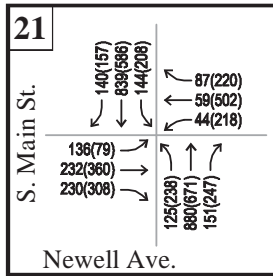
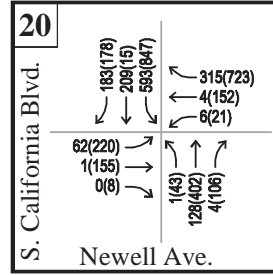
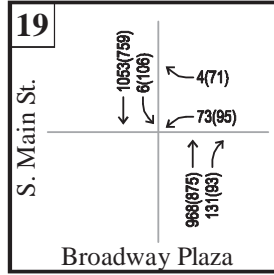
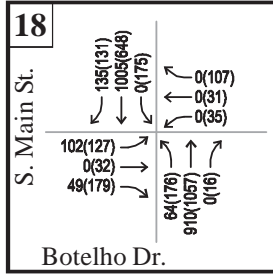
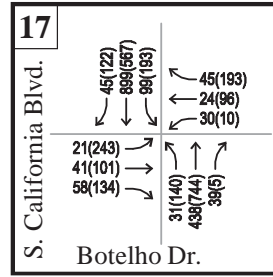
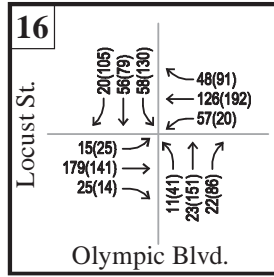
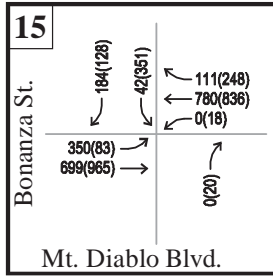


Figure IV.D-10B
Cumulative (2025) No Projects
Peak Hour Volumes

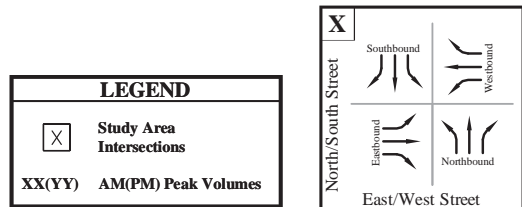
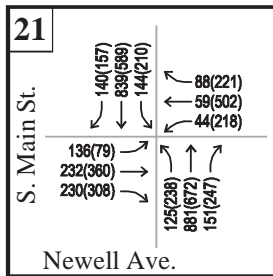
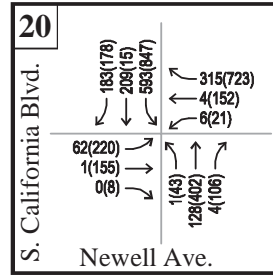
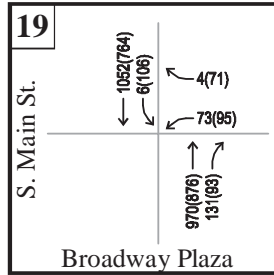
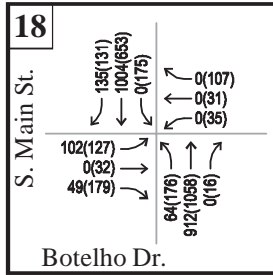
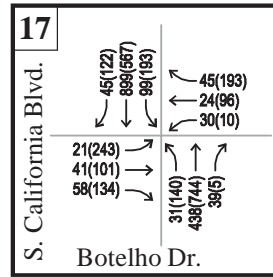
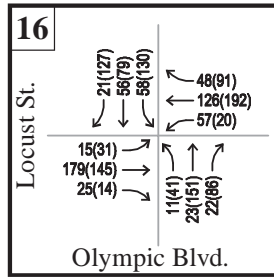
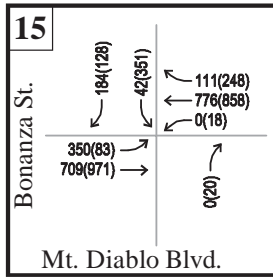


Figure IV.D-11B
Cumulative (2025) Plus Project
Peak Hour Volumes

**TABLE IV.D-15
COMPARISON OF PEAK-HOUR LEVELS OF SERVICE – CUMULATIVE (2025) NO PROJECT
VERSUS CUMULATIVE (2025) PLUS SPECIFIC PLAN CONDITIONS**

Int. No.	Intersection	Traffic Control	AM Peak Hour				PM Peak Hour			
			Cumulative (2025) No Project		Cumulative (2025) Plus Specific Plan		Cumulative (2025) No Project		Cumulative (2025) Plus Specific Plan	
			LOS	V/C or Delay ^a	LOS	V/C or Delay ^a	LOS	V/C or Delay ^a	LOS	V/C or Delay ^a
1	Mt. Diablo Boulevard / Broadway	Signal	C	0.76	C	0.76	E	0.93	E	0.93
2	Mt. Diablo Boulevard / California Boulevard	Signal	B	0.64	B	0.65	E	0.94	E	0.94
3	Olympic Boulevard / California Boulevard	Signal	A	0.48	A	0.48	B	0.69	B	0.69
4	Mt. Diablo Boulevard / Main Street	Signal	C	0.74	C	0.74	E	0.93	E	0.94
5	Mt. Diablo Boulevard / Locust Street	Signal	A	0.32	A	0.32	B	0.62	B	0.64
6	Bonanza Street / California Boulevard	Signal	A	0.58	A	0.58	D	0.85	D	0.76
7	Mt. Diablo Boulevard / Oakland Boulevard	Signal	C	0.73	C	0.73	F	1.01	F	1.01
8	Mt. Diablo Boulevard / Alpine Boulevard	Signal	C	0.75	C	0.75	C	0.77	C	0.78
9	Olympic Boulevard / Main Street	Signal	A	0.53	A	0.53	A	0.55	A	0.55
10	Olympic Boulevard / Alpine Boulevard	Signal	C	0.79	C	0.79	D	0.86	D	0.87
11	Olympic Boulevard / I-680 NB Ramps	Signal	F	1.33	F	1.34	F	1.35	F	1.35
12	Olympic Boulevard / I-680 SB Off-Ramp	Signal	A	0.51	A	0.51	C	0.75	C	0.75
13	Cypress Street / California Boulevard	SSSC	A	9.1	A	9.2	B	12.6	B	12.9
14	Mt. Diablo Blvd / Camino Diablo – Boulevard Road	Signal	A	0.58	A	0.58	C	0.80	C	0.80
15	Mt. Diablo Boulevard / Bonanza Street	Signal	A	0.49	A	0.49	A	0.57	A	0.58
16	Olympic Boulevard / Locust Street	Signal	A	0.21	A	0.21	A	0.41	A	0.41
17	California Boulevard / Botelho Drive	Signal	A	0.36	A	0.36	B	0.65	B	0.65
18	Main Street / Botelho Drive	Signal	A	0.43	A	0.43	A	0.53	A	0.53
19	Main Street / Broadway Place	Signal	A	0.37	A	0.37	A	0.40	A	0.40
20	California Boulevard / Newell Avenue	Signal	A	0.35	A	0.35	C	0.74	C	0.74
21	Main Street / Newell Avenue	Signal	A	0.46	A	0.46	A	0.58	A	0.59

^a The level of service at signalized intersections is based on the volume-to-capacity ratio (V/C). The level of service for unsignalized intersections is based on vehicle delay. The LOS and delay for Side-Street Stop-Controlled ("SSSC") intersections represent the worst movement or approach; the LOS and delay for signalized intersections represent the overall intersection.

SOURCE: Kimley-Horn and Associates, Inc.

The PM peak-hour delay index / average speed in the both directions is projected to exceed the standard of 2.0/15 mph for the Cumulative (2025) No Project Conditions and the addition of Specific Plan-generated traffic on Ygnacio Valley Road would not result in a measurable difference to the average operating speed and delay index. Therefore, it can be concluded that the proposed Specific Plan would not cause an exceedance of the LOS standard (i.e., TSO criteria), and significant reduction of its operating speed, or a change in its Delay Index would not cause the roadway to operate with at a level of service worse than the standard (low LOS E) identified for the Core Area, and the proposed Specific Plan would have a less-than-significant cumulative traffic impact.

**TABLE IV.D-16
CUMULATIVE (2025) PLUS SPECIFIC PLAN –
ROADWAY OPERATING CONDITIONS**

Segment	Time	Direction	TSO	Existing (2007) ^a	Cumulative (2025) No Project ^b	Cumulative (2025) + Specific Plan
Ygnacio Valley Road (I-608 to Walnut Boulevard)	AM Peak	EB	Average Speed (mph)	16.1	15.7	15.6
			Delay Index	1.9	1.9	1.9
		WB	Average Speed (mph)	26.6	15.5	15.5
			Delay Index	1.1	1.9	1.9
	PM Peak	EB	Average Speed (mph)	13.6	10.0	9.7
			Delay Index	2.2	3.0	3.2
		WB	Average Speed (mph)	12.7	11.8	11.8
			Delay Index	2.4	2.5	2.5

TSO = Traffic Service Objective; Delay Index = ratio of free-flow speed to congested speed

^a From 2007 CCTA TSO Monitoring Report

^b From Broadway Plaza Retail Project EIR

SOURCE: Kimley-Horn and Associates, Inc.

Mitigation Measures

No mitigation measures are required.

Alternative Transportation (Transit Services, and Pedestrian and Bicycle Circulation)

Transit

Impact TRAF-7: Conflict with adopted policies, plans, or programs supporting alternative transportation (e.g., bus turnouts, bicycle racks) (criterion g) (Less than Significant)

The proposed Specific Plan would not involve obstruction, redesign or reconfiguration of roadways, nor would it affect bus routes or bicycle racks. Implementation of the Specific Plan, in combination with cumulative development, would have no impact on adopted policies, plans, or programs supporting alternative transportation.

Transit Services. As described in Impact TRAF-3 above, the trip generation estimates for the Specific Plan did not account for any reduction in the total trips due to transit in order to reflect a worst-case analysis assuming all trips are made by automobile. If a conservative ten percent of the unadjusted project trips are assumed to be transit trips, then the project would generate a total of about 21 transit trips during the AM peak hour and 35 transit trips during the PM peak hour. As per the General Plan 2025 EIR, the 2025 daily transit trips for the Growth Management II Alternative is about 20,700 riders. The amount of transit trips added by the Specific Plan contributes one percent or less to the 2025 daily transit trips. Because the Specific Plan would add a negligible amount of riders to future transit systems, the Specific Plan would not exceed the existing transit capacity serving the City of Walnut Creek, and would not cause a significant impact. The General Plan also considered the impact of growth allowed in the General Plan to be less than significant.

Pedestrian and Bicycle Circulation. Implementation of the Specific Plan would generate pedestrian and bicycle trips, but that demand would be accommodated by the combination of existing facilities and proposed Specific Plan design. As described in the Setting, the study area is well-served by bicycle facilities, surrounded by Class I, Class II, and Class III bikeways. The Iron Horse Trail (Class I path) is located less than one half mile east of the project site. Class II bike lanes are located on North California Boulevard and on Olympic Boulevard, and Class III bike routes are located on Ygnacio Valley Road.

The General Plan proposes additional bicycle facilities on Rudgear Road.

Further the General Plan indicates that the 2025 proposed land development will improve the bicycle network by providing additional bicycle facilities and would provide bicycle parking at new commercial and community facilities as required per the City Bicycle Parking Requirement Ordinance.

For pedestrian circulation, the General Plan lists the pedestrian improvements to include closing sidewalk/walkway gaps and connections to regional trails and full frontage improvements in all commercial areas. The project also plans to provide the needed pedestrian facilities such as sidewalks (a 15-foot-wide sidewalk is planned on Mount Diablo, Locust Street, Cypress Street, and North California Boulevard), paseos, plazas, and courtyard between North Main Street and North California Boulevard, to encourage pedestrian trips.

Mitigation Measures

No mitigation measures are required.

6. References – Traffic, Transportation, Circulation and Parking

City of Walnut Creek, *Broadway Plaza Retail Project Draft Environmental Impact Report*, June 20, 2008.

City of Walnut Creek, *Broadway Plaza Retail Project Final Environmental Impact Report*, September 16, 2008.

Dowling Associates, Inc., *Technical Memorandum: Downtown Walnut Creek Retail Trip Generation*, March 11, 2008.

Institute of Transportation Engineers (“ITE”), *Trip Generation*, 7th Edition, 2003.

Institute of Transportation Engineers (“ITE”), *Parking Generation*, 3rd Edition, 2004.

TJKM Transportation Consultants, *Downtown Walnut Creek Parking Study*, May 2, 2002.

Urban Land Institute, *Shared Parking*, 2nd Edition, 2005

E. Air Quality

This section examines the potential air quality impacts associated with the project and provides an evaluation of the impacts the proposed Locust Street / Mt. Diablo Boulevard Specific Plan would have on air quality.

1. Regulatory Setting

Federal

The federal Clean Air Act (“CAA”) requires the U.S. Environmental Protection Agency (“EPA”) to identify National Ambient Air Quality Standards (“NAAQS” or national standards) to protect public health and welfare. National standards have been established for ozone, carbon monoxide, nitrogen dioxide, sulfur dioxide, PM₁₀, PM_{2.5}, and lead. **Table IV.E-1** shows current national and state ambient air quality standards and provides a brief discussion of the related health effects and principal sources for each pollutant.

Pursuant to the 1990 federal Clean Air Act amendments, the EPA classifies air basins (or portions thereof) as “attainment” or “non-attainment” for each criteria air pollutant, based on whether or not the NAAQS has been achieved. **Table IV.E-2** shows the current attainment status of the Specific Plan Area.

The Clean Air Act requires each state to prepare an air quality control plan referred to as the State Implementation Plan (“SIP”). The Clean Air Act amendments added requirements for states containing areas that violate the NAAQS to revise their SIPs to incorporate additional control measures to reduce air pollution. The SIP is a living document that is periodically modified to reflect the latest emissions inventories, planning documents, and rules and regulations of air basins as reported by the agencies with jurisdiction over them. The EPA has responsibility to review all state SIPs to determine if they conform to the mandates of the Clean Air Act amendments and will achieve air quality goals when implemented. If the EPA determines a SIP to be inadequate, it may prepare a Federal Implementation Plan (“FIP”) for the non-attainment area and may impose additional control measures. Failure to submit an approvable SIP or to implement the plan within mandated time frames can result in sanctions being applied to transportation funding and stationary air pollution sources in the air basin.

Regulation of TACs, termed Hazardous Air Pollutants (“HAPs”) under federal regulations, is achieved through federal, state and local controls on individual sources. The 1977 Clean Air Act amendments required the EPA to identify National Emission Standards for Hazardous Air Pollutants (“NESHAPs”) to protect public health and welfare. These substances include certain volatile organic chemicals, pesticides, herbicides, and radionuclides that present a tangible hazard, based on scientific studies of exposure to humans and other mammals. There is uncertainty in the precise degree of hazard.

**TABLE IV.E-1
STATE AND NATIONAL CRITERIA AIR POLLUTANT STANDARDS, EFFECTS, AND SOURCES**

Pollutant	Averaging Time	State Standard	National Standard	Pollutant Health and Atmospheric Effects	Major Pollutant Sources
Ozone	1 hour 8 hours	0.09 ppm 0.07 ppm ¹	--- 0.075 ppm	High concentrations can directly affect lungs, causing irritation. Long-term exposure may cause damage to lung tissue.	Formed when reactive organic gases ("ROG") and nitrogen oxides ("NOx") react in the presence of sunlight. Major sources include on-road motor vehicles, solvent evaporation, and commercial / industrial mobile equipment.
Carbon Monoxide	1 hour 8 hours	20 ppm 9.0 ppm	35 ppm 9 ppm	Classified as a chemical asphyxiant, carbon monoxide interferes with the transfer of fresh oxygen to the blood and deprives sensitive tissues of oxygen.	Internal combustion engines, primarily gasoline-powered motor vehicles.
Nitrogen Dioxide	1 hour Annual Avg.	0.18 ppm 0.030	--- 0.053 ppm	Irritating to eyes and respiratory tract. Colors atmosphere reddish-brown.	Motor vehicles, petroleum refining operations, industrial sources, aircraft, ships, and railroads.
Sulfur Dioxide	1 hour 3 hours 24 hours Annual Avg.	0.25 ppm --- 0.04 ppm ---	--- 0.5 ppm 0.14 ppm 0.03 ppm	Irritates upper respiratory tract; injurious to lung tissue. Can yellow the leaves of plants, destructive to marble, iron, and steel. Limits visibility and reduces sunlight.	Fuel combustion, chemical plants, sulfur recovery plants, and metal processing.
Respirable Particulate Matter (PM ₁₀)	24 hours Annual Avg.	50 µg/m ³ 20 µg/m ³	150 µg/m ³ ---	May irritate eyes and respiratory tract, decreases in lung capacity, cancer and increased mortality. Produces haze and limits visibility.	Dust and fume-producing industrial and agricultural operations, combustion, atmospheric photochemical reactions, and natural activities (e.g., wind-raised dust and ocean sprays).
Fine Particulate Matter (PM _{2.5})	24 hours Annual Avg.	--- 12 µg/m ³	35 µg/m ³ 15 µg/m ³	Increases respiratory disease, lung damage, cancer, and premature death. Reduces visibility and results in surface soiling.	Fuel combustion in motor vehicles, equipment, and industrial sources; residential and agricultural burning; Also, formed from photochemical reactions of other pollutants, including NOx, sulfur oxides, and organics.
Lead	Monthly Ave. Quarterly	1.5 µg/m ³ ---	--- 1.5 µg/m ³	Disturbs gastrointestinal system, and causes anemia, kidney disease, and neuromuscular and neurological dysfunction.	Present source: lead smelters, battery manufacturing & recycling facilities. Past source: combustion of leaded gasoline.
Hydrogen Sulfide	1 hour	0.03 ppm	No National Standard	Geothermal Power Plants, Petroleum Production and refining	Nuisance odor (rotten egg smell), headache and breathing difficulties (higher concentrations)
Sulfates	24 hour	25 g/m ³	No National Standard	Produced by the reaction in the air of SO ₂ .	Breathing difficulties, aggravates asthma, reduced visibility
Visibility Reducing Particles	8 hour	Extinction of 0.23/km; visibility of 10 miles or more	No National Standard	Reduces visibility, reduced airport safety, lower real estate value, discourages tourism.	See PM _{2.5} .

NOTE: ppm = parts per million; µg/m³ = micrograms per cubic meter.

¹ This concentration was approved by the Air Resources Board on April 28, 2005 and became effective May 17, 2006.

SOURCE: ARB, 2008b, ARB, 2005.

**TABLE IV.E-2
BAY AREA ATTAINMENT STATUS**

Pollutant	Designation/Classification	
	Federal Standards	State Standards
Ozone – one hour	No Federal Standard ^a	Non-attainment
Ozone – eight hour	Nonattainment	Non-attainment ^b
PM ₁₀	Unclassified	Non-attainment
PM _{2.5}	Unclassified/Attainment	Non-attainment
CO	Attainment	Attainment
Nitrogen Dioxide	Attainment	Attainment
Sulfur Dioxide	Attainment	Attainment
Lead	No Designation	Attainment
Hydrogen Sulfide	No Federal Standard	Unclassified
Sulfates	No Federal Standard	Attainment
Visibility Reducing Particles	No Federal Standard	Unclassified

^a Federal One Hour Ozone National Ambient Air Quality Standard was revoked on June 15, 2005

^b The State 8-hour ozone standard was approved by the ARB on April 28, 2005, and became effective May 17, 2006.

SOURCE: BAAQMD, 2008.

State

ARB manages air quality, regulates mobile emissions sources, and oversees the activities of county Air Pollution Control Districts and regional Air Quality Management Districts. ARB establishes state ambient air quality standards and vehicle emissions standards.

California has adopted ambient standards that are more stringent than the federal standards for criteria air pollutants. These are shown in Table IV.E-1. Under the California Clean Air Act (“CCAA”) patterned after the federal Clean Air Act, areas have been designated as attainment or non-attainment with respect to the state standards. Table IV.E-2 summarizes the attainment status with California standards in the Specific Plan Area.

Toxic Air Contaminants

California State law defines TACs as air pollutants having carcinogenic effects. The state Air Toxics Program was established in 1983 under Assembly Bill (“AB”) 1807 (Tanner). A total of 243 substances have been designated TACs under California law; they include the 189 (federal) hazardous air pollutants (“HAPs”) adopted in accordance with AB 2728. The Air Toxics “Hot Spots” Information and Assessment Act of 1987 (AB 2588) seeks to identify and evaluate risk from air toxics sources; however, AB 2588 does not regulate air toxics emissions. Toxic air contaminant emissions from individual facilities are quantified and prioritized. “High-priority” facilities are required to perform a health risk assessment and, if specific thresholds are violated, are required to communicate the results to the public in the form of notices and public meetings.

In August of 1998, ARB identified particulate emissions from diesel-fueled engines (diesel particulate matter, or DPM) as TACs. ARB subsequently developed the *Risk Reduction Plan to Reduce Particulate Matter Emissions from Diesel-Fueled Engines and Vehicles* (ARB, 2000). The document represents proposals to reduce diesel particulate emissions, with the goal of reducing emissions and associated health risks by 75 percent in 2010 and by 85 percent in 2020. The program aims to require the use of state-of-the-art catalyzed diesel particulate filters and ultra low sulfur diesel fuel on diesel-fueled engines.

ARB recently published the *Air Quality and Land Use Handbook: A Community Health Perspective* (ARB, 2005). The primary goal in developing the handbook was to provide information that will help keep California's children and other vulnerable populations out of harm's way with respect to nearby sources of air pollution. The handbook highlights recent studies that have shown that public exposure to air pollution can be substantially elevated near freeways and certain other facilities (i.e., distribution centers, rail yards, chrome platers, etc.). However, the health risk is greatly reduced with distance. For that reason, ARB provided some general recommendations aimed at keeping appropriate distances between sources of air pollution and sensitive land uses, such as residences. The handbook recommends that residences not be located within 500 feet of a freeway or urban road with more than 100,000 vehicles per day. Residences developed under the Specific Plan will not be affected by these recommendations because the Specific Plan Area is more than 1,500 feet from Interstate 680 and the traffic volumes will be far below 100,000 trips per day on all the urban roads adjacent to the Specific Plan Area.

Local

The regional agency primarily responsible for developing air quality plans for the Bay Area is the BAAQMD, the agency with permit authority over most types of stationary emission sources of air pollutants in the Bay Area.

Air Quality Plans

The 1977 Clean Air Act amendments require that regional planning and air pollution control agencies prepare a regional *Air Quality Plan* to outline the measures by which both stationary and mobile sources of pollutants can be controlled in order to achieve all standards specified in the Clean Air Act. The 1988 California Clean Air Act also requires development of air quality plans and strategies to meet state air quality standards in areas designated as non-attainment (with the exception of areas designated as non-attainment for the state PM standards). Maintenance plans are required for attainment areas that had previously been designated non-attainment in order to ensure continued attainment of the standards. Air quality plans developed to meet federal requirements are referred to as *State Implementation Plans*.

Bay Area plans are prepared by the BAAQMD with the cooperation of the Metropolitan Transportation Commission ("MTC") and the Association of Bay Area Governments ("ABAG"). Currently, there are three plans for the Bay Area:

- The *Ozone Attainment Plan for the 1-Hour National Ozone Standard* (ABAG, 2001) developed to meet federal ozone air quality planning requirements
- The *Bay Area 2005 Ozone Strategy* (BAAQMD, 2006) developed to meet planning requirements related to the state ozone standard; and
- The *1996 Carbon Monoxide Redesignation Request and Maintenance Plan for Ten Federal Planning Areas*, developed by the air districts with jurisdiction over the ten planning areas including the BAAQMD to ensure continued attainment of the federal carbon monoxide standard. In June 1998, the EPA approved this plan and designated the ten areas as attainment. The maintenance plan was revised most recently in 2004.

The Bay Area 2001 *Ozone Attainment Plan* was prepared as a proposed revision to the Bay Area part of California's plan to achieve the national ozone standard. The plan was prepared in response to the EPA's partial approval and partial disapproval of the Bay Area's 1999 *Ozone Attainment Plan* and finding of failure to attain the national ambient air quality standard for ozone. The revised plan was adopted by the boards of the co-lead agencies at a public meeting and approved by ARB in 2001. In July 2003, the EPA approved the plan. The EPA also made an interim final determination that the plan corrects deficiencies identified in the 1999 plan. Following three years of low ozone levels (2001, 2002 and 2003), in October 2003, the EPA proposed a finding that the Bay Area had attained the national one-hour standard and that certain elements of the 2001 plan (attainment demonstration, contingency measures and reasonable further progress) were no longer required. In April 2004, the EPA made final the finding that the Bay Area had attained the one-hour standard and approved the remaining applicable elements of the 2001 plan: emissions inventory; control measure commitments; motor vehicle emission budgets; reasonably available control measures; and commitments to further study measures.

The EPA recently transitioned from the national one-hour standard to a more health protective 8-hour standard. Defined as "concentration-based," the new national ozone standard is set at 85 parts per billion averaged over eight hours. The new national 8-hour standard is considered to be more health protective because it protects against health effects that occur with longer exposure to lower ozone concentrations. In April 2004, the EPA designated regions as attainment and non-attainment areas for the 8-hour standard. These designations took effect on June 15, 2004. The EPA formally designated the Bay Area as a non-attainment area for the national 8-hour ozone standard and classified the region as "marginal" according to five classes of non-attainment areas for ozone, which range from marginal to extreme. Marginal non-attainment areas were charged with attaining the national 8-hour ozone standard by June 15, 2007. While certain elements of Phase 1 of the 8-hour implementation rule are still undergoing legal challenge, The EPA signed Phase 2 of the 8-hour implementation rule on November 9, 2005. Although the Bay Area did not achieve attainment by the June 2007 deadline, it is not currently anticipated that marginal areas will be required to prepare attainment demonstrations for the 8-hour standard, though other planning elements may be required. The Bay Area plans to address all requirements of the national 8-hour standard in subsequent documents.

For state air quality planning purposes, the Bay Area is classified as a serious non-attainment area for ozone. The “serious” classification triggers various plan submittal requirements and transportation performance standards. One such requirement is that the Bay Area update the *Clean Air Plan* (“CAP”) every three years to reflect progress in meeting the air quality standards and to incorporate new information regarding the feasibility of control measures and new emission inventory data. The Bay Area’s record of progress in implementing previous measures must also be reviewed. On January 4, 2006, the BAAQMD adopted the most recent revision to the CAP - the *Bay Area 2005 Ozone Strategy*. The control strategy for the *Bay Area 2005 Ozone Strategy* is to implement all feasible measures on an expeditious schedule in order to reduce emissions of ozone precursors and consequently reduce ozone levels in the Bay Area and reduce transport to downwind regions.

In April 2005, ARB established a new eight-hour average ozone standard of 0.070 ppm, which became effective on May 17, 2006. ARB is currently working on designations and implementation guidance for the new standard. The one-hour state standard has been retained. The San Francisco Bay Area has not attained the state eight-hour standards and will be taking action as necessary to address those standards once the planning requirements have been established.

Sensitive Receptors

Some receptors are considered more sensitive than others to air pollutants. The reasons for greater than average sensitivity include pre-existing health problems, proximity to emissions source, or duration of exposure to air pollutants. Land uses such as schools, children's day care centers, hospitals, and convalescent homes are considered to be more sensitive than the general public to poor air quality because the population groups associated with these uses have increased susceptibility to respiratory distress and other air quality-related health problems. Persons engaged in strenuous work or exercise also have increased sensitivity to poor air quality. Residential areas are considered more sensitive to air quality conditions than commercial and industrial areas, because people generally spend longer periods of time at their residences, resulting in greater exposure to ambient air quality conditions. Recreational uses are also considered sensitive, due to the greater exposure to ambient air quality conditions, and because the presence of pollution detracts from the recreational experience. Land uses in this 1.2-square mile Core Area are mostly commercial with some residential as well as public and civic uses. New residences may be developed in the Specific Plan Area.

2. Existing Conditions

Air quality is a function of both the rate and location of pollutant emissions under the influence of meteorological conditions and topographic features. Atmospheric conditions such as wind speed, wind direction, and air temperature gradients interact with the physical features of the landscape to determine the movement and dispersal of air pollutants, and consequently affect air quality. This section addresses issues related to “criteria air pollutants” and “toxic air contaminants.” Criteria air pollutants refer to those pollutants that are pervasive in urban environments and for which state and national health-based ambient air quality standards have been established.

Meteorology

The Specific Plan Area is located in the City of Walnut Creek, which lies within the San Francisco Bay Area Air Basin. The Bay Area Air Basin encompasses the nine-county region, including all of Alameda, Contra Costa, Santa Clara, San Francisco, San Mateo, San Francisco, Marin and Napa counties, and the southern portions of Solano and Sonoma counties. The climate of the Bay Area is determined largely by a high-pressure system that is almost always present over the eastern Pacific Ocean off the West Coast of North America. High-pressure systems are characterized by an upper layer of dry air that warms as it descends, restricting the mobility of cooler marine-influenced air near the ground surface, and resulting in the formation of subsidence inversions. In winter, the Pacific high-pressure system shifts southward, allowing storms to pass through the region. During summer and fall, emissions generated within the Bay Area can combine with abundant sunshine under the restraining influences of topography and subsidence inversions to create conditions that are conducive to the formation of photochemical pollutants, such as ozone and secondary particulates, such as sulfates and nitrates.

Specifically, the Specific Plan Area is located within the Diablo and San Ramon Valley climatological subregion of the Bay Area Air Basin (BAAQMD, 1999). The east sides of the valleys are bordered by the Black Diamond Hills and Mt Diablo. The Diablo Valley is a broad valley, approximately five miles wide and 10 miles long. The Carquinez Strait is located at the north end of the Diablo Valley and San Ramon is to the south. The major cities located in the Diablo Valley are Concord, and Walnut Creek. The Coast Range on the west side of the valley blocks much of the marine air from reaching these valleys. During the daytime, there are two predominant flow patterns: upvalley flow, and westerly flow across the lower elevations of the Coast Range. On clear nights, a surface inversion sets up and separates the surface flow from the upper layer flow. When this happens, the terrain channels the flow down valley toward the Carquinez Strait. This down valley drainage pattern can be observed to Martinez located at the northern end of the valley.

Wind speeds in these valleys rank as some of the lowest in the Bay Area. For example, in the middle of the Diablo Valley, the BAAQMD monitoring station in Concord reports annual average wind speeds of 4.7 mph. Conditions in Walnut Creek are similar to Concord.

Air temperatures are cooler in the winter and warmer in the summer because these valleys are farther from the moderating effect of large water bodies, and because the Coast Range blocks marine air flow. During the winter, in the Diablo Valley, Concord records daily maximum temperatures in the mid 50's. During the summer, average daily maximum temperatures are in the high 80's to 90 degrees. Average minimum temperatures in winter are in the low to mid 40's (BAAQMD, 1999).

The valleys rarely experience fog during the summer. In the winter, however, tule fog is common on cold, clear nights when winds are light and there is abundant moisture on the ground. Alternatively, tule fog can be advected from the Central Valley through the Carquinez Strait and Livermore Valleys. This type of fog usually burns off during the day, but occasionally can last for a week or two before being dissipated by the next storm. Shielded by the Coast Range to the

west, rainfall amounts in the Diablo Valley are relatively low. For example, Walnut Creek reports an annual average of 19 inches (BAAQMD, 1999).

Pollution potential is relatively high in these valleys. In the winter, light winds at night, coupled with a surface-based inversion, and terrain blocking to the east and west does not allow much dispersion of pollutants. In the summer months, ozone can be transported into the valleys from both the Central Valley and the central Bay Area. Current levels from within these valleys already exceed state ozone standards.

Existing Air Quality and Sensitive Receptors

BAAQMD operates a regional monitoring network that measures the ambient concentrations of the six criteria air pollutants. Existing and probable future levels of air quality in Walnut Creek can generally be inferred from ambient air quality measurements conducted by the BAAQMD at its monitoring stations. The monitoring station closest to the Specific Plan Area is the station at 2975 Treat Boulevard in Concord, which is located approximately 4 miles northeast of the Specific Plan Area. The station monitors ozone (1-hour and 8-hour), particulate matter (PM₁₀ and PM_{2.5}), carbon monoxide, nitrogen dioxide and sulfur dioxide. Since the major pollutants of concern in the San Francisco Bay Area are ozone and particulate matter, **Table IV.E-3** shows a three-year summary of monitoring data (2005 – 2007) for these pollutants from the Treat Boulevard station. Due to the proximity of the Specific Plan Area to the Treat Boulevard station in Concord, air quality measurements gathered in Concord are considered representative of conditions in the Specific Plan Area. Table IV.E-3 also compares measured pollutant concentrations with state and national ambient air quality standards.

Criteria Air Pollutants

Ozone. Short-term exposure to ozone can irritate the eyes and cause constriction of the airways. Besides causing shortness of breath, ozone can aggravate existing respiratory diseases such as asthma, bronchitis, and emphysema. Ozone is not emitted directly into the atmosphere, but is a secondary air pollutant produced in the atmosphere through a complex series of photochemical reactions involving reactive organic gases (“ROG”) and nitrogen oxides (“NOx”). ROG and NOx are known as precursor compounds for ozone. Significant ozone production generally requires ozone precursors to be present in a stable atmosphere with strong sunlight for approximately three hours. Ozone is a regional air pollutant because it is not emitted directly by sources, but is formed downwind of sources of ROG and NOx under the influence of wind and sunlight. Ozone concentrations tend to be higher in the late spring, summer, and fall, when the long sunny days combine with regional subsidence inversions to create conditions conducive to the formation and accumulation of secondary photochemical compounds, like ozone.

Carbon Monoxide. Ambient carbon monoxide concentrations normally are considered a local effect and typically correspond closely to the spatial and temporal distributions of vehicular traffic. Wind speed and atmospheric mixing also influence carbon monoxide concentrations. Under inversion conditions, carbon monoxide concentrations may be distributed more uniformly

**TABLE IV.E-3
AIR QUALITY DATA SUMMARY (2003-2007) FOR THE PLANNING AREA:
CONCORD – 2975 TREAT BLVD MONITORING STATION**

Pollutant	State Standard ^a	National Standard ^a	Monitoring Data by Year		
			2005	2006	2007
Ozone hourly					
Highest 1-hour average, ppm ^b	0.09	NA	0.098	0.117	0.105
Days over State Standard			1	8	1
Ozone 8-hour					
Highest 8-hour average, ppm ^b	0.07	0.075	0.081	0.093	0.081
Days over National Standard			0	4	0
Days over State Standard			2	14	4
PM₁₀					
Highest 24-hour average, µg/m ³ ^b	50	150	42.2	83.6	52.4
Estimated days over State Standard ^c			0	3	2
Estimated days over National Standard ^c			0	0	0
State annual average, µg/m ³ ^b	20	NA	16.5	18.5	16.8
PM_{2.5}					
Highest 24-hour average, µg/m ³ ^b	NA	35	48.9	62.1	46.2
Estimated days over National Standard ^d			0 ^e	0 ^e	0 ^e
State annual average, µg/m ³ ^b	12	15	9.3	10	8.7

^a Generally, state standards and national standards are not to be exceeded more than once per year.

^b ppm = parts per million; µg/m³ = micrograms per cubic meter.

^c PM₁₀ is not measured every day of the year. Number of estimated days over the standard is based on 365 days per year.

^d Exceedance based on the previous National Standard of 65µg/m³.

^e The ARB states that an exceedance is not necessarily a violation.

NOTES: Values in **bold** are in excess of at least one applicable standard. NA = Not Available.

SOURCE: California Air Resources Board ("ARB"), 2008a. Summaries of Air Quality Data, 2005, 2006, 2007;
<http://www.arb.ca.gov/adam/cgi-bin/db2www/polltrendsdb.d2w/start>

over an area that may extend some distance from vehicular sources. When inhaled at high concentrations, carbon monoxide combines with hemoglobin in the blood and reduces the oxygen-carrying capacity of the blood. This results in reduced oxygen reaching the brain, heart, and other body tissues. This condition is especially critical for people with cardiovascular diseases, chronic lung disease, or anemia, as well as for fetuses.

Carbon monoxide concentrations have declined dramatically in California due to existing controls and programs and most areas of the state, including the City, have no problem meeting state and federal carbon monoxide standards. CO measurements and modeling were important in the early 1980's when CO levels were regularly exceeded throughout California. In more recent years, CO measurements and modeling have not been a priority in most California air districts due to the retirement of older polluting vehicles, less emissions from new vehicles and improvements in fuels. The clear success in reducing CO levels is evident in the first paragraph of the executive summary of the California Air Resources Board *2004 Revision to the California State*

Implementation Plan for Carbon Monoxide Updated Maintenance Plan for Ten Federal Planning Areas (ARB, 2004), shown below:

“The dramatic reduction in carbon monoxide (“CO”) levels across California is one of the biggest success stories in air pollution control. Air Resources Board (“ARB” or “Board”) requirements for cleaner vehicles, equipment and fuels have cut peak CO levels in half since 1980, despite growth. All areas of the State designated as non-attainment for the federal 8-hour CO standard in 1991 now attain the standard, including the Los Angeles urbanized area. Even the Calexico area of Imperial County on the congested Mexican border had no violations of the federal CO standard in 2003. Only the South Coast and Calexico continue to violate the more protective State 8-hour CO standard, with declining levels beginning to approach that standard.”

Respirable Particulate Matter (PM₁₀ and PM_{2.5}). PM₁₀ and PM_{2.5} consist of particulate matter that is 10 microns or less in diameter and 2.5 microns or less in diameter, respectively. (A micron is one-millionth of a meter). PM₁₀ and PM_{2.5} represent fractions of particulate matter that can be inhaled into the air passages and the lungs and can cause adverse health effects. Some sources of particulate matter, such as wood burning in fireplaces, demolition, and construction activities, are more local in nature, while others, such as vehicular traffic, have a more regional effect. Very small particles of certain substances (e.g., sulfates and nitrates) can cause lung damage directly, or can contain adsorbed gases (e.g., chlorides or ammonium) that may be injurious to health. Particulates also can damage materials and reduce visibility. Large dust particles (diameter greater than 10 microns) settle out rapidly and are easily filtered by human breathing passages. This large dust is of more concern as a soiling nuisance rather than a health hazard. The remaining fraction, PM₁₀ and PM_{2.5}, are a health concern particularly at levels above the federal and state ambient air quality standards. PM_{2.5} (including diesel exhaust particles) is thought to have greater effects on health because these particles are so small and thus, are able to penetrate to the deepest parts of the lungs. Scientific studies have suggested links between fine particulate matter and numerous health problems including asthma, bronchitis, acute and chronic respiratory symptoms such as shortness of breath and painful breathing. Recent studies have shown an association between morbidity and mortality and daily concentrations of particulate matter in the air. Children are more susceptible to the health risks of PM₁₀ and PM_{2.5} because their immune and respiratory systems are still developing.

Mortality studies since the 1990s have shown a statistically significant direct association between mortality (premature deaths) and daily concentrations of particulate matter in the air. Despite important gaps in scientific knowledge and continued reasons for some skepticism, a comprehensive evaluation of the research findings provides persuasive evidence that exposure to fine particulate air pollution has adverse effects on cardiopulmonary health (Dockery and Pope 2006). ARB has estimated that achieving the ambient air quality standards for PM₁₀ could reduce premature mortality rates by 6,500 cases per year (ARB, 2002).

Nitrogen Dioxide (“NO₂”). NO₂ is a reddish brown gas that is a by-product of combustion processes. Automobiles and industrial operations are the main sources of NO₂. NO₂ may be visible as a coloring component of a brown cloud on high pollution days, especially in conjunction with high ozone levels.

Nitrogen dioxide is an air quality concern because it acts a respiratory irritant and is a precursor of ozone. Nitrogen dioxide is a major component of the group of gaseous nitrogen compounds commonly referred to as nitrogen oxides (“NO_x”). Nitrogen oxides are produced by fuel combustion in motor vehicles, industrial stationary sources (such as industrial activities), ships, aircraft, and rail transit. Typically, nitrogen oxides emitted from fuel combustion are in the form of nitric oxide (“NO”) and NO₂. NO is often converted to NO₂ when it reacts with ozone or undergoes photochemical reactions in the atmosphere. Therefore, emissions of NO₂ from combustion sources are typically evaluated based on the amount of NO_x emitted from the source.

Sulfur dioxide (“SO₂”). SO₂ is a combustion product of sulfur or sulfur-containing fuels such as coal and diesel. SO₂ is also a precursor to the formation of atmospheric sulfate, particulate matter and contributes to potential atmospheric sulfuric acid formation that could precipitate downwind as acid rain.

Lead. Ambient lead concentrations meet both the federal and state standards in the Specific Plan Area. Lead has a range of adverse neurotoxin health effects, and was formerly released into the atmosphere primarily via leaded gasoline products. The phase-out of leaded gasoline in California resulted in decreasing levels of atmospheric lead. The proposed Specific Plan will not introduce any new sources of lead emissions; consequently, lead emissions are not required to be quantified and are not further evaluated in this analysis.

Toxic Air Contaminants (“TACs”)

Non-criteria air pollutants, or TACs, are airborne substances that are capable of causing short-term (acute) and/or long-term (chronic or carcinogenic, i.e., cancer causing) adverse human health effects (i.e., injury or illness). TACs include both organic and inorganic chemical substances. They may be emitted from a variety of common sources, including gasoline stations, automobiles, dry cleaners, industrial operations, and painting operations. The current California list of TACs includes approximately 200 compounds, such as particulate emissions from diesel-fueled engines.

In 2001, ARB assessed the statewide health risks from exposure to diesel exhaust and to other toxic air contaminants. It is difficult to distinguish the health risks of diesel emissions from the other air toxics since diesel exhaust contains about 40 different TACs. The ARB study (ARB, 2000) detected diesel exhaust by using ambient air carbon soot measurements as a surrogate for diesel emissions. The study reported that in 2000, the state-wide cancer risk from exposure to diesel exhaust was about 540 per million (i.e., 540 cancers per million people) as compared to a total risk for exposure to all ambient air toxics of 760 per million. This estimate of risk from diesel exhaust, which accounts for about 70 percent of the total risk from TACs, included both urban and rural areas in the state. It can be considered as an average worst-case for the state since it assumes constant exposure to outdoor concentrations of diesel exhaust and does not account for expected lower concentrations indoors, where people spend most of their time.

Odorous Emissions

Though offensive odors from stationary sources rarely cause any physical harm, they still remain unpleasant and can lead to public distress generating citizen complaints to local governments. The occurrence and severity of odor impacts depend on the nature, frequency and intensity of the source; wind speed and direction; and the sensitivity of receptors. The *CEQA Guidelines* recommend that odor impacts be considered for any proposed new odor sources located near existing receptors, as well as any new sensitive receptors located near existing odor sources. Generally, increasing the distance between the receptor and the source will mitigate odor impacts.

3. Standards of Significance

According to Appendix G of the state CEQA Guidelines, the environmental impacts of the Specific Plan on air quality would be considered significant if it would:

- (a) Conflict with or obstruct implementation of the applicable air quality plan;
- (b) Violate any air quality standard or contribute substantially to an existing or projected air quality violation;
- (c) Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is in non-attainment under an applicable federal or state ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors);
- (d) Expose sensitive receptors to substantial pollutant concentrations; or
- (e) Create objectionable odors affecting a substantial number of people.

For impact analysis, the BAAQMD provides various thresholds and tests of significance. For ROG, NO_x and PM₁₀, a net increase of 80 pounds per day is considered significant. For CO, an increase of 550 pounds per day of CO would be considered significant.

For analysis at a plan or program level, the BAAQMD recommends three significance criteria in its CEQA Guidelines (BAAQMD, 1999). In general, the BAAQMD CEQA Guidelines stress that local plans for cities and counties must be consistent with the most recent regional air quality plan, in this case the *Bay Area 2005 Ozone Strategy*. Local plans found to be consistent with the *Bay Area 2005 Ozone Strategy* would have a less than significant impact on regional air quality.

The following criteria are recommended by the BAAQMD in evaluating the impacts of local plans and will be used for the analysis of the Specific Plan:

1. *Consistency with Clean Air Plan Population and Vehicle Miles Traveled (“VMT”) Assumptions*

The plan must show over its planning period that:

- Population growth for the jurisdiction will not exceed the values included in the current Clean Air Plan (the *Bay Area 2005 Ozone Strategy*), and

- The rate of increase in VMT for the jurisdiction is equal to or lower than the rate of increase in population.
2. Consistency with Clean Air Plan Transportation Control Measures (“TCMs”)
The plan should demonstrate that TCMs described in the *Bay Area 2005 Ozone Strategy* are included as part of the Specific Plan.
 3. Impacts associated with Odors and Toxics
For local plans to have a less than significant impact with respect to potential odors and/or toxic air contaminants, buffer zones should be established around existing and proposed land uses that would emit these air pollutants.

Topics Determined Less than Significant in the Initial Study

Air quality was previously analyzed in the Locust Street / Mt. Diablo Boulevard Specific Plan Initial Study. The Initial Study found the Specific Plan to be consistent with clean air planning efforts and that it will not exceed the total amount of commercial development permitted in the General Plan 2025 and therefore the Initial Study found the Specific Plan consistent with BAAQMD clean air planning efforts (criterion a). The Initial Study also found that the project would not expose a substantial number of people to objectionable odors (criterion e). These topics are not analyzed further in this section.

4. Impact Discussion

Construction Impacts

Impact AIR-1: Violate any air quality standard or contribute substantially to an existing or projected air quality violation or result in cumulatively considerable net increase of any criteria pollutant for which the project region is in non-attainment under an applicable federal or state ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors) (criteria b and c). (Potentially Significant)

Construction activities will occur intermittently at different sites in the Specific Plan Area throughout the period of implementation of the Specific Plan. Although the related impacts at any one location will be temporary, construction of individual projects under the proposed Specific Plan could cause adverse effects on the local air quality, primarily from dust emissions.

Construction activities will include site preparation, earthmoving and general construction. Site preparation includes activities such as general land clearing and grubbing. Earthmoving activities will include cut-and-fill operations, trenching, soil compaction and grading. General construction includes adding improvements such as roadway surfaces, structures and facilities.

Construction activities will result in the emission of ROG, NO_x, CO, SO_x and particulates (PM₁₀ and PM_{2.5}) from equipment exhaust, construction-related vehicular activity and construction worker automobile trips. Emission levels for construction activities will vary depending on the number and type of equipment use, duration of use, operation schedules (the time and frequency)

and the number of construction workers traveling to the worksite by motorized vehicle. Criteria pollutant emissions of ROG and NO_x from these emissions sources will incrementally add to the regional atmospheric loading of ozone precursors during construction. BAAQMD CEQA *Guidelines* recognize that construction equipment emits ozone precursors, but indicate that such emissions are included in the emission inventory that is the basis for regional air quality plans. Therefore, construction emissions of ROG and NO_x are not expected to impede attainment or maintenance of ozone standards in the Bay Area (BAAQMD, 1999). The impact of construction equipment exhaust emissions will therefore be less than significant.

Construction activities will also result in dust emissions (including PM₁₀ and PM_{2.5}) primarily from “fugitive” sources (i.e., emissions released through means other than through a stack or tailpipe) such as soil disturbance. Construction-related fugitive dust emissions at the Specific Plan Area will vary from day to day, depending on the level and type of activity, silt content of the soil and the weather. Without mitigation, construction activities will result in significant quantities of dust and as a result, local visibility and PM₁₀ and PM_{2.5} concentrations will be adversely affected. The BAAQMD’s approach to analyses of fugitive dust emissions from construction is to emphasize implementation of effective and comprehensive dust control measures rather than detailed quantification of emissions. The BAAQMD considers any project’s construction-related impacts to be less than significant if the required dust-control measures are implemented. Without these measures, the impact is generally considered to be significant, particularly if sensitive land uses are located in the project vicinity.

The Specific Plan will be subject to the following dust control mitigation measure. Implementation of the measures will reduce impacts from fugitive dust to on- and off-site receptors to a less-than-significant level.

Mitigation Measure AIR-1: Implement control measures for remediation and construction-related air emissions. The project applicant shall ensure that the contractor reduces particulate emissions by complying with the Bay Area Air Quality Management District (“BAAQMD”). During construction, the project applicant shall require the construction contractor to implement the following measures required as part of BAAQMD’s basic and enhanced dust control procedures required for construction sites. These include:

Basic Controls that Apply to All Construction Sites

- a) Water on a continuous and as-needed basis (at least twice daily) all earth surfaces during cleaning, grading, earthmoving and other site preparation activities. Watering should be sufficient to prevent airborne dust from leaving the site.
- b) Use watering to control dust generation during demolition of structures or break-up of pavement.
- c) Cover all trucks hauling construction and demolition debris, including soil, sand and other loose material from the site.
- d) Pave, apply water three times daily, or apply (non-toxic) soil stabilizers on all unpaved access roads, parking areas and staging areas at construction sites.

- e) Sweep daily (with water sweepers or vacuum/street sweepers) all paved access roads, parking areas and staging areas at construction sites.
- f) Sweep streets daily (with water sweepers or vacuum/street sweepers) if visible soil material is carried onto adjacent paved roads.

Enhanced Controls that Apply to Sites Greater than 4 Acres

- g) All “Basic” controls listed above, plus
- h) Apply (non-toxic) soil stabilizers to previously graded portions of the site inactive for more than ten days, or cover or hydroseed these areas.
- i) Enclose, cover, water twice daily or apply (non-toxic) soil stabilizers to exposed stockpiles of debris, soil, sand or other materials that can be blown by the wind.
- j) Limit traffic speeds on unpaved roads to 15 miles per hour.
- k) Install sandbags or other erosion control measures to prevent silt runoff to public roadways.
- l) Replant vegetation in disturbed areas as quickly as possible.
- m) Properly maintain all construction equipment.
- n) Reduce equipment idling time.
- o) Opacity is an indicator of exhaust particulate emissions from off-road diesel powered equipment. The project shall ensure that emissions from all construction diesel powered equipment used on the project site do not exceed 40 percent opacity for more than three minutes in any one hour. Any equipment found to exceed 40 percent opacity (or Ringelmann 2.0) shall be repaired immediately. Essentially any diesel construction equipment that produces dark emissions for three continuous minutes is out of compliance with this measure.
- p) The contractor shall install temporary electrical service whenever possible to avoid the need for independently powered equipment (e.g. compressors).
- q) Clear signage should be posted indicating that diesel equipment standing idle for more than five minutes shall be turned off. This would include trucks waiting to deliver or receive soil, aggregate or other bulk materials. Rotating drum concrete trucks could keep their engines running continuously as long as they were on-site and away from residences.
- r) Properly tune and maintain equipment for low emissions.
- s) The applicant shall ensure that during renovation and demolition activities, removal or disturbance of any materials contains asbestos, lead paint or other hazardous pollutants will be conducted in accordance with BAAQMD rules and regulations as well as other applicable rules and regulations of other agencies.

Significance after Mitigation: Less than Significant.

Operational Impacts

Impact AIR-2: Violate any air quality standard or contribute substantially to an existing or projected air quality violation or result in cumulatively considerable net increase of any criteria pollutant for which the project region is in non-attainment under an applicable federal or state ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors) (criteria b, and c). (Less than Significant)

The Specific Plan will result in an increase in criteria air pollutant emissions from a variety of emissions sources, including on-site area sources (e.g., natural gas combustion for space and water heating, landscape maintenance, use of consumer products such as hairsprays, deodorants, cleaning products, etc.) and mobile on-road sources (automobile and truck trips). Exhaust emissions from passenger vehicle travel associated with the Specific Plan were calculated by using the URBEMIS2007 program, which uses EMFAC2007 (the ARB’s vehicle emissions model for cars and trucks). URBEMIS2007 calculates area source emissions based on the size of the project.

