

Draft Environmental Impact Report

CONCORD 2030 URBAN AREA GENERAL PLAN

STATE CLEARINGHOUSE NO. 2006062093

December 2006

prepared for THE CITY OF CONCORD

Draft Environmental Impact Report

CONCORD 2030 URBAN AREA GENERAL PLAN

STATE CLEARINGHOUSE NO. 2006062093

December 2006

prepared for THE CITY OF CONCORD

prepared by Dyett & Bhatia

Table of Contents

Executive Summary

E.1	Proposed Project	E-1
	Key Features of the Proposed General Plan	E-2
	Estimated Buildout of the Proposed General Plan	E-3
E.2	Alternatives to the Proposed General Plan	E-4
E.3	Areas of Controversy	E-6
E.4	Summary of Impacts & Environmentally Superior Alternative	E-6

I Introduction

I.1	Purpose of EIR	I-1
I.2	General Plan Process & Public Involvement	I-2
I.3	EIR Approach and Assumptions	I-3
I.4	Issues Addressed in this EIR	I-4
I.5	Documents Incorporated by Reference	I-5
I.6	Organization of EIR	I-6

2 Project Description

2.1	Regional Location and Planning Boundaries	2-1
	Regional Location	2-1
	Planning Boundaries	2-2
	Proposed Urban Limit Line Boundary	2-2
2.2	Purpose and Objectives of the Proposed General Plan	2-6
	Plan Purpose	2-6
	Plan Objectives.....	2-7
2.3	General Plan Process	2-7
2.4	The Proposed General Plan	2-9
	Key Initiatives	2-9
	General Plan Land Use Diagram	2-10

2.5	Buildout Under the Proposed General Plan	2-16
	Population Growth and Housing	2-18
	Employment	2-18
	Jobs/Employment Balance	2-19
2.6	Key Policy Direction.....	2-19
	Economic Vitality	2-19
	Land Use.....	2-20
	Growth Management.....	2-22
	Transportation and Circulation.....	2-23
	Parks, Open Space, and Conservation.....	2-26
	Safety and Noise	2-27
	Public Facilities and Utilities	2-28
2.7	Implementation of the Proposed General Plan	2-29
	Overview	2-29
	Responsibilities.....	2-30
	The Plan, the Regulatory System, and Capital Improvements.....	2-33
3	Settings, Impacts, and Mitigation Measures	
3.1	Air Quality.....	3.1-1
	Environmental Setting.....	3.1-1
	Regulatory Setting.....	3.1-1
	Physical Setting.....	3.1-9
	Impact Analysis.....	3.1-14
	Significance Criteria	3.1-14
	Methodology & Assumptions	3.1-15
	Summary of Impacts	3.1-15
	Impacts and Mitigation Measures.....	3.1-15
3.2	Land Use.....	3.2-1
	Environmental Setting.....	3.2-1
	Physical Setting.....	3.2-1

Regulatory Setting.....	3.2-6
Impact Analysis.....	3.2-13
Significance Criteria	3.2-13
Methodology & Assumptions	3.2-13
Summary of Impacts	3.2-15
Impacts and Mitigation Measures.....	3.2-16
3.3 Transportation.....	3.3-1
Environmental Setting.....	3.3-1
Physical Setting.....	3.3-1
Regulatory Setting.....	3.3-13
Impact Analysis.....	3.3-15
Significance Criteria	3.3-15
Methodology & Assumptions	3.3-16
Impacts and Mitigation Measures.....	3.3-27
3.4 Biological Resources.....	3.4-1
Environmental Setting.....	3.4-1
Physical Setting.....	3.4-1
Regulatory Setting.....	3.4-8
Impact Analysis.....	3.4-13
Significance Criteria	3.4-13
Methodology & Assumptions	3.4-13
Summary of Impacts	3.4-14
Impacts and Mitigation Measures.....	3.4-14
3.5 Cultural Resources	3.5-1
Environmental Setting.....	3.5-2
Physical Setting.....	3.5-2
Regulatory Setting.....	3.5-6
Impact Analysis.....	3.5-9
Significance Criteria	3.5-9

Methodology & Assumptions	3.5-10
Summary of Impacts	3.5-10
Impacts and Mitigation Measures.....	3.5-10
3.6 Energy and Utilities	3.6-1
Environmental Setting.....	3.6-1
Physical Setting.....	3.6-1
Regulatory Setting.....	3.6-2
Impact Analysis.....	3.6-2
Significance Criteria	3.6-2
Methodology & Assumptions	3.6-3
Summary of impacts.....	3.6-3
Impacts and Mitigation Measures.....	3.6-3
3.7 Geology, Soils, and Seismicity.....	3.7-1
Environmental Setting.....	3.7-1
Physical Setting.....	3.7-1
Regulatory Setting.....	3.7-13
Impact Analysis.....	3.7-14
Significance Criteria	3.7-14
Methodology & Assumptions	3.7-15
Summary of impacts.....	3.7-15
Impacts and Mitigation Measures.....	3.7-15
3.8 Hazardous Materials	3.8-1
Environmental Setting.....	3.8-1
Physical Setting.....	3.8-1
Regulatory Setting.....	3.8-2
Impact Analysis.....	3.8-7
Significance Criteria	3.8-7
Methodology & Assumptions	3.8-8
Summary of Impacts	3.8-8

Impacts and Mitigation Measures.....	3.8-8
3.9 Noise	3.9-1
Environmental Setting.....	3.9-1
Physical Setting.....	3.9-1
Regulatory Setting.....	3.9-3
Impact Analysis.....	3.9-6
Significance Criteria	3.9-6
Methodology & Assumptions	3.9-6
Summary of Impacts	3.9-6
Impacts and Mitigation Measures.....	3.9-7
3.10 Parks, Open Space, and Recreation	3.10-1
Environmental Setting.....	3.10-1
Physical Setting.....	3.10-1
Regulatory Setting.....	3.10-5
Impact Analysis.....	3.10-5
Significance Criteria	3.10-5
Methodology & Assumptions	3.10-6
Summary of Impacts	3.10-6
Impacts and Mitigation Measures.....	3.10-6
3.11 Public Services and Safety	3.11-1
Environmental Setting.....	3.11-1
Physical Setting.....	3.11-1
Regulatory Setting.....	3.11-14
Impact Analysis.....	3.11-14
Significance Criteria	3.11-14
Methodology & Assumptions	3.11-15
Summary of Impacts	3.11-16
Impacts and Mitigation Measures.....	3.11-16

3.12 Visual Resources	3.12-1
Environmental Setting.....	3.12-1
Physical Setting.....	3.12-1
Regulatory Setting.....	3.12-1
Impact Analysis.....	3.12-2
Significance Criteria	3.12-2
Methodology & Assumptions	3.12-2
Summary of Impacts	3.12-2
Impacts and Mitigation Measures.....	3.12-3
3.13 Water Resources and Flooding.....	3.13-1
Environmental Setting.....	3.13-1
Physical Setting.....	3.13-1
Regulatory Setting.....	3.13-4
Impact Analysis.....	3.13-7
Significance Criteria	3.13-7
Methodology & Assumptions	3.13-7
Summary of Impacts	3.13-8
Impacts and Mitigation Measures.....	3.13-8
4 Analysis of Alternatives	
4.1 Background of Alternatives Development.....	4-1
Alternatives Initially Considered.....	4-1
Alternatives Not Carried Forward in EIR Analysis	4-2
4.2 Description of Alternatives	4-3
Alternative 1: Jobs/Housing Balance.....	4-3
Alternative 2: Environmental Balance	4-4
Alternative 3: Constrained Urban Limit Line and Transit Priority.....	4-4
No Project Alternative.....	4-4
Comparison of Alternatives.....	4-13
4.3 Comparative Impact Analysis.....	4-14

	Air Quality	4-14
	Land Use.....	4-15
	Transportation	4-17
	Biological Resources	4-26
	Cultural Resources.....	4-26
	Energy Use and Utilities.....	4-28
	Geology, Soils, and Seismicity.....	4-28
	Hazardous Materials	4-29
	Noise.....	4-30
	Parks, Open Space, and Recreation	4-30
	Public Services and Safety	4-32
	Visual Resources.....	4-37
	Water Resources and Flooding.....	4-38
4.4	Environmentally Superior Alternative.....	4-38
5	CEQA Required Conclusions	
5.1	Significant Unavoidable Environmental Impacts.....	5-1
5.2	Irreversible Environmental Changes.....	5-1
	Water Consumption	5-2
	Energy Sources.....	5-2
	Construction-Related Impacts.....	5-2
5.3	Growth-Inducing Impacts.....	5-2
	Projected Growth	5-2
	Increase in Regional Housing Demand	5-3
	Jobs/Housing Balance.....	5-3
5.4	Cumulative Impacts.....	5-4
5.5	Impacts Found Not to Be Significant.....	5-5
6	Bibliography	
7	Report Authors	

Appendix A: Notice of Preparation (NOP)

Appendix B: NOP Comments

Appendix C: Description of Map Units

Appendix D: Special Status Species Considered in the Evaluation of the Concord General Plan Update EIR

Appendix E: Location of Leaking Underground Storage Tanks (LUST)

List of Tables

Table E-1: Households, Population, and Jobs at Buildout.....	E-4
Table E-2: Comparison of Buildout of Proposed General Plan and Alternatives	E-6
Table E-3: Summary of Impacts and Proposed General Policies that Reduce the Impact	E-8
Table 2.4-1: Standards for Density and Development Intensity	2-16
Table 2.5-1: General Plan Land Use Acreage at Plan Buildout.....	2-17
Table 2.5-2: Households, Population, and Jobs at Buildout	2-18
Table 2.5-3: Jobs per Employed Residents Ratios	2-19
Table 3.1-1: State and National Criteria Air Pollutant Standards, Effects and Sources.....	3.1-4
Table 3.1-2: Attainment Status of the Bay Area for State and National Ambient Air Quality Standards	3.1-5
Table 3.1-3: Air Quality Data Summary (2000 – 2004) for the Project Area	3.1-11
Table 3.1-4: Summary of Ozone Data for the San Francisco Bay Area Air Basin (1995 – 2004)	3.1-12
Table 3.1-5: Clean Air Plan TCMs to be Implemented by Local Governments.....	3.1-19
Table 3.1-6: BAAQMD Recommended Buffer Zone Distances for Potential Odor Sources	3.1-23
Table 3-2-1: Existing Land Use Acres.....	3.2-2
Table 3.2-2: Acreage of Farmland Types in the Concord Planning Area.....	3.2-5
Table 3.2-3: Correspondence of Generalized Land Use Categories to Current and Proposed Designations.....	3.2-14
Table 3.3-1: Level of Service Definitions	3.3-2
Table 3.3-2: LOS and Volume-to-Capacity Ratio for Free-Flow Speed at 70 mi/h	3.3-4
Table 3.3-3: LOS and Density thresholds for Merge and Diverge Areas	3.3-4
Table 3.3-4: Signalized Intersection Level of Service Definitions.....	3.3-5
Table 3.3-5: Annual Average Daily Volumes For Service Levels on Roadway Segments...	3.3-6
Table 3.3-6: Existing Freeway Segment Operations (2005)	3.3-7
Table 3.3-7: Existing Freeway Ramp Operations (2005)	3.3-8
Table 3.3-8: Existing Roadway Segment Operations (2002).....	3.3-9

Table 3.3-9: Existing Intersection Operations.....	3.3-11
Table 3.3-10: Daily Vehicle-Trip Generation.....	3.3-19
Table 3.3-11: Daily Vehicle Trips and Vehicle Miles of Travel for Buildout Conditions	3.3-19
Table 3.3-12: Freeway Segment Operations	3.3-21
Table 3.3-13: Ramp Operations	3.3-22
Table 3.3-14: Roadway Segment Operations	3.3-24
Table 3.3-15: Signalization Intersections Operations	3.3-25
Table 3.3-16: Freeway Speeds and Delay Index	3-3.26
Table 3.5-1: City of Concord Designated Historic Sites and Structures.....	3.5-5
Table 3.7-1: Active Faults near City of Concord.....	3.7-4
Table 3.7-2: Modified Mercalli Intensity Scale	3.7-8
Table 3.9-1: Proposed General Plan Land Use Acreages by Noise Contour	3.9-8
Table 3.9-2: Opportunity Sites by Land Use Acreages and Noise Contour.....	3.9-8
Table 3.9-3: Alternative 1 Helipad Noise Contours - Acres of Planned Land Use within each Noise Contour Range.....	3.9-11
Table 3.9-4: Alternative 2 Helipad Noise Contours - Acres of Planned Land Use within each Noise Contour Range.....	3.9-11
Table 3.10-1: Existing Public Parks and Recreation Facilities.....	3.10-2
Table 3.10-2: Summary of Existing Parks and Recreation Facilities.....	3.10-5
Table 3.10-3: Summary of Proposed Park and Recreation Facilities at Buildout of General Plan	3.10-7
Table 3.11-1: Existing Public Schools in Concord (2005-2006)	3.11-2
Table 3.11-2 Treated Water Sales by Customer Class (Ccf).....	3.11-6
Table 3.11-3: Existing Base Wastewater Flow for Concord.....	3.11-6
Table 3.11-4: Concord Solid Waste Disposal	3.11-7
Table 3.11-5: Concord Solid Waste Diversion Rates	3.11-8
Table 3.11-6: Fire Stations serving Concord	3.11-10
Table 3.11-7: CCCFD Response Times (2004)	3.11-10
Table 3.11-8: Police Stations Located within Concord.....	3.11-12

Table 3.11-9: Student Generation Assumptions.....	3.11-15
Table 3.11-10: Education Level Breakdowns Assumptions.....	3.11-15
Table 3.11-11: Student Projections Based on Household Type.....	3.11-16
Table 3.11-12: Student Population at Buildout	3.11-17
Table 3.11-13: Estimated Water Demand for Concord.....	3.11-18
Table 3.11-14: Concord’s Base Wastewater Flow at Buildout.....	3.11-20
Table 3.11-15: Additional Police Officers Needed for Buildout	3.11-23
Table 3.12-1: Hillside Viewsheds in Concord Planning Area.....	3.12-3
Table 3.13-1: Beneficial Uses of Waterbodies within Suisun Basin.....	3.13-5
Table 4.2-1: Comparison of Buildout of Proposed General Plan and Alternatives	4-3
Table 4.2-2: Comparison of Buildout to Existing (2006) Conditions:	
Proposed General Plan and Alternatives	4-13
Table 4.3-1: Comparison of Population, Jobs, Vehicle Miles, and Vehicle Trip Ends	4-15
Table 4.3-2: Comparison of Land Use Buildout for Alternatives	4-16
Table 4.3-3: Daily Vehicle-Trip Generation.....	4-17
Table 4.3-4: Daily Vehicle Trips and Vehicle Miles of Travel for Buildout Conditions.....	4-18
Table 4.3-5: Freeway Segment Operations (2030)	4-21
Table 4.3-6: Ramp Operations (2030)	4-22
Table 4.3-7: Roadway Segment Operations (2030)	4-24
Table 4.3-8: Intersection Levels of Service (2030).....	4-25
Table 4.3-9: Comparison of Parkland Demand at Buildout	4-31
Table 4.3-10 New Demand for Public Schools at Buildout.....	4-33
Table 4.3-11: Estimated Water Demand for Concord at Buildout.....	4-34
Table 4.3-12: Concord Base Wastewater Flow at Buildout.....	4-35
Table 4.3-13: New Demand for Police Facilities at Buildout.....	4-37
Table 4.4-1: Comparison of Impacts	4-40
Table 5-1: Jobs per Employed Residents Ratios	5-4

List of Figures

Figure 2-1: Regional Location.....	2-3
Figure 2-2: Planning Area Boundaries	2-4
Figure 2-3: Proposed Urban Limit Line.....	2-5
Figure 2-4: Urban Area General Plan Land Use Diagram.....	2-11
Figure 3.2-1: Existing Land Use.....	3.2-3
Figure 3.2-2: Soils of Farming Significance	3.2-7
Figure 3.2-2: Redevelopment Area	3.2-9
Figure 3.3-1: Existing Roadway System.....	3.3-3
Figure 3.3-2: Transit Routes.....	3.3-12
Figure 3.3-3: Planned Roadway Improvements	3.3-18
Figure 3.4-1: Vegetation and Habitat.....	3.4-3
Figure 3.4-2: Special Status Species and Ecologically Significant Areas	3.4-9
Figure 3.5-1: Historic Resources.....	3.5-7
Figure 3.7-1: Quaternary Geologic Materials.....	3.7-2
Figure 3.7-2: Regional Faults.....	3.7-3
Figure 3.7-3: Local Geologic and Seismic Hazards.....	3.7-5
Figure 3.7-4: Slopes	3.7-11
Figure 3.8-1: Hazardous Materials	3.8-3
Figure 3.9-1: Typical Sound Levels.....	3.9-2
Figure 3.9-2: Future Noise Contours with Helipad.....	3.9-4
Figure 3.9-3: Buchanan Field Airport Noise Contours	3.9-5
Figure 3.10-1: Existing and Proposed Parks and Recreation Facilities.....	3.10-3
Figure 3.11-1: Existing Schools	3.11-3
Figure 3.11-2: Wildfire Hazards	3.11-9
Figure 3.11-3: Health and Safety Services	3.11-11
Figure 3.12-1: Viewsheds	3.12-5
Figure 3.13-1: Flood Zones	3.13-3
Figure 4-1: Alternative I	4-5

Figure 4-2: Alternative 2	4-7
Figure 4-3: Alternative 3	4-9
Figure 4-4: No Project Alternative	4-11

Executive Summary

This Draft Environmental Impact Report (EIR) evaluates the potential impacts of the proposed City of Concord General Plan and Urban Limit Line. The proposed Plan was developed in response to policy direction provided by the City Council and the Planning Commission as well as community concerns identified through an extensive public participation and outreach program, including newsletters, community workshops and public meetings in 2003-2006. The City of Concord is the “lead agency” for this EIR, as defined by the California Environmental Quality Act (CEQA). As the lead agency, the City is required to evaluate the potential effects of the Plan in an EIR.

An EIR is intended to inform decision-makers and the general public of the potential significant environmental impacts of a proposed project. The EIR also identifies mitigation measures to minimize significant impacts and evaluates reasonable alternatives to the proposed project that may reduce or avoid one or more significant environmental effects. These alternatives must include a “No Project” alternative that represents the result of not implementing the project and a range of reasonable alternatives to the project, which would feasibly attain most of the basic objectives but would avoid or substantially lessen any of the significant effects of the project. Based on the alternatives analysis, an environmentally superior alternative is identified.

This EIR is a program EIR that examines the potential effects resulting from implementing designated land uses and policies in the proposed General Plan, as well as a new Urban Limit Line for the city. The impact assessment evaluates the General Plan as a whole and identifies the broad, regional effects that may occur with its implementation. As a programmatic document, this EIR does not assess site-specific impacts. Any future development project made possible by the General Plan will be subject to individual, site-specific environmental review, as required by State law.

E.1 PROPOSED PROJECT

The proposed Concord 2030 Urban Area General Plan is intended to replace the existing General Plan, which was last updated in 1994. The General Plan is composed of goals, policies, a land use diagram, and other graphic figures and maps (e.g. open space systems, a transportation network, and public facilities) to guide future development within the City’s boundaries, through the year 2030.

Throughout this document, the term “proposed Concord 2030 Urban Area General Plan” is used interchangeably with “General Plan,” “proposed Plan” or the “proposed project.”
CEQA Guidelines 15126.6(a)

Concord is located in central Contra Costa County. The City is bordered by the communities of Clayton, Pittsburg, Pleasant Hill and Walnut Creek and unincorporated areas of Contra Costa County. The north and east sides of the City are surrounded by open space and agricultural areas.

The Plan includes the seven elements required by State law, including Land Use, Transportation/Circulation, Housing, Open Space, Conservation, Noise, and Safety. It also includes three optional elements, including Economic Vitality, Growth Management, Parks, Public Facilities and Utilities. However, the Housing Element was updated separately in 2003 and is not part of the current General Plan revision, nor is it analyzed in this Draft EIR.

KEY FEATURES OF THE PROPOSED GENERAL PLAN

Based on the planning objectives that were set forth, nine key features emerged as the General Plan took shape. These initiatives are large-scale themes that address the planning objectives. The maps and policies in the General Plan are structured around these key initiatives.

- *Integrating economic development into the General Plan.* The new Economic Vitality Element brings the City's Economic Vitality Strategy into the General Plan and underscores the City's goals for fiscal health, a strong regional center, a vibrant Downtown, and retail strength.
- *Protecting community assets.* The Plan renews the City's commitment to protect and enhance its community assets, including quiet communities with distinctive character, a strong sense of community, a diverse population, high quality building design, convenient shopping, broad choice in employment and entertainment, a family atmosphere with excellent recreational activities, and job opportunities close to where people live.
- *Supporting mixed use development and transit-supportive land uses around the BART station and along commercial corridors with bus service.* The Plan promotes mixed use development around the BART station and along arterial streets on underused retail sites to create more vitality in these commercial corridors. Adjacent neighborhoods will be protected by buffering standards to avoid adverse impacts.
- *Protecting ridgelines, visible hillsides and significant environmental resources.* With the extended planning area, Plan policies are intended to protect ridgelines, visible hillsides and other significant natural resource areas from development that would have adverse environmental or visual impacts.
- *Creating a safe and efficient multi-modal transportation system.* The Plan establishes a comprehensive set of principles and policies to enhance the existing system and promote a well-integrated and coordinated transit network and safe and convenient pedestrian and bicycle circulation. With the November 2004 passage of Measure J, the City has access to additional funding for transportation improvements to serve planned development. The City also will work with the Bay Conservation and Development Commission and the Metropolitan Transportation Commission to ensure continued deep-water access to the

Concord Naval Weapons Station and will continue to support use of Buchanan Field Airport for regional and local aviation needs.

- *Preserving and enhancing environmental resources.* Plan policies call for an interconnected open space system, restoration of degraded resources, protection of creeks and wetlands, and water conservation.
- *Providing effective disaster response and planning.* A significant new initiative will be preparation of a Local Hazards Mitigation Plan, consistent with the guidelines for the Federal Emergency Management Agency and the Disaster Act of 2000.
- *Planning for environmental justice.* The City will plan for the equitable distribution of community facilities and services to meet the needs of all segments of the population and provide services for special needs that increase and enhance the community's quality of life while avoiding over-concentration in any one area.

These themes and the policies proposed to implement them are described in greater detail in Section 2 of this EIR.

ESTIMATED BUILDOUT OF THE PROPOSED GENERAL PLAN

Full development under the General Plan is referred to as “buildout.” Although the General Plan applies a 23-year planning horizon that is generally based on regional population and employment projections, the Plan is not intended to specify or anticipate when buildout will actually occur; nor does the designation of a site for a certain use necessarily mean the site will be built/redeveloped with that use in the next 23 years. The Land Use Element of the proposed General Plan provides a more detailed analysis of General Plan buildout.

The proposed General Plan designates an Urban Limit Line (ULL) on the General Plan Land Use Diagram and includes policies for its establishment and administration in the Growth Management Element. The ULL is intended to be ratified by a vote of the people and, if approved, would be in force until March 31, 2034 – the sunset date for Measure J.

Residential Development

Approximately 43,980 households currently exist in the Concord Planning Area. The General Plan is intended to accommodate an additional 6,580 households. General Plan buildout would result in approximately 50,560 households in the Concord Planning Area.

Buildout Population

As shown in **Table ES-1**, the Concord Planning Area would accommodate a population of approximately 142,210 people at buildout, an increase of about 14 percent over the current estimated population, or 17,770 new residents. Over a 23-year period, this represents an average

annual growth rate of 0.6 percent, a lower rate than that experienced by the City over the last 25 years, which was about 0.7 percent.

Table ES-1: Households, Population, and Jobs at Buildout¹

	Existing (2006)	Additional	Buildout (2030)	Percent Increase	Annual Growth Rate
Population ²	124,440	17,770	142,210	14%	0.6%
Housing Units	46,290	6,930	53,220	15%	0.6%
Households ³	43,980	6,580	50,560	15%	0.6%
Jobs ⁴	60,890	27,910	88,800	46%	1.6%

1. All numbers rounded to the nearest tenth.

2. Buildout population was calculated assuming 2.7 persons per household.

3. Households are estimated as 95 percent of the total housing units, assuming a 5 percent vacancy rate.

4. Existing 2006 jobs were calculated using the average annual growth rate assumed by ABAG for 2005-2010: 1.13%.

Source: Department of Finance: Projections, 2006; ABAG 2005 Projections: 2006; City of Concord, Dyett and Bhatia: 2006.

Buildout Employment

Concord will accommodate approximately 88,800 jobs at buildout, an increase of about 46 percent. The total additional employment accommodated by the proposed Urban Area General Plan is about 27,910 jobs. Over a 23-year period, this represents an average annual growth rate of 1.6 percent, less than half the rate experienced by the City over the previous 25 years, which was approximately 3.4 percent.

E.2 ALTERNATIVES TO THE PROPOSED GENERAL PLAN

The following alternatives are described and evaluated in this EIR:

Alternative 1: Jobs/Housing Balance

The development concepts proposed in this alternative focus on infill development within existing neighborhoods and commercial corridors, and in the Central Area (Downtown) as the primary activity center. This alternative also would allow for more intensive land uses in areas with underutilized or vacant parcels. However, in general, new development would be consistent with established development patterns in the city. New commercial space would be accommodated in the more intensive Downtown core, as well as redevelopment or reuse of older commercial strip centers. Small-scale neighborhood commercial uses would also be allowed as part of mixed-use developments along commercial corridors. Design standards would ensure new residential development does not compromise neighborhood preservation. This alternative would have the same Urban Limit Line (ULL) and planned transportation network as the proposed General Plan.

Alternative 2: Environmental Balance

The development concepts proposed in this alternative are intended to promote more compact development and foster more mixed-use development within the existing urban area. This alternative incorporates the principles and land use proposal outlined in the Shaping Our Future 2003 Vision Plan—the collaborative regional planning project of the cities in Contra Costa County. This alternative would have the same Urban Limit Line (ULL) as in the proposed General Plan and the same planned transportation network.

Alternative 3: Constrained Urban Limit Line and Transit Priority

Under this alternative, the Urban Limit Line (ULL) within the inland portion of the CNWS would be established along Mt. Diablo Creek, thereby reducing the size of Concord’s planned urban area by 4,572 acres, or 20 percent, from 23,275 acres to 18,703 acres. The objective would be to protect permanently the Los Medanos hills and adjacent land to the east of the creek from urbanization over the term of Measure J, the Transportation Expenditure Plan for the Countywide Transportation Plan and Growth Management Program approved by the voters in November 2004. The constrained ULL would be submitted for voter approval and would extend through March 2034, with only minor boundary adjustments not to exceed a total of 30 acres allowed over the life of the ULL.

Within the existing urban area of Concord, Alternative 3 would be paired with the mixed-use and infill development concepts of Alternative 2. Compared to the proposed General Plan and other alternatives, this alternative would result in same growth as Alternative 2 but include improved transit services to reduce trips and support alternative modes of transportation. Daily vehicle trips would shift from auto to transit and non-motorized modes, such as walking and bicycling.

No Project Alternative

Consideration of the No Project alternative is required by CEQA in all EIRs and represents the continuation of the current City of Concord General Plan land use designations. In the absence of the proposed General Plan, the existing General Plan and zoning would continue to guide development in the Planning Area. The No Project alternative would not include establishment of a ULL by Concord.

A detailed comparison of alternatives and associated impacts is provided in Chapter 4 of this EIR.

Estimates of the buildout population for each alternative are based on the total number of housing units and on the average household size projected by ABAG (2.7 persons per unit). Estimates of the buildout employment for each alternative are based on the total amount of non-residential floor area and on the typical amount of floor area needed to accommodate each employee by type of activity (office, retail, industrial, etc.). **Table ES-2** shows the buildout estimates of each alternative.

Table ES-2: Comparison of Buildout of Proposed General Plan and Alternatives

Alternative	Housing Units	Jobs	Households	Employed Residents	Jobs/Emp. Residents Ratio
Proposed GP	53,220	88,800	50,560	75,840	1.17
Alternative 1	53,250	78,360	50,590	75,890	1.03
Alternative 2	49,220	81,180	46,760	70,140	1.16
Alternative 3	49,220	81,180	46,760	70,140	1.16
No Project	47,200	80,340	44,840	67,260	1.19

Note: For projected buildouts, households equal 95% of the total housing units (assumes a 5% vacancy rate). Numbers rounded to the nearest tenth.

Source: Dyett and Bhatia, 2006.

E.3 AREAS OF CONTROVERSY

Although there are no areas of controversy, there are several potential significant transportation effects associated with the proposed General Plan that are significant and unavoidable. Other potentially significant effects will require mitigation (see **Table ES-3**). Impacts in the issue areas of parks, cultural resources, wastewater treatment, and water resources require mitigation to ensure that protective measures are in place to reduce or avoid potentially significant impacts.

No feasible mitigation measures have been identified that would reduce impact to freeway and freeway ramps to a level that is less than significant. Increasing freeway capacity by adding lanes would not be feasible because of the high cost, the negative impacts on air quality, and other factors. Adding lanes is inconsistent with the policies of the responsible regional agencies. As noted previously, MTC’s regional transportation plan makes no commitments to widen freeway facilities in the county. The emphasis is on maintaining an enhancing the exiting and supporting multimodal solutions, and no funding for funding for freeway widening over the planning horizon for this General Plan Update. Furthermore, implementation of the proposed Urban Area General Plan would result in freeway speeds and delays on several segments that are below the Action Plan TSOs

E.4 SUMMARY OF IMPACTS & ENVIRONMENTALLY SUPERIOR ALTERNATIVE

Table ES-3 presents the summary of the proposed General Plan impacts identified in the EIR and the proposed General Plan policies and mitigation measures that reduce these impacts. Detailed discussions of the impacts and proposed policies that would reduce impacts are in Chapter 3. The significance of each impact with implementation of the proposed General Plan policies is also shown in **Table ES-3**. The level of significance is determined by comparing the impact to the significance criteria described in Chapter 3.

Based on the comparative analysis in Chapter 4 of this Draft EIR, and setting aside the No Project alternative (as provided by CEQA), Alternative 3 is identified as the environmentally superior alternative. This determination is based on the fact that the proposed project, compared to the

Executive Summary

proposed General Plan and other “build” alternatives, would result in less environmental impacts due to lower population and job growth as well as a constrained ULL. These two factors would reduce potential impacts in most resource areas, such as air quality, biological resources, energy use, noise, water resources, as well as a reduced threat of geologic and flooding hazards. However, Alternative 3 does not meet the city’s long term housing and economic development needs nor the proposed General Plan’s objectives related to the mix and balance of land uses. This alternative also limits opportunities for open space and environmental conservation within the ULL.

Table ES-3: Summary of Impacts and Proposed General Policies that Reduce the Impact

Impact	Significance	Proposed General Policies and Mitigation Measures that Reduce the Impact	Significance after Mitigation
<p>Air Quality</p> <p>3.1-1 New development under the proposed General Plan and within the proposed Urban Limit Line could increase population and vehicle miles traveled in the area at a rate greater than that assumed in regional air quality planning and therefore conflict with the implementation of the Bay Area CAP.</p>	<p>Less than Significant</p>	<p>Policy S-1.1.3: Cooperate with the Bay Area Air Quality Management District in the review of land use proposals to address typical air quality problems.</p> <p>Policy S-1.1.4: Provide input and assistance to the Bay Area Air Quality Management District's development and implementation of regional air quality strategies.</p> <p>Policy S-1.2.1: Promote pedestrian, bicycle, and transit modes of travel to reduce air pollutant emissions from automobiles.</p> <p>Policy S-1.2.2: Encourage establishment of Transportation Demand Management (TDM) programs at major employment sites and shopping centers, including provision of preferential carpool parking and car share programs, bicycle lockers, BART shuttles, and jitney service.</p> <p>Policy S-1.2.3: Support the expansion and improvement of local and regional transit systems and ridesharing programs.</p> <p>Policy S-1.3.1: Encourage provisions for compatible live/work arrangements and telecommuting in residential areas.</p> <p>Policy S-1.3.2: Promote infill development to reduce automobile travel.</p> <p>Policy S-1.3.3: Support transit-oriented development to reduce automobile travel.</p> <p>Policy T-1.1.2: Continue to promote a wide variety of transportation alternatives and modes to serve all residents and businesses to enhance the quality of life.</p> <p>Policy T-1.1.9: Establish efficient linkages to the regional transportation system for all modes of travel</p> <p>Policy T-1.3.4: Coordinate with Caltrans and transit providers to identify and implement Park and Ride sites.</p> <p>Policy T-1.4.1: Coordinate with public transportation agencies to facilitate safe, efficient and convenient access to transit.</p> <p>Policy T-1.4.2: Work with public transportation agencies to ensure adequate transit service.</p> <p>Policy T-1.5.1: Plan linkages to minimize walking distance and enhance the pedestrian experience.</p> <p>Policy T-1.5.2: Use innovative and effective walkway features to enhance the pedestrian</p>	<p></p>

Table ES-3: Summary of Impacts and Proposed General Policies that Reduce the Impact

Impact	Significance	Proposed General Policies and Mitigation Measures that Reduce the Impact	Significance after Mitigation
3.1-2 The proposed General Plan could be inconsistent with the Transportation Control Measures in the 2005 Bay Area Ozone Strategy.	Less than Significant	<p>environment.</p> <p>Policy T-1.5.3: Facilitate pedestrian circulation near high activity centers.</p> <p>Policy T-1.5.4: Encourage new development to provide pedestrian connections to adjacent open spaces, and trails.</p> <p>Policy T-1.6.1: Implement strategies and actions for enhanced bicycle circulation throughout the City.</p> <p>Policy T-1.6.2: Require provision of bicycle facilities in new developments, where appropriate.</p> <p>Policy T-1.6.3: Encourage transit operators to provide adequate bicycle accommodations.</p> <p>Policy T-1.6.4: Encourage new development to provide bicycle access to parks, schools, and transit stops in the design of new residential neighborhoods.</p> <p>Policy LU-1.3.3 Support higher density and mixed use development in Downtown and near transit centers and corridors.</p> <p>Policy LU-4.2.3 Promote pedestrian-oriented urban design.</p>	
	Less than Significant	<p>Promote pedestrian, bicycle, and transit modes of travel to reduce air pollutant emissions from automobiles.</p> <p>Policy S-1.2.1: Encourage establishment of Transportation Demand Management (TDM) programs at major employment sites and shopping centers, including provision of preferential carpool parking and car share programs, bicycle lockers, BART shuttles, and jitney service.</p> <p>Policy S-1.2.3: Support the expansion and improvement of local and regional transit systems and ridesharing programs.</p> <p>Policy T-1.3.4: Coordinate with Caltrans and transit providers to identify and implement Park and Ride sites</p> <p>Principle T-1.6: Provide a Safe and Comprehensive Bicycle Network.</p> <p>Policy T-1.6.1: Implement strategies and actions for enhanced bicycle circulation throughout the City.</p> <p>Policy T-1.6.2: Require provision of bicycle facilities in new developments, where appropriate.</p> <p>Policy T-1.6.3 Encourage transit operators to provide adequate bicycle accommodations.</p>	

Table ES-3: Summary of Impacts and Proposed General Policies that Reduce the Impact

Impact	Significance	Proposed General Policies and Mitigation Measures that Reduce the Impact	Significance after Mitigation
		<p>Policy T-1.6.4: Encourage new development to provide bicycle access to parks, schools, and transit stops in the design of new residential neighborhoods.</p> <p>In addition, Policies S-1.2.1 and S-1.2.2, included above, would also serve to ensure compliance with this measure.</p> <p>Policy T-1.1.1: Maintain streets at optimal levels to provide safe and efficient travel.</p> <p>Policy T-1.1.3: Maintain and upgrade transportation systems to provide smooth flow of traffic, minimize vehicle emissions, and save energy.</p> <p>Policy T-1.1.7: Develop and operate a circulation system that directs the flow of traffic on residential streets to arterial streets.</p> <p>Policy T-1.1.8: Designate specific truck routes to provide for movement of goods throughout the City.</p> <p>Policy T-1.1.9: Establish efficient linkages to the regional transportation system for all modes of travel.</p> <p>Policy T-1.1.10: Coordinate traffic signal systems with abutting jurisdictions.</p> <p>Policy S-1.1.1: Maintain and upgrade traffic control systems to provide for a safe and smooth flow of traffic, emphasizing commute route signal synchronization and vehicle emissions reductions.</p> <p>Principle S-1.1: Integrate Air Quality Goals into Local Planning and Development Review.</p> <p>Policy S-1.1.1: Maintain and upgrade traffic control systems to provide for a safe and smooth flow of traffic, emphasizing commute-route signal synchronization and vehicle emissions reductions.</p> <p>Policy S-1.1.2: Site projects in locations and/or in a manner that will reduce air pollution exposure of sensitive receptors.</p> <p>Policy S-1.1.3: Cooperate with the Bay Area Air Quality Management District in the review of land use proposals to address typical air quality problems, including windblown particulates, mechanical equipment exhaust, and ventilation of parking garages.</p> <p>Policy S-1.1.4: Provide input and assistance to the Bay Area Air Quality Management District's development and implementation of regional air quality strategies.</p> <p>Policy T-1.2.1: Schedule public transportation improvement projects in the Capital Improvement</p>	

Table ES-3: Summary of Impacts and Proposed General Policies that Reduce the Impact

Impact	Significance	Proposed General Policies and Mitigation Measures that Reduce the Impact	Significance after Mitigation
		<p>Program and Transportation Improvement Program.</p> <p>Policy T-1.2.2: Continue Off-site Street Improvement Programs (OSIP) to fund transportation improvements and traffic control system upgrades.</p> <p>Principle T-1.5: Provide Safe and Convenient Pedestrian Circulation.</p> <p>Policy T-1.5.1: Plan linkages to minimize walking distance and enhance the pedestrian environment.</p> <p>Policy T-1.5.2: Use innovative and effective walkway features to enhance the pedestrian environment.</p> <p>Policy T-1.5.3: Facilitate pedestrian circulation near high activity centers.</p> <p>Policy T-1.5.4: Encourage new development to provide pedestrian connections to adjacent open spaces, and trails.</p> <p>Policy S-1.2.1: Promote pedestrian, bicycle, and transit modes of travel to reduce air pollutant emissions from automobiles.</p> <p>Policy LU-1.2.4: Encourage neighborhood retail and service uses within convenient walking distance of all residential neighborhoods, where feasible.</p> <p>Policy LU-4.2.3: Promote pedestrian-oriented urban design.</p> <p>Policy T-1.1.14: Continue to implement the City's Traffic Calming Program to enhance safety and livability on residential streets.</p> <p>Policy T-1.1.15: Prioritize funding improvements for designated truck routes parallel to school routes, or are in close proximity to a school, to ensure safe travel for pedestrians and bicyclists.</p>	
<p>3.1-3 Fugitive dust and other criteria pollutant emissions generated by construction and demolition activities under the proposed General Plan and within areas encompassed by</p>	<p>Less than Significant</p>	<p>Policy S-1.1.3: Cooperate with the Bay Area Air Quality Management District in the review of land use proposals to address typical air quality problems.</p>	

Table ES-3: Summary of Impacts and Proposed General Policies that Reduce the Impact

Impact	Significance	Proposed General Policies and Mitigation Measures that Reduce the Impact	Significance after Mitigation
<p>the Urban Limit Line could result in health and nuisance type impacts in the immediate vicinity of construction sites.</p>			
<p>3.1-4 Reuse and intensification could expose existing and proposed sensitive receptors to objectionable odors.</p>	<p>Less than Significant</p>	<p>Policy S-1.1.2: Site projects in locations and/or in a manner that will reduce air pollution exposure of sensitive receptors. Policy LU-1.1.4: Mitigate residential uses from impacts of more intensive land uses through good site planning and/or appropriate operational measures.</p>	
Land Use			
<p>3.2-1 The proposed ULL for Concord includes farmland that may be converted in the future.</p>	<p>Less than Significant</p>	<p>Policy LU-10.1.1: Encourage the County and adjacent cities to prohibit new development on designated ridgelines and in protected viewsheds, but allow appropriate beneficial and reasonable open space uses in these areas, subject to standards for viewshed protection to preserve the open space character of areas visible from Concord's neighborhoods and commercial districts. Policy LU-10.1.3: Work with the County and adjacent jurisdictions to ensure that zoning and subdivision regulations applicable to all development visible from within the City's Planning Area reflect General Plan Policy direction.</p>	
Transportation			
<p>3.3-1 Implementation of the proposed Urban Area General Plan would contribute to substandard freeway segment operations during the peak hours along I-680, SR-242 and SR-4</p>	<p>Significant</p>	<p>Policy GM-1.1.1: Develop an improved understanding of the relationship between land use and transportation through ongoing traffic impact analyses, participation in the updating of Regional Route Action Plans, and other programs implementing the growth management element. Policy GM-1.3.5: Continue to assist with multi-jurisdictional transportation planning by participating in activities of TRANSPAC including development of Action Plans for Routes of Regional Significance and cooperating in planning for intersections subject to Findings of Special Circumstances located in other jurisdictions when it is believed that local actions contribute to conditions at such intersections. Policy GM-1.3.6: Participate in the Contra Costa Transportation Authority's conflict resolution</p>	<p>Significant</p>

Table ES-3: Summary of Impacts and Proposed General Policies that Reduce the Impact

Impact	Significance	Proposed General Policies and Mitigation Measures that Reduce the Impact	Significance after Mitigation
<p>3.3-2 Implementation of the proposed Urban Area General Plan would contribute to substandard freeway ramp operations during the peak hours at freeway ramps on I-680.</p>	<p>Significant</p>	<p>process as needed to resolve disputes related to the development and implementation of Action Plans and other programs described in this Element.</p> <p>See policies listed for Impact 3.3-2.</p>	<p>Significant</p>
<p>3.3-3 Implementation of the proposed Urban Area General Plan would contribute to substandard roadway segment operations during the peak hours along Clayton Road, Galindo Street, Monument Boulevard, and Willow Pass Road.</p>	<p>Less than Significant with Mitigation</p>	<p>Policy GM-1.3.4: Include capital projects by the City necessary to maintain and improve traffic operations in the five-year Capital Improvement Program/Transportation Improvement Program (CIP/TIP). Funding sources for such projects as well as intended project phasing will be generally identified in the CIP.</p> <p>Policy T-1.1.1: Maintain streets at optimal levels to provide safe and efficient travel.</p> <p>Policy T-1.1.8: Designate specific truck routes to provide for movement of goods throughout the City.</p> <p>Policy T-1.2.1: Schedule public transportation improvement projects in the Capital Improvement Program and Transportation Improvement Program.</p> <p>Policy T-1.2.2: Continue Off-Site Street Improvement Programs (OSIP) to fund transportation improvements and traffic control system upgrades.</p> <p>Mitigation Measures</p> <p>3.3 (a) Establish a Transportation Performance Monitoring (TPM) program to work in concert with the City's Transportation Demand Management Program by establishing a vehicle trip end allocation program for new development in the Urban Area, with a maximum number of p.m. peak hour vehicle trips to be allowed by traffic analysis zone (TAZ). No development would be allowed to generate traffic that directly or cumulatively would exceed this number with certain exceptions to be defined in the implementing regulations. These trip end limits</p>	<p>Less than Significant</p>

Table ES-3: Summary of Impacts and Proposed General Policies that Reduce the Impact

Impact	Significance	Proposed General Policies and Mitigation Measures that Reduce the Impact	Significance after Mitigation
		<p>then will maintain levels of service as established in the Growth Management Element, with exceptions to be granted only for designated Infill Opportunity Zones, consistent with state law and CCTA's Congestion Management Program, and for development for which the City Council makes a Statement of Overriding Considerations. The City will maintain a "trip ledger" showing all site trips that have been approved for each TAZ, with allocations made on the basis of receipt of a Certificate of Reservation of Site Trips or a building permit application. The City Council will periodically review the trip generation rates and allowable adjustments and exceptions established for the TPM program and the trip allocations by TAZ and allow for recomputation of the maximum number of site trips allowed based on approved changes in trip generation rates or other approved adjustment factors. Details on how trip generation rates are established, how site trips are calculated, how the trip ledger is maintained, how exceptions are granted and what happens when unallocated site trips are unavailable will be included in the ordinance establishing the TPM.</p> <p>3.3 (b) Establish and fund a significant expansion of local bus transit service within the Urban Area to serve neighborhoods and employment centers as in-fill development occurs, with frequent, safe and inexpensive rides, convenient access, and service network linking BART, major employment centers and residential neighborhoods to Downtown, with the objective of achieving a minimum 30 percent reduction in peak hour SOV trips, which may be achieved by a combination of improved local transit, bikeways, and carpooling and other alternate modes. Funding would come from (1) the City's Policy and Procedure 144, Traffic Impact Analysis and Mitigation Requirements, which is modeled on CCTA's development mitigation program and is consistent with GM Policy 1.3.10 and 1.4.1 and (2) a Community Facilities District, tax-increment financing or other form of assessment financing, linkage fees, or impacts fees levied on CNVWS development to be established as part of base reuse planning, as described in Volume III of the General Plan.</p>	
<p>3.3-4 Implementation of the proposed Urban Area General Plan would contribute to substandard intersection operations during the peak hours at several</p>	<p>Less than Significant with Mitigation</p>	<p>Policy T-1.1.1.1: Maintain streets at optimal levels to provide safe and efficient travel. Policy T-1.1.1.3: Maintain and upgrade the transportation systems to provide smooth flow of traffic, minimize vehicle emissions, and save energy. Policy T-1.1.1.4: Provide that the level of service at intersections may be exceeded for new development within one-half mile of a BART station, or within one-quarter mile of a transit corridor, where appropriate. Policy T-1.1.1.10: Coordinate traffic signal systems with abutting jurisdictions.</p>	<p>Less than Significant</p>

Table ES-3: Summary of Impacts and Proposed General Policies that Reduce the Impact

Impact	Significance	Proposed General Policies and Mitigation Measures that Reduce the Impact	Significance after Mitigation
		<p>Mitigation Measures</p> <p>See 3.3(a) and 3.3(b), above, which will reduce impacts to a level that is less than significant.</p>	
<p>3.3-5 Implementation of the proposed Urban Area General Plan would result in freeway speeds and delays on several segments that are below the Action Plan TSOs.</p>	<p>Significant</p>		<p>Significant</p>
<p>3.3-6 Implementation of the proposed Urban Area General Plan would result in increased transit ridership and increased transit service.</p>	<p>Beneficial</p>	<p>Policy E-3.1.5: Promote transit-oriented development and activities that take advantage of nearby transit services, such as BART, bus services, and Buchanan Field Airport.</p> <p>Policy LU-4.2.9: Designate land around the Downtown BART Station as identified in the Downtown Strategic Plan as an “infill opportunity zone” and offer incentives for regional office uses, residential, and mixed uses such as reduced parking, to support use of mass-transit, especially within walking distance of the Downtown BART station.</p> <p>Policy T-1.1.2: Continue to promote a wide variety of transportation alternatives and modes to serve all residents and businesses to enhance the quality of life.</p> <p>Policy T-1.3.2: Allow flexible parking standards for developments within one-half mile of a BART station and one-quarter mile of a public parking facility, where appropriate.</p> <p>Policy T-1.3.4: Coordinate with Caltrans and transit providers to identify and implement Park and Ride sites.</p> <p>Policy T-1.4.1: Coordinate with public transportation agencies to facilitate safe, efficient, and convenient access to transit.</p> <p>Policy T-1.4.2: Work with public transportation agencies to ensure adequate transit service.</p> <p>Policy T-1.6.4: Encourage new development to provide bicycle access to parks, schools, and transit stops in the design of new residential neighborhoods.</p> <p>Policy T-1.8.2: Protect the existing railroad rights-of-way wherever feasible for future local and region-wide rail service and transit connections.</p> <p>Policy LU-1.1.5.1: Designate the North Concord BART station area as an “infill opportunity zone” to</p>	