Table IV.E-4 summarizes existing mobile and area emissions for the Specific Plan Area, emissions that will occur with implementation of the Specific Plan and the resulting net emissions as a result of the Specific Plan. The existing and Specific Plan emissions are compared using year 2010 emissions factors, which will show the maximum net emissions, as future years will have less net emissions due to improvements in vehicle emissions controls and retirement of older model vehicles. As indicated in Table IV.E-4, emissions of NO_x, PM₁₀, ROG and CO from the project will not exceed the significance threshold emission levels. Therefore, impacts from increases in these emissions will be less than significant

**TABLE IV.E-4
 SPECIFIC PLAN AIR EMISSIONS**

Air Pollutant	Existing Uses	Specific Plan Uses Lbs/Day	Net New Emissions	Significance Threshold	Significant (Yes or No)?
NO _x	35	61	26	80	No
PM ₁₀	46	86	40	80	No
ROG	35	56	21	80	No
CO	347	597	250	550 ^b	No

^a Emission factors were generated by the Air Board's URBEMIS2007 model for Contra Costa County and assume a default vehicle mix. All daily estimates are for wintertime conditions (most conservative). All emissions are based on Year 2010 emission factors. Emission include both vehicular and area sources.
^b Projects for which mobile source CO emissions exceed 550 pounds per day do not necessarily have a significant air quality impact, but are required to estimate localized CO concentrations.

NOTE: No values exceed applicable standards. The addition of the subtotals may not equal the total due to rounding.

SOURCE: ESA, 2008

Mitigation: None required.

Impact AIR-3: Expose sensitive receptors to substantial pollutant concentrations (criterion d). (Less than Significant)

CO is a localized pollutant of concern. Due to the distance between construction activities and sensitive receptors, construction would not emit CO in quantities that could pose health concerns. Operations would not be anticipated to result in or contribute to CO concentrations that exceed the California 1-hour or 8-hour ambient air quality standards. Thus, mobile-source emissions of CO would not be anticipated to result in or contribute substantially to an air quality violation. The short-term construction and long-term operational mobile-source impact of the Specific Plan on CO concentrations would be less-than-significant.

Construction activities will also increase diesel particulate matter (“DPM”), but the toxic effects of the DPM will be minimal, and less than significant, because the construction will be temporary and will not last over the long-term timeframes used in DPM Health Risk Analyses (e.g.; continuous exposure over a 70-year period). Furthermore because there are no known sensitive receptors located within or in the immediate vicinity of the Specific Plan Area, sensitive receptors would not be exposed to substantial pollutant concentrations from construction. This would be a less-than-significant impact without mitigation.

Mitigation: None required.

Cumulative Impacts

Impact AIR-4: The Specific Plan is consistent with the Bay Area Clean Air Plan, therefore the project will not have a cumulative air quality impact. (Less than Significant)

As discussed above (see Topics Determined Less Than Significant in the Initial Study) the Initial Study found the Specific Plan to be consistent with clean air planning efforts, therefore the Specific Plan will not contribute to a cumulative air quality impact in the region.

Mitigation: None required.

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F. Global Climate Change and Greenhouse Gases

This section describes the regulatory and policy framework and the existing conditions relevant to the issue of climate change and greenhouse gases (“GHGs”). The analysis considers the degree to which implementation of the Specific Plan would contribute to incremental global climate change and align with the state’s goals to reduce GHGs.

In February 2007, the International Panel on Climate Change (“IPCC”) released its fourth assessment on climate change. The report detailed the solidifying consensus around science of global climate change. On April 2, 2007 the Supreme Court of the United States determined that GHGs are pollutants, and that the U.S. Environmental Protection Agency (“EPA”) has authority to regulate them. In California, lawmakers have been taking steps to regulate and reduce the state’s contribution global GHG emissions. All of the foregoing actions are based on observable trends in global climate, scientific projections of future global GHG emissions, and the potential for significant regional environmental impacts. Research suggests that in addition natural processes, human activities, such as the burning of fossil fuels (including coal, natural gas, and petroleum products), deforestation, and industrial livestock practices, contribute additional carbon dioxide (CO₂), methane (CH₄), and other heat trapping emissions into the atmosphere. Climate change could result in adverse consequences to both the natural resources and economy of California.

Background

Policies and guidance are being developed by various levels of governments to help assess the issue and set standards for action. The following background information provides an overview of the existing body of knowledge related to global climate change. In addition, the agencies associated with climate change and GHG regulations are described.

Existing Conditions

Gases in the earth’s atmosphere, classified as atmospheric GHGs, play a critical role in determining the earth’s surface temperature. The sun emits solar radiation that enters earth’s atmosphere from space. A portion of the radiation is absorbed by the earth’s surface and the rest is reflected back toward space. However, the reflection changes the properties of the radiation from short-wave/high-frequency solar radiation to long-wave/lower-frequency infrared radiation. GHGs, which are transparent to solar radiation, absorb infrared radiation. As a result, the radiation that in previous times would have dispersed into space is now retained, resulting in warming of the atmosphere. This process is known as the greenhouse effect in reference to the structures used to grow plants in cold weather by using glazing to retain solar radiation.

Among the prominent GHGs contributing to the greenhouse effect are carbon dioxide (CO₂), methane (CH₄), nitrous oxide (N₂O), and synthetic halocarbons (chlorofluorocarbons (CFCs), hydrofluorocarbons, perfluorocarbons, halons and sulfur hexafluoride). The primary GHG is CO₂, which is a byproduct of fossil fuel combustion. Methane, a GHG approximately 21 times more

potent than CO₂, results from offgassing associated with agricultural practices, landfills, and the decomposition of vegetation.

Processes that absorb and accumulate CO₂, often called CO₂ “sinks,” include absorption by vegetation and dissolution into the ocean.

Human-caused GHG emissions in excess of natural ambient concentrations are responsible for enhancing the greenhouse effect. GHG emissions contributing to global climate change are attributable in large part to human activities associated with the industrial/manufacturing, utility, transportation, residential, and agricultural sectors. In California, the transportation sector is the largest emitter of GHGs, producing 41 percent of all emissions. Electricity generation is the second largest emitter (including out of state emissions for imported electricity) followed by industrial uses (California Energy Commission, 2006a).

While California is a significant contributor of GHG emissions, climate change is a global problem. The cumulative effect of worldwide emissions is the driving force behind climate change. In 2002, depending on the source, California ranked as the 10th to 16th largest emitter of CO₂ in the world (the rankings also include Texas, the only state to emit more CO₂ than California) and produced 492 million gross metric tons of carbon dioxide equivalents in 2004 (California Energy Commission, 2006a).

"Carbon dioxide equivalents" is the unit of measurement used when measuring GHGs to account for the different potential of the various GHGs to retain infrared radiation in the atmosphere and contribute to the greenhouse effect. The global warming potential of a GHG is also dependent on the lifetime, or persistence, of the gas molecule in the atmosphere. For example, one ton of methane has the same contribution to the climate changes as approximately 21 tons of CO₂ (California Energy Commission, 2006a). Expressing GHG emissions in carbon dioxide equivalents allows the contribution of all GHG emissions to be measured as a single unit equivalent to the effect that would occur if only CO₂ were being emitted.

1. Regulatory Setting

To date, GHG emissions have been addressed through environmental regulations enforced through air quality laws. As referenced above, the Supreme Court of the United States has determined that GHG emissions are pollutants that can be regulated under the federal Clean Air Act. In addition, the state legislature has passed laws directing the California Air Resources Board (“CARB”) to develop actions to reduce CHG emissions. At the time of this writing, however, regulations setting ambient air quality emissions standards for GHGs do not exist.

Federal

The EPA is charged with enforcing the Clean Air Act and has established air quality standards for common pollutants. These ambient air quality standards represent the allowable levels for each contaminant, according to the various thresholds of each pollutant for causing adverse health effects. The standards cover what are called “criteria” pollutants because health and other effects

of each pollutant are described in criteria documents. The EPA has been directed to develop regulations to address the GHG emissions of cars and trucks. At the time of this writing, EPA regulations for GHGs do not exist and are not expected until late 2008 at the earliest.

State

Assembly Bill 1493

In 2002, then-Governor Gray Davis signed Assembly Bill (AB) 1493. AB 1493 requires CARB to develop and adopt regulations by January 1, 2005, that achieve “the maximum feasible reduction of greenhouse gases emitted by passenger vehicles and light-duty truck and other vehicles determined by [CARB] to be vehicles whose primary use is noncommercial personal transportation in the State.”

Executive Order S-3-05

Executive Order S-3-05, which was signed by Governor Arnold Schwarzenegger in 2005, proclaims that California is vulnerable to the impacts of climate change. It declares that increased temperatures could reduce the Sierra's snow-pack, further exacerbate California's air quality problems, and potentially cause a rise in sea levels. To combat those concerns, the Executive Order established total greenhouse gas emission targets. Specifically, emissions are to be progressively reduced as follows:

- By 2010, reduce GHG emissions to the 2000 level.
- By 2020, reduce GHG emissions to the 1990 level.
- By 2050, reduce GHG emissions to 80 percent below the 1990 level.

Climate Action Team (“CAT”)

The Executive Order directed the Secretary of the California Environmental Protection Agency (“Cal EPA”) to coordinate a multi-agency effort to reduce GHG emissions to the target levels. The Secretary will also submit bi-annual reports to the governor and state legislature describing: (1) progress made toward reaching the emission targets; (2) impacts of global climate change on California's resources; and (3) mitigation and adaptation plans to combat these impacts. To comply with the Executive Order, the Secretary of Cal EPA created a Climate Act Team (“CAT”) composed of members from various state agencies and commissions. CAT released its first report in March 2006. The report proposed to achieve the targets by building on voluntary actions of California businesses, local government, and community actions, as well as through state incentive and regulatory programs.

The CAT report provides GHG emission reduction strategies that include the following:

Climate Change Standards. AB 1493 requires the state to develop and adopt regulations that achieve the maximum feasible and cost-effective reduction of climate change emissions emitted by passenger vehicles and light duty trucks. CARB adopted regulations in September 2004.

Green Buildings Initiative. Executive Order, s-20-04 (CA 2004) sets a goal of reducing energy use in public and private buildings by 20 percent by the year 2015, as compared with 2003 levels. The Executive Order and related action plan identify specific actions state agencies are to take with state-owned and state-leased buildings. The Executive order and plan also discuss various strategies and incentives to encourage private building owners and operators to achieve the 20 percent target.

Diesel Anti-Idling. In July 2004, CARB adopted a measure to limit diesel-fueled commercial motor vehicle idling.

Building Energy Efficiency Standards in Place and in Progress. Public Resources Code section 25402 authorizes the California Energy Commission (CEC) to adopt and periodically update its building energy efficiency standards (that apply to newly constructed buildings and additions to and alterations to existing buildings).

Appliance Energy Efficiency Standards in Place and in Progress. Public Resources Code section 25402 authorizes the CEC to adopt and periodically update its appliance energy efficiency standards (that apply to devices and equipment using energy that are sold or offered for sale in California).

Fuel-Efficient Replacement Tires & Inflation Programs. State legislation established a state-wide program to encourage the production and use of more efficient tires.

Measures to Improve Transportation Energy Efficiency. Builds on current efforts to provide a framework for expanded and new initiatives including incentives, tools, and information that advance cleaner transportation and reduce climate change emissions.

Assembly Bill 32—California Global Warming Solutions Act

On September 27, 2006, Governor Schwarzenegger signed AB 32, the California Global Warming Solutions Act. AB 32 requires that state-wide GHG emissions be reduced to 1990 levels by the year 2020. This reduction will be accomplished through an enforceable state-wide cap on GHG emissions that will be phased in starting in 2012. To effectively implement the cap, AB 32 directs CARB to develop and implement regulations to reduce state-wide GHG emissions from stationary sources. AB 32 specifies that regulations adopted in response to AB 1493 should be used to address GHG emissions from mobile sources (i.e., vehicles). AB 32 also states that if AB 1493 regulations cannot be implemented, then CARB should develop new regulations to control vehicle GHG emissions under AB 32's authorizations.

AB 32 requires CARB to adopt a quantified cap on GHG emissions representing 1990 emissions levels and disclose how it arrives at the cap; institute a schedule to meet the emissions cap; and develop tracking, reporting, and enforcement mechanisms to ensure that the state achieves reductions in GHG emissions necessary to meet the cap. AB 32 also includes guidance to institute emissions reductions in an economically efficient manner by the reductions.

Senate Bill 1368

SB 1368 is the companion bill of AB 32 and was signed by Governor Schwarzenegger in September 2006. SB 1368 required the California Public Utilities Commission (“PUC”) to establish a GHG emissions performance standard for base-load generation from investor-owned utilities by February 1, 2007. The California Energy Commission (“CEC”) was required to establish a similar standard for local publicly owned utilities by June 30, 2007. These standards cannot exceed the GHG emissions rate from a base-load combined-cycle natural gas fired plant.

On January 27, 2007, the PUC adopted an interim Greenhouse Gas Emissions Performance Standard to require that all new long-term commitments for baseload power generation to serve Californians do not exceed the emissions of a combined cycle gas turbine plant. The legislation further requires that all electricity provided to California, including imported electricity, must be generated from plants that meet the standards set by the PUC and CEC.

Senate Bill 375 (2008)

Recently signed by Governor Schwarzenegger, SB 375 builds on the existing regional transportation planning process (which is overseen by local elected officials with land use responsibilities) to connect the reduction of GHG emissions from cars and light trucks to land use and transportation policy. According to CARB, in 1990 GHG emissions from automobiles and light trucks were 108 million metric tons, but by 2004 these emissions had increased to 135 million metric tons. SB 375 asserts that “Without improved land use and transportation policy, California will not be able to achieve the goals of AB 32.”

Accordingly, SB 375 has three goals: (1) to use the regional transportation planning process to help achieve AB 32 goals; (2) to use CEQA streamlining as an incentive to encourage residential projects that help achieve AB 32 goals to reduce GHGs; and (3) to coordinate the regional housing needs allocation process with the regional transportation planning process.

CARB Early Action Measures

In June 2007, CARB directed staff to pursue 37 early actions for reducing greenhouse gas emissions under AB 32. The broad spectrum of strategies to be developed – including a Low Carbon Fuel Standard, regulations for refrigerants with high global warming potentials, guidance and protocols for local governments to facilitate greenhouse gas reductions, and green ports – reflects that the serious threat of climate change requires action as soon as possible (CARB, 2007a).

In addition to approving the 37 greenhouse gas reduction strategies, CARB directed staff to further evaluate early action recommendations made at the June 2007 meeting, and to report back to CARB within six months. CARB staff evaluated all 48 recommendations submitted by several stakeholder and several internally-generated staff ideas and published the *Draft List of Early Action Measures To Reduce Greenhouse Gas Emissions In California Recommended For Board Consideration* (CARB, 2007a). CARB ultimately identified nine Discrete Early Action measures including potential regulations affecting landfills, motor vehicle fuels, refrigerants in cars, port

operations and other sources. The Board has already approved two Discrete Early Action measures (ship electrification at ports and reduction of high GWP gases in consumer products). Regulatory development for the remaining measures is ongoing. (CARB, 2008)

Office of Planning and Research (OPR) Technical Advisory on CEQA and Climate Change (June 2008)

The Governor's Office of Planning and Research (OPR) is in the process of developing guidelines for the mitigation of GHG emissions or the effects of GHG emissions under CEQA, following Senate Bill 97. OPR is required to prepare and transmit these guidelines by July 1, 2009 for certification and adoption by January 1, 2010. In the interim, a June 2008 Technical Advisory (OPR, 2008) provides informal guidance for public agencies as they address the issue of climate change in their CEQA documents.

The June 2008 Technical Advisory from OPR offers recommendations for identifying GHG emissions, determining significance under CEQA, and mitigating impacts. It states that lead agencies under CEQA should develop their own approach to performing a climate change analysis, for projects that generate GHG emissions. The approach should be consistent for analyzing all such projects, and analyses should be performed based on the best available information. If a lead agency determines that GHGs may be generated by a proposed project, the agency is responsible for quantifying estimated GHG emissions by type and source. The June 2008 Technical Advisory also states that the lead agency must assess whether project emissions are individually or cumulatively significant and implement strategies to avoid, reduce, or otherwise mitigate the impacts of those emissions when impacts are potentially significant. Regional agencies can attempt to reduce GHG emissions through their planning processes, according to the OPR Technical Advisory. Regional transportation planning agencies can adopt plans and programs that address congestion relief and reduce vehicle miles traveled (VMT), for example.

CARB AB 32 Proposed Scoping Plan (October 2008)

In October of 2008 CARB developed a Scoping Plan outlining the State's strategy to achieve the 2020 greenhouse gas emissions limit. This Proposed Scoping Plan, developed by CARB in coordination with the Climate Action Team (CAT), proposes a comprehensive set of actions designed to reduce overall greenhouse gas emissions in California, improve the environment, reduce dependence on oil, diversify our energy sources, save energy, create new jobs, and enhance public health. It will be presented to the Board for approval at its meeting in December 2008. The measures in the Scoping Plan approved by the Board will be developed over the next two years and be in place by 2012.

The Scoping Plan expands the list of nine Discrete Early Action Measures into a list of 39 Recommended Actions contained in Appendices C and E of the Plan. These measures are presented in **Table 4.F-1** below.

**TABLE 4.F-1
 RECOMMENDED ACTIONS OF CLIMATE CHANGE PROPOSED SCOPING PLAN**

ID #	Sector	Strategy Name	ID #	Sector	Strategy Name
T-1	Transportation	Pavley I and II – Light-Duty Vehicle GHG Standards	I-1	Industry	Energy Efficiency and Co-benefits Audits for Large Industrial Sources
T-2	Transportation	Low Carbon Fuel Standard (Discrete Early Action)	I-2	Industry	Oil and Gas Extraction GHG Emission Reduction
T-3	Transportation	Regional Transportation-Related GHG Targets	I-3	Industry	GHG Leak Reduction from Oil and Gas Transmission
T-4	Transportation	Vehicle Efficiency Measures	I-4	Industry	Refinery Flare Recovery Process Improvements
T-5	Transportation	Ship Electrification at Ports (Discrete Early Action)	I-5	Industry	Removal of Methane Exemption from Existing Refinery Regulations
T-6	Transportation	Goods-movement Efficiency Measures	RW-1	Recycling and Waste Management	Landfill Methane Control (Discrete Early Action)
T-7	Transportation	Heavy Duty Vehicle Greenhouse Gas Emission Reduction Measure – Aerodynamic Efficiency (Discrete Early Action)	RW-2	Recycling and Waste Management	Additional Reductions in Landfill Methane – Capture Improvements
T-8	Transportation	Medium and Heavy-Duty Vehicle Hybridization	RW-3	Recycling and Waste Management	High Recycling/Zero Waste
T-9	Transportation	High Speed Rail	F-1	Forestry	Sustainable Forest Target
E-1	Electricity and Natural Gas	Increased Utility Energy efficiency programs More stringent Building and Appliance Standards	H-1	High Global Warming Potential Gases	Motor Vehicle Air Conditioning Systems (Discrete Early Action)
E-2	Electricity and Natural Gas	Increase Combined Heat and Power Use by 30,000GWh	H-2	High Global Warming Potential Gases	SF6 Limits in Non-Utility and Non-Semiconductor Applications (Discrete Early Action)
E-3	Electricity and Natural Gas	Renewables Portfolio Standard	H-3	High Global Warming Potential Gases	Reduction in Perfluorocarbons in Semiconductor Manufacturing (Discrete Early Action)
E-4	Electricity and Natural Gas	Million Solar Roofs	H-4	High Global Warming Potential Gases	Limit High GWP Use in Consumer Products (Discrete Early Action, Adopted June 2008)
CR-1	Electricity and Natural Gas	Energy Efficiency	H-5	High Global Warming Potential Gases	High GWP Reductions from Mobile Sources
CR-2	Electricity and Natural Gas	Solar Water Heating	H-6	High Global Warming Potential Gases	High GWP Reductions from Stationary Sources
GB-1	Green Buildings	Green Buildings	H-7	High Global Warming Potential Gases	Mitigation Fee on High GWP Gases
W-1	Water	Water Use Efficiency	A-1	Agriculture	Methane Capture at Large Dairies
W-2	Water	Water Recycling			
W-3	Water	Water System Energy Efficiency			
W-4	Water	Reuse Urban Runoff			
W-5	Water	Increase Renewable Energy Production			
W-6	Water	Public Goods Charge (Water)			

SOURCE: CARB, 2008

CARB Preliminary Draft Staff Proposal, October 2008

In its Staff Proposal, CARB is taking the first step toward developing recommended statewide interim thresholds of significance for GHGs that may be adopted by local agencies for their own use. The proposal does not attempt to address every type of project that may be subject to CEQA, but instead focuses on common project types that, collectively, are responsible for substantial GHG emissions – specifically, industrial, residential, and commercial projects. CARB is developing these thresholds in these sectors to advance climate objectives, streamline project review, and encourage consistency and uniformity in the CEQA analysis of GHG emissions throughout the State. Finalized thresholds are not expected until 2009.

The objective of CARB staff’s preliminary interim threshold concepts is to develop thresholds for projects in specific sectors that will subject a substantial portion of the GHG emissions from all new projects to CEQA’s mitigation requirement, consistent with a lead agency’s obligation to “avoid or minimize environmental damage where feasible.”

In December 2007, CARB approved a GHG emissions limit for 2020 and proposed regulations requiring mandatory reporting of GHGs for large facilities. An inventory of the state's 1990 emissions using a variety of data sources, including inputs related to fuel combustion, industrial processes, and agricultural practices, was estimated to be 427 million tons carbon dioxide equivalent (CO₂e). CARB AB 32 Draft Scoping Plan estimated that 2020 emission projections in California could be 596 million metric tons of CO₂e if no actions are taken to reduce GHGs. In October 2008, the CARB released Recommended Greenhouse Gas Reduction Measures outlining actions to reduce 174 million metric tons of CO₂e from being emitted by 2020 in order to meet the 1990 level, as required by AB 32.

Local

Locust Street / Mt. Diablo Boulevard Specific Plan Goal and Objectives

The Locust Street / Mt. Diablo Boulevard Specific Plan includes ten land use and urban design (LU) objectives, including the following objective and policies with climate change ramifications.

Objective LU-10 – Sustainability: Promote development patterns and building designs that reduce auto dependency and that foster energy conservation and resource protection.

Policy LU-10.1: Create a safe, comfortable and engaging pedestrian environment that encourages walking as a viable alternative to vehicular travel.

Policy LU-10.2: Maximize opportunities for shared parking that promote a “park-once” behavior, encouraging visitors to the Downtown to walk between destinations.

Policy LU-10.3: New construction in the Specific Plan Area is encouraged to incorporate green building features that can achieve the equivalent of a certification from the U.S. Green Building Council’s Leadership in Energy and Environmental Design (LEED) program.

General Plan 2025 Policies

Walnut Creek's General Plan 2025 Chapter 4 (Built Environment) includes Policy 27.1, which is relevant to GHG emissions:

Policy 27.1: Encourage resource-efficient building techniques, materials, and technologies in new construction and renovation.

2. Existing Conditions

The California Energy Commission reports that California is the 12th to 16th largest emitter of CO₂ in the world and produced 492 million metric tons of CO₂e in 2004 (California Energy Commission, 2006). Consumption of fossil fuels in the transportation sector was the single largest source of California's GHG emissions in 2004, accounting for 41 percent of total GHG emissions in the state. This category was followed by the electric power sector (including both in-state and out-of-state sources) (22 percent) and the industrial sector (20 percent). Methane, a highly potent GHG, results from off-gassing associated with agricultural practices and landfills.

The increased concentration of GHGs in the atmosphere has been linked to global climate change. Some of the potential resulting effects of climate change in California may include loss in Sierra snow pack and threats to water supplies, sea level rise, more extreme heat days per year, more high ozone days, more large forest fires, and more drought years (CalEPA, 2006). Globally, climate change has the potential to impact numerous environmental resources through potential, though uncertain, impacts related to future air temperatures and precipitation patterns. The projected effects of global climate change on weather are likely to vary regionally, but are expected to include the following direct effects (IPCC, 2001):

- Higher maximum temperatures and more hot days over nearly all land areas;
- Higher minimum temperatures and fewer cold days and frost days over nearly all land areas;
- Reduced diurnal temperature range over most land areas;
- Increase of heat index over land areas; and
- More intense precipitation events.

There are also many secondary effects that are projected to result from global climate change, including global rise in sea level, impacts to agriculture, changes in disease vectors, and changes in habitat and biodiversity. While the possible outcomes and the feedback mechanisms involved are not fully understood and much research remains to be done, the potential for substantial environmental, social, and economic consequences over the long term may be great.

Global Changes

The Third IPCC report indicates that the average global temperature is likely to increase between 3.6 and 8.1 degrees Fahrenheit by the year 2100, with larger increases possible but not likely. Temperature increases are expected to vary widely in specific locations depending on a variety of

factors. The increase in temperature is expected to lead to higher temperature extremes, precipitation extremes leading to increased flooding and droughts, ocean acidification from increase carbon content, and rising sea levels. Because the effects of warming are likely to include making dry areas drier, and rising sea levels may inundate coastal areas, subtropical and low-lying regions are expected to be the areas most affected by climate change.

Changes in the Climates of Western United States and California

Climate models indicate that if GHG emissions continue to proceed at a medium or high rate, temperatures in California are expected to increase by 4.7 to 10.5 degrees Fahrenheit by the end of the century.³ Lower emission rates would reduce the projected warming to 3 to 5.6 degrees Fahrenheit. Almost all climate scenarios include a continuing warming trend through the end of the century given the vast amounts of GHGs already released and the difficulties associated with reducing emissions to a level that would stabilize the climate. According to the 2006 California Climate Action Team Report (CCAT, 2006), the following climate change effects are predicted in California over the course of the next century:

- A diminishing Sierra snowpack declining by 70 percent to 90 percent, threatening the state's water supply.
- Increasing temperatures from 8 to 10.4 degrees F under higher emission scenarios, leading to a 25 to 35 percent increase in the number of days that ozone pollution levels are exceeded in most urban areas.
- Coastal erosion along the length of California and sea water intrusion into the Delta from a 4- to 33-inch rise in sea level. This would exacerbate flooding in already vulnerable regions.
- Increased vulnerability of forests due to pest infestation and increased temperatures.
- Increased challenges for the state's important agriculture industry from limited water shortage, increasing temperatures, and saltwater intrusion into the Delta.
- Increased electricity demand, particularly in the hot summer months.

Therefore, temperature increases would lead to environmental impacts in a wide variety of areas, including: reduced snowpack resulting in changes to the existing water resources, increased risk of wildfires, changing weather expectations for farmers and ranchers, and public health hazards associated with higher peak temperatures, heat waves, and decreased air quality.

Water Resources

Depending on the climate model, precipitation is predicted to increase or decrease slightly. However, the form in which precipitation occurs could change substantially. Warmer winters would lead to less snow and more rain. As a result, the Sierra snowpack would be reduced and would melt earlier. This change could lead to increased flood risks as more water flows into reservoirs and rivers during the winter rainy period. Increased temperatures would also lead to a rise in the sea level, from both thermal expansion and the melting of land-based glaciers.

During the past century, sea levels along the California coast have risen by approximately seven inches. Climate forecasts indicate the sea level would rise by 7 to 23 inches over the next 100 years, depending on the climate model. Substantial melting of either the Greenland or Antarctic ice sheets would lead to an even greater increase; however, the IPCC models do not indicate that this would occur within the next 100 years, which is the boundary of most climate models. Longer forecast periods are inherently less reliable as they require more assumptions, and tend to compound the effects of assumptions that may be incorrect. Increases in sea level could lead to increased coastal flooding, salt water intrusion into aquifers, and disrupt wetlands and estuaries.

Wildfires

Increased temperatures would lead to increases in evapotranspiration. The summers would likely be drier, and vegetation would also be more likely to dry out, causing increasingly more flammable forests and wildlands. In addition, warmer temperatures could lead to the expansion of pests that kill and weaken trees, leading to increases in the amount of highly flammable dead trees, increasing the risk of large forest fires.

Weather Extremes

The temperature increases presented in climate change models are yearly averages. Within those averages is the potential for substantially hotter summers and/or colder winters. As a result of global climate change, the weather is expected to become more variable, with larger extremes. In California, the increase in temperatures is expected to lead to more days with temperatures in excess of 95 degrees. More days of extreme heat has implications for public health as Californians would face greater risk of death from dehydration, heat stroke/exhaustion, heart attack, stroke, and respiratory distress caused by extreme heat. In addition, increased temperatures have implications for agricultural crops, particularly long-term crops such as grapes and fruit trees that are planted in particular locations to take advantage of micro-climates.

Air Quality

As previously indicated, increased temperatures can increase air quality problems. Increased temperatures create the conditions in which ozone formation can increase. In addition, hotter temperatures would likely result in increased electricity use to power air conditioners and refrigerators. Increased power use has the potential to result in increased air pollutant emissions as more electrical generation is needed to meet the demand.

Uncertainty Regarding Global Climate Change

The scientific community has largely agreed that the earth is warming, and that humans are contributing to that change. However, the earth's climate is composed of many complex mechanisms, including ocean currents, cloud cover, as well as the jet-stream and other pressure/temperature weather guiding systems. These systems are in turn influenced by changes in ocean salinity, changes in the evapotranspiration of vegetation, the reflectivity (albedo) of groundcover, and numerous other factors. Some changes have the potential to reduce climate

change, while others could form a feedback mechanism that would speed the warming process beyond what is currently projected. While the climate system is inherently dynamic, the overall trend is towards a gradually warming planet.

3. Standards of Significance

The increased concentration of GHGs in the atmosphere has been linked to global climate change. Implementation of the Specific Plan would contribute to GHG emissions. At the time of this writing, there are no state or federal regulations that set ambient air quality emissions standards for GHGs. There are no known standards of significance for determining the environmental impacts of the emissions of GHGs by a project.

For the Specific Plan, four considerations are identified to evaluate whether emissions from implementation of the project may have a potentially significant cumulative impact on climate change and whether the project's projected CHC emissions are consistent with the state goal of reducing GHG emissions in California, consistent with AB 32. See Approach and Methodology, below.

4. Approach and Methodology

At this time, few if any cities, counties or agencies state-wide have adopted standards of significance for evaluating a project's contribution to climate change. The Governor's Office of Planning and Research ("OPR") has asked CARB to "recommend a method for setting thresholds of significance to encourage consistency and uniformity in the CEQA analysis of GHG emissions" throughout the state because OPR has recognized that "the global nature of climate change warrants investigation of a statewide threshold for GHG emissions"(OPR, 2008). On June 19, 2008, OPR released a Technical Advisory for addressing climate change through CEQA review. OPR's technical advisory offers informal guidance on the steps that lead agencies should take to address climate changes in their CEQA documents, in the absence of state-wide thresholds. OPR will develop, and CARB will certify and adopt, amendments to the CEQA guidelines on or before January 1, 2010, pursuant to Senate Bill 97.

OPR's technical advisory provides informal guidance regarding the steps lead agencies should take to address climate change in their CEQA documents. In the absence of adopted statewide thresholds, OPR recommends the following approach for analyzing GHG emissions:

1. Identify and quantify the project's GHG emissions;
2. Assess the significance of the impact on climate change; and
3. If the impact is found to be significant, identify alternatives and/or mitigation measures that will reduce the impact to less than significant levels.

Based on a review of recent publications and actions from CARB and OPR's technical advisory regarding analysis of GHG's in CEQA documents (CARB, 2007a, and 2007b, OPR 2008), four considerations will be used to evaluate whether project emissions could conflict with state goals

for reducing GHG emissions. Each is discussed in the impacts analysis below. The considerations include the following:

- (a) The project's potential conflicts with the 44 early action strategies identified by CARB;
- (b) The relative size of the project in comparison to the state-wide estimated GHG emissions reduction goal of 174 million metric tons of CO₂e by 2020 and in comparison to the size of major facilities that are required to report GHG emissions (25,000 metric tons of CO₂e per year)¹;
- (c) Conflict with the state goal of reducing GHG emissions in California to 1990 levels by 2020, and to 80 percent of 1990 levels by 2050, as set forth by the timetable established in AB 32; and
- (d) The basic parameters of a project to determine whether its design is inherently energy efficient.

These four considerations will be used to evaluate project emissions that could conflict with state goals for reducing GHG emissions.

As with other individual and relatively small projects (i.e., projects that are not cement plants, oil refineries, electric generating facilities/providers, co-generation facilities, or hydrogen plants or other stationary combustion sources that emit more than 25,000 metric tons/year of CO₂e), the specific emissions from implementation of the Specific Plan are not expected to individually have an impact on global climate change (AEP, 2007). Furthermore, GHG emissions impacts are considered to be exclusively cumulative impacts; there are no non-cumulative GHG emissions impacts from a climate change perspective (CAPCOA, 2008).

5. Impact Discussion

Impact GHG-1: Greenhouse gas (GHG) emissions from implementation of the Specific Plan would not conflict with the state goal of reducing GHG emissions in California, consistent with AB 32. (Less than Significant)

Implementation of the Specific Plan would contribute incrementally to global climate change as a result of increased emissions of GHGs, primarily CO₂, emitted by increased fossil fuel combustion due to development proposed in the Specific Plan, primarily from increased vehicle traffic, electricity usage, and natural gas usage (area emissions). In addition, GHG emissions from trucks and earthmoving equipment associated with construction activities would have a one time contribution to global climate change.

Project-related emissions of GHGs were calculated using CARB's URBEMIS2007 model as well as the indirect electricity emission procedures that follow the General Reporting Protocol of the California Climate Action Registry. The URBEMIS inputs and other GHG calculations are

¹ The State of California has not provided guidance as to quantitative significance thresholds for assessing the impact of greenhouse gas emissions on climate change and global warming concerns. Nothing in the CEQA Guidelines has yet addressed this issue.

provided in the Appendix B to this EIR. GHG emissions are estimated for the proposed uses that may be developed with implementation of the Specific Plan and the existing uses to be removed to accommodate such development. The project increment is the net change between the existing operations and the proposed operations.

As described above, the following four types of analyses are used in determining whether the Specific Plan would conflict with state goals for reducing GHG emissions.

1. Potential Conflicts with the 44 Early Action Strategies identified by CARB (consideration a)

With regard to whether implementation of the Specific Plan has potential conflicts with the CARB 44 early action strategies, the Specific Plan does not pose any apparent conflict with the most recent list of the CARB early action strategies. These strategies are almost entirely targeted at emissions from fuel production and storage, transportation of goods (via haul trucks and ports), cement plants or energy facilities. The strategies that do address light-duty motor vehicles are directed toward regulatory agencies and not land use development.

2. GHG Emissions (consideration b and c)

Consideration is given to the relative size of the project in comparison to the estimated greenhouse reduction goal of 174 million metric tons per year of CO₂e emissions by 2020 and in comparison to the size of major facilities that are required to report GHG emissions (25,000 metric tons per year of CO₂e emissions) (CAPCOA Significance Threshold 2.3). Implementation of the Specific Plan would generate a net increase of 4,772 metric tons of CO₂e emissions per year (including direct emissions from vehicle trips and space heating, and indirect emissions from the use of electricity). The Specific Plan would not be classified as a major source of GHG emissions, as emissions from project implementation would only be about 20 percent of the lower reporting limit, which is 25,000 metric tons of CO₂e emission per year. GHG emissions from mobile equipment would be approximately 1,197 metric tons during the estimated peak year of construction. So construction GHG emissions would be less than the emissions from operations.

When compared to the overall state reduction goal of approximately 174 million metric tons CO₂e emission per year, the net GHG emissions for the Specific Plan operations (4,773 metric tons CO₂e emission per year or 0.003 percent of the state goal) are quite small and would not conflict with the state's ability to meet the goals of AB 32.

3. Sustainable Design Elements (consideration d)

Consideration is given to whether the basic design parameters of a project are inherently energy efficient. The Specific Plan will incorporate sustainable elements. Sustainable site development and design strategies that will contribute to a reduction in GHG emissions include Specific Plan Objective LU-10 – Sustainability, which states the Specific Plan will “promote development patterns and building designs that reduce auto dependency and that foster energy conservation and resource protection.” Objective LU-10 further enumerates three specific policies:

Policy LU-10.1: Create a safe, comfortable and engaging pedestrian environment that encourages walking as a viable alternative to vehicular travel.

Policy LU-10.2: Maximize opportunities for shared parking that promote a “park-once” behavior, encouraging visitors to the Downtown to walk between destinations.

Policy LU-10.3: New construction in the Specific Plan Area is encouraged to incorporate green building features that can achieve the equivalent of a certification from the U.S. Green Building Council’s Leadership in Energy and Environmental Design (LEED) program.

Furthermore, Walnut Creek’s General Plan 2025 includes Built Environment Policy 27.1, encouraging resource-efficient building techniques, materials, and technologies in new construction and renovation.

In summary, based on the analysis provided above, implementation of the Specific Plan would not conflict with the state’s goals in AB 32, and emissions of GHGs associated with the Specific Plan would be less-than-significant.

Mitigation: None required.

Cumulative Impacts

Impact GHG-2: Implementation of the Specific Plan, combined with past, present, and reasonably foreseeable probable future projects, considering construction and operation activities, would not result in a substantial cumulative increase GHG emissions. (Less than Significant)

As the effect of global climate change and the effect of GHGs is cumulative, as analyzed for Impact GHG-1, implementation of the Specific Plan and other past, present and reasonably foreseeable projects or plans would not substantially increase GHG emissions, particularly given anticipated compliance with all state and local goals and policies, in addition to increasing incorporation of sustainable design and operations in new development. The impact would be less than significant.

Mitigation: None required.

References – Global Climate Change and Greenhouse Gases

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G. Noise

This section provides a discussion of applicable plans, policies, and regulations; and existing noise conditions pertaining to the Locust Street / Mt. Diablo Specific Plan Area.

Background

Definitions

Sound is mechanical energy transmitted by pressure waves through a medium such as air. Noise is defined as unwanted sound. The sound pressure level has become the most common descriptor used to characterize the loudness of an ambient sound level. Sound pressure level is measured in decibels (“dB”), with zero dB corresponding roughly to the threshold of human hearing, and 120 to 140 dB corresponding to the threshold of pain. Because sound pressure can vary greatly within the range of human hearing, a logarithmic loudness scale is used to keep sound intensity numbers at a convenient and manageable level.

Sound pressure fluctuations can be measured in units of hertz (“Hz”), which correspond to the frequency of a particular sound. Typically, sound does not consist of a single frequency, but rather a broad band of frequencies varying in levels of magnitude (sound power). When all the audible frequencies of a sound are measured, a sound spectrum is plotted consisting of a range of frequency spanning 20 to 20,000 Hz.

The typical human ear is not equally sensitive to all frequencies of the audible sound spectrum. When assessing potential noise impacts, sound is measured using an electronic filter that de-emphasizes the frequencies below 1,000 Hz and above 5,000 Hz in a manner corresponding to the human ear’s decreased sensitivity to low and extremely high frequencies instead of the frequency mid-range. This method of frequency weighting is referred to as A-weighting and is expressed in units of A-weighted decibels (“dBA”).¹ Frequency A-weighting is typically applied to community noise measurements.

Noise Exposure and Community Noise

Noise exposure is a measure of the noise experienced by the individual over a period of time. A noise level is a measure of noise at a given instant in time. However, noise levels rarely persist consistently over a long period of time. Rather, community noise varies continuously with time with respect to the contributing sound sources in the environment. Community noise is primarily the product of many distant noise sources, which constitute a relatively stable background noise exposure, with the individual contributors unidentifiable. The background noise level changes throughout a typical day, but does so gradually, corresponding with the addition and subtraction of distant noise sources such as traffic and atmospheric conditions. What makes community noise constantly variable throughout a day, besides the slowly changing background noise, is the

¹ All noise levels reported herein reflect A-weighted decibels unless otherwise stated.

addition of short duration single event noise sources (e.g., aircraft flyovers, motor vehicles, sirens), which are readily identifiable to the individual.

These successive additions of sound to the community noise environment varies the community noise level from instant to instant requiring the measurement of noise exposure over a period of time to legitimately characterize a community noise environment and evaluate cumulative noise impacts. This time-varying characteristic of environmental noise is described using statistical noise descriptors. The most frequently used noise descriptors are summarized below:

- L_{eq} : The equivalent sound level is used to describe noise over a specified period of time, typically one hour, in terms of a single numerical value. The L_{eq} is the constant sound level, which would contain the same acoustic energy as the varying sound level, during the same time period (i.e., the average noise exposure level for the given time period).
- L_{max} : The instantaneous maximum noise level measured during the measurement period of interest.
- L_x : The sound level that is equaled or exceeded x percent of a specified time period. The L_{50} represents the median sound level.

DNL (or “Ldn”): The energy average of the A-weighted sound levels occurring during a 24-hour period, and which accounts for the greater sensitivity of most people to nighttime noise by weighting noise levels at night (“penalizing” nighttime noises). Noise between 10:00 p.m. and 7:00 a.m. is weighted (penalized) by adding 10 dBA to take into account the greater annoyance of nighttime noises. This noise descriptor is referred to by different agencies and references as either DNL or Ldn. The two notations refer to the same noise descriptor.

CNEL: Similar to the DNL the Community Noise Equivalent Level (“CNEL”) adds a 5-dBA “penalty” for the evening hours between 7:00 p.m. and 10:00 p.m. in addition to a 10-dBA penalty between the hours of 10:00 p.m. and 7:00 a.m.

Effects of Noise on People

The effects of noise on people can be placed into three categories:

- subjective effects of annoyance, nuisance, dissatisfaction;
- interference with activities such as speech, sleep, learning; and
- physiological effects such as hearing loss or sudden startling.

Environmental noise typically produces effects in the first two categories. Workers in industrial plants generally experience noise in the last category. There is no completely satisfactory way to measure the subjective effects of noise, or the corresponding reactions of annoyance and dissatisfaction. A wide variation exists in the individual thresholds of annoyance, and different tolerances to noise tend to develop based on an individual’s past experiences with noise.

Thus, an important way of predicting a human reaction to a new noise environment is the way it compares to the existing environment to which one has adapted: the so called “ambient noise” level. In general, the more a new noise exceeds the previously existing ambient noise level, the

less acceptable the new noise will be judged by those hearing it. With regard to increases in A-weighted noise level, the following relationships occur:

- except in carefully controlled laboratory experiments, a change of 1 dBA cannot be perceived;
- outside of the laboratory, a 3-dBA change is considered a just-perceivable difference;
- a change in level of at least 5 dBA is required before any noticeable change in human response would be expected; and
- a 10-dBA change is subjectively heard as approximately a doubling in loudness, and can cause adverse response

These relationships occur in part because of the logarithmic nature of sound and the decibel system. The human ear perceives sound in a non-linear fashion; hence the decibel scale was developed. Because the decibel scale is based on logarithms, two noise sources do not combine in a simple additive fashion, rather logarithmically. For example, if two identical noise sources produce noise levels of 50 dBA, the combined sound level would be 53 dBA, not 100 dBA.

Noise Attenuation

Stationary point sources of noise, including stationary mobile sources such as idling vehicles, attenuate (lessen) at a rate of 6 to 7.5 dBA per doubling of distance from the source, depending on the topography of the area and environmental conditions (i.e., atmospheric conditions and noise barriers, either vegetative or manufactured, etc.). Widely distributed noise, such as a large industrial facility spread over many acres or a street with moving vehicles, would typically attenuate at a lower rate, approximately 3 to 4.5 dBA.

1. Regulatory Setting

Noise issues are addressed in Title 24 of the *California Code of Regulations* (for new multifamily residential developments), local general plan policies, and local noise ordinance standards and municipal codes related to noise. Federal, state, and local agencies regulate different aspects of environmental noise.

State of California

State regulations include requirements for the construction of new hotels, motels, apartment houses, and dwellings other than detached single-family dwellings that are intended to limit the extent of noise transmitted into habitable spaces. These requirements are collectively known as the California Noise Insulation Standards and are found in *California Code of Regulations*, Title 24 (known as the Building Standards Administrative Code), Part 2 (known as the California Building Code), Appendix Chapters 12 and 12A. For limiting noise transmitted between adjacent dwelling units, the noise insulation standards specify the extent to which walls, doors, and floor ceiling assemblies must block or absorb sound. For limiting noise from exterior sources, the noise insulation standards set forth an interior standard of DNL 45 dBA in any habitable room and,

where such units are proposed in areas subject to noise levels greater than DNL 60 dBA, require an acoustical analysis demonstrating how dwelling units have been designed to meet this interior standard. If the interior noise level depends upon windows being closed, the design for the structure must also specify a ventilation or air-conditioning system to provide a habitable interior environment. Title 24 standards are enforced through the building permit application process in Walnut Creek, as in most jurisdictions.

City of Walnut Creek General Plan 2025

The Noise Element of the General Plan contains the following policies to achieve the goal of providing an acceptable noise environment for existing and future residents of Walnut Creek (City of Walnut Creek, 2006):

Safety and Noise

GOAL 8: Provide compatible noise environments for new development, redevelopment and condo conversion.

- Policy 8.1: Apply the noise and land use compatibility table and standards to all residential, commercial, and mixed-use proposals, including condominium conversions.
- Policy 8.2: Policy 8.2. Address the issue of residences affected by intermittent urban noise from sources such as heating, ventilating, and air conditioning equipment and by outdoor maintenance activities, such as parking lot sweeping and early morning garbage collection.
- Action 8.2.1. For new single-family residential projects, use a standard of 60 Ldn for exterior noise in private use areas.
- Action 8.2.2. For new multifamily residential projects and for the residential component of mixed-use development, use a standard of 65 Ldn in outdoor areas, excluding balconies.
- Action 8.2.3. Strive for a maximum interior noise levels at 45 Ldn in all new residential units.

The Community Development Department requires non-residential projects to conduct acoustical studies if there are any questions regarding noise and land use compatibility. The Department also requires an evaluation of the mitigation measures for any projects that would cause an increase in noise of 3 dBA or more thereby exceeding the 60 DNL standard in residential areas and causing significant adverse community response. **Table IV.G-1** shows the City's land use compatibility guidelines.

Locust Street / Mt. Diablo Boulevard Specific Plan

Policy LU-5.2, shown below, is the only policy included in the Specific Plan that directly addresses noise control features.

- Policy LU-5.2: Design housing and hotels on upper levels to ensure that noise and odors from nearby shops and restaurants do not disturb residents and guests.

**TABLE IV.G-1
LAND USE COMPATIBILITY FOR COMMUNITY NOISE ENVIRONMENTS**

Land Use Category	Exterior Noise Exposure (L _{DN})		
	Normally Acceptable	Conditionally Acceptable	Unacceptable
Single-family Residential	< 60	60 to 75	> 75
Multifamily residential, hotels, and motels	< 65	60 to 75	> 75
Outdoor sports and recreation, neighborhood parks and playgrounds	< 65	60 to 80	> 80
Schools, libraries, museums, hospitals, personal care, meeting halls, churches	< 60	60 to 75	> 75
Office buildings, business commercial, and professional	< 70	70 to 80	> 80
Auditoriums, concert halls, amphitheaters	---	< 70	> 70

^a Normally Acceptable – Specified land use is satisfactory, based upon the assumption that any buildings involved are of normal conventional construction, without any special noise insulation requirements.

^b Conditionally Acceptable – Specified land use may be permitted only after detailed analysis of the noise reduction requirements.

^c Unacceptable – New construction or development should not be undertaken because mitigation to comply with noise element policies is unfeasible.

SOURCE: Walnut Creek General Plan, Safety and Noise Element – Figure 8. 2006.

Walnut Creek Municipal Code

Title 4, Chapter 6 of the Walnut Creek Municipal Code also contains noise standards. Through these standards, the City intends to control and, in some instances, prohibit noise and vibration, which may impact the health, safety or welfare of the citizens of Walnut Creek. Section 4-6.203f of the municipal code limits the erection, construction, demolition, alteration or repair of any building, structure or residence that requires a permit, or the excavation of any earth, fill, streets or highways that requires a grading permit, to between the hours of 7:00 a.m. and 6:00 p.m. on weekdays which are not holidays, or those precise hours of operation enumerated in individual building and grading permits. Section 4-6.203g limits the use and operation of any noise-creating commercial or residential landscaping or home maintenance equipment or tools including, but not limited to, hammers, blowers, trimmers, mowers, chainsaws, power fans or any engine, the operation of which causes noises due to the explosion of operating gases or fluids, to between the hours of 8:00 a.m. and 7:00 p.m. on weekdays and 9:00 a.m. and 7:00 p.m. on weekends and holidays.

2. Existing Conditions

Existing Noise Environment

Transportation sources, such as automobiles, trucks, trains, and aircraft, are the principal sources of noise in most urban environments. Along major transportation corridors, noise levels can reach 80 DNL, while along arterial streets, noise levels typically range from 65 to 70 DNL. Industrial and commercial equipment and operations also contribute to the ambient noise environment in their vicinities.

The Specific Plan Area is in the City of Walnut Creek, and the major noise source is vehicular traffic on the surrounding street network, including arterials such as Mount Diablo Boulevard and California Boulevard. BART tracks are located approximately one-half mile west of the Specific Plan Area parallel to I-680; however, freeway and BART noise do not contribute significantly to the local noise environment of the Study area. Other sources of noise include traffic on other internal roads and commercial activities. Noise measurements conducted for the City's General Plan Update 2025 show noise levels of 68 to 72 dBA, DNL at and around the Specific Plan Area (Illingworth & Rodkin, 2004).

Sensitive Receptors

Some land uses are considered more sensitive to ambient noise levels than others, due to the amount of noise exposure (in terms of both exposure duration and insulation from noise) and the types of activities typically involved. Residences, motels and hotels, schools, libraries, churches, hospitals, nursing homes, auditoriums, and parks and other outdoor recreation areas generally are more sensitive to noise than are commercial and industrial land uses. There are no known sensitive noise receptors located within or in the immediate vicinity of the Specific Plan Area. A large office complex is located directly west of the Specific Plan Area, and newer retail development exists to the east and south. The site is northwest of Broadway Plaza, a shopping center which contains Nordstrom and Macy's national department stores and around 90 other specialty shops and restaurants.

3. Standards of Significance

According to Appendix G of the state CEQA Guidelines, the project would result in a significant impact related to noise and vibration if it would:

- (a) Expose persons to or generate noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies;
- (b) Expose persons to or generate excessive groundborne vibration or groundborne noise levels;
- (c) Result in a substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project;
- (d) Result in a substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project;
- (e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, expose people residing or working in the project area to excessive noise levels; or
- (f) For a project within the vicinity of a private airstrip, expose people residing or working in the project area to excessive noise.

Measure of “Substantial Increase”

Some guidance as to the significance of changes in ambient noise levels is provided by the 1992 findings of the Federal Interagency Committee on Noise (“FICON”), which assessed the annoyance effects of changes in ambient noise levels resulting from aircraft operations. The recommendations are based upon studies that relate aircraft noise levels to the percentage of persons highly annoyed by the noise. Annoyance is a summary measure of the general adverse reaction of people to noise that generates speech interference, sleep disturbance, or interference with the desire for a tranquil environment. Although the FICON recommendations were specifically developed to assess aircraft noise impacts, it has been asserted that they are applicable to all sources of noise described in terms of cumulative noise exposure metrics such as the Ldn, as shown in **Table IV.G-2**.

The rationale for the Table IV.G-2 criteria is that, as ambient noise levels increase, a small increase in decibel levels is sufficient to cause significant annoyance. The quieter the ambient noise level is, the more the noise can increase (in decibels) before it causes significant annoyance.

**TABLE IV.G-2
 MEASURES OF SUBSTANTIAL INCREASE FOR NOISE EXPOSURE**

Ambient Noise Level Without Specific Plan (Ldn)	Significant Impact Assumed to Occur if the Specific Plan Increases Ambient Noise Levels By:
<60 dB	+ 5.0 dB or more
60-65 dB	+ 3.0 dB or more
>65 dB	+ 1.5 dB or more

SOURCE: Federal Interagency Committee on Noise (“FICON”), 1992.

Construction Noise

Noise impacts from short-term construction activities could exceed noise thresholds and could result in a significant construction impact if short-term construction activity occurred outside of the daytime hours permitted by the City’s noise ordinance. However, construction noise associated with development under the Specific Plan will be temporary in duration and only occur in short intervals (i.e., as long as the particular piece of construction machinery is running). (See Impact NOI-1 and Mitigation Measure NOI-1.)

Stationary Noise

A resulting off-site noise level at residences from stationary non-transportation sources that exceed compatibility thresholds in Table IV.G-1 will result in a significant noise impact. (See Impact NOI-3 and Mitigation Measures NOI-3a through NOI-3c.)

Traffic Noise

As described in Table IV.G-2, above, the Specific Plan will result in a significant traffic noise impact if mobile noise results in increased noise levels of 1.5 dBA Ldn or more in an ambient noise environment greater than 65 dBA Ldn; or increased noise of 3 dBA Ldn or more in an ambient noise environment between 60 and 65 dBA Ldn; or increased noise of 5 dBA Ldn or more in an ambient environment of less than 60 dBA Ldn. The FICON thresholds are representative of noise increases that could adversely affect sensitive receptors along the roadway. Although an increase in noise may be significant based on the thresholds, if there are no sensitive receptors along the roadway and thus no receptors that would be adversely impacted, then the noise would be deemed less than significant. (See Impact NOI-4.)

Topics Determined Less than Significant in the Initial Study

Noise was previously analyzed in the Locust Street / Mt. Diablo Boulevard Specific Plan Initial Study. The Initial Study found that the site lies outside a two-mile radius of a public airport or private airstrip. Therefore, criteria e and f are not discussed further in this EIR, as stated in the Initial Study.

4. Impact Discussion

Construction Impacts

Impact NOI-1: Development of the Specific Plan will result in temporary noise or vibration impacts related to construction activities (criteria a, b and d). (Potentially Significant)

Construction activities will occur intermittently at different sites in the Specific Plan Area throughout the period of implementation of the Specific Plan. Although the related impacts at any one location will be temporary, construction of individual projects under the Specific Plan could cause adverse effects on the ambient noise environment within the planning area. Noise from construction activities will result primarily from the operation of equipment. Construction preparation activities such as excavation, grading, earth movement, stockpiling, and batch-dropping operations generate noise. Construction activities such as foundation laying, building construction, and finishing operations will also generate noise. Construction-related noise levels at and near the Specific Plan Area will fluctuate depending on the particular type, number, and duration of uses of various pieces of construction equipment. Construction-related material haul trips will raise ambient noise levels along haul routes, depending on the number of haul trips made and types of vehicles used. In addition, certain types of construction equipment generate impulsive noises (such as pile driving), which can be particularly annoying. Standard demolition activities employ equipment similar to that used for construction activities and will have similar, but shorter duration, noise impacts. **Table IV.G-3** shows typical noise levels during different construction stages. **Table IV.G-4** shows typical noise levels produced by various types of construction equipment.

**TABLE IV.G-3
TYPICAL CONSTRUCTION NOISE LEVELS**

Construction Phase	Noise Level (dBA, Leq)^a
Ground Clearing	84
Excavation	89
Foundations	78
Erection	85
Finishing	89

^a Average noise levels correspond to a distance of 50 feet from the noisiest piece of equipment associated with a given phase of construction and 200 feet from the rest of the equipment associated with that phase.

SOURCE: U.S. Environmental Protection Agency, Noise from Construction Equipment and Operations, Building Equipment, and Home Appliances, 1971.

**TABLE IV.G-4
TYPICAL NOISE LEVELS FROM CONSTRUCTION EQUIPMENT**

Construction Equipment	Noise Level (dBA, Leq at 50 feet)
Dump Truck	88
Portable Air Compressor	81
Concrete Mixer (Truck)	85
Scraper	88
Jack Hammer	88
Dozer	87
Paver	89
Generator	76
Pile Driver	101
Backhoe	85

SOURCE: Cunniff, Environmental Noise Pollution, 1977.

Construction activities will generate significant amounts of noise corresponding to the appropriate phase of building construction and the noise generating equipment used during those phases. Depending on the proximity of construction activities to sensitive receptors (future residences in the Specific Plan Area), the presence of intervening barriers, the number, types and duration of construction equipment used, sensitive receptors and businesses could be exposed to significantly high noise levels during construction.

The City of Walnut Creek Municipal Code only allows construction activity between the hours of 7:00 a.m. and 6:00 p.m. on weekdays. Further, no construction activity shall be undertaken on weekends and nationally recognized holidays. Although some businesses will still be somewhat affected by construction noise. Compliance with this ordinance will make ensure the construction noise impact is less than significant impact.

Any construction pile driving within 50 feet of an existing building will require mitigation measures to ensure no building damage occurs. Compliance with Mitigation Measure NOI-1 will make vibration from pile driving a less than significant impact.

Mitigation Measure NOI-1: The construction contractor will conduct crack surveys before pile driving that could cause architectural damage to nearby structures. The survey will include any buildings within 50 feet of pile driving locations and within 100 feet of historical buildings or buildings in poor condition. The surveys will be done by photographs, video tape, or visual inventory, and will include inside as well as outside locations. All existing cracks in walls, floors, and driveways should be documented with sufficient detail for comparison after construction to determine whether actual vibration damage occurred. A post-construction survey should be conducted to document the condition of the surrounding buildings after the construction is complete. The construction contractor will be liable for construction vibration damage to adjacent structures.

Significance after Mitigation: Less than Significant.

Operational Impacts

Impact NOI-2: Residential uses built as part of the Specific Plan could be exposed to excessive exterior and interior noise levels (criterion a). (Less than Significant)

Noise measurements conducted for the City's General Plan Update 2025 show noise levels of 68 to 72 dBA, DNL at and around the Specific Plan Area (Illingworth & Rodkin, 2004). The exterior noise levels will be within the conditionally acceptable limits of the General Plan. Because residential uses built as part of the Specific Plan are expected to be apartments without substantial shared, outdoor exterior use areas, this will be a less than significant impact.

The City's Building Department will require the apartments to be built to meet the state interior noise standard of 45 Ldn, dBA. Building partitions with STC ratings of approximately 30 will reduce the estimated outdoor noise levels to an indoor level of less than 45 Ldn, dBA. If the interior noise level depends upon windows being closed, which may be the case in most locations, the design for the structure will be required to have a ventilation or air-conditioning system to provide a habitable interior environment. With implementation of these interior noise standards this will be a less than significant impact.

Mitigation: None required.

Impact NOI-3: Operational activities (non-transportation) associated with the Specific Plan could affect residences developed as part of the Specific Plan (criteria a and c). (Potentially Significant)

The new residences developed with the Specific Plan will be impacted by operations related to the adjacent commercial uses in the Specific Plan. Noise from commercial uses such as HVAC equipment operation, trash compactor use, loading/unloading activities in delivery areas, idling trucks and powered equipment could affect new residences, especially the residences adjacent to the commercial areas. Typical building equipment and their respective noise level ranges at 3 feet include: unit heaters – 45 to 80 Leq; boilers and rooftop air conditioning units – 70 to 90 Leq; and self-contained air conditioning units – 55 to 95 Leq. If these units were unshielded and positioned at locations on project buildings closest to residences they could potentially exceed normally acceptable land use compatibility standards for multifamily residential, hotels, and motels. Maintenance activities associated with parking and landscaped areas in the Specific Plan Area could include the use of parking lot sweepers and leaf blowers. Leaf blowers have been measured to be in the range of 69 to 81 dBA at a distance of 50 feet from the operator. The City of Walnut Creek Noise Ordinance states that any noise-creating commercial or residential landscaping or home maintenance equipment or tools are limited to between the hours of 8:00 a.m. and 7:00 p.m. on weekdays and 9:00 a.m. and 7:00 p.m. on weekends and holidays. Absent mitigation, noise from operation of HVAC equipment and truck delivery activities will be a potentially significant impact of the Specific Plan on the new residences proposed as part of the Specific Plan.

Mitigation Measure NOI-3a: All development under the Specific Plan shall be constructed to comply with the General Plan Standards in Tables IV.G-1 as well as the relevant noise insulation standards contained in Title 24 of the California Code of Regulations (Part 2, Appendix Chapter 12A).

Mitigation Measure NOI-3b: Loading, unloading, opening, closing or otherwise handling boxes, crates, containers, building materials, garbage cans or similar objects, when such activities result in noise levels greater than 45 dBA for the one hour Leq (or the existing ambient noise level if the level is already above 45 dBA) at the exterior of noise sensitive receptors shall be prohibited between the hours of 10:00 p.m. and 6:00 a.m.

Mitigation Measure NOI-3c: The project applicant shall incorporate the following design features into the final site plans:

- Building equipment (e.g., HVAC units) shall be located away from off-site and on-site residences, on building rooftops, or within an enclosure that effectively blocks the line of site of the source from receivers.
- Truck delivery areas shall be located as far from residents as possible. To the extent feasible, project buildings shall be located such that they block noise related to truck deliveries and waste collection from residential or other sensitive receptors.

Significance after Mitigation: Less than Significant.

Impact NOI-4: Project-generated vehicle traffic associated with the Specific Plan will result in an increase in ambient noise levels on local roadways (criterion c). (Less than Significant)

Based on the traffic analysis prepared for this EIR, the Specific Plan will decrease daily vehicle trips distributed over the local street network and will therefore decrease local roadside noise levels. Noise produced by traffic from implementation of the Specific Plan will be less than significant.

Mitigation: None required.

Cumulative Impacts

Impact NOI-5: Implementation of the Specific Plan, combined with other past, present, and reasonably foreseeable development in the vicinity, will not result in cumulative noise impacts. (Less than Significant)

Cumulative development, including that resulting from the Specific Plan, will increase noise levels associated with increased traffic, the operation of new land uses (e.g., HVAC equipment, trash compactor use, loading/unloading activities, etc.), as well as temporary, localized construction noise and vibration impacts generated by equipment, vehicles and equipment. All development will be adhere to the City's General Plan policies that address potential noise effects, to state interior noise standards and other building code requirements, as well as the City of Walnut Creek Municipal Code. In addition the City will require all projects that would result in adverse noise and/or vibration effects to incorporate mitigation measures consistent with those identified in this Specific Plan, Mitigation Measures NOI-1 and 3a through 3b. By doing so, development of the Specific Plan, combined with other past, present, and reasonably foreseeable projects, would reduced potential cumulative noise and vibration impacts to less than significant.

Mitigation: None required.

References – Noise

California Department of Transportation (“Caltrans”), Technical Noise Supplement, 1998

City of Walnut Creek, *General Plan 2025*, adopted April 4, 2006, as amended.

City of Walnut Creek, *Walnut Creek Municipal Code, Title 4: Public Welfare, Chapter 6: Nuisances, Article 2: Noise*, www.amlegal.com/walnut_creek_ca/, effective July 18, 2008, accessed November 25, 2008.

Cunniff, Patrick, *Environmental Noise Pollution*, 1977.

U.S. Environmental Protection Agency (“EPA”), *Noise from Construction Equipment and Operations, Building Equipment, and Home Appliances*, 1971.

H. Geology, Soils, and Seismicity

This section analyzes the existing geologic, soils, and seismic hazard conditions of the Specific Plan Area. Included is a discussion of existing regulatory and policy setting, environmental setting, and an impact analysis of potential environmental impacts that may occur with implementation of the Specific Plan.

1. Regulatory Setting

State

Alquist-Priolo Earthquake Fault Zoning Act

Alquist-Priolo Earthquake Fault Zoning Act (formerly the Alquist-Priolo Special Studies Zone Act) of 1972 (revised in 1994), Public Resources Code Section 261 et seq., is the state law that addresses hazards from earthquake fault zones. The purpose of this law is to mitigate the hazard of surface fault rupture by regulating development near active faults. As required by the Act, the state has delineated Earthquake Fault Zones (formerly Special Studies Zones) along known active faults in California. No known Alquist-Priolo Earthquake Fault Zone crosses the Specific Plan Area.

Seismic Hazards Mapping Act

The Seismic Hazards Mapping Act, Public Resources Code Section 2695 et seq., was developed to protect the public from the effects of strong ground shaking, liquefaction, landslides, or other ground failure, and from other hazards caused by earthquakes. This act requires the State Geologist to delineate various seismic hazard zones and requires cities, counties, and other local permitting agencies to regulate certain development projects within these zones. Before a development permit may be granted for a site within a Seismic Hazard Zone, a geotechnical investigation of the site must be conducted and appropriate mitigation measures incorporated into the project design. The California Geological Survey has not completed any mapping for the Specific Plan Area.

California Building Code

The California Building Code (“CBC”) is codified in the California Code of Regulations (“CCR”) as Title 24, Part 2. Title 24 is administered by the California Building Standards Commission, which is responsible for coordinating all building standards. Under state law, all building standards must be contained in Title 24, or local amendments there to, or they are not enforceable. The purpose of the CBC is to establish minimum standards to safeguard the public health, safety and general welfare through structural strength, means of egress facilities, and general stability by regulating and controlling the design, construction, quality of materials, use and occupancy, location, and maintenance of all building and structures within its jurisdiction. The CBC is based on the International Building Code (“IBC”). The 2007 CBC is based on the 2006 IBC published by the International Code Conference. In addition, the CBC contains

necessary California amendments that are based on the American Society of Civil Engineers (“ASCE”) Minimum Design Standards 7-05. ASCE 7-05 provides requirements for general structural design and includes means for determining earthquake loads as well as other loads (flood, snow, wind, etc.) for inclusion in building codes. The provisions of the CBC apply to the construction, alteration, movement, replacement, and demolition of every building or structure or any appurtenances connected or attached to such buildings or structures throughout California.

The earthquake design requirements take into account the occupancy category of the structure, site class, soil classifications, and various seismic coefficients that are used to determine a Seismic Design Category (“SDC”) for a project. The SDC is a classification system that combines the occupancy categories with the level of expected ground motions at the site and ranges from SDC A (very small seismic vulnerability) to SDC E/F (very high seismic vulnerability and near a major fault). Design specifications are then determined according to the SDC.

City

General Plan 2025 Policies

The General Plan 2025 Safety and Noise element contains the following goal, policies and actions, which call for the maintenance of data on geologic hazards and require geotechnical investigation and mitigations for projects in areas subject to geologic hazards.

Safety and Noise

GOAL 1. Protect life and property from geologic hazards.

- Policy 1.1. Reduce the potential effects of seismic and other geologic hazards, including slope instability.
 - Action 1.1.1. Identify areas prone to seismic and other geologic hazards, including slope instability.
 - Action 1.1.2. Establish minimum road widths and clearances around structures at risk from known geologic hazards.
 - Action 1.1.3. Review and update the existing maps of geologic hazards.
 - Action 1.1.4. Require appropriate mitigations for new development or redevelopment in areas prone to seismic and other geologic hazards.

- Policy 1.2. Limit development within high-risk geologic areas to a maximum density of one dwelling unit per 20 acres.
 - Action 1.2.1. Identify high risk areas after taking into account soil stability, history of soil slippage, proximity to earthquake faults, slope grad, accessibility, and drainage conditions, and continue to assign low intensity uses, not exceeding a density of one dwelling unit per twenty acres, to such areas.

- Action 1.2.2. As updated seismic-hazard zone maps become available, incorporate them in the general plan.
- Action 1.2.3. Identify areas where surface ruptures are most likely to occur and cause damage to human-made structures, such as dams.
- Action 1.2.4. For development proposals submitted in areas near earthquake fault zones listed under the Alquist-Priolo Act, require a geotechnical evaluation to identify hazard mitigation measures needed to reduce the risk to life and property from earthquake-induced hazards.
- Action 1.2.5. For development proposals submitted in areas near high or very high liquefaction-susceptibility areas, require a geotechnical evaluation to identify hazard mitigation measures needed to reduce the risk to life and property from liquefaction-induced hazards.

2. Existing Conditions

Regional Geology

The Specific Plan Area lies within the geologically complex region of California referred to as the Coast Ranges geomorphic province.¹ The Coast Ranges province lies between the Pacific Ocean and the Great Valley (Sacramento and San Joaquin valleys) provinces and stretches from the Oregon border to the Santa Ynez Mountains near Santa Barbara. Much of the Coast Range province is composed of marine sedimentary deposits and volcanic rocks that form northwest trending mountain ridges and valleys, running subparallel to the San Andreas Fault Zone. The relatively thick marine sediments dip east beneath the alluvium of the Great Valley. The Coast Ranges can be further divided into the northern and southern ranges, which are separated by the San Francisco Bay. The San Francisco Bay lies within a broad depression created from an east-west expansion between the San Andreas and the Hayward fault systems. West of the San Andreas Fault lies the Salinian Block, a granitic core that extends from the southern end of the province to north of the Farallon Islands.

The Northern Coast Ranges are comprised largely of the Franciscan Complex or Assemblage, which consists primarily of graywacke, shale, greenstone (altered volcanic rocks), basalt, chert (ancient silica-rich ocean deposits), and sandstone that originated as ancient sea floor sediments. Franciscan rocks are overlain by volcanic cones and flows of the Quien Sabe, Sonoma and Clear Lake volcanic fields (CGS, 2002a).

¹ A geomorphic province is an area that possesses similar bedrock, structure, history, and age. California has 11 geomorphic provinces.

Local Geology

The Specific Plan Area and vicinity are underlain by weakly-consolidated, medium- and coarse-grained alluvial deposits with estimated ages ranging between 10-70 thousand years old (Helley and LaJoie, 1979). These deposits originate in the uplands to the west and south as weathered bedrock that is dislodged and transported by water towards the valley. At the valley margins, the younger, less consolidated sediments occur as alluvial fans while older, more consolidated deposits cover the valley floor. The alluvium consists of interbedded clay, silt, sand, and gravel deposits of variable and irregular thickness. Surficial materials are highly variable, typically easy to excavate, and, when wet, tend to be unstable on steep slopes and in excavations.

West and south of the Specific Plan Area the bedrock uplands consist of moderately deformed sedimentary rocks of Tertiary age (65 to 1.6 million years ago) consisting of the San Pablo Group and the nonmarine sedimentary rocks of the Contra Costa Group. The San Pablo Group consists primarily of marine deposits including sandstone, mudstone, siltstone, and shale with minor tuff. The Contra Costa Group consists primarily of non-marine sandstone, conglomerate, shale and minor claystone, limestone and tuff (CDMG, 1991).

Soils

Surface soil in the Specific Plan Area is characterized by Tierra Loam as part of the Tierra Series, as defined by the United States Department of Agriculture (“USDA”) Soil Conservation Service. Tierra Loam soils occur on moderate slopes and formed from weathered sedimentary terrace deposits. They drain slowly due to clay content. In general, the soils have high shrink-swell potential (USDA NRCS, 1982). The Tierra Loam is associated with the Los Osos clay loam and Misllsholm loam. Runoff is medium to rapid and there is a moderate to high erosion hazard when exposed. The Tierra Loam is also characterized by very slow permeability, high shrink swell potential, and high corrosivity.

Subsurface soil investigations conducted across the street from the Primary Study Area (as defined in Section A, Land Use) have revealed heterogeneous subsurface conditions across the area. Bedrock in the form of a highly weathered sandstone was encountered at depths ranging from 48 feet below ground surface (“bgs”) to being exposed at the surface. The sandstone is overlain by a clayey sandy gravel which is overlain by a clayey sand.

Topography

The Specific Plan Area is situated on the southern end of the Walnut Creek Valley, sandwiched between the Briones Hills and Shell Ridge near the base of Mount Diablo. The natural slope of the valley is gradual to the north, however the Specific Plan Area and vicinity are relatively level. The Specific Plan Area elevations are approximately in the range of 120 to 140 feet above mean sea level (“msl”) (USGS, 1980).

Seismicity

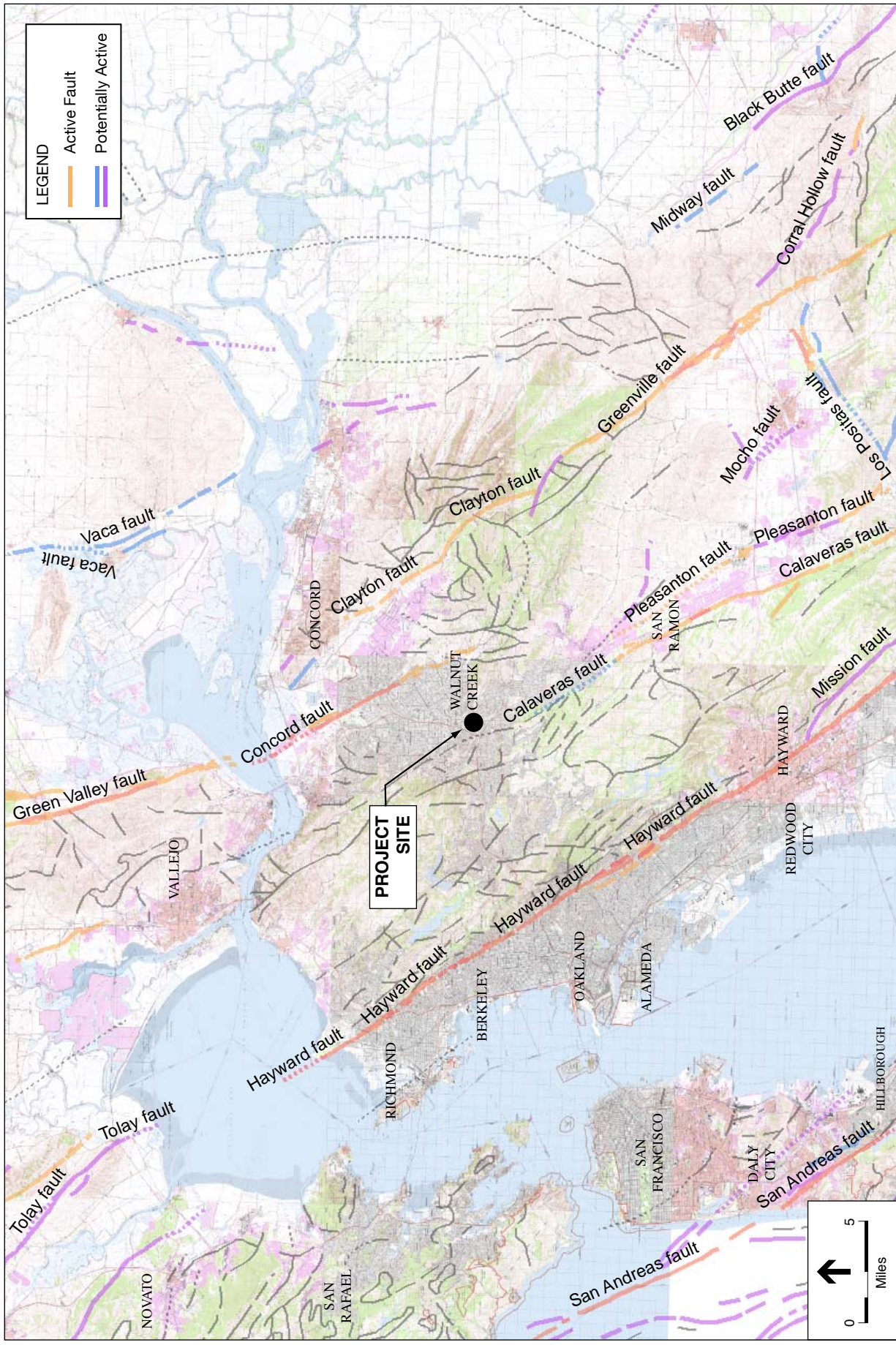
The Specific Plan Area lies within a region of California that contains many active and potentially active faults and is considered an area of high seismic activity (**Figure IV.H-1**).² The U.S. Geological Survey (“USGS”) along with the California Geological Survey and the Southern California Earthquake Center formed the 2007 Working Group on California Earthquake Probabilities which has evaluated the probability of one or more earthquakes of magnitude 6.7 or higher occurring in the state of California over the next 30 years. The result of the evaluation indicated a 63 percent likelihood that such an earthquake event will occur in the Bay Area (USGS, 2008).

Richter magnitude is a measure of the size of an earthquake as recorded by a seismograph, a standard instrument that records groundshaking at the location of the instrument. The reported Richter magnitude for an earthquake represents the highest amplitude measured by the seismograph at a distance of 100 kilometers from the epicenter. Richter magnitudes vary logarithmically with each whole number step representing a ten fold increase in the amplitude of the recorded seismic waves. Earthquake magnitudes are also measured by their Moment Magnitude (“Mw”) which is related to the physical characteristics of a fault including the rigidity of the rock, the size of fault rupture, and movement or displacement across a fault (CGS, 2002b).

Ground movement during an earthquake can vary depending on the overall magnitude, distance to the fault, focus of earthquake energy, and type of geologic material. The composition of underlying soils, even those relatively distant from faults, can intensify ground shaking. For this reason, earthquake intensities are also measured in terms of their observed effects at a given locality. The Modified Mercalli (“MM”) intensity scale (**Table IV.H-1**) is commonly used to measure earthquake damage due to ground shaking. The MM values for intensity range from I (earthquake not felt) to XII (damage nearly total), and intensities ranging from IV to X could cause moderate to significant structural damage.³ The intensities of an earthquake will vary over the region of a fault and generally decrease with distance from the epicenter of the earthquake.

² An “active” fault is defined by the State of California as a fault that has had surface displacement within Holocene time (approximately the last 11,000 years). A “potentially active” fault is defined as a fault that has shown evidence of surface displacement during the Quaternary (last 1.6 million years), unless direct geologic evidence demonstrates inactivity for all of the Holocene or longer. This definition does not, of course, mean that faults lacking evidence of surface displacement are necessarily inactive. “Sufficiently active” is also used to describe a fault if there is some evidence that Holocene displacement occurred on one or more of its segments or branches (Hart, 1997).

³ The damage level represents the estimated overall level of damage that will occur for various MM intensity levels. The damage, however, will not be uniform. Not all buildings perform identically in an earthquake. The age, material, type, method of construction, size, and shape of a building all affect its performance (ABAG, 1998a).



SOURCE: Jennings, 1994

Locust Street/ Mt. Diablo Boulevard Specific Plan . 204164

Figure IV.H-1
Regional Fault Map

**TABLE IV.H-1
MODIFIED MERCALLI INTENSITY SCALE**

Intensity Value	Intensity Description	Average Peak Acceleration (% ga)
I	Not felt except by a very few persons under especially favorable circumstances.	< 0.17 g
II	Felt only by a few persons at rest, especially on upper floors on buildings. Delicately suspended objects may swing.	0.17-1.4 g
III	Felt noticeably indoors, especially on upper floors of buildings, but many people do not recognize it as an earthquake. Standing motor cars may rock slightly, vibration similar to a passing truck. Duration estimated.	0.17-1.4 g
IV	During the day felt indoors by many, outdoors by few. At night, some awakened. Dishes, windows, doors disturbed; walls make cracking sound. Sensation like heavy truck striking building. Standing motor cars rocked noticeably.	1.4–3.9g
V	Felt by nearly everyone, many awakened. Some dishes and windows broken; a few instances of cracked plaster; unstable objects overturned. Disturbances of trees, poles may be noticed. Pendulum clocks may stop.	3.5 – 9.2 g
VI	Felt by all, many frightened and run outdoors. Some heavy furniture moved; and fallen plaster or damaged chimneys. Damage slight.	9.2 – 18 g
VII	Everybody runs outdoors. Damage negligible in buildings of good design and construction; slight to moderate in well-built ordinary structures; considerable in poorly built or badly designed structures; some chimneys broken. Noticed by persons driving motor cars.	18 – 34 g
VIII	Damage slight in specially designed structures; considerable in ordinary substantial buildings, with partial collapse; great in poorly built structures. Panel walls thrown out of frame structures. Fall of chimneys, factory stacks, columns, monuments, walls. Heavy furniture overturned. Sand and mud ejected in small amounts. Changes in well water. Persons driving motor cars disturbed.	34 – 65 g
IX	Damage considerable in specially designed structures; well-designed frame structures thrown out of plumb; great in substantial buildings, with partial collapse. Buildings shifted off foundations. Ground cracked conspicuously. Underground pipes broken.	65 – 124 g
X	Some well-built wooden structures destroyed; most masonry and frame structures destroyed with foundations; ground badly cracked. Rails bent. Landslides considerable from riverbanks and steep slopes. Shifted sand and mud. Water splashed (slopped) over banks.	> 124 g
XI	Few, if any, (masonry) structures remain standing. Bridges destroyed. Broad fissures in ground. Underground pipelines completely out of service. Earth slumps and land slips in soft ground. Rails bent greatly.	> 1.24 g
XII	Damage total. Practically all works of construction are damaged greatly or destroyed. Waves seen on ground surface. Lines of sight and level are distorted. Objects are thrown upward into the air.	> 1.24 g

^a g (gravity) = 980 centimeters per second squared. 1.0 g of acceleration is a rate of increase in speed equivalent to a car traveling 328 feet from rest in 4.5 seconds.

SOURCE: ABAG, 2003; CGS, 2003

Regional Faults

The San Andreas, Hayward and Calaveras Faults pose the greatest threat of significant damage in the Bay Area according to the USGS Working Group (USGS, 2003). These three strike-slip faults have experienced movement within the last 150 years.⁴ Other principal faults capable of producing significant ground shaking in the Bay Area are listed on **Table IV.H-2** and include the Concord–Green Valley, Marsh Creek–Greenville, San Gregorio and Rodgers Creek Faults.

**TABLE IV.H-2
ACTIVE FAULTS IN THE SPECIFIC PLAN AREA VICINITY**

Fault	Location Relative to Locust Street / Mount Diablo Boulevard Specific Plan Area	History of Recent Movement	Fault Classification^a	Historical Seismicity^b	Maximum Moment Magnitude Earthquake ("Mw")^c
Calaveras	4 miles South	Historic (1861 rupture) Holocene	Active	M5.6-M6.4, 1861 M4 to M4.5 swarms 1970, 1990	6.6-6.8
Hayward (southern)	10 miles West-Southwest	Historic (1868 rupture) Holocene	Active	M6.8, 1868 Many <M4.5	6.7-7.5
Greenville-Marsh Creek	8 miles East-Northeast	Historic (1980 rupture) Holocene	Active	M5.6, 1980	6.6-7.3
Concord-Green Valley	4 miles Northeast	Holocene	Active	Active Creep ^d	6.9
San Andreas	28 miles West-Southwest	Historic (1906; 1989 ruptures) Holocene	Active	M7.1, 1989 M8.25, 1906 M7.0, 1838 Many <M6	7.8-8.0

^a An "Active Fault" is defined by the State Mining and Geology Board as one that has displayed surface displacement within Holocene time (about the last 10,000 years).

^b Richter magnitude ("M") and year for recent and/or large events.

^c The Maximum Moment Magnitude Earthquake ("Mw") is the strongest earthquake that is likely to be generated along a fault zone based on empirical relationships among Mw, surface rupture length, down-dip rupture width, rupture area, and fault type from Wells and Coppersmith (1994).

^d Slow fault movement that occurs over time without producing an earthquake.

SOURCES: Hart, 1997; Jennings, 1994; Peterson, 1996.

An "active" fault is defined by the state as a fault that has had surface displacement within approximately the last 11,000 years. A "potentially active" fault is defined as a fault that has shown evidence of surface displacement during the last 1.6 million years, unless direct geologic evidence demonstrates inactivity for the last 11,000 years or longer. This definition does not mean that faults lacking evidence of surface displacement are necessarily inactive. "Sufficiently active" is also used to describe a fault if there is some evidence that displacement occurred in the last 11,000 years on one or more of its segments or branches. These faults are considered either

⁴ A strike-slip fault is a fault on which movement is parallel to the fault's strike or lateral expression at the surface (Bates and Jackson, 1984).

active or potentially active. Inactive faults are located throughout the Bay Area. Inactive faults with a long period of inactivity do not provide any guarantee that a considerable seismic event could occur. Occasionally, faults classified as inactive can exhibit secondary movement during a major event on another active fault.

San Andreas Fault

The San Andreas Fault zone is a major structural feature that forms at the boundary between the North American and Pacific tectonic plates, extending from the Salton Sea in southern California near the border with Mexico to north of Point Arena, where the fault trace extends into the Pacific Ocean. The main trace of the San Andreas Fault through the Bay Area trends northwest through the Santa Cruz Mountains and the eastern side of the San Francisco Peninsula. As the principal strike-slip boundary between the Pacific plate to the west and the North American plate to the east, the San Andreas is often a highly visible topographic feature, such as between Pacifica and San Mateo, where Crystal Springs Reservoir and San Andreas Lake clearly mark the rupture zone. Near San Francisco, the San Andreas Fault trace is located immediately off-shore near Daly City and continues northwest through the Pacific Ocean approximately 6 miles due west of the Golden Gate Bridge.

The San Andreas Fault zone was the source of the two major seismic events in recent history that affected the San Francisco Bay Area. The 1906 San Francisco earthquake was estimated at Richter magnitude of M 7.9 and resulted in approximately 290 miles of surface fault rupture, the longest of any known continental strike slip fault. Horizontal displacement along the fault approached 17 feet near the epicenter. The more recent 1989 Loma Prieta earthquake, with a moment magnitude of Mw 6.9, resulted in widespread damage throughout the Bay Area.

Hayward Fault

The Hayward Fault zone is the southern extension of a fracture zone that includes the Rodgers Creek Fault (north of San Pablo Bay), the Healdsburg Fault (County of Sonoma), and the Maacama Fault (County of Mendocino). The Hayward Fault trends to the northwest within the East Bay, extending from San Pablo Bay in Richmond, 60 miles south to San Jose. The Hayward Fault in San Jose converges with the Calaveras Fault, a similar fault that extends north to Suisun Bay. The Hayward Fault is designated by the Alquist-Priolo Earthquake Fault Zoning Act as an active fault.

Historically, the Hayward Fault generated one sizable earthquake in the 1800s.⁵ In 1868, a Richter magnitude 7 earthquake on the southern segment of the Hayward Fault ruptured the ground for a distance of about 30 miles. Recent analysis of geodetic data indicates surface deformation may have extended as far north as Berkeley. Lateral ground surface displacement during these events was at least 3 feet.

⁵ Prior to the early 1990s, it was thought that a Richter magnitude 7 earthquake occurred on the northern section of the Hayward Fault in 1836. However, a study of historical documents by the California Geological Survey concluded that the 1836 earthquake was not on the Hayward Fault (Bryant, 2000).

A characteristic feature of the Hayward Fault is its well-expressed and relatively consistent fault creep. Although large earthquakes on the Hayward Fault have been rare since 1868, slow fault creep has continued to occur and has caused measurable offset. Fault creep on the East Bay segment of the Hayward Fault is estimated at 9 millimeters per year (“mm/yr”) (Peterson, et al., 1996). However, a large earthquake could occur on the Hayward Fault with an estimated moment magnitude of about Mw 7.1 (Table IV.H-1). The USGS Working Group on California Earthquake Probabilities includes the Hayward–Rodgers Creek Fault systems in the list of those faults that have the highest probability of generating earthquakes of Richter magnitude M 6.7 or greater in the Bay Area (USGS, 2003).

Calaveras Fault

The Calaveras Fault is a major right-lateral strike-slip fault that has been active during the last 11,000 years. The Calaveras Fault is located in the eastern San Francisco Bay region and generally trends along the eastern side of the East Bay hills, west of San Ramon Valley, and extends into the western Diablo Range, and eventually joins the San Andreas Fault zone south of Hollister. The northern extent of the fault zone is somewhat conjectural and could be linked with the Concord Fault.

The fault separates rocks of different ages, with older rocks west of the fault and younger sedimentary rocks to the east. The location of the main, active fault trace is defined by youthful geomorphic features (linear scarps and troughs, right-laterally deflected drainage, sag ponds) and local groundwater barriers. The Calaveras Fault is designated as an Alquist-Priolo Earthquake Hazard Zone (see discussion on this zone designation below). There is a distinct change in slip rate and fault behavior north and south of the vicinity of Calaveras Reservoir. North of Calaveras Reservoir, the fault is characterized by a relatively low slip rate of 5-6 mm/yr and sparse seismicity. South of Calaveras Reservoir, the fault zone is characterized by a higher rate of surface fault creep that has been evidenced in historic times. The Calaveras Fault has been the source of numerous moderate magnitude earthquakes and the probability of a large earthquake (greater than M6.7) is much lower than on the San Andreas or Hayward Faults (USGS, 2003). However, this fault is considered capable of generating earthquakes with upper bound moment magnitudes ranging from Mw 6.6 to Mw 6.8.

Concord-Green Valley Fault

The Concord-Green Valley Fault extends from Walnut Creek north to Wooden Valley (east of Napa Valley). Historical records indicate that no large earthquakes have occurred on the Concord or Green Valley Faults (USGS, 2003). However, a moderate earthquake of Richter magnitude M5.4 occurred on the Concord Fault segment in 1955. The Concord and Green Valley Faults exhibit active fault creep and are considered to have a small probability of causing a significant earthquake.

Greenville – Marsh Creek Fault

The Greenville Fault, also known as the Marsh Creek-Greenville Fault, extends along the base of the Altamont Hills, which form the eastern margin of the Livermore Valley. The fault is recognized as a major structural feature and has demonstrated activity in the last 11,000 years. A Richter magnitude M5.6 earthquake on the Greenville Fault in 1980 produced a small amount of surface rupture (approximately 3 centimeters) on the fault near Vasco Road.

Seismic Hazards

Surface Fault Rupture

Seismically induced ground rupture is defined as the physical displacement of surface deposits in response to an earthquake's seismic waves. The magnitude, sense, and nature of fault rupture can vary for different faults or even along different strands of the same fault. Ground rupture is considered more likely along active faults, which are referenced in Table IV.H-2.

The Specific Plan Area is not within an Alquist-Priolo Fault Rupture Hazard Zone, as designated through the Alquist-Priolo Earthquake Fault Zoning Act, and no mapped active faults are known to pass through the immediate region. Therefore, the risk of ground rupture in the Specific Plan Area is very low.

Ground Shaking

Strong ground shaking from a major earthquake could affect the Specific Plan Area during the next 30 years. Earthquakes on the active faults (listed in Table IV.H-2) are expected to produce a range of ground shaking intensities in the Specific Plan Area. Ground shaking may affect areas hundreds of miles distant from the earthquake's epicenter. Historic earthquakes have caused strong ground shaking and damage in the San Francisco Bay Area, the most recent being the M 6.9 Loma Prieta earthquake in October 1989. The epicenter was approximately 60 miles southeast of the Specific Plan Area, but this earthquake nevertheless caused strong ground shaking for about 20 seconds and resulted in varying degrees of structural damage throughout the Bay Area.

The common way to describe ground motion during an earthquake is with the motion parameters of acceleration and velocity in addition to the duration of the shaking. A common measure of ground motion is the peak ground acceleration ("PGA"). The PGA for a given component of motion is the largest value of horizontal acceleration obtained from a seismograph. PGA is expressed as the percentage of the acceleration due to gravity ("g"), which is approximately 980 centimeters per second squared. In terms of automobile accelerations, one "g" of acceleration is a rate of increase in speed equivalent to a car traveling 328 feet from rest in 4.5 seconds. For comparison purposes, the maximum peak acceleration value recorded during the Loma Prieta earthquake was in the vicinity of the epicenter, near Santa Cruz, at 0.64 g. The highest value measured in the East Bay was 0.29 g, recorded at the Oakland Wharf near the Naval Supply Center where the soils are artificial fill overlying Bay Mud. The lowest values recorded were 0.06 g in the bedrock on Yerba Buena Island. However, an earthquake on the nearby Hayward

Fault would likely produce far more severe ground shaking at the site than was observed during the Loma Prieta earthquake. Probabilistic seismic hazard maps indicate that peak ground acceleration in the region could reach or exceed 0.6g (CGS, 2008).⁶ The potential hazards related to ground shaking are discussed further in the Impacts and Mitigations section of this chapter.

Liquefaction

Liquefaction is a transformation of soil from a solid to a liquefied state during which saturated soil temporarily loses strength resulting from the buildup of excess pore water pressure, especially during earthquake-induced cyclic loading. Soil susceptible to liquefaction includes loose to medium dense sand and gravel, low-plasticity silt, and some low-plasticity clay deposits. Four kinds of ground failure commonly result from liquefaction: lateral spread, flow failure, ground oscillation, and loss of bearing strength. Lateral spreading is the horizontal displacement of surficial blocks of sediments resulting from liquefaction in a subsurface layer that occurs on slopes ranging between 0.3 and 3 percent and commonly displaces the surface by several meters to tens of meters. Flow failures occur on slopes greater than 3 degrees and are primarily liquefied soil or blocks of intact material riding on a liquefied subsurface zone. Ground oscillation occurs on gentle slopes when liquefaction occurs at depth and no lateral displacement takes place. Soil units that are not liquefied may pull apart and oscillate on the liquefied zone. The loss of bearing pressure can occur beneath a structure when the underlying soil loses strength and liquefies. When this occurs, the structure can settle, tip, or even become buoyant and “float” upwards. Liquefaction and associated failures could damage foundations, roads, underground cables and pipelines, and disrupt utility service. In the Specific Plan Area and vicinity, soils with the potential to liquefy exist along the immediate edges of San Ramon Creek. Other soils in the area have a low to moderate potential for liquefaction (ABAG, 2004).

Earthquake-Induced Settlement

Settlement of the ground surface can be accelerated and accentuated by earthquakes. During an earthquake, settlement can occur as a result of the relatively rapid compaction and settling of subsurface materials (particularly loose, uncompacted, and variable sandy sediments above the water table) due to the rearrangement of soil particles during prolonged ground shaking. Settlement can occur both uniformly and differentially (i.e., where adjoining areas settle at different amounts). Areas underlain by artificial fill will be susceptible to this type of settlement. Since the Specific Plan Area likely has been developed previously under the recommendations of a licensed geotechnical engineer, the majority of the areas that may have once been susceptible to differential settlement have been eliminated prior to development. Regardless, future

⁶ A probabilistic seismic hazard map shows the predicted level of hazard from earthquakes that seismologists and geologist believe could occur. The map’s analysis takes into consideration uncertainties in the size and location of earthquakes and the resulting ground motions that can affect a particular site. The maps are typically expressed in terms of probability of exceeding a certain ground motion. These maps depict a 10% probability of being exceeded in 50 years. There is a 90% chance that these ground motions will NOT be exceeded. This probability level allows engineers to design buildings for larger ground motions than seismologists think will occur during a 50-year interval, making buildings safer than if they were only designed for the ground motions that are expected to occur in the 50 years. Seismic shaking maps are prepared using consensus information on historical earthquakes and faults. These levels of ground shaking are used primarily for formulating building codes and for designing buildings. (CGS, 2005a)

development would re-evaluate site soils and fills to determine the potential for settlement according to accepted geotechnical practices.

Geologic Hazards

Considering the geologic context of the Specific Plan Area, other typical geologic hazards could include slope instability, soil erosion, settlement, expansive soil materials, tsunamis, and seiches. These hazards are discussed briefly below and provide the initial context for further evaluation in this environmental impact analysis.

Expansive Soils

Expansive soils possess a “shrink-swell” behavior. Shrink-swell is the cyclic change in volume (expansion and contraction) that occurs in fine-grained clay sediments from the process of wetting and drying. Structural damage may occur over a long period of time, usually the result of inadequate soil and foundation engineering or the placement of structures directly on expansive soils. The native soils underlying the Specific Plan Area are described as moderately to highly expansive (USDA, 1982).

Soil Erosion

Erosion is the wearing away of soil and rock by processes such as mechanical or chemical weathering, mass wasting, the action of waves, wind or underground water. Excessive soil erosion can eventually lead to damage of building foundations and roadways. In the Specific Plan Area, areas that are susceptible to erosion are those that would be exposed during the construction phase. Typically, the soil erosion potential is reduced once the soil is graded and covered with concrete, structures, asphalt, or slope protection. Soil erosion is not considered a potential significant issue at the site considering the likelihood that site soils disturbed during construction would be managed according to local regulations which minimize erosion potential.

Settlement

Settlement can occur from immediate settlement, consolidation, shrinkage of expansive soil, and liquefaction (discussed above). Immediate settlement occurs when a load from a structure or placement of new fill material is applied, causing distortion in the underlying materials. This settlement occurs quickly and is typically complete after placement of the final load. Consolidation settlement occurs in saturated clay from the volume change caused by squeezing out water from the pore spaces. Consolidation occurs over a period of time and is followed by secondary compression, which is a continued change in void ratio under the continued application of the final load.

Soils tend to settle at different rates and by varying amounts depending on the load weight or changes in properties over an area, which is referred to as differential settlement. Soils in the Specific Plan Area consist of clays, silts, and sands and/or engineered soils that have a low susceptibility to differential settlement.

Landslides and Slope Failure

Slope failures, commonly referred to as landslides, include many phenomena that involve the downslope displacement and movement of material, either triggered by static (i.e., gravity) or dynamic (i.e., earthquake) forces. A slope failure is a mass of rock, soil, and debris displaced downslope by sliding, flowing, or falling. Exposed rock slopes undergo rockfalls, rockslides, or rock avalanches, while soil slopes experience shallow soil slides, rapid debris flows, and deep-seated rotational slides. Landslides may occur on slopes of 15 percent or less; however, the probability is greater on steeper slopes that exhibit old landslide features such as scarps, slanted vegetation, and transverse ridges. The Specific Plan Area is located in a predominantly level part of the City that has a low potential for landslides or slope failure.

3. Standards of Significance

According to Appendix G of the state CEQA Guidelines, implementation of the Specific Plan would result in a significant impact related to Geology, Soils, and Seismicity if it would:

- (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 or Seismic Hazards Map issued by the State Geologist for the area or based on other substantial evidence of a known fault (refer to Division of Mines and Geology Special Publications 42);
 - ii. Strong seismic ground shaking;
 - iii. Seismic-related ground failure, including liquefaction; or
 - iv. Landslides;
- (b) Result in substantial soil erosion or loss of topsoil;
- (c) Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse;
- (d) Be located on expansive soil, as defined in Section 1802A.3.2 of the 2007 California Building Code, the most recent version of the Code, creating substantial risks to life or property;
- (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 waste water.

Topics Determined Less than Significant in the Initial Study

Geology, Soils, and Seismicity was previously analyzed in the Locust Street / Mt. Diablo Boulevard Specific Plan Initial Study which determined that several of the criteria mentioned above were found to be either less than significant or have no impact (as also summarized in Chapter 6 of this EIR). Due to the location and conditions of the Specific Plan Area, landslides and erosion impacts (criteria a.iv, b, and part of c) were found to have no impact and a less than

significant impact, respectively. And while the Initial Study stated that the rupture of a known earthquake fault (criterion a.i) was potentially significant, in fact there are no active faults within or immediately adjacent to the Specific Plan Area that present a significant hazard of rupture. In addition, the Specific Plan does not call for the installation of any septic tanks or other wastewater disposal systems (criterion e). Therefore, these issues are not further analyzed in this EIR.

4. Approach and Methodology

Implementation of the Specific Plan will include construction of new structures. The policies contained in the Specific Plan generally address design measures that have little bearing on structural integrity or the ability to withstand the consequences of various geologic and seismic hazards. However, Specific Plan projects will also be bound by the policies set forth in the General Plan, as well as the regulatory requirements as stated above in the *Regulatory Framework* section. Therefore, the following analysis considers existing regulations and the potential for the development associated with the Specific Plan to result in environmental impacts related to geology, soils and seismicity.

5. Impact Discussion

Impact GEO-1: Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving strong seismic ground shaking (criterion a.ii). (Less than Significant)

The Specific Plan Area is located in a region of California that is considered to be seismically active. The Specific Plan Area will likely experience at least one major earthquake (Richter magnitude (M 6.7 or higher) within the next 30 years. The intensity of such an event will depend on the causative fault and the distance to the epicenter, the moment magnitude, and the duration of shaking. A seismic event in the Bay Area could produce damaging ground accelerations in the Specific Plan Area.

The effects of groundshaking can be minimized through appropriate structural design, as required by current building codes. Standard state-of-the-art geotechnical engineering practices include analysis for the effects of strong groundshaking from regional active faults. Incorporating seismic design criteria into building foundations and structural design can effectively reduce the potential for significant damage. Existing General Plan policies and building code requirements will necessitate the preparation of site-specific geotechnical investigations that include recommendations to reduce the potential impacts from groundshaking to less than significant levels.

Mitigation: None required.

Impact GEO-2: Expose people or structures to potential substantial adverse effects including the risk of loss, injury, or death involving seismic-related ground failure, including liquefaction (criterion a.iii). (Less than Significant)

The effects of seismic-related ground failure could result in loss of bearing pressure, lateral spreading, sand boils (liquefied soil exiting at the ground surface), or differential settlement where differing magnitudes of settlement are experienced across a single building foundation. These types of ground failures can cause significant damage to poorly designed structures. Liquefaction hazards are greatest in areas where loose cohesionless soils such as sands are saturated from a high (typically less than 50 feet below ground surface) groundwater table. However, site-specific liquefaction hazards can only be obtained through subsurface exploration and analysis as typically performed under a geotechnical investigation. According to mapping prepared by ABAG, the Specific Plan Area contains a low susceptibility for liquefaction. Regardless, geotechnical investigations which are required to identify all seismic and geological hazards will be able to confirm whether liquefiable soils were present. If present, the geotechnical investigation will provide site-specific engineering recommendations for mitigation of liquefiable soils. These recommendations will then become part of project design. Implementation of these design standards will mitigate any identified liquefaction hazards to less than significant levels.

Mitigation: None required.

Impact GEO-3: 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 (criterion c). (Less than Significant)

The Specific Plan Area is located in a developed region with unknown site specific characteristics. Considering much of the area has been previously developed, there is a high likelihood that near-surface soils contain artificial fill materials. Undocumented artificial fills (fills without documentation of engineering specifications) can have substandard load-bearing capacities according to modern geotechnical practices. Relatively soft or insufficiently compacted sediments or artificial fills can be susceptible to settlement. The amount and rate of consolidation settlement will depend on:

- the weight of any new fill or structural loads;
- the thickness of the existing artificial fills; and
- the thickness of any relatively soft alluvial sediments.

When structures are placed over areas where the subsurface materials vary in engineering properties, they can cause differing rates of settlement (differential settlement). Differential settlement is often the most damaging and could occur at any site unless the details of subsurface materials are explored. Typically, geotechnical engineering practices can effectively mitigate the potential for settlement through uniform compaction of existing materials or by importing engineered fill materials and compacting them uniformly across the building site. Implementation

of standard geotechnical engineering practices and building code requirements will reduce the potential impacts from settlement to less than significant levels.

Mitigation: None required.

Impact GEO-4: Be located on expansive soil, as defined in the California Building Code, creating substantial risks to life or property (criterion d). (Less than Significant)

Expansive soils are generally soils that possess a “shrink-swell” behavior. Shrink-swell is the cyclic change in volume (expansion and contraction) that occurs in fine-grained clay sediments from the process of wetting and drying. Structural damage may occur over a long period of time, usually the result of inadequate soil and foundation engineering or the placement of structures directly on expansive soils. Much of the Specific Plan Area was previously developed and associated earthwork and grading operations have likely replaced any previously existing expansive soils. However, as part of standard geotechnical engineering practices, site-specific geologic and geotechnical investigations evaluate the potential for expansive soils. These investigations will determine whether a given development has expansive soils. Furthermore, the investigations will include an assessment of the magnitude of this characteristic, and present recommendations for grading and foundation design to mitigate potentially adverse impacts such as floor and wall cracking. Compliance with the existing routine construction permit requirements and building code requirements will reduce potential impacts to less than significant.

Mitigation: None required.

Cumulative Impacts

Impact GEO-5: Implementation of the Specific Plan, combined with past, present, and reasonably foreseeable probable future projects will not result in adverse cumulative impacts to geology, soils, or seismic hazards. (Less than Significant)

The geographic area considered for the cumulative geology, soils, of seismic hazards effects is the Bay Area region. The entire Bay Area and thus the Specific Plan Area is seismically active and future development or redevelopment will expose additional people and structures to potentially adverse effects associated with earthquakes including seismic ground shaking and seismic-related ground failure. However, site-specific geotechnical studies that future development or redevelopment projects will be required to prepare will determine how each development could be designed to minimize exposure of people to these effects. Future development will be constructed to standards that will likely exceed those of older structures within the Specific Plan Area. Projects under the Specific Plan will all be constructed in accordance with the current version of the California Building Code seismic safety requirements and recommendations contained in each site-specific geotechnical report. Therefore, impacts to

area geology and soils resulting from any development in the Specific Plan Area, combined with other past, present, or reasonably foreseeable probable future projects, will not result in a cumulatively impact. The cumulative impact would be less than significant given mandatory compliance with existing state and local regulations and codes.

Mitigation: None required.

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I. Hazardous Materials

This section analyzes the existing hazardous materials conditions of the Specific Plan Area. Included is a discussion of existing regulatory and policy setting, environmental setting, and an impact analysis of potential environmental impacts that may occur with implementation of the Specific Plan.