Table ES-3: Summary of Impacts and Proposed General Policies that Reduce the Impact

Impact	Significance	Proposed General Policies and Mitigation Measures that Reduce the Impact	Significance after Mitigation
<p>3.3-7 Implementation of the proposed Urban Area General Plan would increase bicycle use and provide new bicycle facilities.</p>	<p>Beneficial</p>	<p>qualify for exemptions from adopted transportation level of service standards in this area.</p> <p>Policy T-1.1.1.2 Continue to promote a wide variety of transportation alternatives and modes to serve all residents and businesses to enhance the quality of life.</p> <p>Policy T-1.1.1.14 Continue to implement the City's Traffic Calming Program to enhance safety and livability on residential streets.</p> <p>Policy T-1.6.1: Implement strategies and actions for enhanced bicycle circulation throughout the City.</p> <p>Policy T-1.6.2: Require provision of bicycle facilities in new developments, where appropriate.</p> <p>Policy T-1.6.3: Encourage transit operators to provide adequate bicycle accommodations.</p> <p>Policy T-1.6.4: Encourage new development to provide bicycle access to parks, schools, and transit stops in the design of new residential neighborhoods.</p>	
<p>3.3-8 Implementation of the proposed Urban Area General Plan would increase pedestrian activity and provide new pedestrian facilities.</p>	<p>Beneficial</p>	<p>Policy LU-1.1.1.6: Ensure an interconnected street and pedestrian circulation network serving the needs of pedestrians, bicyclists, and other non-motorized forms of transportation, and that functionally and physically integrates the various land use activities within the City as well as provides access to the Bay Area's regional trails and bicycle systems.</p> <p>Policy LU-4.2.3: Promote pedestrian-oriented urban design.</p> <p>Policy LU-4.2.4: Encourage new and redevelopment projects to include amenities for public benefit, such as affordable housing, pedestrian-oriented facilities, and historic preservation.</p> <p>Policy T-1.1.2 Continue to promote a wide variety of transportation alternatives and modes to serve all residents and businesses to enhance the quality of life.</p> <p>Policy T-1.1.14 Continue to implement the City's Traffic Calming Program to enhance safety and livability on residential streets.</p> <p>Policy T-1.5.1: Plan linkages to minimize walking distance and enhance the pedestrian experience.</p> <p>Policy T-1.5.2: Use innovative and effective walkway features to enhance the pedestrian environment.</p> <p>Policy T-1.5.3: Facilitate pedestrian circulation near high activity centers.</p> <p>Policy T-1.5.4: Encourage new development to provide pedestrian connections to adjacent open</p>	

Table ES-3: Summary of Impacts and Proposed General Policies that Reduce the Impact

Impact	Significance	Proposed General Policies and Mitigation Measures that Reduce the Impact	Significance after Mitigation
<p>3.3-9 Implementation of the proposed Urban Area General Plan would promote the development of port and rail service.</p>	<p>Beneficial</p>	<p>spaces, and trails.</p> <p>Advocate the maintenance of deep water channels at a depth that keeps ocean vessel use viable from San Francisco to Concord.</p> <p>Protect the existing railroad rights-of-way wherever feasible for future local and region-wide rail service and transit connections.</p> <p>Ensure adequate roadway transportation linkages from the port and rail facilities to the regional transportation network.</p> <p>Plan for only job-producing uses in the port area, and do not allow any residential development.</p>	
<p>Biological Resources</p>			
<p>3.4-1 New development under the proposed Urban Area General Plan could result in substantial adverse effect, either directly or through habitat modifications, on special status species.</p>	<p>Less than Significant</p>	<p>Policy POS-3.2.1: Preserve bay marshes, wetlands, and tidal areas adjacent to Suisun Bay and other wetlands and creeks in the Planning Area as open space.</p> <p>Policy POS-3.4.1: Conserve wildlife habitat and wildlife corridors, including seasonal migration routes.</p> <p>Policy POS-3.4.2: Protect rare, threatened, or endangered species and their habitats through the use of the environmental review process and in accordance with State and Federal law.</p> <p>Project-level environmental review will assess the potential impact of proposed development on special-status species and sensitive natural communities and could require adequate mitigation measures and monitoring to ensure protection of sensitive biological resources.</p> <p>Policy POS-3.4.5: Coordinate with appropriate regulatory and trustee agencies to enhance protection of special status species and sensitive natural communities.</p> <p>Coordination with regulatory and trustee agencies will include, but is not limited to the California Department of Fish and Game, U.S. Fish and Wildlife Service, and the Regional Water Quality Control Board.</p> <p>Policy POS-3.4.6: Avoid construction-related activities during breeding and nesting seasons for special status species.</p> <p>Project-related activities within sensitive habitat of special status species will generally not be allowed during the breeding season or season of greatest effect on their survival. If project activities cannot avoid the breeding season or the season of</p>	

Table ES-3: Summary of Impacts and Proposed General Policies that Reduce the Impact

Impact	Significance	Proposed General Policies and Mitigation Measures that Reduce the Impact	Significance after Mitigation
<p>3.4-2 New development under the proposed Urban Area General Plan could result in substantial and adverse impacts on riparian habitat.</p>	<p>Less than Significant</p>	<p>greatest potential effect, the project applicant will have to arrange for surveys of any special status species within 500 feet of the project area and follow applicable trustee agency protocol for species protection.</p> <p>Policy POS-3.4.7: Promote habitat restoration in areas of special status species.</p> <p>The City will coordinate with appropriate agencies and the community to improve habitat restoration efforts, both on and off-site, throughout the Planning Area, and will include special status species habitat restoration requirements in the Zoning Ordinance.</p>	
<p>3.4-3 Implementation of the Urban Area General Plan could result in filling of wetlands and other waters, including open water associated with Suisun Bay, perennial and seasonal wetlands, ponds, creeks, and other drainages.</p>	<p>Less than Significant</p>	<p>Policy POS-3.1.1: Enhance and maintain the natural values of creeks and major drainage ways.</p> <p>Policy POS-3.1.2: Preserve native riparian vegetation and wildlife, and establish riparian corridors along all creeks.</p> <p>Policy POS-3.1.3: Require adequate building setbacks for development adjacent to creek banks and major drainage ways to protect neighboring properties from erosion and flooding.</p> <p>Policy POS-3.2.1: Preserve bay marshes, wetlands, and tidal areas adjacent to Suisun Bay and other wetlands and creeks in the Planning Area as open space.</p> <p>Policy POS-3.1.1: Enhance and maintain the natural values of creeks and major drainage ways.</p> <p>Policy POS-3.1.2: Preserve native riparian vegetation and wildlife, and establish riparian corridors along all creeks.</p> <p>Policy POS-3.1.3: Require adequate building setbacks for development adjacent to creek banks and major drainageways to protect neighboring properties from erosion and flooding.</p> <p>Policy POS-3.1.7: Improve the quality of underground and surface waters in Concord through coordination with outside agencies.</p> <p>Policy POS-3.2.1: Preserve bay marshes, wetlands, and tidal areas adjacent to Suisun Bay and other wetlands and creeks in the Planning Area as open space.</p> <p>This policy is consistent with State and Federal “no net loss” policies for wetlands. Preservation mechanisms include the following:</p> <ul style="list-style-type: none"> • Avoidance of sensitive habitat areas; • Clustering of development away from wetlands; • Transfer of development rights for preservation of existing lands; and/or 	

Table ES-3: Summary of Impacts and Proposed General Policies that Reduce the Impact

Impact	Significance	Proposed General Policies and Mitigation Measures that Reduce the Impact	Significance after Mitigation
3.4-4 New development under the proposed Urban Area General Plan could result in harm to or removal of heritage trees.	Less than Significant	<p>Policy POS-3.4.3: Retain significant vegetation, including native vegetation and heritage trees, where feasible, and require replacement plantings as appropriate for mitigation.</p> <ul style="list-style-type: none"> • Compensatory in-kind mitigation; such as restoration or creation. 	
Cultural Resources			
3.5-1 New development designated for Urban Area, located outside of previously developed areas, has the potential to disrupt undiscovered archaeological resources.	Less than Significant	<p>Policy POS-4.1.2: Consult with the State Office of Historic Preservation with respect to managing impacts of development and land use on historic and archaeological resources.</p> <p>Policy POS-4.1.3: Preserve important historic and archaeological sites during new development, reuse, and intensification.</p> <p>Policy POS-4.1.4: In identified sensitive areas, require archaeological studies as part of the development review process.</p>	
3.5-2 New infill development within previously built up areas within the City has the potential to impact sites of local historic importance and the overall historic setting of downtown.	Less than Significant	<p>Policy LU-1.1.10: Ensure that new development in historic neighborhoods is compatible in scale and style to the character of that neighborhood, and encourage retention of historic buildings through flexible reuse provisions.</p> <p>Policy LU-4.2.4: Encourage new and redevelopment projects to include amenities for public benefit, such as affordable housing, pedestrian-oriented facilities, and historic preservation.</p> <p>Policy LU-4.2.8: Encourage preservation of historic buildings to the maximum extent feasible.</p> <p>Policy POS-4.1.1: Preserve all City, state, and federally designated historic sites and structures to the maximum extent feasible.</p>	
3.5-3 Implementation of the Urban Area General Plan could adversely affect unidentified paleontological resources.	Less than Significant with Mitigation	<p>Mitigation Measure</p> <p>3.5-3 All grading plans for development projects involving ground displacement shall include a requirement that in the event fossils are encountered, construction shall be temporarily halted, the Planning Division shall be notified immediately, a qualified paleontologist shall evaluate the fossils, and steps needed to photo-document or to recover the fossils shall be taken. If fossils are found during construction activities, grading in the vicinity shall be temporarily suspended while the fossils are evaluated for scientific significance and fossil recovery.</p>	Less than Significant

Table ES-3: Summary of Impacts and Proposed General Policies that Reduce the Impact

Impact	Significance	Proposed General Policies and Mitigation Measures that Reduce the Impact	Significance after Mitigation
Energy and Utilities			
<p>3.6-1 New development may result in wasteful, inefficient, or unnecessary consumption of energy by residential, commercial, industrial, or public uses.</p>	<p>Less than Significant</p>	<p>Policy E-3.1.2: Promote and support an urban, pedestrian-oriented environment that builds upon the proximity of Todos Santos Plaza, and high density resident and street retail uses.</p> <p>Policy E-3.1.5: Promote transit-oriented development and activities that take advantage of nearby transit services, such as BART, bus services, and Buchanan Field Airport.</p> <p>Policy LU-1.1.7: Upgrade the quality of new and existing multi-family housing by requiring high-quality design.</p> <p>Policy LU-1.2.4: Encourage neighborhood retail and service uses within convenient walking distance of all residential neighborhoods, where feasible.</p> <p>Policy LU-1.3.3: Support higher density and mixed use development in Downtown and near transit centers and corridors.</p> <p>Policy LU-3.1.5: Identify new areas for region-serving commercial uses at locations that take advantage of major transportation routes.</p> <p>Policy LU-3.1.6: Ensure the timely implementation of necessary infrastructure to support existing and new region-serving development.</p> <p>Policy LU-4.2.3: Promote pedestrian-oriented urban design.</p> <p>Policy LU-4.2.4: Encourage new and redevelopment projects to include amenities for public benefit, such as affordable housing, pedestrian-oriented facilities, and historic preservation.</p> <p>Policy LU-4.2.5: Provide incentives for the development of multiple anchor uses and mixed use development surrounding Todos Santos Plaza to attract retail clientele and encourage pedestrian activity.</p> <p>Policy LU-4.2.9: Designate land around the Downtown BART Station as identified in the Downtown Strategic Plan as an “infill opportunity zone” and offer incentives for regional office uses, residential, and mixed uses such as reduced parking, to support use of mass transit, especially within walking distance of the Downtown BART station.</p> <p>Policy LU-10.1.2: On any land to be annexed to the City, require new development to be clustered to reduce both environmental and visual impacts of hillside development.</p>	

Table ES-3: Summary of Impacts and Proposed General Policies that Reduce the Impact

<i>Impact</i>	<i>Significance</i>	<i>Proposed General Policies and Mitigation Measures that Reduce the Impact</i>	<i>Significance after Mitigation</i>
		<p>Policy GM-3.1.1: Evaluate the impact of proposed General Plan amendments on the availability of job and housing opportunities and the potential for reducing commute trips and average commute length.</p> <p>Policy GM-3.1.2: Support Concord's economic development programs and seek to attract high quality employment opportunities for local residents and other residing near local job centers.</p> <p>Policy GM-3.1.3: Consistent with Housing Element policies, give priority in the City's housing programs to providing opportunities for persons employed in local and nearby jobs.</p> <p>Policy GM-3.1.4: Accommodate home business uses that do not create residential neighborhood disruptions due to excessive traffic, parking, noise, pollution, odors, or unsightly storage or activities nor consistent with residential surroundings.</p> <p>Policy GM-3.3.1: Manage a Transportation Demand Management Program.</p> <p>Policy T-1.1.1: Maintain streets at optimal levels to provide safe and efficient travel.</p> <p>Policy T-1.1.2: Continue to promote a wide variety of transportation alternatives and modes to serve all residents and businesses to enhance the quality of life.</p> <p>Policy T-1.1.3: Maintain and upgrade transportation systems to provide smooth flow of traffic, minimize vehicle emissions, and save energy.</p> <p>Policy T-1.1.9: Establish efficient linkages to the regional transportation system for all modes of travel.</p> <p>Policy T-1.3.4: Coordinate with Caltrans and transit providers to identify and implement Park and Ride sites.</p> <p>Policy T-1.4.1: Coordinate with public transportation agencies to facilitate safe, efficient, and convenient access to transit.</p> <p>Policy T-1.4.2: Work with public transportation agencies to ensure adequate transit service.</p> <p>Policy T-1.5.1: Plan linkages to minimize walking distance and enhance the pedestrian environment.</p> <p>Policy T-1.5.2: Use innovative and effective walkway features to enhance the pedestrian environment.</p>	

Table ES-3: Summary of Impacts and Proposed General Policies that Reduce the Impact

Impact	Significance	Proposed General Policies and Mitigation Measures that Reduce the Impact	Significance after Mitigation
		<p>Policy T-1.5.3: Facilitate pedestrian circulation near high activity centers.</p> <p>Policy T-1.5.4: Encourage new development to provide pedestrian connections to adjacent open spaces, and trails.</p> <p>Policy T-1.6.1: Implement strategies and actions for enhanced bicycle circulation throughout the City.</p> <p>Policy T-1.6.2: Require provision of bicycle facilities in new developments, where appropriate.</p> <p>Policy T-1.6.3: Encourage transit operators to provide adequate bicycle accommodations.</p> <p>Policy T-1.6.4: Encourage new development to provide bicycle access to parks, schools, and transit stops in the design of new residential neighborhoods.</p> <p>Policy S-1.2.1: Promote pedestrian, bicycle and transit modes of travel to reduce air pollutant emissions from automobiles.</p> <p>Policy S-1.2.2: Encourage establishment of Transportation Demand Management (TDM) programs at major employment sites and shopping centers, including provision of preferential carpool parking and car share programs, bicycle lockers, BART shuttles, and jitney service.</p> <p>Policy S-1.2.3: Support the expansion and improvement of local and regional transit systems and ridesharing programs.</p> <p>Policy S-1.3.1: Encourage provisions for compatible live/work arrangements and telecommuting in residential areas.</p> <p>Policy S-1.3.2: Promote infill development to reduce automobile travel.</p> <p>Policy S-1.3.3: Support transit-oriented development to reduce automobile travel.</p> <p>Policy PF-1.4.1: Require new development to coordinate with all utility providers to assure quality services to all residents and businesses throughout the community.</p> <p>Policy PF-1.5.2: Promote the importance of recycling industrial and construction wastes.</p> <p>Policy POS-3.6.1: Encourage sustainable building practices for new development and the remodeling of existing buildings.</p>	
3.6-2 Future development may require the construction	Less than Significant	<p>PF-1.5.2: Promote the importance of recycling industrial and construction wastes.</p> <p>POS-3.6.1: Encourage sustainable building practices for new development and the remodeling</p>	

Table ES-3: Summary of Impacts and Proposed General Policies that Reduce the Impact

Impact	Significance	Proposed General Policies and Mitigation Measures that Reduce the Impact	Significance after Mitigation
<p>of additional energy infrastructure facilities, the construction of which could cause significant environmental effects.</p>		<p>Policy LU-1.1.7: Upgrade the quality of new and existing multi-family housing by requiring high-quality design.</p>	
<p>3.6-3 Future development may result in a substantial increase in transportation energy consumption due to the projected increases in peak hour trips associated with future population and employment growth.</p>	<p>Less than Significant</p>	<p>Policy E-3.1.5: Promote transit-oriented development and activities that take advantage of nearby transit services, such as BART, bus services, and Buchanan Field Airport.</p> <p>Policy LU-1.2.4: Encourage neighborhood retail and service uses within convenient walking distance of all residential neighborhoods, where feasible.</p> <p>Policy LU-1.3.3: Support higher density and mixed use development in Downtown and near transit centers and corridors.</p> <p>Policy LU-3.1.5: Identify new areas for region-serving commercial uses at locations that take advantage of major transportation routes.</p> <p>Policy LU-4.2.3: Promote pedestrian-oriented urban design.</p> <p>Policy LU-4.2.9: Designate land around the Downtown BART Station as identified in the Downtown Strategic Plan as an “infill opportunity zone” and offer incentives for regional office uses, residential, and mixed uses such as reduced parking, to support use of mass-transit, especially within walking distance of the Downtown BART station.</p> <p>Policy GM-3.1.1: Evaluate the impact of proposed General Plan amendments on the availability of job and housing opportunities and the potential for reducing commute trips and average commute length.</p> <p>Policy GM-3.1.4: Accommodate home business uses that do not create residential neighborhood disruptions due to excessive traffic, parking, noise, pollution, odors, or unsightly storage or activities nor consistent with residential surroundings.</p> <p>Policy GM-3.3.1: Manage a Transportation Demand Management Program.</p> <p>Policy T-1.1.1: Maintain streets at optimal levels to provide safe and efficient travel.</p> <p>Policy T-1.1.2: Continue to promote a wide variety of transportation alternatives and modes to serve all residents and businesses to enhance the quality of life.</p>	

Table ES-3: Summary of Impacts and Proposed General Policies that Reduce the Impact

Impact	Significance	Proposed General Policies and Mitigation Measures that Reduce the Impact	Significance after Mitigation
		<p>Policy T-1.1.3: Maintain and upgrade transportation systems to provide smooth flow of traffic, minimize vehicle emissions, and save energy.</p> <p>Policy T-1.1.9: Establish efficient linkages to the regional transportation system for all modes of travel.</p> <p>Policy T-1.4.1: Coordinate with public transportation agencies to facilitate safe, efficient, and convenient access to transit.</p> <p>Policy T-1.4.2: Work with public transportation agencies to ensure adequate transit service.</p> <p>Policy T-1.6.1: Implement strategies and actions for enhanced bicycle circulation throughout the City.</p> <p>Policy T-1.6.2: Require provision of bicycle facilities in new developments, where appropriate.</p> <p>Policy T-1.6.3: Encourage transit operators to provide adequate bicycle accommodations.</p> <p>Policy T-1.6.4: Encourage new development to provide bicycle access to parks, schools, and transit stops in the design of new residential neighborhoods.</p> <p>Policy S-1.2.1: Promote pedestrian, bicycle and transit modes of travel to reduce air pollutant emissions from automobiles.</p> <p>Policy S-1.2.2: Encourage establishment of Transportation Demand Management (TDM) programs at major employment sites and shopping centers, including provision of preferential carpool parking and car share programs, bicycle lockers, BART shuttles, and jitney service.</p> <p>Policy S-1.2.3: Support the expansion and improvement of local and regional transit systems and ridesharing programs.</p> <p>Policy S-1.3.1: Encourage provisions for compatible live/work arrangements and telecommuting in residential areas.</p> <p>Policy S-1.3.2: Promote infill development to reduce automobile travel.</p> <p>Policy S-1.3.3: Support transit-oriented development to reduce automobile travel.</p>	
3.6-4 The delineation of the ULL may result in adverse impacts on energy use.	Less than Significant	Policy GM-4.1.1: Delineate an ULL in the General Plan Land Use Diagram that is an area within which urban development will occur. For purposes of this policy, “urban development” means development requiring one of more basic municipal services, including, but not limited to, water service, sewer service, improved storm drainage	

Table ES-3: Summary of Impacts and Proposed General Policies that Reduce the Impact

Impact	Significance	Proposed General Policies and Mitigation Measures that Reduce the Impact	Significance after Mitigation
Geology, Soils, Seismicity, and Mineral Resources			
<p>3.7-1 In the event of a major earthquake in the region of Concord, surface fault rupture and seismic ground shaking could potentially injure people and cause collapse or structural damage to existing and proposed structures. Fault-rupture and ground shaking could potentially expose people and property to seismic-related hazards, including localized liquefaction and related ground failure.</p>	<p>Less than Significant with Mitigation</p>	<p>Policy S-3.1.1: Require as part of the development review process a thorough evaluation of geologic-seismic and soils conditions and risks.</p> <p>Policy S-3.1.2: Require all new development to design structures and buildings pursuant to applicable state and local standards and codes.</p> <p>Policy S-3.1.3: Require geologic studies to be conducted on all structures, including those not for human occupancy, located above and below ground whenever a project is located within an Earthquake Fault Zone as identified by the California Geologic Service.</p> <p>Policy S-3.1.4: Ensure that the design of roads, pipelines and other public facilities and utilities that cross the Concord Fault accommodate the effects of tectonic creep.</p> <p>Policy S-3.1.5: Cooperate with appropriate government agencies and public and private organizations to address seismic hazards.</p> <p>Policy S-3.2.3: Require soils and geologic hazards analysis and mitigation as part of development project review.</p> <p>Policy S-3.2.4: Regulate all development, including remodeling or structural rehabilitation, to assure adequate mitigation of safety hazards on sites having a history or threat of slope instability, erosion, subsidence, ground failure, ground rupture, and/or liquefaction.</p> <p>Policy S-7.1.3: Establish public and private partnerships and cooperate with other emergency providers to deliver safe and effective emergency response.</p> <p>Policy S-8.1.1: Maintain an ongoing program for disaster response, including participation in all aspects of emerging, new high-technology solutions.</p> <p>Policy S-8.1.2: Coordinate disaster response planning with surrounding cities, agencies, and Contra Costa County.</p> <p>Policy S-8.1.3: Work with critical use facilities (i.e., hospitals, schools, public assembly facilities, transportation services) to assure that they can provide alternative sources of electricity, water, and sewerage in the event that regular utilities are interrupted in a disaster.</p>	<p>Less than Significant</p>

Table ES-3: Summary of Impacts and Proposed General Policies that Reduce the Impact

Impact	Significance	Proposed General Policies and Mitigation Measures that Reduce the Impact	Significance after Mitigation
3.7-2 Development under the proposed General Plan could be subjected to geologic hazards, including expansive soils, landslides, differential settlement and erosion.	Less than Significant	<p>Policy S-8.1.4: Implement the City's Local Hazards Mitigation Plan, consistent with the guidelines of the Federal Emergency Management Agency (FEMA) and the Disaster Act of 2000, and seek funding under FEMA's Hazard Mitigation Grant Program.</p> <p>Mitigation Measures</p> <p>3.7(a) General Plan Policy S-3.2.4, which requires regulation of development to assure adequate mitigation of safety hazards on sites subject to seismic hazards, shall be amended to incorporate the potential threat of a tsunami.</p>	
		<p>Policy LU-1.1.1: Encourage the County and adjacent cities to prohibit new development on designated ridgelines and in protected viewsheds, but allow appropriate beneficial and reasonable open space uses in these areas, subject to standards for viewshed protection that will preserve the open space character of areas that are visible from Concord's neighborhoods and commercial districts.</p> <p>Policy LU-10.1.3: Work with the County and adjacent jurisdictions to ensure that zoning and subdivision regulations applicable to all development visible from within the City's planning area reflect General Plan Policy direction.</p> <p>Actions the City will request of the County and adjacent jurisdictions include:</p> <ul style="list-style-type: none"> • Designating protected ridgelines, creeks, and other significant resource areas, along with daylight plane or setback standards; • Defining protected viewsheds; and • Designating growth limits and clustering provisions for very low-density hillside residential development based on slope and elevation to ensure viewshed protection. <p>Policy LU-10.1.4: Minimize cut-and-fill of natural hillsides.</p> <p>Policy POS-1.2.1: Implement strategies and actions associated with the design, development, and operation of multi-purpose trails as contained in the Trails Master Plan.</p> <p>Policy S-3.1.1: Require as part of the development review process a thorough evaluation of geologic-seismic and soils conditions and risks.</p> <p>Policy S-3.1.2: Require all new development to design structures and buildings pursuant to applicable State and local standards and codes.</p> <p>Policy S-3.2.1: Require all development on hillsides where the grade exceeds 15 percent to submit</p>	

Table ES-3: Summary of Impacts and Proposed General Policies that Reduce the Impact

Impact	Significance	Proposed General Policies and Mitigation Measures that Reduce the Impact	Significance after Mitigation
		<p>a hillside development plan that demonstrates contoured grading techniques to ensure that buildings, streets, and drives can be accommodated safely with a minimum amount of grading.</p> <p>Policy S-3.2.2: Do not allow development on hillsides with slopes over 30 percent.</p> <p>Policy S-3.2.3: Require soils and geologic hazards analysis and mitigation as part of development project review.</p> <p>Policy S-3.2.4: Regulate all development, including remodeling or structural rehabilitation, to assure adequate mitigation of safety hazards on sites having a history or threat of slope instability, erosion, subsidence, ground failure, ground rupture, and/or liquefaction.</p> <p>Policy S-3.2.5: Control erosion of graded areas with revegetation or other acceptable methods.</p>	
3.7-3 Development under the General Plan could restrict development of mineral resources.	Less than Significant	<p>Policy POS-3.5.1: Encourage conservation of valuable mineral resources and provide substantial protection of significant mineral deposits, consistent with the City's other land use goals.</p> <p>Policy POS-3.5.2: Regulate extraction and consumption of mineral resources in accordance with applicable State law.</p> <p>Policy POS-3.5.3: Prohibit residential land uses within the mineral resource impacts areas containing mineral deposits of state-wide or regional significance as determined by the California State Mining and Geology Board.</p> <p>Policy POS-3.5.4: Preserve significant mineral resource areas in open space areas.</p> <p>Policy POS-3.5.5: Require future development in the vicinity of significant mineral resources to be planned and designed to minimize conflict between mineral extraction activities and neighboring land uses.</p>	
Hazardous Materials			
3.8-1 Development on land impacted by petroleum hydrocarbons or other chemical constituents, or demolition of existing buildings containing	Less than Significant	<p>Policy S-5.1.1: Coordinate with the Contra Costa County Department of Environmental Health, and other appropriate regulatory agencies' review of proposals at sites, which may have toxic contamination or include hazardous materials use.</p> <p>Policy S-5.1.2: Coordinate review with the appropriate water provider and/or water quality agency for proposals proximate to water canals, pipelines, or reservoirs that</p>	

Table ES-3: Summary of Impacts and Proposed General Policies that Reduce the Impact

Impact	Significance	Proposed General Policies and Mitigation Measures that Reduce the Impact	Significance after Mitigation
<p>hazardous building materials, could expose people or the environment to hazardous conditions.</p>		<p>include handling potentially hazardous materials.</p> <p>Policy S-5.1.3: Control the transport of hazardous materials to minimize potential hazards to the local population.</p> <p>Policy S-5.1.4: Require appropriate clean-up of all former commercial and industrial sites prior to reuse according to relevant State and Federal regulatory agencies.</p> <p>Policy S-5.1.5 Coordinate with appropriate regulatory agencies during the review of any proposed General Plan Amendment that relates to the Concord Naval Weapons Station to ensure that potential hazards and safety issues are adequately addressed and any risks to existing and future residents are fully mitigated.</p> <p>Mitigation Measure</p> <p>3.8(a) General Plan Policy S-5.1.1, which requires coordination with the Contra Costa County Department of Environmental Health and other appropriate regulatory agencies for review of proposals at sites which may be contaminated or include hazardous materials use, shall be supported by a commentary to clarify that this policy also will apply to sites which may contain structures that contain hazardous building materials such as lead-based paint, asbestos, and polychlorinated biphenyls (PCBs).</p>	
<p>3.8-2 Business and industrial expansion under the proposed General Plan could increase the volume of hazardous materials and hazardous wastes used and generated in Concord.</p>	<p>Less than Significant</p>	<p>Policy LU-7.2.4: Require new hospital facilities to be designed to assure that potential environmental hazards associated with medical care are managed properly.</p> <p>Policy T-1.1.8: Designate specific truck routes to provide for movement of goods throughout the City.</p> <p>Policy S-5.1.1: Coordinate with the Contra Costa County Department of Environmental Health, and other appropriate regulatory agencies' review of proposals at sites, which may have toxic contamination or include hazardous materials use.</p> <p>Policy S-5.1.2: Coordinate review with the appropriate water provider and/or water quality agency for proposals proximate to water canals, pipelines, or reservoirs that include handling potentially hazardous materials.</p> <p>Policy S-5.1.3: Control the transport of hazardous materials to minimize potential hazards to the local population.</p> <p>Policy PF-1.5.3: Prepare and distribute informational handouts to the public regarding opportunities</p>	

Table ES-3: Summary of Impacts and Proposed General Policies that Reduce the Impact

Impact	Significance	Proposed General Policies and Mitigation Measures that Reduce the Impact	Significance after Mitigation
<p>3.8-3 The proposed General Plan, within the proposed Urban Limit Line, would increase the number of residents in Concord, likely resulting in an increased volume of hazardous materials being used and disposed of by households as a result of population expansion.</p>	<p>Less than Significant</p>	<p>to reduce waste at homes and businesses, as well as methods of safe disposal of hazardous materials.</p> <p>Implementation of the policies listed above would reduce this potential impact to less-than-significant levels.</p> <p>Policy PF-1.5.3: Prepare and distribute informational handouts to the public regarding opportunities to reduce waste at homes and businesses, as well as methods of safe disposal of hazardous materials.</p>	
Noise			
<p>3.9-1 New development under the proposed General Plan could expose persons to or generate noise levels in excess of 60 dB for low density single family, duplex, and mobile homes; 65 dB for residential multi-family and high density residential, mixed use, motels, and hotels; 70 dB for schools, libraries,</p>	<p>Less than Significant</p>	<p>Policy LU-1.1.5: Identify opportunities for public/private cooperation and City actions for the mitigation of noise, traffic, and other potential conflicts between commercial uses, multi-family residential, and single-family neighborhoods.</p> <p>Policy S-2.1.2: Require a noise study and mitigation measures for all projects that have noise exposure greater than “normally acceptable” levels.</p> <p>Policy S-2.1.4: Promote the use of noise attenuation measures to improve the acoustic environment inside residences where existing single-family residential development is located on an arterial street.</p> <p>Policy S-2.2.1: Provide for the mitigation of noise exposure in areas of the City exposed to noise levels in excess of the “normally acceptable” standards to the extent feasible.</p> <p>Policy S-2.2.4: Require new noise sources to use best available control technology (BACT) to minimize noise emissions.</p>	

Table ES-3: Summary of Impacts and Proposed General Policies that Reduce the Impact

Impact	Significance	Proposed General Policies and Mitigation Measures that Reduce the Impact	Significance after Mitigation
<p>churches, hospitals, nursing homes, playgrounds, neighborhood parks, and office buildings, business, commercial and professional uses; and 75 dB for golf courses, riding stables, water recreation, cemeteries, industrial, manufacturing utilities, and agriculture.</p>		<p>Policy S-2.2.5: Require developers to reduce the noise impacts of new development on adjacent properties through appropriate means. Policy LU-10.1.6: Ensure that any development between Evora Road and State Route 4 is setback from the edge of State Route 4 to mitigate visual and noise impacts.</p>	
<p>3.9-2 The proposed General Plan would potentially expose existing noise-sensitive uses to construction-related noise levels of groundborne vibration and noise.</p>	<p>Less than Significant</p>	<p>Policy S-2.2.5: Require developers to reduce the noise impacts of new development on adjacent properties through appropriate means.</p>	
<p>3.9-3 The General Plan would potentially increase ambient noise because of increased traffic volumes.</p>	<p>Less than Significant</p>	<p>Policy S-2.1.4: Promote the use of noise attenuation measures to improve the acoustic environment inside residences where existing single-family residential development is located on an arterial street. Policy S-2.2.5: Require developers to reduce the noise impacts of new development on adjacent properties through appropriate means.</p>	
<p>3.9-4 Existing and new development located on neighboring land uses near the John Muir Health, Concord Campus' proposed</p>	<p>Less than Significant</p>	<p>Policy S-2.1.2: Require a noise study and mitigation measures for all projects that have noise exposure greater than "normally acceptable" levels. Policy S-2.2.5: Require developers to reduce the noise impacts of new development on adjacent properties through appropriate means. Policy T-1.7.3: Allow helipads for emergency helicopter use at hospitals, and establish standards in the Zoning Ordinance for emergency helicopter landing and take-off facilities.</p>	

Table ES-3: Summary of Impacts and Proposed General Policies that Reduce the Impact

Impact	Significance	Proposed General Policies and Mitigation Measures that Reduce the Impact	Significance after Mitigation
<p>helipad facility will be subject to temporary increases in ambient noise levels.</p>			
Parks			
<p>3.10-1 Buildout of the proposed General Plan may result in up to 17,700 new residents, possibly resulting in a shortage of parks facilities by not meeting the General Plan standard of 5 acres per 1,000 new residents and an increase in the use of existing parks such that substantial physical deterioration of the facility would occur or be accelerated.</p>	<p>Less than Significant with Mitigation</p>	<p>Policy GM-2.1.1: Establish performance standards, to be maintained through capital projects, for the following facilities and service: a. <i>Parks</i>. Five acres of park per 1,000 residents. See, also, Policy POS-1.1.1, Parks, Open Space, and Conservation Element. Policy GM-2.1.2: Require new development to contribute to or participate in the establishment and improvement of parks, fire, police, sanitary sewer, water and flood control systems in proportion to the demand generated by project occupants and users. The City will manage a development mitigation program that ensures new development pays its share of the costs associated with the provision of facilities for parks, fire, police, sanitary facilities, water, and flood control. Policy T-1.6.4: Encourage new development to provide bicycle access to parks, schools, and transit stops in the design of new residential neighborhoods. Policy POS-1.1.1: Acquire and develop additional neighborhood and community parks to serve existing and future needs, at a ratio of 6 acres of park land per 1,000 residents. Policy POS-1.1.2: Provide a variety of recreation spaces and facilities to serve the needs of the community. Policy POS-1.1.3: Continue to acquire and/or redevelop new and innovative parklands as needs or opportunities arise. Policy POS-1.1.4: Secure and maintain parks and open space facilities consistent with the ability of the City to finance acquisition and their operation. Policy POS-1.1.6: Review infrastructure needs for existing and new recreational facilities, and where appropriate, identify required improvements in the City's Capital Improvement Program. Policy POS-1.2.1: Implement strategies and actions associated with the design, development, and operation of multi-purpose trails as contained in the Trails Master Plan.</p>	<p>Less than Significant</p>

Table ES-3: Summary of Impacts and Proposed General Policies that Reduce the Impact

Impact	Significance	Proposed General Policies and Mitigation Measures that Reduce the Impact	Significance after Mitigation
		<p>Policy POS-1.2.2: Work with proposed development projects to provide new linkages to existing trails and create new trails where feasible.</p> <p>Policy POS-1.3.1: Utilize closed or under-used public school sites for community recreation when feasible.</p> <p>Policy POS-1.3.2: Work with the Mt. Diablo Unified School District to provide use of school facilities after school and during summer months for community recreation uses.</p> <p>Policy POS-1.4.1: Encourage developers to provide for-profit regional recreation facilities.</p> <p>Policy POS-2.1.1: Acquire, preserve, and maintain open space for future generations.</p> <p>Policy POS-2.1.2: Participate in joint planning and implementation with the State of California Parks and Recreation Department, and other appropriate agencies to establish connections to Mt. Diablo State Park.</p> <p>Policy POS-2.1.3: Utilize the Trails Master Plan and Map to develop connections between open space areas.</p> <p>Policy POS-2.2.1: Design structures and facilities located within parks and open space areas to complement the natural setting and values of each site and adjacent lands.</p> <p>Policy POS-2.2.2: Strive to preserve open space in southeast Concord in order to expand the Lime Ridge Open Space area.</p> <p>Policy POS-2.2.3: Use open space where feasible to delineate an urban edge.</p> <p>Policy POS-2.2.4: Require degraded open space areas to be restored to an environmentally sustainable condition as part of development approval where these lands are proposed as permanent open space in new development.</p> <p>Policy POS-2.2.5: Protect the Mt. Diablo foothills, generally above 300 feet in elevation, and Los Medanos Hills as a valuable scenic asset, providing habitat for flora and fauna.</p> <p>Policy POS-2.2.6: Restore degraded open space owned by the City, including but not limited to habitat improvements and control of invasive plant species.</p> <p>Policy POS-2.3.1: Increase the regional trail, ridgeline, and hillside open space system in the City's Planning Area through joint efforts with East Bay Regional Park District, Contra Costa County, the Navy, U.S. Government, and nonprofit trustee agencies.</p> <p>Policy POS-2.3.2: Establish priorities for open space preservation in the City's Planning Area based</p>	

Table ES-3: Summary of Impacts and Proposed General Policies that Reduce the Impact

Impact	Significance	Proposed General Policies and Mitigation Measures that Reduce the Impact	Significance after Mitigation
		<p>on an evaluation of natural resources, viewsheds, wildlife habitats, and recreational opportunities.</p> <p>Mitigation Measure</p> <p>As part of General Plan implementation, the City will identify new park sites within the City limits to ensure that a minimum of 89 acres of park and recreation facilities be set aside for Concord residents through the parkland dedication process under the City's subdivision regulations or acquired by use of in lieu fees paid by subdividers. This will meet the parkland standard set in the Growth Management Element of the General Plan. Additionally, as part of implement of the City's long-term policy for new parkland, as expressed in the Parks and Open Space Element, the City intends to acquire a total of 217 acres of new parkland to meet the 6-acre standard by 2030.</p>	
Public Services and Safety			
<p>3-1.1.1 New development under the proposed General Plan will increase the demand for school facilities.</p>	<p>Less than Significant</p>	<p>Policy PF-2.1.1: Maintain and improve educational opportunities in Concord through cooperation with the Mt. Diablo Unified School District (MDUSD), private schools, California State University, community organizations, and the Contra Costa County library system.</p> <p>Policy PF-2.1.2: Work cooperatively with the MDUSD to ensure that sufficient land is identified and reserved to accommodate projected growth in the community.</p> <p>Policy PF-2.1.3: Cooperate with the MDUSD in planning for new school sites and facilities and coordinate infrastructure improvements to ensure compatibility with City plans.</p> <p>Policy PF-2.1.4: Partner with the MDUSD to optimize the joint use of school facilities for community use.</p> <p>Policy PF-2.1.5: Encourage the establishment of vocational school and other training programs to prepare Concord's citizens for employment, in addition to traditional educational opportunities.</p> <p>Policy PF-2.1.6: Ensure that future planning for the Concord Naval Weapons Station reserves adequate land for schools, churches, and community centers.</p> <p>Policy GM-2.1.1: Establish performance standards, to be maintained through capital projects, for the following facilities and service:</p>	

Table ES-3: Summary of Impacts and Proposed General Policies that Reduce the Impact

Impact	Significance	Proposed General Policies and Mitigation Measures that Reduce the Impact	Significance after Mitigation
3-1.1.2 New development under the proposed General Plan may increase the demand for water beyond available distribution capacity.	Less than Significant with Mitigation	<p>g. Public Education. Mount Diablo Unified School District provides public education services in Concord. The City supports the goals of the District pertaining to required instructional activities.</p> <p>Policy GM-2.1.2: Require new development to contribute to or participate in the establishment and improvement of parks, fire, police, sanitary sewer, water and flood control systems in proportion to the demand generated by project occupants and users. The City will manage a development mitigation program that ensures new development pays its share of the costs associated with the provision of facilities for parks, fire, police, sanitary facilities, water, and flood control..</p>	Less than Significant
3-1.1.3 New development may exceed wastewater treatment requirements of the San Francisco Bay Regional Water Quality Control Board (SFRWQCB).	Less than Significant	<p>In addition to Policy GM-2.1.2 listed previously, implementation on the following proposed General Plan policies would result in impacts that are less than significant.</p> <p>Policy PF-1.1.1: Coordinate with the Contra Costa Water District (CCWD) to provide an adequate and safe water supply.</p> <p>Policy PF-1.1.2: Encourage water conservation through City programs and cooperation with the CCWD.</p> <p>Policy GM-2.1.1: Establish performance standards, to be maintained through capital projects, for the following facilities and service:</p> <p>e. Water. The Contra Costa Water District provides water to Concord. The City supports the goals the District has adopted to meet federal and state standards.</p> <p>Policy PF-1.1.2: Encourage water conservation through City programs and cooperation with the CCWD.</p> <p>Policy PF-1.2.1: Operate and maintain the City-owned wastewater collection system, including transfer to Central Contra Costa Sanitary District for treatment and disposal.</p> <p>Policy PF-1.2.2: Reduce the need for sewer system improvements by requiring new development to incorporate water conservation measures.</p> <p>Policy PF-1.2.3: Cooperate with Central Contra Costa Sanitary District and other service providers to develop their wastewater reclamation program as a supplement to water supplies.</p>	Less than Significant

Table ES-3: Summary of Impacts and Proposed General Policies that Reduce the Impact

Impact	Significance	Proposed General Policies and Mitigation Measures that Reduce the Impact	Significance after Mitigation
		<p>Policy PF-1.4.1: Require new development to coordinate with all utility providers to assure quality services to all residents and businesses throughout the community.</p> <p>Policy PF-1.5.2: Promote the importance of recycling industrial and construction wastes.</p>	
<p>3-11.4 Solid waste levels are in non-compliance with the California Public Resources Code 50 percent diversion rates.</p>	<p>Less than Significant</p>	<p>Policy PF-1.5.1: Continue reduction and recycling efforts within the City to divert increasingly larger portions of the waste stream from local landfills.</p> <p>Policy PF-1.5.3: Prepare and distribute informational handouts to the public regarding opportunities to reduce waste at homes and businesses, as well as methods of safe disposal of hazardous materials.</p> <p>Policy PF-1.5.4: Require builders to incorporate adequate storage areas appropriately screened from the street for recyclables into new multifamily, commercial, and industrial structures.</p>	
<p>3-11.5 New development in the proposed General Plan requires police and fire protection services that exceed current staffing and facilities.</p>	<p>Less than Significant with Mitigation</p>	<p>Policy GM-2.1.1: Establish performance standards, to be maintained through capital projects, for the following facilities and service:</p> <ul style="list-style-type: none"> c. <i>Police.</i> 200 square feet of station per 1,000 residents. d. <i>Fire.</i> The Central Contra County Fire Protection District, which is governed by the County Board of Supervisors, provides fire protection for all residents and nonresidential developments in the Concord Planning Area. The City supports the county's goals to provide fire safety to the community. <p>Policy S-7.1.1: Evaluate the effects of new development on law enforcement service and take public safety issues into account when reviewing land use proposals.</p> <p>Policy S-7.1.2: Promote effective, community-oriented law enforcement.</p>	<p>Less than Significant</p>
<p>3-11.6 New development under the proposed General Plan requires additional emergency preparations in the event of an earthquake or other</p>	<p>Less than Significant</p>	<p>Policy T-1.7.1: Support Buchanan Field Airport use as a region and local serving airfield.</p> <p>Policy S-7.1.3: Establish public and private partnerships and cooperate with other emergency providers to deliver safe and effective emergency response.</p> <p>Policy S-8.1.4: Implement the City's Local Hazards Mitigation Plan, consistent with the guidelines of the Federal Emergency Management Agency (FEMA) and the Disaster Act of 2000, and seek funding under FEMA's Hazard Mitigation Grant Program.</p>	

Table ES-3: Summary of Impacts and Proposed General Policies that Reduce the Impact

Impact	Significance	Proposed General Policies and Mitigation Measures that Reduce the Impact	Significance after Mitigation
disaster.		<p>Policy GM-2.1.1: Establish performance standards, to be maintained through capital projects, for the following facilities and service:</p> <p>f. <i>Flood Control</i>. Flood control/drainage system capacity sufficient for the 50 year flood event (as determined by FEMA).</p>	
Visual Resources			
<p>3-12.1 Implementation of the General Plan has the potential to affect scenic vistas and views of Los Medanos hills.</p>	<p>Less than Significant</p>	<p>Policy E-5.1.1.2: Preserve an open space system that protects visual and natural resources.</p> <p>Policy LU-1.1.1.9: Preserve visible hillsides and open space areas through techniques such as cluster development or density transfers.</p> <p>Policy LU-4.2.6: Limit building heights for new structures in the blocks immediately adjacent to Todos Santos Plaza with an inclined daylight plane requiring upper-story setbacks to ensure sunlight access for public spaces. <i>This is the preferred approach for height limits around downtown squares. The total amount of floor area will be governed by the floor area ratio.</i></p> <p>Policy LU-1.1.1.4: Continue to implement development and design standards related to development in hillside areas addressing viewshed protection, open space preservation, grading impacts, and height and massing of structures.</p> <p>Policy LU-10.1.1: Encourage the County and adjacent cities to prohibit new development on designated ridgelines and in protected viewsheds, but allow appropriate beneficial and reasonable open space uses in these areas, subject to standards for viewshed protection that will preserve the open space character of areas that are visible from Concord's neighborhoods and commercial districts.</p> <p>Policy LU-10.1.2: On any land to be annexed to the City, require new development to be clustered to reduce both environmental and visual impacts of hillside development.</p> <p>Policy LU-10.1.3: Work with the County and adjacent jurisdictions to ensure that zoning and subdivision regulations applicable to all development visible from within the City's Planning Area reflect General Plan Policy direction. <i>Actions the City will request of the County and adjacent jurisdictions include:</i></p> <ul style="list-style-type: none"> • <i>Designating protected ridgelines, creeks, and other significant resource areas, along with</i> 	

Table ES-3: Summary of Impacts and Proposed General Policies that Reduce the Impact

Impact	Significance	Proposed General Policies and Mitigation Measures that Reduce the Impact	Significance after Mitigation
		<p>daylight plane or setback standards;</p> <ul style="list-style-type: none"> Defining protected viewsheds; and Designating growth limits and clustering provisions for very low-density hillside residential development based on slope and elevation to ensure viewshed protection. <p>Policy LU-10.1.1.6: Ensure that any development between Evora Road and State Route 4 is setback from the edge of State Route 4 to mitigate visual and noise impacts.</p> <p>Policy LU-10.1.1.8: Encourage the provision of wildlife corridors to ensure the integrity of habitat linkages and preserve the character of visible hillsides and open space.</p> <p>Policy LU-10.1.1.9: Oppose any expansion of the Urban Limit Line (ULL) that would allow development in protected viewsheds or on visible hillsides located within the City's Planning Area Boundary.</p> <p>While the City is not opposed to expansion of the County's ULL per se, the City would raise objections to any new development that results in visible development on slopes and hillsides areas within the City's Planning Area Boundary Area. The City will evaluate all development proposals by neighboring cities and the County within Concord's Planning Area Boundary to determine if there are potential visual impacts.</p> <p>Policy S-3.2.1: Require all development on hillsides where the grade exceeds 15 percent to submit a hillside development plan that demonstrates contoured grading techniques to ensure that buildings, streets, and drives can be accommodated safely with a minimum amount of grading.</p>	
<p>3.12-2 Future development projects could be of different intensity, size, and character than existing development and which could degrade the existing visual character of Concord.</p>	<p>Less than Significant</p>	<p>Policy LU-1.1.1 Support land use decisions that reinforce and capitalize on neighborhood strengths and benefit neighborhood identity and scale.</p> <p>Policy LU-1.1.2 Require new development in residential areas to preserve and enhance positive neighborhood characteristics. <i>This will be done by standards and review procedures included in the Zoning Ordinance.</i></p> <p>Policy LU-1.1.3 Ensure that the scale, operation, location, and other characteristics of community facilities, including parks, schools, childcare facilities, religious institutions, and other public and quasi-public facilities, enhance the character and quality of neighborhoods.</p>	

Table ES-3: Summary of Impacts and Proposed General Policies that Reduce the Impact

Impact	Significance	Proposed General Policies and Mitigation Measures that Reduce the Impact	Significance after Mitigation
		<p><i>This will be done through neighborhood planning following adoption of the General Plan.</i></p> <p>Policy LU-1.1.4 Mitigate residential uses from impacts of more intensive land uses through good site planning and/or appropriate operational measures. <i>Screening, landscaping, restrictions on driveway access, and limitations on hours of operation can help minimize adverse impacts.</i></p> <p>Policy LU-1.1.6: Prohibit conversion of residences backing onto roadways to commercial or office uses which would gain access or seek visibility from the roadways.</p> <p>Policy LU-1.1.7: Upgrade the quality of new and existing multi-family housing by requiring high-quality design. <i>Specific standards will be included in the Zoning Ordinance.</i></p> <p>Policy LU-1.1.8: Continue to support and promote housing conservation and home remodeling, expansion, and updating to maintain the quality of the housing stock. <i>Examples of the City programs that will be used are in the Housing Element.</i></p> <p>Policy LU-1.1.9: Preserve visible hillsides and open space areas through techniques such as cluster development or density transfers.</p> <p>Policy LU-1.3.2: Establish standards to address the transition between existing neighborhoods and new infill development.</p>	
<p>3.12-3 Implementation of the Concord 2030 Urban Area General Plan would protect Historic neighborhoods from incompatible development.</p>	<p>Beneficial</p>	<p>Policy LU-1.1.10: Ensure that new development in historic neighborhoods is compatible in scale and style to the character of that neighborhood, and encourage retention of historic buildings through flexible reuse provisions.</p> <p>Policy LU-4.2.4: Encourage new and redevelopment projects to include amenities for public benefit, such as affordable housing, pedestrian-oriented facilities, and historic preservation.</p> <p>Policy LU-4.2.6: Limit building heights for new structures in the blocks immediately adjacent to Todos Santos Plaza with an inclined daylight plane requiring upper-story setbacks to ensure sunlight access for public spaces.</p> <p>Policy LU-4.2.8: Encourage preservation of historic buildings to the maximum extent feasible.</p>	
<p>3.12-4 Development under the</p>	<p>Less than</p>	<p>Policy LU-8.1.1: Establish design standards that achieve the highest quality of building design and</p>	

Table ES-3: Summary of Impacts and Proposed General Policies that Reduce the Impact

Impact	Significance	Proposed General Policies and Mitigation Measures that Reduce the Impact	Significance after Mitigation
<p>proposed General Plan has the potential to adversely affect visual resources in the short-term during periods of construction by blocking or disrupting views.</p>	<p>Significant</p>	<p>materials. Policy LU-8.1.2: Establish design standards for mixed use projects that provide for a cohesive, well-integrated, functional development. Policy LU-8.1.3: Require new commercial development to provide comprehensive landscaping, including within hardscapes and parking lot areas. Policy LU-9.1.2: Require new development to provide and maintain right-of-way improvements along project frontages such as landscaping, street trees, and other amenities that enhance the streetscape appearance. Policy POS-2.2.4: Require degraded open space areas to be restored to an environmentally sustainable condition as part of development approval where these lands are proposed as permanent open space in new development.</p>	
<p>Water Resources</p>			
<p>3-13.1 New urban land uses and increased intensity of urban land uses could alter existing drainage patterns or increase storm water runoff rates, overwhelming storm drain capacity, decreasing groundwater recharge, and causing flooding in downstream receiving waters.</p>	<p>Less than Significant with Mitigation</p>	<p>Policy LU-8.2.3: Apply site planning techniques that minimize the amount of impervious paving, promote pedestrian safety, and reduce urban runoff in commercial centers. Policy LU-10.1.5: Ensure that developers incorporate natural creekways as open space amenities into the design of projects as a condition of approval. Policy POS-3.1.1: Enhance and maintain the natural values of creeks and major drainage ways. Policy POS-3.1.3: Require adequate building setbacks for development adjacent to creek banks and major drainage ways to protect neighboring properties from erosion and flooding. Policy POS-3.1.6: To the extent practical, preserve creeks in a natural condition while providing the need to convey storm water. Policy S-4.1.1: Manage development to ensure compliance with the City's Flood Management Ordinance and the City's Stormwater Management and Discharge Control Ordinance. Policy S-4.1.2: Establish engineering standards for constructing a storm drainage system to protect against loss of life and property and minimize risks of flooding. Policy S-4.1.3: Coordinate storm drainage management with appropriate agencies, including the County Flood Control and Water Conservation District, Regional Water Quality Control Board, Army Corps of Engineers, Department of Fish and Game, and with</p>	<p>Less than Significant</p>

Table ES-3: Summary of Impacts and Proposed General Policies that Reduce the Impact

Impact	Significance	Proposed General Policies and Mitigation Measures that Reduce the Impact	Significance after Mitigation
		<p>the Contra Costa Water District, in the vicinity of the Contra Costa Canal.</p> <p>Policy S-4.1.4: Design storm drainage facilities to meet the Contra Costa County Flood Control and Water Conservation District standards and ensure adequate and safe flow to minimize flooding.</p> <p>Policy PF-1.1.3: Coordinate with the San Francisco Bay Regional Water Quality Control Board to provide for the implementation of Storm Water Management Programs intended to protect receiving water sources from pollutants.</p> <p>Policy PF-1.3.5: Require new development to provide any needed storm drains that are not part of the City's master storm drain system and to incorporate features into site improvement plans to minimize surface runoff.</p> <p>Policy PF-1.3.6: Schedule master drainage improvement projects in the Capital Improvements Program.</p> <p>Policy PF-1.3.7: Maintain master storm drain system maps that identify locations where easements should be reserved for the eventual installation of pipes and structures to ensure appropriate storm drainage management.</p> <p>Policy PF-1.3.8: Continue the Drainage Area Fee Program to fund master storm drainage improvements.</p> <p>Policy PF-1.3.9: Ensure that new development provides needed drainage improvements in proportion to a project's impacts, to assure an equitable distribution of costs to construct and maintain the City's master storm drainage system.</p> <p>Mitigation Measure</p> <p>3.13(a) General Plan Policy S-4.1.2, which requires storm drainage systems be designed to protect against loss of life and property and minimize risks of flooding, shall be supported by commentary that explains that implementing regulations will need to incorporate specific adequate protection of structures located within a 100-year floodplain from flooding hazards.</p>	
3-13.2 New development within the proposed ULL may require the construction of new storm water	Less than Significant	<p>Policy PF-1.1.3: Coordinate with the San Francisco Bay Regional Water Quality Control Board to provide for the implementation of Storm Water Management Programs intended to protect receiving water sources from pollutants.</p>	

Table ES-3: Summary of Impacts and Proposed General Policies that Reduce the Impact

Impact	Significance	Proposed General Policies and Mitigation Measures that Reduce the Impact	Significance after Mitigation
<p>drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects.</p>		<p>Policy S-4.1.3: Coordinate storm drainage management with appropriate agencies, including the County Flood Control and Water Conservation District, Regional Water Quality Control Board, Army Corps of Engineers, Department of Fish & Game and with the Contra Costa Water District, in the vicinity of the Contra Costa Canal.</p> <p>Policy PF-1.3.5: Require new development to provide any needed storm drains that are not part of the City's master storm drain system and to incorporate features into site improvement plans to minimize surface runoff.</p> <p>Policy PF-1.3.6: Schedule master drainage improvement projects in the Capital Improvement Program.</p> <p>Policy PF-1.3.7: Maintain master storm drain system maps that identify locations where easements should be reserved for the eventual installation of pipes and structures to ensure appropriate storm drainage management.</p> <p>Policy PF-1.3.8: Continue the Drainage Area Fee Program to fund master storm drainage improvements.</p> <p>Policy PF-1.3.9: Ensure that new development provides needed drainage improvements in proportion to a project's impacts, to assure an equitable distribution of costs to construct and maintain the City's master storm drainage system.</p> <p>Policy PF-1.4.1: Require new development to coordinate with all utility providers to assure quality services to all residents and businesses throughout the community.</p>	
<p>3-1.4.3 New and increased intensity of urban land uses could result in increased levels of non-point source pollutants in storm water runoff, adversely affecting water quality in receiving water bodies.</p>	<p>Less than Significant</p>	<p>Policy LU-8.2.3: Apply site planning techniques that minimize the amount of impervious paving, promote pedestrian safety, and reduce urban runoff in commercial centers.</p> <p>Policy POS-3.1.1: Enhance and maintain the natural values of creeks and major drainage ways.</p> <p>Policy POS-3.1.2: Preserve native riparian vegetation and wildlife, and establish riparian corridors along all creeks.</p> <p>Policy POS-3.1.3: Require adequate building setbacks for development adjacent to creek banks and major drainage ways to protect neighboring properties from erosion and flooding.</p> <p>Policy POS-3.1.4: Support improvements along creeks in consultation and cooperation with creek restoration and design professionals.</p> <p>Policy POS-3.1.6: To the extent practical, preserve creeks in a natural condition while providing for</p>	

Table ES-3: Summary of Impacts and Proposed General Policies that Reduce the Impact

Impact	Significance	Proposed General Policies and Mitigation Measures that Reduce the Impact	Significance after Mitigation
		<p>the need to convey storm water.</p> <p>Policy POS-3.1.7: Improve the quality of underground and surface waters in Concord through coordination with outside agencies.</p> <p>Policy POS-3.2.1: Preserve bay marshes, wetlands, and tidal areas adjacent to Suisun Bay and other wetlands and creeks in the Planning Area as open space.</p> <p>Policy PF-1.1.3: Coordinate with the San Francisco Bay Regional Water Quality Control Board to provide for the implementation of Storm Water Management Programs intended to protect receiving water sources from pollutants.</p> <p>Policy S-4.1.3: Coordinate storm drainage management with appropriate agencies, including the County Flood Control and Water Conservation District, Regional Water Quality Control Board, Army Corps of Engineers, Department of Fish & Game and with the Contra Costa Water District, in the vicinity of the Contra Costa Canal.</p>	

I Introduction

This Program Environmental Impact Report (EIR) has been prepared on behalf of the City of Concord in accordance with the California Environmental Quality Act (CEQA). This chapter outlines the purpose of and overall approach to the preparation of the EIR on the proposed Concord 2030 Urban Area General Plan. Concord is the lead agency responsible for ensuring that the proposed General Plan complies with CEQA.

I.1 PURPOSE OF EIR

The EIR on the proposed Urban Area General Plan has three purposes:

- First, the EIR will help the City of Concord meet California Environmental Quality Act (CEQA) requirements for analysis of environmental impacts by including a complete and comprehensive programmatic evaluation of the physical impacts of the proposed Urban Area General Plan, the Urban Limit Line (ULL), and its alternatives.
- Second, the EIR will inform residents and members of the City Council and Planning Commission of the environmental impacts prior to the Commission and Council taking action on the Plan. This information will assist City officials in reviewing and adopting the proposed Plan.
- Third, the EIR will assist local decision-makers in determining appropriate amendments to Concord's land use regulations and other implementation actions, based on a balanced assessment of the environmental impacts of the proposed Urban Area General Plan.

The EIR also identifies further measures that decision-makers may want to incorporate into the Urban Area General Plan, or implementation programs to minimize environmental effects.

The Plan does not address potential development of the Concord Naval Weapons Station (CNWS) because the City, acting as the Local Reuse Authority, has initiated a separate base reuse planning program for the Inland Portion of the CNWS following approval of the base closure in November 2005. This means that when this separate planning effort is completed and a land use plan is approved by the City, the General Plan will be amended to incorporate the Naval Weapon Station reuse plan.

The proposed Urban Area General Plan consists of policies and proposals to guide the future growth of the City of Concord within its Planning Area (see Chapter 2 for discussion and map of planning and jurisdictional boundaries). This Draft EIR evaluates the potential impacts of the adoption of the proposed Plan. This EIR will also be used as a reference for subsequent environmental review of specific plans, infrastructure improvements, zoning amendments, impact fees and development proposals.

CEQA requires that the agency with the primary responsibility over the approval of a project (the lead agency) evaluate the potential impacts of the project in an EIR. The City is required to

prepare an EIR on the General Plan in order to provide the City Council, as the ultimate decision maker, with an informational document for use in evaluating the proposed Plan. After adoption, the EIR will serve the additional function of providing direction to the City in implementation of the new Plan. The EIR also identifies mitigation measures to minimize significant impacts and evaluate reasonable alternatives to the proposed Plan. The “No Project Alternative” discusses the result of not implementing the proposed General Plan or any of the alternatives. An environmentally superior alternative also is identified as part of the alternatives analysis to inform the public—the ultimate decision-makers on this project.

This Draft EIR will be used by Concord residents, elected officials, and City staff during the public review process. The Draft EIR and Final EIR, which includes responses to public comments received during the 45-day comment period, will be certified by the Concord City Council prior to consideration of the proposed Concord 2030 Urban Area General Plan. The proposed Plan and the EIR have been prepared concurrently and policies in the proposed Plan take into consideration the EIR discussion of impacts and mitigation measures.

1.2 GENERAL PLAN PROCESS & PUBLIC INVOLVEMENT

The General Plan update was initiated in March 2003, following initial work in 2002 on the City’s multi-year Zoning Ordinance update project. In order for the General Plan to accurately address community needs and values, a comprehensive public process of obtaining the input of residents, businesses, and property owners as well as City officials was central to the update process. This involved the sharing of information and ideas between elected and appointed officials, City staff, the planning consultants, and residents.

The first major step in the process was the preparation of the *Map Atlas* report, a process that formally began in the spring of 2003. The Map Atlas provides baseline information in map form on existing conditions in the City. The *Opportunities and Constraints* Working Paper is the second step in the process of preparing a new General Plan for the City of Concord. This paper acts as a companion piece to the Concord General Plan Update Map Atlas, and was published concurrently in August 2003. This Opportunities and Constraints Working Paper builds on the information presented in the Map Atlas and describes planning issues for the General Plan.

The next step involved the preparation and consideration of the *Sketch Plan* Workbook, which was prepared in April 2004. The sketch plans illustrate ideas for the City’s future in the form of schematic land use and transportation alternatives informed by comments received from other public forums, and by technical studies conducted. The sketch plans essentially bracket the probable range of choices for the General Plan.

A Community Visioning workshop was held in April 29, 2004. Public meetings with City Council and the Planning Commission also were held at key points in the process, to brief them on Plan concepts and solicit comments. Newsletters were distributed to organizations and individuals, including City residents and property owners, business owners, developers, service organizations, and the City provided information to the local newspaper on planning issues being addressed by

the General Plan. The proposed General Plan reflects the desires, the decisions, and the work of the public.

A Draft 2030 General Plan and DEIR were prepared and circulated for public review in January 20, 2006. On May 23, 2006, the City Council directed staff to eliminate the proposed development parameters for the CNWS and refocus the emphasis of the General Plan Update on the City's existing urban area. The Concord Naval Weapons Station (CNWS) is excluded from this Update as the CNWS is subject of a separate reuse planning effort.

The proposed General Plan will be considered by the Planning Commission and City Council at public hearings following public review of this Draft EIR. If approved, the proposed Plan will become the City's new General Plan. As such, it will guide land use decision-making in the City to the year 2030, unless amended or until a subsequent General Plan is adopted.

1.3 EIR APPROACH AND ASSUMPTIONS

The proposed Plan EIR is a program EIR, defined in the CEQA Guidelines Section 15168 as: "...an EIR which may be prepared on a series of actions that can be characterized as one large project and are related either: (1) Geographically; (2) As logical parts in the chain of contemplated actions; (3) In connection with the issuance of rules, regulations, plans, or other general criteria to govern the conduct of a continuing program; or (4) As individual activities carried out under the same authorizing statutory or regulatory authority and having generally similar environmental impacts which can be mitigated in similar ways."

Program EIRs can be used as the basic, general environmental assessment for an overall program of projects developed over a 25 year planning horizon. A program EIR has several advantages. First, it provides a basic reference document to avoid unnecessary repetition of facts or analysis in subsequent project-specific assessments. Second, it allows the lead agency to look at the broad, regional impacts of a program of actions before its adoption and eliminates redundant or contradictory approaches to the consideration of regional and cumulative impacts.

As a program EIR, this document focuses on the overall effects of the proposed General Plan in the Planning Area; the analysis does not examine the effects of potential site-specific projects that may occur under the overall umbrella of this program in the future. In fact, this EIR assumes that specific development projects and infrastructure improvement proposals submitted to Concord will necessitate an independent environmental assessment in accord with the requirements of CEQA. The nature of general plans is such that many proposed policies are intended to be general, with details to be later determined during implementation. Thus, many of the impacts and mitigation measures can only be described in general or qualitative terms.

In order to place many of the proposed General Plan policies into effect, the City would adopt or approve specific actions—zoning regulations, zoning map amendments, development impact fees, specific plans, capital improvement programs, development projects, etc.—that would be consistent with the policies and implementation measures of the Plan. This program EIR does not

preclude the need for environmental review of specific plans and individual projects subsequent to Council adoption of the proposed General Plan.

CEQA mandates that lead agencies adopt mitigation monitoring and reporting programs for projects identified as having significant impacts where mitigation measures have been identified. Mitigation monitoring and reporting programs are intended to ensure compliance during project implementation. These programs provide the additional advantages of providing staff and decision-makers with feedback as to the effectiveness of mitigation measures, as well as the experience and information to shape future mitigation measures.

The proposed General Plan is intended to be self-mitigating, in that the policies and programs of the proposed Plan are designed to mitigate environmental impacts. This EIR clearly shows how the impacts of future development in Concord will be mitigated through implementation of the policies and programs of the proposed Plan. Any residual impact after implementation of these proposed policies and programs is identified as measured against the significance criteria established for each impact area. The significance criteria is an identifiable quantitative, qualitative, or performance level of a particular environmental effect in which non-compliance indicates that the effect is significant.

This EIR represents the best effort to evaluate the potential environmental effects of the proposed General Plan given its long-term planning horizon. It can be anticipated that conditions will change; however, the assumptions used are the best available at the time of preparation and reflect existing knowledge of patterns of development and travel patterns.

The proposed General Plan EIR is based on the following key assumptions:

- *Full Implementation.* This EIR assumes that all policies in the proposed General Plan will be fully implemented and all development will be consistent with the proposed General Plan Land Use Diagram. Key elements of the proposed General Plan include establishment of a ULL, which is established in response to Measure J (2004) in order to promote compact development, discourage urban sprawl, and protect rural lands and open space resources. The ULL was submitted for voter approval, under the “Principles of Agreement” established in Measure J, and approved in the November 2006 general election.
- *Buildout in 2030.* This EIR assumes that buildout of the proposed General Plan will occur by 2030. It is understood that development under the proposed General Plan will be incremental and timed in response to market conditions. And while the proposed General Plan includes policies intended to control the amount and location of new growth, it does not include interim “phases” (development scenarios) as this is considered speculative.

1.4 ISSUES ADDRESSED IN THIS EIR

The issues evaluated in this EIR were determined during the initial phase of the project. A Notice of Preparation (NOP) for the EIR on the Concord 2030 Urban Area General Plan was circulated in the June 2006 and the City received comments during a 30-day review period. The NOP is in

Appendix A of this EIR. These comments, along with input received during public workshops and meetings helped to identify the major planning and environmental issues and concerns in the General Plan and helped establish the framework and focus of the environmental analysis.

The first step toward completion of this Draft EIR was the initial analysis of the environmental setting. This analysis compiled specific information on the current conditions, the characteristics of the City, and the major issues it faces. Information on the environmental setting provides background regarding relevant issues and is used to evaluate potential impacts. Based on the initial analysis of the environmental setting, as well as the NOP comments and public meetings, the following issues are analyzed in this EIR:

- Air Quality
- Land Use
- Transportation
- Biological Resources
- Cultural Resources
- Energy and Utilities
- Geology, Soils, and Seismicity
- Hazardous Materials
- Noise
- Parks, Open Space, and Recreation
- Public Services and Safety
- Visual Resources
- Water Resources and Flooding

Each potential impact is addressed in Chapter 3: Settings, Impact Analysis, and Mitigation, of this EIR.

I.5 DOCUMENTS INCORPORATED BY REFERENCE

Section 15150 of the CEQA Guidelines permits documents of lengthy technical detail to be incorporated by reference in an EIR. Specifically, Section 15150 states that an EIR may "incorporate by reference all or portions of another document which is a matter of public record or is generally available to the public...." Incorporated documents are to be briefly summarized in the EIR and be made available to the public for inspection or reference. The Concord 2030 Urban Area General Plan Draft EIR incorporates by reference the documents noted below, which are available at the City of Concord Planning Division, 1950 Parkside Drive, Concord, CA 94519,

- *Concord General Plan Update: Map Atlas (August 2003)* – This document provides baseline information regarding existing conditions that will influence future development in the City of Concord. The Atlas uses maps to illustrate the supply of available land in the

City, which will help guide the decision-making process regarding future growth and conservation. The Atlas maps highlight information for natural resources, land uses, and civic and transportation infrastructure throughout the City and its Sphere of Influence.

- *Concord General Plan Update: Opportunity and Constraints Working Paper (August 2003)* – This report is the companion document to the Map Atlas. It builds on the information presented in the Map Atlas and describes land use issues for the General Plan. The Paper also briefly summarizes public input received to date, discusses current plans and programs for Concord, analyzes growth prospects, land needs, development trends, and proposes "Opportunity Areas" in the City where change in future land use designations and infrastructure improvements may be appropriate to accommodate growth and housing needs.
- *Concord General Plan Update: Sketch Plan Workbook (April 2004)* – This document, also referred to as the Sketch Plans, presents various land use and transportation alternatives that may be incorporated into the proposed General Plan and compares these with the current General Plan.

Other project and program EIRs that have been prepared for projects in the Concord Planning Area have been reviewed during preparation of this EIR. These EIRs address approved development and development currently underway.

I.6 ORGANIZATION OF EIR

The Draft EIR is organized into the following main chapters:

- *Chapter 2: Project Description.* This chapter includes a detailed description of the proposed General Plan and ULL. The General Plan Diagram, the proposed land use classification system, open space and resource protection policies and programs, and buildout estimates are presented.
- *Chapter 3: Setting, Impact Analysis, and Mitigation.* This chapter analyzes the environmental impacts of the proposed General Plan and ULL. Impacts are organized by major topic. Each topic area includes a description of the environmental setting, significance criteria, impacts, and mitigation measures. Policies in the proposed General Plan that would avoid or reduce the impacts are also discussed.
- *Chapter 4: Analysis of Alternatives.* This chapter compares the impacts of the proposed General Plan with land use alternatives including a No Project Alternative and three alternatives that include varying amounts of new development.
- *Chapter 5: CEQA Required Conclusions.* Chapter 5 provides a summary of significant environmental impacts, including unavoidable, irreversible, growth-inducing, and cumulative impacts.

2 Project Description

The project analyzed in this EIR is the proposed *Concord 2030 Urban Area General Plan* and associated Urban Limit Line (ULL). A city's general plan has been described as its constitution for development; it establishes the framework within which decisions on how to grow, provide public services and facilities, and protect and enhance the environment must be made. The proposed Plan is intended to address growth and development over the next 23 years.

Under California Government Code §65300 et. seq., cities are required to prepare a general plan that establishes policies and standards for future development, housing affordability, and resource protection for the entire planning area. By law, a general plan must be an integrated, internally consistent statement of city policies. Section 65302 requires that the general plan include the following seven elements: Land Use, Circulation, Housing, Conservation, Open Space, Noise, and Safety. Additional elements may be included in the general plan as well, at the discretion of the City. Optional elements in the proposed Concord 2030 Urban Area General Plan include Economic Vitality, Growth Management, Parks and Recreation, and Public Facilities and Utilities. The Housing Element was adopted in 2003 and is not subject to analysis in this EIR because no amendments to this element are proposed as part of this General Plan update. All elements have equal weight, and no one element supersedes another.

Cities may amend the general plan four times a year (each amendment may include any number of changes), and cities are encouraged to keep the plan current through regular updates.

This chapter provides background information regarding the regional location of Concord's Planning Area, as well as the policy development process, General Plan objectives, the proposed Urban Limit Line and key themes/components of the proposed General Plan. Additional details are provided in the Plan itself. This project description provides the basis for the environmental analysis in Chapter 3.

2.1 REGIONAL LOCATION AND PLANNING BOUNDARIES

REGIONAL LOCATION

The City of Concord is situated 29 miles east of San Francisco in the north-central region of Contra Costa County. Natural features frame the valley in which the City is located — the Suisun Bay stretches to the north, rolling hillsides surround the City to the east and south, and Walnut Creek runs approximately parallel to south western City limits. Neighboring cities include Clayton, Martinez, Pittsburg, Pleasant Hill and Walnut Creek. Across the bay to the north lays Solano County, accessible from Concord by Interstate 680, a major transportation arterial that borders the western edge of the City. Major transportation arterials that transect Concord are Highway 4, Highway 242, and Interstate 680. Highway 4 leads west to and intersects with Interstate 80 near Hercules in the East Bay, and due east to the cities of Antioch and Stockton. Highway 242 runs north-south, and serves primarily as a connector between Highway 4 and Interstate 680. Interstate 680 is a major regional artery that connects Concord to Solano County

to the north and cities such as Dublin and San Jose to the south. **Figure 2-1** shows the City's regional location.

PLANNING BOUNDARIES

The City of Concord encompasses approximately 19,840 acres, or 31 square miles of land area. The City limits extend to Mallard Reservoir in the north and beyond Ygnacio Valley Road in the south. Interstate 680 and the City of Walnut Creek bound the City to the west, and the eastern boundary is defined by the extent of the Concord Naval Weapons Station (CNWS). The City limit is depicted along with other relevant planning boundaries in **Figure 2-2**.

The City's Sphere of Influence (SOI) represents the total area for which the City ultimately will provide urban services. The SOI measures approximately 29,540 acres, or 46 square miles. At this time, approximately 9,600 acres lie outside the existing City limits in unincorporated Contra Costa County. The inclusion of this area does not necessarily mean that Concord is considering annexation, but it is relevant to consider when planning the future development of the City.

According to State law, the City can establish a Planning Area that consists of land within the city and, "any land outside its boundaries which, in the planning agency's judgment, bears relation to its planning." The City of Concord has defined its Planning Area as all lands encompassed by the SOI, and three areas outside the SOI. These areas, although not within the SOI, are included in the Planning Area because they have direct bearing on:

- Planning for the Urban Area;
- Protecting views of ridgelines and visible hillsides; and
- Coordinating planning with Contra Costa County and the cities of Walnut Creek and Pittsburg on open space areas of mutual interest.

The City limits, SOI, and the Planning Area for this Urban Area General Plan are illustrated in **Figure 2-2**.

PROPOSED URBAN LIMIT LINE BOUNDARY

At the direction of the Planning Commission, the Urban Area General Plan project includes an Urban Limit Line (ULL) and related policies within the Plan. These policies are intended to provide the basis for City Council consideration of a subsequent ballot initiative for voter ratification of the ULL at a future time, consistent with the provisions of Measure J (2004), Contra Costa's Transportation Sales Tax Expenditure Plan. This Program EIR for the General Plan update considers this future implementation of a ULL as part of the project. The proposed ULL is shown in **Figure 2-3**. The ULL is defined as a line beyond which urban development will not be allowed, except for public parks and recreational facilities. For purposes of this policy, "urban development" means development requiring one or more basic municipal services, including, but not limited to, water service, sewer service, improved storm drainage facilities, fire hydrants and other physical public facilities and services. The General Plan establishes "wetlands/

Figure 2-1
Regional Location

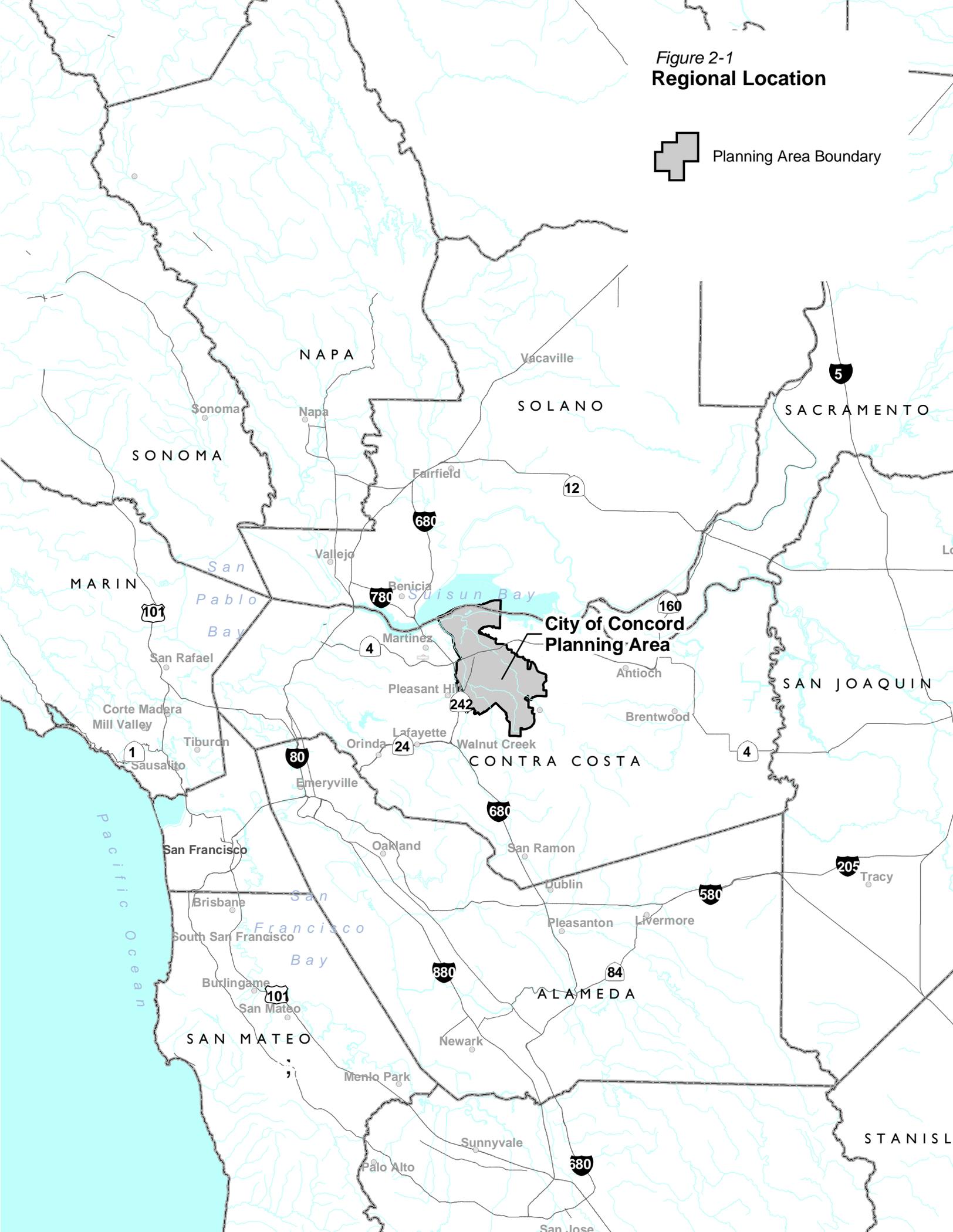
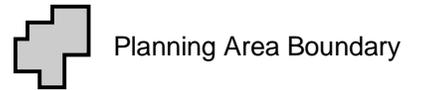


Figure 2-2
Planning Area Boundaries

-  City Limits
-  Sphere of Influence
-  Planning Area

Source:
 City of Concord, Dyett & Bhatia: 2006.

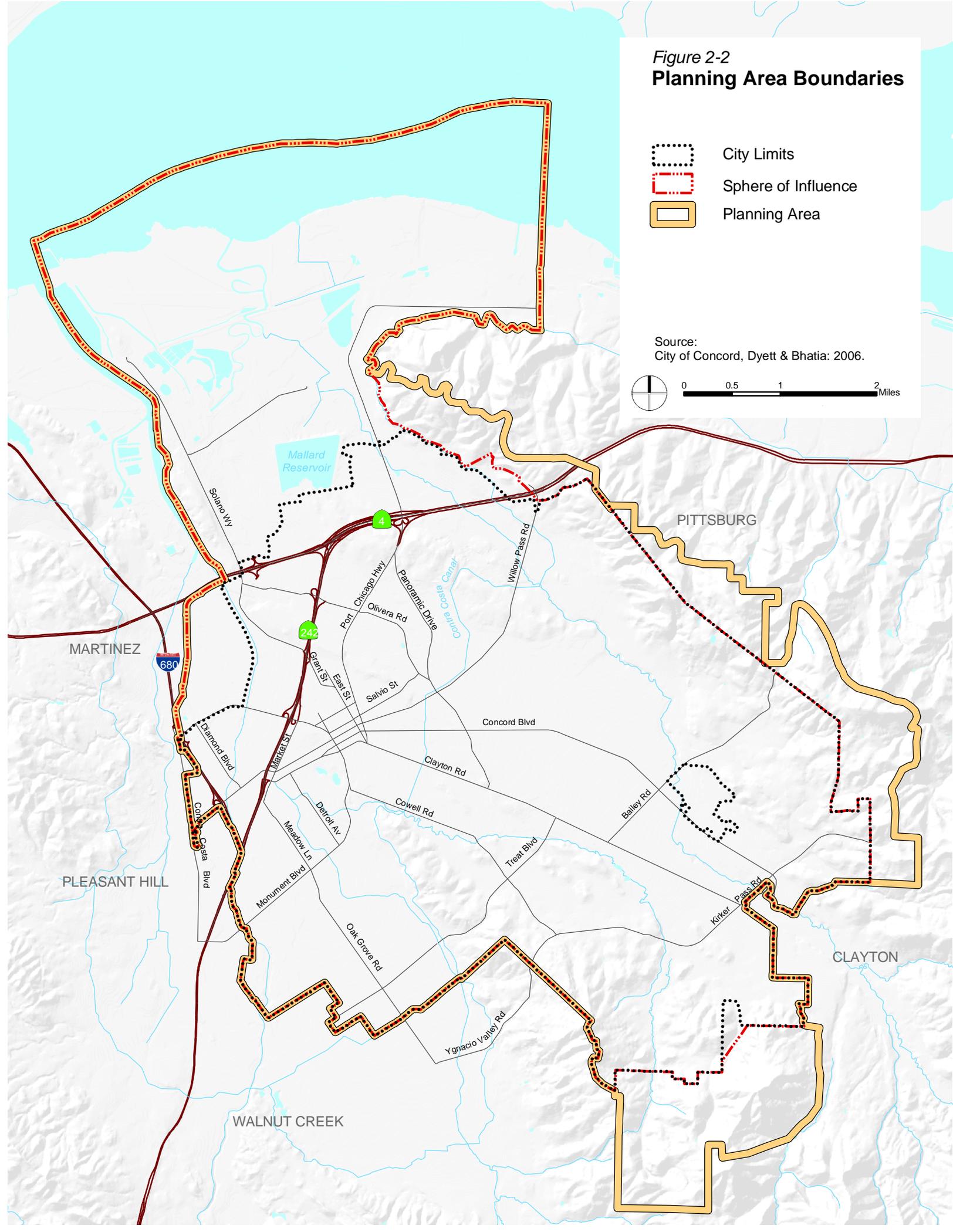
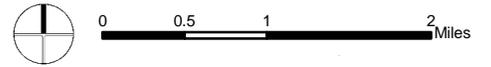
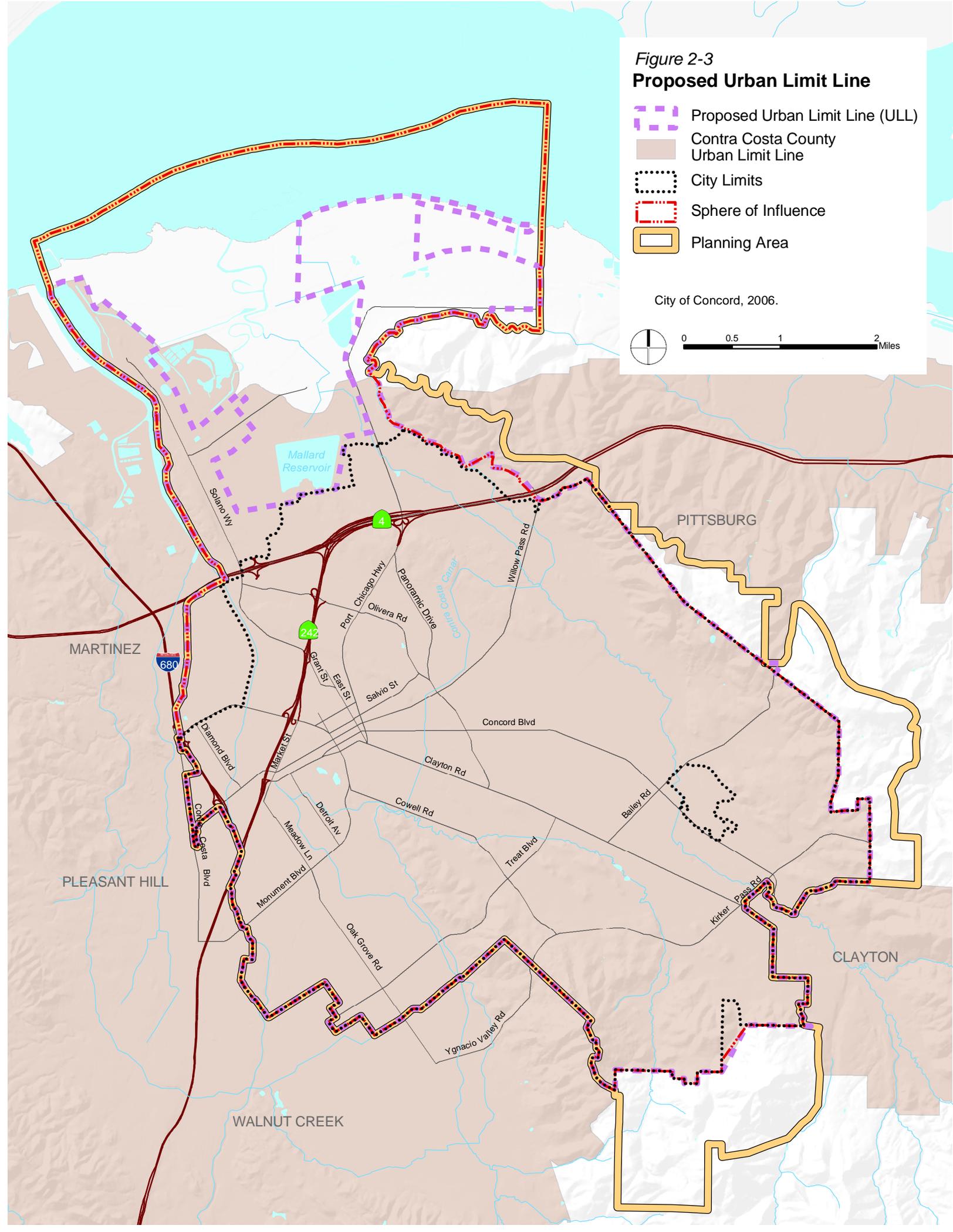
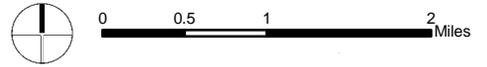


Figure 2-3
Proposed Urban Limit Line

-  Proposed Urban Limit Line (ULL)
-  Contra Costa County Urban Limit Line
-  City Limits
-  Sphere of Influence
-  Planning Area

City of Concord, 2006.



resource conservation", "rural conservation", and "open space" land use designation for lands within the City's planning area that are outside the ULL.

The ULL is designated on the General Plan Land Use Diagram and policies for its establishment and administration are in the Growth Management Element. As noted above, the ULL is intended to be ratified by a vote of the people. Under the provisions of a ballot initiative that would be consistent with General Plan policies, the ULL could only be changed by a subsequent vote of the people or the procedures set for forth in the initiative. The purpose of the Plan policies calling for a ballot initiative is to establish a process to ratify the ULL and related goals and policies in Concord 2030 Urban Area General Plan and ensure that the ULL will be in force until March 31, 2034 – the sunset date for Measure J.

This ballot initiative would promote stability in long-term planning for the City of Concord by setting a cornerstone policy within the General Plan establishing the geographic limits of long-term urban development, while allowing sufficient flexibility within those limits to respond to the City's changing needs over time.

Concord's proposed ULL reflects a commitment to focus future growth within the City and protect environmentally sensitive areas surrounding the City. The proposed ULL will protect the health, safety, welfare, and quality of life of the residents of Concord by concentrating future residential, commercial, and industrial growth in areas already served by urban services or where such services are to be provided consistent with this General Plan. The policies implementing the ULL are consistent with Measure J. The proposed ULL also complements General Plan policies promoting additional housing and job opportunities, emphasizing infill and mixed development, protecting open space, providing for recreational and educational needs, and supporting a thriving downtown.

2.2 PURPOSE AND OBJECTIVES OF THE PROPOSED GENERAL PLAN

CEQA Guidelines §15124(b) require a description of project purpose and objectives.

PLAN PURPOSE

The proposed Concord 2030 Urban Area General Plan (2030) is intended to respond directly to changes experienced in Concord since the preparation of the current General Plan (1994), and to the growth projected for the City in coming decades. The proposed General Plan, which establish a planning framework and policies for a 23-year planning period, will replace the City's existing General Plan.

The General Plan update was initiated to take a comprehensive look at where the City is, where it would like to be in the future, and to create a vision of what Concord should be like in 2030. Some areas of the City may change very little in this timeframe, and others may change dramatically. The General Plan update focuses on current community needs and neighborhood

character, economic development opportunities and challenges, how to encourage mixed use and infill development, and growth outside the current City limits. It also addresses environmental resource conservation. Lastly, it responds to resident preferences about where different land uses such as housing, shopping, industry and public facilities should be located and how City resources should be used to achieve the Plan's goals.

The General Plan integrates plans and programs adopted since 1994, when the last General Plan was adopted. These include the 2003 Housing Element, the Concord Economic Vitality Strategy, the Concord Redevelopment Agency Strategic Plan, the Trails Master Plan, and the Shaping Our Future (SOF) 2003 Vision Plan. The Contra Costa Transportation Authority (CCTA) also updated the Countywide Transportation Plan as part of the County voter approved Measure J last year, which provides \$2 billion in funding for transportation programs and modified CCTA's Growth Management Program.

PLAN OBJECTIVES

The General Plan presents several key objectives that were identified and considered by the Planning Commission and City Council, based on input by the public and from key stakeholders and City staff. They are:

- Ensure that the proposed General Plan reflects Concord's current planning and economic efforts, and includes goals, policies, and desires of Concord residents and businesses;
- Plan in a manner that meets future land needs based on the projected population and job growth;
- Provide for an interconnected system of protected and accessible open space and for adequate public utilities, community facilities and services;
- Meet the City's jobs/housing balance objectives, the need for housing in the community, and State law requirements for Concord's allocation of regional housing needs; and
- Establish an Urban Limit Line.

2.3 GENERAL PLAN PROCESS

The Draft 2030 General Plan was initiated in March 2003, following initial work in 2002 on the City's multi-year Zoning Ordinance update project. The process included analysis of technical information, preparation of a Map Atlas and Opportunities and Constraints working paper after which alternative sketch plan concepts were prepared and reviewed with the community and with City officials. Following direction from the Planning Commission and the City Council on a preferred plan concept, plan policies were drafted and a draft 2030 General Plan was prepared for Planning Commission review. The Draft 2030 General Plan and DEIR were prepared and circulated for public review in January 20, 2006. On May 23, 2006, the City Council directed staff to eliminate the proposed development parameters for the CNWS and refocus the emphasis of the General Plan update on the City's existing urban area. The Concord Naval Weapons Station (CNWS) is excluded from this Update as the CNWS is subject of a separate reuse planning effort.

In order for the Urban Area General Plan to accurately address community needs and values, a comprehensive public process of obtaining the input of residents, businesses, and property owners as well as City officials was central to the update process. This involved the sharing of information and ideas between elected and appointed officials, City staff, the planning consultants, and residents. The following methods were used over the course of the General Plan update to ensure the community's full participation:

- *Community Workshops.* The first Community Visioning Workshop on Issues and Opportunities was held on April 29, 2003; subsequent workshops on sketch plan concepts were held in April and May 2004. Small group discussions allowed for all workshop participants to be heard. Spanish translators and translation of workshop materials were made available at one of the workshops.
- *Community Outreach.* City staff provided presentations on the General Plan update project to community service organizations that included the Concord Chamber of Commerce, Rotary Clubs, and Parent Teacher Association's for five public schools in Concord.
- *Planning Commission Tour and Workshops.* The Planning Commission conducted a tour of the opportunity areas and held a workshop in September 2003 to provide direction on key policy issues. The tour and workshops were open to the public. Subsequent Planning Commission Study Sessions on Plan policies are scheduled for April-May, 2005.
- *Joint City Council/Planning Commission Study Sessions.* The City Council and Planning Commission met seven times to hear community comments, discuss issues and opportunities, sketch plan alternatives, and a preferred land use concept and provide direction on the General Plan update. These Study Sessions were open to the public as well.
- *Newsletter updates and mailings.* The City published newsletters to provide updates on the planning process and mailed meeting and workshop notices to over 1,000 organizations and individuals, including City residents and property owners, business owners, developers, service organizations, and other interested agencies.
- *Public Service Announcements.* The City provided Public Service Announcements regarding the Community Workshops, Planning Commission and City Council Study Sessions on the City's cable station.
- *City website.* Many of the documents and maps created during the update process as well as meeting agendas and staff reports were posted on the City's website: www.cityofconcord.org.
- *General Plan update mailing list.* Those interested in receiving information and notices were placed on the General Plan update mailing list.
- *Publication of documents and results.* The results of all City Council and Planning Commission meetings, workshops, and presentations were summarized and made available to the public; hard copies of documents also were available in the Permit Center, the City Clerk's Office, and the Concord Library.

2.4 THE PROPOSED GENERAL PLAN

The Concord 2030 Urban Area General Plan includes the seven elements required by State law (Land Use, Housing, Circulation, Open Space, Conservation, Safety, and Noise) and three other elements that address local concerns (Economic Vitality, Growth Management; and Public Facilities and Utilities). The introduction of the General Plan first presents and summarizes the key initiatives of the plan.