1. Regulatory Setting

Federal

Hazardous Materials Management and Handling

The primary federal agencies with responsibility for hazardous materials management include the U.S. Environmental Protection Agency (“EPA”), U.S. Department of Labor Occupational Safety and Health Administration (“OSHA”), and the U.S. Department of Transportation (“DOT”). Federal laws, regulations, and responsible agencies are summarized in **Table IV.I-1** and are discussed in detail in this section.

State and local agencies often have either parallel or more stringent regulations than federal agencies. In most cases, state law mirrors or overlaps federal law and enforcement of these laws is the responsibility of the state or a local agency to which enforcement powers are delegated. For these reasons, the legal requirements and their enforcement is discussed under either the state or local agency section.

Under the federal Resource Conservation and Recovery Act (“RCRA”), 42 U.S.C. Sections 6901 et seq., individual states may implement their own hazardous waste programs in lieu of RCRA as long as the state program is at least as stringent as federal RCRA requirements. The EPA must approve state programs intended to implement federal regulations.

Risk Management Program

When Congress passed the Clean Air Act Amendments of 1990, it required EPA to publish regulations and guidance for chemical accident prevention at facilities using extremely hazardous substances. The Risk Management Program Rule (“RMP Rule”) was written to implement Section 112(r) of these amendments. The rule, which built upon existing industry codes and standards, requires companies of all sizes that use certain flammable and toxic substances to develop a Risk Management Program, which includes a(n):

- Hazard assessment that details the potential effects of an accidental release, an accident history of the last five years, and an evaluation of worst-case and alternative accidental releases;
- Prevention program that includes safety precautions and maintenance, monitoring, and employee training measures; and

**TABLE IV.I-1
 FEDERAL LAWS AND REGULATIONS RELATED TO HAZARDOUS MATERIALS MANAGEMENT**

Classification	Law or Responsible Federal Agency	Description
Hazardous Materials Management	Community Right-to-Know Act of 1986 (also known as Title III of the Superfund Amendments and Reauthorization Act ("SARA"))	Imposes requirements to ensure that hazardous materials are properly handled, used, stored, and disposed of and to prevent or mitigate injury to human health or the environment in the event that such materials are accidentally released.
Hazardous Waste Handling	Resource Conservation and Recovery Act of 1976 ("RCRA")	Under RCRA, the EPA regulates the generation, transportation, treatment, storage, and disposal of hazardous waste from "cradle to grave."
	Hazardous and Solid Waste Act	Amended RCRA in 1984, affirming and extending the "cradle to grave" system of regulating hazardous wastes. The amendments specifically prohibit the use of certain techniques for the disposal of some hazardous wastes.
Hazardous Materials Transportation	U.S. Department of Transportation ("DOT")	Has the regulatory responsibility for the safe transportation of hazardous materials. The DOT regulations govern all means of transportation except packages shipped by mail (49 CFR).
	U.S. Postal Service ("USPS")	USPS regulations govern the transportation of hazardous materials shipped by mail.
Occupational Safety	Occupational Safety and Health Act of 1970	Fed/OSHA sets standards for safe workplaces and work practices, including the reporting of accidents and occupational injuries (29 CFR).
Radioactive Materials ^a	Atomic Energy Act	Administered by the Nuclear Regulatory Commission, the act regulates the use and control of radioactive material. ^b
Biosafety Standards ^c	The National Institutes of Health, and the Centers for Disease Control and Prevention ("CDC")	Operated under the U.S. Department of Health and Human Services, these agencies establish standards for working with biohazardous materials.
Structural and Building Components (Lead-based paint, PCBs, and asbestos)	Toxic Substances Control Act ("TSCA")	Regulates the use and management of PCBs in electrical equipment, and sets forth detailed safeguards to be followed during the disposal of such items.
	U.S. EPA	The EPA monitors and regulates hazardous materials used structural and building components and affects on human health.

^a U.S. Nuclear Regulatory Commission, Atomic Energy Act of 1954, as amended, <http://www.nrc.gov/who-we-are/governing-laws.html>, accessed November 15, 2002.

^b Radioactive material is any material or combination of materials that spontaneously emit ionizing radiation.

^c A hazardous biologic material is any potentially harmful biologic material (including infectious agents, oncogenic viruses, and recombinant DNA) or any material contaminated with a potentially harmful biologic material.

- Emergency response program that specifies emergency health care, employee training measures and procedures for informing the public and response agencies (e.g. the fire department) should an accident occur.

The plans must be revised and resubmitted every five years.

The Risk Management Program is intended to reduce chemical risk at the local level. This information helps local fire, police, and emergency response personnel (who must prepare for and respond to chemical accidents), and is useful to citizens in understanding the chemical hazards in communities.

State

Soil Contamination

Soils that have concentrations of contaminants higher than certain acceptable levels must be handled and disposed as hazardous waste when excavated. The California Code of Regulations (“CCR”), Title 22, §66261.20-24 contains technical descriptions of characteristics that will cause a soil to be classified as a hazardous waste.

Hazardous Materials Management

The California Hazardous Materials Release Response Plans and Inventory Law of 1985 (“Business Plan Act”), Health and Safety Code section 25500 et seq., requires that any business that handles hazardous materials prepare a business plan, that include the following:

- Details, including floor plans, of the facility and business conducted at the site
- An inventory of hazardous materials that are handled or stored on site
- An emergency response plan
- A safety and emergency response training program for new employees with annual refresher courses

In January 1996, the California Environmental Protection Agency (“Cal EPA”) adopted regulations implementing a Unified Hazardous Waste and Hazardous Materials Management Regulatory Program (“Unified Program”). The program has six elements: (1) hazardous waste generators and hazardous waste on-site treatment; (2) underground storage tanks; (3) aboveground storage tanks; (4) hazardous materials release response plans and inventories; (5) risk management and prevention programs; and (6) Unified Fire Code hazardous materials management plans and inventories. The plan is implemented at the local level. The local agency responsible for the implementation of the Unified Program is called the Certified Unified Program Agency (“CUPA”). In Contra Costa County, the Contra Costa Hazardous Materials Program is the designated CUPA.

Hazardous Waste Management and Handling

In California, Cal EPA and the Department of Toxic Substances Control (“DTSC”), a department within Cal EPA, regulate the generation, transportation, treatment, storage, and disposal of hazardous waste. The EPA approved California’s RCRA program, called the Hazardous Waste Control Law (“HWCL”), Health and Safety Code Sections 25100 et seq., in 1992. DTSC has primary hazardous material regulatory responsibility, but can delegate enforcement responsibilities to local jurisdictions that enter into agreements with DTSC for the generation, transport, and disposal of hazardous materials under the authority of the HWCL.

The hazardous waste regulations establish criteria for identifying, packaging, and labeling hazardous wastes; prescribe the management of hazardous wastes; establish permit requirements for hazardous waste treatment, storage, disposal, and transportation; and identify hazardous

wastes that cannot be disposed of in ordinary landfills. Hazardous waste manifests must be retained by the generator for a minimum of three years. Hazardous waste manifests provide a description of the waste, its intended destination, and regulatory information about the waste. A copy of each manifest must be filed with the state. The generator must match copies of hazardous waste manifests with receipts from treatment, storage, and disposal facilities.

Contaminated soils and other hazardous materials removed from a site during construction or remediation may need to be handled as hazardous waste. In the County, remediation of contaminated sites is performed under the oversight and with the cooperation of the Contra Costa Hazardous Materials Program (“CCHMP”) and the Regional Water Quality Control Board (“RWQCB”).

Hazardous Materials Transportation

The State of California has also adopted federal DOT regulations for the intrastate movement of hazardous materials. State regulations are contained in Title 26 of the CCR. In addition, the State of California regulates the transportation of hazardous waste originating in the state and passing through the state.

The two state agencies with primary responsibility for enforcing federal and state regulations and responding to hazardous materials transportation emergencies are the California Highway Patrol (“CHP”) and California Department of Transportation (“Caltrans”).

The CHP enforces hazardous material and hazardous waste labeling and packing regulations to prevent leakage and spills of material in transit and to provide detailed information to cleanup crews in the event of an accident. Vehicle and equipment inspection, shipment preparation, container identification, and shipping documentation are all part of the responsibility of the CHP, which conducts regular inspections of licensed transporters to assure regulatory compliance. Caltrans has emergency chemical spill identification teams at as many as 72 locations throughout the state that can respond quickly in the event of a spill.

Common carriers are licensed by the CHP, pursuant to California Vehicle Code section 32000. This section requires the licensing of every motor (common) carrier who transports, for a fee, in excess of 500 pounds of hazardous materials at one time, and every carrier, if not for hire, who carries more than 1,000 pounds of hazardous material of the type requiring placards.

Every hazardous waste package type used by a hazardous materials shipper must undergo tests that imitate some of the possible rigors of travel. While not every package must be put through every test, most packages must be able to be kept under running water for a time without leaking; dropped, fully loaded, onto a concrete floor; compressed from both sides for a period of time; subjected to low and high pressure; and frozen and heated alternately.

Hazardous Materials Emergency Response

Pursuant to the Emergency Services Act, Government Code sections 8550 et seq., California has developed an Emergency Response Plan to coordinate emergency services provided by federal,

state, and local governmental agencies and private persons. Response to hazardous materials incidents is one part of this Emergency Response plan. The Emergency Response plan is administered by the state Office of Emergency Services (“OES”). The OES coordinates the responses of other agencies, including the EPA, CHP, the California Department of Fish and Game (CDFG), the RWQCBs, the local air pollution control districts, and local agencies.

Pursuant to the Business Plan Law, California Health and Safety Code section 25500 et seq., local agencies are required to develop “area plans” for response to releases of hazardous materials and wastes. These Emergency Response Plans depend to a large extent on the Business Plans submitted by persons who handle hazardous materials. An area plan must include pre-emergency planning and procedures for emergency response, notification, and coordination of affected governmental agencies and responsible parties, training, and follow up. As described above under *Hazardous Materials Management*, the CCHMP, which is also the designated CUPA, is responsible for implementing the Unified Program that includes provisions for the implementation of hazardous materials release response plans. This Unified Program was established and documented in the Contra Costa County Hazardous Materials Area Plan.

In addition, California Accidental Release Prevention Program (“CalARP”) regulations became effective January 1, 1997, replacing the California Risk Management and Prevention Program. CalARP was created to prevent the accidental release of regulated substances. It covers businesses that store or handle certain volumes of regulated substances at their facilities. A list of regulated substances is found in Section 2770.5 of the CalARP regulations. If a business has more than the listed threshold quantity of a substance, an accidental release prevention program must be implemented and a risk management plan may be required. The California Office of Emergency Services is responsible for implementing the provisions of CalARP.

Local

Soil and Groundwater Contamination

In the County, investigation and remediation of contaminated sites is performed under the oversight of Cal EPA and with the cooperation of CCHMP and the RWQCB. At sites where contamination is suspected or known to occur, the responsible party is required to perform a site investigation and prepare a remediation plan, if necessary. For typical development projects, actual site remediation is done either before or during the construction phase of the project. For removal of underground storage tanks (“USTs”), CCHMP and the local fire department have regulatory authority.

The CCHMP provides oversight, guidance, investigation and enforcement of the laws involving the handling, storage and processing of hazardous materials, monitors facilities to ensure safe and legal handling, storage, and disposal of hazardous wastes. Contra Costa Hazardous Materials Programs is the CUPA for all of the County.

City

General Plan 2025 Policies

The General Plan contains the following relevant goal, policies, and actions in the Safety and Noise element related to hazardous materials:

Safety and Noise

GOAL 3. Reduce dangers from hazardous materials.

- Policy 3.1. Facilitate the proper disposal of hazardous materials.
- Policy 3.2. Prioritize safety needs of non-industrial land uses.
- Policy 3.3. Incorporate hazardous materials abatement provisions in zoning and subdivision decisions and entitlement permits.
- Policy 3.4. Work with federal and state authorities to ensure that any transport of hazardous materials through Walnut Creek is at the highest standard of safety.
 - Action 3.4.1. Designate hazardous material carrier routes that direct hazardous materials away from populated and other sensitive areas.
- Policy 3.5. Require that soils, groundwater, and buildings affected by hazardous material releases from prior land uses, and lead and asbestos potentially present in building materials, will not have the potential to adversely affect the environment or the health and safety of residents.
 - Action 3.5.1. Require an environmental investigation for hazardous materials when reviewing application for new development in former commercial or industrial areas.
- Policy 3.6. Require that new development and redevelopment protect public health and safety from hazardous materials.
 - Action 3.6.1. Require environmental investigation stipulated by State and County regulations for potential hazardous material releases from prior uses, as well as lead and asbestos present in building materials.

2. Existing Conditions

Definitions

Materials and waste may be considered hazardous if they are poisonous (toxicity), can be ignited by open flame (ignitability), corrode other materials (corrosivity), or react violently, explode or generate vapors when mixed with water (reactivity). The term “hazardous material” is defined by state law as any material that, because of quantity, concentration, or physical or chemical characteristics, poses a significant present or potential hazard to human health and safety or to the environment.¹ In some cases, past industrial or commercial uses on a site can result in spills or

¹ State of California, Health and Safety Code, Chapter 6.95, Section 25501(o).

leaks of hazardous materials and petroleum to the ground, resulting in soil and groundwater contamination. Federal and state laws require that soils having concentrations of contaminants such as lead, gasoline, or industrial solvents that are higher than certain acceptable levels must be handled and disposed as hazardous waste during excavation, transportation, and disposal. The California Code of Regulations (“CCR”), Title 22, §66261.20-24 contains technical descriptions of characteristics that will cause a soil to be classified as a hazardous waste.

The use of hazardous materials and disposal of hazardous wastes are subject to numerous laws and regulations at all levels of government (see above).

Regional Setting

Regional land use in the vicinity of the Specific Plan Area is characterized by urban development. Urban development can cause soil and groundwater contamination from gasoline stations, industrial facilities, and residential areas. In addition, the use and storage of hazardous materials is common in neighborhood commercial operations including gasoline stations, dry cleaners, and film developers. Disturbance of existing soil and groundwater contamination can have adverse impacts on construction workers, the public, and the physical environment. In addition, improper storage or use or accidental release of hazardous materials can result in adverse environmental and public health impacts.

Soil and Groundwater Contamination

Soil and groundwater contamination in the region may include petroleum fuels or oils from leaking above- or below-ground petroleum storage tanks, hazardous or solid wastes from illegally disposed drums or from previous onsite uses, or chemicals or other raw hazardous materials from past spills. In addition, hazardous materials, such as asbestos, lead, polychlorinated biphenyls, and polycyclic aromatic hydrocarbons contained in older structural and building components and that occur naturally in the environment, can result in localized soil and groundwater contamination that may be harmful to workers, the public, and/or the environment.

Fuel Contamination from Leaking Underground and Aboveground Storage Tanks

A UST is a tank and any underground piping connected to the tank that has at least 10 percent of its combined volume underground. Until the mid-1980s, most USTs were made of single-walled bare steel which can corrode over time resulting in leakage. Faulty installation or maintenance procedures also lead to UST leakage, in addition to potential releases associated with spills. Recently revised UST regulations have significantly reduced the incidents of UST leakage from new UST systems and the consequential soil and groundwater contamination. However, some older UST systems remain in service, and many sites contaminated by leaking USTs are still under investigation and clean-up. Similarly, spills resulting from poor maintenance or improper installation associated with aboveground storage tanks (“ASTs”) can result in localized, shallow soil contamination. USTs installed prior to the mid-1980’s that have leaked as well as improperly installed USTs and ASTs that have resulted in fuel spills can present contamination issues in the region.

Asbestos-Containing Materials

Asbestos is the commercial term for a group of naturally occurring, fibrous silicate minerals that were used as building fireproofing and insulation until it was banned by the EPA in the 1970s. The fire resistant and chemically inert nature of asbestos minerals makes it ideal for a fire retardant. Asbestos is found in ceiling coverings, tiles, floor mastic, and pipe insulation in older buildings. Serpentine bedrock, located in many areas within the San Francisco Bay region, can contain chrysotile and other naturally-occurring asbestos fibers, which could be released into the atmosphere during excavation, blasting, or gravel crushing activities. Inhalation of asbestos fibers by humans can lead to asbestosis and other lung respiratory complications and diseases. Areas of the region that contain buildings that were built prior to the 1970's and that contained asbestos as well as regions containing artificial fill can potentially contain asbestos soil and groundwater contamination.

Lead

The presence of lead, above natural background levels, in shallow soils is a possible occurrence in areas that were constructed over artificial fill and in former industrial areas. Lead concentrations in fill can originate from building and industrial rubble containing or affected by sources of lead such as piping, coatings, paint, and other construction materials. Historically, tetraethyl lead ("TEL") was used as an anti-knock agent in gasoline. Although the EPA banned the use of TEL in gasoline, residual elevated concentrations are still present in the shallow soils along roadsides and in industrial areas.

Polychlorinated Biphenyls

Polychlorinated biphenyls ("PCBs") constitute a group of compounds, developed in the 1930s, that were historically used in many types of electrical equipment, including transformers and capacitors, primarily as electrical insulators. The ability of oil containing PCBs to withstand high temperatures made them popular in the electrical and mining industry. Due to their accumulation in the food chain, production and use of PCBs was discontinued in 1977 following discovery that exposure to PCBs may cause serious adverse health effects. PCBs still persist in varying concentrations in soils underlying former industrial areas and in areas affected by historic PCB spills.

Polycyclic Aromatic Hydrocarbons

Polycyclic aromatic hydrocarbons ("PAHs") are a group of organic compounds found in a wide variety of materials, including crude oil, asphalt, and creosote timber. Most refined petroleum products also contain PAHs, either retained from the original crude or produced during the refining process. PAHs are produced as combustion products and therefore occur in many burned or charred materials and are commonly found after structural or large forest fires. Elevated concentrations of PAHs may occur in soils or offshore sediment due to the presence of historic fill.

Existing Hazardous Materials Use

Hazardous materials are used regionally by industrial and commercial operations in conformance with a submitted and approved Business Plan that outlines procedures for their proper use, storage, and disposal. In addition, as described in the *Regulatory Framework* below, federal, state, and local guidelines also control hazardous materials use, storage, and disposal. Businesses located in the Specific Plan Area currently use, store, and dispose of hazardous materials as part of their normal operations.

Existing Environment

Commercial use within the Specific Plan Area includes past and present usage, storage and disposal of hazardous materials. A limited survey of regulatory agency records was conducted for locations within the Specific Plan Area. Regulatory databases, provided by the State Water Resources Control Board's ("SWRCB") Geotracker database for leaking underground fuel tanks ("LUFT") and USTs, the Spills, Leaks, Investigations, and Cleanup Database ("SLIC"), and the EnviroStor database maintained by the California Department of Toxic Substances Control ("DTSC") was reviewed for the Specific Plan Area and close vicinity. A handful of LUFT sites were located along Mt. Diablo Boulevard in the vicinity of the Specific Plan Area (DTSC, 2008). Two of these addresses are within the Specific Plan Area. One of the sites, 1556 Mt. Diablo Boulevard (currently Mark Morris Tires, formerly occupied by Firestone), is listed as closed with no further action required. Sites are typically closed by the SWRCB when the extent of contamination has been fully delineated and the levels are below action levels or do not have concentrations that will require any further assessment, monitoring, or remediation based on existing site use. The other site listed the Chevron service station at 1700 Mt. Diablo Boulevard, as an open case with verification monitoring being conducted to establish appropriate next steps. The contaminants of issue in this case are petroleum hydrocarbons. In addition to the above two mentioned sites, there are known subsurface detections of petroleum hydrocarbons on the south side of Mt. Diablo Boulevard and on the site of the Olympic Place project from former service stations and auto repair facilities. For the properties in the Specific Plan Area, only the Chevron service station was on the UST list.

Review of the SLIC list showed two sites for the entire City, including the former Kaiser Sand at 1333 North California and Virginia Cleaners at 1305-1335 Main Street (SWRCB, 2008). Kaiser Sand was located across California Street from the Chevron station but a limited review of the site revealed no further information regarding the scope or current status of the site. Virginia Cleaners is located approximately 1/3 of a mile southeast of the Specific Plan Area. Again, no further information on scope or current status of the site was available as part of the limited review of public materials.

The Contra Costa County Health Services agency keeps a database for hazardous materials incidents dating back to 1993. According to a review of this database, there were no incidents noted for the Specific Plan Area and only minor incidents (i.e. discovery of abandoned containers of oil or fuel etc.) in the vicinity of the Specific Plan Area (CCCHS, 2008).

3. Standards of Significance

According to Appendix G of the state CEQA Guidelines, the project would result in a significant environmental impact related to hazardous materials if it would:

- (a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials;
- (b) Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment;
- (c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school;
- (d) Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code section 65962.5 and, as a result, would create a significant hazard to the public or the environment;
- (e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard for people residing or working in the project area;
- (f) For a project within the vicinity of a private airstrip, would the project result in a safety hazard for people residing or working in the project area;
- (g) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan; or
- (h) Expose people or structures to a significant risk of loss, injury or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands.

Topics Determined Less than Significant in the Initial Study

Hazards were previously analyzed in the Locust Street / Mt. Diablo Boulevard Specific Plan Initial Study, which determined that several of the criteria mentioned above were found to be either less than significant or have no impact (also summarized in Chapter 6). The Specific Plan Area is not located within the area of an airport land use plan or near a public airport (criterion e) or private air strip (criterion f). In addition, because the Specific Plan Area will not change or obstruct the existing street pattern, it will not interfere with an adopted emergency response or evacuation plan (criterion g). The Initial Study further concluded that the Specific Plan will not expose people or structures to a significant risk associated with wildland fires (criterion h) pursuant to mapping designation of “Moderate” fire threat for the Specific Plan, pursuant to the General Plan.

4. Approach and Methodology

If mishandled, hazardous materials and hazardous wastes could pose risks to the public. Potential health and safety impacts can stem from interactions of construction workers, the public and/or future occupants with hazardous materials and wastes encountered or generated during construction activities or operations of facilities that handle hazardous materials. The Specific Plan calls for the redevelopment of the Specific Plan Area. The policies contained within the Specific Plan generally address design measures that have little relevance to hazardous materials exposure risks. However, the Specific Plan will also be bound by the policies contained in the General Plan as well as the regulatory requirements discussed in the *Regulatory Framework* section. Therefore, the following analysis discusses the potential impacts related to development that will accompany the implementation of the Specific Plan against the existing regulatory framework.

5. Impact Discussion

Construction Impacts

Impact HAZ-1: Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials, create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment, or 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 create a significant hazard to the public or the environment (criteria a, b and d). (Less than Significant)

Implementation of the Specific Plan could disturb and release contaminated soil or groundwater and expose workers, the public, or the environment to adverse conditions related to hazardous materials handling, but will comply with existing regulatory requirements and local policies. Future development within the Specific Plan Area could include excavation for installation of utilities, building foundations, subterranean development, or for regrading. Disturbance of subsurface soils and groundwater at locations that may have been previously contaminated by prior uses could further disperse existing contamination into the environment and expose construction workers or the public to contaminants.

If significant levels of hazardous materials in excavated soils should go undetected, health and safety risks to workers and the public could occur. Exposure to hazardous materials could cause various short-term and/or long-term health effects. Possible health effects could be acute (immediate, or of short-term severity), chronic (long-term, recurring, or resulting from repeated exposure), or both. Acute effects, often resulting from a single exposure, could result in a range of effects from minor to major, such as nausea, vomiting, headache, dizziness, or burns. Chronic exposure could result in systemic damage or damage to organs, such as the lungs, liver, or kidneys. Health effects would be specific to each hazardous material.

Contamination could also be encountered either at any of the identified LUFT or SLIC sites or at some other unidentified location where contamination may be present. It is not uncommon to encounter unexpected conditions once groundbreaking activities commence. However, there are established protocols available that can minimize the potential exposure to workers, the public and the environment. General Plan Policies 3.5 and 3.6 along with their corresponding Actions (previously discussed under *General Plan 2025 Policies*) will require that environmental investigations are conducted prior to construction of new development or redevelopment. These investigations will confirm the presence of hazardous materials in subsurface materials and provide recommendations in coordination with the local overseeing agency to remediate the contamination, if necessary, to safe levels. In addition, there are established OSHA requirements that help protect workers and the environment from exposure to released hazardous materials. Therefore, adherence to these existing General Plan policies as well as existing federal, state, and local regulations will ensure the potential impact to a less than significant.

Mitigation: None required.

Impact HAZ-2: Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials, or create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment (criteria a and b). (Less than Significant)

As discussed above, some existing buildings in the Specific Plan Area may contain asbestos, lead-based paint, and/or PCBs. Implementation of the Specific Plan could disturb and release hazardous structural and building components (i.e. asbestos, lead, PCBs, USTs, and ASTs) during demolition and construction, which could expose workers, the public, or the environment to adverse conditions related to hazardous materials handling. However, construction activities associated with implementation of the Specific Plan will comply with existing regulatory requirements and local policies

Asbestos

Asbestos could be encountered during structural demolition of the existing buildings and may require containment and disposal. Based on the age of the buildings within the Specific Plan Area, it is very likely that some asbestos containing materials (“ACMs”) are present. Affected buildings will require appropriate abatement of identified asbestos prior to demolition or renovation. ACMs are regulated both as a hazardous air pollutant under the Clean Air Act and as a potential worker safety hazard under the authority of Cal-OSHA. The renovation or demolition of buildings containing asbestos will require retaining contractors who are licensed to conduct asbestos abatement work and notifying the Bay Area Air Quality Management District (“BAAQMD”) ten days prior to initiating construction and demolition activities.

Section 19827.5 of the California Health and Safety Code, adopted January 1, 1991, requires that local agencies not issue demolition or alteration permits until an applicant has demonstrated compliance with notification requirements under applicable federal regulations regarding hazardous air pollutants, including asbestos. The BAAQMD is vested by the California legislature with authority to regulate airborne pollutants, including asbestos, through both inspection and law enforcement, and is to be notified ten days in advance of any proposed demolition or abatement work.

Potential exposure to asbestos, and its related chronic adverse health effects, is possible throughout demolition and renovation if materials that contain asbestos are present during operations.

Lead and Lead-based Paint

Lead-based paint could be separated from building materials during any demolition processes. Separated paint can be classified as a hazardous waste if the lead content exceeds 1,000 parts per million and will need to be disposed of accordingly. Additionally, lead-based paint chips can pose a hazard to workers and adjacent sensitive land uses. Both the Federal and California OSHAs regulate all worker exposure during construction activities that impact lead-based paint. Interim Final Rule found in 29 CFR Part 1926.62 covers construction work where employees may be exposed to lead during such activities as demolitions, removal, surface preparation for re-painting, renovation, clean up and routine maintenance. The OSHA-specified method of compliance includes respiratory protection, protective clothing, housekeeping, hygiene facilities, medical surveillance, training, etc.

Demolition and renovation work could create exposure to lead-based paint present in building structures. Dust generating activities that include removal of walls, sanding, welding, and material disposal could produce airborne quantities of lead-laden material. These materials could expose workers and persons in close proximity, including occupants of offsite locations. The Specific Plan Area contains buildings with painted surfaces, such as drywall, ceilings, and exterior stucco, which could contain lead-based paint (“LBP”).

PCB-containing Materials

The presence of PCB-containing materials may be present within the existing structures in the Specific Plan Area. The detection of significant concentrations of PCBs indicates the former use and/or storage of PCBs at the project site. Demolition of these structures could disturb these materials and expose workers or the public to adverse effects. Similar to the concerns of ACMs, an initial survey to determine the presence of PCBs will need to be conducted for a specific site followed by implementation of appropriate measures to handle any materials with PCBs.

Underground Storage Tanks

There are documented USTs within the Specific Plan Area and always the potential for encountering undocumented USTs. Prior to UST regulations that were established in the 1980’s, USTs were commonly installed without any documented record. Therefore, additional

undocumented USTs may be encountered during future demolition and grading activities. If encountered, an older UST could expose workers or the public to adverse effects.

However, existing protocols and regulations for demolition of hazardous building materials will address the potential impacts of exposure from asbestos, lead based paint, PCBs, and USTs. Pre-demolition surveys by licensed contractors are required to sample building materials prior to demolition and if present, include the recommendations for an abatement plan. Abatement must be conducted by licensed contractors that will appropriately protect the workers and the public through personal protective equipment for workers, isolation of work areas, and use of appropriate waste containment. All hazardous waste is required to be transported and disposed of at a licensed disposal facility. Adherence to these established mandatory federal, state, and local requirements will ensure that the potential impact is less than significant.

Mitigation: None required.

Impact HAZ-3: Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment (criteria b). (Less than Significant)

Implementation of the Specific Plan could release hazardous materials (i.e. fuels, lubricants, solvents) used onsite during construction activities to the environment through improper handling or storage, but will employ established BMPs. Future construction activities that may occur with implementation of the Specific Plan will require the use of certain hazardous materials such as fuels, oils, lubricants, solvents, and glues. Inadvertent release of large quantities of these materials into the environment could adversely impact soil, surface waters, or groundwater quality. In addition, larger developments could potentially include onsite storage and/or use of quantities of materials capable of significantly impacting soil and groundwater. Employing construction best management practices (“BMPs”) is typical of construction and redevelopment projects of the scale that will occur in the Specific Plan Area; BMPs are routinely implemented as part of construction to minimize the potential adverse effects to groundwater and soils resulting from inadvertent handling or storage of hazardous materials. Typical BMPs include the following, which will apply to future projects:

- Following manufacturer’s recommendations on use, storage and disposal of chemical products used in construction;
- Avoiding overtopping construction equipment fuel gas tanks;
- During routine maintenance of construction equipment, properly containing and removing grease and oils.
- Properly disposing of discarded containers of fuels and other chemicals.

Adherence to these BMPs, which have proven effective in minimizing the potential for accidental upset conditions of hazardous materials, will ensure the potential impact is less than significant.

Mitigation: None required.

Impact HAZ-4: Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school (criteria c). (Less than Significant)

Parkmead Elementary School, located approximately 1.5 miles from the Specific Plan Area is the nearest elementary school to the project. The nearest intermediate school is Walnut Creek Intermediate School, located approximately three-quarters of a mile from the Specific Plan Area. Las Lomas High School, at approximately one-half mile south of the Specific Plan Area, is the nearest school to the project. As no school is located within one-quarter mile of the Specific Plan Area, the impact for this criterion would be less than significant

Mitigation: None required.

Operational Impacts

Impact HAZ-5: Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials, or create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment (criteria a and b). (Less than Significant)

Implementation of the Specific Plan will include uses that will handle limited quantities of hazardous materials, but that will comply with existing regulatory requirements. Future development in the Specific Plan Area will include commercial, retail, and residential uses that are likely to handle, store, and transport various hazardous materials and consequently generate hazardous wastes. Existing state and local regulations require that all hazardous materials and wastes are stored, handled, and disposed of according to a numerous safety requirements that ensure protection of human health and the environment. For general commercial/retail land uses and residential uses, hazardous materials are generally handled and transported in relatively small quantities. Given the relatively low potential for adverse health effects associated with the materials associated with these uses, the effects will be than significant. In addition, businesses that operate in the Specific Plan Area will be required to prepare and submit a Hazardous Materials Business Plan to the City. Implementation of the plan ensures that employees are adequately trained to handle the materials and specifies how employees shall respond to accidental upset incidents. Overall, adherence to established federal, state, and local regulatory

requirements that address the handling of hazardous materials will ensure that the potential impact of operational hazardous material use is less than significant.

Land Use Option B on Opportunity Site 4 (Chevron) will allow redevelopment and reinvestment in a portion of Opportunity Site 4, while maintaining the existing gas station use on the remainder of that site. As a result, the use on Opportunity Site 4 would continue to handle, store, and transport various hazardous materials and generate hazardous wastes in slight greater amounts than the commercial retail/office uses that would redevelop the entirety of Opportunity Site 4 with Option A. (See Table III-1, Specific Plan Development Program, by Site – Existing and Proposed, in the Project Description, Chapter III). Existing federal, state, and local regulations that mandate the storage, handling, disposal, and transport of hazardous materials and wastes, including those specific to gas stations with ancillary auto repair services, will continue to apply to ensure protection of human health and the environment.

Therefore, implementation of the Specific Plan, Option A or Option B on Opportunity Site 4, will not result in a significant impact as future development of continuing uses will adhere to established federal, state, and local regulatory requirements that address the handling of hazardous materials. The impact will be less than significant.

Mitigation: None required.

Cumulative Impacts

Impact HAZ-6: Implementation of the Specific Plan, combined with other past, present, and reasonably foreseeable probable future development in the vicinity, will not result in cumulative hazardous materials impacts. (Less than Significant)

Hazardous material impacts typically occur in a local or site-specific context versus a cumulative context combined with other development projects. It is possible, however for combined effects of transporting and disposal of hazardous materials to be affected by cumulative development.

Future development will occur in accordance with existing General Plan policies and established regulatory requirements relevant to hazardous material. As discussed above, cumulative development will have a less than significant hazardous materials impact to the public or the environment within or near the Specific Plan Area. Other foreseeable development within the area also will be required to comply with the same regulatory framework as projects in the Specific Plan Area This includes federal and state regulatory requirements for transporting (Cal EPA and Caltrans) hazardous materials or cargo (including fuel and other materials used in all motor vehicles) on public roads or disposing of hazardous materials (Cal EPA, DTSC, ACEHD). Therefore, the cumulative impact of the Specific Plan development and other past, present, and reasonably foreseeable probable future projects on hazardous materials will be less than significant.

Mitigation: None required.

References – Hazardous Materials

Association of Bay Area Governments (“ABAG”), *Wildfire Hazard Maps and Information*,
<http://www.abag.ca.gov/bayarea/eqmaps/wildfire/>, accessed September 24, 2008.

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http://www.cchealth.org/z/app/incident_search/incident.php?action=PROCESS&from_date=1993%2F01%2F01&to_date=2008%2F09%2F23&address=&city=Walnut+Creek&fac_name=&submit=submit, accessed September 23, 2008.

Department of Toxic Substances Control (“DTSC”), Envirostor Database,
<http://www.envirostor.dtsc.ca.gov/>, accessed September 19, 2008.

State Water Resources Control Board (“SWRCB”), Geotracker,
<http://www.geotracker.swrcb.ca.gov>, accessed September 19, 2008.

City of Walnut Creek, *General Plan Vision 2005, A Plan for the City of Walnut Creek*, adopted February 22, 1989, as amended.

J. Hydrology, Water Quality, and Flooding

This section addresses potential changes in hydrology, water quality, groundwater, and flooding conditions that could result from implementation of the Locust Street / Mount Diablo Specific Plan. This section describes the existing hydrologic setting; provides an overview of applicable federal, state, and local regulatory framework; presents an analysis of potential environmental impacts; and where appropriate, identifies suitable mitigation measures to reduce the intensity of potential impacts. Information sources used to prepare this section include documents from various local, state, and federal agencies, the General Plan, and numerous published documents and maps related to the topic.

1. Regulatory Setting

Federal

The major federal legislation governing the water quality aspects of the Specific Plan is the Clean Water Act (“CWA”), 33 U.S.C. sections 1251 et seq., as amended. The objective of the CWA is to “restore and maintain the chemical, physical, and biological integrity of the Nation’s waters,” 33 U.S.C. section 1251(a). The CWA requires states to establish water quality standards to protect designated uses for all waters of the nation. In general, implementation of many aspects of the CWA under the EPA have been delegated to individual states.

State

Porter-Cologne Water Quality Control Act and California’s Water Boards

The Porter-Cologne Water Quality Control Act (Division 7 of the California Water Code) provides the basis for water quality regulation within California. This Act established the authority of the State Water Resources Control Board (“SWRCB”) and the nine Regional Water Quality Control Boards (“RWQCBs”). The SWRCB administers water rights, water pollution control, and water quality functions throughout the state, while the RWQCBs conduct planning, permitting, and enforcement activities. The Specific Plan Area lies within the jurisdiction of the RWQCB, San Francisco Bay region.

The Porter-Cologne Water Quality Control Act allows the SWRCB to adopt statewide water quality control plans, the purpose of which are to establish water quality objectives for specific water bodies. In the San Francisco Bay region the Water Quality Control Plan, known as the Basin Plan, is the RWQCB’s master policy document. The Basin Plan contains descriptions of the legal, technical, and programmatic basis of water quality regulation in the region (RWQCB, 1995). The Act also authorizes the National Pollutant Discharge Elimination System (“NPDES”) program, which established effluent limitations and quality requirements for discharges to waters of the State. In the San Francisco Bay region, the RWQCB has included permit requirements for stormwater runoff under the NPDES program since 1991. In the Specific Plan Area, the City of Walnut Creek as a co-permittee of Contra Costa Clean Water Program (discussed below) administers the stormwater program.

The California Department of Fish and Game (“CDFG”) has jurisdiction over any activity that could affect the bank or bed of any stream that has value to fish and wildlife. If any changes are proposed along a creek or waterway within its jurisdiction, a Streambed Alteration Agreement required under the Department of Fish and Game Code sections 1601 or 1603. The U.S. Army Corps of Engineers (“Corps”) also has jurisdiction over any “fill” to “waters of the United States,” including wetlands, under Section 404 of the Clean Water Act. The San Francisco Bay RWQCB administers the 401 Water Quality Certification of the Clean Water Act to ensure that such activities adhere to state water quality standards. The RWQCB has review authority of Section 404 permits administered by the Corps.

Construction Activity Permitting

The SWRCB administers the NPDES Permit Program through its General NPDES Permit. The San Francisco Bay RWQCB monitors and enforces the NPDES storm water permitting for the region. Construction activities that disturb one acre of land or more are subject to the permitting requirements of the NPDES General Permit for Discharges of Storm Water Runoff Associated with Construction Activity (General Construction Permit). If subject to this permit, individual Specific Plan sponsors must submit a Notice of Intent to the SWRCB in order to be covered by the General Permit prior to the beginning of construction. The General Construction Permit requires the preparation and implementation of a Storm Water Pollution Prevention Plan (“SWPPP”), which must be prepared before construction begins. A SWPPP includes specifications for Best Management Practices (“BMPs”) to be implemented during construction to control potential discharge of pollutants from the construction area. Additionally, a SWPPP describes measures to prevent pollutants in runoff after construction is complete and reference a plan for inspection and maintenance of the facilities. Implementation of a SWPPP starts with the commencement of construction and continues through the completion of the project. Upon completion, the applicant must submit a Notice of Termination to the SWRCB.

Municipal Storm Water Permitting

Federal regulations authorize the issuance of system-wide municipal permits by the RWQCB. The RWQCB regulates municipalities for control of stormwater runoff pollution under the NPDES. Co-permittees of the Contra Costa Clean Water Program are responsible for development and implementation of storm water management plans (“SWMP”) to prevent the pollution of surface runoff. Discharge of storm water from the City is permitted through a Joint Municipal NPDES Permit issued to Contra Costa County, 19 of its incorporated cities and the Contra Costa County Flood Control and Water Conservation District, which have joined together to form the Contra Costa Clean Water Program. The permit incorporates specific requirements to limit storm water pollutant discharges associated with certain new development and significant redevelopment projects. The requirements apply to the City as the Discharger of storm water, the Contra Costa Clean Water Program as the Permit Holder, and specific new development and redevelopment projects. Therefore, Walnut Creek is part of the county-wide program implemented by the County in compliance with NPDES permit requirements, (Contra Costa County Clean Water Program, 2004).

Local and City

Contra Costa Clean Water Program

The Contra Costa Clean Water Program (“CCCWP”) was formed by the County, the Contra Costa Flood Control and Water Conservation District, and 19 incorporated cities within the County. CCCWP supports compliance with the CWA by providing guidance and program outlines for activities that are meant to control pollutant levels within stormwater flows. Specifically, CCCWP implements mandates of the San Francisco Bay RWQCB and Central Valley RWQCB that the County and jurisdictions therein impose more stringent requirements from new developments, in order to control water quality pollution before stormwater runoff is discharged into receiving waters. These requirements on new developments are implemented in conjunction with temporary measures to control sediment and other construction-related pollutants, maintenance programs for streets, parks, and public infrastructure, public outreach, and other programs. Prior to initiating construction on a given development project, compliance with CCCWP policies must be initiated, and if deemed necessary, a Stormwater Control Plan that initiates relevant pollution and drainage control measures must be submitted for approval along with the Planning and Zoning Application for the project in question.

General Plan 2025 Policies

The following General Plan goals, policies, and actions are relevant to hydrology, water quality, and flooding in the Specific Plan Area:

Safety and Noise

GOAL 2. Reduce the potential for flooding in flood-prone areas.

- Policy 2.1. Reduce the risk of property damage and personal injury due to flooding.
 - Action 2.1.1. Limit the amount of impervious surface in flood-prone areas.
 - Action 2.1.2. Limit runoff in flood-prone areas.

2. Existing Conditions

Hydrology and Drainage

The Locust Street / Mount Diablo Boulevard Specific Plan Area is located within the Walnut Creek Watershed of the Walnut Creek Valley. The Walnut Creek watershed drains the central region of the County flowing north and emptying into Suisin Bay. The Las Trampas Creek joins the San Ramon Creek near the Specific Plan Area to form Walnut Creek. The Specific Plan Area is situated within the Grayson Creek-Murderers Creek Subwatershed. Grayson and Murderers Creeks are tributaries of Walnut Creek that originate within the Briones Hills (City of Walnut Creek, 2004).

San Ramon Creek is the major creek drainage for the San Ramon Valley, flowing north to Walnut Creek. It generally runs east of and parallel to Interstate 680, merges with several other

tributaries, and joins with Walnut Creek, eventually draining into Pacheco Creek, Suisun Bay, Carquinez Strait, and the San Francisco Bay. The Walnut Creek watershed is the major drainage basin in central County. The Specific Plan Area is located approximately 800 feet southwest of where San Ramon Creek and Las Trampas Creek join. Las Trampas Creek begins southwest of the Specific Plan Area and winds down from the uplands in a generally northeasterly direction.

The City's system of storm drains collects and channels surface water (mostly from rainfall) into a series of pipes, trenches, culverts, detention basins, and open channels which transport and empty it into San Francisco Bay. The system is based upon the natural drainage pattern determined by topography.

The Grayson Creek and Murderers Creek drainage basins encompass the Specific Plan Area. The subwatershed consists of both open space and urbanized land, sloping toward the east. Both creeks drain towards Walnut Creek, a natural creek, though modified by a series of channels and pipes outside of the Specific Plan Area.

Climate in the Walnut Creek Valley is considered Mediterranean, where summers are dry and warm and winters are cool and wet. Annual rainfall in this region is variable depending on the year, but averages approximately 21 inches per year with the majority of rainfall occurring between October and April (City of Walnut Creek, 2004). Localized flooding related to extreme storm events can occur along unprotected reaches of San Ramon Creek, especially in the valley lowlands to the northeast.

Groundwater

Groundwater in the Specific Plan Area is likely shallow and contained within the alluvial sediments. Subsurface soil investigations conducted across the street from the Specific Plan Area encountered groundwater at depths of 13 to 14 feet below ground surface (Kleinfelder, 2001). The shallow groundwater most likely flows through the alluvial sediments on top of the bedrock. Groundwater resources are not used in this area due to availability of municipal surface water supplies. The area available for groundwater recharge depends on the amount of exposed ground area. Placement of impervious surfaces such as roads, parking lots, and structures decreases the recharge area and direct the water to surface drainage features.

Flooding

The risk of flooding in urban areas is dependent on the following variables: preceding soil conditions, amount and intensity of rainfall, and capacity of the storm drain system. It is the function of the storm drain system to move surface runoff into gutters, storm drain inlets, channels, creeks, collection basins, and eventually to the receiving body (San Francisco Bay). Additionally, silt and debris in the storm drain system can sometimes cause water to back up and flood surrounding areas. Leaves, branches, household trash, and other debris must be removed regularly in order for the storm drain system to function effectively. The City's Streets/Building & Equipment Maintenance Division provides street cleaning and sweeping service on a scheduled basis (and during other times, as necessary), and maintains and repairs the municipal storm water

drain system, which includes catch basins, open ditches and channels, hillside valley-gutters, box culverts, and subsurface drains, within the Specific Plan Area.

There are localized areas of Walnut Creek that are subject to flooding during certain large storm events (i.e., 100-year events) (ESRI, 2004). The entire Specific Plan Area lies within Flood Area Zone X as designated by the Federal Emergency Management Agency (“FEMA”). **Figure IV.J-1** illustrates areas within the Zone X flood zone. Zone X is defined as areas of 500-year flood; areas of 100-year flood that would experience an average flood depth of less than one foot; areas of 100-year flood with drainage areas less than one square mile; or areas protected by levees from 100-year floods. Zone X differs from the Special Flood Hazard Areas in that it does not require certain building restrictions.

In the Walnut Creek Valley, storm flows can increase in surface watercourses due to the level of development and the addition of impervious surfaces. A number of flood control improvements have been made to Walnut Creek and its tributaries by the U.S. Army Corps of Engineers, the State of California, and the Contra Costa County Flood Control District. Some of the problem areas have been realigned and modified including diversions, concrete box culverts, and other flow capacity improvements to accommodate storm flows that could occur in this region.

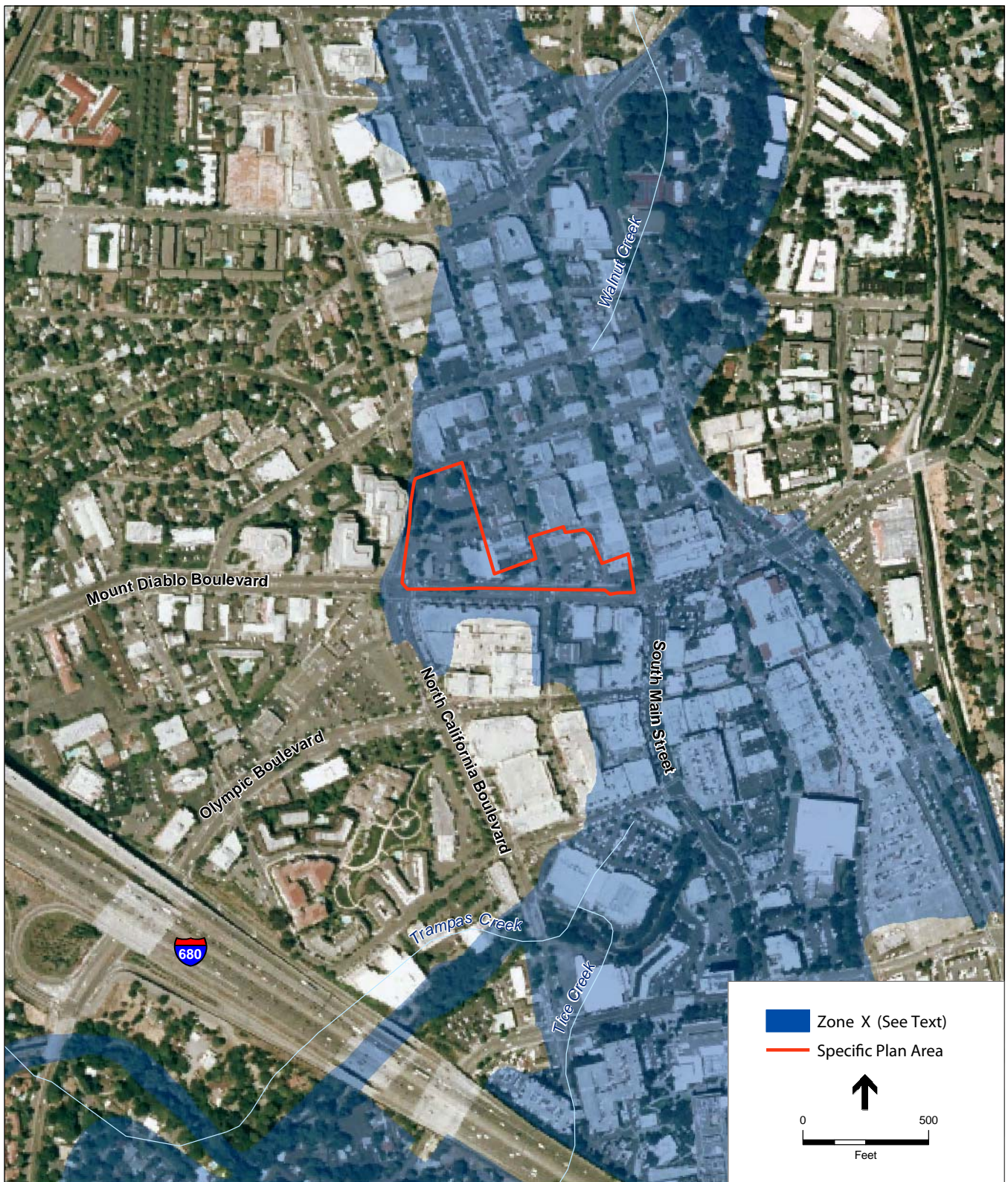
Water Quality

Water pollution is a critical problem associated with urban runoff. The Specific Plan Area’s storm drain system is designed to prevent flooding by channeling stormwater runoff northward via channels and culverts toward Suisun Bay. However, this runoff is not treated, and can deliver pollutants to Suisun Bay from any impermeable surface within the Specific Plan Area. Stormwater runoff accounts for up to 80 percent of the pollution which eventually empties into San Pablo Bay, and can contain the following pollutants: oil, grease, or antifreeze from leaking cars or trucks; paint or paint products; leaves or yard waste; pesticides, herbicides, or fertilizers from yards and gardens; solvents and household chemicals; animal wastes, litter, or sewer leakage; and construction debris such as fresh concrete, mortar, or cement.

Releases of petroleum hydrocarbons to the subsurface have been documented within the Specific Plan Area as well as just outside of the area. See Section I (Hazardous Materials) for more details regarding soil and groundwater contamination.

Sea Levels and Climate Change in the Bay Area

Historic records indicate that the average sea level in San Francisco Bay has risen by approximately 7 inches over the past 150 years (BDCP, 2007), and the Intergovernmental Panel on Climate Change reports that mean sea level will rise by approximately 12 to 36 inches by the year 2100 (IPCC, 2007). Sea level rise models applied to the Bay Area indicate that a sea level rise of about 12 inches would shift the 100-year storm surge influenced flood event from once per century to once per decade (BCDC, 2007). Therefore, as a result of climate change, it is anticipated that the Bay Area will be prone to substantial additional flooding in low-lying areas adjacent to the San Francisco Bay and the Sacramento-San Joaquin Delta.



SOURCE: FEMA, 2006; ESRI, 2007; ROMA Design Group, 2004; and ESA, 2008

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Figure IV.J-1

FEMA Floodplain in the Specific Plan Area

The Specific Plan would be located entirely within an upland area that is located at least 7 miles south of Suisun Bay, which is the portion of the Bay-Delta system that is located in closest proximity to the Specific Plan Area. Additionally, the Specific Plan Area is situated at an elevation ranging from approximately 135 to 145 feet above sea level. As a result, the Specific Plan Area would not experience any increase in flooding as a result of climate-induced sea level rise.

As described above, the Specific Plan would replace existing impervious surfaces and would not result in additional sediment, erosion, or sedimentation within downstream areas, and therefore would not compound flooding downstream, including flooding associated with climate-induced sea level rise.

3. Standards of Significance

According to Appendix G of the state CEQA Guidelines, the project would result in a significant environmental impact related to hydrology, water quality, and flooding if it would:

- (a) Violate any water quality standard or waste discharge requirements;
- (b) Substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g., the production rate of pre-existing nearby wells would drop to a level which would not support existing land uses or planned uses for which permits have been granted);
- (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-site or off-site;
- (d) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site;
- (e) Create or contribute runoff water that would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff;
- (f) Otherwise substantially degrade water quality;
- (g) Place housing within a 100-year flood plain;
- (h) Place structures within a 100-year flood plain that would impede or redirect flood flows;
- (i) Expose people or structures to a significant risk of loss, injury, or death involving flooding, including flooding as a result of the failure of a levee or dam;
- (j) Cause or result in inundation by seiche, tsunami, or mudflow.

Topics Determined Less than Significant in the Initial Study

The Initial Study prepared for the Locust Street / Mt. Diablo Boulevard Specific Plan determined that the potential impact associated with placing housing within a 100-year flood plain (criterion g); placing structures within a 100-year flood plain that would impede or redirect flood flows (criterion h); or inundation by seiche, tsunami, or mudflow (criterion j) would be less than significant. Criterion i is discussed further in this EIR, and criterion g, h and j are not analyzed further in this EIR, as indicated in the Initial Study.

4. Impact Discussion

Impact HYD-1: Violate any water quality standards or waste discharge requirements (criterion a). (Less than Significant)

Implementation of the Specific Plan would result in the conversion of existing uses into additional office, residential, and commercial uses, from approximately 91,000 square feet (sf) of existing development up to approximately 353,000 sf of proposed development upon full buildout. This additional construction would require demolition of a portion of the existing parking lots and structures currently located in the Specific Plan Area, followed by the new construction.

Demolition and construction would include destruction and removal of cement, pavement, and other debris, scraping, grading, earth moving, and other construction related activities. These actions, if not properly managed, could generate stormwater or other runoff that is polluted with debris, sediment, oils, greases, heavy metals, fuels, and other potential pollutants associated with construction and demolition activities. These potential pollutants could then migrate with runoff from the site and result in contamination or sedimentation in receiving waters, including natural waterways. This could be a significant impact. Compliance with the conditions of the required NPDES permit, as described below, would be necessary to reduce the intensity of this potential impact.

Additionally, implementation of the Specific Plan would result in increased intensity of use at the Specific Plan Area during operation. Specifically, increased traffic and occupancy on-site could result in increases in associated pollutants, including transportation-related pollutants such as oil and fuels, brake dust, and settled particulates; leaching of oils or other chemicals from paved surfaces; increased sediment; and trash. Without protective measures, these pollutants could be discharged into the City's drainage system and ultimately natural waters, resulting in a potentially significant increase in water quality degradation. Compliance with the conditions of the required NPDES permit, as described below, would be required to reduce the intensity of this potential impact.

The existing Specific Plan Area is almost completely covered by impervious surfaces, such as parking lots, buildings, roadways, sidewalks, and other features. While the Specific Plan would result in an increase in the intensity of use of the Specific Plan Area, it is not anticipated to result in an increase in impervious surfaces within the Specific Plan Area. Therefore, potential impacts

to water quality associated with increased impervious surface area would not be anticipated to occur as a result of the Specific Plan.

In order to comply with the requirements of the RWQCB concerning discharges of stormwater during Specific Plan construction and operation, development project proposed under the Specific Plan will be required to obtain an NPDES permit for construction activities and implement a Stormwater Pollution Prevention Plan (“SWPPP”) for construction and operation of the Specific Plan. The RWQCB requires that the SWPPP identify pollutant sources that could potentially affect the quality of stormwater discharge, and also implement Best Management Practices (“BMPs”) that would reduce the level of pollutants in stormwater during construction and operation.

BMPs required by the RWQCB may include, but would not be limited to the following:

- Excavation and grading activities shall be scheduled for the dry season (April 30 to October 15), to the extent possible. This will reduce the chance of severe erosion from intense rainfall and surface runoff.
- If excavation occurs during the rainy season, storm runoff from the construction area shall be regulated through a storm water management/erosion control plan that shall include temporary onsite silt traps and/or basins with multiple discharge points to natural drainages and energy dissipaters. Stockpiles of loose material shall be covered and runoff diverted away from exposed soil material. If work stops due to rain, a positive grading away from slopes shall be provided to carry the surface runoff to areas where flow would be controlled, such as the temporary silt basins. Sediment basins/traps shall be located and operated to minimize the amount of offsite sediment transport. Any trapped sediment shall be removed from the basin or trap and placed at a suitable location onsite, away from concentrated flows, or removed to an approved disposal site.
- Temporary erosion control measures (such as fiber rolls, staked straw bales, detention basins, check dams, geofabric, sandbag dikes, and similar measures) shall be provided until construction is complete or landscaping is established and can minimize discharge of sediment into nearby waterways. All storm drains shall be protected from sedimentation using such measures.
- Sediment shall be retained onsite by a system of sediment basins, traps, or other appropriate measures.
- No disturbed surfaces will be left without erosion control measures in place during the rainy season, from October 15th through April 30th.
- Erosion protection shall be provided on all cut-and-fill slopes. Landscaping shall be initiated as soon as possible after completion of grading and prior to the onset of the rainy season (by October 15).
- Construction-related stormwater BMPs selected and implemented for the Project shall be in place and operational prior to the onset of major earthwork on the site. The construction phase facilities shall be maintained regularly and cleared of accumulated sediment as necessary. Operation-related stormwater BMPs shall be incorporated into Project design and fully implemented prior to completion of construction and associated activities for the

Project. Effective mechanical and structural BMPs that could be implemented at the project site include the following:

- Mechanical storm water filtration measures, including oil and sediment separators or absorbent filter systems such as the Stormceptor® system, can be installed within the storm drainage system to provide filtration of storm water prior to discharge.
- Vegetative strips, high infiltration substrates, and grassy swales can be used where feasible throughout the development to reduce runoff and provide initial storm water treatment.
- Roof drains shall discharge to natural surfaces, swales, or other stormwater retention features to avoid excessive peak stormwater flows.
- The water quality detention basins during construction shall be designed to provide effective water quality control measures including the following:
 - Maximize detention time for settling of fine particles;
 - Establish maintenance schedules for periodic removal of sedimentation, excessive vegetation, and debris that may clog basin inlets and outlets;
 - Maximize the detention basin elevation to allow the highest amount of infiltration and settling prior to discharge.
- Hazardous materials such as fuels and solvents used on the construction sites shall be stored in covered containers and protected from rainfall, runoff, vandalism, and accidental release to the environment. All stored fuels and solvents will be contained in an area of impervious surface with containment capacity equal to the volume of materials stored. A stockpile of spill cleanup materials shall be readily available at all construction sites. Employees shall be trained in spill prevention and cleanup, and individuals shall be designated as responsible for prevention and cleanup activities.
- Equipment shall be properly maintained in designated areas with runoff and erosion control measures to minimize accidental release of pollutants.

Compliance with the required NPDES permit would include generation of a SWPPP and implementation of the aforementioned or similar BMPs to reduce the intensity of potential water quality pollution, sufficient to the requirements of RWQCB. Therefore, this impact would be less than significant.¹

¹ Any project developed under the Specific Plan which would require permanent discharging and treatment of groundwater in excess of 10,000 gallons per day would require coverage under the SFRWQCB's General Waste Discharge Permit for discharge of extracted and treated groundwater (Order No. R2-2007-0033/NPDES No. CAG912004).

Impact HYD-2: Substantially deplete groundwater supplies such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level (criterion b). (Less than Significant)

Generally, impervious surfaces prevent the inflow of stormwater and other drainage into the subsurface, thereby reducing the total volume of water available for groundwater recharge. Any increase in impervious surfaces could, as a result, cause a concurrent reduction in groundwater recharge, and in turn reduce groundwater levels in the underlying aquifer. The existing land use within the Specific Plan Area are comprised of retail space, office buildings, parking lots, and other impervious features. Nearly all of the existing land within the Specific Plan Area is covered by impervious surfaces. As a result, the proposed changes in land use would not be anticipated to result in any net increase in impervious surfaces, and therefore would not be anticipated to result in a reduction in groundwater recharge associated with construction of impervious surfaces.

Additionally, the Specific Plan Area would not be supplied by groundwater, and no additional groundwater would be pumped as a result of implementation of the Specific Plan. Therefore groundwater levels would not be affected. The impact would be less than significant.

Mitigation: None required.

Impact HYD-3: Substantially alter the existing drainage pattern of the Specific Plan Area, including through the alteration of the course of a stream or river in a manner that would result in substantial erosion or siltation on-site or off-site, or such that the rate or amount of surface runoff would be substantially increased, in a manner which would result in flooding on- or off-site (criteria c and d). (Less than Significant)

The proposed Specific Plan could result in changes in surface drainage patterns, such as re-routing of existing overland surface flows, re-positioning of storm drains, changes in topography, changes in the placement of stormwater collection and dispersal points, and other changes that could alter drainage patterns on site. These potential changes, if not properly managed, could result in buildup of stormwater or flooding within unintended areas.

In addition to the potential water quality impacts discussed under Impact HYD-1, implementation of the Specific Plan could result in collection of sediment, additional trash, and other debris, potentially resulting in buildup of debris that could result in localized flooding on-site or downstream. However, implementation of the Specific Plan would require compliance with CCCWP policies and procedures regarding preparation of a Stormwater Control Plan. Compliance with CCCWP policies would ensure adherence to stringent guidelines of the San Francisco Bay RWQCB, as well as local authorities, in order to maintain drainage, stormflow, and water quality at acceptable levels. As discussed in CCCWP's Stormwater C.3 Guidebook (CCCWP, 2008), the following or similar measures would be likely to be implemented to ensure compliance with CCCWP guidance:

- **Limit Impervious Surfaces:** limit overall coverage of paving and roofs; minimize directly connected impervious areas; direct runoff from impervious to pervious areas; select permeable pavements and surface treatments; detain and retain runoff throughout the site; use drainage as a design element; minimize peak flow and volume of runoff.
- Promote direct infiltration of stormwater in areas where direct infiltration is possible and contamination is not an issue and in compliance with the NPDES permit, which restricts design and location of direct infiltration devices could bypass filtration through surface soils prior to reaching groundwater.
- Locate and maintain stormwater treatment facilities, including swales, bioretention areas, and settling ponds/basins, on-site to retain and treat stormwater
- Operational BMPs including but not limited to maintenance of storm drain inlet markings; distribution of pollution prevention to site occupants; storm drain maintenance and inspection; maintain landscaping with minimal or no pesticides; provide adequate trash receptacles; properly store and maintain outdoor equipment and materials; prevent discharge of vehicle washwater into storm drains; prevent disposal of vehicle fluid to storm drains; routine dry sweeping of vehicle fueling areas; regular sweeping of streets and other impervious surfaces.

Compliance with CCCWP guidelines, as well as compliance with the required NPDES permit for construction activities discussed under Impact HYD-1, would reduce potential for changes in runoff, sedimentation, erosion, or flooding that could result in on-site or downstream impacts. Therefore, this impact would be less than significant. No mitigation is required.

Impact HYD-4: Create or contribute runoff water that would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff (criterion e). (Less than Significant)

Implementation of the proposed Specific Plan would not result in an increase in the total area of impervious surfaces within the Specific Plan Area, as discussed above. Therefore, development of the Specific Plan would not be anticipated to result in generation of additional stormwater runoff, and would not be anticipated to exceed the capacity of any existing or planned stormwater conveyance. No impact would occur.

Mitigation: None required.

Impact HYD-5: Expose people or structures to a significant risk of loss, injury, or death involving flooding, including flooding that could result from the failure of a levee or dam (criterion i). (Less Than Significant)

Implementation of the Specific Plan would result in demolition or redevelopment of existing land uses, with construction of additional retail, residential, and other land uses. The Specific Plan

would not include any construction activities along the alignment of an existing or proposed levee or dam, and would not result in the disruption of any levee or dam located within the Specific Plan Area or elsewhere. The Specific Plan would include siting of residential and other urban land uses areas within Zone X, as shown on FEMA Flood Insurance Rate Maps. However, these uses would not occur within a 100-year flood zone, as defined by FEMA or within the inundation area of any existing levee. Implementation of the Specific Plan therefore would not result in a substantial or significant increase in the exposure of people or structures to floods or flood-related hazards. Therefore, this impact would be less than significant.

Mitigation: None required.

Cumulative Impacts

Impact HYD-6: Implementation of the Specific Plan, combined with past, present, or reasonably foreseeable probable future projects, will not result in a cumulative reduction in groundwater levels or increase in flood flows. (Less than Significant)

Implementation of the proposed Specific Plan would not result in construction of additional impervious surfaces, as described above. Furthermore, the proposed Specific Plan would not rely upon groundwater for water supply or cause additional withdrawal of groundwater, as discussed above. Therefore, the Specific Plan would not contribute to a cumulatively considerable reduction in groundwater levels.

The Specific Plan would involve replacing existing impervious surfaces with new surfaces but would not result in additional impervious surfaces, thus there would be no net increase anticipated in storm flows. Therefore, the Specific Plan would not contribute to any cumulatively considerable impacts to flood flows, either on-site or downstream. The impact would be less than significant.

Mitigation: None required.

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J. Hydrology, Water Quality, and Flooding

This section addresses potential changes in hydrology, water quality, groundwater, and flooding conditions that could result from implementation of the Locust Street / Mount Diablo Specific Plan. This section describes the existing hydrologic setting; provides an overview of applicable federal, state, and local regulatory framework; presents an analysis of potential environmental impacts; and where appropriate, identifies suitable mitigation measures to reduce the intensity of potential impacts. Information sources used to prepare this section include documents from various local, state, and federal agencies, the General Plan, and numerous published documents and maps related to the topic.

1. Regulatory Setting

Federal

The major federal legislation governing the water quality aspects of the Specific Plan is the Clean Water Act (“CWA”), 33 U.S.C. sections 1251 et seq., as amended. The objective of the CWA is to “restore and maintain the chemical, physical, and biological integrity of the Nation’s waters,” 33 U.S.C. section 1251(a). The CWA requires states to establish water quality standards to protect designated uses for all waters of the nation. In general, implementation of many aspects of the CWA under the EPA have been delegated to individual states.

State

Porter-Cologne Water Quality Control Act and California’s Water Boards

The Porter-Cologne Water Quality Control Act (Division 7 of the California Water Code) provides the basis for water quality regulation within California. This Act established the authority of the State Water Resources Control Board (“SWRCB”) and the nine Regional Water Quality Control Boards (“RWQCBs”). The SWRCB administers water rights, water pollution control, and water quality functions throughout the state, while the RWQCBs conduct planning, permitting, and enforcement activities. The Specific Plan Area lies within the jurisdiction of the RWQCB, San Francisco Bay region.

The Porter-Cologne Water Quality Control Act allows the SWRCB to adopt statewide water quality control plans, the purpose of which are to establish water quality objectives for specific water bodies. In the San Francisco Bay region the Water Quality Control Plan, known as the Basin Plan, is the RWQCB’s master policy document. The Basin Plan contains descriptions of the legal, technical, and programmatic basis of water quality regulation in the region (RWQCB, 1995). The Act also authorizes the National Pollutant Discharge Elimination System (“NPDES”) program, which established effluent limitations and quality requirements for discharges to waters of the State. In the San Francisco Bay region, the RWQCB has included permit requirements for stormwater runoff under the NPDES program since 1991. In the Specific Plan Area, the City of Walnut Creek as a co-permittee of Contra Costa Clean Water Program (discussed below) administers the stormwater program.

The California Department of Fish and Game (“CDFG”) has jurisdiction over any activity that could affect the bank or bed of any stream that has value to fish and wildlife. If any changes are proposed along a creek or waterway within its jurisdiction, a Streambed Alteration Agreement required under the Department of Fish and Game Code sections 1601 or 1603. The U.S. Army Corps of Engineers (“Corps”) also has jurisdiction over any “fill” to “waters of the United States,” including wetlands, under Section 404 of the Clean Water Act. The San Francisco Bay RWQCB administers the 401 Water Quality Certification of the Clean Water Act to ensure that such activities adhere to state water quality standards. The RWQCB has review authority of Section 404 permits administered by the Corps.

Construction Activity Permitting

The SWRCB administers the NPDES Permit Program through its General NPDES Permit. The San Francisco Bay RWQCB monitors and enforces the NPDES storm water permitting for the region. Construction activities that disturb one acre of land or more are subject to the permitting requirements of the NPDES General Permit for Discharges of Storm Water Runoff Associated with Construction Activity (General Construction Permit). If subject to this permit, individual Specific Plan sponsors must submit a Notice of Intent to the SWRCB in order to be covered by the General Permit prior to the beginning of construction. The General Construction Permit requires the preparation and implementation of a Storm Water Pollution Prevention Plan (“SWPPP”), which must be prepared before construction begins. A SWPPP includes specifications for Best Management Practices (“BMPs”) to be implemented during construction to control potential discharge of pollutants from the construction area. Additionally, a SWPPP describes measures to prevent pollutants in runoff after construction is complete and reference a plan for inspection and maintenance of the facilities. Implementation of a SWPPP starts with the commencement of construction and continues through the completion of the project. Upon completion, the applicant must submit a Notice of Termination to the SWRCB.

Municipal Storm Water Permitting

Federal regulations authorize the issuance of system-wide municipal permits by the RWQCB. The RWQCB regulates municipalities for control of stormwater runoff pollution under the NPDES. Co-permittees of the Contra Costa Clean Water Program are responsible for development and implementation of storm water management plans (“SWMP”) to prevent the pollution of surface runoff. Discharge of storm water from the City is permitted through a Joint Municipal NPDES Permit issued to Contra Costa County, 19 of its incorporated cities and the Contra Costa County Flood Control and Water Conservation District, which have joined together to form the Contra Costa Clean Water Program. The permit incorporates specific requirements to limit storm water pollutant discharges associated with certain new development and significant redevelopment projects. The requirements apply to the City as the Discharger of storm water, the Contra Costa Clean Water Program as the Permit Holder, and specific new development and redevelopment projects. Therefore, Walnut Creek is part of the county-wide program implemented by the County in compliance with NPDES permit requirements, (Contra Costa County Clean Water Program, 2004).

Local and City

Contra Costa Clean Water Program

The Contra Costa Clean Water Program (“CCCWP”) was formed by the County, the Contra Costa Flood Control and Water Conservation District, and 19 incorporated cities within the County. CCCWP supports compliance with the CWA by providing guidance and program outlines for activities that are meant to control pollutant levels within stormwater flows. Specifically, CCCWP implements mandates of the San Francisco Bay RWQCB and Central Valley RWQCB that the County and jurisdictions therein impose more stringent requirements from new developments, in order to control water quality pollution before stormwater runoff is discharged into receiving waters. These requirements on new developments are implemented in conjunction with temporary measures to control sediment and other construction-related pollutants, maintenance programs for streets, parks, and public infrastructure, public outreach, and other programs. Prior to initiating construction on a given development project, compliance with CCCWP policies must be initiated, and if deemed necessary, a Stormwater Control Plan that initiates relevant pollution and drainage control measures must be submitted for approval along with the Planning and Zoning Application for the project in question.

General Plan 2025 Policies

The following General Plan goals, policies, and actions are relevant to hydrology, water quality, and flooding in the Specific Plan Area:

Safety and Noise

GOAL 2. Reduce the potential for flooding in flood-prone areas.

- Policy 2.1. Reduce the risk of property damage and personal injury due to flooding.
 - Action 2.1.1. Limit the amount of impervious surface in flood-prone areas.
 - Action 2.1.2. Limit runoff in flood-prone areas.

2. Existing Conditions

Hydrology and Drainage

The Locust Street / Mount Diablo Boulevard Specific Plan Area is located within the Walnut Creek Watershed of the Walnut Creek Valley. The Walnut Creek watershed drains the central region of the County flowing north and emptying into Suisin Bay. The Las Trampas Creek joins the San Ramon Creek near the Specific Plan Area to form Walnut Creek. The Specific Plan Area is situated within the Grayson Creek-Murderers Creek Subwatershed. Grayson and Murderers Creeks are tributaries of Walnut Creek that originate within the Briones Hills (City of Walnut Creek, 2004).

San Ramon Creek is the major creek drainage for the San Ramon Valley, flowing north to Walnut Creek. It generally runs east of and parallel to Interstate 680, merges with several other

tributaries, and joins with Walnut Creek, eventually draining into Pacheco Creek, Suisun Bay, Carquinez Strait, and the San Francisco Bay. The Walnut Creek watershed is the major drainage basin in central County. The Specific Plan Area is located approximately 800 feet southwest of where San Ramon Creek and Las Trampas Creek join. Las Trampas Creek begins southwest of the Specific Plan Area and winds down from the uplands in a generally northeasterly direction.

The City's system of storm drains collects and channels surface water (mostly from rainfall) into a series of pipes, trenches, culverts, detention basins, and open channels which transport and empty it into San Francisco Bay. The system is based upon the natural drainage pattern determined by topography.

The Grayson Creek and Murderers Creek drainage basins encompass the Specific Plan Area. The subwatershed consists of both open space and urbanized land, sloping toward the east. Both creeks drain towards Walnut Creek, a natural creek, though modified by a series of channels and pipes outside of the Specific Plan Area.

Climate in the Walnut Creek Valley is considered Mediterranean, where summers are dry and warm and winters are cool and wet. Annual rainfall in this region is variable depending on the year, but averages approximately 21 inches per year with the majority of rainfall occurring between October and April (City of Walnut Creek, 2004). Localized flooding related to extreme storm events can occur along unprotected reaches of San Ramon Creek, especially in the valley lowlands to the northeast.

Groundwater

Groundwater in the Specific Plan Area is likely shallow and contained within the alluvial sediments. Subsurface soil investigations conducted across the street from the Specific Plan Area encountered groundwater at depths of 13 to 14 feet below ground surface (Kleinfelder, 2001). The shallow groundwater most likely flows through the alluvial sediments on top of the bedrock. Groundwater resources are not used in this area due to availability of municipal surface water supplies. The area available for groundwater recharge depends on the amount of exposed ground area. Placement of impervious surfaces such as roads, parking lots, and structures decreases the recharge area and direct the water to surface drainage features.

Flooding

The risk of flooding in urban areas is dependent on the following variables: preceding soil conditions, amount and intensity of rainfall, and capacity of the storm drain system. It is the function of the storm drain system to move surface runoff into gutters, storm drain inlets, channels, creeks, collection basins, and eventually to the receiving body (San Francisco Bay). Additionally, silt and debris in the storm drain system can sometimes cause water to back up and flood surrounding areas. Leaves, branches, household trash, and other debris must be removed regularly in order for the storm drain system to function effectively. The City's Streets/Building & Equipment Maintenance Division provides street cleaning and sweeping service on a scheduled basis (and during other times, as necessary), and maintains and repairs the municipal storm water

drain system, which includes catch basins, open ditches and channels, hillside valley-gutters, box culverts, and subsurface drains, within the Specific Plan Area.

There are localized areas of Walnut Creek that are subject to flooding during certain large storm events (i.e., 100-year events) (ESRI, 2004). The entire Specific Plan Area lies within Flood Area Zone X as designated by the Federal Emergency Management Agency (“FEMA”). **Figure IV.J-1** illustrates areas within the Zone X flood zone. Zone X is defined as areas of 500-year flood; areas of 100-year flood that would experience an average flood depth of less than one foot; areas of 100-year flood with drainage areas less than one square mile; or areas protected by levees from 100-year floods. Zone X differs from the Special Flood Hazard Areas in that it does not require certain building restrictions.

In the Walnut Creek Valley, storm flows can increase in surface watercourses due to the level of development and the addition of impervious surfaces. A number of flood control improvements have been made to Walnut Creek and its tributaries by the U.S. Army Corps of Engineers, the State of California, and the Contra Costa County Flood Control District. Some of the problem areas have been realigned and modified including diversions, concrete box culverts, and other flow capacity improvements to accommodate storm flows that could occur in this region.

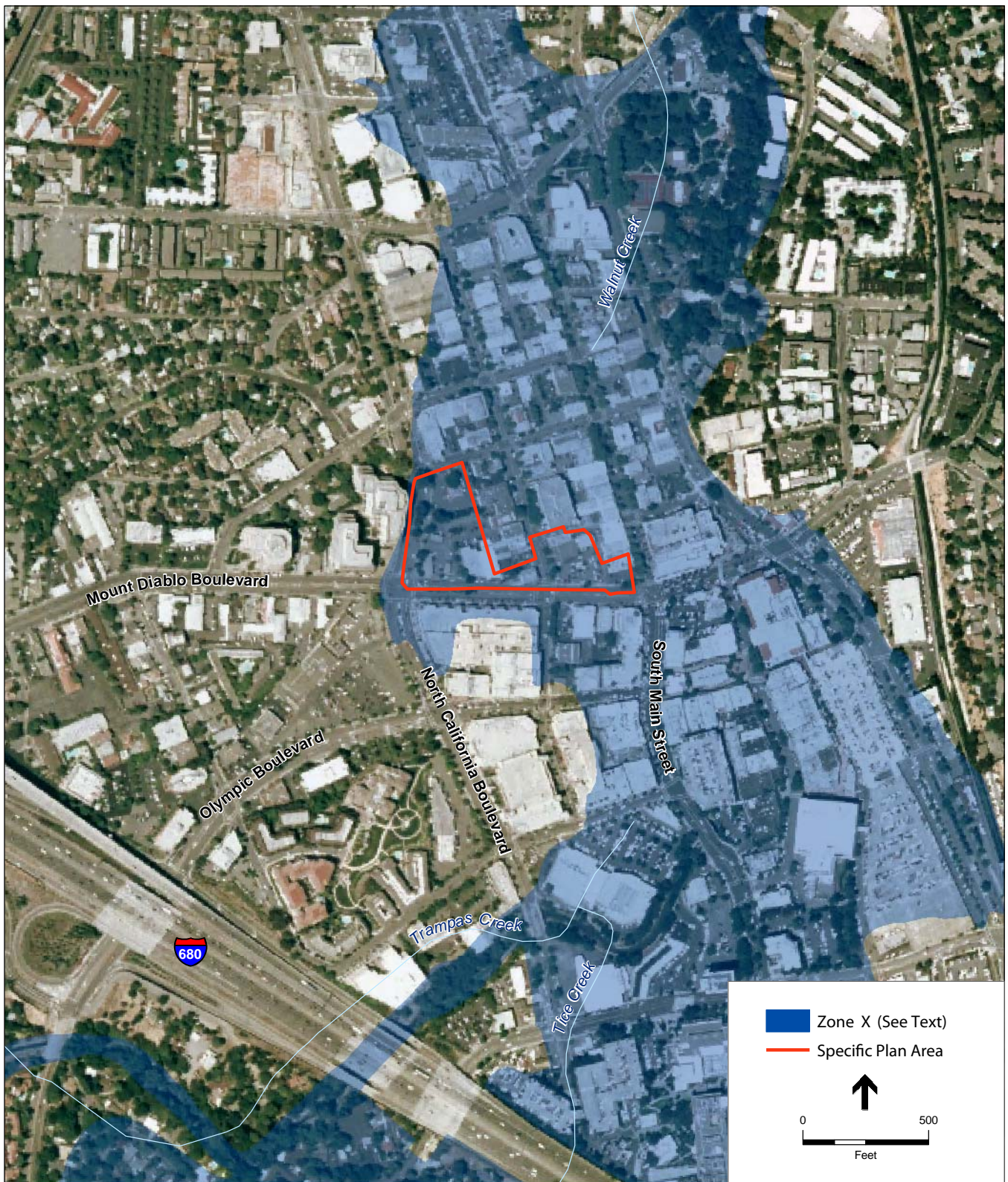
Water Quality

Water pollution is a critical problem associated with urban runoff. The Specific Plan Area’s storm drain system is designed to prevent flooding by channeling stormwater runoff northward via channels and culverts toward Suisun Bay. However, this runoff is not treated, and can deliver pollutants to Suisun Bay from any impermeable surface within the Specific Plan Area. Stormwater runoff accounts for up to 80 percent of the pollution which eventually empties into San Pablo Bay, and can contain the following pollutants: oil, grease, or antifreeze from leaking cars or trucks; paint or paint products; leaves or yard waste; pesticides, herbicides, or fertilizers from yards and gardens; solvents and household chemicals; animal wastes, litter, or sewer leakage; and construction debris such as fresh concrete, mortar, or cement.

Releases of petroleum hydrocarbons to the subsurface have been documented within the Specific Plan Area as well as just outside of the area. See Section I (Hazardous Materials) for more details regarding soil and groundwater contamination.

Sea Levels and Climate Change in the Bay Area

Historic records indicate that the average sea level in San Francisco Bay has risen by approximately 7 inches over the past 150 years (BDCP, 2007), and the Intergovernmental Panel on Climate Change reports that mean sea level will rise by approximately 12 to 36 inches by the year 2100 (IPCC, 2007). Sea level rise models applied to the Bay Area indicate that a sea level rise of about 12 inches would shift the 100-year storm surge influenced flood event from once per century to once per decade (BCDC, 2007). Therefore, as a result of climate change, it is anticipated that the Bay Area will be prone to substantial additional flooding in low-lying areas adjacent to the San Francisco Bay and the Sacramento-San Joaquin Delta.



SOURCE: FEMA, 2006; ESRI, 2007; ROMA Design Group, 2004; and ESA, 2008

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Figure IV.J-1

FEMA Floodplain in the Specific Plan Area

The Specific Plan would be located entirely within an upland area that is located at least 7 miles south of Suisun Bay, which is the portion of the Bay-Delta system that is located in closest proximity to the Specific Plan Area. Additionally, the Specific Plan Area is situated at an elevation ranging from approximately 135 to 145 feet above sea level. As a result, the Specific Plan Area would not experience any increase in flooding as a result of climate-induced sea level rise.

As described above, the Specific Plan would replace existing impervious surfaces and would not result in additional sediment, erosion, or sedimentation within downstream areas, and therefore would not compound flooding downstream, including flooding associated with climate-induced sea level rise.

3. Standards of Significance

According to Appendix G of the state CEQA Guidelines, the project would result in a significant environmental impact related to hydrology, water quality, and flooding if it would:

- (a) Violate any water quality standard or waste discharge requirements;
- (b) Substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g., the production rate of pre-existing nearby wells would drop to a level which would not support existing land uses or planned uses for which permits have been granted);
- (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-site or off-site;
- (d) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site;
- (e) Create or contribute runoff water that would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff;
- (f) Otherwise substantially degrade water quality;
- (g) Place housing within a 100-year flood plain;
- (h) Place structures within a 100-year flood plain that would impede or redirect flood flows;
- (i) Expose people or structures to a significant risk of loss, injury, or death involving flooding, including flooding as a result of the failure of a levee or dam;
- (j) Cause or result in inundation by seiche, tsunami, or mudflow.

Topics Determined Less than Significant in the Initial Study

The Initial Study prepared for the Locust Street / Mt. Diablo Boulevard Specific Plan determined that the potential impact associated with placing housing with a 100-year flood plain (criterion g); placing structures within a 100-year flood plain that would impede or redirect flood flows (criterion h); or inundation by seiche, tsunami, or mudflow (criterion j) would be less than significant. Criterion i is discussed further in this EIR, and criterion g, h and j are not analyzed further in this EIR, as indicated in the Initial Study.

4. Impact Discussion

Impact HYD-1: Violate any water quality standards or waste discharge requirements (criterion a). (Less than Significant)

Implementation of the Specific Plan would result in the conversion of existing uses into additional office, residential, and commercial uses, from approximately 91,000 square feet (sf) of existing development up to approximately 353,000 sf of proposed development upon full buildout. This additional construction would require demolition of a portion of the existing parking lots and structures currently located in the Specific Plan Area, followed by the new construction.

Demolition and construction would include destruction and removal of cement, pavement, and other debris, scraping, grading, earth moving, and other construction related activities. These actions, if not properly managed, could generate stormwater or other runoff that is polluted with debris, sediment, oils, greases, heavy metals, fuels, and other potential pollutants associated with construction and demolition activities. These potential pollutants could then migrate with runoff from the site and result in contamination or sedimentation in receiving waters, including natural waterways. This could be a significant impact. Compliance with the conditions of the required NPDES permit, as described below, would be necessary to reduce the intensity of this potential impact.

Additionally, implementation of the Specific Plan would result in increased intensity of use at the Specific Plan Area during operation. Specifically, increased traffic and occupancy on-site could result in increases in associated pollutants, including transportation-related pollutants such as oil and fuels, brake dust, and settled particulates; leaching of oils or other chemicals from paved surfaces; increased sediment; and trash. Without protective measures, these pollutants could be discharged into the City's drainage system and ultimately natural waters, resulting in a potentially significant increase in water quality degradation. Compliance with the conditions of the required NPDES permit, as described below, would be required to reduce the intensity of this potential impact.

The existing Specific Plan Area is almost completely covered by impervious surfaces, such as parking lots, buildings, roadways, sidewalks, and other features. While the Specific Plan would result in an increase in the intensity of use of the Specific Plan Area, it is not anticipated to result in an increase in impervious surfaces within the Specific Plan Area. Therefore, potential impacts

to water quality associated with increased impervious surface area would not be anticipated to occur as a result of the Specific Plan.

In order to comply with the requirements of the RWQCB concerning discharges of stormwater during Specific Plan construction and operation, development project proposed under the Specific Plan will be required to obtain an NPDES permit for construction activities and implement a Stormwater Pollution Prevention Plan (“SWPPP”) for construction and operation of the Specific Plan. The RWQCB requires that the SWPPP identify pollutant sources that could potentially affect the quality of stormwater discharge, and also implement Best Management Practices (“BMPs”) that would reduce the level of pollutants in stormwater during construction and operation.

BMPs required by the RWQCB may include, but would not be limited to the following:

- Excavation and grading activities shall be scheduled for the dry season (April 30 to October 15), to the extent possible. This will reduce the chance of severe erosion from intense rainfall and surface runoff.
- If excavation occurs during the rainy season, storm runoff from the construction area shall be regulated through a storm water management/erosion control plan that shall include temporary onsite silt traps and/or basins with multiple discharge points to natural drainages and energy dissipaters. Stockpiles of loose material shall be covered and runoff diverted away from exposed soil material. If work stops due to rain, a positive grading away from slopes shall be provided to carry the surface runoff to areas where flow would be controlled, such as the temporary silt basins. Sediment basins/traps shall be located and operated to minimize the amount of offsite sediment transport. Any trapped sediment shall be removed from the basin or trap and placed at a suitable location onsite, away from concentrated flows, or removed to an approved disposal site.
- Temporary erosion control measures (such as fiber rolls, staked straw bales, detention basins, check dams, geofabric, sandbag dikes, and similar measures) shall be provided until construction is complete or landscaping is established and can minimize discharge of sediment into nearby waterways. All storm drains shall be protected from sedimentation using such measures.
- Sediment shall be retained onsite by a system of sediment basins, traps, or other appropriate measures.
- No disturbed surfaces will be left without erosion control measures in place during the rainy season, from October 15th through April 30th.
- Erosion protection shall be provided on all cut-and-fill slopes. Landscaping shall be initiated as soon as possible after completion of grading and prior to the onset of the rainy season (by October 15).
- Construction-related stormwater BMPs selected and implemented for the Project shall be in place and operational prior to the onset of major earthwork on the site. The construction phase facilities shall be maintained regularly and cleared of accumulated sediment as necessary. Operation-related stormwater BMPs shall be incorporated into Project design and fully implemented prior to completion of construction and associated activities for the

Project. Effective mechanical and structural BMPs that could be implemented at the project site include the following:

- Mechanical storm water filtration measures, including oil and sediment separators or absorbent filter systems such as the Stormceptor® system, can be installed within the storm drainage system to provide filtration of storm water prior to discharge.
- Vegetative strips, high infiltration substrates, and grassy swales can be used where feasible throughout the development to reduce runoff and provide initial storm water treatment.
- Roof drains shall discharge to natural surfaces, swales, or other stormwater retention features to avoid excessive peak stormwater flows.
- The water quality detention basins during construction shall be designed to provide effective water quality control measures including the following:
 - Maximize detention time for settling of fine particles;
 - Establish maintenance schedules for periodic removal of sedimentation, excessive vegetation, and debris that may clog basin inlets and outlets;
 - Maximize the detention basin elevation to allow the highest amount of infiltration and settling prior to discharge.
- Hazardous materials such as fuels and solvents used on the construction sites shall be stored in covered containers and protected from rainfall, runoff, vandalism, and accidental release to the environment. All stored fuels and solvents will be contained in an area of impervious surface with containment capacity equal to the volume of materials stored. A stockpile of spill cleanup materials shall be readily available at all construction sites. Employees shall be trained in spill prevention and cleanup, and individuals shall be designated as responsible for prevention and cleanup activities.
- Equipment shall be properly maintained in designated areas with runoff and erosion control measures to minimize accidental release of pollutants.

Compliance with the required NPDES permit would include generation of a SWPPP and implementation of the aforementioned or similar BMPs to reduce the intensity of potential water quality pollution, sufficient to the requirements of RWQCB. Therefore, this impact would be less than significant.¹

¹ Any project developed under the Specific Plan which would require permanent discharging and treatment of groundwater in excess of 10,000 gallons per day would require coverage under the SFRWQCB's General Waste Discharge Permit for discharge of extracted and treated groundwater (Order No. R2-2007-0033/NPDES No. CAG912004).

Impact HYD-2: Substantially deplete groundwater supplies such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level (criterion b). (Less than Significant)

Generally, impervious surfaces prevent the inflow of stormwater and other drainage into the subsurface, thereby reducing the total volume of water available for groundwater recharge. Any increase in impervious surfaces could, as a result, cause a concurrent reduction in groundwater recharge, and in turn reduce groundwater levels in the underlying aquifer. The existing land use within the Specific Plan Area are comprised of retail space, office buildings, parking lots, and other impervious features. Nearly all of the existing land within the Specific Plan Area is covered by impervious surfaces. As a result, the proposed changes in land use would not be anticipated to result in any net increase in impervious surfaces, and therefore would not be anticipated to result in a reduction in groundwater recharge associated with construction of impervious surfaces.

Additionally, the Specific Plan Area would not be supplied by groundwater, and no additional groundwater would be pumped as a result of implementation of the Specific Plan. Therefore groundwater levels would not be affected. The impact would be less than significant.

Mitigation: None required.

Impact HYD-3: Substantially alter the existing drainage pattern of the Specific Plan Area, including through the alteration of the course of a stream or river in a manner that would result in substantial erosion or siltation on-site or off-site, or such that the rate or amount of surface runoff would be substantially increased, in a manner which would result in flooding on- or off-site (criteria c and d). (Less than Significant)

The proposed Specific Plan could result in changes in surface drainage patterns, such as re-routing of existing overland surface flows, re-positioning of storm drains, changes in topography, changes in the placement of stormwater collection and dispersal points, and other changes that could alter drainage patterns on site. These potential changes, if not properly managed, could result in buildup of stormwater or flooding within unintended areas.

In addition to the potential water quality impacts discussed under Impact HYD-1, implementation of the Specific Plan could result in collection of sediment, additional trash, and other debris, potentially resulting in buildup of debris that could result in localized flooding on-site or downstream. However, implementation of the Specific Plan would require compliance with CCCWP policies and procedures regarding preparation of a Stormwater Control Plan. Compliance with CCCWP policies would ensure adherence to stringent guidelines of the San Francisco Bay RWQCB, as well as local authorities, in order to maintain drainage, stormflow, and water quality at acceptable levels. As discussed in CCCWP's Stormwater C.3 Guidebook (CCCWP, 2008), the following or similar measures would be likely to be implemented to ensure compliance with CCCWP guidance:

- **Limit Impervious Surfaces:** limit overall coverage of paving and roofs; minimize directly connected impervious areas; direct runoff from impervious to pervious areas; select permeable pavements and surface treatments; detain and retain runoff throughout the site; use drainage as a design element; minimize peak flow and volume of runoff.
- Promote direct infiltration of stormwater in areas where direct infiltration is possible and contamination is not an issue and in compliance with the NPDES permit, which restricts design and location of direct infiltration devices could bypass filtration through surface soils prior to reaching groundwater.
- Locate and maintain stormwater treatment facilities, including swales, bioretention areas, and settling ponds/basins, on-site to retain and treat stormwater
- Operational BMPs including but not limited to maintenance of storm drain inlet markings; distribution of pollution prevention to site occupants; storm drain maintenance and inspection; maintain landscaping with minimal or no pesticides; provide adequate trash receptacles; properly store and maintain outdoor equipment and materials; prevent discharge of vehicle washwater into storm drains; prevent disposal of vehicle fluid to storm drains; routine dry sweeping of vehicle fueling areas; regular sweeping of streets and other impervious surfaces.

Compliance with CCCWP guidelines, as well as compliance with the required NPDES permit for construction activities discussed under Impact HYD-1, would reduce potential for changes in runoff, sedimentation, erosion, or flooding that could result in on-site or downstream impacts. Therefore, this impact would be less than significant. No mitigation is required.

Impact HYD-4: Create or contribute runoff water that would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff (criterion e). (Less than Significant)

Implementation of the proposed Specific Plan would not result in an increase in the total area of impervious surfaces within the Specific Plan Area, as discussed above. Therefore, development of the Specific Plan would not be anticipated to result in generation of additional stormwater runoff, and would not be anticipated to exceed the capacity of any existing or planned stormwater conveyance. No impact would occur.

Mitigation: None required.

Impact HYD-5: Expose people or structures to a significant risk of loss, injury, or death involving flooding, including flooding that could result from the failure of a levee or dam (criterion i). (Less Than Significant)

Implementation of the Specific Plan would result in demolition or redevelopment of existing land uses, with construction of additional retail, residential, and other land uses. The Specific Plan

would not include any construction activities along the alignment of an existing or proposed levee or dam, and would not result in the disruption of any levee or dam located within the Specific Plan Area or elsewhere. The Specific Plan would include siting of residential and other urban land uses areas within Zone X, as shown on FEMA Flood Insurance Rate Maps. However, these uses would not occur within a 100-year flood zone, as defined by FEMA or within the inundation area of any existing levee. Implementation of the Specific Plan therefore would not result in a substantial or significant increase in the exposure of people or structures to floods or flood-related hazards. Therefore, this impact would be less than significant.

Mitigation: None required.

Cumulative Impacts

Impact HYD-6: Implementation of the Specific Plan, combined with past, present, or reasonably foreseeable probable future projects, will not result in a cumulative reduction in groundwater levels or increase in flood flows. (Less than Significant)

Implementation of the proposed Specific Plan would not result in construction of additional impervious surfaces, as described above. Furthermore, the proposed Specific Plan would not rely upon groundwater for water supply or cause additional withdrawal of groundwater, as discussed above. Therefore, the Specific Plan would not contribute to a cumulatively considerable reduction in groundwater levels.

The Specific Plan would involve replacing existing impervious surfaces with new surfaces but would not result in additional impervious surfaces, thus there would be no net increase anticipated in storm flows. Therefore, the Specific Plan would not contribute to any cumulatively considerable impacts to flood flows, either on-site or downstream. The impact would be less than significant.

Mitigation: None required.

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K. Public Services and Recreation

This section discusses existing public services (including police, fire protection, and public schools) serving the Specific Plan Area and the potential environmental impacts of the Specific Plan to those public services.

1. Regulatory Setting

State

Senate Bill 50

The regulatory framework for schools is determined at the school district and State level. Senate Bill 50, the Leroy F. Greene School Facilities Act of 1998, Education Code sections 17070.10 et seq., limits the power of cities and counties to require mitigation of school facilities impacts as a condition of approving new development and provides instead for a standardized developer fee. SB 50 provides for three levels of statutory mitigation fees. The base amounts are known as “Level 1” fees and are subject to inflationary adjustment every two years.

City of Walnut Creek

General Plan 2025 Policies

The General Plan contains the following goals and policies regarding police services, fire protection, public schools, and parks and recreation:

Safety and Noise

GOAL 4. Strive to prevent and reduce damage related to fire hazards.

Policy 4.1. Regulate projects in high risk areas.

Policy 4.2. Work with the Contra Costa County Fire Protection District toward addressing fire response times and other fire-related issues inside the planning area.

Action 4.2.1. Require that all new development or redevelopment plans be submitted to the fire district for review.

GOAL 5. Promote public safety.

Policy 5.2. Maintain a response time of less than 5 minutes for emergency calls and for other calls less than 20 minutes, 95 percent of the time.

Policy 5.3. Support Community Oriented Policing.

Policy 5.5. Seek ways to reduce police service demands through project design enhancements.

Action 5.5.1. Incorporate crime reduction and public safety features in the design and planning of private and public projects.

- Action 5.5.2 Submit all discretionary permits to the Police Department for analysis of and recommendations to reduce crime.

Quality of Life

GOAL 9. Facilitate lifelong educational opportunities for all ages, and support the success of schools.

- Policy 9.1. Encourage excellent educational opportunities for all ages.

Natural Environment and Public Spaces

GOAL 6. Acquire additional parklands.

- Policy 6.1. Plan park acquisitions and provide parkland and facilities adequate to support the city's recreational needs, activities, and programs.
 - Action 6.1.1. Maintain 5 acres of parkland per 1,000 people.
 - Action 6.2.2. Consider establishing an impact fee on commercial development to be used to develop new or enhance existing parks or public plazas.
 - Action 6.2.3. Create flexible development policies and regulations that encourage owners and developers to provide parkland or other public spaces or plazas, beyond the amount of open space and/or landscaping already required.

GOAL 7. Provide publicly accessible outdoor spaces in the Core Area.

- Policy 7.2. Encourage the development of, maintenance of, and connectivity between high-quality public spaces in the Core Area.
 - Action 7.2.1. Define, design, and complete a network of public walkways and small public spaces in the Core Area.
- Policy 7.3. In conjunction with Core Area commercial and residential development and redevelopment, offer incentives for creating and maintaining public spaces, including pocket parks and plazas.
 - Action 7.3.1. Identify potential pocket park and plaza locations when reviewing precise and specific plans.

2. Existing Conditions

Police Services

The Walnut Creek Police Department provides criminal investigation and law enforcement services in the City. The Department operates from headquarters at 1666 North Main Street at City Hall. The Department has unstaffed satellite offices at Heather Farm Park, John Muir Medical Center, Larkey Park, Walnut Creek School District, and the Police Firearms facility.

In 2007, the Police Department staff consisted of 80 sworn officers, 38 civilian employees, and 69 volunteers, resulting in a staffing ratio of 1.22 sworn officers per 1,000 residents. The number

of sworn officers per 1,000 residents is a common law enforcement industry indicator of sufficient staffing. The Department in 2007 projected a need for five full time employees over the next two budget cycles.

The Department provides patrol services and responds to calls for service based on geographical areas called sectors. Walnut Creek is divided into three sectors: (1) Sector 1; (2) Sector 2; and (3) Sector 3. The Specific Plan Area is located in Sector 2, which includes most of the downtown core.

The Department divides calls into three categories. Priority 1 calls are defined as life threatening situations. Priority 2 calls are not life threatening, but require immediate response. Priority 3 covers all other calls received by the police. The standard for response time to Priority 1 calls is less than five minutes; actual response time is about 4.42 minutes. For Priority 2 calls, the standard is less than seven minutes; the actual response time has averaged 8.31 minutes. The standard for response time to Priority 3 calls is 30 minutes. With supervisory approval, the response time is 60 minutes. The actual average response time is about 24.06 minutes for Priority 3 calls.

Fire Protection and Emergency Medical Services

The Contra Costa County Fire Protection District (“CCCFPD”) provides fire-protection and first-responder emergency-medical services to Walnut Creek and the Specific Plan Area. The CCCFPD has 30 fire stations, three of which are located within the City limits of Walnut Creek. The CCCFPD automatically dispatches and responds to all emergency calls in Walnut Creek and the neighboring community and also maintains automatic aid agreements with the San Ramon Valley Fire Department and the Orinda-Moraga Fire Department, which allows the closest fire engine to respond to fire and medical emergencies, regardless of jurisdiction.

The CCCFPD has a staff of 406 personnel. The resources currently allocated to the three fire stations within Walnut Creek include a total of five fire engines, one ladder truck and 15 personnel. Station 1, located at 1330 Civic Drive, is the nearest station to the Specific Plan Area (approximately one-half mile north). This station is staffed with a minimum of six personnel, one fire engine and one ladder truck.

In 2007, the CCCFPD was dispatched to 57,428 calls for service, of which 46,882 were emergency medical service calls. The average City-wide response time for 2007 was about 6.5 minutes. The City’s general response time goal for fire service calls of all types is three minutes or less, 90 percent of the time.

The risk of structural fires within Walnut Creek is minimal due to adequate fire fighting resources, the relatively new condition of structures and building code requirements. Building development in the City continues to comply with applicable building codes, and the CCCFPD continues to implement its building inspection program. Fire hydrant coverage and emergency access are generally good in most areas. The district’s Fire Prevention Bureau reviews

development plans and inspects construction projects to ensure that all new and remodeled buildings and facilities meet state and local Building and Fire Code requirements.

Public Schools

The Walnut Creek School District (“WCSD”) and the Acalanes Union High School District (“AUHSD”) are the local public school districts serving the Specific Plan Area.

The WCSD operates five elementary schools (grades K-5) and one intermediate school (grades 6-8). In the 2007-2008 school year, WCSD enrollment was 3,125. The WCSD is capable of serving about 3,200 students and the District is therefore operating under capacity. Parkmead Elementary School, located at 1920 Magnolia Way, approximately 1.5 miles from the Specific Plan Area, is the nearest elementary school. The 2007-2008 school year enrollment at Parkmead Elementary was 452 students. The nearest intermediate school is Walnut Creek Intermediate School, which had a 2007-2008 school year enrollment of 1,128 students. The WCSD uses a student generation rate for residential uses of 0.34 student per dwelling unit. The WCSD does not publish a student generation rate for commercial uses. The WCSD development impact fee for commercial development is \$0.10 per square foot of building space.

The AUHSD has five high schools, including Las Lomas High School located at 1460 S. Main Street, approximately one-half mile south of the Specific Plan Area. Enrollment for the 2007-2008 school year was 5,905. The 2007-2008 school year enrollment for Las Lomas High School was 1,581. Although the District is unable to determine its operating capacity at this time, its capacity in 2005 was 1,750 students. Enrollment with AUHSD is expected to decrease in subsequent years, due to projected demographic changes. Enrollment capacity is not expected to change and no new schools or expansions of existing schools are planned. The AUHSD student generation rate for residential uses is 0.25 student per dwelling unit. The AUHSD does not publish a student generation rate for commercial uses and it does not currently collect development impact fees.

Parks and Recreation

Walnut Creek has over 3,000 acres of parks, open space, and recreational areas. The City’s Recreation Division offers a variety of programs for all ages at various locations throughout the City. Fee and free programs are offered year-round in aquatics, sports, therapeutic recreation, special events, and leisure activities. Local school districts also make some school playfields available for general public use. In addition, Walnut Creek is located near a major state park (Mt. Diablo State Park) and several regional parks that provide recreational, educational, and leisure opportunities. Parks in the vicinity of the Specific Plan Area include Liberty Bell Plaza, Alama Park, and Civic Park.

The City has over 400 acres of developed parkland, excluding open space, which results in a parkland ratio of about six acres per 1,000 persons. This exceeds the City’s parkland ratio goal of five acres per 1,000.

3. Standards of Significance

According to Appendix G of the state CEQA Guidelines, the Specific Plan would result in a significant environmental impact related to public services if it would:

- (a) 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 following public services:
 - Police Services
 - Fire Protection
 - Schools Facilities
 - Parks
 - Other Public Facilities
- (b) 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.
- (c) Include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment.

Topics Determined Less than Significant in the Initial Study

The Initial Study prepared for the Locust Street / Mt. Diablo Boulevard Specific Plan determined that each of the public service topics will be analyzed in this EIR.

4. Impact Discussion

Impact PUB-1: 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 police protection (criterion a). (Less than Significant)

Implementation of the Specific Plan will increase retail uses by about 44,670 square feet; office uses by 97,300 square feet; and will also include approximately 46 residential units. Development under the Specific Plan could generate approximately 425 new jobs/employees, as well as approximately 100 permanent residents. New retail uses will also increase the number of shoppers to the Specific Plan Area and the downtown. (See Section J, Population and Housing.)

As a result, increased population in the Specific Plan Area could generate additional calls for police services and a need for additional patrol time related to crime, traffic and parking. Considering continued growth throughout the City, including unique service demands downtown, the Police Department in 2007 projected a need for five full-time employees over the next two budget cycles. However, the addition of five employees will not necessitate the construction of

new or altered police facilities. Therefore, potential environmental impacts of the project related to police protection will be less than significant.

Mitigation: None required.

Impact PUB-2: Result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times, or other performance objectives for fire protection (criterion a). (Less than Significant)

Implementation of the Specific Plan and the resulting increase in the number of employees, customers, and potential residents will result in an incremental increase in calls for fire and emergency medical services. The operation or construction of projects will not significantly affect Contra Costa County Fire Protection District (“CCCFPD”) response times, nor require additional staff, equipment, or facility expansion.

Fire sprinklers will be provided throughout proposed new buildings. The CCCFPD Fire Prevention Bureau will review the project construction plans and inspect the construction work as it progresses to ensure that proposed buildings meet State and local Building and Fire Code requirements. In addition, as explained in Section L, Utilities, existing fire flow and pressure in the Specific Plan Area are adequate to accommodate future development. Therefore, potential environmental impacts of the Specific Plan on fire protection will be less than significant.