KEY INITIATIVES

Based on the planning objectives that were established, nine key initiatives are listed in the plan and are described as the overall themes that address the planning objectives. The Concord 2030 Urban Area General Plan is intended to carry out the following themes and key initiatives:

- *Integrating economic development into the General Plan.* The new Economic Vitality Element brings the City's Economic Vitality Strategy into the General Plan and underscores the City's goals for fiscal health, a strong regional center, a vibrant Downtown, and retail strength.
- *Protecting community assets.* The Plan renews the City's commitment to protect and enhance its community assets, including quiet communities with distinctive character, a strong sense of community, a diverse population, high quality building design, convenient shopping, broad choice in employment and entertainment, a family atmosphere with excellent recreational activities, and job opportunities close to where people live.
- *Supporting mixed use development and transit-supportive land uses around BART stations and in commercial corridors with bus service.* The Plan promotes mixed use development around the BART station and along arterial streets on underused retail sites to create more vitality in these commercial corridors. Adjacent neighborhoods will be protected by buffering standards to avoid adverse impacts.
- *Protecting ridgelines, visible hillsides and significant environmental resources.* With the extended Planning Area, Plan policies are intended to protect ridgelines, visible hillsides and other significant natural resource areas from development that would have adverse environmental or visual impacts.
- *Creating a safe and efficient multi-modal transportation system.* The Plan establishes a comprehensive set of principles and policies to enhance the existing system and promote a well-integrated and coordinated transit network and safe and convenient pedestrian and bicycle circulation. With the November 2004 passage of Measure J, the City has access to additional funding for transportation improvements to serve planned development. The City also will work with the Bay Conservation and Development Commission and the Metropolitan Transportation Commission to ensure continued deep-water access to the CNWS and will continue to support use of Buchanan Field Airport for regional and local aviation needs.
- *Preserving and enhancing environmental resources.* Plan policies call for an interconnected open space system, restoration of degraded resources, protection of creeks and wetlands, and water conservation.

- *Providing effective disaster response and planning.* In July 2005, the City adopted the Association of Bay Area Governments (ABAG) Multi-jurisdictional Hazard Mitigation Plan including the Annex to the Plan as the City’s local Hazard Mitigation Plan. The adoption of the Plan makes the City eligible for pre-disaster hazard mitigation funding as provided for under the Disaster Mitigation Act of 2000.
- *Planning for environmental justice.* The City will plan for the equitable distribution of community facilities and services to meet the needs of all segments of the population and provide services for special needs that increase and enhance the community’s quality of life while avoiding over-concentration in any one area.

GENERAL PLAN LAND USE DIAGRAM

The land use framework of the General Plan is illustrated in the General Plan Diagram (Figure 2-4), which is a graphic representation of the themes and policies in the Plan. It designates the proposed general location, distribution, and extent of land uses through buildout, which is anticipated to be by 2030. As required by State law, land use classifications—shown as color/graphic patterns, letter designations, or labels on the diagram—specify a range for housing density and building intensity for each type of designated land use. These density/intensity standards allow circulation and public facility needs to be determined. The General Plan Diagram is designed to reflect the planning objectives and key initiatives listed above.

The Diagram is to be used and interpreted only in conjunction with the text and other figures contained in the proposed Urban Area General Plan. The legend of the General Plan Diagram includes the land use classifications described below, which represent an adopted component of the Plan. The Diagram is not parcel-specific, and uses on sites less than one acre in size are generally not depicted

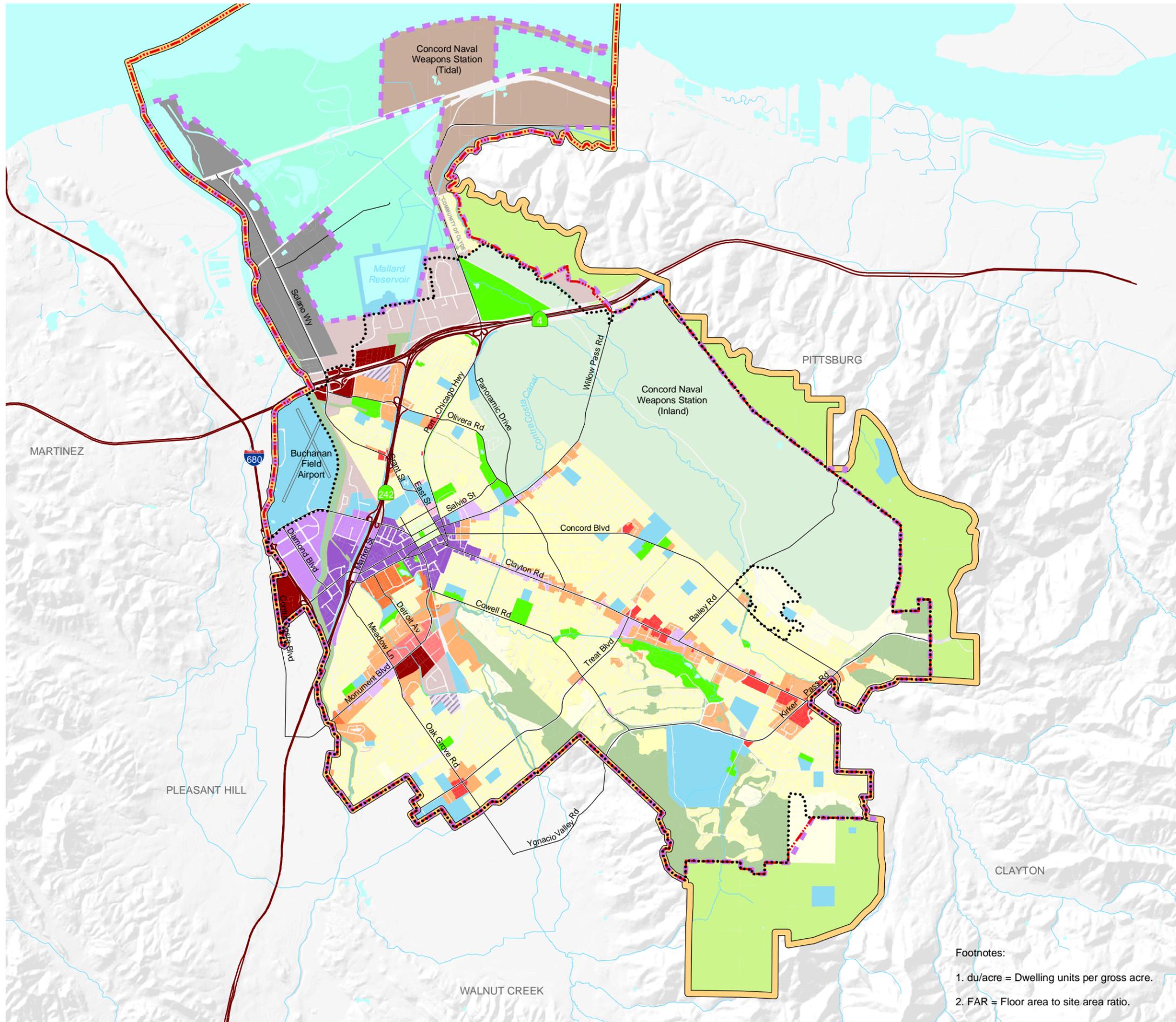
The following descriptions apply to land uses indicated on the General Plan Land Use Diagram. Land use classifications are organized into the following categories: Residential, Mixed Use, Commercial, Office/Industrial and Open Space and Resource Conservation. Total acreage for each land use classification is presented in Table 2.4-1. The classifications are as follows:

Residential

Rural Residential. This classification is intended for very low density residential development, at densities less than 2.5 units per net acre. Clustered development is preferred to maximize open space.

Low Density Residential. This classification is intended for residential development at densities between 2.5 and 10 units per net acre. This density range is typical of a single-family residential neighborhood, such as Sun Terrace or Turtle Creek. Special zoning provision (i.e. overlay zone) will be implemented for historic preservation and limited duplex/triplex, office and live-work uses within the North Todos Santos area.

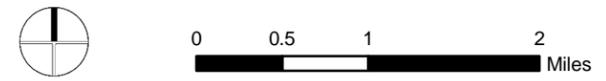
Figure 2-4
Urban Area General Plan
Land Use Diagram



- Rural Residential (< 2.5 du/acre)¹
- Low Density Residential (2.5 - 10 du/acre)
- Medium Density Residential (11 - 32 du/acre)
- High Density Residential (33 - 100 du/acre)
- Downtown Pedestrian District (Up to 100 du/acre; Max 4.0 FAR²)
- Commercial Mixed Use (Up to 40 du/acre; Max 2.0 FAR)
- West Concord Mixed Use (Max 4.0 FAR)
- Downtown Mixed Use (Up to 100 du/acre; Max 6.0 FAR)
- Industrial Mixed Use (Max 1.0 FAR)
- Service Commercial (Max 0.8 FAR)
- Neighborhood Commercial (Up to 24 du/acre; Max 0.35 FAR)
- Regional Commercial (Max 1.0 FAR)
- Community Office (Max 1.0 FAR)
- Business Park (Max 0.8 FAR)
- Heavy Industrial (Max 0.6 FAR)
- CNWS- Tidal
- CNWS - Inland
- Public/Quasi-Public (Max 1.5 FAR)
- H Hospital Facilities (Max 1.5 FAR)
- Wetlands/Resource Conservation
- Parks
- Open Space
- Rural Conservation (1 du/ 20 acre)
- City Limits
- Sphere of Influence
- Proposed Urban Limit Line (ULL)
- Planning Area Boundary

Footnotes:
 1. du/acre = Dwelling units per gross acre.
 2. FAR = Floor area to site area ratio.

Sources:
 City of Concord, Dyett & Bhatia: September 2006.



Medium Density Residential. This classification is intended for residential development at densities ranging from 11 to 32 units per net acre. This density range accommodates a variety of housing types, from small-lot single-family to townhomes and other forms of multi-family development. It is applied along arterial streets and transit corridors, including Monument Boulevard, Willow Pass Road, and Clayton Road.

High Density Residential. This classification is intended for residential development at densities ranging from 33 to 100 units per net acre. This density range would accommodate attached homes, two- to four-plexes, and apartment buildings. This classification is intended for areas in and adjacent to central Concord and near BART stations, where higher densities may be appropriate. Residential design standards will ensure land use compatibility.

Mixed Use

Commercial Mixed Use. This classification allows for ground-floor commercial uses and local serving offices with residential development in densities ranging up to 40 units per net acre. It is intended for use along commercial corridors and would accommodate multi-family residential. Commercial Mixed Use is applied along Clayton Road, Monument Boulevard, and Willow Pass Road. The maximum non-residential FAR is 2.0.

Downtown Mixed Use. This classification is intended for high density mixed-use development in Central Concord, east of Walnut Creek. It allows for a mix of uses that balances jobs and housing opportunities, including offices, commercial development, hotels, public/quasi public, and residential uses up to 100 units per net acre. The maximum non-residential FAR is 6.0.

Downtown Pedestrian District. This classification is intended for mid- to high-rise commercial, residential or mixed-use development around Todos Santos Plaza, with restriction in height around the Plaza to preserve sunlight access. The designation is intended to maintain the pedestrian-oriented environment in this portion of Central Concord, with a focus on ground-level commercial uses and development that encourages walkability. Pedestrian-oriented design standards and use limitations apply. The maximum FAR is 4.0.

West Concord Mixed Use. This mixed-use category is intended for use in West Concord and the area east of Walnut Creek bounded by Concord Avenue, Market Street (south to Meadow Lane), SR 42, and Pine Creek. The emphasis is on office development, but it also allows for a mixture of commercial, institutional, and public/quasi public uses. Residential development is not allowed in this mixed-use category, as it is intended to create a campus-like office environment. The maximum FAR is 4.0.

Industrial Mixed Use. This new land use designation is intended for a mix of light industrial, secondary office, service uses (excluding auto-oriented retail services) and live/work facilities. Typical uses include warehouse, research and development, wholesale, bulk retail, office space with limited customer access, and artists' studios. Small-scale retail and service uses serving local employees, residents and visitors may be permitted as secondary uses. The maximum FAR is 1.0. This designation would allow for live/work facilities where appropriate, such as the North Hillcrest area and the southern portion of the Detroit Avenue/Shary Circle area.

Commercial

Neighborhood Commercial. This classification is intended for small-scale commercial uses that primarily provide convenience and comparison goods and services to the local community with residential uses allowed above ground level. Examples include neighborhood shopping centers, supermarkets, dry cleaners, video stores, and small restaurants. It is distributed throughout the City in order to locate commercial services within close proximity to all of Concord's residents. The designation also provides for an increase in Neighborhood Commercial as-of-right store size to 65,000 sq. ft. with an option for larger stores with a use permit. The maximum FAR is 0.35.

Regional Commercial. This classification is intended for large-scale commercial developments (greater than 80,000 square feet) that serve both residents and the surrounding region. A broad range of retail uses is envisioned, including regional shopping centers, big box retail, home improvement sales and service, and warehouse membership clubs as well as new auto sales and services, travel-related services such as hotels, gas stations, and restaurants. The maximum FAR is 0.5.

Service Commercial. This classification is intended to provide sites for commercial businesses that are not appropriate in other areas because of high volumes of vehicle traffic and potential adverse impacts on other uses. It includes sites for automotive sales and services, building materials, warehousing, distribution and personal storage located on major arterial streets. It is applied along Monument Boulevard, between Meadow Lane and the BART tracks, and along SR 4 near the western boundary of the City. The maximum FAR is 0.6.

Office/Industrial

Community Office. This classification is intended for small-scale professional offices that serve the community. These uses are typically low-rise development of not more than three stories. The maximum FAR is 1.0.

Business Park. This classification is intended for campus-like office complex development as well as industrial parks, including single and multi-story office, flex-space, and industrial building for single and multiple users, light industrial and warehouse uses, and research and development activities. Other uses may include mini-storage, wholesale, bulk retail, and businesses with limited customer access, commercial recreation, and other uses that require large, warehouse-style buildings. Small-scale retail and service uses serving local employees and visitors may be permitted as secondary and accessory uses. This designation may also allow small restaurants, support services, and convenience retail activities at appropriate locations, subject to standards to minimize impacts on industrial users. It is applied to the area north of SR 4, between SR 242 and Port Chicago Highway, as well as to the Stanwell Business Park, which is located east of the Buchanan Field Airport, areas adjacent to Mallard Reservoir in North Concord, and the Detroit Avenue/Shary Circle area. The maximum FAR is 0.8.

Heavy Industrial. This designation allows primary manufacturing, refining, and similar activities. It also accommodates warehousing, distribution and port-related uses, with support commercial services and ancillary office space. No retail uses are allowed. This designation is applied primarily to facilities north of SR 4. The maximum FAR is 0.6.

Public/Quasi-Public

Concord Naval Weapons Station-Inland and Tidal. These classifications apply to the Concord Naval Weapons Station, the Inland Area and the Tidal Area. The Inland Area has been decommissioned and reuse opportunities for this area are currently being studied. The Tidal Area contains port and industrial buildings and back up land which will continue to be used by the Army for an undetermined period of time. Portions of the Tidal Area also are designated as Port Priority Use areas under the San Francisco Seaport Plan and included within the City's Urban Limit Line.

Public/Quasi-Public. This classification is applied to property owned by governmental entities or to semi-public facilities. It includes Buchanan Field Airport, hospitals, schools, administrative offices (e.g. government offices), corporation yards, and public facilities such as recycling centers, sewage treatment facilities, and fire stations. The H-designator on the land use diagram denotes a hospital use. Minor governmental offices located in a private building, places of religious assembly not occupying extensive land areas, and similar facilities are not shown on the General Plan Diagram. New public/quasi public facilities may be appropriate in any land use designation based on need and subject to environmental review. The maximum FAR is 1.5.

Open Space/Resource Conservation

Public Open Space. This classification is intended for large areas that are necessary for natural resource protection, the managed production of natural resources, the provision of natural resources, outdoor recreation, scenic value, and the assurance of public health and safety. Only open space lands owned by a public or quasi-public entity or in which the public has an interest are subject to the "open space" designation on the General Plan Land Use Diagram.

Private Open Space. This classification includes cemeteries and privately-owned open space not accessible to the public.

Parks. This classification is intended for improved and unimproved park facilities. It includes neighborhood, community, and regional parks; public golf courses; and recreational facilities that provide visual open space and serve the outdoor recreational needs of the community.

Wetlands/Resource Conservation. This designation applies to wetlands and resource conservation lands. It is intended to protect the wildlife, hydrological, and biological resources in these areas. It allows only very low intensity open space uses that are compatible with and do not disturb the resources to be protected.

Rural Conservation. This designation provides for protection of rural hillside areas. Single family residential development of up to 1 unit per 20 gross developable net acres would be allowed with clustering encouraged to minimize impacts on City views of the area.

Summary of Density and Intensity

The density and intensity (FAR) standards used in the General Plan are shown in Table 2.4-1.

Table 2.4-1: Standards for Density and Development Intensity

<i>Land Use Category</i>	<i>Residential Density Range (housing units/net acre)</i>	<i>Maximum Non-Residential Floor Area Ratio (FAR)</i>
Rural Residential/Conservation	< 2.5	n/a
Low Density Residential	2.5 - 10	n/a
Medium Density Residential	11 - 32	n/a
High Density Residential	33 - 100	n/a
Commercial Mixed Use	Up to 40	2.0
West Concord Mixed Use	n/a	4.0
Downtown Mixed Use	Up to 100	6.0
Industrial Mixed Use	n/a	1.0
Downtown Pedestrian District	Up to 100	4.0
Service Commercial	n/a	0.8
Neighborhood Commercial	Up to 24	0.35
Regional Commercial	n/a	0.5
Community Office	n/a	1.0
Business Park	n/a	0.8
Heavy Industrial	n/a	0.6
Public/ Quasi-Public	n/a	1.5

Source: *City of Concord, Dyett & Bhatia: 2006.*

2.5 BUILDOUT UNDER THE PROPOSED GENERAL PLAN

Full development under the proposed General Plan is referred to as “buildout.” Although the proposed General Plan applies a 23-year planning horizon, the Plan is not intended to specify or anticipate when buildout will actually occur; nor does the designation of a site for a certain use necessarily mean the site will be built/redeveloped with that use in the next 23 years. Refer to the Land Use Element for more detailed analysis of General Plan buildout.

This section describes the implications of the proposed General Plan buildout in terms of future population, housing units, and jobs. Adequate land is provided by this Plan within the proposed ULL to accommodate anticipated housing and job needs in Concord through 2030, and even through 2034, the sunset date for Measure J.

Table 2.5-1 shows the buildout acreage of the General Plan Land Use Diagram.

Table 2.5-1: General Plan Land Use Acreage at Plan Buildout

<i>Land Use</i>	<i>Acres</i>	<i>Percent of Total</i>
Rural Residential	740	2.2%
Low Density Residential	5,506	16.6%
Medium Density Residential	873	2.6%
High Density Residential	96	0.3%
<i>Residential Land Subtotal</i>	<i>7,215</i>	<i>21.7%</i>
Downtown Pedestrian District	24	0.1%
Commercial Mixed Use	139	0.4%
West Concord Mixed Use	264	0.8%
Downtown Mixed Use	344	1.0%
Industrial Mixed Use	46	0.1%
Service Commercial	76	0.2%
Neighborhood Commercial	137	0.4%
Regional Commercial	204	0.6%
<i>Mixed Use and Commercial Land Subtotal</i>	<i>1,234</i>	<i>3.7%</i>
Community Office	27	0.1%
Business Park	737	2.2%
Heavy Industrial	860	2.6%
<i>Office and Industrial Land Subtotal</i>	<i>1,624</i>	<i>4.9%</i>
Public/Quasi-Public	1,872	5.6%
Wetlands/Resource Conservation	3,319	10.0%
Parks	546	1.6%
Open Space	1,735	5.2%
Rural Conservation	3,513	10.6%
<i>Community Land Subtotal</i>	<i>10,985</i>	<i>33.1%</i>
CNWS-Inland ¹	5,057	15.2%
CNWS-Tidal (Port Chicago) ¹	1,332	4.0%
<i>Navy Lands Subtotal</i>	<i>6,389</i>	<i>19.2%</i>
Suisun Bay	2,382	7.2%
Water, Rights-of-Way, or Undesignated Areas	3,364	10.1%
<i>Other Land Subtotal</i>	<i>5,748</i>	<i>17.3%</i>
<i>Total</i>	<i>33,193</i>	<i>100.0%</i>

Note: Due to rounding, subtotals may not equal individual column counts.

Source: Dyett & Bhatia, 2006.

POPULATION GROWTH AND HOUSING

Buildout Population

The Concord Planning Area will accommodate a population of approximately 142,210 people at buildout, an increase of about 14 percent over the current estimated population of 124,440. Over a 23-year period, this represents an average annual growth rate of 0.6 percent, a slightly lower rate than that experienced by the City over the last 25 years, which was about 0.7 percent. Table 2.5-2 summarizes buildout for the proposed General Plan by population, housing units, households, and jobs.

Residential Development

As shown in Table 2.5-2, approximately 46,290 housing units (43,980 households) currently exist in the Concord Planning Area. The proposed Urban Area General Plan is intended to accommodate an additional 6,930 housing units (6,580 households) through infill residential development. This infill residential development will consist of multi-family housing developed on mixed-use land clustered along major transportation routes that radiate outward from downtown, notably Clayton Road, Monument Boulevard, Willow Pass Road. In total, the proposed Urban Area General Plan will result in approximately 53,220 housing units (50,560 households) at buildout with the Concord Planning Area.

Table 2.5-2: Households, Population, and Jobs at Buildout¹

	Existing (2006)	Additional	Buildout (2030)	Percent Increase	Annual Growth Rate
Population ²	124,440	17,770	142,210	14%	0.6%
Housing Units	46,290	6,930	53,220	15%	0.6%
Households ³	43,980	6,580	50,560	15%	0.6%
Jobs ⁴	60,890	27,910	88,800	46%	1.6%

1. All numbers rounded to the nearest tenth.

2. Buildout population was calculated assuming 2.7 persons per household.

3. Households are estimated as 95 percent of the total housing units, assuming a 5 percent vacancy rate.

4. Existing 2006 jobs were calculated using the average annual growth rate assumed by ABAG for 2005-2010: 1.13%.

Source: Department of Finance: Projections, 2006; ABAG 2005 Projections: 2006; City of Concord, Dyett and Bhatia: 2006.

EMPLOYMENT

As shown in Table 2.5-2, Concord will accommodate approximately 88,800 jobs at buildout, an increase of approximately 46 percent. The total additional employment accommodated by the proposed Urban Area General Plan is about 27,910 jobs. Over a 23-year period, this represents an average annual growth rate of 1.6 percent, less than half the rate experienced by the City over the previous 25 years, which was approximately 3.4 percent.

JOBS/EMPLOYMENT BALANCE

A city’s jobs/employment ratio (jobs to employed residents) would be 1:1 if the number of jobs in the city equaled the number of employed residents. In theory, such a balance would eliminate the need for commuting. More realistically, a balance means that in-commuting and out-commuting are matched, leading to efficient use of the transportation system, particularly during peak hours. The current jobs/employment ratio in Concord is 0.92:1, which means that the number of jobs in the City is lower than the number of employed residents by about 8 percent. At buildout, the proposed Urban Area General Plan will add more jobs than population, the jobs/employment balance should increase to 1.17:1, thereby reducing the growth in peak-hour traffic congestion in the City and the region. Table 2.5-3 displays existing and projected jobs per employed residents ratios.

Table 2.5-3: Jobs per Employed Residents Ratios

Type	Existing	Buildout
Jobs	60,890	22,800
Employed Residents	65,970	75,840
Ratio	0.92	1.17

1. All numbers rounded to the nearest tenth.

2. Employed residents at buildout were calculated using the ratio assumed by ABAG for Contra Costa County for 2030: 1.5 employed residents per household.

Source: Projections 2005, ABAG: 2006; Dyett & Bhatia: 2006.

2.6 KEY POLICY DIRECTION

Policy direction for each of the proposed Urban Area General Plan Elements is described in this section. Key policies are listed; additional policies are included in the Plan itself to support the proposed General Plan goals and principles. All of these policies are incorporated by reference into this project description and analyzed in this EIR.

ECONOMIC VITALITY

The proposed General Plan includes numerous growth and economic development initiatives for Concord as follows:

- Ensure the fiscal & financial health of the City;
- Establish Concord as a major regional employment center;
- Maintain and promote a vibrant Downtown;
- Support retail strength in the City; and

Key policies that support these initiatives are:

- Ensure that Concord has adequate fiscal resources to secure the highest quality environment for its residents and businesses.
- Establish land use priorities that foster entrepreneurship, growth, and innovative business development.
- Strengthen the business climate to ensure the growth, development, and prosperity of Concord's business community.
- Attract businesses in growth industries that require highly skilled labor
- Continue to promote the Downtown as the social, cultural, and entertainment center of the community.
- Continue to improve the quality and mix of uses in Downtown to ensure patron, visitor, and resident satisfaction.
- Attract catalyst retail businesses that stimulate economic development and raise the standard of retail enterprise.
- Partner with the business community to strengthen the City's retail economy by facilitating revitalization and expansion of the City's shopping areas.

LAND USE

The land use policies in the proposed General Plan comprise the heart of the General Plan and include an emphasis on mixed use and neighborhood character. The Land Use Element also established the ULL on the Land Use Diagram; policies for administration of the ULL are in the Growth Management Element. A summary of key policies is as follows:

Residential Areas

- Preserve and enhance neighborhood character by supporting land use decisions that reinforce and capitalize on neighborhood strengths and benefit neighborhood identity and scale.
- Provide opportunities for neighborhood participation in the land use decision-making process.
- Encourage neighborhood retail and service uses within convenient walking distance of all residential neighborhoods, where feasible.
- Foster amenities and services that make Concord's neighborhoods desirable places to live
- Encourage a variety of housing types on infill development sites.
- Support higher density and mixed use development in Downtown and near transit centers and corridors.

Retail & Commercial

- Maintain attractive and viable neighborhood-serving centers.
- Plan for new commercial development to expand the variety of goods and services to meet region-serving as well as local needs.
- Provide for regional centers that have an appealing mix of tenants and are designed with site amenities to attract customers from both local neighborhoods and region-wide communities.
- Identify new areas for region-serving commercial uses at locations utilizing to best advantage major transportation routes.

Central Concord

- Continue to expand Central Concord's role as the City's focal point for business, entertainment, dining, cultural, and civic gatherings.
- Integrate the distinct districts within Central Concord with unifying streetscape and pedestrian-oriented design and amenities.
- Require a mix of uses, integrated at an urban scale, to promote an active commercial and residential center.
- Encourage new and redevelopment projects to include amenities for public benefit, such as affordable housing, pedestrian-oriented facilities and historic preservation.

Office and Employment Centers

- Promote a large, diversified regional office sector to ensure a resilient economic base.
- Assure high quality design and site planning of regional offices that establish a cosmopolitan image and contribute to the character of the City as a whole.
- Provide sites for employment-generating businesses, technology-based businesses, and light industrial uses wishing to locate in Concord.
- Restrict retail in industrial business park areas to wholesale, bulk retail, and small-scale uses serving local employees.

Services

- Support augmentation of the Buchanan Field Airport operation that is consistent with the City's Economic Vitality Strategy.
- Support and encourage the expansion and continued renewal of the John Muir Health, Concord Campus.
- Encourage the development of private and public institutions of higher education.

Urban Design

- Establish design standards that achieve the highest quality of building design and materials.

- Establish design standards for mixed use projects that provide for a cohesive, well-integrated, functional development.
- Encourage land assembly to achieve building sites large enough for safe, efficient, on-site vehicular circulation, and ample landscaping.
- Encourage streetscape and façade improvements to enhance the appearance of existing uses along major arterials.
- Maintain an aesthetically pleasing street network that helps frame and define the community while meeting the needs of pedestrians, bicyclists, and motorists.
- Support and Encourage Open Space Protection
- On any land to be annexed to the City, require new development to be clustered to reduce both environmental and visual impacts of hillside development.
- Minimize cut-and-fill of natural hillsides.
- As a condition of approval, ensure that developers incorporate natural creekways as open space amenities into the design of projects.
- Encourage the provision of wildlife corridors to ensure the integrity of habitat linkages and preserve the character of visible hillsides and open space.

GROWTH MANAGEMENT

The Growth Management Element establishes a framework for the future development of Concord. Also, the Growth Management Element establishes policies for administration of the ULL. A summary of guiding principles is as follows:

- Reduce traffic congestion by understanding the relationships between land use and transportation, cooperating with regional transportation authorities, and applying Level of Service (LOS) standards.
- Reduce commute trips and commute length through the policies and programs that address housing options and job opportunities in the City, the sub region and the county.
- Ensure that new development pays for costs of service and does not have detrimental effects upon service levels for parks, fire, police, sanitary facilities, water, and flood control.
- Establish an Urban Limit Line (ULL) that complies with the provisions of Measure J (2004).

Transportation

- Monitor the relationship between land use and transportation through ongoing traffic impact analyses and participate in development of Regional Route Action Plans and other programs implementing the growth management element.
- Continue to assist with multi-jurisdictional transportation planning by participating in activities of TRANSPAC including development of Action Plans for Routes of Regional Significance and cooperating in planning for intersections subject to Findings of Special

Circumstances located in other jurisdictions when it is believed that local actions contribute to conditions at such intersections.

- Do not approve any development project expected to generate over 50 peak-hour vehicle trips unless the City has made Findings of Consistency with the Level of Service Standards. Findings of Consistency may be made only if a traffic impact study shows project approval is consistent with adopted Action Plans with respect to Routes of Regional Significance and will not result in violation of adopted standards at any Basic Route signalized intersection unless: 1) projects included in the City's Capital Improvement Program will result in attainment of the standards, or 2) Findings of Special Circumstances including imposition of appropriate mitigation measures have been adopted by the City and the Contra Costa Transportation Authority.
- Establish a transportation management program to mitigate impacts of development projects on the transportation system.
- Support economic development programs that seek to attract high quality employment opportunities for local residents and others residing near local job centers.
- Consistent with Housing Element policies, give priority in the City's housing programs to providing opportunities for persons employed in local and nearby jobs.

Development Mitigation

- Require traffic studies for all developments projected to generate significant amounts of traffic.
- Require each new development to contribute to or participate in the establishment and improvement of parks, fire, police, sanitary sewer, water and flood control systems in proportion to the demand generated by the development. The City will manage a development mitigation program that ensures new development pays its share of the costs associated with the provision of facilities for parks, fire, police, sanitary facilities, water, and flood control.

Urban Limit Line Boundary

- Delineate an ULL in the General Plan Land Use Diagram that is an area within which urban development will occur. For purposes of this policy, "urban development" means development requiring one or more basic municipal services, including, but not limited to, water service, sewer service, improved storm drainage facilities, fire hydrants and other physical public facilities and services.

TRANSPORTATION AND CIRCULATION

The proposed General Plan includes numerous local roadway improvements and proposed regional transportation planning initiatives to ensure the safe and efficient operation of the circulation system in Concord. These improvements and initiatives are consistent with the Metropolitan Transportation Commission Regional Transportation Plan, *Transportation 2030*,

the Countywide Transportation Plan, and the Transportation Sales Tax Expenditure Plan established by Measure J (2004).

Principles governing these policies are as follows:

- Overall objective: create a balanced, multi-modal transportation system that serves bicyclists and pedestrians as well as motor vehicles.
- Transportation programs are based on circulation system planning and land use planning.
- The City's traffic circulation planning efforts are integrated with those of the Contra Costa County Transportation Authority and TRANSPAC in a cooperative, regional planning effort.
- State of the art traffic engineering is used to bring planned improvements to reality.

A summary of key traffic and circulation policies include:

Circulation & Street System

- Maintain streets at optimal levels to provide safe and efficient travel.
- Continue to promote a wide variety of transportation alternatives and modes to serve all residents and businesses to enhance the quality of life.
- Maintain and upgrade transportation systems to provide smooth flow of traffic, minimize vehicle emissions, and save energy.
- Require that new development pays a fair share of the costs of street & transportation improvements.
- Preserve and improve the scenic and visual quality of public roadways throughout Concord.

Residential Streets

- Develop and operate a circulation system that encourages the flow of traffic to collector streets then residential streets to arterial streets.
- Continue to implement the City's Traffic Calming Program to enhance safety and livability on residential streets.

Parking

- Ensure adequate parking facilities are provided for public convenience and to promote economic development.
- Promote creative parking solutions, such as shared parking, identification of Park and Ride sites, and flexible parking standards for developments within one-half mile of a BART station and one-quarter mile of a public parking facility.

Transit

- Coordinate with public transportation agencies to facilitate safe, efficient, and convenient access to transit.
- Work with public transportation agencies to ensure adequate transit service.

Bicycle & Pedestrian Circulation

- Plan linkages to minimize walking distance and enhance the pedestrian experience.
- Facilitate pedestrian circulation near high activity centers.
- Encourage new development to provide pedestrian connections to adjacent open spaces, and trails.
- Encourage new development to provide bicycle access to parks, schools, and transit stops in the design of new residential neighborhoods.
- Implement strategies and actions for enhanced bicycle circulation throughout the City.

Buchanan Field Airport

- Support Buchanan Field Airport use as a region and local serving airfield.

Port and Rail

- Advocate the maintenance of deep water channels at a depth that keeps ocean vessel use viable from San Francisco to the CNWS.
- Ensure adequate roadway transportation linkages from the port and rail facilities to the regional transportation network.

The Metropolitan Transportation Commission (MTC) has adopted a new Regional Transportation Plan, Transportation 2030. The plan shows no significant projects that widen the freeways in Central Contra Costa County. Instead, the emphasis is in maintaining and enhancing the existing network with the addition of high-occupancy vehicle (HOV) lanes, new auxiliary lanes to reduce merge conflicts, and interchange improvements. The major regional projects that are planned for construction effecting traffic in central county are adding a fourth bore to the Caldecott tunnel, reconstructing the I-680/SR4 interchange, and widening SR 4 in Pittsburg and Antioch. These projects were also included in the financing plan for Measure J that Contra Costa voters approved in November 2004. Freeway projects are very expensive to construct and need several funding sources. The State and federal government along with local sales tax initiatives, such as Measure J and Regional Measure 2, are the primary contributors to the projects. Funding freeway projects have been difficult because of the shortfall in State revenues. For several years, the State shifted funds earmarked for transportation projects to other budget items. This action slowed or halted the construction of most freeway projects. Even for the next several years, assuming that funding is available, the State is expected to fund pre-approved projects rather than new construction.

PARKS, OPEN SPACE, AND CONSERVATION

The proposed General Plan includes policies and programs that are designed to improve the systems of parks and open space to accommodate recreation needs and preserve environmental quality. Key policies include:

Parks

- Acquire and develop additional and maintain the present inventory of neighborhood and community parks to serve existing and future needs, at a ratio of 6 acres of park land per 1,000 residents.
- Pursue the development of park and recreation facilities within reasonable walking distance of all residences.
- Implement strategies and actions associated with the design, development, and operation of multi-purpose trails as contained in the Trails Master Plan.
- Utilize closed or under-used public school sites for community recreation when feasible.

Open Space

- Acquire, preserve, and maintain open space for future generations.
- Utilize the Trails Master Plan and Map to develop connections between open space areas.
- Require degraded open space areas to be restored to an environmentally sustainable condition as part of development approval where these lands are proposed as permanent open space in new development.
- Restore degraded open space owned by the City, which includes habitat improvements and control of invasive plant species.
- Establish priorities for open space preservation in the City's Planning Area based on an evaluation of natural resources, viewsheds, wildlife habitats, and recreational opportunities.

Conservation

- Enhance and maintain the natural values of creeks and major drainage ways, including preservation of Preserve native riparian vegetation and wildlife, and establish riparian corridors along all creeks.
- Require adequate building setbacks for development adjacent to creek banks and major drainage ways to protect neighboring properties from erosion and flooding.
- Preserve bay marshes, wetlands, and tidal areas adjacent to Suisun Bay and other wetlands and creeks in the Planning Area as open space.
- Conserve wildlife habitat and wildlife corridors, including seasonal migration routes.
- Protect rare, threatened, or endangered species and their habitats in accordance with State and Federal law.

- Encourage conservation of valuable mineral resources and provide substantial protection of significant mineral deposits, consistent with the City's other land use goals.
- Preserve all City, state, and federally designated historic sites and structures to the maximum extent feasible.
- In identified sensitive areas, require archaeological studies as part of the development review process.

SAFETY AND NOISE

The proposed General Plan includes policies and programs related to noise and safety. In addition, the Noise Element includes future noise contours associated with General Plan buildout, future use of the Buchanan Field Airport and planned helicopter use at John Muir Health, Concord Campus. The key policies include:

Air Quality

- Make air quality a priority in land use planning by introducing concepts that reduce vehicle trips, such as infill and transit-oriented development.
- Site projects in locations and/or in a manner that will reduce air pollution exposure of sensitive receptors.
- Promote pedestrian, bicycle, and transit modes of travel to reduce air pollutant emissions from automobiles.

Noise

- Use the community noise level exposure standards as review criteria for new land uses, and require a noise study and mitigation measures for all projects that have noise exposure greater than "normally acceptable" levels.
- Promote the use of noise attenuation measures to improve the acoustic environment inside residences where existing single-family residential development is located on an arterial street.
- Require developers to reduce the noise impacts of new development on adjacent properties through appropriate means.

Hazard Reduction

- Require as part of the development review process a thorough evaluation of geologic-seismic and soils conditions and risk.
- Require all new development to design structures and buildings pursuant applicable State and local standards and codes.
- Require geologic studies to be conducted for all structures, including those not for human occupancy, located above and below ground whenever a project is located within an Earthquake Fault Zone as identified by the California Geologic Service.

- Regulate all development, including remodeling or structural rehabilitation, to assure adequate mitigation of safety hazards on sites having a history or threat of slope instability, erosion, subsidence, ground failure, ground rupture, and/or liquefaction.
- Coordinate with the Contra Costa County Department of Environmental Health, and other appropriate regulatory agencies' review of proposals at sites, which may have toxic contamination or include hazardous materials use.
- Control the transport of hazardous materials to minimize potential hazards to the local population.
- Require appropriate clean up of all former commercial and industrial sites prior to reuse according to relevant State and federal regulatory agencies.
- Require all development projects adjacent to open space to incorporate firebreaks, fire resistant landscaping, and/or fire-resistant building materials in order to minimize potential damage.

Emergency Services

- Promote effective, community-oriented law enforcement.
- Evaluate the effects of new development on law enforcement service and take public safety issues into account when reviewing land use proposals.
- Ensure that sufficient access for fire protection services is available in all new development.
- Maintain an ongoing program for disaster response, including participation in all aspects of emerging, new high-technology solutions.
- Implement the City's Local Hazards Mitigation Plan, consistent with the guidelines of the Federal Emergency Management Agency (FEMA) and the Disaster Act of 2000, and seek funding under FEMA's Hazard Mitigation Grant Program.

PUBLIC FACILITIES AND UTILITIES

The proposed General Plan includes policies and programs related to public facilities and utilities. The City's performance standards for such facilities and services are included in the Plan. Key public facilities and utilities policies include:

Water and Wastewater

- Coordinate with the Contra Costa Water District (CCWD) to provide an adequate and safe water supply.
- Encourage water conservation through City programs and cooperation with the CCWD.
- Design storm drainage facilities to meet the Contra Costa County Flood Control and Water Conservation District standards and ensure adequate and safe flow to minimize flooding.

- Ensure that new development provides needed drainage improvements in proportion to a project's impacts, to assure an equitable distribution of costs to construct and maintain the City's master storm drainage system.
- Operate and maintain the City-owned wastewater collection system, including transfer to Central Contra Costa County Sanitary District for treatment and disposal.

Solid Waste

- Continue reduction and recycling efforts within the City to divert increasingly larger portions of the waste stream from local landfills.

Education

- Maintain and improve educational opportunities in Concord through cooperation with the Mt. Diablo Unified School District (MDUSD), private schools, California State University, community organizations, and the Contra Costa County library system.
- Cooperate with the MDUSD in planning for new school sites and facilities and coordinate infrastructure improvements to ensure compatibility with City plans.
- Partner with the MDUSD to optimize the joint use of school facilities for community use.

Cultural Facilities

- Pursue planning and development for new library facilities and services.
- Encourage the use of public and private facilities, schools, churches, community centers, and spaces within other facilities for child and adult care services.
- Expand Concord's role as a regional entertainment center and encourage the creation and expansion of visual and performing arts programs.
- Plan for the equitable distribution of new public facilities by working with public agencies to create and expand opportunities, facilities, programs, and services for special needs that increase and enhance the community's quality of life while avoiding over concentration in one area.

2.7 IMPLEMENTATION OF THE PROPOSED GENERAL PLAN

OVERVIEW

The proposed General Plan provides specific policy guidance for implementation of plan concepts in each of the Plan elements and establishes a basis for coordinated action by the City, adjacent jurisdictions, Contra Costa County, Contra Costa Transportation Authority (CCTA), and regional and state agencies. The policies in each element of the Plan provide details that will guide program development; the General Plan Implementation Program (Volume III of the Plan) describes, in general terms, the responsibilities for implementation. It also outlines specific implementation actions that will be initiated after adoption. The Implementation Program will be

updated as often as deemed necessary to ensure that it reflects the City's implementation and strategic priorities.

The major implementation process for the land use proposals will be administration of the Zoning Ordinance through the Zoning Map. The Zoning Ordinance and Zoning Map will need to be amended to be consistent with the General Plan's policies; this work is currently underway. The Subdivision Ordinance also will need to be amended to provide flexibility in street design and ensure adequate provision of transit, bike and pedestrian facilities and connections between neighborhoods, schools, parks, and shopping areas, consistent with Plan policies for land use, transportation, and parks and public facilities.

The Concord Redevelopment Agency is evaluating opportunities for amending redevelopment project area boundaries to expand redevelopment programs. These can facilitate implementation of the General Plan policies, particularly for economic development and land use. The Redevelopment Agency also will participate in funding infrastructure improvements, housing programs and business relocation and expansion, as needed to carry out the General Plan, consistent with redevelopment project area plans and state law.

Design guidelines may be used to guide physical planning and building design, as well as landscape treatment in private projects and streetscape design. Guidelines for resource management and a Best Practices Manual will also be used to ensure protection of biological resources and water resources.

The City's 10-year Capital Improvement Program will continue to be the primary means of scheduling and funding infrastructure improvements of city-wide benefit. Special assessment districts or other means of financing improvements benefiting specific areas have been used successfully by the City for Downtown maintenance, landscape maintenance and street lighting. In the future, the City may continue to use these types of special districts, or Mello-Roos Community Facilities Districts or Infrastructure Financing Districts, may be used. In many areas, General Plan implementation will depend on actions of other public agencies and of the private sector that will fund most of the development expected to occur in the Planning Area on a "fair share" basis, that is in proportion to the demand for services and facilities each project generates. The General Plan will serve a coordinating function for private sector decisions; it also provides a basis for action on individual development applications, which must be found to be consistent with the General Plan if they are to be approved.

RESPONSIBILITIES

Implementing the General Plan will involve the City Council, the Planning Commission, other City boards and commissions, and City departments. The City also will need to consult with Contra Costa County and other public agencies about implementation proposals that affect their respective areas of jurisdiction. The principal responsibilities that City officials and staff have for Plan implementation are briefly summarized below; details on their powers and duties are in the Concord Municipal Code.

City Council

The City Council is responsible for the overall management of municipal affairs; it acts as the legislative body and is responsible for adoption of the General Plan and any amendments to the General Plan. The City Council appoints the City Manager who is the chief administrator of the City and has overall responsibility for the day-to-day implementation of the Plan. The City Council also appoints the Planning Commission and other boards and commissions established under the Municipal Code.

The City Council's role in implementing the General Plan will be to set implementation priorities and approve zoning map and text amendments, consistent with the General Plan, and a Capital Improvement Program and budget to carry out the Plan. The City Council also acts as the Redevelopment Agency and, in this capacity, will help finance public facilities and improvements needed to implement the Plan.

Planning Commission

The Planning Commission is responsible for preparing and recommending adoption or amendment of the General Plan, zoning and subdivision ordinances and other regulations, resource conservation plans, and programs and legislation needed to implement the General Plan. The Planning Commission also may prepare and recommend adoption of specific plans, neighborhood plans or special plans, as needed for Plan implementation. As provided under State law, the Planning Commission reviews annually the City's Capital Improvement Program for consistency with the General Plan.

Planning & Economic Development Department

The Planning & Economic Development Department is responsible for the general planning, development review, economic development and housing program functions undertaken by the City; it also is staff to the Redevelopment Agency, Planning Commission, Design Review Board, and Zoning Administrator function. Specific duties related to General Plan implementation include preparing zoning and subdivision ordinance amendments, design guidelines, reviewing development applications, conducting investigations and making reports and recommendations on planning and land use, zoning, subdivisions, design review, development plans and environmental controls. The Department also will coordinate activities related to school sites and the Buchanan airport in consultation with Contra Costa County, Mt. Diablo Unified School District (MDUSD) and the Airport Land Use Commission. Finally, the Department will have the primary responsibility for preparing the annual report on the General Plan and conducting the five-year review. This department has substantial implementation responsibilities for the Housing Element of the General Plan. These reporting requirements are described in Chapter 1 of the General Plan.

Building, Engineering & Neighborhood Services Department

The Building, Engineering & Neighborhood Services Department is responsible for building permits and building inspections, engineering services, and neighborhood services, including

code enforcement, neighborhood cleanup, neighborhood partnerships and multi-family housing inspection.

Community & Recreation Services Department

The Community & Recreation Services Department is responsible for managing the City's recreation services and community services (CDBG Administration), as well as managing scheduling use of parks, open spaces, and the golf course. Specific implementing responsibilities are established in the Public Services Element of the General Plan. The Department also will be preparing an updated strategic plan to implement the General Plan.

Building, Engineering, and Neighborhood Services (BENS)

The Building, Engineering, and Neighborhood Services provides for maintenance of all city infrastructure. The BENS coordinates the preparation of the annual 10-year Capital Improvement Program (CIP) budget document and oversees the design and construction administration of capital projects. Engineering Services also seeks grants to fund capital projects. Engineering Services reviews current development applications, subdivision maps, grading permits, public improvement plans, encroachment permits, development in the flood zone, and sewer permits. Engineering Services inspection work for compliance with the conditions of the permits it issues. BENS is responsible for transportation planning and operations, sign, striping and street maintenance, and parks and facilities maintenance. Specific implementing responsibilities are established in the Land Use, Transportation/ Circulation and Public Services Elements of the General Plan.

Police Department

Within the City, responsibility for public safety is assigned to the Police Department. The Police Department is responsible for preventing crime and maintaining law and order; it also coordinates with the Contra Costa County Consolidated Fire Protection District on mutual aid. Specific implementing responsibilities under the General Plan are established in the Public Facilities and Utilities and Safety Element of the General Plan.

Other Boards and Commissions

Other boards and commissions that will be involved in Plan implementation in their respective areas of expertise include:

- Board of Appeals
- Community Services Commission
- Design Review Board
- Mobile Home Park Rent Review Board
- Parks, Recreation and Open Space Commission

The General Plan does not envision any substantive change in the responsibilities assigned to these boards and commissions. They will be administering new or amended regulations adopted pursuant to Plan policies, and their actions will need to be consistent with the General Plan.

THE PLAN, THE REGULATORY SYSTEM AND CAPITAL IMPROVEMENTS

The City will use a variety of regulatory mechanisms and administrative procedures to implement the General Plan. Overall responsibility for plan implementation is vested in the Planning Agency, consisting of the City Council, Planning Commission, Planning Manager, and Design Review Board. California law requires the Zoning Ordinance and Maps be consistent with the General Plan. Other regulatory mechanisms, including subdivision approvals, building and housing codes, capital improvement programs, and environmental review procedures also will be used to implement Plan policies. All project approvals must be consistent with the General Plan.

Zoning Regulations

The City's Zoning Ordinance will translate plan policies into specific use regulations, development standards and performance criteria that will govern development on individual properties. The General Plan establishes the policy framework, while the Zoning Ordinance prescribes standards, rules and procedures for development. The Zoning Map will provide more detail than the General Plan Diagram.

The General Plan calls for several new zoning districts. Regulations for these districts will be established as part of the comprehensive zoning update being undertaken concurrently with the General Plan update. The use regulations and development standards for existing zoning districts will be amended to conform to Plan policies. Density and intensity limits, consistent with the Plan's land use classifications, also will be established. The City will bring both the Zoning Ordinance and the Zoning Map into conformance with the General Plan.