Mitigation: None required.

Impact PUB-3: 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 schools (criterion a). (Less than Significant)

The Specific Plan Area is located within the Walnut Creek School District (“WCSD”) and the Acalanes Union High School District (“AUHSD”) boundaries. Development under the Specific Plan will result in the construction of 46 new residential units in the Specific Plan Area where none existed previously. Using student generation rates per dwelling unit provided by WCSD (0.34 per unit) and AUHSD (0.25 per unit), new residential uses will be expected to generate approximately 16 elementary and middle school students and 12 high school students. In addition, as allowed by state law and WCSD and AUHSD policy, some new employees working in the Specific Plan Area who do not live within either districts’ boundaries may choose to send

their children to schools in these districts. However, this number is likely to be small and will be too speculative for impact assessment under CEQA.

The increase in school-age children and the timeframe for the generation of new students is not anticipated to impact the capacity of existing school facilities within the local school districts and required additional or expanded facilities.

Whether or not the district's collect impact fees from commercial development (the WCSD does and the AUHSD does not), the California State Legislature has determined both that school impact fees shall be the exclusive method of mitigating school facilities impacts and that payment of school impact fees shall be deemed to provide full and complete school facilities mitigation. Therefore, the impacts of the Specific Plan on school facilities will be less than significant.

Mitigation: None required.

Impact PUB-4: 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; include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment; or 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 for parks (criteria a, b and c). (Less than Significant)

Development within the Specific Plan Area could generate about 425 new employees as well as approximately 100 permanent residents. Parks in the vicinity of the proposed development include Alma Park, Liberty Bell Plaza, and Civic Park. Walnut Creek also has four large open space areas with a combined acreage of almost 3,000 acres. Employees and potential residents of the Specific Plan Area will utilize nearby parks as well as other parks and open space resources throughout the City. However, development within the Specific Plan Area will not increase the use of nearby parks and recreational facilities such that substantial physical deterioration will occur. The Specific Plan also does not propose any construction or expansion of parks or recreational facilities. Furthermore, the City currently exceeds the goal of five acres developed parkland ratio goal of five acres per 1,000 persons. The proposed development will not be expected to reduce this ratio and therefore would not result in the need for construction or expansion of recreational facilities or parks. Therefore, implementation of the Specific Plan will have a less than significant impact on parks.

Mitigation: None required.

Cumulative Impacts

Impact PUB-5: Implementation of the Specific Plan, combined with past, present, or reasonably foreseeable probable future projects, will not result in a cumulative public services impact. (Less than Significant)

The Specific Plan, together with other past, present and reasonably foreseeable probable future development in Walnut Creek, will result in a total of 314 new housing units and 1.19 million square feet of new non-residential building space. An estimated 624 new residents and 3,724 new employees will also be added to the City. This additional development will be located in different parts of Walnut Creek, mostly in the Core Area.

Cumulative development will result in an increase in police and fire protection service calls, as well as a proportionate increase in staff and equipment needs. Considering continued growth throughout the City, including unique service demands downtown, the Police Department in 2007 projected a need for five full-time employees over the next two budget cycles. The addition of five employees will not necessitate the construction of new or altered police facilities.

No specific additional fire department facilities or site expansion needs have been identified to accommodate any additional staff or equipment needed to serve this cumulative development. The CCCFPD Fire Prevention Bureau reviews development plans and inspects construction projects to ensure that all new and remodeled buildings and facilities meet State and local Building and Fire Code requirements. Therefore, cumulative impacts to fire protection and emergency medical service will be less than significant.

Those additional residents that are of school age will attend schools within the districts that serve the City, including WCSD and AUHSD. Development projects will be assessed school impact fees up to the amounts allowed under state law and that, in accordance with state law, will be deemed full and complete school facilities mitigation. As a result, cumulative impacts to schools will be less than significant.

Additional residents and, to a lesser degree, employees resulting from these cumulative projects will increase parkland usage and needs. Employees will be expected to utilize the parkland for mainly passive recreation, with minimal impacts to existing parkland. Projects that include new housing will be required to either dedicate parkland or pay parkland in-lieu fees that will be used to acquire and develop new parkland. With the imposition of parkland dedication and in-lieu fee requirements, cumulative park and recreation impacts will be less than significant.

Mitigation: None required.

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L. Utilities and Service Systems

This section describes the regulatory setting and potential environmental impacts of the Specific Plan on water supply and facilities for wastewater and stormwater drainage that serve the Specific Plan Area.

1. Regulatory Setting

Federal

Clean Water Act

The major federal legislation governing the water quality aspects of the project is the Clean Water Act (“CWA”), 33 U.S.C. sections 1251 et seq., as amended. The objective of the CWA is to “restore and maintain the chemical, physical, and biological integrity of the Nation’s waters,” 33 U.S.C. section 1251(a). The CWA requires states to establish water quality standards to protect designated uses for all waters of the nation. In general, implementation of many aspects of the CWA under the EPA has been delegated to individual states.

Stormwater / NPDES

The National Pollutant Discharge Elimination System (“NPDES”) permit program was established in the CWA to regulate municipal and industrial discharges to surface waters of the United States. Federal NPDES permit regulations have been established for broad categories of discharges, including point-source municipal waste discharges and nonpoint-source stormwater runoff. NPDES permits generally identify effluent and receiving water limits on allowable concentrations and/or mass emissions of pollutants contained in the discharge; prohibitions on discharges not specifically allowed under the permit; and provisions that describe required actions by the discharger, including industrial pretreatment, pollution prevention, self-monitoring, and other activities.

Wastewater discharge is regulated under the NPDES permit program for direct discharges into receiving waters and by the National Pretreatment Program for indirect discharges to a sewage treatment plant. Sanitary wastewater generated on the project site is treated by the Central Contra Costa Sanitary District, which has a permit to discharge treated wastewater into Suisun Bay.

State

Porter-Cologne Water Quality Control Act

The Porter-Cologne Water Quality Control Act (Division 7 of the California Water Code) provides the basis for water quality regulation within California. This Act established the authority of the State Water Resources Control Board (“SWRCB”) and the nine Regional Water Quality Control Boards (“RWQCBs”). The SWRCB administers water rights, water pollution control, and water quality functions throughout the State, while the RWQCBs conduct planning,

permitting, and enforcement activities. The Specific Plan Area lies within the jurisdiction of the RWQCB, San Francisco Bay Region.

The Porter-Cologne Water Quality Control Act allows the SWRCB to adopt state-wide water quality control plans, the purpose of which are to establish water quality objectives for specific water bodies. In the San Francisco Bay Region the Water Quality Control Plan, known as the Basin Plan, is the RWQCB's master policy document. The Basin Plan contains descriptions of the legal, technical, and programmatic basis of water quality regulation in the region (RWQCB, 1995). The Act also authorizes the NPDES program, which established effluent limitations and quality requirements for discharges to waters of the State.

SB 610

Senate Bill 610 (Stats. 2001, c. 643) amended section 21151.9 of the Public Resources Code (relating to CEQA), sections 10631 and 10656 of the Water Code (relating to Urban Water Management Plans), and sections 10910, 10911, 10912, and 10915 of the Water Code (relating to preparation of water supply assessments). The purpose and legislative intent of SB 610 was to further integrate land use and water supply planning, and to ensure that long term water supplies were available to support new land uses. The laws took effect on January 1, 2002.

SB 610 requires the preparation of a Water Supply Assessment ("WSA") for large-scale development projects. The WSA report evaluates the water supply available for new development based on the anticipated demand. For the broad range of projects that are subject to this law, the statutory WSA must be requested by the lead agency from the local water provider at the time the lead agency determines whether an EIR is required for the project. The water agency must then provide the assessment within 90 days (but may request a time extension under certain circumstances). The water supply assessment must include specific information including an identification of existing water supply entitlements and contracts. The governing board of the water agency must approve the assessment at a public meeting.

Local

East Bay Municipal Utilities District

Water service in Walnut Creek is provided by both the East Bay Municipal Utility District ("EBMUD") and the Contra Costa Water District ("CCWD"). The project is located within the EBMUD service area. Updated every five years in accordance with California's Urban Water Management Planning Act, EBMUD's Urban Water Management Plan ("UWMP") 2005 provides an overview of EBMUD's water supply sources and usage, recycled water and conservation programs.

General Plan 2025 Policies

The General Plan contains the following goals, policies, and actions regarding water and wastewater:

Safety and Noise

GOAL 7. Work with the water districts to ensure safe and adequate water supplies for the Planning Area.

- Policy 7.1. Work with water agencies to secure water supplies to serve the Planning Area's growing number of residents and employees.
- Action 7.1.1. Work with water agencies and the fire district to ensure the availability of an adequate water supply, particularly during peak load periods, to serve firefighting needs.

Built Environment

GOAL 29. Promote water conservation.

- Policy 29.2. Promote water conservation throughout the community.

GOAL 32. Meet or exceed State and federal water quality standards.

- Policy 32.6. Reduce pollutant loading in the wastewater system.
- Action 32.6.1. Apply "best management practices" to discharges to the sanitary sewage system.

2. Existing Conditions

Water Supply

EBMUD supplies water to two-thirds of the City. CCWD serves the remaining one-third of the City.

EBMUD supplies water to approximately 1.3 million people in a service area that includes 20 cities and communities in Contra Costa and Alameda counties. Surface water comprises almost 100 percent of the EBMUD water supply. About 90 percent of the EBMUD water supply originates from the Mokelumne River on the west slope of the Sierra Nevada and is stored at the Pardee Reservoir about 40 miles northeast of Stockton. The remaining 10 percent of EBMUD water is comprised of local watersheds and reservoirs in the East Bay hills.

EBMUD's 2005 UWMP outlines water demand and supply through 2030. EBMUD projects higher growth rates in customer demand through 2020 due to increased development within the EBMUD service area. The implementation of conservation and recycled water programs will result in lower growth rates in customer demand between 2020 and 2030.

EBMUD's water demand projections are derived from a land-use based demand forecast developed in 2000 that was based on the adopted General Plans and Specific Plans and discussions with staff of cities and counties in EBMUD's service area. This EIR will therefore reflect an amount of future development in Walnut Creek allowed under the Growth Limitation Program.

EBMUD's water shortage contingency planning anticipates water supply interruptions due to droughts and other potential catastrophes. EBMUD determines its water supply availability each year and initiates water reduction programs if the projected water supply is unable to fully meet customer needs. During non-drought conditions, water use efficiency measures are implemented to eliminate wasteful practices. EBMUD's Water Supply Availability and Deficiency Policy limits rationing to no more than 25 percent of total customer demand on an annual basis.

EBMUD's water supply is adequate to meet existing and projected demand through 2030, an assumed average drought year, under normal conditions, and the first two years of an assumed three-year drought, but not in the third year of a protracted drought scenario. EBMUD is developing projects to manage future water supply needs and is currently implementing numerous water conservation and recycling programs to reduce demand. EBMUD's Water Supply Management Program 2020 is the basis for water conservation and recycling programs and for development of supplemental supply initiatives. Planned water supply projects include use of local groundwater supplies and surface water from the Sacramento River at Freeport during droughts.

EBMUD operates six water treatment plants, including the Walnut Creek Water Treatment Plant, located on Larkey Lane in northwest Walnut Creek. EBMUD's facilities are interconnected to enhance capacity reliability such that, on any given day, production from one water treatment plant could offset some or all of the production from another. The San Pablo Water Treatment Plant is a standby facility used only during planned outages of the other treatment plants. Major reconstruction of the Walnut Creek Water Treatment Plant treatment and storage facilities were completed in 2006. The current plant capacity of 91 million gallons per day ("mgd") is adequate to meet existing demand of 72 mgd but falls short of the projected demand of 96 mgd in 2030.

EBMUD's Water Treatment and Transmission Improvement Project ("WTTIP") includes additional improvements to the treatment plant and other facilities in the Walnut Creek area to address existing deficiencies and future demand. The plant needs new filters to increase capacity to 115 mgd to meet peak operational demands and to accommodate occasional changes in source water quality due to increases in seasonal turbidity and algae in Pardee reservoir. A new pumping plant is also proposed at the treatment plant to improve water pressure for customers in higher elevations of Walnut Creek and adjacent areas. Planned longer-term improvements beyond 2010 include the addition of high-rate sedimentation units and UV disinfection facilities. The proposed improvements to be completed in 2010 will adequately address future demand through 2030.

EBMUD distributes water to its service area through a system of pipelines, storage reservoirs, and pumping plants. Water is conveyed from the Pardee Reservoir through a network of tunnels and aqueducts to treatment plants and terminal reservoirs in the East Bay. EBMUD operates and maintains all storage, pumping, and distribution facilities within its service area and is responsible for all facilities up to the customer's water meter.

Table IV.L-1 shows the location and characteristics of the existing water pipes in the Specific Plan Area. **Figure IV.L-1** depicts the alignment of existing lines.

**TABLE IV.L-1
 EXISTING WATER SYSTEM CONDITIONS**

Street	Pipe Diameter	Pipe Material	Year Installed
South California	48-inch	Steel	1966
Cypress St.	6-inch	Asbestos cement ('AC')	1953
Locust St.	6-inch	Cast iron	1953
North Main St.	6-inch	Cast iron	1953
Mt. Diablo Blvd.	8-inch	Cast iron	1953
	8-inch	Steel	2001

SOURCE: EBMUD, 2008

Wastewater Collection and Treatment

The Central Contra Costa Sanitary District ("CCCSD") provides wastewater collection and treatment services for the City. The collection system within the City includes gravity sewer lines and pump stations, and the wastewater treatment plant is located near Martinez.

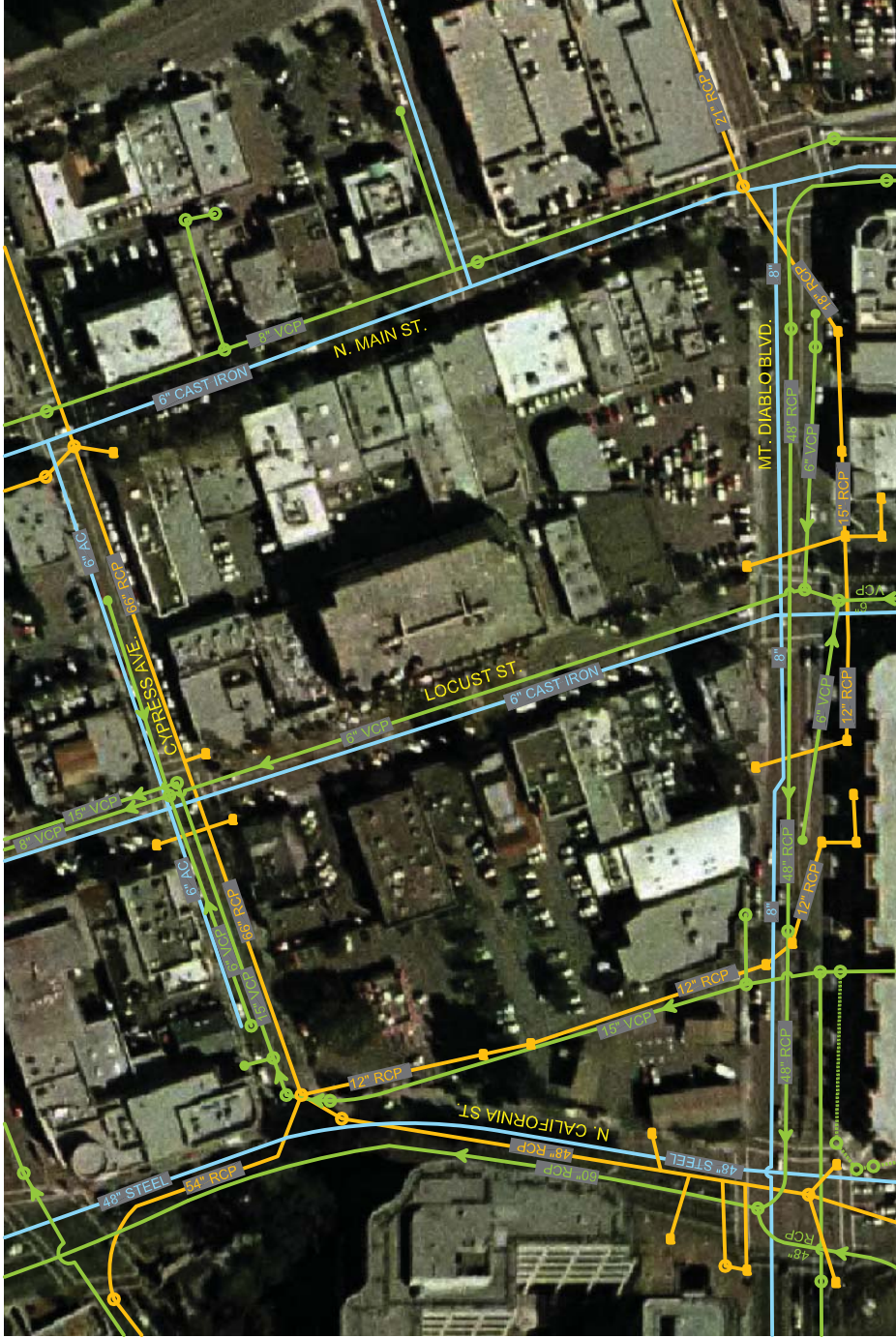
Treated effluent is discharged to Suisun Bay operating under a NPDES permit granted by the San Francisco Bay Regional Water Quality Control Board. The treatment plant has a reliable physical capacity and permit to discharge up to 53.8 mgd average dry weather flow and 240 mgd wet weather flow. In 2008, the wastewater treatment plant processed about 39.1 mgd average dry weather flow, leaving approximately 14.7 mgd average dry weather flow remaining available. While average dry weather flow capacity is adequate to meet demand, LAFCO recently approved a major annexation to the CCCSD in the southern Alhambra Valley, which is constructing a new trunk sewer to improve wet-weather capacity, maintainability, reliability, operations efficiency, odor control and seismic protection.

Sewer lines in the Specific Plan Area are shown in **Figure IV.L-1**. **Table IV.L-2** includes information about the existing wastewater pipes serving the Specific Plan Area.

**TABLE IV.L-2
 EXISTING WASTEWATER SYSTEM CONDITIONS**

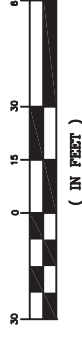
Street	Pipe Diameter	Pipe Material
South California	60-inch	Reinforced concrete (RC)
	15-inch	Clay (VCP)
Cypress St.	15-inch	Clay (VC)
	8-inch	Clay (VCP)
Locust St.	6-inch	Clay (VCP)
North Main St.	8-inch	Clay (VCP)
Mt. Diablo Blvd.	48-inch	Reinforced concrete (RC)
	6-inch	Clay (VC)
	8-inch	Plastic (PVC)

SOURCE: CCCSD, 2008



LEGEND

- SANITARY SEWER LINE
- SANITARY SEWER MANHOLE
- SANITARY SEWER CLEAN-OUT
- ⋯ SANITARY SEWER TENTATIVE LINE*
- WATER LINE
- STORM DRAIN LINE
- DRAIN INLET
- STORM DRAIN MANHOLE



NOTE: UTILITY LINES, MANHOLES, INLETS, AND OTHER UTILITY STRUCTURES SHOWN AT THIS SCALE ARE LOCATED ONLY IN THE STREETS RELATIVE TO OTHER UTILITIES AND ARE APPROXIMATE.

* LINE IS SHOWN AS TENTATIVE SEWER LINE IN THE 50% IMHOFF PLACE IMPROVEMENT PLANS DATED 7-20-88 SENT BY CENTRAL CONTRA COSTA SANITARY DISTRICT

Storm Drainage

The City’s Public Services Department oversees and maintains the storm drainage system throughout the city limits. The system of storm drains collects and channels surface water (mostly from rainfall) into a series of pipes, trenches, culverts, detention basins, and open channels which transport and empty it into San Francisco Bay. The system is based upon the natural drainage pattern determined by topography.

The Specific Plan Area is almost completely covered by impervious surfaces, such as parking lots, buildings, roadways, sidewalks, and other features. While development within the Specific Plan Area will result in an increase in the intensity of uses, it is not anticipated to result in an increase in impervious surfaces.

Storm drain lines in the Specific Plan Area are shown in Figure IV.L-1 and described in **Table IV.L-3**. The Specific Plan Area also has an existing 12-inch storm drain pipe that runs through the west side of the Specific Plan Area, following the old right-of-way for Grainger Road.

**TABLE IV.L-3
 EXISTING DRAINAGE SYSTEM CONDITIONS**

Street	Pipe Diameter	Pipe Material
South California	48-inch	Reinforced concrete (RCP)
Cypress St.	66-inch	Reinforced concrete (RCP)
Locust St.	none	
North Main St.	none	
Mt. Diablo Blvd.	12-inch to 18-inch	Reinforced concrete (RCP)

SOURCE: City of Walnut Creek, 2008

Energy

Pacific Gas and Electric (“PG&E”) provides electric power and natural gas to customers in Walnut Creek. PG&E relies on hydroelectric, nuclear, fossil fuel plants, geothermal plants, wind turbines, and small independent energy companies for its transportation, industrial, residential, and commercial energy needs. Existing development on the project site is served by PG&E electrical and gas services.

Title 24

Energy Efficiency Standards for Residential and Nonresidential Buildings were established in 1978 by the California Energy Commission in response to a legislative mandate to reduce California's energy consumption. The current standards regulate types of buildings (i.e., residential, high-rise, hotel/motel, mixed-occupancy, etc.); manufacture, construction and installation of equipment and building components (appliances, doors, windows, roofing, lighting

control devices); and, heating and cooling systems (air conditioning, boilers, central heating, insulation, water heaters). The standards are updated periodically to allow consideration and possible incorporation of new energy efficiency technologies and methods.

Telecommunications

Telecommunications services include telephone and cable connections. AT&T provides local telephone service. Cable television services in Walnut Creek are provided by Comcast Cable Service and Astound Broadband.

3. Standards of Significance

According to Appendix G of the State CEQA Guidelines, the project would result in a significant impact on utilities if it would:

- (a) Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board;
- (b) Require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, construction of which could cause significant environmental effects;
- (c) Require or result in the construction of new storm water drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects;
- (d) Have sufficient water supplies available to serve the project from existing entitlements and resources, or are new or expanded entitlements needed;
- (e) Result in a determination by the wastewater treatment provider that would serve the project that it does not have adequate capacity to serve the project's projected demand in addition to the provider's existing commitments;
- (f) Be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs; or
- (g) Comply with federal, state, and local statutes and regulations related to solid waste.

Topics Determined Less than Significant in the Initial Study

Utilities and Service Systems was previously analyzed in the Locust Street/Mt. Diablo Boulevard Specific Plan Initial Study. As stated in the Initial Study, service of the Specific Plan Area by a landfill with sufficient permitted capacity to accommodate solid waste disposal needs (criteria f) was determined to be a less than significant impact. Compliance with federal, state, and local statutes and regulations related to solid waste (criteria g) was also analyzed in the Initial Study and was determined to be less than significant. Therefore, these topics are not analyzed further in this section, as indicated in the Initial Study.

4. Approach and Methodology

Physical environmental impacts to utilities are usually associated with population and employment increases, which in turn lead to the need for expanded or new facilities. An increase in population or employment in any given area may result in the need to develop new, or alter existing, public facilities and utility services in order to accommodate demand.

The utilities and infrastructure services demands the Specific Plan will generate are calculated and compared to the existing demand for utility service. Using projected utility demands, a net increase in utility usage associated with implementation of the Specific Plan's proposed land use changes are determined. Existing conservation programs are analyzed to determine if the utility usage will reasonably be expected to be conserved and not used in a wasteful manner. Finally, projected utility usage is compared to utility capacity.

5. Impact Discussion

Impact UTIL-1: Require or result in the construction of new wastewater treatment facilities or expansion of existing facilities, construction of which could cause significant environmental effects, or result in a determination by the wastewater treatment provider that would serve the project that it does not have adequate capacity to serve the project's projected demand in addition to the provider's existing commitments, or exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board (criteria a, b and e). (Less than Significant)

Based on a wastewater generation rate for retail uses of 56 gpd per 1,000 square feet, 64 gpd per 1,000 square feet of office uses, and 150 gpd per residential unit, the net increase of wastewater generated under the Specific Plan will be approximately 15,629 gpd.

Preliminary analysis by KHA indicates that the additional wastewater generated by the Specific Plan will be adequately handled by the existing sanitary sewer system in the area. However, the CCCSD will require that the existing 6-inch line in Locust Street be replaced with an 8-inch line if this line is tapped for connections. It is assumed that this replacement would require temporary construction activities, potentially including in-street trenching that would not rise to a level of significance under CEQA as it would be similar to routine upgrades.

The estimated 15,629 gpd, or 0.016 mgd, of wastewater generated by the Specific Plan will be well within the existing 14.7 mgd remaining available dry weather capacity of CCCSD's wastewater treatment plant. As such, the CCCSD has adequate capacity to serve the project in addition to existing commitments.

Wastewater from implementation of the Specific Plan will not contain any unusual pollutants and will be within the existing dry weather capacity and permitted discharge volume of CCCSD's treatment plant. Therefore, the project will not result in any change in the quality of treated effluent discharged to Suisun Bay or in the ability of the CCCSD to continue to meet RWQCB treatment standards.

In summary, development under the Specific Plan would not require new or expanded wastewater treatment facilities and would be served by CCCSD without exceeding the plant's existing capacity or RWQCB requirements. Therefore, the project related impact on wastewater treatment would be less than significant.

Mitigation: None required.

Impact UTIL-2: Require or result in the construction of new water treatment facilities or expansion of existing facilities, construction of which could cause significant environmental effects, or have sufficient water supplies available to serve the project from existing entitlements and resources, or are new or expanded entitlements needed (criteria b and d). (Less than Significant)

Implementation of the Specific Plan will increase retail uses by about 44,670 square feet; office uses by 97,300 square feet; and will also include approximately 46 residential units. Based on a water demand factor for retail and office uses of 200 gallons per day ("gpd") per 1,000 square feet and 350 gpd per residential unit, the net increase with the project will generate an estimated additional demand for water of approximately 44,494 gpd.

EBMUD's water supply is adequate to meet existing and projected demand through 2030 under normal conditions and up to two years of drought. EBMUD also implements numerous water conservation and recycling programs to reduce demand and develops projects to manage future water supply needs. In addition, the water demand projections used by EBMUD are derived from a land-use based demand forecast that reflects the City's plans and policies, and will therefore also reflect an amount of future development permitted under the General Plan's growth limitation policies (see Section IV.C, Population and Housing).

The existing capacity of the Walnut Creek water treatment plant is adequate to meet existing demand and proposed improvements to be completed in 2010 will adequately address future demand through 2030. In addition, EBMUD's six water treatment plants are interconnected, enhancing reliability capacity.

The applicant's engineering consultant, Kimley-Horn and Associates ("KHA"), indicated that, based on discussions with the EBMUD, the downtown Walnut Creek area water distribution system is generally in good condition and additional distribution capacity is not expected to be needed. EBMUD hydrant flow tests indicate that, under current conditions, there is adequate pressure in the system. EBMUD will use a hydraulic model to confirm adequate fire flow and pressure before providing service to the Specific Plan Area.

The Specific Plan Area will be adequately served by the existing water supply and will not require the expansion or construction of new water treatment or distribution facilities; therefore the impact on water supply, treatment, and distribution will be less than significant.

Mitigation: None required.

Impact UTIL-3: 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 (criterion c). (Less than Significant)

Development within the Specific Plan Area will continue to connect and discharge stormwater runoff to the City's existing storm drain lines in the adjacent streets. However, development could result in changes in surface drainage patterns, such as re-routing of existing overland surface flows, re-positioning of storm drains, changes in topography, changes in the placement of stormwater collection and dispersal points, and other changes that could alter drainage patterns onsite.

The Specific Plan Area is almost entirely impervious in its present condition and will remain so with proposed development. According to the City Engineer, the Specific Plan Area contains an existing 12-inch storm drain pipe that runs through the west side of the Specific Plan Area, following the old right-of-way ("ROW") for Grainger Road. This pipe is located in the area proposed for the new parking garage and is likely not deep enough to drain the property adequately. Therefore, construction of the parking garage or any other buildings in the vicinity will require relocation of this storm drain and construction of a new drainage system within Mt. Diablo Boulevard. However, it is assumed that associated construction activities, potentially including in-street trenching, would be temporary and would not rise to a level of significance under CEQA as it would be similar to routine upgrades.

As described in Section IV.I, Hydrology and Water Quality, to comply with the requirements of the RWQCB concerning discharges of stormwater during project construction and operation, the project proponent will be required to obtain an NPDES permit for construction activities and implement a Stormwater Pollution Prevention Plan ("SWPPP") for construction and operation of the proposed project. The RWQCB requires that the SWPPP identify pollutant sources that could potentially affect the quality of stormwater discharge, and also implement Best Management Practices (BMPs) that will reduce the level of pollutants in stormwater during construction and operation. Compliance with the required NPDES permit will include generation of a SWPPP and implementation of the aforementioned or similar BMPs to reduce the intensity of potential water quality pollution, sufficient to the requirements of RWQCB.

Developments under the Specific Plan will also be required to comply with Contra Costa County Clean Water Program ("CCCWP") policies and procedures regarding preparation of a Stormwater Control Plan. Compliance with CCCWP policies would ensure adherence to guidelines of the RWQCB, as well as local authorities, in order to maintain drainage, stormflow, and water quality at acceptable levels.

Development within the Specific Plan Area would not result in an increase in the total area of impervious surfaces, as discussed above. Therefore, development is not anticipated to result in

generation of additional stormwater runoff. Although activities related to construction of upgrades to the stormwater system could result in potential impacts, those impacts would be considered less than significant with implementation of mitigation measures identified throughout this EIR.

Mitigation: None required.

Impact UTIL-4: Implementation of the Specific Plan will increase demand for electricity and natural gas services. (Less than Significant)

Development of the Specific Plan Area will result in an incremental increase in the demand for gas and electrical power given the proposed development on the project site. Overall, the level of energy required of projects under the Specific Plan will represent a small percentage increase in demand. Development will not be expected to violate applicable federal, state and local statutes and regulations relating to energy standards, exceed PG&E's service capacity or require new or expanded facilities. Developments will be required to comply with all standards of Title 24 of the California Code of Regulations, aimed at the incorporation of energy-conserving design and construction. In addition, any improvements and extensions required to accommodate development will be determined in consultation with PG&E prior to installation. As a result, although developments will increase energy consumption, it will not result in a significant impact related to the provision of energy services.

Mitigation: None required.

Cumulative Impacts

Impact UTIL-5: Implementation of the Specific Plan, combined with past, present and reasonably foreseeable probable future projects, will not result in a significant cumulative impact to utilities.

The Specific Plan, together with other past, present and probable future development in the City, will result in a total of 314 new housing units and 1.19 million square feet of new non-residential building space. EBMUD's water supply is adequate to meet existing and projected demand through 2030 under normal conditions and up to two years of drought. EBMUD is also implementing water conservation and recycling programs and developing water supply projects to manage future water supply needs. In addition, the water demand projections used by EBMUD are derived from a land-use based demand forecast that reflects Walnut Creek's plans and policies, and City staff expectations of future development. No significant additional facilities or expansion needs beyond those already underway or planned will be expected to be needed to serve this additional development. In addition, the City coordinates with the EBMUD in the review of development proposals to ensure compliance with California Fire Code fire flow and

pressure requirements. Cumulative impacts on water supply and water treatment and distribution systems will be less than significant.

The estimated increase in wastewater flows will be well within the existing remaining available capacity of the wastewater treatment plant of 14.7 mgd average dry weather flow. In addition, the City coordinates with the CCCSD in the review of development proposals to ensure that they could feasibly be served. Cumulative impacts related to wastewater will be less than significant.

Development with the Specific Plan will not result in an increase in the total area of impervious surfaces and is not anticipated to result in generation of additional stormwater runoff. Therefore the project will have no impact on the off-site stormwater drainage system and will not contribute to potential cumulative drainage impacts.

Mitigation: None required.

References – Utilities and Service Systems

City of Walnut Creek, *Broadway Plaza Retail Project Environmental Impact Report*, September 16, 2008.

City of Walnut Creek, *Broadway Plaza Retail Project Environmental Impact Report*, September 16, 2008.

City of Walnut Creek, *General Plan 2025*, adopted April 4, 2006.

City of Walnut Creek, *General Plan 2025 Environmental Impact Report*, December 9, 2005.

City of Walnut Creek, *General Plan 2025 Environmental Impact Report*, December 9, 2005.

City of Walnut Creek, *Locust Street/Mt. Diablo Boulevard Precise Plan, Existing Conditions and Environmental Setting Report*, February 24, 2005.

Kimley-Horn and Associates, Memorandum re: Mt. Diablo Boulevard Specific Plan Utilities, September 19, 2008.

CHAPTER V

Alternatives

A. Criteria for Selecting Alternatives

The California Environmental Quality Act (“CEQA”) requires that the EIR identify and discuss a “reasonable range of alternatives” to the project. The alternatives selected for comparison would attain most of the basic objectives of the project and avoid or substantially lessen one or more significant effects of the project, CEQA Guidelines section 15126.6. The “range of alternatives” is governed by the “rule of reason,” which requires the EIR to set forth only those alternatives necessary to permit an informed and reasoned choice by the decision-making body and informed public participation, CEQA Guidelines section 15126.6f. CEQA generally defines “feasible” to mean an alternative that is capable of being accomplished in a successful manner within a reasonable period of time, while also taking into account economic, environmental, social, technological, and legal factors, Public Resources Code section 21061.1; CEQA Guidelines section 15126.6(a).

The alternatives considered in this EIR were selected based on the following factors:

- (1) The extent to which the alternative would accomplish most of the basic objectives of the project;
- (2) The extent to which the alternative would avoid or lessen any of the identified significant environmental effects of the project;
- (3) The feasibility of the alternative, taking into account site suitability, availability of infrastructure, and consistency with applicable plans and regulatory limitations;
- (4) The extent to which an alternative contributes to a “reasonable range” of alternatives necessary to permit a reasoned choice; and
- (5) The CEQA Guidelines requirement to consider a no project alternative and to identify an environmentally superior alternative in addition to the no project alternative, CEQA Guidelines, section 15126.6(e).

Specific Plan Objectives Relevant to Selection of Alternatives

The Specific Plan objectives are presented in the Project Description, Chapter III of this EIR. The objectives (and numerous supporting policies) address the following topics of Land Use and Urban Design (“LU”) and Circulation and Parking (“CIRC”). Each is relevant to the selection and

evaluation of the alternatives and is summarized below (full text of each objective is presented in the Project Description, Chapter III):

- **LU-1** – Link the North and South Sides of Mt. Diablo Boulevard
- **LU-2** – Infill Development Opportunities
- **LU-3** – Retail Destination
- **LU-4** – Pedestrian-Oriented
- **LU-5** – Upper-Level Mixed-Use
- **LU-6** – Downtown Scale
- **LU-7** – Sidewalks and Building Setbacks
- **LU-8** – Preservation
- **LU-9** – Arts and Cultural Enhancements
- **LU-10** – Sustainability
- **CIRC-1** – Pedestrian Network
- **CIRC-2** – Public Parking
- **CIRC-3** – Service Access
- **CIRC-4** – Commercial Lane Enhancements

Significant Impacts Resulting from the Specific Plan

As indicated above, CEQA requires that the alternatives selected for comparison avoid or substantially lessen one or more significant effects of a proposed project. The analysis in this EIR determined that the Specific Plan would not result in any significant and unavoidable impacts. Table V-2 at the end of this chapter identifies each of the less than significant impacts identified for the project and indicates the relative impacts of each of the alternatives analyzed in this EIR.

B. Summary of Selected Alternatives

Having considered the selection criteria discussed above, the City identified a No Project Alternative, a Reduced Density / Height Alternative, and a Primary Study Area Buildout Alternative that entails greater development than the Specific Plan. The development program for each alternative and the Specific Plan is presented in Table V-1 on the following page; each alternative is described in narrative detail in the *Alternatives Analysis* in Section C that follows.

The selected alternatives represent a "reasonable range of potentially feasible alternatives" to the Specific Plan, pursuant to section 15126.6(a) of the CEQA Guidelines. No other alternatives were evaluated for this EIR.¹

A summary comparison of the environmental impacts for each alternative and the Specific Plan are presented in Table V-2 at the end of this chapter.

¹ "Option B" for Opportunity 4 is analyzed as a variant of the Specific Plan ("Option A") throughout the analysis in Chapter IV of this EIR.

**TABLE V-1
COMPARISON OF SELECTED ALTERNATIVES AND THE SPECIFIC PLAN, BY SITE**

	Retail (SF)	Office (SF)	Residential (SF) / (DU)	Hotel (SF) / (Rms)	Total Dvlpmt (SF)	On Site Parking (Spaces)	Max. Height (ft) (FAR)
SPECIFIC PLAN (OPTION A)							
OPPORTUNITY SITE 1 (Main / Mt.Diablo)	4,300	4,300			8,600	0	35 (2.0)
OPPORTUNITY SITE 2 (Locust / Mt.Diablo)	19,500		45,000 (36)		64,500	124	35/50 (2.0)
OPPORTUNITY SITE 3 (Parking Garage)						335	70 (1.25)
OPPORTUNITY SITE 4 (N. California / Mt. Diablo / Chevron)	17,000	13,000			30,000	0	35 (1.25)
OPPORTUNITY SITE 5 (N. California / Cypress/ McDonald's)	13,420	80,000			93,420	265	70 (2.0)
OPPORTUNITY SITE 6 (Locust St.)	10,500		15,000 (10)		25,500	21	35/50 (2.0)
Remaining Parcels ¹	<u>71,400</u>				<u>71,400</u>	<u>54</u>	35/50 (2.0)
TOTAL SQ FT.²	136,120	97,300	60,000 (46)	0	293,420	799	
NO PROJECT ALTERNATIVE ³							
OPPORTUNITY SITE 1 (Parking Lot)	0				0	15	35/50 (2.0)
OPPORTUNITY SITE 2 (Auto Service)	28,000				28,000	48	35/50 (2.0)
OPPORTUNITY SITE 3 (Parking Lot)	0				0	51	50 (1.25)
OPPORTUNITY SITE 4 (N. California / Mt. Diablo / Chevron)	2,300				2,300	4	35/50 (1.25)
OPPORTUNITY SITE 5 (N. California / Cypress / McDonald's)	2,000				2,000	62	50 (1.25)
OPPORTUNITY SITE 6 (Locust St.)	15,000				15,000	20	35/50 (2.0)
Remaining Parcels ¹	<u>71,400</u>				<u>71,400</u>	<u>54</u>	35/50 (2.0)
TOTAL SQ FT.³	118,700	0	0	0	118,700	254	
REDUCED DENSITY / HEIGHT ALTERNATIVE							
OPPORTUNITY SITE 1 (Main / Mt.Diablo)	4,300	4,300			8,600	0	35 (2.0)
OPPORTUNITY SITE 2 (Locust / Mt.Diablo)	19,500		45,000 (36)		64,500	124	35/50 (2.0)
OPPORTUNITY SITE 3 (Parking Garage)						287	60 (1.25)
OPPORTUNITY SITE 4 (N. California / Mt. Diablo / Chevron)	17,000	13,000			30,000	0	35 (1.25)
OPPORTUNITY SITE 5 (N. California / Cypress / McDonald's)	13,420		65,000 (52)		78,420	104	60 (1.25)
OPPORTUNITY SITE 6 (Locust St.)	10,500		15,000 (10)		25,500	21	35/50 (2.0)
Remaining Parcels ¹	<u>71,400</u>				<u>71,400</u>	<u>54</u>	35/50 (2.0)
TOTAL SQ FT. ⁴	136,120	17,300	125,000 (98)	0	278,420	590	
PRIMARY STUDY AREA BUILDOUT ALTERNATIVE							
OPPORTUNITY SITE 1 (Main / Mt.Diablo)	5,500	5,500			11,000	0	35 (2.0)
OPPORTUNITY SITE 2 (Locust / Mt.Diablo)	19,500	45,000			64,500	180	35/50 (2.0)
OPPORTUNITY SITE 3 (Parking Garage)	15,000	47,000			62,000	207	70 (3.0)
OPPORTUNITY SITE 4 (N. California / Mt. Diablo / Chevron)	25,000	42,000			67,000	223	50 3.0)
OPPORTUNITY SITE 5 (N. California / Cypress / McDonald's)	16,000	0		40,000 (60)	56,000	187	70 (2.0 ⁵)
OPPORTUNITY SITE 6 (Locust St.)	10,500	10,500			21,000	70	35/50 (2.0)
Remaining Parcels ¹	<u>71,400</u>				<u>71,400</u>	<u>54</u>	35/50 (2.0)
TOTAL SQ FT.⁵	162,900	150,000	0	40,000 (60)	352,900	921	

¹ Secondary Plan Area

² "Project/Specific Plan" + Remaining Parcels with assumed total 2 percent growth rate over 10 yrs.

³ No change assumed to Opportunity Sites 1, 3, 4 and 5; Opportunity Sites 2 and 6 calculated as General Retail with a built-out Floor Area Ratio of 1.0. Remaining Parcels assumed total 2 percent growth rate over 10 yrs.

⁴ "Reduced Density/Height" + Remaining Parcels with assumed total 2 percent growth rate over 10 yrs.

⁵ "Primary Study Buildout Alternative" + Remaining Parcels with assumed total 2 percent growth rate over 10 yrs.

⁶ Subject to compliance with Specific Plan policies.

C. Alternatives Analysis

1. No Project Alternative

Purpose

The No Project Alternative is provided in this EIR to compare the impacts of approving the Specific Plan to not approving the Specific Plan, CEQA Guidelines section 15126.6 (e). For purposes of this EIR, the City has conservatively identified existing conditions, with a small increment of additional growth over the next ten years, as the No Project Alternative. Compared to the development that could occur in the Specific Plan Area according to the existing General Plan and zoning without adoption of the Specific Plan, the No Project Alternative program is substantially less intensive.

Description and Comparison

As summarized in Table V-1, the No Project Alternative generally maintains existing 2008 conditions within the Specific Plan Area, with a growth rate of 2 percent over the next decade.² The No Project Alternative also incorporates additional growth on Opportunity Sites 2 and 6, because it is expected that these two Opportunity Sites may redevelop within the next ten years even without adoption and implementation of the Specific Plan. On Opportunity Site 2 (Locust Street / Mt. Diablo Boulevard Corner), the No Project Alternative could replace the existing 9,950 square feet of automotive service use (tire store and auto repair facility) with 28,000 square feet of retail uses similar to those envisioned by the Specific Plan. Compared to the Specific Plan, there would be 8,500 square feet less retail and no residential units (compared to 36 units) on Site 2. On Opportunity Site 6 (Locust Street), the No Project Alternative could add 4,500 more square feet of retail use than the Specific Plan, which would also propose 10 residential units on the site.

Since the Specific Plan would not be adopted with the No Project Alternative, the General Plan and Zoning Ordinance amendments that would increase the maximum building height on Opportunity Sites 3 and 5 (from 50 to 70 feet) or increase the potential FAR on Opportunity Site 5 (from 1.25 to 2.0) also would not occur. Development under the No Project Alternative would maintain existing applicable General Plan guidance and zoning regulations.

Impact Discussion

Transportation and Parking

Trip Generation / Intersection and Roadway Level of Service. The above-described changes to land uses under the No Project Alternative would result in fewer peak-hour vehicle trips from the Specific Plan Area than would be generated with implementation of the Specific Plan. Applying the same peak-hour trip rates used throughout this EIR, the No Project Alternative would generate approximately 37 and 89 fewer AM and PM peak-hour vehicle trips, respectively, than the entire

² City Planning Staff estimated a 2 percent growth over the next decade based on local development trends recorded since 1985. This same growth is assumed to occur for the Specific Plan and under all project alternatives.

Specific Plan Area.³ Therefore, the No Project Alternative would reduce overall local traffic, and the less than significant traffic impacts (intersections and roadways) identified for the Specific Plan would be reduced further. See peak-hour trip generation estimates for the No Project Alternative (Table B) and the Specific Plan (Table A) in Appendix C to this EIR.

Transit. Like the Specific Plan, the No Project Alternative would generate demand for transit trips, but would not exceed the existing transit capacity serving the City. The above-cited lower trip generation for this alternative compared to the Specific Plan would result in fewer transit trips under this alternative as well. The No Project Alternative would result in the same less-than-significant transit impact as the Specific Plan.

Pedestrian and Bike. The No Project Alternative would generate pedestrians and bicycle trips that would use the existing and proposed pedestrian and bicycle facilities. The above-cited lower trip generation for this alternative compared to the Specific Plan would result in lower level of pedestrian and bicycle activity under this alternative as well. As with the Specific Plan, this demand would have a less than significant impact on existing facilities.

Parking. While no significant parking impact was identified for the Specific Plan, the changes that would occur under the No Project Alternative on Opportunity Sites 2 and 6 would result in 76 fewer spaces on Opportunity Site 2 and one fewer space on Opportunity Site 6 (See Table V-1). The overall parking supply in the Specific Plan Area with the No Project Alternative would be substantially less (254 compared to 799) than with the Specific Plan, as shown in Table V-1, however, because no changes would occur within the Specific Plan Area. Under the No Project Alternative, the parking supply on Opportunity Sites 2 and 6 would continue to meet or exceed the requirements for on-site parking, as would the Specific Plan. No parking garage would be constructed on Opportunity Site 3.

Air Quality

The No Project Alternative would involve construction activity on Opportunity Sites 2 and 6 that could result in similar less than significant (after mitigation) impacts associated with construction period emissions and air quality impacts identified for implementation of the Specific Plan. The No Project Alternative would not introduce residential uses and would avoid the potential operational air quality effects on new residents, compared to the Specific Plan. The No Project Alternative would implement all mitigation measures identified in this EIR for the two Opportunity Sites that would be developed. The impact would continue to be less-than-significant, as with the Specific Plan.

Noise

The No Project Alternative would involve construction activity on Opportunity Sites 2 and 6 that could result in similar less than significant (after mitigation) impacts associated with construction period vibration impacts identified for implementation of the Specific Plan. The No Project Alternative would not introduce residential uses and would avoid the potential operational noise effects on new residents, compared to the Specific Plan. The No Project Alternative would

³ Opportunity Sites 1 through 6 only (Primary Study Area); excludes the Secondary Study Area (Remaining Parcels) which remains the same for all alternatives and the Specific Plan, as shown in Table V-1.

implement all mitigation measures identified in this EIR for the two Opportunity Sites that would be developed. The impact would continue to be less-than-significant, as with the Specific Plan.

Cultural Resources

Site-specific development that would occur on Opportunity Sites 2 and 6 under the No Project Alternative would have the same potential to encounter prehistoric or historic-period archaeological resources or any paleontological resources during grading or excavation. As such, the No Project Alternative would have the same potentially significant cultural resources impact and would implement the mitigation measure (Mitigation Measures CR-1) identified in the Initial Study for the Specific Plan (and in Table II-1 in this EIR).

Other Topics

All other topics addressed in the EIR will have a less than significant impact, as analyzed throughout Chapter IV and the Initial Study. No changes would occur to development standards in the Specific Plan Area, and specifically on Opportunity Sites 2 or 6 where change is expected to occur under the No Project Alternative; therefore, the No Project Alternative could not result in greater effects for any environmental topics not discussed above. Even though objectives, policies, development standards and design guidelines in the Specific Plan would not be adopted for the Specific Plan Area, each are consistent and build upon existing General Plan policies and zoning that currently apply to the Specific Plan Area and to which development under the No Project Alternative would adhere.

2. Reduced Density / Height Alternative

Purpose

The Reduced Density / Height Alternative is provided in this EIR to compare the impacts of approving the Specific Plan to those associated with a development that is reduced in comparison to the Specific Plan and that therefore would reduce or avoid impacts of the Specific Plan, pursuant to CEQA.

Description and Comparison

As summarized in Table V-1, the Reduced Density / Height Alternative varies from the Specific Plan on Opportunity Site 3 (Parking Garage) and Opportunity Site 5 (Cypress Street / N. California Boulevard Corner / McDonalds) only. The maximum height of the new parking garage on Opportunity Site 3 would be reduced from 70 feet (or 335 spaces) to 60 feet (or 287 spaces). On Opportunity Site 5, the Reduced Density / Height Alternative places 52 residential units, instead of 80,000 square feet of office, above the ground floor retail. The building height on Opportunity Site 5 also would be reduced from 70 feet to 60 feet and would maintain a maximum FAR of 1.25 (compared to the potential for up to 2.0 with the Specific Plan). Opportunity Site 5 parking also would be reduced by approximately 161 spaces (from 265 to 104) due to the change from office to residential use.

Impact Discussion

Transportation and Parking

Trip Generation / Intersection and Roadway Level of Service. Providing residential use (52 units) on the upper floors of Opportunity Site 5 (over retail) instead of 80,000 square feet of office uses (over retail) assumed under the Specific Plan would result in fewer peak-hour vehicle trips than with implementation of the Specific Plan. Applying the same peak-hour trip rates used throughout this EIR, this alternative would generate approximately 106 and 99 fewer AM and PM peak-hour vehicle trips, respectively, from Opportunity Site 5 than the Specific Plan, as well as the entire Specific Plan Area.⁴ Therefore, the Reduced Density / Height Alternative would reduce overall local traffic, and the less than significant traffic impacts (intersections and roadways) identified for the Specific Plan would be reduced further. See peak-hour trip generation estimates for the Reduced Density / Height Alternative (Table C) and the Specific Plan (Table A) in Appendix C to this EIR.

Transit. Like the Specific Plan, the Reduced Density / Height Alternative would generate demand for transit trips, but would not exceed the existing transit capacity serving the City. The above-cited lower trip generation for this alternative compared to the Specific Plan would result in fewer transit trips under this alternative as well. The Reduced Density / Height Alternative would result in the same less than significant transit impact as the Specific Plan.

Pedestrian and Bike. The Reduced Density / Height Alternative would generate pedestrians and bicycle trips that would use the existing and proposed pedestrian and bicycle facilities. The above-cited lower trip generation for this alternative compared to the Specific Plan would result in lower level of pedestrian and bicycle activity under this alternative as well. As with the Specific Plan, this demand would have a less than significant impact on existing facilities.

Parking. While no significant parking impact was identified for the Specific Plan, as shown in Table V-1, this alternative would provide approximately 209 fewer (799 compared to 590) parking spaces due to reductions in parking garage height on Site 3 and change in land use (residential instead of office) on Opportunity Site 5. The Specific Plan Area parking supply would continue to meet or exceed the requirements for on-site parking.

Air Quality

The Reduced Density / Height Alternative would involve construction activity throughout the Specific Plan Area. Therefore, it would result in similar less than significant (after mitigation) impacts associated with construction period emissions and air quality impacts identified for implementation of the Specific Plan. The Reduced Density / height Alternative proposes approximately 50 additional new residents to the Specific Plan Area, and thus would expose a greater number of residents to the potential operational air quality effects on new residents, compared to the Specific Plan. This alternative would implement all mitigation measures identified in this EIR; the impact would continue to be less than significant, as with the Specific Plan.

⁴ Opportunity Sites 1 through 6 only (Primary Study Area); excludes the Secondary Study Area (Remaining Parcels) which remains the same for all alternatives and the Specific Plan, as shown in Table V-1.

Noise

The Reduced Density / Height Alternative would involve construction activity throughout the Specific Plan Area. Therefore, it would result in similar less than significant (after mitigation) impacts associated with construction period vibration impacts identified for implementation of the Specific Plan. The Reduced Density / Height Alternative proposes approximately 50 additional new residents to the Specific Plan Area, and thus would expose a greater number of residents to the potential operational noise effects on new residents, compared to the Specific Plan. This alternative would implement all mitigation measures identified in this EIR; the impact would continue to be less than significant, as with the Specific Plan.

Cultural Resources

Site-specific development under the Reduced Density / Height Alternative would have the same potential to encounter prehistoric or historic-period archaeological resources or any paleontological resources during grading or excavation. As such, this alternative would have the same potentially significant cultural resources impact and would implement the mitigation measure (Mitigation Measures CR-1) identified in the Initial Study for the Specific Plan (and in Table II-1 in this EIR).