Subdivision Regulations

No subdivision of land may be approved under California law and the City's subdivision regulations unless its design and proposed improvements are found to be consistent with the General Plan. Dedication of land for park facilities is required for subdivisions for a certain number of units consistent with the policies and standards prescribed by the General Plan. The subdivision regulations also can require dedication of land for riparian habitat and reservation of land for fire stations, libraries, schools and other public facilities.

Building and Housing Codes

No building permit may be issued under California law (Gov. Code Section 65567) unless the proposed development is consistent with the City's open space plan and conforms to the policies of the Parks, Open Space and Conservation Element.

Capital Improvements

Concord's Capital Improvements Program (CIP) includes a list of public works projects that the City intends to design and construct in coming years, consistent with the General Plan.

This page intentionally left blank.

3.1 Air Quality

This section addresses the impacts of the proposed Concord 2030 General Plan and the proposed Urban Limit Line (ULL) on the local and regional air quality.

ENVIRONMENTAL SETTING

REGULATORY SETTING

The U.S. Environmental Protection Agency (US EPA) is responsible for implementing the programs established under the Federal Clean Air Act, such as establishing and reviewing the Federal ambient air quality standards and judging the adequacy of State Implementation Plans (SIP). However, the EPA has delegated the authority to implement many of the Federal programs to the States while retaining an oversight role to ensure that the programs continue to be implemented. In California, the California Air Resources Board (CARB) is responsible for establishing and reviewing the State ambient air quality standards, developing and managing the California SIP, securing approval of this plan from US EPA, and identifying toxic air contaminants (TACs). CARB also regulates mobile emissions sources in California, such as construction equipment, trucks, and automobiles, and oversees the activities of air quality management districts, which are organized at the county or regional level. An air quality management district is primarily responsible for regulating stationary emissions sources at facilities within its geographic areas and for preparing the air quality plans that are required under the Federal Clean Air Act and California Clean Air Act. The Bay Area Air Quality Management District (BAAQMD) is the regional agency with regulatory authority over emission sources in the Bay Area, which includes all of San Francisco, San Mateo, Santa Clara, Alameda, Contra Costa, Marin, and Napa counties, and the southern half of Sonoma and southwestern half of Solano counties.

Criteria Air Pollutants

As required by the Federal Clean Air Act passed in 1977, US EPA has identified six criteria air pollutants that are pervasive in urban environments and for which State and national health-based ambient air quality standards have been established. US EPA identifies these pollutants as criteria air pollutants because the agency has regulated them by developing specific public health- and welfare-based criteria as the basis for setting permissible levels. Ozone, carbon monoxide (CO), nitrogen dioxide (NO₂), sulfur dioxide (SO₂), particulate matter (PM), and lead are the six criteria air pollutants.

Ozone

Ozone is a respiratory irritant and an oxidant that increases susceptibility to respiratory infections and that can cause substantial damage to vegetation and other materials. 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 (NO_x). ROG and NO_x 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 NO_x 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. Ground level ozone in conjunction with suspended particulate matter in the atmosphere leads to hazy conditions generally termed as “smog.”

Carbon Monoxide

Carbon monoxide, a colorless and odorless gas, is a non-reactive pollutant that is a product of incomplete combustion and is mostly associated with motor vehicle traffic. High carbon monoxide concentrations develop primarily during winter when periods of light wind combine with the formation of ground level temperature inversions (typically from the evening through early morning). These conditions result in reduced dispersion of vehicle emissions. Motor vehicles also exhibit increased carbon monoxide emission rates at low air temperatures. 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.

Nitrogen Dioxide

Nitrogen dioxide is an air quality concern because it acts a respiratory irritant and is a precursor of ozone. Nitrogen dioxide is produced by fuel combustion in motor vehicles, industrial stationary sources, ships, aircraft, and rail transit.

Sulfur Dioxide

Sulfur dioxide is a combustion product of sulfur or sulfur-containing fuels such as coal and oil, which are restricted in the Bay Area. Its health effects include breathing problems and may cause permanent damage to lungs. SO₂ is an ingredient in acid rain, which can damage trees, lakes and property, and can also reduce visibility.

Particulate Matter

PM-10 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). PM-10 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. Particulate matter in the atmosphere results from many kinds of dust- and fume-producing industrial and agricultural operations, fuel combustion, and atmospheric photochemical reactions. Some sources of particulate matter, such as demolition and construction activities, are more local in nature, while others, such as vehicular traffic, have a more regional effect. Very small particles (PM-2.5) 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.

PM emissions in the project area are mainly from urban sources, dust suspended by vehicle traffic and secondary aerosols formed by reactions in the atmosphere. Particulate concentrations near residential sources generally are higher during the winter, when more fireplaces are in use and meteorological conditions prevent the dispersion of directly emitted contaminants.

Lead

Leaded gasoline (which is being phased out), paint (houses, cars), smelters (metal refineries), and manufacture of lead storage batteries have been the primary sources of lead released into the atmosphere. Lead has a range of adverse neurotoxic health effects for which children are at special risk. Some lead-containing chemicals cause cancer in animals.

Ambient Air Quality Standards

Regulation of air pollution is achieved through both national and State ambient air quality standards and emissions limits for individual sources of air pollutants. As required by the Federal Clean Air Act, the US EPA has established National Ambient Air Quality Standards (national standards) to protect public health and welfare. California has adopted more stringent ambient air quality standards for most of the criteria air pollutants (referred to as State Ambient Air Quality Standards or State standards). In addition, California has established State ambient air quality standards for sulfates, hydrogen sulfide, vinyl chloride, and visibility-reducing particles. Because of California's unique meteorological problems, there is considerable diversity between State and Federal standards currently in effect in California, as shown in **Table 3.1-1**. The table also summarizes the related health effects and principal sources for each pollutant.

The ambient air quality standards are intended to protect the public health and welfare, and they incorporate an adequate margin of safety. They are designed to protect those segments of the public most susceptible to respiratory distress, known as sensitive receptors, including asthmatics, the very young, the elderly, people weak from other illness or disease, or persons engaged in strenuous work or exercise. Healthy adults can tolerate occasional exposure to air pollution levels somewhat above the ambient air quality standards before adverse health effects are observed.

Attainment Status

Under amendments to the Federal Clean Air Act, US EPA has classified air basins or portions thereof, as either "attainment" or "nonattainment" for each criteria air pollutant, based on whether or not the national standards have been achieved. The California Clean Air Act, which is patterned after the Federal Clean Air Act, also requires areas to be designated as "attainment" or "nonattainment" for the State standards. Thus, areas in California have two sets of attainment / nonattainment designations: one set with respect to the national standards and one set with respect to the State standards.

The Bay Area is currently designated "nonattainment" for State and national (1 hour and 8 hour) ozone standards and for the State PM-10 and PM-2.5 standards. The Bay Area is "attainment" or "unclassified" with respect to the other ambient air quality standards. **Table 3.1-2** shows the attainment status of the Bay Area with respect to the national and State ambient air quality standards for different criteria pollutants.

Table 3.1-1: State and National Criteria Air Pollutant Standards, Effects and Sources

<i>Pollutant</i>	<i>Averaging Time</i>	<i>California Standard</i>	<i>National Primary Standard</i>	<i>Major Pollutant Sources</i>	<i>Pollutant Health and Atmospheric Effects</i>
Ozone	1 hour	0.09 ppm	---	On-road motor vehicles, other mobile sources, solvent extraction, combustion, industrial and commercial processes.	High concentrations can directly affect lungs, causing irritation. Long-term exposure may cause damage to lung tissue.
	8 hours	0.07 ppm	0.08 ppm		
Carbon Monoxide	1 hour	20 ppm	35 ppm	Internal combustion engines, primarily gasoline-powered motor vehicles.	Classified as a chemical asphyxiant, carbon monoxide interferes with the transfer of fresh oxygen to the blood and deprives sensitive tissues of oxygen.
	8 hours	9.0 ppm	9 ppm		
Nitrogen Dioxide	1 hour	0.25 ppm	---	Motor vehicles, petroleum refining operations, industrial sources, aircraft, ships, and railroads.	Irritating to eyes and respiratory tract. Colors atmosphere reddish brown.
	Annual Average	---	0.053 ppm		
Sulfur Dioxide	1 hour	0.25 ppm	---	Fuel combustion, chemical plants, sulfur recovery plants, and metal processing.	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.
	24 hours	0.04 ppm	0.14 ppm		
	Annual Avg.	---	0.03 ppm		
Respirable Particulate Matter (PM ₁₀)	24 hours	50 µg/m ³	150 µg/m ³	Dust- and fume-producing industrial and agricultural operations, combustion, atmospheric photochemical reactions, and natural activities (e.g. wind-raised dust and ocean sprays).	May irritate eyes and respiratory tract, decreases lung capacity and increases risk of cancer and mortality. Produces haze and limit visibility.
	Annual Average	20 µg/m ³	50 µg/m ³		
Fine Particulate Matter (PM _{2.5})	24 hours	---	65 µg/m ³	Fuel combustion in motor vehicles, equipment and industrial sources; residential and agricultural burning. Also formed from photochemical reactions of other pollutants, including NO _x , sulfur oxides, and organics.	Increases respiratory disease, lung damage, cancer and premature death. Reduces visibility and results in surface soiling.
	Annual Average	12 µg/m ³	15 µg/m ³		
Lead	Monthly Average	1.5 µg/m ³	---	Present source: lead smelters, battery manufacturing & recycling facilities. Past source: combustion of leaded gasoline.	Disturbs gastrointestinal system, and causes anemia, kidney disease, and neuromuscular and neurologic dysfunction.
	Quarterly	---	1.5 µg/m ³		

Note: ppm=parts per million; and µg/m³=micrograms per cubic meter

Source: California Air Resource Board, Available at <http://www.arb.ca.gov/aqs/aaqs2.pdf>, May 2006.

Table 3.1-2: Attainment Status of the Bay Area for State and National Ambient Air Quality Standards

Pollutant	Averaging Time	Attainment Status	
		State Standards ¹	National Standards ²
Ozone	8 Hours	Unclassified	Nonattainment ³
	1 Hour	Nonattainment	---
Carbon Monoxide	8 Hours	Attainment	Attainment ⁵
	1 Hour	Attainment	Attainment
Nitrogen Dioxide	Annual Average	---	Attainment
	1 Hour	Attainment	---
Sulfur Dioxide	Annual Average	---	Attainment
	24 Hours	Attainment	Attainment
	1 Hour	Attainment	---
Respirable Particulate Matter (PM-10)	Annual Arithmetic Mean	Nonattainment ⁶	Attainment
	24 Hours	Nonattainment ⁶	Unclassified
Fine Particulate Matter (PM-2.5)	Annual Arithmetic Mean	Nonattainment ⁶	Attainment
	24 Hours	---	Attainment
Lead	Calendar Quarter	---	Attainment
	30 Day Average	Attainment	---

¹ California Standards for ozone, carbon monoxide (except Lake Tahoe), sulfur dioxide (1-hour and 24-hour), nitrogen dioxide, and PM-10 are values that are not to be exceeded.

² National standards other than for ozone and those based on annual averages or annual arithmetic means are not to be exceeded more than once a year.

³ In June 2004, the Bay Area was designated as a marginal nonattainment area for the national 8-hour standard.

⁴ In April 1998, the Bay Area was redesignated to attainment for the national 8-hour carbon monoxide standard.

⁵ Based on new annual standards for PM-10 and PM-2.5 established by CARB in June 2002.

Source: Bay Area Air Quality Management District, 2006.

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 nonattainment (with the exception of areas designated as nonattainment for the State PM standards). Maintenance plans are required for attainment areas that had previously been designated nonattainment 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 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. These are:

- The Ozone Attainment Plan for the 1-Hour National Ozone Standard (ABAG, 2001) developed to meet Federal ozone air quality planning requirements;
- The recently adopted 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 US 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 the ARB in 2001. In July 2003, EPA signed a rulemaking proposing to approve the Plan. 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, 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, 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: emission inventory; control measure commitments; motor vehicle emission budgets; reasonably available control measures; and commitments to further study measures.

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, EPA designated regions as attainment and nonattainment areas for the 8-hour standard. These designations took effect on June 15, 2004. EPA formally designated the Bay Area as a nonattainment area for the national 8-hour ozone standard, and classified the region as "marginal" according to five classes of nonattainment areas for ozone, which range from marginal to extreme. Marginal nonattainment areas must attain 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, EPA signed Phase 2 of the 8-hour implementation rule on November 9, 2005. It is not currently anticipated that marginal areas will be required to prepare attainment demonstrations for the 8-hour standard. 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 *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. The new standard took effect in May 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 is currently designated “unclassified” with respect to the State eight-hour standard and will be taking action as necessary to address the standard as appropriate once the planning requirements have been established.

Toxic Air Contaminants

The Health and Safety Code defines toxic air contaminants (TACs) as air pollutants that may cause or contribute to an increase in mortality or in serious illness, or that may pose a present or potential hazard to human health. TACs are less pervasive in the urban atmosphere than criteria air pollutants, but are linked to short-term (acute) or long-term (chronic and/or carcinogenic) adverse human health effects. There are hundreds of different types of TACs, with varying degrees of toxicity. Sources of TACs include industrial processes, commercial operations (e.g., gasoline stations and dry cleaners), and motor vehicle exhaust. The current list of toxic air contaminants includes approximately 200 compounds, including all of the toxics identified under Federal law plus additional compounds, such as particulate emissions from diesel-fueled engines, which was added in 1998. According to the BAAQMD, the local agency with governing air quality issues in the Bay Area, diesel exhaust emissions are the TAC responsible for most excess cancer deaths in the Bay Area.

Unlike regulations concerning criteria air pollutants, there are no ambient air quality standards for evaluation of TACs based on the amount of emissions. Instead, TAC emissions are evaluated based on the degree of health risk that could result from exposure to these pollutants. Regulation of toxic air contaminants is achieved through Federal and State controls on individual sources. Federal environmental laws refer to “hazardous air pollutants,” while California environmental laws refer to “toxic air contaminants.” Both of these terms basically encompass the same constituent toxic compounds.

TACs have been regulated under Federal air quality law since the 1977 Federal Clean Air Act Amendments. The most recent Federal Clean Air Act Amendments (1990) reflect a technology-based approach for reducing TACs. The first phase involves requiring facilities to install Maximum Achievable Control Technology (MACT). The MACT standards vary depending on the type of emitting source. US EPA has established MACT standards for over 20 facilities or

activities, such as perchloroethylene dry cleaning and petroleum refineries. The second phase of control involves determining the residual health risk represented by air toxics emissions sources after implementation of MACT standards.

Two principal laws provide the foundation for State regulation of TACs from stationary sources. In 1983, the State Legislature adopted Assembly Bill 1807, which established a process for identifying TACs and provided the authority for developing retrofit air toxics control measures on a Statewide basis. Air toxics from stationary sources in California are also regulated under Assembly Bill 2588, the Air Toxics “Hot Spots” Information and Assessment Act of 1987. Under Assembly Bill 2588, TAC emissions from individual facilities are quantified and prioritized by the regional air quality management district or county air pollution control district. High priority facilities are required to perform a health risk assessment, and if specific thresholds are violated, they are required to communicate the results to the public in the form of notices and public meetings. Depending on the risk level, emitting facilities can be required to implement varying levels of risk reduction measures.

Locally, the BAAQMD administers the Bay Area’s Toxic Air Contaminant Control Program, which is intended to reduce public exposure to TACs from stationary sources in the Bay Area. BAAQMD is currently working to control TAC impacts at local “hot spots” and to reduce TAC background concentrations. The control strategy involves reviewing new stationary sources to ensure compliance with required emissions controls and limits, maintaining an inventory of existing stationary sources of TACs, and developing new rules and regulations to reduce TAC emissions.

Regulation of TACs from mobile sources has traditionally been implemented through emissions standards for on-road motor vehicles (imposed on vehicle manufacturers) and through specifications for gasoline and diesel fuel sold in California (imposed on fuel refineries and retailers), rather than through land use decisions, air quality permits, or regulations addressing how motor vehicles are used by the general public.

BAAQMD Rules and Regulations

The BAAQMD is the regional agency responsible for rulemaking, permitting, and enforcing activities affecting stationary sources in the Bay Area. Specific rules and regulations adopted by the BAAQMD limit the emissions that can be generated by various uses and/or activities, and identify specific pollution reduction measures that must be implemented in association with various uses and activities. These rules regulate not only emissions of the six criteria air pollutants, but also toxic emissions and acutely hazardous non-radioactive materials emissions.

Emissions sources subject to these rules are regulated through the BAAQMD’s permitting process and standards of operation. Through this permitting process, including an annual permit review, the BAAQMD monitors the generation of stationary emissions and uses this information in developing its air quality plans. Any sources of stationary emissions constructed as part of the proposed project would be subject to the BAAQMD *Rules and Regulations*. Both Federal and State ozone plans rely heavily upon stationary source control measures set forth in BAAQMD’s *Rules and Regulations*.

PHYSICAL SETTING

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.” The term “criteria air pollutants” refers to those pollutants that are pervasive in urban environments and for which State and national health-based ambient air quality standards have been established (*see Criteria Air Pollutants*, p. 2, above). The Health and Safety Code defines toxic air contaminants as air pollutants which may cause or contribute to an increase in mortality or in serious illness, or which may pose a present or potential hazard to human health. This setting description provides an overview of region-specific information related to climate and topography, regulatory context followed by a discussion of plans, policies, and regulations; and existing air quality conditions pertaining to the project area.

Climate and Meteorology

The project area is the City of Concord, which lies within the San Francisco Bay Area Air Basin (Bay Area). 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 greater San Francisco Bay Area, including Martinez and Concord, is a Mediterranean-type climate characterized by warm, dry summers and mild, wet winters, attributable to 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 project area would be located within the Diablo and San Ramon Valley climatological subregion of the Bay Area Air Basin (BAAQMD, 1999). The valleys are bordered by the Black Diamond Hills and Mt. Diablo to the east. The Diablo Valley is a broad valley, approximately 5 miles wide and 10 miles long. The Carquinez Strait is at its north end; in the south, it tapers into the San Ramon Valley. Major cities in the Diablo Valley are Concord, and Walnut Creek. The Coast Range on the west side of these valleys is sufficiently high to block much of the marine air from reaching the valleys. During the daytime, there are two weakly 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 downvalley toward the Carquinez Straits. This downvalley drainage pattern can be observed all the way to Martinez at the 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 station in Concord reports annual average wind speeds of 4.7 mph.

Air temperatures are cooler in the winter and warmer in the summer because these valleys are further from the moderating effect of large water bodies, and because the Coast Range blocks marine air flow. In the Diablo Valley during the winter, 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.

These valleys rarely experience fog during the summer. In the winter, however, tule fogs are common at night. Tule fogs form on cold, clear nights when winds are light and there is abundant moisture on the ground, as happens after a rainstorm. Alternatively, the tule fog can be advected from the Central Valley through the Carquinez Strait and Livermore Valleys. These fogs usually burn 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. Concord, for example, reports an annual average of 25.1 inches.

Pollution potential is relatively high in these valleys. In the winter, light winds at night, coupled with a surface-based inversion, and terrain that blocks airflow 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 already exceed State ozone standards.

Criteria Air Pollutants

The 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 Concord can generally be inferred from ambient air quality measurements conducted by the BAAQMD at its nearby monitoring stations. The 2975 Treat Boulevard station in Concord can be considered to be representative of the air quality in Concord. This station monitors ozone, particulate matter (PM₁₀ and PM_{2.5}), carbon monoxide, nitrogen dioxide and sulfur dioxide. **Table 3.1-3** shows a five-year summary of monitoring data for ozone, carbon monoxide, and particulate matter from the Treat Boulevard station. These three pollutants are of most concern in the Bay Area. The table also compares these measured concentrations with State and Federal ambient air quality standards. **Table 3.1-4** shows trends in regional exceedances of the Federal and State ozone standards. Because of the number of exceedances, ozone is the pollutant of greatest concern in the Bay Area. Bay Area counties experience most ozone exceedances during the period from April through October.

Motor vehicle transportation, including automobiles, trucks, transit buses, and other modes of transportation, is the major contributor to regional air pollution. Stationary sources were once important contributors to both regional and local pollution. However, their role has been substantially reduced in recent years by pollution control programs, such as those of the BAAQMD. Any further progress in air quality improvement now focuses heavily on transportation sources.

Based on the data shown in **Table 3.1-3**, State one-hour ozone standards have been exceeded on an average of 4 days per year in Concord over the last five years. National one-hour and 8-hour standards have been exceeded just once in the last five years.

Table 3.1-3: Air Quality Data Summary (2001 – 2005) for the Project Area

Pollutant	Standard ²	Monitoring Data by Year ¹				
		2001	2002	2003	2004	2005 ⁵
Ozone						
Highest 1 Hour Average (ppm) ³		0.134	0.103	0.101	0.097	0.098
Days over State Standard	0.09	6	5	5	1	1
Days over National Standard	0.12	1	0	0	0	0
Highest 8 Hour Average (ppm) ³		0.087	0.089	0.085	0.083	0.08
Days over National Standard	0.08	1	3	1	0	0
Carbon Monoxide:						
Highest 8 Hour Average (ppm) ³		2.67	2.28	1.99	2.0	1.51
Days over State and National Standard	9	0	0	0	0	0
Respirable Particulate Matter (PM-10):						
Highest 24 Hour Average ($\mu\text{g}/\text{m}^3$) ³		111.5	65.8	34.0	50.7	42.2
Measured Days over State Standard ⁴	50	3	3	0	1	0
Measured Days over National Standard ⁴	150	0	0	0	0	0
Fine Particulate Matter (PM-2.5):						
Highest 24-Hour Average ($\mu\text{g}/\text{m}^3$) ³	65	68.2	76.7	49.7	73.7	48.9
Days over National Standard		1	1	0	1	0
National Annual Average ($\mu\text{g}/\text{m}^3$) ³	15	10.2	12.7	9.7	NA	NA

¹ Data are from the 2975 Treat Boulevard station in Concord.

² Generally, State standards are not to be exceeded and national standards are not to be exceeded more than once per year.

³ ppm = parts per million; $\mu\text{g}/\text{m}^3$ = micrograms per cubic meter.

⁴ PM-10 is not measured every day of the year. It is measured once every 6 days. The data shown refers to the actual number of days measured over the standards.

⁵ Data for 2005 includes data collected from the 2975 Treat Boulevard Station, where monitoring ended in 2005 and the new 2956A Treat Boulevard Station.

Note: Values in **bold** are in excess of applicable standard. NA = Not Available.

Source: California Air Resources Board, 2006c.

The principal sources of ozone precursors ROG and NOx in the Bay Area include on-road motor vehicles (approximately 39 percent for ROG and 52 percent for NOx), other mobile sources (approximately 17 percent for ROG and 34 percent for NOx), solvent evaporation (approximately 20 percent for ROG), fuel combustion (approximately 9 percent NOx) and oil and gas production (approximately 8 percent for ROG). Bay Area emissions of the ozone precursors ROG and NOx are expected to decrease by approximately 24 and 36 percent, respectively, between 2005 and 2020 (CARB, 2006a) largely as a result of the State's onroad motor vehicle emission control program. These reductions are projected as vehicles meeting more stringent emission standards enter the fleet, and all vehicles use cleaner burning gasoline and diesel fuel or alternative fuels. This includes the use of improved evaporative emission control systems, computerized fuel injection, engine management systems to meet increasingly stringent California emission standards, cleaner gasoline, and the Smog Check program. ROG and NOx emissions from other mobile sources and stationary sources are also projected to decline as more stringent emission standards and control technologies are adopted and implemented.

Table 3.1-4 shows that there have been no exceedances of State and Federal ambient carbon monoxide standards at the Treat Boulevard station in Concord over the last five years. Currently, on-road motor vehicles are responsible for approximately 68 percent of the carbon monoxide emitted within the San Francisco Bay Area and 65 percent of that emitted in Contra Costa County (CARB, 2005a). Carbon monoxide emissions are expected to decrease in Contra Costa County by approximately 41 percent between 2005 and 2020 due to attrition of older, high polluting vehicles, improvements in the overall automobile fleet, and improved fuel mixtures (CARB, 2006a).

Table 3.1-4: Summary of Ozone Data for the San Francisco Bay Area Air Basin (1996 – 2005)

Year	Number of Day Standard Exceeded ¹			Ozone Concentrations (ppm) ²	
	State 1 hr	National 1 hr	National 8 hr	Maximum 1 hr	Maximum 8 hr
2005	9	0	1	0.12	0.09
2004	7	0	0	0.11	0.084
2003	19	1	7	0.13	0.101
2002	16	2	7	0.16	0.106
2001	15	1	7	0.13	0.100
2000	12	3	9	0.15	0.144
1999	20	3	4	0.16	0.122
1998	29	8	16	0.15	0.111
1997	8	0	0	0.11	0.084
1996	34	8	14	0.14	0.112

¹ This table summarizes the data from all of the monitoring stations within the Bay Area.

² ppm = parts per million.

Source: Bay Area Air Quality Management District, Annual Bay Area Air Quality Summaries, available at http://www.baaqmd.gov/pio/aaq_summaries/index.htm, accessed August 2006.

State PM-10 standards have been exceeded at the Treat Boulevard station on an average of less than two days per year, while there have been no exceedances of the national standard. The national PM-2.5 standard has been exceeded just three times over the last five years. Generally, contributors to PM concentrations in the project area are primarily urban sources, dust suspended by vehicle traffic, and secondary aerosols formed by reactions in the atmosphere. Particulate concentrations near residential sources generally are higher during the winter, when more fireplaces are in use and meteorological conditions prevent the dispersion of directly emitted contaminants. Direct PM-10 emissions in Contra Costa County are expected to increase by approximately 18 percent between 2005 and 2020 (CARB, 2006a). This increase would be primarily from increase in fugitive dust from an anticipated increase in the vehicle miles traveled as well as stationary sources (such as industrial activities) and area sources (such as construction and demolition, road dust and other miscellaneous processes). Fugitive dust refers to particulate matter not emitted from a duct, tailpipe or stack, which becomes airborne due to the forces of wind, human activity, or both. Activities that generate fugitive dust include vehicle travel over paved and unpaved roads, brake wear, tire wear, soil cultivation, off-road vehicles, or any vehicles operating on open fields or dirt roadways, wind erosion of exposed surfaces, storage piles at construction sites, etc. PM-2.5 emissions in Contra Costa County are also projected to increase by approximately 14 percent between 2005 and 2020 (CARB, 2006a) because the reduction in emissions from onroad and offroad engines would be more than offset by an increase in vehicle activity and also an increase in industrial growth.

The standards for nitrogen dioxide, sulfur dioxide, and lead are being met in the Bay Area, and the latest pollutant trends suggest that these standards will not be exceeded in the foreseeable future (ABAG, 2001).

Toxic Air Contaminants

The ambient background of TACs is the combined result of many diverse human activities, including gasoline stations, automobiles, dry cleaners, industrial operations, hospital sterilizers, and painting operations. In general, mobile sources contribute more significantly to health risks than do stationary sources. Both BAAQMD and CARB operate a network of monitoring stations that measure ambient concentrations of certain TACs that are associated with strong health-related effects and are present in appreciable concentrations in the Bay Area, as in all urban areas. The 2975 Treat Boulevard Station in Concord also monitors TACs. However, ambient concentrations of TACs are similar through the urbanized areas of the Bay Area. Of the pollutants for which monitoring data are available, benzene and 1,3-butadiene (which are emitted primarily from motor vehicles) account for over one half of the average calculated cancer risk (BAAQMD, 2004). Benzene levels have declined dramatically since 1996 with the advent of Phase 2 reformulated gasoline. The use of reformulated gasoline also appears to have led to significant decreases in 1,3-butadiene. Due largely to these observed reductions in ambient benzene and 1,3-butadiene levels, the calculated network average cancer risk has been significantly reduced in recent years. Based on 2002 ambient monitoring data, the BAAQMD reported a calculated lifetime cancer risk from measured concentrations of TACs, excluding diesel particulate matter, to be 162 in one million averaged over all Bay Area locations (BAAQMD, 2004). This is 46 percent less than what was observed in 1995 (BAAQMD, 2004). Because diesel particulate matter can not be directly monitored in the ambient air, the BAAQMD uses California Air Resources Board's estimates of the population-weighted average ambient diesel particulate concentration

for the Bay Area to derive an average cancer risk from diesel particulate matter exposure at about 480 in-one-million, as of 2000 (CARB, 2006b). The risk from diesel particulate matter has reduced from 750 in-one-million in 1990 and 570 in-one-million in 1995 (CARB, 2006b).

Odors and Nuisances

Another air quality issue of concern in the Bay Area is nuisance impacts from odors. Objectionable odors may be associated with a variety of pollutants. Common sources of odors include wastewater treatment plants, landfills, composting facilities, refineries and chemical plants. Odors rarely cause direct health impacts, but they can be very unpleasant and lead to distress and concern over possible health effects among the public, 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 BAAQMD CEQA Guidelines recommends 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. The BAAQMD CEQA Guidelines lists the type of operations that are typically associated with odor issues and provides acceptable buffer zones (distance between source and receptor) that would be required to mitigate odor impacts. All odor sources are subject to the requirements of the BAAQMD Regulation 7 – Odorous Substances, which establishes general limitations on odorous substances and specific emission limitations on certain odorous compounds, in addition to the requirements of local nuisance ordinances.

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.

IMPACT ANALYSIS

SIGNIFICANCE CRITERIA

A significant impact would occur with full implementation of the proposed Concord General Plan if it would:

- Conflict with or obstruct implementation of the applicable air quality plan;

- Violate any air quality standard or threshold or contribute to an existing or projected air quality violation;
- Expose sensitive receptors to substantial pollutant concentrations; or
- Create objectionable odors affecting a substantial number of people.

METHODOLOGY & ASSUMPTIONS

The methodology recommended by the *BAAQMD CEQA Guidelines* has been used in evaluating impacts.

SUMMARY OF IMPACTS

Air quality impacts resulting from the implementation of the proposed General Plan fall into two categories: short-term impacts due to construction, and long-term impacts due to operation. Construction activities would affect local particulate concentrations primarily due to fugitive dust sources and increase other criteria pollutant emissions from equipment exhaust.

Over the long term, the full implementation of the proposed General Plan would result in an increase in criteria pollutant emissions primarily due to related motor vehicle trips. Stationary sources and area sources would result in lesser quantities of criteria pollutant emissions. Stationary sources and diesel-fueled mobile sources would also generate emissions of TACs including diesel particulate matter that could pose a health risk.

IMPACTS AND MITIGATION MEASURES

Impact

- 3.1-1 New development under the proposed General Plan and within the proposed Urban Limit Line could increase population and vehicle miles traveled in the area at a rate greater than that assumed in regional air quality planning and therefore conflict with the implementation of the Bay Area CAP. (*Less than Significant*)**

Air pollutant emissions are a function of human activity. If growth in population is greater than assumed in the CAP emission inventory, then population-based emissions are also likely to be greater than assumed in the CAP. Consequently attainment of the State air quality standards would be delayed, and, plans showing estimated population greater than that assumed in the ABAG Projections would be inconsistent with air quality planning and have a significant impact.

Development under the proposed General Plan would result in increases in population and employment and consequently an increase in traffic and air pollutant emissions. With respect to the BAAQMD Guidelines for determining air quality impacts, the impact analysis must determine consistency of a proposed plan or plan amendment with the population and vehicle miles traveled (VMT) in the applicable regional air quality plan, in this case, the 2005 Bay Area Ozone Strategy. In forecasting future stationary and mobile source emissions and preparing the regional air quality plan, the BAAQMD uses growth projections prepared by ABAG. The resultant emissions forecasts are then used to develop strategies and control measures necessary to achieve

regional ozone attainment within a designated time frame. In developing its projections, ABAG uses information from local government general plans, current zoning and other local development policies, in conjunction with economic and demographic factors. Consistent with this process, the ABAG projections for Concord use the development anticipated under the existing Concord General Plan, zoning and existing policies at the time of preparation of the projections. Therefore, for a plan to be consistent with population and VMT assumptions used in regional air quality planning, the plan must show that over the planning period:

- a) Population growth for the jurisdiction will not exceed the values included in the current Clean Air Plan, and
- b) The rate of increase in VMT for the jurisdiction is equal to or lower than the rate of increase in population.

The proposed General Plan anticipates that the population in Concord will increase from 123,900 in 2005 to 141,670 in 2030. This represents a growth rate of 0.57 percent per year to the buildout year 2030. The *2005 Bay Area Ozone Strategy* is based on population assumptions in the 2003 ABAG Projections. Based on 2003 ABAG Projections, the population in Concord is projected to be 154,500 in 2030 with a rate of population growth of 0.85 percent per year between 2005 and 2030 (ABAG, 2003). Therefore, the population growth under the implementation of the proposed Concord General Plan and within the Urban Limit Line would be consistent with ABAG's 2003 population projections, which forms the basis of the 2005 Ozone Strategy. However, based on data provided by Dowling Associates, VMT is expected to increase by 1.06 percent per year up to the buildout year 2030. Since the rate of increase in VMT would exceed the rate of increase in population, the proposed General Plan would not be consistent with the 2005 Bay Area Ozone Strategy as VMT and associated emissions generated by the proposed General Plan would exceed the assumptions used in the Ozone Strategy to forecast future trends in emissions that form the basis for future air quality planning. Consequently, attainment of the State air quality standards would be delayed, and the proposed Concord General Plan and development within the Urban Limit Line would not be consistent with regional air quality planning.

Proposed General Plan Policies that Reduce the Impact

The following proposed policies would reduce potential air pollution emissions:

- Policy S-1.1.3: Cooperate with the Bay Area Air Quality Management District in the review of land use proposals to address typical air quality problems.
- Policy S-1.1.4: Provide input and assistance to the Bay Area Air Quality Management District's development and implementation of regional air quality strategies.
- Policy S-1.2.1: Promote pedestrian, bicycle, and transit modes of travel to reduce air pollutant emissions from automobiles.
- Policy S-1.2.2: Encourage establishment of Transportation Demand Management (TDM) programs at major employment sites and shopping centers, including

provision of preferential carpool parking and car share programs, bicycle lockers, BART shuttles, and jitney service.

- Policy S-1.2.3: Support the expansion and improvement of local and regional transit systems and ridesharing programs.
- Policy S-1.3.1: Encourage provisions for compatible live/work arrangements and telecommuting in residential areas.
- Policy S-1.3.2: Promote infill development to reduce automobile travel.
- Policy S-1.3.3: Support transit-oriented development to reduce automobile travel.
- Policy T-1.1.2: Continue to promote a wide variety of transportation alternatives and modes to serve all residents and businesses to enhance the quality of life.
- Policy T-1.1.9: Establish efficient linkages to the regional transportation system for all modes of travel.
- Policy T-1.3.4: Coordinate with Caltrans and transit providers to identify and implement Park and Ride sites.
- Policy T-1.4.1: Coordinate with public transportation agencies to facilitate safe, efficient and convenient access to transit.
- Policy T-1.4.2: Work with public transportation agencies to ensure adequate transit service.
- Policy T-1.5.1: Plan linkages to minimize walking distance and enhance the pedestrian experience.
- Policy T-1.5.2: Use innovative and effective walkway features to enhance the pedestrian environment.
- Policy T-1.5.3: Facilitate pedestrian circulation near high activity centers.
- Policy T-1.5.4: Encourage new development to provide pedestrian connections to adjacent open spaces, and trails.
- Policy T-1.6.1: Implement strategies and actions for enhanced bicycle circulation throughout the City.
- Policy T-1.6.2: Require provision of bicycle facilities in new developments, where appropriate.
- Policy T-1.6.3: Encourage transit operators to provide adequate bicycle accommodations.

- Policy T-1.6.4: Encourage new development to provide bicycle access to parks, schools, and transit stops in the design of new residential neighborhoods.
- Policy LU-1.2.4 Encourage neighborhood retail and service uses within convenient walking distance of all residential neighborhoods, where feasible.
- Policy LU-1.3.3 Support higher density and mixed use development in Downtown and near transit centers and corridors.
- Policy LU-4.2.3 Promote pedestrian-oriented urban design.

Although VMT increase due to the proposed General Plan is considered a significant air quality impact, it is important to note that proposed changes in land use designations that allow for this additional growth also encourage new growth in proximity to employment centers, thereby potentially reducing the travel distance of future residents to employment areas. The Urban Limit Line restricts development outside of its boundaries, further reducing the travel distance of future residents to employment areas. In addition, implementation of the policies Stated above for all development under the existing General Plan would reduce the impact to less than significant.

While this analysis is based on assumed development and activity that could occur pursuant to the proposed General Plan and within the Urban Limit Line, individual projects that may be proposed in the future within the project area would undergo further environmental review to determine whether they could generate further air quality impacts specific to their site, time and project description, and any significant impacts identified would be mitigated to a less than significant level.

Mitigation Measures

No mitigation measures are required.

Impact

3.1-2 The proposed General Plan could be inconsistent with the Transportation Control Measures in the 2005 Bay Area Ozone Strategy. (*Less than Significant*)

The 1988 California Clean Air Act, Section 40919(d) requires regions to implement “transportation control measures to substantially reduce the rate of increase in passenger vehicle trips and miles traveled.” Consistent with this requirement, a primary goal of the *Bay Area 2005 Ozone Strategy* is to reduce the number of trips and vehicle miles Bay Area residents travel in single-occupant vehicles through the implementation of nineteen TCMs. **Table 3.1-5** identifies those TCMs that local governments should implement through local plans to be considered in conformance with the *2005 Ozone Strategy*. The BAAQMD recommends that local plans that do not demonstrate reasonable efforts to implement these TCMs be considered inconsistent with the regional air quality plan and therefore have a significant impact. As discussed in **Table 3.1-5** below, the proposed General Plan contains policies consistent with the TCMs in the Ozone Strategy. These policies encourage mixed use development, a concept that places residential, commercial, industrial, and employment activities close to each other thereby reducing the

Table 3.1-5: Clean Air Plan TCMs to be Implemented by Local Governments

<i>TCM in the 2005 Ozone Strategy</i>		<i>Policies in the Proposed General Plan Consistent with the TCM</i>
1. Support Voluntary Employer-Based Trip Reduction Programs		Policy S-1.2.1: Promote pedestrian, bicycle, and transit modes of travel to reduce air pollutant emissions from automobiles.
		Policy S-1.2.2: Encourage establishment of Transportation Demand Management (TDM) programs at major employment sites and shopping centers, including provision of preferential carpool parking and car share programs, bicycle lockers, BART shuttles, and jitney service.
		Policy S-1.2.3: Support the expansion and improvement of local and regional transit systems and ridesharing programs.
		Policy T-1.3.4: Coordinate with Caltrans and transit providers to identify and implement Park and Ride sites
		Principle T-1.6: Provide a Safe and Comprehensive Bicycle Network.
		Policy T-1.6.1: Implement strategies and actions for enhanced bicycle circulation throughout the City.
		Policy T-1.6.2: Require provision of bicycle facilities in new developments, where appropriate.
		Policy T-1.6.3 Encourage transit operators to provide adequate bicycle accommodations.
		Policy T-1.6.4: Encourage new development to provide bicycle access to parks, schools, and transit stops in the design of new residential neighborhoods. In addition, Policies S-1.2.1 and S-1.2.2, included above, would also serve to ensure compliance with this measure.
	3. Improve Arterial Traffic Management	
		Policy T-1.1.3: Maintain and upgrade transportation systems to provide smooth flow of traffic, minimize vehicle emissions, and save energy.
		Policy T-1.1.7: Develop and operate a circulation system that directs the flow of traffic on residential streets to arterial streets.
		Policy T-1.1.8: Designate specific truck routes to provide for movement of goods throughout the City.
		Policy T-1.1.9: Establish efficient linkages to the regional transportation system for all modes of travel.
		Policy T-1.1.10: Coordinate traffic signal systems with abutting jurisdictions.
		Policy S-1.1.1: Maintain and upgrade traffic control systems to provide for a safe and smooth flow of traffic, emphasizing commute route signal synchronization and vehicle emissions reductions.
		Principle S-1.1: Integrate Air Quality Goals into Local Planning and Development Review.
		Policy S-1.1.1: Maintain and upgrade traffic control systems to provide for a safe and smooth flow of traffic, emphasizing commute-route signal synchronization and vehicle emissions reductions.
		Policy S-1.1.2: Site projects in locations and/or in a manner that will reduce air pollution exposure of sensitive receptors.
4. Local Clean Air Plans, Policies and Programs		Policy S-1.1.3: Cooperate with the Bay Area Air Quality Management District in the review of land use proposals to address typical air quality problems, including windblown particulates, mechanical equipment exhaust, and ventilation of parking garages.
		Policy S-1.1.4: Provide input and assistance to the Bay Area Air Quality Management District's development and implementation of regional air quality strategies.

Table 3.1-5: Clean Air Plan TCMs to be Implemented by Local Governments

<i>TCM in the 2005 Ozone Strategy</i>	<i>Policies in the Proposed General Plan Consistent with the TCM</i>
5. Conduct Demonstration Projects	<p>Policy T-1.2.1: Schedule public transportation improvement projects in the Capital Improvement Program and Transportation Improvement Program.</p> <p>Policy T-1.2.2: Continue Off-site Street Improvement Programs (OSIP) to fund transportation improvements and traffic control system upgrades.</p>
6. Pedestrian Travel	<p>Principle T-1.5: Provide Safe and Convenient Pedestrian Circulation.</p> <p>Policy T-1.5.1: Plan linkages to minimize walking distance and enhance the pedestrian environment.</p> <p>Policy T-1.5.2: Use innovative and effective walkway features to enhance the pedestrian environment.</p> <p>Policy T-1.5.3: Facilitate pedestrian circulation near high activity centers.</p> <p>Policy T-1.5.4: Encourage new development to provide pedestrian connections to adjacent open spaces, and trails.</p> <p>Policy S-1.2.1: Promote pedestrian, bicycle, and transit modes of travel to reduce air pollutant emissions from automobiles.</p> <p>Policy LU-1.2.4: Encourage neighborhood retail and service uses within convenient walking distance of all residential neighborhoods, where feasible.</p> <p>Policy LU-4.2.3: Promote pedestrian-oriented urban design.</p>
7. Promote Traffic Calming Measures	<p>Policy T-1.1.14: Continue to implement the City's Traffic Calming Program to enhance safety and livability on residential streets.</p> <p>Policy T-1.1.15: Prioritize funding improvements for designated truck routes parallel to school routes, or are in close proximity to a school, to ensure safe travel for pedestrians and bicyclists.</p>

Source: Environmental Science Associates, 2006.

commute distances of project area residents and residents in other parts of the City. This would reduce adverse impacts associated with motor vehicle use, such as poor air quality, and promote use of transit and other modes of travel, such as bicycling and walking. Therefore, the proposed General Plan would be considered to be consistent with the TCMs in the *2005 Bay Area Ozone Strategy* and this impact would be less than significant.

Mitigation Measures

No mitigation is required.

Impact

3.1-3 Fugitive dust and other criteria pollutant emissions generated by construction and demolition activities under the proposed General Plan and within areas encompassed by the Urban Limit Line could result in health and nuisance type impacts in the immediate vicinity of construction sites. (*Less than Significant*)

Construction activities would occur intermittently at different sites in the project area throughout the period of implementation of the proposed General Plan. Although the related impacts at any one location would be temporary, construction of individual projects under the proposed project could cause adverse effects on local air quality. Construction activities would generate substantial amounts of dust (including PM-10 and PM-2.5) primarily from “fugitive” sources (i.e., emissions released through means other than through a stack or tailpipe) and lesser amounts of other criteria air pollutants primarily from the operation of heavy equipment construction machinery (primarily diesel operated) and construction worker automobile trips (primarily gasoline operated). Fugitive dust emissions would vary from day to day, depending on the level and type of activity, silt content of the soil, and the prevailing weather. Sources of fugitive dust during construction would include vehicle movement over paved and unpaved surfaces, demolition, excavation, earth movement, grading, and wind erosion from exposed surfaces. In the absence of mitigation, construction activities may result in significant quantities of dust, and as a result, local visibility and PM-10 concentrations may be adversely affected on a temporary and intermittent basis during the construction period. In addition, the fugitive dust generated by construction would include not only PM-10, but also larger particles, which would fall out of the atmosphere within several hundred feet of the site and could result in nuisance-type impacts. Demolition of buildings constructed prior to 1980 often involves hazardous materials such as asbestos used in insulation, fire retardants, or building materials (floor tile, roofing, etc.) and lead-based paint. Airborne asbestos fibers and lead dust pose a serious health threat. The demolition, renovation and removal of asbestos-containing building materials would be subject to the requirements of BAAQMD Regulation 11, Rule 2. Construction activities would also result in the emission of other criteria pollutants from equipment exhaust, construction-related vehicular activity and construction worker automobile trips. Emission levels for construction activities would vary depending on the number and type of equipment, duration of use, operation schedules, and the number of construction workers. Criteria pollutant emissions of ROG and NO_x from these emission sources would incrementally add to the regional atmospheric loading of ozone precursors during project construction.

Proposed General Plan Policies that Reduce the Impact

The following proposed policy would reduce potential air pollution emissions from activities including construction:

Policy S-1.1.3: Cooperate with the Bay Area Air Quality Management District in the review of land use proposals to address typical air quality problems.

The BAAQMD's approach to analyses of construction impacts is to emphasize implementation of effective and comprehensive 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 would be considered significant. BAAQMD CEQA Guidelines recognize that construction equipment emit 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 are not expected to impede attainment or maintenance of ozone standards in the Bay Area (BAAQMD, 1999).

Mitigation Measures

No programmatic mitigation measures are feasible and site-specific measures shall be identified during CEQA review of specific development proposals made to the City.

Impact

3.1-4 Reuse and intensification could expose existing and proposed sensitive receptors to objectionable odors. (Less than Significant)

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. Odor impacts should 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 a receptor and the source to an acceptable level will mitigate odor impacts. **Table 3.1-6** shows BAAQMD-recommended buffer zones (distance between receptor and source) for known odor-emitting sources.

Development proposed under the Concord 2030 General Plan could place residential and other sensitive receptors in proximity to light industrial uses, which could result in odor impacts depending on the types of industries proposed.

Table 3.1-6: BAAQMD Recommended Buffer Zone Distances for Potential Odor Sources

<i>Type of Operation</i>	<i>Buffer Zone</i>
Wastewater Treatment Plant	1 mile
Sanitary Landfill	1 mile
Transfer Station	1 mile
Composting Facility	1 mile
Petroleum Refinery	2 miles
Asphalt Batch Plant	1 mile
Chemical Manufacturing	1 mile
Fiberglass Manufacturing	1 mile
Painting/Coating Operations (e.g., auto body shops)	1 mile
Rendering Plant	1 mile
Coffee Roaster	1 mile

Source: BAAQMD CEQA Guidelines –Assessing Air Quality Impacts of Projects and Plans, December 1999.

Proposed General Plan Policies that Reduce the Impact

The following proposed policy in the Concord 2030 General Plan would reduce potential air pollution impacts, including odors:

Policy S-1.1.2: Site projects in locations and/or in a manner that will reduce air pollution exposure of sensitive receptors.

Policy LU-1.1.4: Mitigate residential uses from impacts of more intensive land uses through good site planning and/or appropriate operational measures.

In addition, all new development under the proposed General Plan and within the Urban Limit Line would be subject to further CEQA review to evaluate project-level impacts of odors specific to their site, time and project description and to avoid potential conflicts in land uses. Analysis of potential odor impacts conducted would include both the following situations: 1) sources of odorous/toxic emissions locating near existing sensitive receptors, and 2) receptors locating near existing odor/toxics sources. Any significant impacts would be mitigated to a less than significant level.

Mitigation Measures

No programmatic mitigation measures are feasible and site-specific measures shall be identified during CEQA review of specific development proposals made to the City.

This page intentionally left blank.