Other Topics

All other topics addressed in the EIR will have a less than significant impact, as analyzed throughout Chapter IV and the Initial Study. Given the reduced maximum building height that would occur on Opportunity Site 3 and Opportunity Site 5 (60 feet reduced from 70) compared to the Specific Plan, the Reduced Density / Height Alternative would result in less shadow or scenic vista and scenic resources effects, even though these topics are less than significant with the Specific Plan. In summary, all other effects associated with this alternative would remain the same as identified for the Specific Plan.

3. Primary Study Area Buildout Alternative

Purpose

The Primary Study Area Buildout Alternative is provided in this EIR to compare the impacts of approving the Specific Plan to those associated a more intensive development within the Primary Study Area – the Opportunity Sites poised for redevelopment in the next few years. The Primary Study Area Buildout Alternative is provided in this EIR and analyzed at a substantially greater level of detail to provide the City maximum flexibility to streamline future site specific proposals that may emerge on the Opportunity Sites, if such proposals are consistent with the Specific Plan.

Description and Comparison

As summarized in Table V-1, the Primary Study Area Buildout Alternative varies from the Specific Plan on each of the six Opportunity Sites. Overall, a total of 46 residential units that the Specific Plan proposes on Opportunity Sites 2 and 6 would be replaced with a total of 55,500

square feet of new office uses. Above the ground-floor retail on Opportunity Site 5, this alternative would introduce hotel uses (60 rooms) instead of 80,000 square feet of office uses. In addition, 62,000 of combined retail and office uses would be developed on Opportunity Site 3 with the new parking garage. Opportunity Sites 1 and 4 would experience more intense retail and office development. Overall, the Primary Study Area Buildout Alternative would create approximately 59,480 more square feet of total development (352,900 compared to 293,420) across the Opportunity Sites than would occur with implementation of the Specific Plan. All changes to maximum building heights and FAR, as well as all objectives, policies, development standards and design guidelines, would be adopted with this alternative and would comply with each.

The Primary Study Area Buildout Alternative proposes a development program for Opportunity Site 5 (MacDonald's restaurant) that includes 16,000 square feet of retail development/hotel lobby on the ground floor and a total of 60 hotel rooms (19 rooms per floor on the second, third, fourth and fifth floors and 3 additional penthouse hotel rooms on a 6th floor). Figure III-6 – Illustrative Concept of Specific Plan Buildings in this DEIR depicts a 5-story building on Opportunity Site 5, which could be constructed within the proposed new 70' height limit. A 5-story building would likely accommodate only 57 hotel rooms on the upper floors.

A 6-story building is the maximum allowed under the limitations of Measure A, and would likely exceed the proposed 70' height limit. For purposes of analysis of the Primary Study Area Buildout Alternative, the taller 6-story building program was used, which was programmed as described above with retail on the ground floor, 60 hotel rooms and a 72'+ height limit. Figure 23 in the Draft Specific Plan includes an illustrative section drawing of a 6-story hotel/retail building on Opportunity Site 5.

Impact Discussion

Transportation and Parking

Trip Generation / Intersection Level of Service. Providing approximately 59,480 more square feet of commercial development than the Specific Plan would add 119 AM peak hour trips and 175 PM peak hour trips for the Specific Plan Area in comparison to the Specific Plan ⁵ (see **Table D** in Appendix C to this EIR). With the addition of the traffic generated by the Primary Study Area Buildout Alternative to the City streets, all study intersections would operate within the LOS standard adopted for the Core Area of Downtown Walnut Creek during the AM and the PM peak hours, except for the intersection of Olympic Boulevard / I-680 Northbound Ramps, which is projected to operate at an unacceptable LOS F under the Existing Plus Approved Project conditions. The Primary Study Area Buildout Alternative traffic would increase the v/c ratio by 0.02 (compared to no change with the Specific Plan), which is below the increase of 0.05 required to result in a significant traffic impact (see Table F in Appendix C). Therefore it can be concluded that the Primary Study Area Buildout Alternative would have a less than significant traffic impact like the Specific Plan.

⁵ Opportunity Sites 1 through 6 only (Primary Study Area); excludes the Secondary Study Area (Remaining Parcels) which remains the same for all alternatives and the Specific Plan, as shown in Table V-1.

(Intersection turning movements during the AM and the PM peak hours for the study intersections are shown in Figures 1 and 2 in Appendix C. Summary of study intersections LOS during the AM and the PM peak hours are also provided as Table F in Appendix C.)

Roadway LOS. The Primary Study Area Buildout Alternative would generate a greater traffic load than would the Specific Plan (and any other alternative, including the No Project Alternative). This alternative would add 25 AM peak hour trips and 39 PM peak hour trips to Ygnacio Valley Road which is identified as Route of Regional Significance by the City, but would not cause a significant reduction of the operating speed or change in delay index; nor would the Specific Plan. This alternative adds 5 trips in eastbound (“EB”) direction and 20 trips in westbound (“WB”) directions during AM peak hour and 26 trips in EB direction and 13 trips in WB direction during the PM peak hour to Ygnacio Valley Road.⁶

The addition of traffic from the Primary Study Area Buildout Alternative to Ygnacio Valley Road would result in a negligible change in average operating speed and delay index during the AM and the PM peak hours, compared to the Specific Plan (Table IV.D-11 in Section IV.D of this EIR). The average speed / delay index in the EB direction in the AM peak hour and in both directions in the PM peak hour do not meet the standard of 15 mph / 2.0/ for the Existing Plus Approved Projects Conditions (see Table H in Appendix C). However, as with the Specific Plan, the addition of the Primary Study Area Buildout Alternative would not result in a measurable difference to the average operating speed and delay index.

Transit. Like the Specific Plan, the Primary Study Area Buildout Alternative would generate demand for transit trips but would not exceed the existing transit capacity serving the City. Also like the analysis of the Specific Plan, trip generation estimates (Table D in Appendix C to this EIR) did not account for any reduction in the total trips due to transit because the analysis reflects a worst-case scenario that assumes all trips are made by automobile. If a conservative 10% of the unadjusted trips attributable to the Primary Study Area Buildout Alternative are assumed to be transit trips, then there will be a total of 33 transit trips during the AM peak hour and 52 transit trips during the PM peak hour, compared to 21 transit trips during the AM peak hour and 35 transit trips during the PM peak hour for the Specific Plan. The identified transit trips are likely to be split between BART and the bus transit. As with the Specific Plan, these estimated transit trips would not exceed existing transit capacity based on observation. Therefore the Primary Study Area Buildout Alternative would not have a significant impact on existing transit services. Further, increased transit ridership is considered beneficial as it reduces the total number of vehicle trips. The Primary Study Area Buildout Alternative would result in the same less than significant transit impact as the Specific Plan.

Pedestrian and Bike. The Primary Study Area Buildout Alternative would generate pedestrians and bicycle trips that would use the existing and proposed pedestrian and bicycle facilities. As with the Specific Plan, this demand would not significantly impact existing facilities. The

⁷ The change in average operating speed and delay index was modeled by adding the Primary Study Area Buildout Alternative traffic to Existing Plus Approved Projects Conditions (Note: Details regarding the source of average operating speed and delay index has been discussed under Existing Plus Approved Project Plus Project Conditions in Section IV.D).

Primary Study Area Buildout Alternative would result in the same less than significant pedestrian and bicycle impacts as the Specific Plan.

Parking. The Primary Study Area Buildout Alternative land uses would generate a peak weekday parking demand for 724 spaces without shared parking and 690 spaces with shared parking (see Table I in Appendix C). This alternative requires 773 parking spaces under the City's Municipal Code (see Table J in Appendix C). Overall, while no significant parking impact was identified for the Specific Plan, the Primary Study Area Buildout Alternative would provide approximately 122 more (921 compared to 799)⁷ onsite parking spaces compared to the Specific Plan, as shown in Table V-1. As with the Specific Plan, some of the Opportunity Sites would not have the necessary number of parking spaces to accommodate the parking requirement. These sites would use the parking garage that would be developed on Opportunity Site 3.

Regarding parking demand, the Primary Study Area Buildout Alternative's parking supply of 921 spaces would be 197 spaces more than the estimated peak demand of 724 spaces. With the shared parking, the total peak parking demand would be 690 spaces and the proposed parking supply of 921 spaces would be 231 spaces more than the demand.

In summary, the Primary Study Area Buildout Alternative would provide sufficient parking supply to meet both the parking requirements under the City's Municipal Code as well as the estimated peak demand. It would result in the same less than significant parking impact as the Specific Plan.

Air Quality

The Primary Study Area Buildout Alternative would involve construction activity throughout the Specific Plan Area. Therefore, it would result in similar less than significant (after mitigation) impacts associated with construction period emissions and air quality impacts identified for implementation of the Specific Plan. The alternative would not introduce residential uses and would avoid the potential operational air quality effects on new residents, compared to the Specific Plan. This alternative would implement all mitigation measures identified in this EIR. The impact would continue to be less than significant, as with the Specific Plan.

Noise

The Primary Study Area Buildout Alternative would involve construction activity throughout the Specific Plan Area. Therefore, it would result in similar less than significant (after mitigation) impacts associated with construction period vibration impacts identified for implementation of the Specific Plan. The alternative would not introduce residential uses and would avoid the potential operational noise effects on new residents, compared to the Specific Plan. This alternative would implement all mitigation measures identified in this EIR. The impact would continue to be less than significant, as with the Specific Plan.

⁷ 867 compared to 745 onsite parking spaces when calculated for Opportunity Sites 1 through 6 only (the Primary Study Area), as reported in Tables I and J in Appendix C and the parking analysis in Chapter IV.

Cultural Resources

Site-specific development under the Primary Study Area Buildout Alternative would have the same potential to encounter prehistoric or historic-period archaeological resources or any paleontological resources during grading or excavation. As such, this alternative would have the same potentially significant cultural resources impact and would implement the mitigation measure (Mitigation Measures CR-1) identified in the Initial Study for the Specific Plan (and in Table II-1 in this EIR).

Other Topics

All other topics addressed in the EIR will have a less than significant impact, as analyzed throughout Chapter IV and the Initial Study. The Primary Study Area Buildout Alternative would conform to the same objectives, policies, development standards and design guidelines that would be adopted with the Specific Plan, and development on each Opportunity Site would adhere to those regulations and guidance. While specific buildings may be taller or larger than those that would be implemented under the Specific Plan, the maximum development possible remains limited by the maximum height and FAR as in the Specific Plan. Therefore, while effects to shadow or scenic vista and scenic resources may be slightly greater due to taller or larger buildings under this alternative, the effects would remain less than significant, as with the Specific Plan. In summary, all other effects associated with this alternative would remain the same as identified for the Specific Plan.

4. Summary

The following Table V-2 provides a summary comparison of the environmental impacts for each alternative and the Specific Plan.

TABLE V-2
SUMMARY OF ENVIRONMENTAL IMPACTS FOR THE ALTERNATIVES AND THE SPECIFIC PLAN

	Specific Plan	No Project Alternative	Reduce Density / Height Alternative	Primary Study Area Buildout Alternative
Roadway Operations (Ygnacio Valley Road)	LS	LS↑	LS↓	LS↑
Air Quality: Construction pollution	LSM	LSM↓	LSM	LSM
Noise/Vibration: Construction Vibration	LSM	LSM↓	LSM	LSM
Noise: Operational Noise on Residents	LSM	N	LSM↑	N
Archaeological Resources	LSM	LSM	LSM	LSM

NOTE: Significance levels shown in the table reflect levels of significance after mitigation and indicate maximum impact during buildout and operation. All topics not identified were determined to have less than significant impacts (see Table II-1 in Chapter II, Summary).

Legend:

LS Less than significant impact
 LSM Less than significant impact, after mitigation
 SU Significant or Significant and Unavoidable adverse impact, after mitigation
 ↑↓ Impact is more severe or less severe than project impact, after mitigation
 N No Impact

D. Environmentally Superior Alternative

CEQA Guidelines section 15126.6(e)(2) requires that the EIR identify an environmentally superior alternative that, when compared to the proposed project and all other alternatives considered, would avoid (or reduce to the greatest extent) more of the adverse environmental effects identified for the project, particularly any significant impacts.

The Reduced Density / Height Alternative is considered environmentally superior based on the analysis presented in this chapter. As previously discussed, the Reduced Density / Height Alternative would result in fewer peak-hour vehicle trips (106 and 99 fewer AM and PM peak-hour vehicle trips, respectively) than with implementation of the Specific Plan. The Reduced Density / Height Alternative would reduce the increase in traffic load to a greater extent than each of the other alternatives and the Specific Plan.

Less than Significant Impacts

While the Reduced Density / Height Alternative would result in similar less than significant (after mitigation) impacts associated with construction period air quality impacts, it would expose 50 additional new project residents to the potential operational air quality effects on new residents, compared to the Specific Plan. This alternative would implement all mitigation measures identified in this EIR. The impact would continue to be less than significant.

While the Reduced Density / Height Alternative would result in similar less than significant (after mitigation) impacts associated with construction period vibration impacts, it would expose 50 additional new project residents to the potential operational noise effects on new residents, compared to the Specific Plan. This alternative would implement all mitigation measures identified in this EIR. The impact would continue to be less than significant.

Although not significant impacts, the Reduced Density / Height Alternative would also limit maximum building heights that would be implemented under the Specific Plan on Opportunity Sites 3 and 5, as well as the potential FAR increase on Opportunity Site 5. As a result, this alternative would likely have slightly less effect to shadow or scenic vista and scenic resources compared to the Specific Plan. All other effects in the EIR are less than significant and the Reduced Density / Height Alternative would have the same affect; the variations between it and the Specific Plan would not result in a substantially different environmental effect than already identified in this EIR.

CHAPTER VI

CEQA-Required Assessments

A. Growth Inducing Impacts

CEQA Guidelines section 15126.2(d) specifies that the EIR shall discuss the growth inducing impacts of a project. The growth inducement discussion examines whether the employment or population growth expected as a result of the Locust Street / Mt. Diablo Boulevard Specific Plan represents growth beyond the Specific Plan Area at levels greater than otherwise expected for Walnut Creek.

The Specific Plan would not induce substantial growth not previously considered or evaluated by the Walnut Creek General Plan 2025 or regional growth models. Implementation of the Specific Plan would support and enhance the City's role as a regional retail destination. In particular, the Specific Plan includes policies, standards and guidelines to guide enhance, and expand the existing pedestrian-oriented retail district, while preserving the diverse and eclectic character of the Traditional Downtown. Therefore, the Specific Plan could enhance conditions that attract new businesses and development to Walnut Creek.

General Plan 2025 has adequately planned and evaluated the potential for additional commercial, residential and other development in the City through Year 2025, and included consideration of development in the Specific Plan Area. In 1993, the City Council amended the 1989 General Plan to include a "Growth Limitation Program," which limited new commercial growth to 150,000 square feet every two years for ten years. This program was extended and ultimately amended and adopted into the current General Plan. Action 9.1.1 accompanying Policy 9.1 of the General Plan limits the rate of commercial growth outside of the Shadelands Business Park to 1.25 million square feet between 2005 and 2015, to be metered at a rate of 250,000 square feet every two years. This growth limitation program limits commercial growth in the City to a rate that the City has adequately planned for in a comprehensive and cumulative manner.

As discussed in Chapter IV (C. Population and Housing), the increased retail and office uses envisioned by the Specific Plan would generate approximately 425 net new jobs and 325 net new employees.¹ It is expected that most of these employees would be existing residents or employees in Walnut Creek, central County of Contra Costa, and the East Bay, and would not relocate to Walnut Creek or the region as a result of new employment opportunities in Specific Plan Area. However, this new employment could potentially increase local housing demand. The

¹ Assumes employment generation rates of one employee per 450 square feet for retail uses and 300 square feet for office. (ABAG, 1995)

Specific Plan could result in at least 46 new dwelling units in the Plan Area, and new development would be required to pay housing impact fees to the City, which, together, would offset potential indirect impacts of the Specific Plan on housing needs and jobs-housing balance.

Lastly, the Specific Plan does not propose new infrastructure that would induce substantial growth in areas not previously considered for growth. Future development under the Specific Plan would connect to existing utilities and occur within a largely built-out, urban area adequately served by existing transportation systems and infrastructure. No utility or transportation system improvements are required to accommodate future growth or additional traffic resulting from implementation of the Specific Plan.

B. Significant Irreversible Changes

CEQA Guidelines section 15126.2(c) specifies that the EIR shall discuss the significant irreversible environmental changes that would be caused by the Specific Plan if it is implemented. The Specific Plan proposes goals, objectives, policies, development standards, and development guidelines, and proposes various amendments to the General Plan and Zoning Ordinance (and other plans applicable to all or part of the Specific Plan Area), that are intended to guide development in the Traditional Downtown area of the City over the next five to ten years.

Use of Nonrenewable Resources

Adoption of the Specific Plan would not result in consumption of increased energy or other natural resources as it is a policy and development guidance document. Implementation of the Specific Plan would consume natural resources (gasoline, sand and gravel, asphalt, oil, etc.) during the construction of specific development projects. During the use and operation of new buildings, energy would be consumed for lighting, heating/cooling, and transportation. Neither the construction or operation and use of future development would consume nonrenewable resources in amount substantially different or greater than typical urban development. As discussed in the Initial Study, the Specific Plan would not affect agricultural resources, biological resources or mineral resources or access to such resources.

Changes that Commit Future Generations to Similar Uses

It is not anticipated that, if adopted, the City will supersede the Specific Plan with subsequent plans or regulations inconsistent with the Plan. Also, as discussed in Chapter IV (I. Hazardous Materials), it is reasonable to assume that future development projects implemented under the Specific Plan will be relatively permanent. No specific development projects are proposed at this time.

Irreversible Damage from Environmental Accidents

Adoption of the Specific Plan would not have the potential for environmental accident as it is a policy and development guidance document. Future development projects implemented under the Specific Plan would not involve the use or transportation of hazardous materials in substantial

quantities or have the potential for environmental accidents not typical of the land uses allowed in the Specific Plan Area.

C. Significant Unavoidable Impacts

CEQA Guidelines section 15126.2(b) specifies that the EIR shall discuss the significant unavoidable effects associated with a project. A significant, unavoidable impact results if the effects of the Specific Plan reach or exceed the defined threshold of significance and no feasible mitigation measure is available to reduce the significant impact to a less-than-significant level. As discussed in Chapter IV of this EIR, the Specific Plan will not result in the any significant, unavoidable environmental effect.

D. Cumulative Impacts

CEQA Guidelines section 15130 specifies that an EIR shall discuss the cumulative impacts of a project. A cumulative analysis is provided in each topical section in Chapter IV of this EIR and summarized here. CEQA defines cumulative impacts as two or more individual impacts which, when considered together, are substantial or which compound or increase other environmental impacts. The cumulative analysis is intended to describe the “incremental impact of the project when added to other, closely related past, present, or reasonably foreseeable future projects” that can result from “individually minor but collectively significant projects taking place over a period of time, CEQA Guidelines section 15355. The analysis of cumulative impacts is a two-phase process that first involves the determination of whether the project, together with reasonably foreseeable projects, would result in a significant impact. If there would be a significant cumulative impact of all such projects, the EIR must determine whether the project’s incremental effect is cumulatively considerable, in which case, the project itself is deemed to have a significant cumulative effect, CEQA Guidelines section 15130.

As discussed in Chapter IV of this EIR, no Cumulative impacts that would occur as a result of the Specific Plan and other past, present, and reasonably foreseeable projects.

E. Impacts Found Not to Be Significant

CEQA Guidelines section 15128 provides that the EIR shall briefly discuss impacts that were not found to be significant. As discussed in Chapter I (Introduction) of this EIR, the information and analysis presented in the Initial Study provides substantial evidence to conclude that CEQA standards triggering preparation of further environmental review for topics not analyzed in this EIR did not exist. The Initial Study identified that less-than-significant impacts will occur with adoption and implementation of the Specific Plan for the topics and standards below that were therefore not analyzed further in this EIR. The discussion of why these impacts were found to be less than significant are presented in each topical section in Chapter IV of this EIR, under *Topics Determined Less than Significant in the Initial Study*, and in the Initial Study that is incorporated by reference as part of this EIR.

Aesthetics

- Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway corridor
- Create a new source of substantial light or glare which would adversely affect daytime or nighttime views in the area

Agricultural Resources

Air Quality

- Conflict with or obstruct implementation of the applicable air quality plan
- Create objectionable odors affecting a substantial number of people

Biological Resources

Cultural Resources

Geology, Soils, and Seismicity

- Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving: landslides
- Result in substantial soil erosion or the loss of topsoil
- 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;
- 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

Hazards and Hazardous Materials

- 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
- 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
- Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan
- Expose people or structures to a significant risk of loss, injury or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands

Hydrology and Water Quality

- Place housing within a 100-year flood plain
- Place structures within a 100-year flood plain that would impede or redirect flood flows
- Cause or result in inundation by seiche, tsunami, or mudflow

Land Use and Land Use Planning

- Physically divide an established community
- Conflict with any applicable habitat conservation plan or natural community conservation plan

Mineral Resources**Noise**

- For a project located within an airport land use plan area, or, where such a plan has not been adopted, in an area within two miles of a public airport or public use airport, would the project expose people residing or working in the area to excessive noise levels
- For a project located in the vicinity of a private airstrip, would the project expose people residing or working in the project area to excessive noise levels

Population and Housing

- Displace substantial numbers of existing housing units, necessitating the construction of replacement housing elsewhere
- Displace substantial numbers of people, necessitating the construction of replacement housing elsewhere

Recreation**Transportation**

- 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
- Conflict with adopted policies, plans, or programs supporting alternative transportation (e.g., conflict with policies promoting bus turnouts, bicycle racks, etc.)

Utilities and Service Systems

- Be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs
- Comply with federal, state, and local statutes and regulations related to solid waste

CHAPTER VII

Report Preparation

Lead Agency

City of Walnut Creek Planning Division
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Project Director: Crescentia Brown, AICP
Project Manager: Elizabeth Kanner

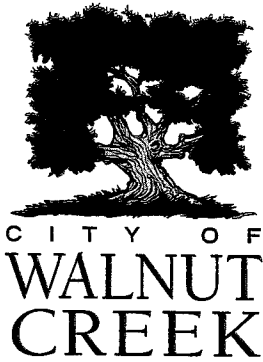
Traffic Impact Study

Kimley-Horn and Associates, Inc.
2000 Crow Canyon Place, Suite 410
San Ramon, CA 94583
(925) 543-0840

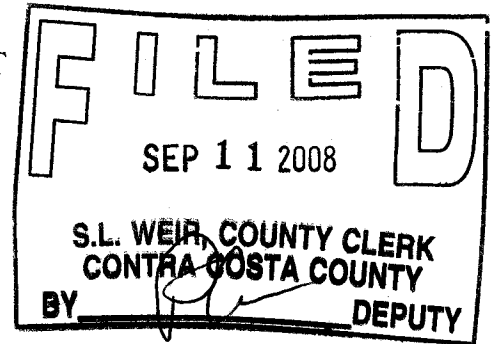
Contact: Ali Mustafa

APPENDIX A

Notice of Preparation and Written Comments on the Notice of Preparation



NOTICE OF PREPARATION
ENVIRONMENTAL IMPACT REPORT
CITY OF WALNUT CREEK



DATE: September 4, 2008

WORK ORDER NO. 708134

PROJECT TITLE: Locust Street/Mt. Diablo Boulevard Precise Plan

SUBJECT: NOTICE OF PREPARATION OF A DRAFT ENVIRONMENTAL IMPACT REPORT

The City of Walnut Creek will be the lead agency and will prepare an environmental impact report for the project identified below.

To Responsible Agencies and Citizens:

We need to know your views as to the scope and content of the environmental information that is germane to your agency's statutory responsibility in connection with the proposed project. Your agency will need to use the EIR prepared by our agency when considering your permit or other approval for the project.

The project description, locations, and the potential environmental effects are contained in the attached Initial Study.


Due to the time limits mandated by State law, your response must be sent at the earliest possible date, but not later than 30 days after receipt of this notice.

Send your response to **Victoria Walker, Principal Planner, at the Walnut Creek Community Development Department, 1666 North Main Street, P.O. Box 8039, Walnut Creek, CA 94596.**

Please send us the name of a contact person in your agency.

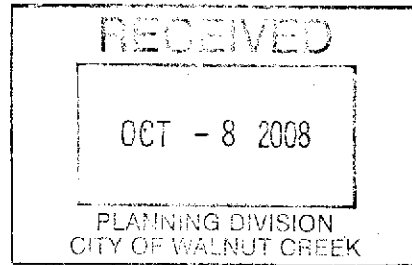
Anyone who wishes to appeal the decision to prepare an EIR or the issues to be focused upon must do so in writing on a standard appeal form not later than ten days after the date of this notice and pay a \$100 fee. Appeal forms are both available at, and filed with, the Office of the City Clerk at 1666 North Main Street, Walnut Creek 94596.

For further information, call **Victoria Walker, Principal Planner** at (925) 943-5834.


VALERIE BARONE, DIRECTOR
Community Development Department

DEPARTMENT OF TRANSPORTATION

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*Flex your power!
Be energy efficient!*

October 2, 2008

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CC-24-9.119
SCH#2008092054

Ms. Victoria Walker
City of Walnut Creek
1666 N. Main Street
Walnut Creek, CA 94596

Dear Ms. Walker:

Locus Street/Mt. Diablo Boulevard Specific Plan - Notice of Preparation

Thank you for including the California Department of Transportation (Department) in the environmental review process for the Locus Street/ Mt. Diablo Boulevard Specific Plan. The following comments are based on the Notice of Preparation. As lead agency, the City of Walnut Creek is responsible for all project mitigation, including any needed improvements to State highways. The project's fair share contribution, financing, scheduling, and implementation responsibilities as well as lead agency monitoring should be fully discussed for all proposed mitigation measures and the project's traffic mitigation fees should be specifically identified in the Environmental Impact Report.

Any required roadway improvements should be completed prior to issuance of project occupancy permits. An encroachment permit is required when the project involves work in the State's right of way (ROW). The Department will not issue an encroachment permit until our concerns are adequately addressed. Therefore, we strongly recommend that the lead agency ensure resolution of the Department's CEQA concerns prior to submittal of the encroachment permit application; see the end of this letter for more information regarding the encroachment permit process.

Community Planning

The Department encourages you to locate any needed housing, jobs and neighborhood services near major mass transit nodes, and connected to these nodes with streets

configured to encourage walking and biking, as a means of reducing regional vehicle miles traveled and traffic impacts on the state highways.

You may also wish to consider developing and applying pedestrian, bicycling and transit performance measures or level of service mitigation measures and modeling pedestrian, bicycle and transit trips that your project will generate so that impacts can be quantified. Mitigation measures resulting from this analysis could improve pedestrian and bicycle access to transit, thereby reducing traffic impacts on state highways.

In addition, please analyze secondary impacts on pedestrians and bicyclists that may result from any mitigation measures for traffic impacts and describe any pedestrian and bicycle mitigation measures that would in turn be needed as a means of maintaining and improving access to transit and reducing traffic impacts on state highways.

Traffic Impact Analysis

The Department is primarily concerned with impacts to the State Highway System. Specifically, a detailed Traffic Impact Analysis (TIA) should identify impacts to the State Highway System. The TIA should include, but is not limited to the following:

1. Information on the project's traffic impacts in terms of trip generation, distribution, and assignment. The assumptions and methodologies used in compiling this information should be addressed.
2. Average Daily Traffic (ADT) and AM and PM peak hour volumes on all significantly affected streets and highways, including crossroads and controlling intersections.
3. Schematic illustration of the traffic conditions for: 1) existing, 2) existing plus project, and 3) cumulative for the intersections in the project area.
4. Calculation of cumulative traffic volumes should consider all traffic-generating developments, both existing and future, that would affect the State Highway facilities being evaluated.
5. Mitigation measures should consider highway and non-highway improvements and services. Special attention should be given to the development of alternate solutions to circulation problems that do not rely on increased highway construction.
6. All mitigation measures proposed should be fully discussed, including financing, scheduling, implementation responsibilities, and lead agency monitoring.

We encourage the City of Walnut Creek to coordinate preparation of the study with our office, and we would appreciate the opportunity to review the scope of work. Please see the Caltrans' "Guide for the Preparation of Traffic Impact Studies" at the following website for more information:

Ms. Victoria Walker/ City of Walnut Creek

October 2, 2008

Page 3

<http://www.dot.ca.gov/hq/traffops/developserv/operationalsystems/reports/tisguide.pdf>

We look forward to reviewing the TIA, including Technical Appendices, and environmental document for this project. Please send two copies to the address at the top of this letterhead, marked ATTN: Lisa Courington, Mail Stop #10D.

Encroachment Permit

Any work or traffic control within the State ROW requires an encroachment permit that is issued by the Department. Traffic-related mitigation measures will be incorporated into the construction plans during the encroachment permit process. See the following website link for more information: <http://www.dot.ca.gov/hq/traffops/developserv/permits/>

To apply for an encroachment permit, submit a completed encroachment permit application, environmental documentation, and five (5) sets of plans which clearly indicate State ROW to the address at the top of this letterhead, marked ATTN: Michael Condie, Mail Stop #5E.

Should you have any questions regarding this letter, please contact Lisa Courington of my staff at (510) 286-5505 or via email at lisa.ann.courington@dot.ca.gov.

Sincerely,



LISA CARBONI
District Branch Chief
Local Development - Intergovernmental Review

c: State Clearinghouse

APPENDIX B

URBEMIS Air Quality and GHG Inputs

Summary Report for Annual Emissions (Tons/Year)

File Name: C:\Documents and Settings\dsa\Application Data\Urbemis\Version9a\Projects\walnut creek project 10 2 08.urb924

Project Name: walnut creek project 10 2 08

Project Location: Bay Area Air District

On-Road Vehicle Emissions Based on: Version : Emfac2007 V2.3 Nov 1 2006

Off-Road Vehicle Emissions Based on: OFFROAD2007

AREA SOURCE EMISSION ESTIMATES

	<u>ROG</u>	<u>NOx</u>	<u>CO</u>	<u>SO2</u>	<u>PM10</u>	<u>PM2.5</u>	<u>CO2</u>
TOTALS (tons/year, unmitigated)	1.13	0.50	1.91	0.00	0.15	0.15	595.13

OPERATIONAL (VEHICLE) EMISSION ESTIMATES

	<u>ROG</u>	<u>NOx</u>	<u>CO</u>	<u>SO2</u>	<u>PM10</u>	<u>PM2.5</u>	<u>CO2</u>
TOTALS (tons/year, unmitigated)	9.98	12.40	111.74	0.08	15.78	3.02	8,519.66

SUM OF AREA SOURCE AND OPERATIONAL EMISSION ESTIMATES

	<u>ROG</u>	<u>NOx</u>	<u>CO</u>	<u>SO2</u>	<u>PM10</u>	<u>PM2.5</u>	<u>CO2</u>
TOTALS (tons/year, unmitigated)	11.11	12.90	113.65	0.08	15.93	3.17	9,114.79

Detail Report for Summer Operational Unmitigated Emissions (Pounds/Day)

File Name: C:\Documents and Settings\dsa\Application Data\Urbemis\Version9a\Projects\walnut creek project 10 2 08.urb924

Project Name: walnut creek project 10 2 08

Project Location: Bay Area Air District

On-Road Vehicle Emissions Based on: Version : Emfac2007 V2.3 Nov 1 2006

Off-Road Vehicle Emissions Based on: OFFROAD2007

OPERATIONAL EMISSION ESTIMATES (Summer Pounds Per Day, Unmitigated)

Source	ROG	NOX	CO	SO2	PM10	PM25	CO2
Apartments mid rise	2.29	2.26	23.82	0.02	3.41	0.65	1,941.42
Strip mall	14.97	15.17	151.01	0.12	21.09	4.04	12,007.88
Office park	8.24	8.93	93.57	0.08	13.43	2.57	7,631.60
retail (traffic trip rate)	25.76	32.09	320.49	0.27	48.54	9.27	27,281.43
TOTALS (lbs/day, unmitigated)	51.26	58.45	588.89	0.49	86.47	16.53	48,862.33

Includes correction for passby trips

Does not include double counting adjustment for internal trips

Analysis Year: 2010 Temperature (F): 85 Season: Summer

Emfac: Version : Emfac2007 V2.3 Nov 1 2006

Summary of Land Uses

Land Use Type	Acreage	Trip Rate	Unit Type	No. Units	Total Trips	Total VMT
Apartments mid rise	1.21	5.76	dwelling units	46.00	264.96	1,983.30
Strip mall		42.94	1000 sq ft	70.00	3,005.80	12,255.37

Summary of Land Uses

Land Use Type	Acres	Trip Rate	Unit Type	No. Units	Total Trips	Total VMT
Office park	11.42	1000 sq ft	97.30	1,111.17	7,804.96	
retail (traffic trip rate)	30.33	1000 sq ft	136.12	4,128.52	28,232.98	
				8,510.45	50,276.61	

Vehicle Fleet Mix

Vehicle Type	Percent Type	Non-Catalyst	Catalyst	Diesel
Light Auto	53.7	1.3	98.3	0.4
Light Truck < 3750 lbs	12.9	2.3	94.6	3.1
Light Truck 3751-5750 lbs	19.8	0.5	99.5	0.0
Med Truck 5751-8500 lbs	6.6	0.0	100.0	0.0
Lite-Heavy Truck 8501-10,000 lbs	0.9	0.0	77.8	22.2
Lite-Heavy Truck 10,001-14,000 lbs	0.6	0.0	50.0	50.0
Med-Heavy Truck 14,001-33,000 lbs	1.0	0.0	20.0	80.0
Heavy-Heavy Truck 33,001-60,000 lbs	0.4	0.0	0.0	100.0
Other Bus	0.1	0.0	0.0	100.0
Urban Bus	0.1	0.0	0.0	100.0
Motorcycle	3.2	68.8	31.2	0.0
School Bus	0.1	0.0	0.0	100.0
Motor Home	0.6	0.0	83.3	16.7

Travel Conditions

Residential	Commercial
Home-Work	Home-Work
Home-Shop	Non-Work
Home-Other	Customer
Home-Work	Commuter
10.8	9.5
7.3	7.4
7.5	7.4
Urban Trip Length (miles)	7.4

Summary Report for Annual Emissions (Tons/Year)

File Name: C:\Documents and Settings\dsa\Application Data\Urbemis\Version9a\Projects\walnut creek project 10 2 08.urb924

Project Name: walnut creek project 10 2 08

Project Location: Bay Area Air District

On-Road Vehicle Emissions Based on: Version : Emfac2007 V2.3 Nov 1 2006

Off-Road Vehicle Emissions Based on: OFFROAD2007

AREA SOURCE EMISSION ESTIMATES

	<u>ROG</u>	<u>NOx</u>	<u>CO</u>	<u>SO2</u>	<u>PM10</u>	<u>PM2.5</u>	<u>CO2</u>
TOTALS (tons/year, unmitigated)	1.13	0.50	1.91	0.00	0.15	0.15	595.13

OPERATIONAL (VEHICLE) EMISSION ESTIMATES

	<u>ROG</u>	<u>NOx</u>	<u>CO</u>	<u>SO2</u>	<u>PM10</u>	<u>PM2.5</u>	<u>CO2</u>
TOTALS (tons/year, unmitigated)	9.98	12.40	111.74	0.08	15.78	3.02	8,519.66

SUM OF AREA SOURCE AND OPERATIONAL EMISSION ESTIMATES

	<u>ROG</u>	<u>NOx</u>	<u>CO</u>	<u>SO2</u>	<u>PM10</u>	<u>PM2.5</u>	<u>CO2</u>
TOTALS (tons/year, unmitigated)	11.11	12.90	113.65	0.08	15.93	3.17	9,114.79

Detail Report for Summer Operational Unmitigated Emissions (Pounds/Day)

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Project Location: Bay Area Air District

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Off-Road Vehicle Emissions Based on: OFFROAD2007

OPERATIONAL EMISSION ESTIMATES (Summer Pounds Per Day, Unmitigated)

Source	ROG	NOX	CO	SO2	PM10	PM25	CO2
Apartments mid rise	2.29	2.26	23.82	0.02	3.41	0.65	1,941.42
Strip mall	14.97	15.17	151.01	0.12	21.09	4.04	12,007.88
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retail (traffic trip rate)	25.76	32.09	320.49	0.27	48.54	9.27	27,281.43
TOTALS (lbs/day, unmitigated)	51.26	58.45	588.89	0.49	86.47	16.53	48,862.33

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Does not include double counting adjustment for internal trips

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Emfac: Version : Emfac2007 V2.3 Nov 1 2006

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retail (traffic trip rate)	30.33	1000 sq ft	136.12	4,128.52	28,232.98	
				8,510.45	50,276.61	

Vehicle Fleet Mix

Vehicle Type	Percent Type	Non-Catalyst	Catalyst	Diesel
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Light Truck < 3750 lbs	12.9	2.3	94.6	3.1
Light Truck 3751-5750 lbs	19.8	0.5	99.5	0.0
Med Truck 5751-8500 lbs	6.6	0.0	100.0	0.0
Lite-Heavy Truck 8501-10,000 lbs	0.9	0.0	77.8	22.2
Lite-Heavy Truck 10,001-14,000 lbs	0.6	0.0	50.0	50.0
Med-Heavy Truck 14,001-33,000 lbs	1.0	0.0	20.0	80.0
Heavy-Heavy Truck 33,001-60,000 lbs	0.4	0.0	0.0	100.0
Other Bus	0.1	0.0	0.0	100.0
Urban Bus	0.1	0.0	0.0	100.0
Motorcycle	3.2	68.8	31.2	0.0
School Bus	0.1	0.0	0.0	100.0
Motor Home	0.6	0.0	83.3	16.7

Travel Conditions

Residential	Commercial
Home-Work	Home-Work
Home-Shop	Non-Work
Home-Other	Customer
Home-Work	Commuter
10.8	9.5
7.3	7.4
7.5	7.4
Urban Trip Length (miles)	7.4

	<u>Travel Conditions</u>					
	Residential			Commercial		
	Home-Work	Home-Shop	Home-Other	Commute	Non-Work	Customer
Rural Trip Length (miles)	16.8	7.1	7.9	14.7	6.6	6.6
Trip speeds (mph)	35.0	35.0	35.0	35.0	35.0	35.0
% of Trips - Residential	32.9	18.0	49.1			
% of Trips - Commercial (by land use)						
Strip mall				2.0	1.0	97.0
Office park				48.0	24.0	28.0
retail (traffic trip rate)				2.0	1.0	97.0

Operational Changes to Defaults

Summary Report for Annual Emissions (Tons/Year)

File Name: C:\Documents and Settings\dsa\Application Data\Urbemis\Version9a\Projects\walnut creek project 10 2 08.urb924

Project Name: walnut creek project 10 2 08

Project Location: Bay Area Air District

On-Road Vehicle Emissions Based on: Version : Emfac2007 V2.3 Nov 1 2006

Off-Road Vehicle Emissions Based on: OFFROAD2007

AREA SOURCE EMISSION ESTIMATES

	<u>ROG</u>	<u>NOx</u>	<u>CO</u>	<u>SO2</u>	<u>PM10</u>	<u>PM2.5</u>	<u>CO2</u>
TOTALS (tons/year, unmitigated)	1.13	0.50	1.91	0.00	0.15	0.15	595.13

OPERATIONAL (VEHICLE) EMISSION ESTIMATES

	<u>ROG</u>	<u>NOx</u>	<u>CO</u>	<u>SO2</u>	<u>PM10</u>	<u>PM2.5</u>	<u>CO2</u>
TOTALS (tons/year, unmitigated)	9.98	12.40	111.74	0.08	15.78	3.02	8,519.66

SUM OF AREA SOURCE AND OPERATIONAL EMISSION ESTIMATES

	<u>ROG</u>	<u>NOx</u>	<u>CO</u>	<u>SO2</u>	<u>PM10</u>	<u>PM2.5</u>	<u>CO2</u>
TOTALS (tons/year, unmitigated)	11.11	12.90	113.65	0.08	15.93	3.17	9,114.79

Urbemis 2007 Version 9.2.4

Detail Report for Annual Construction Unmitigated Emissions (Tons/Year)

File Name: C:\Documents and Settings\dsa\Application Data\Urbemis\Version9a\Projects\walnut creek project construction 10 15 08.urb924

Project Name: walnut creek project construction

Project Location: Bay Area Air District

On-Road Vehicle Emissions Based on: Version : Emfac2007 V2.3 Nov 1 2006

Off-Road Vehicle Emissions Based on: OFFROAD2007

CONSTRUCTION EMISSION ESTIMATES (Annual Tons Per Year, Unmitigated)

<u>ROG</u>	<u>NOx</u>	<u>CO</u>	<u>SO2</u>	<u>PM10 Dust</u>	<u>PM10 Exhaust</u>	<u>PM10 Total</u>	<u>PM2.5 Dust</u>	<u>PM2.5 Exhaust</u>	<u>PM2.5 Total</u>	<u>CO2</u>
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2011		3.36	9.66	9.04	0.00	19.68	0.55	20.22	4.11	0.50	4.61	1,315.30
Building 01/01/2010-12/31/2011		0.57	2.60	4.89	0.00	0.02	0.17	0.19	0.01	0.16	0.16	597.93
Building Off Road Diesel		0.44	2.04	1.41	0.00	0.00	0.15	0.15	0.00	0.14	0.14	210.76
Building Vendor Trips		0.03	0.39	0.32	0.00	0.00	0.01	0.02	0.00	0.01	0.01	85.83
Building Worker Trips		0.10	0.18	3.16	0.00	0.01	0.01	0.02	0.01	0.01	0.01	301.34
Coating 01/01/2010-12/31/2011		1.90	0.00	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.27
Architectural Coating		1.90	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Coating Worker Trips		0.00	0.00	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.27
Demolition 01/01/2010-12/31/2011		0.14	0.95	0.73	0.00	0.00	0.07	0.07	0.00	0.07	0.07	104.30
Fugitive Dust		0.00	0.00	0.00	0.00	3,505.76	0.00	3,505.76	729.20	0.00	729.20	0.00
Demo Off Road Diesel		0.14	0.94	0.60	0.00	0.00	0.07	0.07	0.00	0.07	0.07	91.04
Demo On Road Diesel		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Demo Worker Trips		0.00	0.01	0.14	0.00	0.00	0.00	0.00	0.00	0.00	0.00	13.26
Fine Grading 01/01/2010-12/31/2011		0.37	3.05	1.69	0.00	9.83	0.15	9.98	2.05	0.14	2.19	305.41
Fine Grading Dust		0.00	0.00	0.00	0.00	9.83	0.00	9.83	2.05	0.00	2.05	0.00
Fine Grading Off Road Diesel		0.37	3.05	1.55	0.00	0.00	0.15	0.15	0.00	0.14	0.14	292.15
Fine Grading On Road Diesel		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Fine Grading Worker Trips		0.00	0.01	0.14	0.00	0.00	0.00	0.00	0.00	0.00	0.00	13.26
Mass Grading 01/01/2010-12/31/2011		0.37	3.05	1.69	0.00	9.83	0.15	9.98	2.05	0.14	2.19	305.41
Mass Grading Dust		0.00	0.00	0.00	0.00	9.83	0.00	9.83	2.05	0.00	2.05	0.00
Mass Grading Off Road Diesel		0.37	3.05	1.55	0.00	0.00	0.15	0.15	0.00	0.14	0.14	292.15
Mass Grading On Road Diesel		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Mass Grading Worker Trips		0.00	0.01	0.14	0.00	0.00	0.00	0.00	0.00	0.00	0.00	13.26

Phase Assumptions

Phase: Demolition 1/1/2010 - 12/31/2011 - Type Your Description Here

Building Volume Total (cubic feet): 3.345241E+10

Building Volume Daily (cubic feet): 0

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On Road Truck Travel (VMT): 0

Off-Road Equipment:

- 1 Concrete/Industrial Saws (10 hp) operating at a 0.73 load factor for 8 hours per day
- 1 Rubber Tired Dozers (357 hp) operating at a 0.59 load factor for 1 hours per day
- 2 Tractors/Loaders/Backhoes (108 hp) operating at a 0.55 load factor for 6 hours per day

Phase: Fine Grading 1/1/2010 - 12/31/2011 - Default Fine Site Grading Description

Total Acres Disturbed: 15.14

Maximum Daily Acreage Disturbed: 3.78

Fugitive Dust Level of Detail: Default

20 lbs per acre-day

On Road Truck Travel (VMT): 0

Off-Road Equipment:

- 1 Graders (174 hp) operating at a 0.61 load factor for 6 hours per day
- 1 Rubber Tired Dozers (357 hp) operating at a 0.59 load factor for 6 hours per day
- 1 Tractors/Loaders/Backhoes (108 hp) operating at a 0.55 load factor for 7 hours per day
- 1 Water Trucks (189 hp) operating at a 0.5 load factor for 8 hours per day

Phase: Mass Grading 1/1/2010 - 12/31/2011 - Type Your Description Here

Total Acres Disturbed: 15.14

Maximum Daily Acreage Disturbed: 3.78

Fugitive Dust Level of Detail: Default

20 lbs per acre-day

On Road Truck Travel (VMT): 0

Off-Road Equipment:

- 1 Graders (174 hp) operating at a 0.61 load factor for 6 hours per day
- 1 Rubber Tired Dozers (357 hp) operating at a 0.59 load factor for 6 hours per day
- 1 Tractors/Loaders/Backhoes (108 hp) operating at a 0.55 load factor for 7 hours per day
- 1 Water Trucks (189 hp) operating at a 0.5 load factor for 8 hours per day

Phase: Building Construction 1/1/2010 - 12/31/2011 - Default Building Construction Description

Off-Road Equipment:

- 1 Cranes (399 hp) operating at a 0.43 load factor for 6 hours per day
- 2 Forklifts (145 hp) operating at a 0.3 load factor for 6 hours per day
- 1 Generator Sets (49 hp) operating at a 0.74 load factor for 8 hours per day

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1 Tractors/Loaders/Backhoes (108 hp) operating at a 0.55 load factor for 8 hours per day

3 Welders (45 hp) operating at a 0.45 load factor for 8 hours per day

Phase: Architectural Coating 1/1/2010 - 12/31/2011 - Default Architectural Coating Description

Rule: Residential Interior Coatings begins 1/1/2005 ends 12/31/2040 specifies a VOC of 250

Rule: Residential Exterior Coatings begins 1/1/2005 ends 12/31/2040 specifies a VOC of 250

Rule: Nonresidential Interior Coatings begins 1/1/2005 ends 12/31/2040 specifies a VOC of 250

Rule: Nonresidential Exterior Coatings begins 1/1/2005 ends 12/31/2040 specifies a VOC of 250

Summary Report for Annual Emissions (Tons/Year)

File Name: C:\Documents and Settings\dsa\Application Data\Urbemis\Version9a\Projects\walnut creek existing 10 2 08.urb924

Project Name: walnut creek existing 10 2 08

Project Location: Bay Area Air District

On-Road Vehicle Emissions Based on: Version : Emfac2007 V2.3 Nov 1 2006

Off-Road Vehicle Emissions Based on: OFFROAD2007

AREA SOURCE EMISSION ESTIMATES

	<u>ROG</u>	<u>NOx</u>	<u>CO</u>	<u>SO2</u>	<u>PM10</u>	<u>PM2.5</u>	<u>CO2</u>
TOTALS (tons/year, unmitigated)	0.17	0.16	0.83	0.00	0.00	0.00	180.84

OPERATIONAL (VEHICLE) EMISSION ESTIMATES

	<u>ROG</u>	<u>NOx</u>	<u>CO</u>	<u>SO2</u>	<u>PM10</u>	<u>PM2.5</u>	<u>CO2</u>
TOTALS (tons/year, unmitigated)	6.83	7.18	65.74	0.04	8.48	1.63	4,626.66

SUM OF AREA SOURCE AND OPERATIONAL EMISSION ESTIMATES

	<u>ROG</u>	<u>NOx</u>	<u>CO</u>	<u>SO2</u>	<u>PM10</u>	<u>PM2.5</u>	<u>CO2</u>
TOTALS (tons/year, unmitigated)	7.00	7.34	66.57	0.04	8.48	1.63	4,807.50

Summary of Annual Greenhouse Gas (GHG) Emissions

	Project Operations (CO2 equivalent Metric Tons)	Existing Conditions (CO2 equivalent Metric Tons)	Change in Annual GHG Emissions (CO2 equivalent Metric Tons)
Area Sources	540	164	376
Vehicles	7,729	4,198	3,532
Electrical Use	1370	505	865
Total=	9,639	4,867	4,772

Net GHG emissions compared to 25,000 metric tons
19%

Net GHG emissions compared to 169,000,000 metric tons
0.003%

Greenhouse Gas (GHG) Emissions Calculations

Project Name: Locust Street/Mt. Diablo Boulevard Specific Plan DEIR
 ESA Proj. Number: 204164

Greenhouse Gas (GHG) Emissions from Specific Plan Area Sources and Vehicles

	Annual Emissions		
	pounds (lbs.)	Tons	Metric Tons
URBEMIS2007 Area Emissions	1,190,000	595	540
URBEMIS2007 Vehicle Emissions	17,040,000	8,520	7,729
Total Emissions (area sources + vehicles)	18,230,000	9,115	8,269

Indirect Greenhouse Gas (GHG) Emissions from Proposed Plan Electricity (Power Plant Emissions)

Estimated Proposed Plan Annual Electrical Use: 3,432,233 kWh (kilowatt hours)/year
 3,432 mWh (megawatt hours)/year

Indirect GHG gases	Emission Factor lb/mWh	Annual		CO2 Equivalent Factor	CO2
		Proposed Plan Electricity mWh	GHGs metric tons		Equivalent
Carbon Dioxide (CO2)	878.71	3,432	1,368	1	1368
Nitrous Oxide (N2O)	0.0037	3,432	0.0	296	2
Methane (CH4)	0.0067	3,432	0.0	23	0
Total Indirect GHG Emissions from Project Electricity Use=					1370

Total Annual Greenhouse Gas (GHG) Emission from Proposed Plan Operations All Sources (CO2 equivalent Metric Tons)

Area Sources	540	5.6%
Vehicles	7,729	80.2%
Electrical Use	1370	14.2%
Total=	9,639	100.0%

Notes and References:

Total Emissions from Indirect Electricity Use
 Formula and Emission Factor from The California Climate Action Registry Report Protocol 2006

Pg. 32 (CCARRP) gives Equations

Pg. 36 (CCARRP - April 2008 update) gives CO2 output emission rate (lbs/mWh)
 878.71 (lbs/mWh)

Pg. 85 (CCARRP) gives CO2 equivalency factors

Pg. 87 (CCARRP) gives Methane and Nitrous Oxide electricity emission factors (lbs/mWh)
 Methane - 0.0067 (lbs/mWh)
 Nitrous Oxide - 0.0037 (lbs/mWh)

lbs/metric ton = 2204.62

Percentage of 25,000 38.6%
 Percentage of 169 Million 0.006%

	Tons from URBEMIS	Metric Tons
Construction	1320	1197

Greenhouse Gas (GHG) Emissions Calculations

Project Name: Locust Street/Mt. Diablo Boulevard Specific Plan DEIR
 ESA Proj. Number: 204164

Greenhouse Gas (GHG) Emissions from Existing Area Sources and Vehicles

	Annual Emissions		
	pounds (lbs.)	Tons	Metric Tons
URBEMIS2007 Area Emissions	362,000	181	164
URBEMIS2007 Vehicle Emissions	9,254,000	4,627	4,198
Total Emissions (area sources + vehicles)	9,616,000	4,808	4,362

Indirect Greenhouse Gas (GHG) Emissions from Existing use of Electricity (Power Plant Emissions)

Estimated Project Annual Electrical Use: 1,265,668 kWh (kilowatt hours)/year
 1,266 mWh (megawatt hours)/year

Indirect GHG gases	Emission Factor lb/mWh	Annual		CO2 Equivalent Factor	Annual
		Project Electricity mWh	GHGs metric tons		CO2 Equivalent Emissions (metric tons)
Carbon Dioxide (CO2)	878.71	1,266	504	1	504
Nitrous Oxide (N2O)	0.0037	1,266	0.0	296	1
Methane (CH4)	0.0067	1,266	0.0	23	0
Total Indirect GHG Emissions from Project Electricity Use=					505

Total Annual Greenhouse Gas (GHG) Emission from Existing Conditions All Sources (CO2 equivalent Metric Tons)