3.2 Land Use

This section presents the environmental setting and impact analysis on land use in the Concord Planning Area.

ENVIRONMENTAL SETTING

PHYSICAL SETTING

Much of Concord's land use patterns can be traced to its evolution as a primary service center within central Contra Costa County, with the focus on downtown and subsequently on the transportation corridors. Most of the residential development in the City today is low density single-family housing, with retail-related commercial development clustered along arterials and in Downtown Concord. Office and industrial uses are located adjacent to transportation infrastructure. Schools and parks are distributed throughout the residential neighborhoods in the City.

Existing Land Use

Concord's existing land use pattern is illustrated in **Figure 3.2-1**. Single-Family Residential is the most significant land use within the City limits. Occupying roughly 6,270 acres, it comprises 32 percent of the land uses within Concord.¹ Commercial and mixed-use development are clustered along the major transportation routes that radiate outward from Concord's Downtown, notably Clayton Road, Monument Boulevard, Willow Pass Road, and areas around the intersection of the State Route (SR) 242 and Interstate (I) 680. Industrial uses are primarily situated north of SR 4 and, to a lesser extent, south of Monument Boulevard.

When considering the entire Planning Area—not only that which is within the incorporated city limits—parks and open space uses account for the most land area. Although Concord has a sizeable inventory of neighborhood parks and recreation opportunities, the vast majority of the acreage in this category comes from open space areas in Los Medanos Hills and the Mt. Diablo foothills.

The CNWS takes up another significant portion of the Planning Area. Listed in **Table 3.2-1** as Military, it encompasses 7,554 acres on the northern and eastern sections of the City, and accounts for 23 percent of land within the Planning Area. The inland CNWS is no longer actively used for military purposes and land in the tidal area near Suisun Bay is utilized by the Army.

¹ This percentage excludes Suisun Bay, rights-of-way, drainage channels, and canals.

Table 3-2.1: Existing Land Use Acres

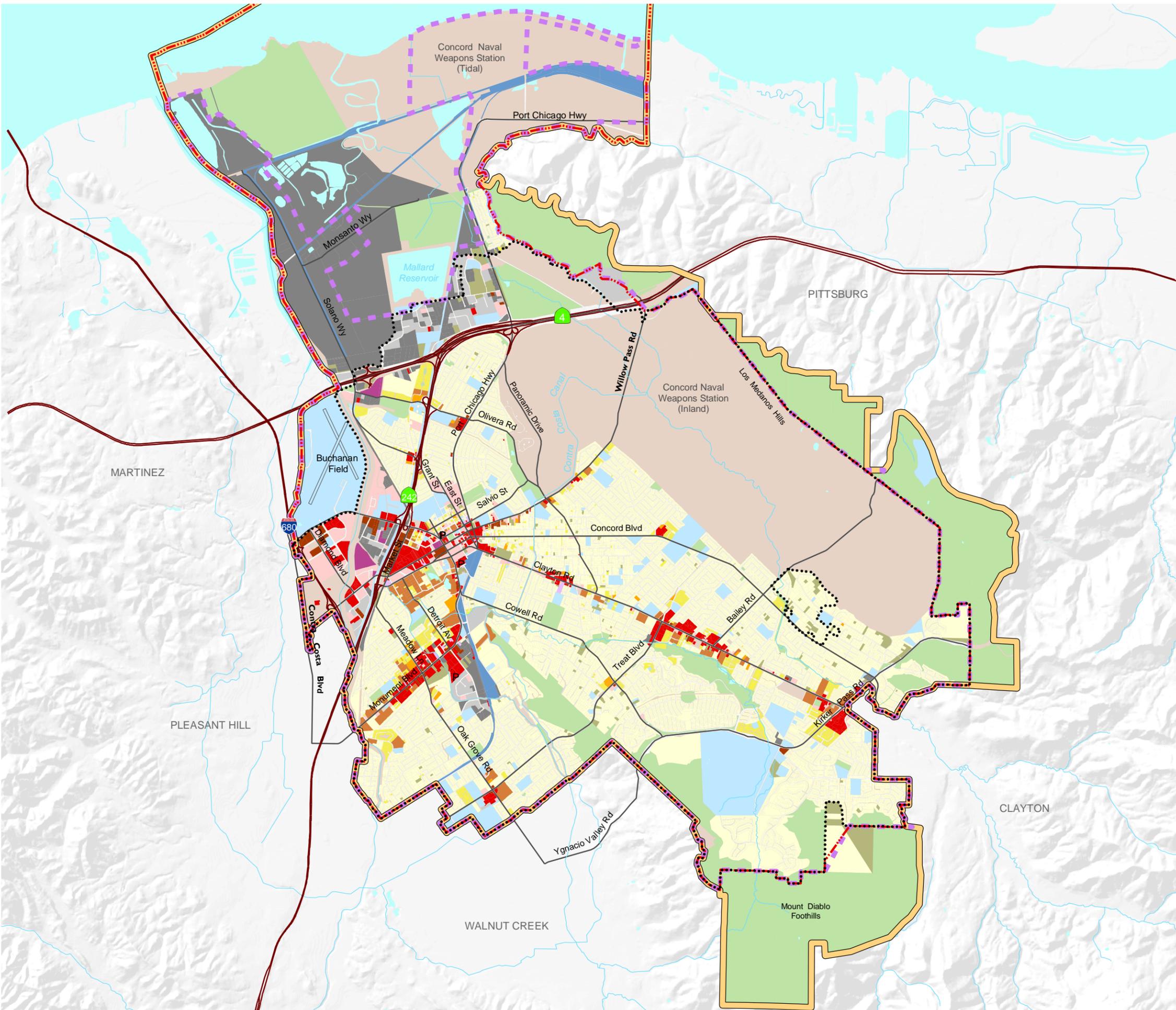
Land Use	<u>Incorporated</u>		<u>Unincorporated (within SOI)</u>		<u>Unincorporated (outside SOI)</u>		<u>Total</u>	
	Acres	Percent	Acres	Percent	Acres	Percent	Acres	Percent
Single-Family Residential	6,270	32.1%	320	3.2%	-	-	6,590	19.9%
Multi-Family Residential	680	3.5%	-	-	-	-	680	2.0%
Visitor Accommodations	20	0.1%	-	-	-	-	20	0.1%
Commercial Retail	400	2.0%	-	-	-	-	400	1.2%
Auto-Oriented Commercial	90	0.5%	-	-	-	-	90	0.3%
Other Commercial	50	0.3%	-	-	-	-	50	0.2%
Shopping Centers	90	0.5%	-	-	-	-	90	0.3%
Mixed Use	20	0.1%	-	-	-	-	20	0.1%
Office	320	1.6%	-	-	-	-	320	1.0%
Military	5,054	25.9%	2,500	25.0%	-	-	7,554	22.8%
Public and Semi-Public	1,180	6.0%	590	5.9%	-	-	1,770	5.3%
Industrial Parks	220	1.1%	80	0.8%	20	0.5%	320	1.0%
General Industrial	340	1.7%	2,160	21.6%	-	-	2,500	7.5%
Parks, Recreation, Open Space, and Rural	1,470	7.5%	950	9.5%	3,630	99.5%	6,050	18.2%
Transportation	90	0.5%	320	3.2%	-	-	410	1.2%
Vacant	170	0.9%	110	1.1%	-	-	280	0.8%
<i>Designated Land Uses Subtotal</i>	<i>16,464</i>	<i>84.3%</i>	<i>7,030</i>	<i>70.2%</i>	<i>3,650</i>	<i>100.0%</i>	<i>27,144</i>	<i>81.8%</i>
Rights-of-way, Drainage Facilities and Canals	3,069	15.7%	470	4.7%	-	-	3,539	10.7%
Suisun Bay	-	-	2,510	25.1%	-	-	2,510	7.6%
<i>Undesignated Land Uses Subtotal</i>	<i>3,069</i>	<i>15.7%</i>	<i>2,980</i>	<i>29.8%</i>	<i>-</i>	<i>-</i>	<i>6,049</i>	<i>18.2%</i>
Total	19,533	100.0%	10,010	100.0%	3,650	100.0%	33,193	100.0%

Note: Land use acreage totals are based on mapping estimates and do not necessarily equate exact ownership acreage.

Due to rounding, subtotals may not equal individual column counts.

Source: City of Concord, Contra Costa County Assessor, Dyett & Bhatia, 2006.

Figure 3.2-1
Existing Land Use



- Single-Family Residential/Mobile Home Park
- Multi-Family Residential - Low Density
- Multi-Family Residential - Medium Density
- Multi-Family Residential - High Density
- Visitor Accomodations
- Commercial Retail
- Commercial Parking Facilities
- Auto-Oriented Commercial
- Commercial Recreation
- Shopping Centers
- Mixed Use
- Office
- Military
- Public and Semi-Public
- Industrial Parks
- General Industrial
- Parks, Recreation, and Open Space
- Transportation
- Vacant
- City Limits
- Sphere of Influence
- Proposed Urban Limit Line (ULL)
- Planning Area Boundary

Sources:
City of Concord, Contra Costa County Assessor, Dyett & Bhatia: 2006.



Other land uses shown in **Figure 3.2-1** include Vacant and Public/Quasi Public. The sites are dispersed throughout the City, and are not clustered within any specific area. Within the City itself, one percent of the land is vacant and eight percent is used for Public/Quasi-Public use.

Agricultural Resources

The California Department of Conservation classifies soils based on their agricultural potential, with the following agricultural classifications found with the Concord Planning Area²:

- *Grazing Land.* Land on which the existing vegetation is suited to the grazing of livestock.
- *Farmland of Local Importance.* Land of importance to the local economy, as defined by each county’s local advisory committee and adopted by its Board of Supervisors. In Contra Costa County, these lands are typically used for livestock grazing. They are capable of producing dryland grain on a two-year summer fallow or longer rotation with volunteer hay and pasture.
- *Unique Farmland.* Land of lesser quality soils used for the production of the State’s leading agricultural crops.

Concord contains two areas classified by the State Department of Conservation as “grazing lands,” which include nearly the entire inland portion of the CNWS—designated as military use in the current General Plan—and the Lime Ridge Open Space. Additionally, a portion of the CNWS located adjacent to Willow Pass Road and Olivera Road—also designated as military use—is classified as “Farmland of Local Importance.” This former CNWS airstrip is also used for cattle grazing. Patches of “Unique Farmland,” currently designated as a combination of vacant and single-family residential, are located near the southern border of the City Limits.

The acreages of these farmland types are listed in **Table 3.2-2** and their locations are mapped in **Figure 3.2-2**.

Table 3.2-2: Acreage of Farmland Types in the Concord Planning Area

<i>Description</i>	<i>Acres</i>
Grazing Land	10,299
Farmland of Local Importance	466
Unique Farmland	28
<i>Total</i>	<i>10,793</i>

Source: CA Department of Conservation, Farmland Mapping and Monitoring Program.

² Definitions from the California Department of Conservation, Farmland Mapping and Monitoring Program. Available online at: http://www.consrv.ca.gov/DLRP/fmmp/mccu/map_categories.htm

REGULATORY SETTING

Current City plans guiding land use within Concord are its General Plan (1994) and the North Todos Santos Specific Plan (1985). The City has two other plans that provide visions for land use development in Concord and suggest public regulations, actions, and capital improvements. Plans by several outside agencies have jurisdiction over some land in Concord, while the development of land in unincorporated Contra Costa County within the Concord Sphere of Influence (SOI) is guided by the County General Plan (2005). The adjacent cities of Pittsburg and Walnut Creek also have their own general plans. These plans are summarized below.

Current Land Use Plans

Concord General Plan

The City's current General Plan was adopted in 1994. The Plan includes six Elements: Land Use; Growth Management; Transportation/Circulation; Public Services; Parks, Recreation and Open Space; and Public Health and Safety. The Plan provides a land use framework for the pattern of development within City limits. The primary land use designation (aside from the CNWS) under the current General Plan is low-density residential intended for single-family homes. Higher density residential uses are primarily located south of Clayton Road. The principal employment-generating uses are located in Downtown and West Concord, with industrial business park designations situated south of Monument Boulevard, adjacent to Buchanan Field Airport, and north of Highway 4.

North Todos Santos Specific Plan

The area encompassed by the North Todos Santos Specific Plan consists of approximately 120 acres north of central Concord. Located directly adjacent to the original town site, this area contains a number of historic homes and structures. Although it consists predominantly of residential uses, it also includes both the Mt. Diablo High School and John Muir Health, Concord Campus sites.

The need for a specific plan arose in response to increased growth and revitalization of central Concord in the early 1980s and the expansion of the John Muir Health, Concord Campus into a major regional medical facility. Given the history of the neighborhood, however, these developments needed to be balanced with the preservation of the historic buildings and character of the area.

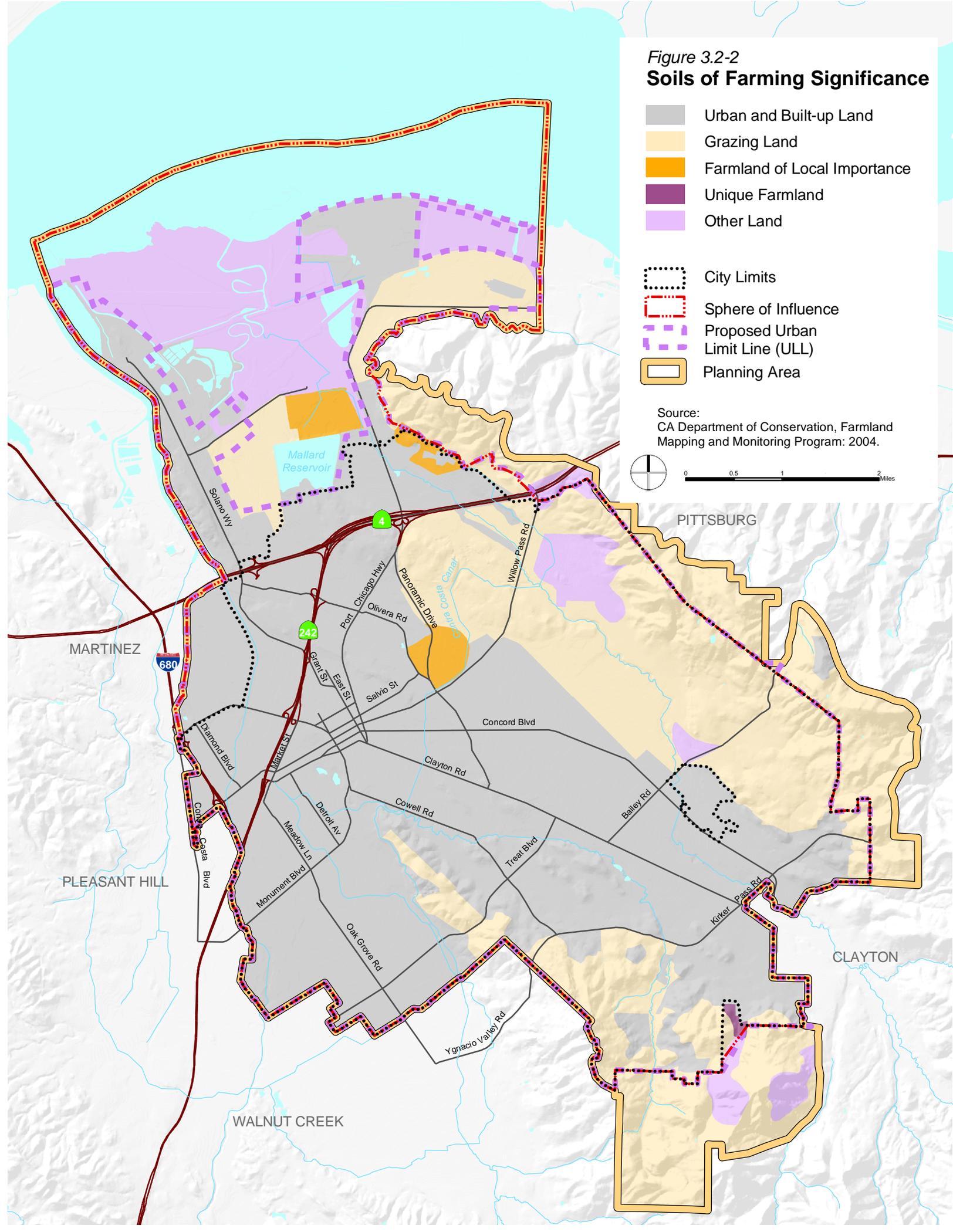
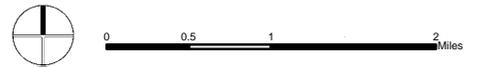
The North Todos Santos Specific Plan is intended to protect the character of this historic neighborhood, with its prevailing pattern of pre-World War II homes. This specific plan will continue to be the guiding policy document for the area and zoning regulations will ensure that new land uses in this neighborhood, including offices and multi-family residences, are compatible with existing uses.

Figure 3.2-2
Soils of Farming Significance

- Urban and Built-up Land
- Grazing Land
- Farmland of Local Importance
- Unique Farmland
- Other Land

- City Limits
- Sphere of Influence
- Proposed Urban Limit Line (ULL)
- Planning Area

Source:
CA Department of Conservation, Farmland Mapping and Monitoring Program: 2004.



Other City of Concord Plans

Economic Vitality Strategy & Economic Development Action Plan

The ability of the City to grow, develop, and provide services to its residents largely depends on the strength of the local economy. Consequently, the City has created an Economic Vitality Strategy and Economic Development Action Plan.

The purpose of the City's Economic Vitality Strategy is to attract and retain businesses by reflecting the importance of Central Concord as a regional office district, shopping destination, and emerging center for technology enterprise. Economic development programs support business growth and development toward the goals of increased employment, expansion of downtown office users, and a growing mix of retail shopping and dining opportunities. By promoting regional job growth and facilitating capital investment, the Concord Redevelopment Agency helps remove blighting influences from the Redevelopment Area and encourages the development of a thriving community.

Concord Redevelopment Plan

The City of Concord's Redevelopment Area includes Central Concord, portions of Monument Boulevard and Willow Pass Road Corridor, and portions of North Concord. The Monument Boulevard, Willow Pass Road, and North Concord areas were added to the Redevelopment Plan in October 2006. Figure 3.2-3 illustrates the existing and added portions of the Redevelopment Areas. The overall redevelopment objective in the entire Redevelopment Area is to alleviate blight and improve adverse conditions and to implement the principals and policies of the City's General Plan.

Redevelopment in Central Concord has been guided by the Concord Redevelopment Strategy and Implementation Action Plan (Strategic Plan). This strategy sets forth a vision, including goals and objectives, for Downtown development. The strategic section draws a clear link between past accomplishments, present conditions, and desired future redevelopment decisions. The implementation component of the plan provides a strategic guide for realizing these approaches, identifying catalyst projects, and defining specifications and timing for carrying out the strategy recommendations.

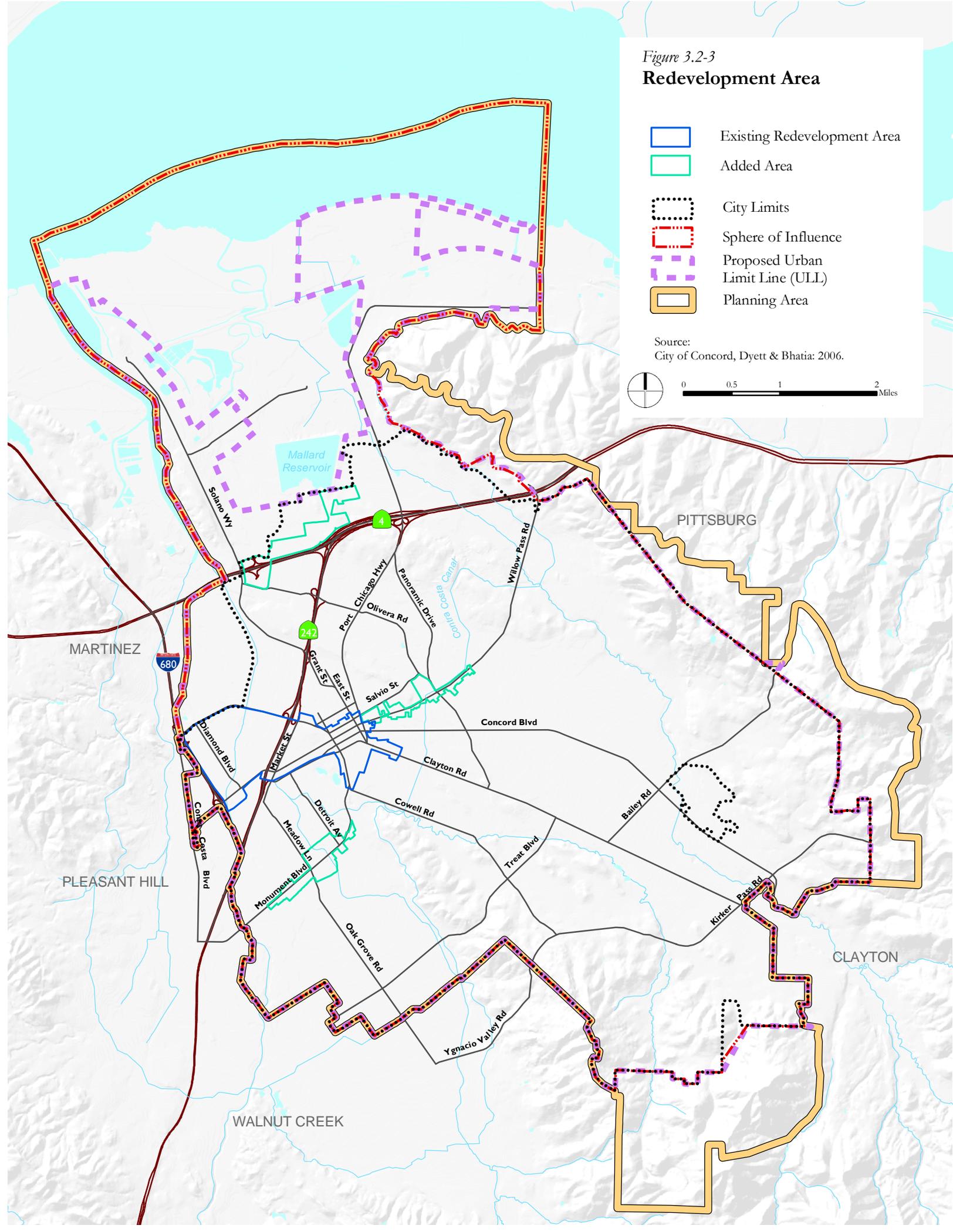
A revision to the Strategic Plan, incorporating a vision, goals and objectives for redevelopment in the remainder of the Redevelopment Area will be initiated in Fiscal Year 2007-08, upon completion of this General Plan Update.

The preferred vision and guiding principles for the Concord Redevelopment Area stress the City's opportunity to be a "premier community to live, work, and do business." They also state that Concord could provide a setting for "in-town living and state-of-the-art business enterprise as well as services and activities for residents of all ages."

Figure 3.2-3
Redevelopment Area

-  Existing Redevelopment Area
-  Added Area
-  City Limits
-  Sphere of Influence
-  Proposed Urban Limit Line (ULL)
-  Planning Area

Source:
 City of Concord, Dyett & Bhatia: 2006.



Plans from Surrounding Jurisdictions and Other Agencies

Contra Costa County General Plan

Adopted in 1996 and amended in 2005, the Contra Costa County General Plan provides the land use framework for the pattern of development in the unincorporated areas of the Contra Costa County. Approximately 40 percent of the total land within the City's Planning Area falls under County jurisdiction, although the majority of this land is within the City's SOI and has consistent land use designations on the City's General Plan.

Besides general policies and goals for the unincorporated land in the County, including permitted land uses, the plan provides policies for some specific geographic areas, one of which is the Clyde area. The County plan stipulates that any infill residential development in Clyde be built no denser than 6 units per acre and designates vacant land adjacent to the Contra Costa Canal as single-family residential of a medium density (3.0 to 4.9 units per acre), with the provision of adequate utilities and traffic circulation being the responsibility of the developer.

The County Land Use Element map, which establishes the permitted uses for the unincorporated land in the County, designates the hillsides around Concord as agricultural land. This land use permits agricultural production and related activities, as well as residential uses at the density of one dwelling unit per five acres. Any land subdivisions in an Agricultural Lands area must conform to the County's ranchette policy, which bars subdividing of property in prime agricultural areas and discourages it within city SOIs.

The County also has an Urban Limit Line, outside of which urban development and the provision of utilities is not allowed, except for public parks and recreational facilities. This policy is discussed in more detail later in the section.

Contra Costa County Airport Land Use Compatibility Plan

State law provides for a special planning process to assure consideration of airport interests in the formulation of local community plans. Pursuant to State law, the Contra Costa County Airport Land Use Commission (ALUC) has been established as an independent body to advise local jurisdictions, such as the City of Concord, on appropriate land use policy for the area near Buchanan Field Airport to assure development compatibility with planned airport operations. To aid in this task, the ALUC has adopted the *Contra Costa County Airport Land Use Compatibility Plan*, which covers the area near the airport. The plan identifies areas near the airport where structural height limits, public safety, and noise compatibility restrictions are applicable.

San Francisco Bay Plan and San Francisco Bay Area Seaport Plan

The San Francisco Bay Conservation and Development Commission (BCDC) regulates new development within the first 100 feet inland from the San Francisco Bay shoreline—including Suisun Bay—in order to ensure as much public access to the Bay as possible and to protect port-priority lands and sensitive environments. It also regulates all filling and dredging of the San Francisco Bay system; has jurisdiction over substantial changes to land use, building construction or remodeling, and subdivision of property near the shoreline; and works to minimize pressures to fill the Bay system by reserving suitable areas for crucial water oriented uses. It also has

jurisdiction over certain marshlands. The BCDC's San Francisco Bay Plan designates priority use areas, which are to be reserved for a particular use in order to minimize the need for future waterfront development to accommodate certain uses.

Pittsburg General Plan

The City of Pittsburg is located to the immediate east of Concord. State Route 4 and the BART train are the main transportation connections between the two cities. Pittsburg's General Plan was adopted in 2001. One of its main themes is economic development through the creation of larger-scale business parks and the use of regional transportation improvements to encourage commercial development. Another major theme is the advancement of local identity and sense of place, pursued through downtown and waterfront revitalization, urban design policies for key areas, and hillside/ridgeline preservation. While the Pittsburg General Plan recognizes that the range of hills along the City's southern boundary is one of its most distinguishing features, it also provides for development in this area, subject to the standards of the City's hillside development ordinance.

Measure P

Measure P, which was passed in 2005 with 51 percent of the vote, amends the City's General Plan by creating an urban limit line around the entire City, thereby expanding the City's area for potential development by roughly 2,200 acres. Consistent with Measure J, this measure is intended to prohibit urban development beyond that line. Future changes to the urban limit line would require approval by the City's voters. Adoption of the City-approved urban limit line allows Pittsburg to obtain its share of Measure J funds that area earmarked for local transportation maintenance and improvements.

Of particular relevance to the Concord General Plan is Pittsburg's proposal for substantial low density residential development in the hillsides outside the County ULL, in an area also in Concord's planning area. The goal of the Southwest Hills planning subarea, which lies south of State Route 4 on the eastern edge of the Concord city limits, is to maintain the general character of the hill forms while encouraging the development of higher-end, low-density residential neighborhoods. The subarea plan subsequently allows up to 1,500 residential units, at a maximum overall density of three units per acre, in the hillside area outside of Pittsburg's Sphere of Influence.

Walnut Creek General Plan

The City of Walnut Creek is located south of Concord, along Highway 242/I-680 and the BART train. Walnut Creek is in the process of updating its General Plan, which was adopted in 1989. The 1989 plan focused on developing and reinvigorating the core of the City and on limiting growth. The plan update, which is expected to be adopted sometime in 2006, mainly adjusts permitted land uses and development guidelines for 21 subareas within the City.

The proposed plan update extends Walnut Creek's planning area to include "lands of interest" that are within Concord's City limits. This overlap occurs in two parcels that are part of the Lime Ridge Open Space. In Walnut Creek's judgment, this land bears relation to its planning.

Contra Costa County Urban Limit Line

Contra Costa County's Urban Limit Line (ULL) was established by voters in Measure C of 1990. Its purpose is to ensure the preservation of non-urban land, such as agricultural uses and open space, and to enforce the 65/35 Land Preservation Standard approved in Measure C. This standard limits urban development in the County to no more than 35 percent of the land in the County, with the remainder reserved for agriculture, open space, wetlands, parks and other non-urban uses.

In 2004, voters approved Measure J, which renewed funding for the Contra Costa Transportation Authority through 2034 and, among other policies, requires a voter-approved ULL. Measure J created a two-step process for updating the ULL. First, the County Board of Supervisors had to adjust the existing ULL to include all incorporated land in the County. This was done on October 5, 2004. As a result, the following areas of Concord's planning area were brought within the ULL:

- The inland portion of the CNWS
- Lime Ridge Open Space
- California State University, East Bay
- An open space area in the southeast corner of the City

The second step requires that the County and its cities work together to establish a new ULL. This step can involve the approval of a countywide, mutually agreed upon line or city-by-city approvals of local alternative ULLs. This latter approach is the strategy currently taken as local jurisdictions were unable to mutually agree on a ULL.

In July 2005, the County took steps to initiate a new, voter-approved ULL, Measure L, which then passed in November 2006 with 63 percent of the vote. This measure amends the County's General Plan (2005-2020) and the 65/35 Ordinance, extending the term of the 65/35 Ordinance from December 31, 2010, to December 31, 2026; it also requires four-fifths vote of the County Board of Supervisors and voter approval to expand the ULL by more than 30 acres; provides for periodic reviews of the ULL by the Board of Supervisors and a required review in 2016 involving an evaluation of housing and job needs; adopts a new ULL map; and retains the 65/35 land preservation standard and protections for the County's prime agricultural land.

Proposed Concord Urban Limit Line

As described in Chapter 2, Project Description, Concord is referring to its proposed ULL as an urban limit line, or ULL. For Measure J compliance, the ULL must be approved by a vote of Concord's citizens and be in force until March 31, 2034. It differs from the existing County ULL in the following ways, as shown in **Figure 2-3**:

- Inclusion of 1,506 acres of the tidal portion of the CNWS,
- Exclusion of land around Mallard Reservoir and to its north, and
- Inclusion of a small area just north of State Route 4 and to the east of the City limits to accommodate an approved development project.

For Concord, its ULL will ensure a greenbelt and open space around the City, which in turn preserves views and natural habitats while limiting urban sprawl. The greenbelt also provides Concord with an identity, preventing it from merging into the developed areas adjacent to the city limits; concentrates growth in areas already served by urban services or areas where such services are to be provided consistent with the proposed General Plan; and complements General Plan policies promoting additional housing opportunities, emphasizing infill and mixed development, and supporting a thriving downtown.

IMPACT ANALYSIS

SIGNIFICANCE CRITERIA

A significant impact would occur with full implementation of the proposed Concord General Plan if it would do one or more of the following:

- Physically divide an established community;
- Displace substantial numbers of existing housing or people;
- Conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project;
- Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance to non-agricultural use;
- Conflict with existing zoning for agricultural use or a Williamson Act contract; or
- Involve other changes which, due to their location or nature, could result in conversion of farmland.

Changes in land use are not, in and of themselves, environmental impacts. Land use changes are impacts only relative to the prior use of the site (i.e., conversion of open space or farmland, an irreplaceable resource, or displacement of homes) or the surrounding usage and character (i.e., division of an established community).

METHODOLOGY & ASSUMPTIONS

This analysis considered current and proposed General Plan policies and goals, existing and proposed land use conditions within Concord, and applicable regulations and guidelines. The use of Geographic Information Systems (GIS) was employed, where appropriate, to quantify potential changes in land use due to the proposed General Plan.

The impact analysis considered the “greatest impact scenario,” which assumes the maximum buildout of the proposed General Plan; although the actual number of parcels that undergo land use changes may be lower. For the purposes of comparing the different land use designations between the existing and proposed General Plans, generalized land use categories were used. **Table 3.2-3** summarizes these categories.

The proposed ULL was analyzed by assessing the potential land that would be included and potentially developed within it.

Table 3.2-3: Correspondence of Generalized Land Use Categories to Current and Proposed Designations

<i>Current General Plan Designation</i>	<i>Proposed General Plan Designation</i>
Single-Family Residential	
Rural Residential	Rural Residential
Low Density Residential	Low Density Residential
Multi-Family Residential	
Medium Density Residential	Medium Density Residential
High Density Residential	High Density Residential
Mixed Use	
Central Area Multiple Use	Commercial Mixed Use Downtown Mixed Use Downtown Pedestrian District West Concord Mixed Use Industrial Mixed Use
Commercial	
Neighborhood/Community Commercial	Service Commercial Neighborhood Commercial
Regional Commercial	Regional Commercial
Office	
Community Office	Community Office
Regional Office	
Business Park	
Industrial/Business Park	Business Park
Industrial	
Heavy Industrial	Heavy Industrial
Parks, Open Space, and Conservation	
Parks	Parks
Open Space	Open Space
Wetlands/Resource Conservation	Wetlands/Resource Conservation
Agricultural Lands (County Designation)	Rural Conservation
Public	
Public/Quasi-Public	Public/Quasi-Public
Military	
Naval Weapons Station	CNWS-Inland CNWS-Port

Source: City of Concord, Dyett & Bhatia, 2006.

SUMMARY OF IMPACTS

The intent of the Concord 2030 Urban Area General Plan is to create a City in which planned land uses exist and function without imposing a nuisance, hazard, or unhealthy condition upon an adjacent use. Commercial, residential, and office uses are compatible if building scale and character are consistent, pedestrian connections are provided, and auto-oriented uses are limited. Uses within areas designated for mixed use development are expected to be compatible with one another because General Plan policies establish requirements for compatible development, including buffering, screening, controls and performance standards. Implementation of the General Plan will create specific regulatory standards and review procedures to ensure compatible land uses.

The proposed General Plan does not physically divide any established community. Rather, by providing better connectivity within the City, the plan provides more linkages within and between existing communities.

Redevelopment caused by new permitted land uses or different densities may remove housing in certain areas, but overall the proposed plan will increase the number of housing units in Concord so anyone displaced will be able to find accommodation in the same area.

The majority of farmland soils are situated in areas planned for neither new development nor conversion of land uses. The County General Plan does designate the hillsides around Concord as agricultural land, which permits agricultural production and related activities and residential uses at the density of one dwelling unit per five acres. The proposed plan may convert a small amount of these areas to non-agricultural use. No Williamson Act contract land would be affected and no other changes would result in the conversion of farmland.

The proposed Urban Area General Plan will be the guiding document in Concord. Adopted policies, plans, programs, the zoning code, and other implementing tools will be amended to conform to the adopted General Plan. The proposed General Plan does not contain provisions that conflict with the Contra Costa County Airport Land Use Compatibility Plan or the BCDC plans.

The proposed Urban Area General Plan does conflict with the General Plan adopted in Pittsburg regarding hillside development, due to an overlap in their planning areas. However, the proposed General Plan is consistent with the County General Plan, which has direct jurisdiction over this unincorporated land. The Concord 2030 Urban Area General Plan's proposal for the Los Medanos Hills—marking them for rural conservation—is intended to protect ridgelines and visible hillsides. Proposed open space protection policy LU-10.1.1 encourages the County and adjacent cities to prohibit new development in protected viewsheds, while policy LU-10.1.3 asserts that Concord will work with these jurisdictions to ensure that their zoning and subdivision regulations for development visible from Concord's planning area reflects this desire. In contrast, Pittsburg's General Plan provides for residential development on the eastern side of the hillsides. The land in question falls outside the existing County ULL and is under County permit jurisdiction. The County land use designation for this area is Agricultural Land, which limits it to agricultural use and very low-density residential development (0.2 dwelling units per acre).

Pittsburg would need to establish a new ULL, which Pittsburg voters recently approved, to allow development in the hillside area. Concord needs to make no changes because the proposed Urban Area General Plan is in agreement with the County General Plan on the preservation of the hillside area. However, this land can be annexed to the City of Pittsburg, consistent with its General Plan.

The overlap between the General Plans proposed for Walnut Creek and Concord has no impact as it involves the Lime Ridge Open Space, which is already managed cooperatively between the cities and no change to its land use is proposed.

The establishment of the proposed ULL would potentially expand the urbanized area around Concord. However, the additional development thereby allowed—as compared with the existing County ULL—will not create a significant impact. For the most part, the proposed ULL parallels the County’s ULL except expansions to include a portion of the tidal area of the CNWS and land in the southeastern corner of the planning area, and a retraction to exclude the area around Mallard Reservoir, as shown in **Figure 2-3**. These proposed deviations from the County ULL will not violate any of the significance criteria defined by CEQA, including farmland conversion and conflicts with other land use plans.

IMPACTS AND MITIGATION MEASURES

Impacts

3.2-1 The proposed ULL for Concord includes farmland that may be converted in the future. *(Less than significant)*

Relatively few parcels within the planning area are known for historic agricultural activities, and those that do exist are currently vacant and not utilized for agricultural purposes. Approximately 28 acres of the farmland within the Planning Area, and within the ULL, is classified as “unique farmland.” This parcel is not actively farmed and no new uses are proposed for this area.

The hillsides surrounding Concord are designated as agricultural land in the Contra Costa County General Plan. This designation allows for agricultural production and related activities and rural residential uses. Implementation of Urban Area General Plan may convert a small amount of these areas to non-agricultural use, yet these parcels are not active, nor of local or statewide importance. As previously indicated, the proposed Urban Area General Plan designates the Los Medanos Hills as rural conservation. This designation is intended to protect ridgelines and visible hillsides. Compliance with Policy LU-10.1.1, which encourages the County and adjacent cities to prohibit new development in protected viewsheds; and policy LU-10.1.3, which requires coordination with these jurisdictions to ensure that their zoning and subdivision regulations for development visible from Concord’s planning area are consistent with Concord’s viewshed protection goals. The land use designations and building intensities set forth in the proposed Urban Area General Plan will not result in the loss of designated farmland, and as such, less than significant farmland impacts are anticipated.

Proposed General Plan Policies that Reduce the Impact

Policy LU-10.1.1: Encourage the County and adjacent cities to prohibit new development on designated ridgelines and in protected viewsheds, but allow appropriate beneficial and reasonable open space uses in these areas, subject to standards for viewshed protection to preserve the open space character of areas visible from Concord's neighborhoods and commercial districts.

Policy LU-10.1.3: Work with the County and adjacent jurisdictions to ensure that zoning and subdivision regulations applicable to all development visible from within the City's Planning Area reflect General Plan Policy direction.

Actions the City will request of the County and adjacent jurisdictions include:

- *Designating protected ridgelines, creeks, and other significant resource areas, along with daylight plane or setback standards;*
- *Defining protected viewsheds; and*
- *Designating growth limits and clustering provisions for very low-density hillside residential development based on slope and elevation to ensure viewshed protection.*

Mitigation Measures

No mitigation measures are required.

This page intentionally left blank.

3.3 Transportation

This section describes the current transportation network and potential impacts on the transportation system associated with adoption of the proposed Concord 2030 Urban Area General Plan. The impact analysis examines the roadway, intersection, truck routes, transit, bicycle/pedestrian, and port/rail components of the overall transportation system.

ENVIRONMENTAL SETTING

The existing physical and regulatory conditions for the transportation system are described below. This section provides an overview of existing transportation infrastructure and services including public transit, non-motorized components, as well as current operating conditions within the City.

PHYSICAL SETTING

At the core of Concord's circulation network is the roadway system. All modes of transportation depend to some degree upon it. In Concord, this system is based on a traditional grid pattern in the downtown surrounded by a radial pattern of arterial roadways. Regional access is provided by Interstate 680 (I-680) and SR-242 and SR-4 on the west and north. Concord's roadway system is integrated with the systems of Pittsburg on the northeast, Martinez and Pleasant Hill on the west, Walnut Creek on the south, and Clayton on the east. The study area for the assessment of transportation impacts is the City of Concord and immediately surrounding area shown in **Figure 3.3-1**.

Existing Roadway System

Freeways

I-680, SR-242 and SR-4 are the "backbone" of the roadway system through the City. I-680 is a north-south route on the west side of the City. I-680 is a major north-south freeway that serves the City of Concord, Walnut Creek, Pleasant Hill, and Martinez. I-680 varies from a seven-lane highway (north of SR-4), eight-lane highway (north of Concord Avenue), then to a twelve-lane highway (north of Monument Boulevard). The posted speed limit for I-680 is 65 mph.

SR-242 is the main north-south route through the center of the City. It is a six-lane highway north of I-680 and south of SR-4 with a posted speed limit of 65 mph.

SR-4 is the main east-west roadway located along the north side of the City. SR-4 varies from a four-lane divided highway (east of Arnold Industrial Way) to a six-lane highway (east of SR-242), and then to an eight-lane highway (east of Willow Pass Road). The majority of the study segments on SR-4 are located between east of I-680 and east of Willow Pass Road.

Local Roadways

The Concord street system is comprised of a variety of street types. The function and capacity of city streets is primarily related to the number of lanes provided for through and turning movements. The existing roadway system is shown in **Figure 3.3-1**.

Routes of Regional Significance are defined in the Growth Management Element of the Concord General Plan. Routes of Regional Significance are major roadway and freeway corridors serving regional traffic. The routes were identified in Action Plans adopted by the Contra Costa Transportation Authority as part of the countywide Measure C program. These regional routes within Concord include the freeways (I-680, SR-242, SR-4), the Kirker Pass Road/Ygnacio Valley Road corridor, Treat Boulevard, and Clayton Road between Treat Boulevard and Kirker Pass Road, as shown in **Figure 3.3-1**.

Basic Routes provide the function of arterials, which deliver traffic between the freeways and other arterials in Concord and neighboring jurisdictions; collectors, which link arterials and neighborhood streets; and local streets, which are designed to provide direct access to adjacent properties.

Traffic Operations Analysis Methods

The Level of Service (LOS) concept is generally used to measure the amount of traffic that a roadway or intersection can accommodate, based on maneuverability, driver dissatisfaction, and delay. LOS ranges from LOS A, or free-flow conditions, to LOS F, or congested conditions. These conditions are generally described in **Table 3.3-1**.

Table 3.3-1: Level of Service Definitions

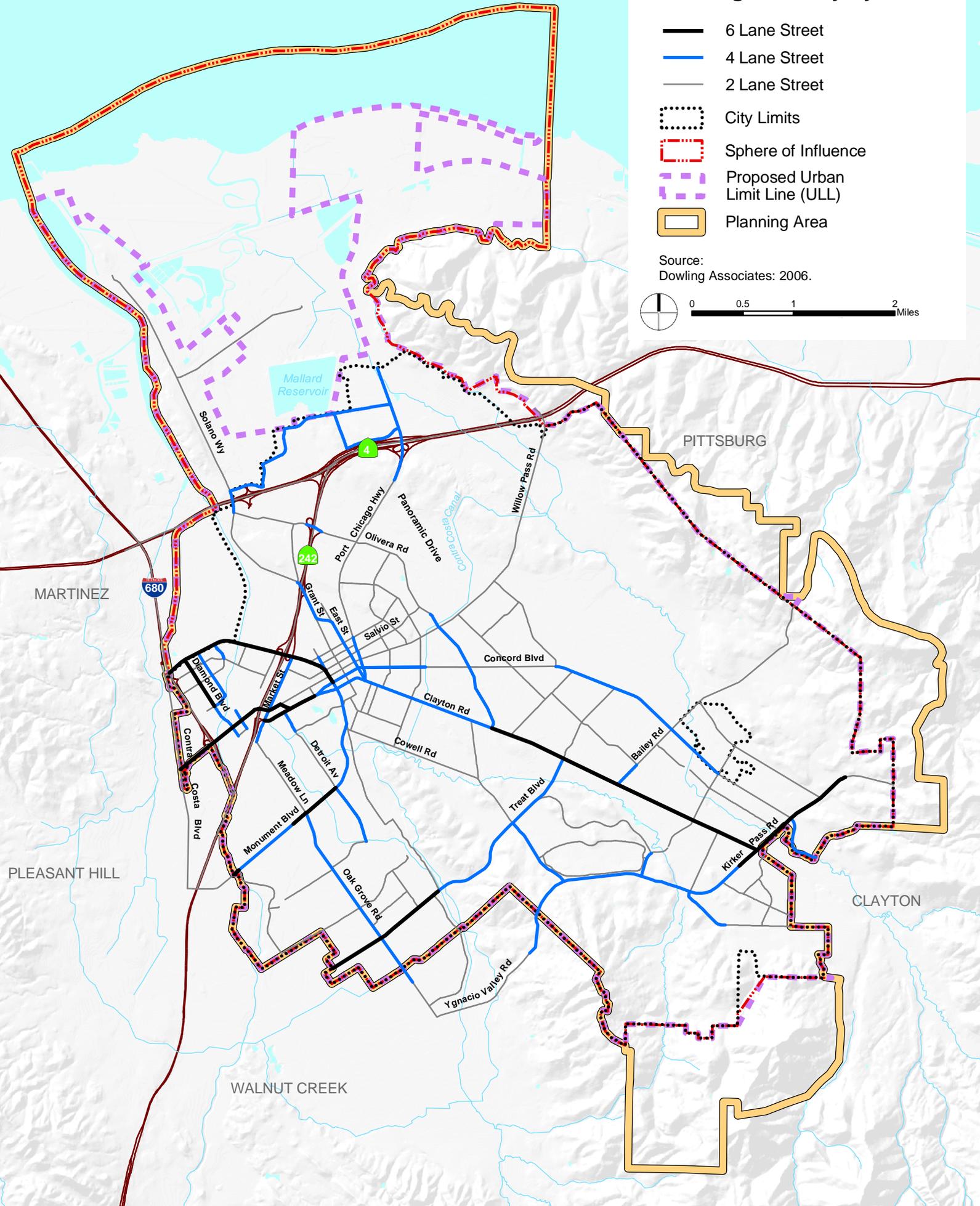
LOS	Description	Max Volume/ Capacity Ratio
A	Free Flow or Insignificant Delays: Vehicles are completely unimpeded in their ability to maneuver within the traffic stream. Control delay at signalized intersections is minimal.	0.6
B	Stable Operation or Minimal Delays: The ability to maneuver within the traffic stream is only slightly restricted, and control delay at signalized intersections are not significant.	0.7
C	Stable Operation or Acceptable Delays: The ability to maneuver and change lanes is somewhat restricted, and average travel speeds may be about 50 percent of the free flow speed.	0.8
D	Approaching Unstable or Tolerable Delays: Small increases in flow may cause substantial increases in delay and decreases in travel speed.	0.9
E	Unstable Operation or Significant Delays: Significant delays may occur and average travel speeds may be 33 percent or less of the free flow speed.	1.0
F	Forced Flow or Excessive Delays: Congestion, high delays, and extensive queuing occur at critical signalized intersections with urban street flow at extremely low speeds.	>1.0

Source: Highway Capacity Manual, Transportation Research Board, Washington D.C, 2000.

**Figure 3.3-1
Existing Roadway System**

-  6 Lane Street
-  4 Lane Street
-  2 Lane Street
-  City Limits
-  Sphere of Influence
-  Proposed Urban Limit Line (ULL)
-  Planning Area

Source:
Dowling Associates: 2006.



Freeways

Two components of the freeways serving the City of Concord were evaluated: freeway segments and freeway ramps. For freeway segments, Highway Capacity Manual (HCM) procedures were used to calculate average daily capacities for each LOS threshold from A to F. The LOS was determined using the volume-to-capacity ratio (v/c) given an estimated free-flow speed at 70 miles per hour for all the highway/freeway segments, which is the base free-flow speed for urban areas from the HCM. The volume-to-capacity ratio is the ratio of flow rate to capacity for a transportation facility. **Table 3.3-2** contains the volume-to-capacity ratio thresholds.