Area Sources	164	3.4%
Vehicles	4,198	86.2%
Electrical Use	505	10.4%
Total=	4,867	100.0%

Notes and References:

Total Emissions from Indirect Electricity Use
 Formula and Emission Factor from The California Climate Action Registry Report Protocol 2006

Pg. 32 (CCARRP) gives Equations

Pg. 36 (CCARRP - April 2008 update) gives CO2 output emission rate (lbs/mWh)
 878.71 (lbs/mWh)

Pg. 85 (CCARRP) gives CO2 equivalency factors

Pg. 87 (CCARRP) gives Methane and Nitrous Oxide electricity emission factors (lbs/mWh)
 Methane - 0.0067 (lbs/mWh)
 Nitrous Oxide - 0.0037 (lbs/mWh)

lbs/metric ton = 2204.62

Percentage of 25,000 19.5%
 Percentage of 169 Million 0.003%

Annual kWh Calculations for Project Emissions of Electricity Used by the project

Project Name: Locust Street/Mt. Diablo Boulevard Specific Plan DEIR
 ESA Proj. Number: 204164

Total GHG Emissions From Commercial Electricity Use

Project	Average annual consumption (kWh)	kWhrs per year
Office (kWh/sq ft/Year)	12.84	1,249,332
Retail/Shopping (kWh/sq ft/Year)	97,300 sq ft	
Residential, Multi-Family (kWh/dwelling unit/Year)	136,120 sq ft	1,883,901
	46 units	299,000
Existing Conditions	Total	3,432,233
Average annual consumption (kWh)		
Office (kWh/sq ft/Year)	12.84	kWhrs per year
Retail/Shopping (kWh/sq ft/Year)	0 sq ft	0
Residential, Multi-Family (kWh/dwelling unit/Year)	91,450 sq ft	1,265,668
	0 units	0
	Total	1,265,668

*Electricity Usage Rates for PG&E systemwide; kWh per conditioned sq. ft./yr
 source: www.consumerenergycenter.org/pv4newbuildings/downloads/II-6A.pdf

Land Use	Existing (sq ft)	Proposed Notes (sq ft)
Residential, Multi-Family	-	60,000 (46 units)
Restaurant	-	- (contained in retail/shopping)
Retail/Shopping	91,450	136,120
Office	-	97,300
Total	91,450	293,420

Electricity Consumption
 (based on average PG&E residential customer use (2000), according to CEC)

Commercial Electricity Use, PG&E systemwide; kWh per conditioned sq. ft./yr:
 (kWh/sq ft/Year, except residential)

Office	12.84
Restaurant	35.62
Retail	13.84
Residential	6.500 kWh/dwelling unit/yr

source: www.consumerenergycenter.org/pv4newbuildings/downloads/II-6A.pdf

CA Energy Commission year 2000 data
 PG&E residential customers average about 6.5 MWh per year
 * California Electricity Consumption by County, 2005:
www.ecdms.energy.ca.gov/elecbycounty.asp

Detail Report for Summer Operational Unmitigated Emissions (Pounds/Day)

File Name: C:\Documents and Settings\dsa\Application Data\Urbemis\Version9a\Projects\walnut creek existing 10 2 08.urb924

Project Name: walnut creek existing 10 2 08

Project Location: Bay Area Air District

On-Road Vehicle Emissions Based on: Version : Emfac2007 V2.3 Nov 1 2006

Off-Road Vehicle Emissions Based on: OFFROAD2007

OPERATIONAL EMISSION ESTIMATES (Summer Pounds Per Day, Unmitigated)

Source	ROG	NOX	CO	SO2	PM10	PM25	CO2
Fast food rest. w/ drive thru	7.08	7.81	78.13	0.06	11.04	2.12	6,277.05
Strip mall	14.97	15.17	151.01	0.12	21.09	4.04	12,007.88
Gasoline/service station	9.18	7.39	73.13	0.05	8.83	1.70	5,157.89
tire store (traffic trip rate)	1.56	1.92	19.21	0.02	2.91	0.56	1,635.20
retail (traffic trip rate)	1.36	1.70	16.95	0.01	2.57	0.49	1,443.04
TOTALS (lbs/day, unmitigated)	34.15	33.99	338.43	0.26	46.44	8.91	26,521.06

Includes correction for passby trips

Does not include double counting adjustment for internal trips

Analysis Year: 2010 Temperature (F): 85 Season: Summer

Emfac: Version : Emfac2007 V2.3 Nov 1 2006

Summary of Land Uses

Land Use Type	Acreage	Trip Rate	Unit Type	No. Units	Total Trips	Total VMT
Fast food rest. w/ drive thru		716.00	1000 sq ft	2.00	1,432.00	6,418.16
Strip mall		42.94	1000 sq ft	70.00	3,005.80	12,255.37

Summary Report for Annual Emissions (Tons/Year)

File Name: C:\Documents and Settings\dsa\Application Data\Urbemis\Version9a\Projects\walnut creek project 10 2 08.urb924

Project Name: walnut creek project 10 2 08

Project Location: Bay Area Air District

On-Road Vehicle Emissions Based on: Version : Emfac2007 V2.3 Nov 1 2006

Off-Road Vehicle Emissions Based on: OFFROAD2007

AREA SOURCE EMISSION ESTIMATES

	<u>ROG</u>	<u>NOx</u>	<u>CO</u>	<u>SO2</u>	<u>PM10</u>	<u>PM2.5</u>	<u>CO2</u>
TOTALS (tons/year, unmitigated)	1.13	0.50	1.91	0.00	0.15	0.15	595.13

OPERATIONAL (VEHICLE) EMISSION ESTIMATES

	<u>ROG</u>	<u>NOx</u>	<u>CO</u>	<u>SO2</u>	<u>PM10</u>	<u>PM2.5</u>	<u>CO2</u>
TOTALS (tons/year, unmitigated)	9.98	12.40	111.74	0.08	15.78	3.02	8,519.66

SUM OF AREA SOURCE AND OPERATIONAL EMISSION ESTIMATES

	<u>ROG</u>	<u>NOx</u>	<u>CO</u>	<u>SO2</u>	<u>PM10</u>	<u>PM2.5</u>	<u>CO2</u>
TOTALS (tons/year, unmitigated)	11.11	12.90	113.65	0.08	15.93	3.17	9,114.79

Detail Report for Summer Operational Unmitigated Emissions (Pounds/Day)

File Name: C:\Documents and Settings\dsa\Application Data\Urbemis\Version9a\Projects\walnut creek project 10 2 08.urb924

Project Name: walnut creek project 10 2 08

Project Location: Bay Area Air District

On-Road Vehicle Emissions Based on: Version : Emfac2007 V2.3 Nov 1 2006

Off-Road Vehicle Emissions Based on: OFFROAD2007

OPERATIONAL EMISSION ESTIMATES (Summer Pounds Per Day, Unmitigated)

Source	ROG	NOX	CO	SO2	PM10	PM25	CO2
Apartments mid rise	2.29	2.26	23.82	0.02	3.41	0.65	1,941.42
Strip mall	14.97	15.17	151.01	0.12	21.09	4.04	12,007.88
Office park	8.24	8.93	93.57	0.08	13.43	2.57	7,631.60
retail (traffic trip rate)	25.76	32.09	320.49	0.27	48.54	9.27	27,281.43
TOTALS (lbs/day, unmitigated)	51.26	58.45	588.89	0.49	86.47	16.53	48,862.33

Includes correction for passby trips

Does not include double counting adjustment for internal trips

Analysis Year: 2010 Temperature (F): 85 Season: Summer

Emfac: Version : Emfac2007 V2.3 Nov 1 2006

Summary of Land Uses

Land Use Type	Acreage	Trip Rate	Unit Type	No. Units	Total Trips	Total VMT
Apartments mid rise	1.21	5.76	dwelling units	46.00	264.96	1,983.30
Strip mall		42.94	1000 sq ft	70.00	3,005.80	12,255.37

Summary Report for Annual Emissions (Tons/Year)

File Name: C:\Documents and Settings\dsa\Application Data\Urbemis\Version9a\Projects\walnut creek project 10 2 08.urb924

Project Name: walnut creek project 10 2 08

Project Location: Bay Area Air District

On-Road Vehicle Emissions Based on: Version : Emfac2007 V2.3 Nov 1 2006

Off-Road Vehicle Emissions Based on: OFFROAD2007

AREA SOURCE EMISSION ESTIMATES

	<u>ROG</u>	<u>NOx</u>	<u>CO</u>	<u>SO2</u>	<u>PM10</u>	<u>PM2.5</u>	<u>CO2</u>
TOTALS (tons/year, unmitigated)	1.13	0.50	1.91	0.00	0.15	0.15	595.13

OPERATIONAL (VEHICLE) EMISSION ESTIMATES

	<u>ROG</u>	<u>NOx</u>	<u>CO</u>	<u>SO2</u>	<u>PM10</u>	<u>PM2.5</u>	<u>CO2</u>
TOTALS (tons/year, unmitigated)	9.98	12.40	111.74	0.08	15.78	3.02	8,519.66

SUM OF AREA SOURCE AND OPERATIONAL EMISSION ESTIMATES

	<u>ROG</u>	<u>NOx</u>	<u>CO</u>	<u>SO2</u>	<u>PM10</u>	<u>PM2.5</u>	<u>CO2</u>
TOTALS (tons/year, unmitigated)	11.11	12.90	113.65	0.08	15.93	3.17	9,114.79

Detail Report for Summer Operational Unmitigated Emissions (Pounds/Day)

File Name: C:\Documents and Settings\dsa\Application Data\Urbemis\Version9a\Projects\walnut creek project 10 2 08.urb924

Project Name: walnut creek project 10 2 08

Project Location: Bay Area Air District

On-Road Vehicle Emissions Based on: Version : Emfac2007 V2.3 Nov 1 2006

Off-Road Vehicle Emissions Based on: OFFROAD2007

OPERATIONAL EMISSION ESTIMATES (Summer Pounds Per Day, Unmitigated)

Source	ROG	NOX	CO	SO2	PM10	PM25	CO2
Apartments mid rise	2.29	2.26	23.82	0.02	3.41	0.65	1,941.42
Strip mall	14.97	15.17	151.01	0.12	21.09	4.04	12,007.88
Office park	8.24	8.93	93.57	0.08	13.43	2.57	7,631.60
retail (traffic trip rate)	25.76	32.09	320.49	0.27	48.54	9.27	27,281.43
TOTALS (lbs/day, unmitigated)	51.26	58.45	588.89	0.49	86.47	16.53	48,862.33

Includes correction for passby trips

Does not include double counting adjustment for internal trips

Analysis Year: 2010 Temperature (F): 85 Season: Summer

Emfac: Version : Emfac2007 V2.3 Nov 1 2006

Summary of Land Uses

Land Use Type	Acreage	Trip Rate	Unit Type	No. Units	Total Trips	Total VMT
Apartments mid rise	1.21	5.76	dwelling units	46.00	264.96	1,983.30
Strip mall		42.94	1000 sq ft	70.00	3,005.80	12,255.37

Summary of Land Uses

Land Use Type	Acres	Trip Rate	Unit Type	No. Units	Total Trips	Total VMT
Office park	11.42	1000 sq ft	97.30	1,111.17	7,804.96	
retail (traffic trip rate)	30.33	1000 sq ft	136.12	4,128.52	28,232.98	
				8,510.45	50,276.61	

Vehicle Fleet Mix

Vehicle Type	Percent Type	Non-Catalyst	Catalyst	Diesel
Light Auto	53.7	1.3	98.3	0.4
Light Truck < 3750 lbs	12.9	2.3	94.6	3.1
Light Truck 3751-5750 lbs	19.8	0.5	99.5	0.0
Med Truck 5751-8500 lbs	6.6	0.0	100.0	0.0
Lite-Heavy Truck 8501-10,000 lbs	0.9	0.0	77.8	22.2
Lite-Heavy Truck 10,001-14,000 lbs	0.6	0.0	50.0	50.0
Med-Heavy Truck 14,001-33,000 lbs	1.0	0.0	20.0	80.0
Heavy-Heavy Truck 33,001-60,000 lbs	0.4	0.0	0.0	100.0
Other Bus	0.1	0.0	0.0	100.0
Urban Bus	0.1	0.0	0.0	100.0
Motorcycle	3.2	68.8	31.2	0.0
School Bus	0.1	0.0	0.0	100.0
Motor Home	0.6	0.0	83.3	16.7

Travel Conditions

Residential	Commercial
Home-Work	Home-Work
Home-Shop	Non-Work
Home-Other	Customer
Home-Work	Commuter
10.8	9.5
7.3	7.4
7.5	7.4
Urban Trip Length (miles)	7.4

	<u>Travel Conditions</u>					
	Residential			Commercial		
	Home-Work	Home-Shop	Home-Other	Commute	Non-Work	Customer
Rural Trip Length (miles)	16.8	7.1	7.9	14.7	6.6	6.6
Trip speeds (mph)	35.0	35.0	35.0	35.0	35.0	35.0
% of Trips - Residential	32.9	18.0	49.1			
% of Trips - Commercial (by land use)						
Strip mall				2.0	1.0	97.0
Office park				48.0	24.0	28.0
retail (traffic trip rate)				2.0	1.0	97.0

Operational Changes to Defaults

Summary Report for Annual Emissions (Tons/Year)

File Name: C:\Documents and Settings\dsa\Application Data\Urbemis\Version9a\Projects\walnut creek project 10 2 08.urb924

Project Name: walnut creek project 10 2 08

Project Location: Bay Area Air District

On-Road Vehicle Emissions Based on: Version : Emfac2007 V2.3 Nov 1 2006

Off-Road Vehicle Emissions Based on: OFFROAD2007

AREA SOURCE EMISSION ESTIMATES

	<u>ROG</u>	<u>NOx</u>	<u>CO</u>	<u>SO2</u>	<u>PM10</u>	<u>PM2.5</u>	<u>CO2</u>
TOTALS (tons/year, unmitigated)	1.13	0.50	1.91	0.00	0.15	0.15	595.13

OPERATIONAL (VEHICLE) EMISSION ESTIMATES

	<u>ROG</u>	<u>NOx</u>	<u>CO</u>	<u>SO2</u>	<u>PM10</u>	<u>PM2.5</u>	<u>CO2</u>
TOTALS (tons/year, unmitigated)	9.98	12.40	111.74	0.08	15.78	3.02	8,519.66

SUM OF AREA SOURCE AND OPERATIONAL EMISSION ESTIMATES

	<u>ROG</u>	<u>NOx</u>	<u>CO</u>	<u>SO2</u>	<u>PM10</u>	<u>PM2.5</u>	<u>CO2</u>
TOTALS (tons/year, unmitigated)	11.11	12.90	113.65	0.08	15.93	3.17	9,114.79

Urbemis 2007 Version 9.2.4

Detail Report for Annual Construction Unmitigated Emissions (Tons/Year)

File Name: C:\Documents and Settings\dsa\Application Data\Urbemis\Version9a\Projects\walnut creek project construction 10 15 08.urb924

Project Name: walnut creek project construction

Project Location: Bay Area Air District

On-Road Vehicle Emissions Based on: Version : Emfac2007 V2.3 Nov 1 2006

Off-Road Vehicle Emissions Based on: OFFROAD2007

CONSTRUCTION EMISSION ESTIMATES (Annual Tons Per Year, Unmitigated)

<u>ROG</u>	<u>NOx</u>	<u>CO</u>	<u>SO2</u>	<u>PM10 Dust</u>	<u>PM10 Exhaust</u>	<u>PM10 Total</u>	<u>PM2.5 Dust</u>	<u>PM2.5 Exhaust</u>	<u>PM2.5 Total</u>	<u>CO2</u>
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2011		3.36	9.66	9.04	0.00	19.68	0.55	20.22	4.11	0.50	4.61	1,315.30
Building 01/01/2010-12/31/2011		0.57	2.60	4.89	0.00	0.02	0.17	0.19	0.01	0.16	0.16	597.93
Building Off Road Diesel		0.44	2.04	1.41	0.00	0.00	0.15	0.15	0.00	0.14	0.14	210.76
Building Vendor Trips		0.03	0.39	0.32	0.00	0.00	0.01	0.02	0.00	0.01	0.01	85.83
Building Worker Trips		0.10	0.18	3.16	0.00	0.01	0.01	0.02	0.01	0.01	0.01	301.34
Coating 01/01/2010-12/31/2011		1.90	0.00	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.27
Architectural Coating		1.90	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Coating Worker Trips		0.00	0.00	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.27
Demolition 01/01/2010-12/31/2011		0.14	0.95	0.73	0.00	0.00	0.07	0.07	0.00	0.07	0.07	104.30
Fugitive Dust		0.00	0.00	0.00	0.00	3,505.76	0.00	3,505.76	729.20	0.00	729.20	0.00
Demo Off Road Diesel		0.14	0.94	0.60	0.00	0.00	0.07	0.07	0.00	0.07	0.07	91.04
Demo On Road Diesel		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Demo Worker Trips		0.00	0.01	0.14	0.00	0.00	0.00	0.00	0.00	0.00	0.00	13.26
Fine Grading 01/01/2010-12/31/2011		0.37	3.05	1.69	0.00	9.83	0.15	9.98	2.05	0.14	2.19	305.41
Fine Grading Dust		0.00	0.00	0.00	0.00	9.83	0.00	9.83	2.05	0.00	2.05	0.00
Fine Grading Off Road Diesel		0.37	3.05	1.55	0.00	0.00	0.15	0.15	0.00	0.14	0.14	292.15
Fine Grading On Road Diesel		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Fine Grading Worker Trips		0.00	0.01	0.14	0.00	0.00	0.00	0.00	0.00	0.00	0.00	13.26
Mass Grading 01/01/2010-12/31/2011		0.37	3.05	1.69	0.00	9.83	0.15	9.98	2.05	0.14	2.19	305.41
Mass Grading Dust		0.00	0.00	0.00	0.00	9.83	0.00	9.83	2.05	0.00	2.05	0.00
Mass Grading Off Road Diesel		0.37	3.05	1.55	0.00	0.00	0.15	0.15	0.00	0.14	0.14	292.15
Mass Grading On Road Diesel		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Mass Grading Worker Trips		0.00	0.01	0.14	0.00	0.00	0.00	0.00	0.00	0.00	0.00	13.26

Phase Assumptions

Phase: Demolition 1/1/2010 - 12/31/2011 - Type Your Description Here

Building Volume Total (cubic feet): 3.345241E+10

Building Volume Daily (cubic feet): 0

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- On Road Truck Travel (VMT): 0
- Off-Road Equipment:
 - 1 Concrete/Industrial Saws (10 hp) operating at a 0.73 load factor for 8 hours per day
 - 1 Rubber Tired Dozers (357 hp) operating at a 0.59 load factor for 1 hours per day
 - 2 Tractors/Loaders/Backhoes (108 hp) operating at a 0.55 load factor for 6 hours per day

Phase: Fine Grading 1/1/2010 - 12/31/2011 - Default Fine Site Grading Description

- Total Acres Disturbed: 15.14
- Maximum Daily Acreage Disturbed: 3.78
- Fugitive Dust Level of Detail: Default
- 20 lbs per acre-day
- On Road Truck Travel (VMT): 0
- Off-Road Equipment:
 - 1 Graders (174 hp) operating at a 0.61 load factor for 6 hours per day
 - 1 Rubber Tired Dozers (357 hp) operating at a 0.59 load factor for 6 hours per day
 - 1 Tractors/Loaders/Backhoes (108 hp) operating at a 0.55 load factor for 7 hours per day
 - 1 Water Trucks (189 hp) operating at a 0.5 load factor for 8 hours per day

Phase: Mass Grading 1/1/2010 - 12/31/2011 - Type Your Description Here

- Total Acres Disturbed: 15.14
- Maximum Daily Acreage Disturbed: 3.78
- Fugitive Dust Level of Detail: Default
- 20 lbs per acre-day
- On Road Truck Travel (VMT): 0
- Off-Road Equipment:
 - 1 Graders (174 hp) operating at a 0.61 load factor for 6 hours per day
 - 1 Rubber Tired Dozers (357 hp) operating at a 0.59 load factor for 6 hours per day
 - 1 Tractors/Loaders/Backhoes (108 hp) operating at a 0.55 load factor for 7 hours per day
 - 1 Water Trucks (189 hp) operating at a 0.5 load factor for 8 hours per day

Phase: Building Construction 1/1/2010 - 12/31/2011 - Default Building Construction Description

- Off-Road Equipment:
 - 1 Cranes (399 hp) operating at a 0.43 load factor for 6 hours per day
 - 2 Forklifts (145 hp) operating at a 0.3 load factor for 6 hours per day
 - 1 Generator Sets (49 hp) operating at a 0.74 load factor for 8 hours per day

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1 Tractors/Loaders/Backhoes (108 hp) operating at a 0.55 load factor for 8 hours per day

3 Welders (45 hp) operating at a 0.45 load factor for 8 hours per day

Phase: Architectural Coating 1/1/2010 - 12/31/2011 - Default Architectural Coating Description

Rule: Residential Interior Coatings begins 1/1/2005 ends 12/31/2040 specifies a VOC of 250

Rule: Residential Exterior Coatings begins 1/1/2005 ends 12/31/2040 specifies a VOC of 250

Rule: Nonresidential Interior Coatings begins 1/1/2005 ends 12/31/2040 specifies a VOC of 250

Rule: Nonresidential Exterior Coatings begins 1/1/2005 ends 12/31/2040 specifies a VOC of 250

Summary Report for Annual Emissions (Tons/Year)

File Name: C:\Documents and Settings\dsa\Application Data\Urbemis\Version9a\Projects\walnut creek existing 10 2 08.urb924

Project Name: walnut creek existing 10 2 08

Project Location: Bay Area Air District

On-Road Vehicle Emissions Based on: Version : Emfac2007 V2.3 Nov 1 2006

Off-Road Vehicle Emissions Based on: OFFROAD2007

AREA SOURCE EMISSION ESTIMATES

	<u>ROG</u>	<u>NOx</u>	<u>CO</u>	<u>SO2</u>	<u>PM10</u>	<u>PM2.5</u>	<u>CO2</u>
TOTALS (tons/year, unmitigated)	0.17	0.16	0.83	0.00	0.00	0.00	180.84

OPERATIONAL (VEHICLE) EMISSION ESTIMATES

	<u>ROG</u>	<u>NOx</u>	<u>CO</u>	<u>SO2</u>	<u>PM10</u>	<u>PM2.5</u>	<u>CO2</u>
TOTALS (tons/year, unmitigated)	6.83	7.18	65.74	0.04	8.48	1.63	4,626.66

SUM OF AREA SOURCE AND OPERATIONAL EMISSION ESTIMATES

	<u>ROG</u>	<u>NOx</u>	<u>CO</u>	<u>SO2</u>	<u>PM10</u>	<u>PM2.5</u>	<u>CO2</u>
TOTALS (tons/year, unmitigated)	7.00	7.34	66.57	0.04	8.48	1.63	4,807.50

Annual kWh Calculations for Project Emissions of Electricity Used by the project

Project Name: Locust Street/Mt. Diablo Boulevard Specific Plan DEIR
 ESA Proj. Number: 204164

Total GHG Emissions From Commercial Electricity Use

Project	Average annual consumption (kWh)	kWhrs per year
Office (kWh/sq ft/Year)	12.84	1,249,332
Retail/Shopping (kWh/sq ft/Year)	97,300 sq ft	
Residential, Multi-Family (kWh/dwelling unit/Year)	136,120 sq ft	1,883,901
	46 units	299,000
Existing Conditions	Total	3,432,233
Average annual consumption (kWh)		
Office (kWh/sq ft/Year)	12.84	kWhrs per year
Retail/Shopping (kWh/sq ft/Year)	0 sq ft	0
Residential, Multi-Family (kWh/dwelling unit/Year)	91,450 sq ft	1,265,668
	0 units	0
	Total	1,265,668

*Electricity Usage Rates for PG&E systemwide; kWh per conditioned sq. ft./yr
 source: www.consumerenergycenter.org/pv4newbuildings/downloads/II-6A.pdf

Land Use	Existing (sq ft)	Proposed Notes (sq ft)
Residential, Multi-Family	-	60,000 (46 units)
Restaurant	-	- (contained in retail/shopping)
Retail/Shopping	91,450	136,120
Office	-	97,300
Total	91,450	293,420

Electricity Consumption
 (based on average PG&E residential customer use (2000), according to CEC)

Commercial Electricity Use, PG&E systemwide: kWh per conditioned sq. ft./yr:
 (kWh/sq ft/Year, except residential)

Office	12.84
Restaurant	35.62
Retail	13.84
Residential	6,500 kWh/dwelling unit/yr

source: www.consumerenergycenter.org/pv4newbuildings/downloads/II-6A.pdf

CA Energy Commission year 2000 data

PG&E residential customers average about 6.5 MWh per year

⁸ California Electricity Consumption by County, 2005:

www.ecdms.energy.ca.gov/elecbycounty.asp

Detail Report for Summer Operational Unmitigated Emissions (Pounds/Day)

File Name: C:\Documents and Settings\dsa\Application Data\Urbemis\Version9a\Projects\walnut creek existing 10 2 08.urb924

Project Name: walnut creek existing 10 2 08

Project Location: Bay Area Air District

On-Road Vehicle Emissions Based on: Version : Emfac2007 V2.3 Nov 1 2006

Off-Road Vehicle Emissions Based on: OFFROAD2007

OPERATIONAL EMISSION ESTIMATES (Summer Pounds Per Day, Unmitigated)

Source	ROG	NOX	CO	SO2	PM10	PM25	CO2
Fast food rest. w/ drive thru	7.08	7.81	78.13	0.06	11.04	2.12	6,277.05
Strip mall	14.97	15.17	151.01	0.12	21.09	4.04	12,007.88
Gasoline/service station	9.18	7.39	73.13	0.05	8.83	1.70	5,157.89
tire store (traffic trip rate)	1.56	1.92	19.21	0.02	2.91	0.56	1,635.20
retail (traffic trip rate)	1.36	1.70	16.95	0.01	2.57	0.49	1,443.04
TOTALS (lbs/day, unmitigated)	34.15	33.99	338.43	0.26	46.44	8.91	26,521.06

Includes correction for passby trips

Does not include double counting adjustment for internal trips

Analysis Year: 2010 Temperature (F): 85 Season: Summer

Emfac: Version : Emfac2007 V2.3 Nov 1 2006

Summary of Land Uses

Land Use Type	Acreage	Trip Rate	Unit Type	No. Units	Total Trips	Total VMT
Fast food rest. w/ drive thru		716.00	1000 sq ft	2.00	1,432.00	6,418.16
Strip mall		42.94	1000 sq ft	70.00	3,005.80	12,255.37

Summary of Land Uses

Land Use Type	Acres	Trip Rate	Unit Type	No. Units	Total Trips	Total VMT
Gasoline/service station	162.78		pumps	14.00	2,278.92	5,121.81
tire store (traffic trip rate)	24.87		1000 sq ft	9.95	247.46	1,692.24
retail (traffic trip rate)	30.33		1000 sq ft	7.20	218.38	1,493.37
					7,182.56	26,980.95

Vehicle Fleet Mix

Vehicle Type	Percent Type	Non-Catalyst	Catalyst	Diesel
Light Auto	53.7	1.3	98.3	0.4
Light Truck < 3750 lbs	12.9	2.3	94.6	3.1
Light Truck 3751-5750 lbs	19.8	0.5	99.5	0.0
Med Truck 5751-8500 lbs	6.6	0.0	100.0	0.0
Lite-Heavy Truck 8501-10,000 lbs	0.9	0.0	77.8	22.2
Lite-Heavy Truck 10,001-14,000 lbs	0.6	0.0	50.0	50.0
Med-Heavy Truck 14,001-33,000 lbs	1.0	0.0	20.0	80.0
Heavy-Heavy Truck 33,001-60,000 lbs	0.4	0.0	0.0	100.0
Other Bus	0.1	0.0	0.0	100.0
Urban Bus	0.1	0.0	0.0	100.0
Motorcycle	3.2	68.8	31.2	0.0
School Bus	0.1	0.0	0.0	100.0
Motor Home	0.6	0.0	83.3	16.7

	<u>Travel Conditions</u>					
	Residential			Commercial		
	Home-Work	Home-Shop	Home-Other	Commute	Non-Work	Customer
Urban Trip Length (miles)	10.8	7.3	7.5	9.5	7.4	7.4
Rural Trip Length (miles)	16.8	7.1	7.9	14.7	6.6	6.6
Trip speeds (mph)	35.0	35.0	35.0	35.0	35.0	35.0
% of Trips - Residential	32.9	18.0	49.1			
% of Trips - Commercial (by land use)						
Fast food rest. w/ drive thru				5.0	2.5	92.5
Strip mall				2.0	1.0	97.0
Gasoline/service station				2.0	1.0	97.0
tire store (traffic trip rate)				2.0	1.0	97.0
retail (traffic trip rate)				2.0	1.0	97.0

Operational Changes to Defaults

Detail Report for Summer Area Source Unmitigated Emissions (Pounds/Day)

File Name: C:\Documents and Settings\dsa\Application Data\Urbemis\Version9a\Projects\walnut creek existing 10 2 08.urb924

Project Name: walnut creek existing 10 2 08

Project Location: Bay Area Air District

On-Road Vehicle Emissions Based on: Version : Emfac2007 V2.3 Nov 1 2006

Off-Road Vehicle Emissions Based on: OFFROAD2007

AREA SOURCE EMISSION ESTIMATES (Summer Pounds Per Day, Unmitigated)

<u>Source</u>	<u>ROG</u>	<u>NOx</u>	<u>CO</u>	<u>SO2</u>	<u>PM10</u>	<u>PM2.5</u>	<u>CO2</u>
Natural Gas	0.06	0.82	0.69	0.00	0.00	0.00	984.00
Hearth - No Summer Emissions							
Landscape	0.61	0.10	7.73	0.00	0.03	0.03	14.04
Consumer Products	0.00						
Architectural Coatings	0.53						
TOTALS (lbs/day, unmitigated)	1.20	0.92	8.42	0.00	0.03	0.03	998.04

Area Source Changes to Defaults

APPENDIX C

Trip Generation and Parking Tables for Alternatives

Table A: Specific Plan Trip Generation Estimates

Project Component / Land-Use	ITE Code ¹	Quantity	Units	AM Peak Hour Trips			PM Peak Hour Trips		
				In	Out	Total	In	Out	Total
Opportunity Site 1									
Retail	Note 2	4,300	S.F	2	1	3	6	6	12
Office	ITE 710 ³	4,300	S.F	6	1	7	1	5	6
Subtotal				8	2	10	7	11	18
Opportunity Site 2									
Retail	Note 2	19,500	S.F	7	5	12	27	29	56
Residential	ITE 232 ⁴	36	D.U	2	10	12	9	5	14
Subtotal				9	15	24	36	34	70
Opportunity Site 4									
Retail	Note 2	17,000	S.F	6	4	10	23	25	48
Office	ITE 710 ³	13,000	S.F	18	2	20	3	16	19
Subtotal				24	6	30	26	41	67
Opportunity Site 5									
Retail	Note 2	13,420	S.F	5	3	8	18	20	38
Office	ITE 710 ³	80,000	S.F	109	15	124	20	99	119
Subtotal				114	18	132	38	119	157
Opportunity Site 6									
Retail	Note 2	10,500	S.F	4	3	7	14	16	30
Residential	ITE 232 ⁴	10	D.U	1	3	3	2	1	4
Subtotal				5	6	10	16	17	34
TOTAL Unadjusted Trip Generation				160	47	206	123	222	346
Existing Trip Generation				-101	-75	-176	-91	-94	-185
Net Adjusted Trip Generation				59	-28	30	32	128	161

Notes:

1. Base ITE Trip Rates from Trip Generation, 7th Edition, Institute of Transportation Engineers, Washington, D.C, 2004, except otherwise noted.
2. Used trip rates derived for Downtown Walnut Creek by Dowling Associates, Inc. which does not include adjustment for pass-by and internal trips.
3. ITE 710 trip rates for General Office Building was used.
4. ITE 232 trip rates for High-Rise Residential Condominium / Townhouse was used.
5. ITE 310 trip rates for Hotel was used,
6. The AM and PM peak hour trips adjusted to account for pass-by trips, except for retail land use.
7. Trip totals may differ slightly due to rounding.

Table B: No Project Alternative Trip Generation Estimates

Project Component / Land-Use	ITE Code ¹	Quantity	Units	AM Peak Hour Trips			PM Peak Hour Trips		
				In	Out	Total	In	Out	Total
<u>Opportunity Site 2</u> Retail to replace Tire Store	Note 5	28,000	S.F	11	7	18	38	42	80
<u>Opportunity Site 4</u> Chevron Gas Station	ITE 945 ³	14	Vehicle Fueling Positions	27	27	54	41	41	82
<u>Opportunity Site 5</u> Mc Donald's	ITE 933 ⁴	2,000	S.F	53	35	88	27	25	52
<u>Opportunity Site 6</u> Increased Retail	Note 5	15,000	S.F	6	4	10	21	22	43
Total All Sites				97	73	170	127	130	257

Notes:

1. Base ITE Trip Rates from Trip Generation, 7th Edition, Institute of Transportation Engineers, Washington, D.C, 2004, unless otherwise noted.
2. ITE 848 trip rate for Tire Store was used.
3. ITE 945 trip rate for Gasoline / Service Station with Convenience Market was used.
4. ITE 933 trip rate for Fast-Food Restaurant without Drive-Through was used.
5. Used trip rates derived for Downtown Walnut Creek by Dowling Associates, Inc. which does not include adjustment for pass-by and internal trips
6. The AM and PM peak hour trips adjusted to account for pass-by trips, except for retail land use.
7. Trip totals may differ slightly due to rounding.

Table C: Reduced Density/Height Alternative Trip Generation Estimates

Project Component / Land-Use	ITE Code ¹	Quantity	Units	AM Peak Hour Trips			PM Peak Hour Trips		
				In	Out	Total	In	Out	Total
Opportunity Site 1									
Retail	Note 2	4,300	S.F	2	1	3	6	6	12
Office	ITE 710 ³	4,300	S.F	6	1	7	1	5	6
Subtotal				8	2	10	7	11	18
Opportunity Site 2									
Retail	Note 2	19,500	S.F	7	5	12	27	29	56
Residential	ITE 232 ⁴	36	D.U	2	10	12	9	5	14
Subtotal				9	15	24	36	34	70
Opportunity Site 4									
Retail	Note 2	17,000	S.F	6	4	10	23	25	48
Office	ITE 710 ³	13,000	S.F	18	2	20	3	16	19
Subtotal				24	6	30	26	41	67
Opportunity Site 5									
Retail	Note 2	13,420	S.F	5	3	8	18	20	38
Residential	ITE 232 ⁴	52	D.U	3	15	18	12	7	19
Subtotal				8	18	26	30	27	57
Opportunity Site 6									
Retail	Note 2	10,500	S.F	4	3	7	14	16	30
Residential	ITE 232 ⁴	10	D.U	1	3	3	2	1	4
Subtotal				5	6	10	16	17	34
TOTAL Unadjusted Trip Generation				54	47	100	115	130	246
Existing Trip Generation				-101	-75	-176	-91	-94	-185
Net Adjusted Trip Generation				-47	-28	-76	24	36	61

Notes:

1. Base ITE Trip Rates from Trip Generation, 7th Edition, Institute of Transportation Engineers, Washington, D.C, 2004, except otherwise noted.
2. Used trip rates derived for Downtown Walnut Creek by Dowling Associates, Inc. which does not include adjustment for pass-by and internal trips.
3. ITE 710 trip rates for General Office Building was used.
4. ITE 232 trip rates for High-Rise Residential Condominium / Townhouse was used.
5. ITE 310 trip rates for Hotel was used,
6. The AM and PM peak hour trips adjusted to account for pass-by trips, except for retail land use.
7. Trip totals may differ slightly due to rounding.

Table D: Primary Study Area Buildout Alternative Trip Generation Estimates

Project Component / Land-Use	ITE Code ¹	Quantity	Units	AM Peak Hour Trips			PM Peak Hour Trips		
				In	Out	Total	In	Out	Total
Opportunity Site 1									
Retail	Note 2	5,500	S.F	2	1	3	8	8	16
Office	ITE 710 ³	5,500	S.F	8	1	9	1	7	8
Existing Trip Generation				10	2	12	9	15	24
Opportunity Site 2									
Retail	Note 2	19,500	S.F	7	5	12	27	29	56
Office	ITE 710 ³	45,000	S.F	62	8	70	11	56	67
Subtotal				69	13	82	38	85	123
Opportunity Site 4									
Retail	Note 2	25,000	S.F	10	6	16	34	37	71
Office	ITE 710 ³	42,000	S.F	57	8	65	11	52	63
Subtotal				67	14	81	45	89	134
Opportunity Site 5									
Retail	Note 2	16,000	S.F	6	4	10	22	24	46
Hotel	ITE 310 ⁵	60	Rooms	21	13	34	19	16	35
Subtotal				27	17	44	41	40	81
Opportunity Site 6									
Retail	Note 2	10,500	S.F	4	3	7	14	16	30
Office	ITE 710 ³	10,500	S.F	14	2	16	3	13	16
Subtotal				18	5	23	17	29	46
TOTAL Unadjusted Trip Generation				261	64	325	183	338	521
Existing Trip Generation				-101	-75	-176	-91	-94	-185
Net Adjusted Trip Generation				160	-11	149	92	244	336

Notes:

1. Base ITE Trip Rates from Trip Generation, 7th Edition, Institute of Transportation Engineers, Washington, D.C, 2004, except otherwise noted.
2. Used trip rates derived for Downtown Walnut Creek by Dowling Associates, Inc. which does not include adjustment for pass-by and internal trips.
3. ITE 710 trip rates for General Office Building was used.
4. ITE 232 trip rates for High-Rise Residential Condominium / Townhouse was used.
5. ITE 310 trip rates for Hotel was used,
6. The AM and PM peak hour trips adjusted to account for pass-by trips, except for retail land use.
7. Trip totals may differ slightly due to rounding.

**TABLE F
EXISTING PLUS APPROVED PROJECTS PLUS PRIMARY STUDY AREA BUILDOUT ALTERNATIVE –
INTERSECTION LEVEL OF SERVICE**

S. No	Intersection	Existing + Approved Projects - AM Peak		Existing + Approved Projects + Primary Study Area Buildout AM Peak		Existing + Approved Projects - PM Peak		Existing + Approved Projects + Primary Study Area Buildout PM Peak	
		V/C or Delay	LOS	V/C or Delay	LOS	V/C or Delay	LOS	V/C or Delay	LOS
1	Mt. Diablo Blvd. & Broadway	0.56	A	0.57	A	0.78	C	0.79	C
2	Mt. Diablo Blvd. & California Blvd.	0.48	A	0.48	A	0.81	D	0.83	D
3	Olympic Blvd. & California Blvd.	0.49	A	0.49	A	0.63	B	0.65	B
4	Mt. Diablo Blvd. & Main St.	0.41	A	0.43	A	0.64	B	0.65	B
5	Mt. Diablo Blvd. & Locust St.	0.28	A	0.29	A	0.56	A	0.57	A
6	Bonanza St. & California Blvd.	0.46	A	0.46	A	0.74	C	0.76	C
7	Mt. Diablo Blvd. & Oakland Blvd.	0.50	A	0.51	A	0.67	B	0.68	B
8	Mt. Diablo Blvd. & Alpine Blvd.	0.62	B	0.63	B	0.73	C	0.74	C
9	Olympic Blvd. & Main St.	0.20	A	0.20	A	0.39	A	0.40	A
10	Olympic Blvd. & Alpine Blvd.	0.66	B	0.66	B	0.74	C	0.75	C
11	Olympic Blvd. & I-680 NB Ramps (on and off)	0.73	C	0.75	C	1.01	F	1.03	F
12	Olympic Blvd. & I-680 SB Off Ramp	0.48	A	0.49	A	0.51	A	0.51	A
13	Cypress St. & California Blvd. ^a	9.7	A	9.8	A	18.5	C	18.3	C
14	Mt. Diablo Blvd. & Camino Diablo / Boulevard Road	0.58	A	0.59	A	0.75	C	0.76	C
15	Mt. Diablo Blvd. & Bonanza St.	0.43	A	0.43	A	0.53	A	0.54	A
16	Olympic Blvd. & Locust St.	0.20	A	0.22	A	0.41	A	0.42	A
17	California Blvd. & Botelho Dr.	0.37	A	0.37	A	0.69	B	0.69	B
18	Main St. & Botelho Dr.	0.16	A	0.16	A	0.37	A	0.37	A
19	Main St. & Broadway Pl.	0.18	A	0.18	A	0.33	A	0.33	A
20	California Blvd. & Newell Ave.	0.49	A	0.49	A	0.72	C	0.72	C
21	Main St. & Newell Ave.	0.48	A	0.48	A	0.56	A	0.56	A

^a Unsignalized intersection – intersection analyzed using HCM 2000 method for unsignalized intersections.

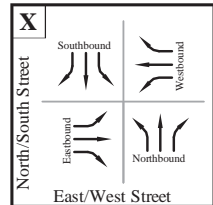
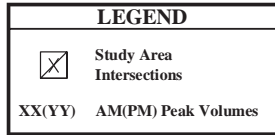
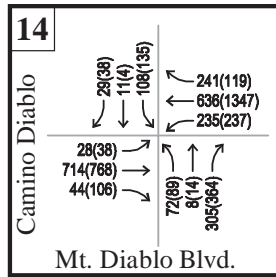
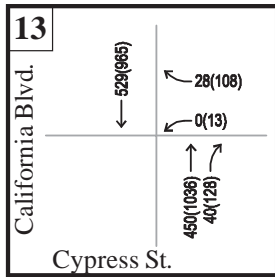
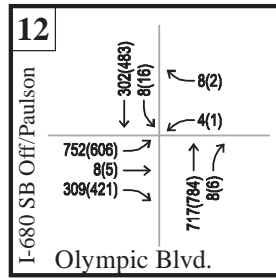
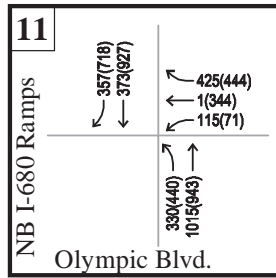
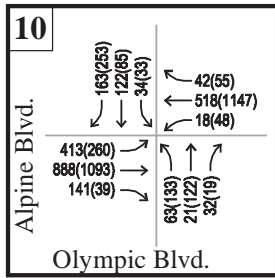
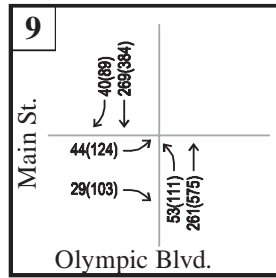
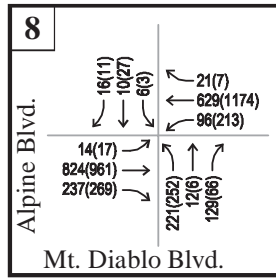
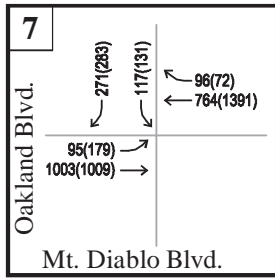
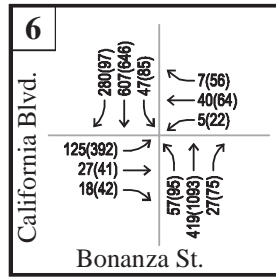
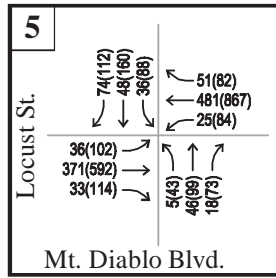
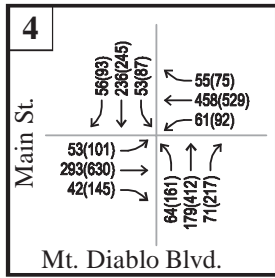
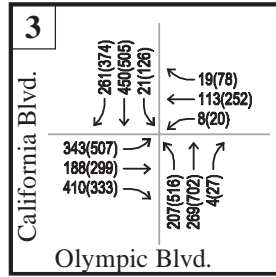
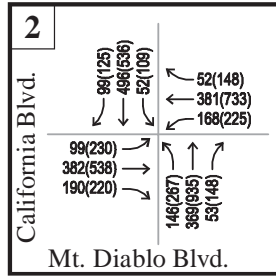
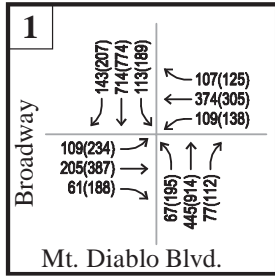
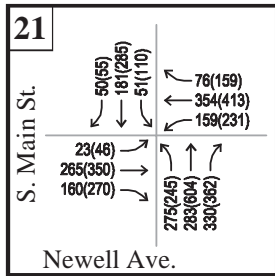
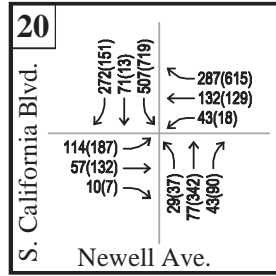
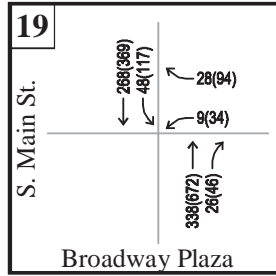
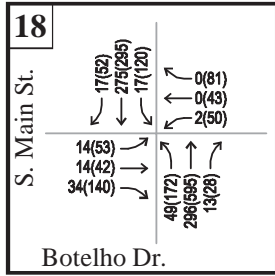
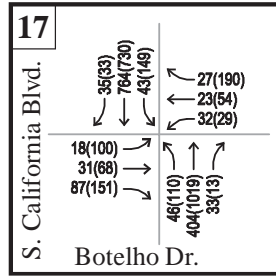
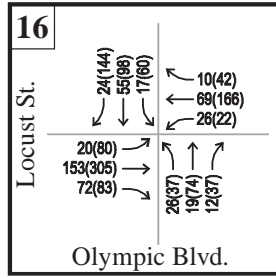
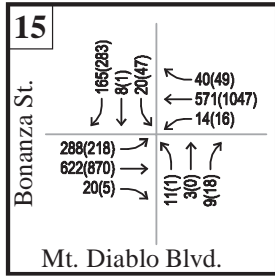


Figure 1
Existing Plus Approved Plus Primary
Study Area Buildout Alternative #1 through #14



LEGEND

☒ Study Area Intersections

XX(YY) AM(PM) Peak Volumes

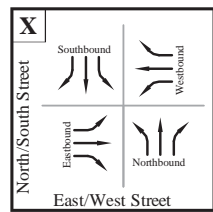


Figure 2
Existing Plus Approved Plus Primary
Study Area Buildout Alternative #15 through #21

**TABLE H
EXISTING PLUS APPROVED PROJECT PLUS PRIMARY STUDY AREA BUILDOUT ALTERNATIVE –
ROADWAY LEVEL OF SERVICE**

Segment	Time	Direction	TSO	Existing (2007) ^a	Existing + Approved ^b	Existing + Approved + Primary Study Area Buildout
Ygnacio Valley Road (I-608 to Walnut Boulevard)	AM Peak	EB	Avg Speed (mph)	16.1	13.4	13.3
			Delay Index	1.9	2.2	2.2
		WB	Avg Speed (mph)	26.6	23.7	21.8
			Delay Index	1.1	1.3	1.6
	PM Peak	EB	Avg Speed (mph)	13.6	13.0	12.7
			Delay Index	2.2	2.3	2.3
		WB	Avg Speed (mph)	12.7	12.0	11.9
			Delay Index	2.4	2.5	2.5

^a SOURCE: 2007 CCTA TSO Monitoring Report

^b SOURCE: Broadway Plaza Retail Project Draft EIR

**TABLE I
PARKING DEMAND ESTIMATES - PRIMARY STUDY AREA BUILDOUT ALTERNATIVE**

Project Component / Land Use	ITE Parking Rates		Quantity	Units	Total Parking Demand	Total Parking Demand (Shared-Use)	Off-Site Parking Supply	Parking Supply/Deficit	
								Traditional Analysis	Share-Use Analysis
Site 1									
Retail	2.65	Spaces / 1,000 S.F.	5,500	S.F.	15	14			
Office	2.84	Spaces / 1,000 S.F.	5,500	S.F.	16	16			
Subtotal					31	30	0	-31	-30
Site 2									
Retail	2.65	Spaces / 1,000 S.F.	19,500	S.F.	52	49			
Office	2.84	Spaces / 1,000 S.F.	45,000	S.F.	128	128			
Subtotal					180	177	180	0	3
Site 3									
Retail	2.65	Spaces / 1,000 S.F.	15,000	S.F.	40	38			
Office	2.84	Spaces / 1,000 S.F.	47,000	S.F.	133	133			
Subtotal					173	171	207	34	36
Site 4									
Retail	2.65	Spaces / 1,000 S.F.	25,000	S.F.	66	68			
Office	2.84	Spaces / 1,000 S.F.	42,000	S.F.	119	119			
Subtotal					185	182	223	38	41
Site 5									
Retail	2.65	Spaces / 1,000 S.F.	16,000	S.F.	42	40			
Office	2.84	Spaces / 1,000 S.F.		S.F.	0				
Residential-Owner	1.46	Spaces / Dwelling Units		D.U.	0				
Residential-Visitor	0.15	Spaces / Dwelling Units		D.U.	0				
Hotel	0.91	Spaces / Room	60	Rooms	55	33			
Subtotal					97	73	187	90	114
Site 6									
Retail	2.65	Spaces / 1,000 S.F.	10,500	S.F.	28	27			
Office	2.84	Spaces / 1,000 S.F.	10,500	S.F.	30	30			
Subtotal					58	57	70	12	13
Total Parking =					724	690	867	143	177

Notes:

- ^a Source of peak parking generation rates:
 Retail: ITE Parking Generation 3rd Edition, LU code 820 (Shopping Center), Weekday (Monday-Thursday), (85th percentile)
 Office: ITE Parking Generation 3rd Edition, LU code 710 (General Office Building), Weekday, Urban (85th percentile)
 Residential owner: ITE Parking Generation 3rd Edition, LU code 230 (Residential Condominium/Townhome), average weekday rate.
 Residential visitor: Urban Land Institute Shared Parking, 2nd Edition, Table 2-2.
 Hotel: ITE Parking Generation 3rd Edition, LU code 310 (Hotel), Weekday average rate.

**TABLE J
CITY CODE PARKING REQUIREMENT**

Project Component / Land Use	City's Parking Code Requirement		Quantity	Units	Total Number of Parking Spaces Required	Off-Site Parking Supply	Parking Surplus / Deficit
Site 1							
Retail	4	Spaces / 1,000 S.F. of RFA	4,400	S.F.	18		
Office	4	Spaces / 1,000 S.F. of RFA	4,400	S.F.	18		
Subtotal					36	0	-36
Site 2							
Retail	4	Spaces / 1,000 S.F. of RFA	15,600	S.F.	62		
Office	4	Spaces / 1,000 S.F. of RFA	36,000	S.F.	144		
Subtotal					206	180	-26
Site 3							
Retail	4	Spaces / 1,000 S.F. of RFA	12,000	S.F.	48		
Office	4	Spaces / 1,000 S.F. of RFA	37,600	S.F.	150		
Subtotal					198	207	9
Site 4							
Retail	4	Spaces / 1,000 S.F. of RFA	20,000	S.F.	80		
Office	4	Spaces / 1,000 S.F. of RFA	33,600	S.F.	134		
Subtotal					214	223	9
Site 5							
Retail	4	Spaces / 1,000 S.F. of RFA	12,800	S.F.	51		
Hotel	0.9	Spaces / Room	60	Rooms	54		
Subtotal					51	187	136
Site 6							
Retail	4	Spaces / 1,000 S.F. of RFA	8,400	S.F.	34		
Office	4	Spaces / 1,000 S.F. of RFA	8,400	S.F.	34		
Subtotal					68	70	2
Total Parking =					773	867	94

Notes:

^a Off-street parking requirement rates from the City of Walnut Creek's Municipal Parking Code.

^b Because the exact Rentable Floor Area (RFA) could not be determined at the time of this analysis, it is assumed that RFA is equal to 80% of the Gross Floor Area (GFA).