Table 3.3-2: LOS and Volume-to-Capacity ratio for Free-Flow Speed at 70 mi/h

Level of Service	Maximum V/C
A	0.32
B	0.53
C	0.74
D	0.90
E	1.00

Source: Highway Capacity Manual 2000, 23-4.

For freeway ramps, HCM procedures were used to calculate the density¹ for each LOS threshold from A to F. First, the peak-hour demand flow rate immediately upstream of merge influence area or at the beginning of the deceleration lane at diverge was calculated. In addition, several capacity values were computed to determine the critical capacity. The determining capacities are: 1) maximum total flow approaching a major diverge area on the freeway, 2) maximum total vehicle flow departing from a merge or diverge area on the freeway, 3) maximum total flow entering the ramp influence area, and 4) maximum flow on a ramp. When demand flow is greater than the critical capacity, the LOS would be F. Otherwise, given a length of the acceleration lane or deceleration lane, the LOS was determined using the density of flow within the ramp influence area according to HCM procedures. **Table 3.3-3** contains the LOS and density thresholds for merge and diverge areas.

Table 3.3-3: LOS and Density thresholds for Merge and Diverge areas

Level of Service	Density (pc/mi/ln)
A	≤ 10
B	> 10-20
C	> 20-28
D	> 28-35
E	> 35
F	Demand exceeds capacity

Source: Highway Capacity Manual 2000, page 25-4.

¹ Density is the number of vehicles on a roadway segment averaged over space, usually expressed as vehicles per mile or vehicles per mile per lane.

For a single lane ramp with dedicated freeway lane, the LOS was determined using the same approach for basic freeway segments methodology. Given a ramp design speed and its flow volume, HCM speed-flow curves were used to determine the LOS of the ramp (Highway Capacity Manual 2000, 23-3).

Roadway Segments

Levels of service for roadway links were estimated using a planning methodology acceptable to the City that is based on the Highway Capacity Manual (HCM). This methodology uses daily traffic volumes to determine levels of service for general planning applications as shown in **Table 3.3-4**. The capacity of a roadway is based on the number of signalized intersections per mile, number of lanes, presence of left-turn lanes and medians, and other factors from the HCM method.

Intersections

Intersections in the City of Concord are analyzed using the procedures developed for the Contra Costa Transportation Authority (CCTA) (“Technical Procedures”, CCTA, September 17, 1997). The CCTA level of service concept measures the amount of traffic that a roadway or intersection can accommodate, based on maneuverability, driver dissatisfaction, and delay. LOS ranges are based on the volume-to-capacity ratios shown in **Table 3.3-4**.

Table 3.3-4: Signalized Intersection Level of Service Definitions

<i>Level of Service</i>	<i>Volume-to-Capacity Ratio (VIC)</i>
A	0.00 - 0.6
B	0.61 – 0.70
C	0.71 – 0.80
D	0.81 – 0.90
E	0.91 – 1.00
F	Varies ¹

¹ In general, volume-to-capacity ratios cannot be greater than 1.00, unless the lane capacity assumptions are too low. Also, if future demand projections are considered for analytical purposes, a ratio greater than 1.00 might be obtained, indicating that the projected demand would exceed the capacity.

Source: *User’s Manual – CCTALOS Intersection Analysis Program, 1996.*

Table 3.3-5: Annual Average Daily Volumes For Service Levels on Roadway Segments

Class I (>0.00 to 1.99 signalized intersections per mile)						
<i>Lanes</i>	<i>Divided</i>	<i>Level of Service</i>				
		A	B	C	D	E
2	Undivided	**	4,200	13,800	16,400	16,900
4	Divided	4,800	29,300	34,700	35,700	***
6	Divided	7,300	44,700	52,100	53,500	***
8	Divided	9,400	58,000	66,100	67,800	***
Class II (2.00 to 4.50 signalized intersections per mile)						
<i>Lanes</i>	<i>Divided</i>	<i>Level of Service</i>				
		A	B	C	D	E
2	Undivided	**	1,900	11,200	15,400	16,300
4	Divided	**	4,100	26,000	32,700	34,500
6	Divided	**	6,500	40,300	49,200	51,800
8	Divided	**	8,500	53,300	63,800	67,000
Class III (more than 4.5 signalized intersections per mile and not within primary City central business district)						
<i>Lanes</i>	<i>Divided</i>	<i>Level of Service</i>				
		A	B	C	D	E
2	Undivided	**	**	5,300	12,600	15,500
4	Divided	**	**	12,400	28,900	32,800
6	Divided	**	**	19,500	44,700	49,300
8	Divided	**	**	25,800	58,700	63,800
Class IV (more than 4.5 signalized intersections per mile and within primary City central business district)						
<i>Lanes</i>	<i>Divided</i>	<i>Level of Service</i>				
		A	B	C	D	E
2	Undivided	**	**	5,200	13,700	15,000
4	Divided	**	**	12,300	30,300	31,700
6	Divided	**	**	19,100	45,800	47,600
8	Divided	**	**	25,900	59,900	62,200

Source: <http://www.dot.state.fl.us/planning/systems/sm/los/pdfs/QLOStables2002.pdf>.

Freeway Operations*Freeway Segments*

Existing traffic operations for a.m. and p.m. peak hours on freeway segments near Concord are summarized in **Table 3.3-6**.

Table 3.3-6: Existing Freeway Segment Operations (2005)

Freeway Segment	Direction	AM		PM	
		LOS	VIC	LOS	VIC
I-680 s/o Monument Blvd.	NB	D	0.89	F	1.16
	SB	D	0.87	D	0.76
I-680 n/o Monument Blvd.	NB	C	0.73	E	0.95
	SB	D	0.85	D	0.75
I-680 n/o SR-242	NB	D	0.89	F	1.16
	SB	D	0.78	C	0.68
I-680 n/o Willow Pass Rd	NB	D	0.76	E	0.99
	SB	C	0.69	C	0.60
I-680 n/o Concord Av	NB	C	0.64	D	0.83
	SB	C	0.68	C	0.60
I-680 n/o SR-4	NB	C	0.55	C	0.73
	SB	D	0.87	D	0.76
SR-242 n/o I-680	NB	B	0.33	E	0.92
	SB	E	0.94	C	0.57
SR-242 n/o Clayton Rd	NB	A	0.25	C	0.70
	SB	C	0.71	B	0.43
SR-242 n/o Concord Av	NB	A	0.31	D	0.85
	SB	D	0.87	B	0.52
SR-242 n/o Grant Av	NB	A	0.29	D	0.81
	SB	D	0.82	B	0.49
SR-242 n/o Olivera Rd	NB	A	0.22	C	0.60
	SB	D	0.82	B	0.49
SR-4 e/o I-680	EB	A	0.28	E	0.94
	WB	F	1.15	C	0.54
SR-4 e/o Arnold Ind Wwy	EB	A	0.23	D	0.76
	WB	E	0.93	B	0.43
SR-4 e/o SR-242	EB	A	0.16	B	0.53
	WB	F	1.29	C	0.60
SR-4 e/o Port Chicago Hwy	EB	A	0.25	D	0.85
	WB	F	1.04	B	0.48

Note: **Bold** values identify locations operating below standard.

Source: Dowling Associates, Inc., 2005.

Freeway Ramps

Existing traffic operations on freeway ramps are summarized in Table 3.3-7.

Table 3.3-7: Existing Freeway Ramp Operations (2005)

Ramps	Peak Hour	LOS	V/C	Density
I-680				
Willow Pass Rd NB off-ramp	AM	C	0.77	27.24
	PM	E	1.00	35.66
Willow Pass Rd NB on-ramp	AM	C	0.35	na
	PM	C	0.52	na
Concord Av NB off-ramp	AM	C	0.56	na
	PM	C	0.52	na
Concord Av Burnett NB on-ramp	AM	B	0.55	18.71
	PM	C	0.76	26.14
Concord Av WB to NB on-ramp	AM	B	0.57	19.53
	PM	D	0.83	28.64
Concord Av SB off-ramp	AM	D	0.84	29.82
	PM	C	0.72	25.13
Concord Av WB to SB on-ramp	AM	C	0.66	22.61
	PM	C	0.63	21.45
Concord Av EB to SB on-ramp	AM	C	0.19	na
	PM	C	0.18	na
Willow Pass Rd SB off-ramp	AM	B	0.30	15.36
	PM	B	0.30	13.44
Willow Pass Rd WB to SB on-ramp	AM	C	0.65	22.43
	PM	C	0.59	20.11
Willow Pass Rd EB to SB on-ramp	AM	C	0.68	23.55
	PM	C	0.66	22.37
SR-242				
Clayton Rd NB off-ramp	AM	B	0.44	14.49
	PM	D	0.94	33.59
Concord Av EB to NB on-ramp	AM	A	0.28	9.27
	PM	C	0.81	27.83
Concord Av WB to NB on-ramp	AM	C	0.41	na
	PM	D	0.78	na
Concord Av SB off-ramp	AM	B	0.63	18.82
	PM	B	0.39	11.27
Clayton Rd SB on-ramp	AM	D	0.89	30.64
	PM	C	0.71	23.86
Concord Ave SB on-ramp	AM	C	0.63	21.87
	PM	B	0.41	13.72

Source: Dowling Associates, Inc. 2005.

Roadway Segment Operations

Existing traffic operations on roadway segments are summarized in **Table 3.3-8**.²

Table 3.3-8: Existing Roadway Segment Operations (2004)

Street Name	Location	LOS	V/C	Daily Volume
Routes Of Regional Significance				
Clayton Rd	East of Treat Blvd	C	0.68	35,285
Kirker Pass Rd	East of Concord Blvd	C	0.64	33,014
Treat Blvd	East of Oak Grove Rd	C	0.70	36,304
Ygnacio Valley Rd	East of Cowell Rd	F	1.09	39,087
Other Roadways				
Bailey Rd	East of Concord Blvd	C	0.44	7,449
Clayton Rd ¹	East of Galindo St	D	0.91	33,980
Concord Ave ¹	East of Diamond Blvd	C	0.70	36,356
Concord Ave ¹	West of Commerce Ave	C	0.69	35,894
Concord Blvd ²	West of Denkinger Rd	C	0.54	17,757
Concord Blvd ¹	West of Galindo St	D	0.84	23,887
Cowell Rd	Between Monument Blvd and Babel Ln	F	1.27	20,753
Denkinger Rd	Between Clayton Rd and Concord Blvd	D	0.79	12,878
Detroit Ave ²	North of Monument Blvd	D	0.79	12,946
Diamond Blvd ¹	North of Willow Pass Rd	C	0.33	17,153
East St ²	East of Grant St	C	0.43	14,149
Farm Bureau Rd	South of Willow Pass Rd	C	0.58	9,455
Galindo St ¹	Between Cowell and Clayton Rd	D	0.92	29,182
Market St ¹	Between Concord Ave and Willow Pass Rd	D	0.80	26,289
Meadow Ln	North of Monument Blvd	F	1.16	18,948
Monument Blvd ²	West of Oak Grove Rd	C	0.73	37,930
Oak Grove Rd	North of Treat Blvd	C	0.68	22,351
Port Chicago Hwy ¹	North of Olivera Rd	C	0.77	13,731
Willow Pass Rd	North of Landana Dr	F	1.21	20,386
Willow Pass Rd	East of Farm Bureau Rd	C	0.59	20,386
Willow Pass Rd ¹	East of Galindo St	D	0.57	18,034
Willow Pass Rd ¹	Between Diamond Blvd and SR-242	D	0.92	43,818

¹ Roadway segment within the CBD

² Roadway segment on transit route

Note: **Bold** values identify locations operating below standard.

Sources: *City of Concord - Existing 2004 traffic volumes, Dowling Associates, Inc. 2005.*

² These 2004 volumes were used because they represent that most recent data available from the City.

Most of the roadways currently operate at acceptable levels of service except for the following locations:

- Ygnacio Valley Road operates at LOS F east of Cowell Road, where the traffic demand exceeds the four-lane roadway's capacity of 35,700 vehicles per day.
- Cowell Road between Monument Boulevard and Babel Lane operates at LOS F due to the limited capacity of the two-lane roadway, which has a capacity of 16,300 vehicles per day.
- Meadow Lane operates at LOS F due to the limited capacity of the two-lane roadway, which has a capacity of 16,300 vehicles per day.
- Willow Pass Road north of Landana Drive operates at LOS F due to the limited capacity of the two-lane roadway, which has a capacity of 16,900 vehicles per day.

Unacceptable levels of congestion on these roadway segments typically occur in the peak commute direction during peak travel periods. In the non-peak direction during the peak periods and at other times of the day there may be little or no congestion along these routes.

Intersection Operations

Existing traffic operations at study intersections are summarized in **Table 3.3-9**.

Truck Routes

In addition to moving people, the roadway system in Concord carries a substantial number of trucks moving goods. In the General Plan specific truck routes have been designated throughout the City. These routes are designed to allow truck traffic to pass through the City with minimal impact on residential neighborhoods as well as local vehicular and pedestrian traffic.

Transit System

The transit system is well developed in the urbanized area of the City. Transit services in Concord include BART trains and County Connection buses.

BART provides rail service from two locations in Concord. The Concord BART station is located on Oakland Avenue near the historic downtown. The North Concord/ Martinez BART station is located on Port Chicago Highway near the SR-4/SR-242 interchange. Both stations are along the line from Pittsburg/Baypoint to Daly City with direct service to Downtown Oakland and Downtown San Francisco. Service to Richmond, Fremont, Dublin/Pleasanton, the San Francisco International Airport, and the Oakland International Airport is available by transfer. Park and Ride facilities, bicycle lockers and County Connection bus feeder services are provided at both stations.

Bus service in Concord is provided by the County Connection with 11 bus routes serving Concord. The Central Contra Costa Transit Authority (CCCTA) operates the County Connection buses. In addition to local service and BART feeder service, these lines link Concord with Walnut Creek, Martinez, Lafayette, Orinda, Clayton, Alamo, and San Ramon. The network of transit routes is shown in **Figure 3.3-2**.

Table 3.3-9: Existing Intersection Operations

Intersection	Traffic Control	LOS (V/C) ¹	
		AM Peak Hour	PM Peak Hour
1. Port Chicago Hwy / Panoramic Dr ²	Signal	A (0.32)	A (0.33)
2. Port Chicago Hwy / Olivera Rd ²	Signal	B (0.70)	D (0.88)
3. Diamond Blvd / Concord Av ²	Signal	A (0.48)	B (0.61)
4. Commerce Av / Concord Av ²	Signal	A (0.56)	C (0.77)
5. Market St / Concord Av ²	Signal	A (0.27)	A (0.55)
6. I-680 SB Ramp / Willow Pass Rd ²	Signal	A (0.55)	B (0.63)
7. I-680 NB Ramp / Willow Pass Rd ²	Signal	B (0.62)	D (0.83)
8. Diamond Blvd / Willow Pass Rd ²	Signal	A (0.40)	B (0.64)
9. Market St / Willow Pass Rd ²	Signal	A (0.57)	C (0.72)
10. Galindo St / Willow Pass Rd ²	Signal	A (0.53)	D (0.89)
11. Farm Bureau Rd / Willow Pass Rd	Signal	A (0.60)	D (0.84)
12. Market St / Clayton Rd ²	Signal	B (0.69)	C (0.76)
13. Oakland Av / Clayton Rd ²	Signal	A (0.54)	B (0.64)
14. Monument Blvd / Oak Grove Rd	Signal	A (0.51)	C (0.73)
15. Oak Grove Rd / Treat Blvd ³	Signal	D (0.86)	D (0.86)
16. Cowell Rd / Treat Blvd ³	Signal	C (0.77)	C (0.80)
17. Clayton Rd / Treat Blvd ³	Signal	C (0.72)	E (0.92)
18. Bailey Rd / Concord Blvd	Signal	C (0.74)	B (0.70)
19. Cowell Rd / Ygnacio Valley Rd ³	Signal	D (0.81)	E (0.99)
20. Clayton Rd / Ygnacio Valley Rd ³	Signal	A (0.60)	B (0.63)
21. Kirker Pass Rd / Concord Blvd ³	Signal	C (0.80)	D (0.82)

¹ V/C = Total Volume-to-Capacity Ratio prepared by CCTALOS Software ver. 2.35

² Intersection is within the CBD

³ Intersection is on a Route of Regional Significance

Note: No intersections currently operate below standard.

Source: Dowling Associates, Inc., 2005.

Bicycle & Pedestrian System

Bicycle routes and pedestrian walkways are typical examples of bicycle and pedestrian transportation facilities. Bicycle facilities are defined as the following three classes according to Chapter 1000 of the Caltrans Highway Design Manual:

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

Figure 3.3-2
Transit Routes

Proposed Route

Existing Route

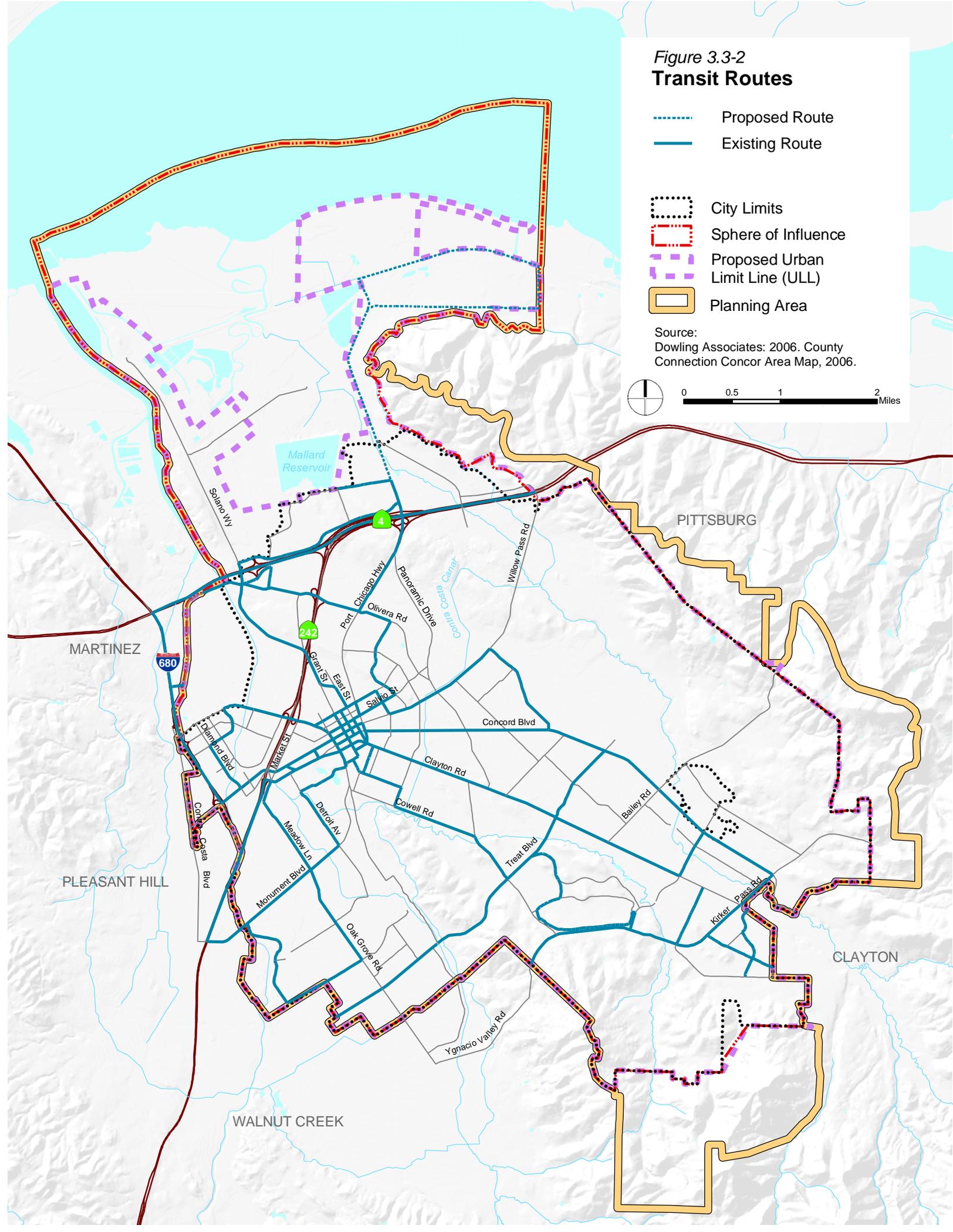
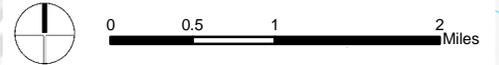
City Limits

Sphere of Influence

Proposed Urban
 Limit Line (ULL)

Planning Area

Source:
 Dowling Associates: 2006. County
 Connection Concor Area Map, 2006.



Given the topography of Concord, bicycling and walking are viable alternatives to auto use for both recreational and non-recreational trips. Bicycling and pedestrian facilities are an important component of the transportation network in Concord, but large areas of the City were built during a period when the importance of serving these modes of travel was not well understood. As reflected in the Concord Trails Master Plan, opportunities exist to improve the convenience and safety of existing facilities, and to increase the extent of bicycle and pedestrian facilities throughout developed areas.

Port & Rail Facilities

The tidal area within Concord north of SR-4 borders Suisun Bay and includes a deep water port. The Army uses the port for weapons shipment operations under an agreement with the Navy. In April 1996, the San Francisco Bay Conservation and Development Commission and the Metropolitan Transportation Commission adopted the San Francisco Bay Area Seaport Plan. The Seaport Plan identifies which ports will be necessary in the future to meet California's cargo shipping needs. It identifies the CNWS tidal area and its deep water port as a “port priority use area” should the base become available for private use. In the event that the tidal area becomes available for private use, the land would continue to be used as a port with supporting industrial uses.

REGULATORY SETTING

The Metropolitan Transportation Commission (MTC) has adopted a new Regional Transportation Plan, Transportation 2030. The plan shows no significant projects that widen the freeways in Central Contra Costa County. Instead, the emphasis is in maintaining and enhancing the existing network with the addition of high-occupancy vehicle (HOV) lanes, new auxiliary lanes to reduce merge conflicts, and interchange improvements. The major regional projects that are planned for construction effecting traffic in central county are (1) adding a fourth bore to the Caldecott tunnel, (2) reconstructing the I-680/SR-4 interchange, and (3) widening SR-4 in Pittsburg and Antioch. These projects were also included in the financing plan for Measure J that Contra Costa voters approved in November 2004. Freeway projects are very expensive to construct and need several funding sources. The State and federal government along with local sales tax initiatives, such as Measure J and Regional Measure 2, are the primary contributors to the projects. Funding freeway projects have been difficult because of the shortfall in State revenues. For several years, the State shifted funds earmarked for transportation projects to other budget items. This action slowed or halted the construction of most freeway projects. Even for the next several years, assuming that funding is available, the State is expected to fund pre-approved projects rather than new construction.

Existing transportation policies, plans, laws, and regulations that would apply to the General Plan Circulation Element are summarized below. This information provides a context for the impact discussion related to the plan’s consistency with applicable regulatory conditions.

State

Caltrans is responsible for planning, design, construction, and maintenance of all state highways. Three state highways pass through Concord: I-680, SR-4 and SR-242. Caltrans’ jurisdictional interest extends to improvements to these roadways at the interchange ramps serving area

freeways. Any federally funded transportation improvements are subject to review by Caltrans staff and the California Transportation Commission.

The Guide for the Preparation of Traffic Impact Studies (Caltrans, 2001) provides consistent guidance for Caltrans staff who review local development and land use change proposals as well as inform local agencies of the information needed for Caltrans to analyze the traffic impacts to State highway facilities including freeway segments, on- or off-ramps, and signalized intersections.

Regional

MTC is the regional organization responsible for prioritizing transportation projects in a Regional Transportation Improvement Program (RTIP) for federal and state funding. The process is based on evaluating each project for need, feasibility, and adherence to federal transportation policies and the local Congestion Management Program (CMP). The CMP requires each jurisdiction to identify existing and future transportation facilities that would operate below an acceptable service level and provide mitigation where future growth would degrade that service level.

Standards for roadway operations in Concord are defined on a countywide basis. In 1988, Contra Costa County voters passed Measure C, which raised the sales tax to provide funding for regional transportation improvements. Measure C requires local jurisdictions to adopt and implement a growth control program in order to receive their share of funds for transportation projects including maintenance. Measure C also included the Growth Management Program, which established a cooperative, multi-jurisdictional planning process requiring participation of all cities and towns and the County in managing the impacts of growth in Contra Costa County.

Measure J, approved by the voters in 2004, authorized the extension of Measure C and establishes Transportation Sales Tax Expenditure Plan that extends the transportation sales tax initially authorized by the passage of Contra Costa Measure C. It provides for \$2 billion in funding for programs and projects. These expenditures are “for the construction and improvement of state highways, the construction, maintenance, improvement, and operation of local streets, roads, and highways, and the construction, improvement, and operation of public transit systems”, including paratransit services (California Public Utilities Code §180205), and for specific efforts supporting such investments. Measure J’s Growth Management Program simplifies Measure C’s requirements; it also requires a binding Urban Limit Line for the county and all of the cities within the county.

The Contra Costa Transportation Authority (CCTA) was established to implement Measure C and its overall goals. Local jurisdictions work through their respective Regional Transportation Planning Committees (RTPCs). As part of central Contra Costa County, the City of Concord worked with other central county jurisdictions through the Transportation Partnership and Cooperation Committee (TRANSPAC), their RTPC, to develop the Central Contra Costa Action Plans for Routes of Regional Significance. The Action Plan identifies traffic service objectives (TSOs) for Routes of Regional Significance, which in Concord includes the freeways (SR-4, SR-242, I-680) and arterial streets (Clayton Road, Contra Costa Boulevard, Treat Boulevard, and

Ygnacio Valley Road/Kirker Pass Road). On these arterials, the TSO sets a target delay index of 2.0, which means that the peak hour travel time is not more than twice the off-peak travel time.

Local

The Measure C Growth Management Program sets standards for the regional and non-regional routes in Contra Costa County, which the City has incorporated into the Growth Management Element of the General Plan. These standards are tied to land use and provide for a tiered system of transportation systems in Concord, with different standards used for different types of streets. The County's Congestion Management Program's provisions for Infill Opportunity Zones allows the City to designate an Infill Opportunity Zone which would allow for these LOS standards to be exceeded within one-half mile of BART stations and within one-quarter mile of transit corridors as a means of encouraging infill development at densities necessary to support public transportation, walking and bicycling.

IMPACT ANALYSIS

SIGNIFICANCE CRITERIA

Adoption of the General Plan would have a significant transportation impact if one or more of the following conditions occurred:

- Conflict with policies contained in the General Plan; or
- Degrade level of service (LOS) based on the following criteria:
 - The LOS criteria for Basic Routes in the proposed Urban Area General Plan were identified based on Policy GM-1.3.1 of the proposed circulation element as follows:

“Apply the following standards to signalized intersections on Basic Routes (all roads not indicated as Routes of Regional Significance):³

Major Arterial:

LOS high-D (85 to 89 v/c)

(Generally provides circulation between major activity centers and/or residential areas for both local and regional traffic.)

Central Business District Streets:LOS low-E (90 to 94 v/c)”

- For roadway segments, the LOS criteria are LOS D for all roadways outside the Central Business District (CBD) and LOS E for roadways within the CBD.

³ Policy GM-1.3-1 contains standards for other classifications of roadways. However, the City of Concord does not currently utilize a roadway classification system, so for purposes of this programmatic EIR analysis, LOS evaluation is centered on Major Arterials and Central Business District Streets.

- For intersections and roadway segments on Routes of Regional Significance (including freeways), the LOS criterion is LOS E.⁴
- For transportation facilities that fail to meet LOS standards (as defined above) under no project conditions, an increase in the volume/capacity ratio of 0.03 or greater above no project conditions was considered to be significant.
- Exceed the traffic service objectives (TSOs) established in the Central Contra Costa Action Plan for Routes of Regional Significance⁶, specifically:
 - For the freeways (I-680, SR-242, and SR-4), a delay index of 2.0, with minimum peak hour average travel speed of 30 mph.
 - For arterials, a delay index of 2.0, with minimum peak hour average travel speed of 15 mph.

METHODOLOGY & ASSUMPTIONS

The transportation impact analysis is focused on potential LOS impacts on freeways, roadway segments, and intersections that would occur from increased travel demand associated with new land development and roadway network improvements under each General Plan alternative. The analysis of ground transportation systems was performed using quantitative methods. For the transit, bicycle and pedestrian systems, the analysis was limited to a review of the General Plan policies and implementation measures associated with each alternative.

The transportation analysis process involved the following steps:

1. The CCTA Decennial Model was reviewed. Major roadway improvements identified the City's current Capital Improvement Program (CIP) and long-range planning efforts (as shown in **Figure 3.3-3** and listed below) were assumed in the future model network.

⁴ The CBD is generally defined as the area from the Downtown to I-680 including the area from Concord Avenue to Clayton Road. The CBD level of service standard also applies to the North Concord BART Station area as a means of encouraging infill development at densities necessary to support public transportation, walking and bicycling. Finally, the CBD level of service standard applies to transit routes, which are generally defined as serving two or more transit lines. Transit Routes are defined in the General Plan.

⁵ The Central County Action Plan defines a Traffic Service Objective for regional routes that the travel time during the peak hour should be no greater than twice the travel time during off-peak conditions (a maximum delay index of 2.0). Calculation of the delay index for the General Plan is based on the concept that many of the regional routes are congested during the peak periods. The Congestion Management Program (CCTA 2001) establishes LOS standards for regional routes. The CMP standards are LOS E and F for the regional routes in Concord, with F allowed only where existing operations are at F. This provision is established in State law (Gov Code 65070 et. seq.).

⁶ The Central County Action Plan defines a Traffic Service Objective for regional routes that the travel time during the peak hour should be no greater than twice the travel time during off-peak conditions (a maximum delay index of 2.0). Calculation of the delay index is based on the concept that many of the regional routes are congested during the peak periods. For arterial streets (Clayton Road between Treat and Kirker Pass Road, Treat Boulevard, and Kirker Pass Road), the TSOs are a delay index of 2.0, with minimum peak hour average travel speed of 15 mph.

2. The land use data for the proposed Urban Area General Plan and alternatives were developed as part of the Concord Draft General Plan. The land use data includes 12 categories – agriculture/rural, business, technology & light industry, community commercial, manufacturing, processing & warehousing, neighborhood commercial, office & office park, parks & open space, public/semi-public, regional commercial, single-family residential, medium- and low-density residential, and multiple-family residential. The land use data was categorized into total households, single-family dwelling units, multi-family dwelling units, total employment, and employment by sector (retail, service, agriculture, manufacturing, wholesale, and other) for input to the Decennial Model.
3. The CCTA model was used to produce traffic volumes for the analysis of buildout conditions of the proposed Urban Area General Plan and the alternatives. The initial volumes generated from the model were adjusted based on the existing traffic counts and the outputs from the model.
4. The significance criteria were used to identify potential roadway network deficiencies. The General Plan policies were used to assess the adequacy of other transportation components such as bicycle and transit system.

Major planned or programmed street improvements for Concord included in the current 1994 General Plan and proposed in the Urban Area General Plan are listed in the following text. Improvement projects proposed in the Urban Area General Plan are indicated with an asterisk.

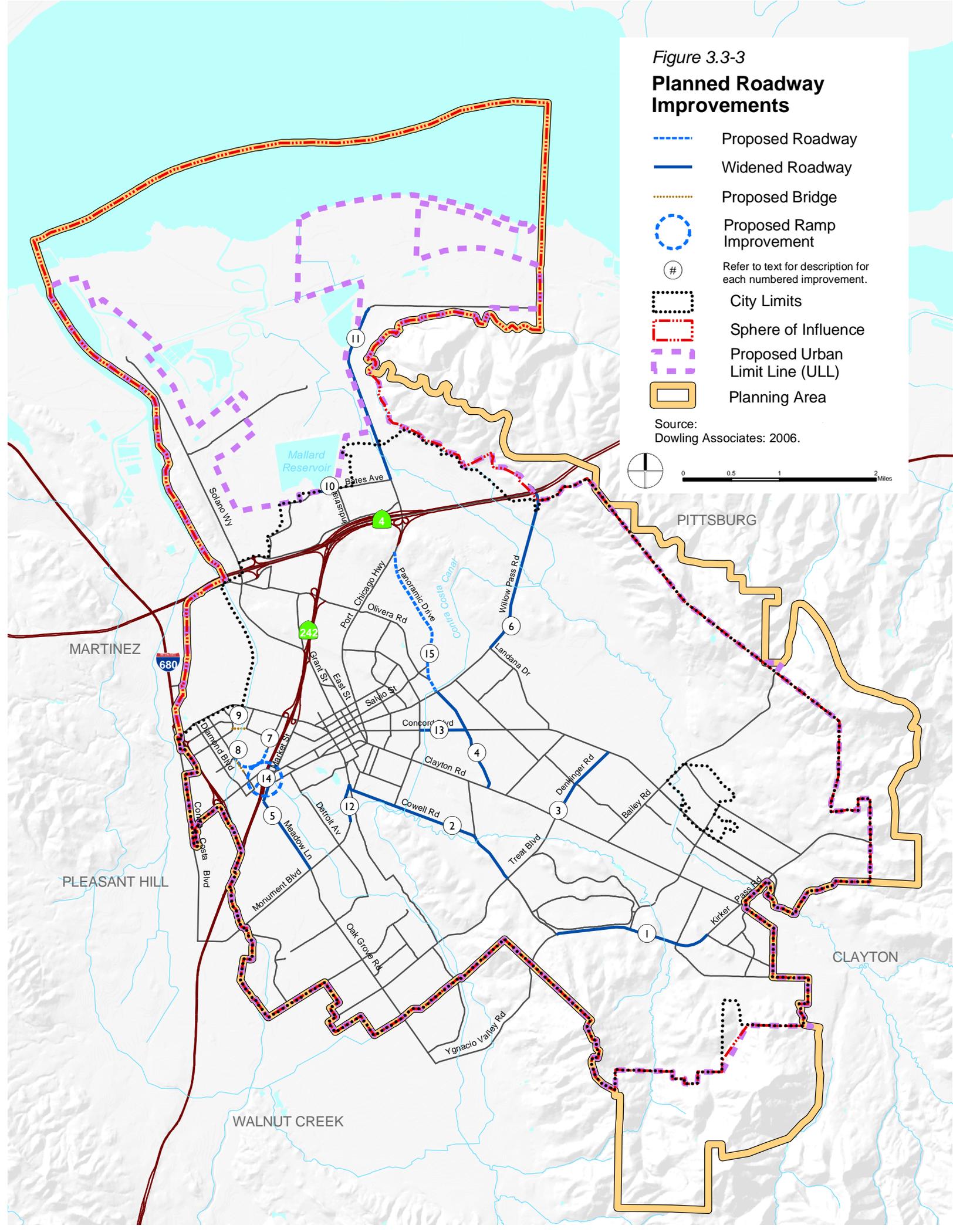
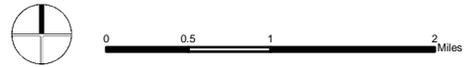
1. Ygnacio Valley Road–widen to six lanes between Cowell Road and Michigan Boulevard
2. Cowell Road–widen to four lanes between Monument Boulevard and Treat Boulevard*
3. Denkinger Road–widen to four lanes between Clayton Road and Concord Boulevard*
4. Farm Bureau Road–widen to four lanes between Willow Pass Road and Clayton Road
5. Meadow Lane–widen to four lanes between Monument Boulevard and Clayton Road*
6. Willow Pass Road–widen to four lanes between Landana Drive and SR-4*
7. Commerce Avenue Extension–extend existing two lane arterial
8. Waterworld Parkway bridge over Walnut Creek–Construct a two-lane bridge with bicycle lanes over Walnut Creek connecting Waterworld Parkway with Meridian Park Boulevard
9. Galaxy Way Gap Closure–construct a bridge over Walnut Creek to close the gap in Galaxy Way*
10. Bates Avenue–widen to four lanes from Industrial Way to Mason Circle*
11. Port Chicago Highway–widen to four lanes from Bates Avenue north to the UPRR crossing*
12. Monument Boulevard–widen to six lanes from Systron Drive to Cowell Road
13. Concord Boulevard–widen to four lanes from 6th to Farm Bureau Road*
14. Clayton Road/SR-242 Interchange–new northbound on-ramp and southbound off-ramp
15. Panoramic Drive–Four lane extension of Panoramic Dr. from N. Concord BART to Willow Pass Road

Figure 3.3-3

Planned Roadway Improvements

-  Proposed Roadway
-  Widened Roadway
-  Proposed Bridge
-  Proposed Ramp Improvement
-  Refer to text for description for each numbered improvement.
-  City Limits
-  Sphere of Influence
-  Proposed Urban Limit Line (ULL)
-  Planning Area

Source:
Dowling Associates: 2006.



Trip Generation

The number of trips generated in the City of Concord was determined from the travel demand model. The model applies trip rates by household or by employee. **Table 3.3-10** summarizes the approximate number of daily trips generated by the dwelling units and employees in the proposed Urban Area General Plan.

Table 3.3-10: Daily Vehicle-Trip Generation

<i>Scenario</i>	<i>Vehicle Trips</i>	<i>Increase</i>	<i>Percent Increase</i>
Existing Conditions	528,915	-	-
Proposed General Plan (2030)	728,607	199,692	38%
No Project (2030)	637,079	108,164	20%

Source: Dowling Associates, Inc., 2005.

As shown in **Table 3.3-10**, buildout of the proposed Urban Area General Plan would generate 728,607 vehicle-trips per day, or 38 percent more trips than existing condition. The number of daily trips would increase by 20 percent if no change is made to the existing General Plan.

Roadway System Analysis Results

The results of the transportation analysis are described in this section. These results were used to identify potential future roadway deficiencies. The proposed Urban Area General Plan will include transportation infrastructure modifications in the Urban Area. The combined effect of the transportation improvements and the land use intensification would result in positive effects at some locations (compared to no project) and significant impacts at other locations.

Table 3.3-11 summarizes the number of the daily vehicle miles of travel (VMT) under buildout conditions for the proposed General Plan alternatives.

Table 3.3-11: Daily Vehicle Trips and Vehicle Miles of Travel For Buildout Conditions

<i>Scenario</i>	<i>Vehicle Trips</i>	<i>VMT¹ (in Million Vehicle Miles)</i>
Existing Conditions	528,915	2.430
Proposed General Plan (2030)	728,607	3.161
No Project (2030)	637,079	3.112

¹ Includes external trips.

Source: Dowling Associates, Inc. 2005.

The implementation of the proposed Urban Area General Plan would increase the VMT by approximately 30 percent over existing conditions. The vehicle trips and VMT increase occurs mainly due to the increased population and job growth.

Analysis of Freeways, Ramps, Roadway Segments, and Intersections

The analysis of roadway systems are provided in **Table 3.3-12** for freeway segment operations, **Table 3.3-13** for freeway ramp operations, **Table 3.3-14** for roadway segment operations, and **Table 3.3-15** for intersection operations. There would be failures of each of these roadway systems to satisfy current operational standards in the future, regardless of the whether or not the proposed Urban Area General Plan is implemented.

The discussion following the tables addresses the impacts of the proposed Urban Area General Plan on the roadway and other transportation systems.

Analysis of Freeway TSOs

The freeway speeds and delay index were estimated based on a free-flow speed of 70 mph and the calculated freeway v/c shown in **Table 3.3-12**. The results of the analysis of freeway TSOs is summarized in **Table 3.3-16**. Those locations with a speed less than 30 mph and/or a delay index of 2.0 or greater would not meet the TSOs.

Table 3.3-12: Freeway Segment Operations

Freeway Segment	Direction	Existing Conditions				No Project (2030)				Proposed GP (2030)			
		AM LOS	VIC	PM LOS	VIC	AM LOS	VIC	PM LOS	VIC	AM LOS	VIC	PM LOS	VIC
I-680 s/o Monument Blvd.	NB	D	0.89	F	1.16	F	1.09	F	1.42	F	1.11	F	1.44
	SB	D	0.87	D	0.76	F	1.04	E	0.95	F	1.05	E	0.97
I-680 n/o Monument Blvd.	NB	C	0.73	E	0.95	D	0.88	F	1.14	D	0.89	F	1.15
	SB	D	0.85	D	0.75	F	1.07	E	0.91	F	1.08	E	0.92
I-680 n/o SR-242	NB	D	0.89	F	1.16	F	1.09	F	1.40	F	1.10	F	1.41
	SB	D	0.78	C	0.68	F	1.02	D	0.87	F	1.00	D	0.88
I-680 n/o Willow Pass Rd	NB	D	0.76	E	0.99	D	0.80	F	1.12	D	0.84	F	1.09
	SB	C	0.69	C	0.60	D	0.82	C	0.71	D	0.80	C	0.72
I-680 n/o Concord Av	NB	C	0.64	D	0.83	D	0.83	F	1.07	D	0.83	F	1.08
	SB	C	0.68	C	0.60	D	0.76	C	0.68	D	0.77	C	0.68
I-680 n/o SR-4	NB	C	0.55	C	0.73	D	0.77	F	1.02	D	0.77	F	1.03
	SB	D	0.87	D	0.76	F	1.16	F	1.06	F	1.17	F	1.07
SR-242 n/o I-680	NB	B	0.33	E	0.92	B	0.43	F	1.06	B	0.45	F	1.08
	SB	E	0.94	C	0.57	F	1.04	C	0.73	F	1.07	D	0.76
SR-242 n/o Clayton Rd	NB	A	0.25	C	0.70	B	0.40	D	0.84	B	0.44	D	0.86
	SB	C	0.71	B	0.43	E	0.91	C	0.67	E	0.93	C	0.71
SR-242 n/o Concord Av	NB	A	0.31	D	0.85	B	0.37	E	0.91	B	0.42	E	0.92
	SB	D	0.87	B	0.52	E	0.94	C	0.57	E	0.97	C	0.58
SR-242 n/o Grant Av	NB	A	0.29	D	0.81	B	0.34	D	0.83	B	0.39	D	0.83
	SB	D	0.82	B	0.49	E	0.90	C	0.54	E	0.92	C	0.56
SR-242 n/o Olivera Rd	NB	A	0.22	C	0.60	A	0.28	C	0.73	A	0.32	C	0.71
	SB	D	0.82	B	0.49	E	0.98	C	0.60	E	0.98	C	0.61
SR-4 e/o I-680	EB	A	0.28	E	0.94	C	0.58	F	1.10	C	0.62	F	1.13
	WB	F	1.15	C	0.54	F	1.36	D	0.81	F	1.37	D	0.84
SR-4 e/o Arnold Ind Wy	EB	A	0.23	D	0.76	B	0.41	E	0.91	B	0.42	E	0.90
	WB	E	0.93	B	0.43	F	1.02	C	0.58	F	1.01	C	0.59
SR-4 e/o SR-242	EB	A	0.16	B	0.53	A	0.29	D	0.80	A	0.31	C	0.74
	WB	F	1.29	C	0.60	F	1.85	E	0.97	F	1.71	E	0.96
SR-4 e/o Port Chicago Hwy	EB	A	0.25	D	0.85	B	0.39	F	1.20	B	0.42	F	1.10
	WB	F	1.04	B	0.48	F	1.39	C	0.68	F	1.30	C	0.68

Note: **Bold** values identify potential significant impacts.

Source: Dowling Associates, Inc., 2005.

Table 3.3-13: Ramp Operations

Freeway Ramp	Peak Hour	Existing Conditions			No Project (2030)			Proposed GP (2030)		
		LOS	V/C	Density	LOS	V/C	Density	LOS	V/C	Density
<i>I-680</i>										
Willow Pass Rd NB off-ramp	AM	C	0.77	27.24	D	0.92	32.76	D	0.92	32.72
	PM	E	1.00	35.66	F	1.16	41.82	F	1.19	43.06
Willow Pass Rd NB on-ramp	AM	C	0.35	na	C	0.35	na	C	0.35	na
	PM	C	0.52	na	C	0.68	na	C	0.63	na
Concord Av NB off-ramp	AM	C	0.56	na	C	0.56	na	D	0.72	na
	PM	C	0.52	na	C	0.55	na	D	0.71	na
Concord Av Burnett NB on-ramp	AM	B	0.55	18.71	C	0.70	23.85	C	0.71	24.03
	PM	C	0.76	26.14	F	0.92	31.71	F	0.87	29.93
Concord Av WB to NB on-ramp	AM	B	0.57	19.53	C	0.76	26.53	C	0.77	26.86
	PM	D	0.83	28.64	F	1.03	35.95	F	1.00	34.81
Concord Av SB off-ramp	AM	D	0.84	29.82	E	0.99	35.47	E	0.99	35.57
	PM	C	0.72	25.13	D	0.86	30.60	D	0.86	30.55
Concord Av WB to SB on-ramp	AM	C	0.66	22.61	C	0.81	27.80	C	0.81	27.88
	PM	C	0.63	21.45	C	0.77	26.15	C	0.76	26.06
Concord Av EB to SB on-ramp	AM	C	0.19	na	C	0.24	na	C	0.22	na
	PM	C	0.18	na	C	0.18	na	C	0.18	na
Willow Pass Rd SB off-ramp	AM	B	0.30	15.36	B	0.31	19.85	B	0.34	19.51
	PM	B	0.30	13.44	B	0.30	17.32	B	0.30	17.41
Willow Pass Rd WB to SB on-ramp	AM	C	0.65	22.43	D	0.86	29.76	D	0.83	28.75
	PM	C	0.59	20.11	C	0.75	25.95	C	0.76	26.19
Willow Pass Rd EB to SB on-ramp	AM	C	0.68	23.55	D	0.91	31.47	D	0.89	30.96
	PM	C	0.66	22.37	C	0.81	27.95	D	0.83	28.55
<i>SR-242</i>										
Clayton Rd NB off-ramp	AM	B	0.44	14.49	B	0.54	18.37	B	0.56	19.04
	PM	D	0.94	33.59	F	1.03	37.00	F	1.04	37.49
Clayton Rd NB on-ramp (proposed)	AM				B	0.32	10.59	B	0.38	12.45
	PM				C	0.79	27.59	D	0.81	28.31
Concord Av EB to NB on-ramp	AM	A	0.28	9.27	B	0.44	14.89	B	0.49	16.76
	PM	C	0.81	27.83	D	0.94	32.53	D	0.96	33.13
Concord Av WB to NB on-ramp	AM	C	0.41	na	C	0.41	na	C	0.41	na
	PM	D	0.78	na	E	0.96	na	E	0.94	na

Table 3.3-13: Ramp Operations

Freeway Ramp	Peak Hour	Existing Conditions			No Project (2030)			Proposed GP (2030)		
		LOS	V/C	Density	LOS	V/C	Density	LOS	V/C	Density
Concord Av SB off-ramp	AM	B	0.63	18.82	C	0.65	22.65	C	0.73	23.30
	PM	B	0.39	11.27	B	0.39	13.68	B	0.39	13.94
Clayton Rd SB off-ramp (proposed)	AM				D	0.90	32.14	D	0.92	32.91
	PM				C	0.72	25.06	C	0.76	26.57
Clayton Rd SB on-ramp	AM	D	0.89	30.64	D	1.00	34.48	F	1.04	35.97
	PM	C	0.71	23.86	D	0.87	29.77	D	0.92	31.33
Concord Ave SB on-ramp	AM	C	0.63	21.87	D	0.82	28.54	D	0.87	30.04
	PM	B	0.41	13.72	B	0.54	18.45	C	0.62	21.06

Note: **Bold** values identify potential significant impacts

Source: Dowling Associates, Inc., 2005

Table 3.3-14: Roadway Segment Operations

Street Name	Location	Existing Conditions		No Project (2030)		Proposed GP (2030)				
		LOS	V/C	Daily Volume	LOS	V/C	Daily Volume	LOS	V/C	Daily Volume
<i>Routes of Regional Significance</i>										
Clayton Rd	East of Treat Blvd	C	0.73	37,990	F	1.05	54,628	F	1.05	54,583
Kirker Pass Rd	East of Concord Blvd	C	0.63	32,393	D	0.84	43,302	D	0.83	43,008
Treat Blvd	East of Oak Grove Rd	C	0.71	36,915	D	0.87	44,824	D	0.88	45,394
Ygnacio Valley R	East of Cowell Rd	F	1.02	36,348	C	0.91	48,810	C	0.90	48,250
<i>Other Roadways</i>										
Bailey Rd	East of Concord Blvd	C	0.44	7,393	D	0.94	15,808	D	0.94	15,863
Clayton Rd ¹	East of Galindo St	D	0.95	35,268	D	0.94	34,937	F	1.01	37,607
Concord Ave ¹	East of Diamond Blvd	C	0.64	33,277	D	0.85	44,228	D	0.92	47,830
Concord Ave ¹	West of Commerce Ave	C	0.65	33,549	D	0.85	44,185	D	0.90	46,688
Concord Blvd ²	West of Denlinger Rd	D	0.78	25,615	D	0.84	27,431	D	0.89	29,332
Concord Blvd ¹	West of Galindo St	D	0.71	20,354	D	0.79	22,605	D	0.86	24,682
Cowell Rd	Between Monument Blvd and Babel Ln	F	1.12	18,198	C	0.56	19,478	C	0.60	20,839
Denlinger Rd	Between Clayton Rd and Concord Blvd	D	0.72	11,739	C	0.37	12,633	C	0.36	12,550
Detroit Ave ²	North of Monument Blvd	D	0.82	13,408	D	0.85	13,809	D	0.85	13,775
Diamond Blvd ¹	North of Willow Pass Rd	C	0.48	24,890	C	0.52	26,745	C	0.57	29,419
East St ²	East of Grant St	C	0.48	15,798	C	0.58	19,089	C	0.60	19,630
Farm Bureau Rd	South of Willow Pass Rd	C	0.53	8,673	C	0.48	16,622	C	0.49	16,777
Galindo St ¹	Between Cowell and Clayton Rd	E	0.98	30,922	F	1.13	35,729	F	1.19	37,790
Market St ¹	Between Concord Ave and Willow Pass Rd	C	0.63	20,806	C	0.38	12,577	C	0.57	18,600
Meadow Ln	North of Monument Blvd	F	1.22	19,874	C	0.73	25,050	D	0.88	30,523
Monument Blvd ²	West of Oak Grove Rd	D	0.82	42,572	E	0.98	50,816	F	1.02	52,853
Oak Grove Rd	North of Treat Blvd	C	0.71	23,248	D	0.86	28,266	D	0.92	30,123
Port Chicago Hwy ¹	North of Olivera Rd	D	0.83	14,692	F	1.12	19,811	F	1.01	17,840
Willow Pass Rd	North of Landana Dr	F	1.20	20,241	B	0.69	24,506	C	0.91	32,508
Willow Pass Rd	East of Farm Bureau Rd	C	0.54	18,774	C	0.67	23,276	D	0.86	29,700
Willow Pass Rd ¹	East of Galindo St	D	0.70	22,057	D	0.83	26,283	D	0.88	27,987
Willow Pass Rd ¹	Between Diamond Blvd and SR-242	D	0.82	39,244	F	1.13	53,609	F	1.35	64,195
Commerce Av Ext. ¹	East of Waterworld Pkwy	C	0.33	11,255	C	0.33	11,283	C	0.67	22,977

¹ Roadway segment within the CBD

² Roadway segment on transit route

Note: Bold values identify potential significant impacts.

Sources: City of Concord - Existing 2002 traffic volumes; Dowling Associates, Inc. 2005.

Table 3.3-15: Signalization Intersections Operations

Intersection	Existing Conditions						No Project (2030)						Proposed GP (2030)							
	AM			PM			AM			PM			AM			PM				
	LOS	V/C	V/C	LOS	V/C	V/C	LOS	V/C	V/C	LOS	V/C	V/C	LOS	V/C	V/C	LOS	V/C	V/C		
1. Port Chicago Hwy / Panoramic DrI	A	0.32	A	0.33	A	0.33	A	0.51	C	0.76	C	0.76	A	0.52	C	0.77	A	0.52	C	0.77
2. Port Chicago Hwy / Olivera RdI	B	0.70	D	0.88	D	0.88	F	1.08	F	1.19	F	1.19	F	1.09	F	1.19	F	1.09	F	1.19
3. Diamond Blvd / Concord AvI	A	0.48	B	0.61	B	0.61	A	0.52	C	0.74	C	0.74	A	0.56	C	0.74	A	0.56	C	0.74
4. Commerce Av / Concord AvI	A	0.56	C	0.77	C	0.77	E	0.96	F	1.12	F	1.12	F	1.05	F	1.12	F	1.05	F	1.12
5. Market St / Concord AvI	A	0.27	A	0.55	A	0.55	A	0.45	B	0.68	B	0.68	A	0.47	B	0.68	A	0.47	B	0.68
6. I-680 SB Ramp / Willow Pass RdI	A	0.55	B	0.63	B	0.63	B	0.69	C	0.76	C	0.76	C	0.72	C	0.76	C	0.72	C	0.76
7. I-680 NB Ramp / Willow Pass RdI	B	0.62	D	0.83	D	0.83	C	0.79	E	1.00	E	1.00	D	0.85	E	1.00	D	0.85	E	1.00
8. Diamond Blvd / Willow Pass RdI	A	0.40	B	0.64	B	0.64	A	0.54	D	0.83	D	0.83	A	0.58	D	0.83	A	0.58	D	0.83
9. Market St / Willow Pass RdI	A	0.57	C	0.72	C	0.72	C	0.74	C	0.80	C	0.80	C	0.72	C	0.80	C	0.72	C	0.80
10. Galindo St / Willow Pass RdI	A	0.53	D	0.89	D	0.89	C	0.71	F	1.07	F	1.07	B	0.66	F	1.06	B	0.66	F	1.06
11. Farm Bureau Rd / Willow Pass Rd	A	0.60	D	0.84	D	0.84	F	1.16	F	1.32	F	1.32	F	1.20	F	1.32	F	1.20	F	1.32
12. Market St / Clayton RdI	B	0.69	C	0.76	C	0.76	F	1.04	D	0.88	D	0.88	E	0.96	D	0.88	E	0.96	D	0.88
13. Oakland Av / Clayton RdI	A	0.54	B	0.64	B	0.64	A	0.54	B	0.69	B	0.69	A	0.55	B	0.69	A	0.55	B	0.69
14. Monument Blvd / Oak Grove Rd	A	0.51	C	0.73	C	0.73	C	0.75	E	1.00	E	1.00	D	0.86	F	1.03	D	0.86	F	1.03
15. Oak Grove Rd / Treat Blvd2	D	0.86	D	0.86	D	0.86	F	1.05	F	1.03	F	1.03	F	1.09	F	1.03	F	1.09	F	1.03
16. Cowell Rd / Treat Blvd2	C	0.77	C	0.80	C	0.80	F	1.03	D	0.86	D	0.86	E	0.98	D	0.86	E	0.98	D	0.86
17. Clayton Rd / Treat Blvd2	C	0.72	E	0.92	E	0.92	E	0.98	F	1.12	F	1.12	D	0.87	F	1.13	D	0.87	F	1.13
18. Bailey Rd / Concord Blvd	C	0.74	B	0.70	B	0.70	E	0.94	E	0.91	E	0.91	E	1.00	E	0.93	E	1.00	E	0.93
19. Cowell Rd / Ygnacio Valley Rd2	D	0.81	E	0.99	E	0.99	F	1.03	F	1.36	F	1.36	E	0.98	F	1.36	E	0.98	F	1.36
20. Clayton Rd / Ygnacio Valley Rd2	A	0.60	B	0.63	B	0.63	C	0.79	C	0.80	C	0.80	C	0.79	C	0.80	C	0.79	C	0.80
21. Kirker Pass Rd / Concord Blvd2	C	0.80	D	0.82	D	0.82	F	1.02	F	1.01	F	1.01	E	1.00	F	1.01	E	1.00	F	1.01

¹ Intersection is within the CBD.

² Intersection is on a Route of Regional Significance.

V/C = Total Volume-to-Capacity Ratio prepared by CCTALOS Software ver. 2.35

Note: **Bold** values identify potential significant impacts.

Source: Dowling Associates, Inc., 2006.

Table 3.3-16: Freeway Speeds and Delay Index

Freeway Segment	Dir	Existing Conditions				No Project (2030)				Proposed General Plan (2030)			
		AM		PM		AM		PM		AM		PM	
		Speed	Delay Index	Speed	Delay Index	Speed	Delay Index	Speed	Delay Index	Speed	Delay Index	Speed	Delay Index
I-680 s/o Monument Blvd.	NB	45	1.56	19	3.68	24	2.92	7	10.00	23	3.04	6	11.67
	SB	47	1.49	58	1.21	29	2.41	39	1.79	28	2.50	36	1.94
I-680 n/o Monument Blvd.	NB	60	1.17	38	1.84	46	1.52	20	3.50	45	1.56	19	3.68
	SB	49	1.43	59	1.19	26	2.69	43	1.63	25	2.80	42	1.67
I-680 n/o SR-242	NB	45	1.56	19	3.68	24	2.92	8	8.75	24	2.92	7	10.00
	SB	56	1.25	63	1.11	31	2.26	47	1.49	32	2.19	46	1.52
I-680 n/o Willow Pass Rd	NB	58	1.21	34	2.06	54	1.30	22	3.18	50	1.40	24	2.92
	SB	63	1.11	66	1.06	52	1.35	61	1.15	54	1.30	61	1.15
I-680 n/o Concord Av	NB	65	1.08	51	1.37	51	1.37	26	2.69	51	1.37	25	2.80
	SB	63	1.11	67	1.04	57	1.23	63	1.11	57	1.23	63	1.11
I-680 n/o SR-4	NB	68	1.03	60	1.17	57	1.23	31	2.26	57	1.23	30	2.33
	SB	47	1.49	58	1.21	19	3.68	27	2.59	18	3.89	26	2.69
SR-242 n/o I-680	NB	70	1.00	41	1.71	70	1.00	27	2.59	69	1.01	25	2.80
	SB	39	1.79	68	1.03	29	2.41	60	1.17	26	2.69	57	1.23
SR-242 n/o Clayton Rd	NB	70	1.00	62	1.13	70	1.00	50	1.40	69	1.01	48	1.46
	SB	61	1.15	70	1.00	43	1.63	64	1.09	40	1.75	61	1.15
SR-242 n/o Concord Av	NB	70	1.00	49	1.43	70	1.00	42	1.67	70	1.00	42	1.67
	SB	47	1.49	68	1.03	39	1.79	67	1.04	36	1.94	67	1.04
SR-242 n/o Grant Av	NB	70	1.00	54	1.30	70	1.00	51	1.37	70	1.00	52	1.35
	SB	52	1.35	69	1.01	44	1.59	68	1.03	42	1.67	68	1.03
SR-242 n/o Olivera Rd	NB	70	1.00	66	1.06	70	1.00	60	1.17	70	1.00	61	1.15
	SB	52	1.35	69	1.01	35	2.00	67	1.04	35	2.00	66	1.06
SR-4 e/o I-680	EB	70	1.00	40	1.75	67	1.04	23	3.04	66	1.06	21	3.33
	WB	20	3.50	68	1.03	9	7.78	54	1.30	8	8.75	50	1.40
SR-4 e/o Arnold Ind Vwy	EB	70	1.00	58	1.21	70	1.00	43	1.63	70	1.00	43	1.63
	WB	41	1.71	69	1.01	31	2.26	67	1.04	31	2.26	67	1.04
SR-4 e/o SR-242	EB	70	1.00	68	1.03	70	1.00	54	1.30	70	1.00	59	1.19
	WB	11	6.36	66	1.06	2	35.00	36	1.94	2	35.00	37	1.89
SR-4 e/o Port Chicago Hwy	EB	70	1.00	49	1.43	70	1.00	16	4.38	70	1.00	24	2.92
	WB	29	2.41	69	1.01	8	8.75	63	1.11	11	6.36	63	1.11

Note: **Bold** values identify potential significant impacts of the Proposed General Plan where under the "No Project" Alternative there would not be a significant impact.

Source: Dowling Associates, Inc., 2006.

IMPACTS AND MITIGATION MEASURES

The significant impacts of the Concord 2030 Urban Area General Plan are summarized and compared to both existing conditions and the No Project (2030) alternative, which is future buildout of the existing general plan. Significance is determined by comparing the proposed Urban Area General Plan to the No Project alternative. To the extent the transportation Policies from the Concord 2030 Urban Area General Plan reduce transportation impacts associated with the implementation of the General Plan Update, the policies have been included in the discussion of impacts.

Impact

3.3-1 Implementation of the proposed Urban Area General Plan would contribute to substandard freeway segment operations during the peak hours along I-680, SR-242 and SR-4. (Significant)

Several freeway segments operate at LOS F under existing conditions, in particular, SR-4 in the westbound direction during the morning commute and I-680 northbound during the evening commute. In the future (2030), freeway congestion increases during both morning and evening peak hours, particularly on SR-4 and I-680. As shown in **Table 3.3-12**, congestion along freeway segments would largely be attributed to regional growth in Contra Costa County and adjacent counties. Nevertheless, the proposed Urban Area General Plan would cause significant impacts at several segments on the freeway system.

During the p.m. peak hour, the proposed Urban Area General Plan would increase the v/c ratio (relative to the No Project alternative) on eastbound SR-4 by more than 0.03 just east of I-680, where it would otherwise operate at LOS F without the proposed Urban Area General Plan.

Proposed General Plan Policies that Reduce the Impact

Numerous policies in the proposed Urban Area General Plan would reduce the traffic burden that would otherwise be served by the freeway system. For example, policies supporting alternate travel modes to the single-occupant auto commuter and the adequate maintenance and upgrade of the non-freeway transportation system would reduce demand on the freeway systems. Similarly, policies supporting smart growth land use would reduce demand on the freeways. In addition, the following proposed policies are specifically targeted at reducing the potential impacts on the freeway system:

Policy GM-1.1.1: Develop an improved understanding of the relationship between land use and transportation through ongoing traffic impact analyses, participation in the updating of Regional Route Action Plans, and other programs implementing the growth management element.

Policy GM-1.3.5: Continue to assist with multi-jurisdictional transportation planning by participating in activities of TRANSPAC including development of Action Plans for Routes of Regional Significance and cooperating in planning for

intersections subject to Findings of Special Circumstances located in other jurisdictions when it is believed that local actions contribute to conditions at such intersections.

Policy GM-1.3.6: Participate in the Contra Costa Transportation Authority's conflict resolution process as needed to resolve disputes related to the development and implementation of Action Plans and other programs described in this Element.

Even with these policies, the impact would be significant.

Mitigation Measures

No feasible mitigation measures have been identified that would reduce freeway impacts to a level that is less than significant. Increasing freeway capacity by adding lanes would not be feasible because of the high cost, the negative impacts on air quality, and other factors. Adding lanes is inconsistent with the policies of the responsible regional agencies. As noted previously, MTC's regional transportation plan makes no commitments to widen freeway facilities in the county. The emphasis is on maintaining and enhancing the existing and supporting multimodal solutions, and no funding for freeway widening over the planning horizon for this General Plan Update.

Impact

3.3-2 Implementation of the proposed Urban Area General Plan would contribute to substandard freeway ramp operations during the peak hours at freeway ramps on I-680. (Significant)

As shown in **Table 3.3-13**, congestion at freeway ramps would occur as a result of implementation of the proposed Urban Area General Plan.

- At the Willow Pass Road northbound off-ramp from I-680, the proposed Urban Area General Plan would cause a significant impact during the p.m. peak hour by increasing the v/c ratio by 0.03 where the ramp junction would otherwise operate at LOS F without the proposed Urban Area General Plan.
- At the Clayton Road on-ramp to southbound SR-242, the ramp junction would operate at LOS D without the proposed Urban Area General Plan during the a.m. peak hour and the proposed Urban Area General Plan would increase the v/c by more than 0.03 and result in LOS F conditions.

Proposed General Plan Policies that Reduce the Impact

The general plan policies cited above for freeway segments (Impact 3.3-1) would also apply to freeway ramp operations.

Mitigation Measures

No feasible mitigation measures have been identified that would reduce the impacts at freeway ramps to a level that is less than significant for the same reasons noted under Impact 3.3-1. The low level of service at the SR-242 junctions would largely be caused by congestion on the freeway mainline. No feasible mitigation measures have been identified that would reduce freeway mainline congestion. Increasing freeway capacity by adding lanes would not be feasible because of the high cost, the negative impacts to air quality, and other factors. Finally, adding lanes is inconsistent with the policies of the responsible regional agencies and with MTC's regional transportation plans.

Impact

3.3-3 Implementation of the proposed Urban Area General Plan would contribute to substandard roadway segment operations during the peak hours along Clayton Road, Galindo Street, Monument Boulevard, and Willow Pass Road. (*Less than Significant with Mitigation*)

As shown in **Table 3.3-14**, congestion along roadway segments would largely be attributed to regional growth in Contra Costa County and adjacent counties. Nevertheless, the proposed Urban Area General Plan would cause significant impacts at several roadway segments.

The proposed Urban Area General Plan would increase the v/c ratio by more than 0.03 on the following roadway segments where the segments would operate at LOS F without the proposed Urban Area General Plan:

- Clayton Road east of Galindo Street
- Galindo Street between Cowell Road and Clayton Road
- Willow Pass Road between Diamond Boulevard and SR-242

In addition, the proposed Urban Area General Plan would cause traffic operations to drop from LOS E to LOS F on Monument Boulevard west of Oak Grove Road.

Proposed General Plan Policies that Reduce the Impact

The proposed General Plan policies cited above for freeway segments (Impact 3.3-1) would also apply to roadway segment operations. The following proposed policies would also reduce potential roadway segment impacts:

Policy GM-1.3.4: Include capital projects by the City necessary to maintain and improve traffic operations in the five-year Capital Improvement Program/Transportation Improvement Program (CIP/TIP). Funding sources for such projects as well as intended project phasing will be generally identified in the CIP.

Policy T-1.1.1: Maintain streets at optimal levels to provide safe and efficient travel.

- Policy T-1.1.8: Designate specific truck routes to provide for movement of goods throughout the City.
- Policy T-1.2.1: Schedule public transportation improvement projects in the Capital Improvement Program and Transportation Improvement Program.
- Policy T-1.2.2: Continue Off-Site Street Improvement Programs (OSIP) to fund transportation improvements and traffic control system upgrades.

Mitigation Measures

No feasible mitigation measures based on physical improvements to roadways have been identified that would reduce roadway segment impacts to a level that is less than significant, but two other mitigation measures could reduce impacts to a less than significant level (see below). Roadway widening would mitigate the impacts of the proposed Urban Area General Plan, but widening at the impacted roadway segments would require acquisition of property and the displacement of businesses and residents. In addition, wider roads at these urban locations would encourage the use of automobile travel and would discourage people from walking. Widening roadways would conflict with many of the policies in the proposed General Plan, such as LU-4.2.3, T-1.5.1, and T-1.5.3.

3.3 (a) Establish a Transportation Performance Monitoring (TPM) program to work in concert with the City's Transportation Demand Management Program by establishing a vehicle trip end allocation program for new development in the Urban Area, with a maximum number of p.m. peak hour vehicle trips to be allowed by traffic analysis zone (TAZ). No development would be allowed to generate traffic that directly or cumulatively would exceed this number with certain exceptions to be defined in the implementing regulations. These trip end limits then will maintain levels of service as established in the Growth Management Element, with exceptions to be granted only for designated Infill Opportunity Zones, consistent with state law and CCTA's Congestion Management Program, and for development for which the City Council makes a Statement of Overriding Considerations. The City will maintain a "trip ledger" showing all site trips that have been approved for each TAZ, with allocations made on the basis of receipt of a Certificate of Reservation of Site Trips or a building permit application. The City Council will periodically review the trip generation rates and allowable adjustments and exceptions established for the TPM program and the trip allocations by TAZ and allow for recomputation of the maximum number of site trips allowed based on approved changes in trip generation rates or other approved adjustment factors. Details on how trip generation rates are established, how site trips are calculated, how the trip ledger is maintained, how exceptions are granted and what happens when unallocated site trips are unavailable will be included in the ordinance establishing the TPM.

3.3 (b) Establish and fund a significant expansion of local bus transit service within the Urban Area to serve neighborhoods and employment centers as in-fill development occurs, with frequent, safe and inexpensive rides, convenient access, and service network linking BART, major employment centers and residential neighborhoods to Downtown, with the objective

of achieving a minimum 30 percent⁷ reduction in peak hour SOV trips, which may be achieved by a combination of improved local transit, bikeways, and carpooling and other alternate modes. Funding would come from (1) the City's Policy and Procedure 144, Traffic Impact Analysis and Mitigation Requirements, which is modeled on CCTA's development mitigation program and is consistent with GM Policy 1.3.10 and 1.4.1 and (2) a Community Facilities District, tax-increment financing or other form of assessment financing, linkage fees, or impacts fees levied on CNWS development to be established as part of base reuse planning, as described in Volume III of the General Plan.

Impact

3.3-4 Implementation of the proposed Urban Area General Plan would contribute to substandard intersection operations during the peak hours at several locations. (*Less than Significant with Mitigation*)

As shown in **Table 3.3-15**, congestion at intersections would largely be attributed to regional growth in Contra Costa County and adjacent counties. Nevertheless, the proposed Urban Area General Plan would cause significant impacts at the following intersections:

- Commerce Avenue/Concord Avenue
- Farm Bureau Road/Willow Pass Road
- Monument Boulevard/Oak Grove Road
- Oak Grove Road/Treat Boulevard
- Bailey Road/Concord Boulevard

The proposed Urban Area General Plan would result in improved traffic operations at the following locations and time periods:

- Galindo Street/Willow Pass Road during the a.m. peak hour
- Market St / Clayton Rd during the a.m. peak hour
- Cowell Road / Treat Boulevard during the a.m. peak hour
- Clayton Rd / Treat Blvd during the a.m. peak hour
- Cowell Rd / Ygnacio Valley Rd during the a.m. peak hour
- Kirker Pass Road / Concord Boulevard during the a.m. peak hour

Proposed General Plan Policies that Reduce the Impact

The following proposed policies would reduce potential impacts:

Policy T-1.1.1: Maintain streets at optimal levels to provide safe and efficient travel.

Policy T-1.1.3: Maintain and upgrade the transportation systems to provide smooth flow of traffic, minimize vehicle emissions, and save energy.

⁷ With the precise target to be established based on subsequent traffic modeling during development of the base reuse plan.

Policy T-1.1.4: Provide that the level of service at intersections may be exceeded for new development within one-half mile of a BART station, or within one-quarter mile of a transit corridor, where appropriate.

Policy T-1.1.10: Coordinate traffic signal systems with abutting jurisdictions.

Mitigation Measures

No feasible physical improvements have been identified that would reduce intersection impacts to a level that is less than significant, but two other mitigation measures could reduce impacts to a level that is less than significant. (See 3.3(a) and 3.3(b)). Roadway widening at intersections would be required to mitigate the impacts of the proposed Urban Area General Plan. Widening at the impacted intersections would require acquisition of property and the displacement of businesses and/or residents. In addition, wider intersections would encourage the use of automobile travel and would discourage people from walking. Widening intersections would conflict with many of the policies in the proposed Urban Area General Plan.

Impact

3.3-5 Implementation of the proposed Urban Area General Plan would result in freeway speeds and delays on several segments that are below the Action Plan TSOs. (Significant)

The proposed Urban Area General Plan would potentially affect speeds on the freeways by contributing traffic on congested corridors. As shown in **Table 3.3-16**, freeway congestion would largely be attributed to regional growth in Contra Costa County and adjacent counties. In 2030, the congested speeds on the following freeway segments would be below the 30 mph set by the TSO with or without the proposed Urban Area General Plan:

- I-680 south of Monument Boulevard
- I-680 north of Monument Boulevard
- I-680 north of SR-242
- I-680 north of Willow Pass Road
- I-680 north of Concord Avenue
- I-680 north of SR-4
- SR-242 north of I-680
- SR-4 east of I-680
- SR-4 east of SR-242
- SR-4 east of Port Chicago Highway

At these locations, the delay index would exceed the TSO of 2.0. When compared to the No Project, the proposed Urban Area General Plan would not cause freeway speeds on additional freeway segments to drop below 30 mph. At SR-4 east of Industrial Way in the westbound

direction during the AM peak hour, the speeds would drop to 31 mph and the delay index increases to 2.26, which is above the TSO.

At most of these locations the change in congested speeds with the proposed Urban Area General Plan is minimal (less than 3 mph) and imperceptible when compared to the No Project.

Mitigation Measures

The Action Plan includes planned improvements to address this regional impact on freeways by applying a system approach to future congestion. No feasible mitigation measures have been identified that would reduce freeway impacts to a level that is less than significant. Increasing freeway capacity by adding lanes would not be feasible because of the high cost, the negative impacts on air quality, and other factors. Adding lanes is inconsistent with the policies of the responsible regional agencies. As noted previously, MTC's regional transportation plan makes no commitments to widen freeway facilities in the county. The emphasis is on maintaining an enhancing the exiting and supporting multimodal solutions, and no funding for funding for freeway widening over the planning horizon for this General Plan Update.

Coordination with the Contra Costa Transportation Authority (CCTA) and the Department of Transportation shall be required for any proposed future improvements to the State Highway system, including ramps, to determine necessary financing, scheduling, implementation responsibilities, and monitoring.

All proposed transportation improvements would be required to obtain an encroachment permit from the Department of Transportation for any work or traffic control within the State Right of Way.

Impact

3.3-6 Implementation of the proposed Urban Area General Plan would result in increased transit ridership and increased transit service. (Beneficial)

Implementation of the General Plan would increase ridership on BART and County Connection bus lines.

Proposed General Plan Policies that Promote Transit Ridership

Proposed General Plan policies that increase transit ridership and service to employment, schools, shopping, and recreation are as follows:

- Policy E-3.1.5: Promote transit-oriented development and activities that take advantage of nearby transit services, such as BART, bus services, and Buchanan Field Airport.
- Policy LU-4.2.9: Designate land around the Downtown BART Station as identified in the Downtown Strategic Plan as an "infill opportunity zone" and offer incentives for regional office uses, residential, and mixed uses such as reduced parking,

- to support use of mass-transit, especially within walking distance of the Downtown BART station.
- Policy T-1.1.2 Continue to promote a wide variety of transportation alternatives and modes to serve all residents and businesses to enhance the quality of life.
- Policy T-1.3.2 Allow flexible parking standards for developments within one-half mile of a BART station and one-quarter mile of a public parking facility, where appropriate.
- Policy T-1.3.4: Coordinate with Caltrans and transit providers to identify and implement Park and Ride sites.
- Policy T-1.4.1: Coordinate with public transportation agencies to facilitate safe, efficient, and convenient access to transit.
- Policy T-1.4.2: Work with public transportation agencies to ensure adequate transit service.
- Policy T-1.6.4: Encourage new development to provide bicycle access to parks, schools, and transit stops in the design of new residential neighborhoods.
- Policy T-1.8.2: Protect the existing railroad rights-of-way wherever feasible for future local and region-wide rail service and transit connections.
- Policy LU-11.5.1: Designate the North Concord BART station area as an “infill opportunity zone” to qualify for exemptions from adopted transportation level of service standards in this area.

Mitigation Measures

No mitigation measures would be required. Increased transit ridership would be a beneficial effect of the proposed Urban Area General Plan.

Impact

3.3-7 Implementation of the proposed Urban Area General Plan would increase bicycle use and provide new bicycle facilities. (Beneficial)

Implementation of the General Plan would support implementation of the Concord Trails Master Plan.

The Concord Trails Master Plan designates the location of existing and proposed trails and bicycle routes as well as existing and proposed grade separated over/under-crossings and trail staging areas. The intent of the Transportation/Circulation Element is to provide linkages to the Countywide Plan at the Concord City limits and accommodate the Countywide Plan within the City limits to the extent feasible.

Proposed General Plan Policies that Promote Bicycle Travel

Proposed General Plan policies that support bicycle use are as follows:

- Policy T-1.1.2 Continue to promote a wide variety of transportation alternatives and modes to serve all residents and businesses to enhance the quality of life.
- Policy T-1.1.14 Continue to implement the City's Traffic Calming Program to enhance safety and livability on residential streets.
- Policy T-1.6.1: Implement strategies and actions for enhanced bicycle circulation throughout the City.
- Policy T-1.6.2: Require provision of bicycle facilities in new developments, where appropriate.
- Policy T-1.6.3: Encourage transit operators to provide adequate bicycle accommodations.
- Policy T-1.6.4: Encourage new development to provide bicycle access to parks, schools, and transit stops in the design of new residential neighborhoods.

Mitigation Measures

No mitigation measures would be required. Increased bicycle use would be a beneficial effect of the proposed Urban Area General Plan.

Impact

3.3-8 Implementation of the proposed Urban Area General Plan would increase pedestrian activity and provide new pedestrian facilities. (Beneficial)

Implementation of the proposed Urban Area General Plan would increase the demand for pedestrian facilities because of increased land use development. Improvements to existing facilities proposed by the General Plan and new development that is accompanied by attractive, well-connected facilities will be conducive to increased walking and biking. A quality environment for pedestrian travel is essential for the mobility of children and many seniors and one that is supportive of walking in general is vital to healthy lifestyles. Most transit trips and many passenger car trips are linked to walking trips on one end or the other so adequate pedestrian facilities are in the interest of the whole community. High quality pedestrian environments include attractive and well-maintained facilities that are well connected together, as well as to other modes of transportation and to high use destinations. The proposed Urban Area General Plan supports creation of these facilities in Downtown and around high activity centers. The Plan also calls new development to include pedestrian facilities in the design of new residential neighborhoods.

Proposed General Plan Policies that Promote Pedestrian Activity

General Plan policies that support pedestrian circulation are as follows:

- Policy LU-11.1.6: Ensure an interconnected street and pedestrian circulation network serving the needs of pedestrians, bicyclists, and other non-motorized forms of transportation, and that functionally and physically integrates the various land use activities within the City as well as provides access to the Bay Area's regional trails and bicycle systems.
- Policy LU-4.2.3: Promote pedestrian-oriented urban design.
- Policy LU-4.2.4: Encourage new and redevelopment projects to include amenities for public benefit, such as affordable housing, pedestrian-oriented facilities, and historic preservation.
- Policy T-1.1.2 Continue to promote a wide variety of transportation alternatives and modes to serve all residents and businesses to enhance the quality of life.
- Policy T-1.1.14 Continue to implement the City's Traffic Calming Program to enhance safety and livability on residential streets.
- Policy T-1.5.1: Plan linkages to minimize walking distance and enhance the pedestrian experience.
- Policy T-1.5.2: Use innovative and effective walkway features to enhance the pedestrian environment.
- Policy T-1.5.3: Facilitate pedestrian circulation near high activity centers.
- Policy T-1.5.4: Encourage new development to provide pedestrian connections to adjacent open spaces, and trails.

Mitigation Measures

No mitigation measures would be required. Increased pedestrian activity would be a beneficial effect of the proposed Urban Area General Plan.

Impact

3.3-9 Implementation of the proposed Urban Area General Plan would promote the development of port and rail service. (Beneficial)

The Land Use Diagram reserves land for port-related industrial uses should the tidal portion of the CNWS be released for civilian use. The Plan also calls for the City to work with the Bay Conservation and Development Commission and other agencies to ensure continued deep water access to the CNWS and protection of rail right-of-way for access to the CNWS.

Proposed General Plan Policies that Promote the Development of Port and Rail Service

Proposed General Plan policies that support development of port and rail service are as follows:

- Policy T-1.8.1: Advocate the maintenance of deep water channels at a depth that keeps ocean vessel use viable from San Francisco to Concord.
- Policy T-1.8.2: Protect the existing railroad rights-of-way wherever feasible for future local and region-wide rail service and transit connections.
- Policy T-1.8.3: Ensure adequate roadway transportation linkages from the port and rail facilities to the regional transportation network.
- Policy T-1.8.4: Plan for only job-producing uses in the port area, and do not allow any residential development.

Mitigation Measures

No mitigation measures would be required. Increased development of port and rail service would be a beneficial effect of the proposed Urban Area General Plan.

This page is intentionally left blank.

3.4 Biological Resources

This section presents the environmental setting and impact analysis for biological resources in the study area, which includes the proposed Urban Area General Plan Planning Area (the “Planning Area”) and the proposed Urban Limit Line. Additional information is contained in the *Integrated Natural Resources Management Plan and Environmental Assessment* by the Naval Weapons Station Seal Beach, prepared in March 2002.

ENVIRONMENTAL SETTING

PHYSICAL SETTING

The City of Concord is located in the Bay Area-Delta Bioregion (as defined by the State’s Natural Communities Conservation Program). This Bioregion is comprised of a variety of natural communities, which range from Salt Marshes to Chaparral to Oak Woodlands. The high diversity of vegetation found in Contra Costa County is a result of topographic and micro-climate diversity and, combined with the rapid pace of development in the region, has resulted in a high degree of endangerment for local flora and fauna.

Habitats

Figure 3.4-1 shows the distribution of major vegetation and habitat within the study area. The primary upland habitat types (as classified by the Wildlife Habitat Relationships System and/or the California Natural Diversity Database) include Urban, Annual Grassland, and Chaparral, Foothill Pine-Blue and Oak Woodland (CDFG, 2002 and 2005; Holland, 1986). Wetland and aquatic habitats include Coastal Brackish Marsh, Riparian, Estuarine, Riverine, and other lacustrine and palustrine habitats including reservoirs and seasonal wetlands. The most prevalent habitat type is Urban, which covers the majority of the area within the city limits and is generally continuous to the west and southwest, adjoining Pleasant Hill and Walnut Creek respectively. To the southeast, urban habitat continues into Clayton.

The Planning Area is bordered to the north by, and includes a small part of, the estuarine habitat of Suisun Bay. Bordering the Bay in this area is the Avon-Port Chicago Marsh, a relatively large area of Coastal Brackish Marsh. This area extends up to 2 miles south toward the developed areas of Concord and is bordered to the west by Pacheco Creek and to the east by highly developed northern portions of the CNWS. Most of this marsh area is considered to be high quality habitat. More patchy brackish marsh habitat is also found beyond these boundaries, both east and west of the planning area along Suisun Bay. The northern extent of the Urban Limit Line (ULL) reaches the edge of the Bay, encompassing areas adjacent to Pacheco Creek and the CNWS but for the most part excluding areas of the Avon-Port Chicago Marsh.

Annual grassland habitat is found primarily in the eastern portion of the Planning Area, within and beyond the ULL.

Grassland habitat is also found in the southern extremity of the Planning Area and the area within the ULL. This area, which includes southern Lime Ridge Open Space, also contains Chaparral and Foothill Pine-Blue Oak Woodland habitat.

Valley oak woodland habitat occurs at several locations within the CNWS Inland Area, occupying approximately 60 acres (24 ha). Open woodlands of valley oaks occur within the southeast near Bailey Road. Valley oaks also are scattered across several low hills, both north and south of Bailey Road. In several steep canyons at the far eastern corner of the CNWS, there are dense woodlands of valley oaks and California buckeyes (*Aesculus californica*). On both the low hill sites and the steep canyon sites, understory vegetation is typically limited to grasses and forbs characteristic of surrounding grassland habitats. Scattered shrubs, such as coyote bush (*Baccharis pilularis*) and poison oak (*Toxicodendron diversilobum*) also may occur within this habitat.¹

Laced within the habitats discussed above are a number of creeks, principally Walnut, Galindo, Mt. Diablo, and Pine creeks, and their tributaries. Although much of the lengths of these creeks have been disturbed, the waterways provide important aquatic and riparian habitat, providing resources and movement corridors to flora and fauna.

Other habitats include freshwater marsh, riparian woodland and riparian scrub, and valley oak woodland.

Special Status Species

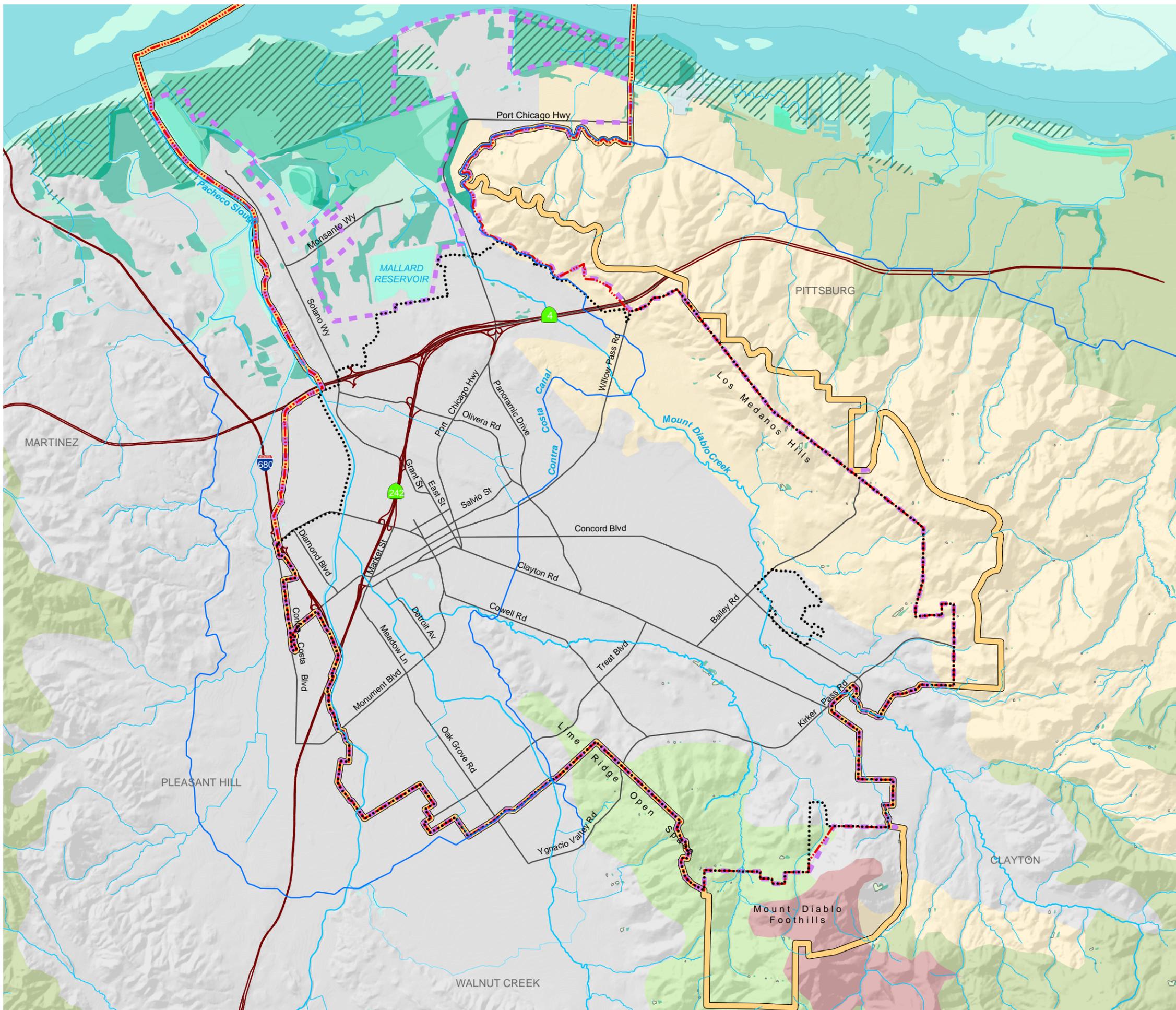
The non-urban habitat areas described at the south, east and north portions of the Planning Area and the area bounded by the proposed ULL are known or potential habitat for a number of special status animal and plant species. The recorded locations of special status species within the study area are shown in **Figure 3.4-2**.

In the southern portion of the Planning Area and the area bounded by the proposed ULL, Lime Ridge supports known populations of Mt. Diablo manzanita (*Arctostaphylos auriculata*; endemic to the Mt. Diablo area), Mt. Diablo fairy lantern (*Calochortus pulchellus*), Diablo helianthella (*Helianthella castanea*), and Hall's bush mallow (*Malacothamnus hallii*). This ridge provides important habitat for these special status plant species and is considered a Significant Ecological Area by Contra Costa County.

Chaparral habitat occurring on Lime Ridge and further east, provides potential habitat for Alameda whipsnake (*Masticophis lateralis euryxanthus*). Mt. Diablo buckwheat (*Eriogonum truncatum*) has been historically recorded just south of the ULL in this area. Despite being considered potentially extinct, a number of recorded locations, including this one, are still considered potential habitat for this species. Southeast of the Planning Area lies Mitchell Creek, beyond which is the ecological area associated with Mt. Diablo State Park. This area contains a

¹ From the *Integrated Natural Resources Management Plan and Environmental Assessment* by the Naval Weapons Station Seal Beach, prepared in March 2002.

Figure 3.4-1
Vegetation and Habitat



Uplands

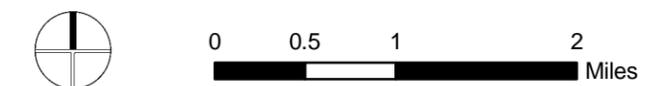
-  Annual Grassland
-  Annual Grassland (80%-90%)
Chamise Chaparral (10%-20%)
-  Buck Brush Chaparral (70%-80%)
Foothill Pine-Oak Woodland (20%-30%)
-  Urban

Wetlands

-  Coastal Brackish Marsh
-  Estuarine - Subtidal
-  Estuarine - Intertidal
-  Lacustrine
-  Palustrine

-  City Limits
-  Sphere of Influence
-  Proposed Urban Limit Line (ULL)
-  Planning Area Boundary

Source:
 Coastal Brackish Marsh habitat designated by the California Natural Diversity Database (CNDDDB): 2006. All other wetlands delineated by the National Wetland Inventory (NWI): 2002. Upland vegetation and habitat from California GAP Analysis: 1998. Creeks and waterways from Contra Costa County: 2005.



concentration of special status species, with recorded populations of Mount Diablo fairy lantern, Mt. Diablo Brewer's western flax (*Hesperolinon breweri*), and Diablo helianthella. The southernmost portion of the Planning Area, for the most part south of the ULL, may also provide potential habitat for these species. Mt. Diablo is considered a Significant Ecological Area by Contra Costa County, and this Significant Ecological Area extends slightly into the Planning Area (but not into the area bounded by the ULL).

The grassland habitat in the eastern portion of the Planning Area, some of which is in the area bounded by the ULL, provides potential habitat for California tiger salamander, which have been observed associated with intermittent streams and seasonal wetland ponds in this area. Given that this species ranges up to slightly over one mile upland from these sources, much of this grassland area is considered habitat. The salamanders use four primary breeding ponds in the Inland Area: two cattle ponds in the upper hills above the spring and two ponds in the lower area, one along T Street and one across Bailey Road in the 5AT Magazine Area. Ivette Loreda, a USFWS biologist with the San Francisco Bay National Wildlife Refuge Complex wrote her masters thesis, *Reproductive Ecology, Microhabitat Use, and Migration Behavior of the California Tiger Salamander*, 1990 based on two studies at the CNWS. This document is available at the Detachment Concord ESO. Also, in 1993, Morrison (DoN 1999d) noted four California tiger salamander breeding areas.²

Intermittent streams and ponds within this area also provide potential habitat for the California red-legged frog (*Rana aurora draytonii*). Seasonal wetland habitat for these species is relatively abundant; a number of tiger salamander populations also inhabit these seasonal ponds. Red-legged frog has been recorded in the northern part of the Planning Area, just east of the ULL. Habitat associations for this federally listed threatened species include lowlands and foothills, in or near permanent sources of deep water with dense shrubby or emergent riparian vegetation (CNDDDB 2000). The California red-legged frog is found at Cistern Pond and other freshwater ponds within the Inland Area. It was introduced in a cooperative effort between the Navy and the USFWS in the early 1980s.³

The northwestern pond turtle (*Clemmys marmorata marmorata*) is a federally designated species of special concern and a California special concern species associated with permanent or nearly permanent water in a wide variety of habitats. It requires rocks, logs, or exposed soil for basking sites and may nest up to 0.3-mile (0.5-km) away from water (CNDDDB 2000).⁴

The burrowing owl (*Athene cunicularia*) has also been recorded in CNWS grassland areas, just east of the ULL but within the Planning Area. This species has the potential to occur in all

² Specific tiger salamander habitat locations from the *Integrated Natural Resources Management Plan and Environmental Assessment*.

³ Habitat locations and Navy information from the *Integrated Natural Resources Management Plan and Environmental Assessment*.

⁴ All northwestern pond turtle info from the *Integrated Natural Resources Management Plan and Environmental Assessment*.

grassland habitats in the Planning Area and within the ULL. A California special concern species, the burrowing owl is a yearlong resident of open, dry grassland, and desert habitats. They prefer low-growing vegetation and presence of existing ground-squirrel burrows. These two characteristics occur in several area within the inland portion of the CNWS (DoN 1999d). In 1993, Morrison (DoN 1999d) noted nine burrowing owl sites at six locations.⁵

The eastern border of the Planning Area, beyond the ULL, parallels and slightly overlaps the edge of known San Joaquin Kit Fox (*Vulpes macrotis mutica*) habitat (CNDDDB 2006).

Roundleaved filaree (*Erodium macrophyllum*) has been historically recorded from the grasslands at the southern end of the CNWS. Although most Contra Costa County records for this species are historic, fieldwork is lacking and its status in the county is uncertain. Grassland and woodland habitats in the Planning Area and within the ULL provide potential habitat for this species.

The Avon-Port Chicago Marsh provides habitat for a host of special status wildlife and plant species including California black rail (*Laterallus jamaicensis coturniculus*), California clapper rail (*Rallus longirostris obsoletus*), Salt-marsh harvest mouse (*Reithrodontomys raviventris*), Suisun song sparrow (*Melospiza melodia maxillaries*), Delta tule pea (*Lathyrus jepsonii var. jepsonii*), Mason's lilaeopsis (*Lilaeopsis masonii*), and Soft bird's beak (*Cordylanthus mollis ssp. mollis*). All of these species have been recorded in this area and are presumed to be extant there. The marsh is considered to be a Significant Natural Area by the California Department of Fish and Game (CDFG) and Contra Costa County considers it a Significant Ecological Area. The CDFG has also mapped a considerable portion of this marsh as Coastal Brackish Marsh, a sensitive community. All brackish marsh habitats within the Planning Area and ULL provide potential habitat for these species.

Western pond turtle (*Clemmys marmorata marmorata*) has been recorded from ponds associated with Galindo Creek in Newhall Park (ESA, 2002). This species has the potential to occur in suitable habitat in creeks and drainages throughout the Planning Area and area bounded by the ULL, although suitable habitat is most likely absent from most areas.

A few historical records of special status species exist within the urbanized area of Concord, particularly California tiger salamander (*Ambystoma californiense*), Contra Costa goldfields (*Lasthenia conjugens*), Caper-fruited tropidocarpum (*Tropidocarpum capparideum*), and Congdon's tarplant (*Centromadia parryi ssp. congdonii*). These records are from central Concord and along the urban Concord-Pleasant Hill border to the west, the Concord-Walnut Creek border to the southwest, and the Concord-Clayton border to the southeast. These populations are presumed to have been extirpated due to urban growth. All, except for the Tiger salamander, probably no longer occur in the area.

⁵ *Integrated Natural Resources Management Plan and Environmental Assessment.*

Other special-status or otherwise protected species, particularly migratory birds and birds of prey, occur in, or have potential to occur in, the Planning Area and utilize natural resources such as grassland and wooded habitats for foraging, roosting, nesting and other life history requirements. This includes bald eagles (*Haliaeetus leucocephalus*), which are known to pass through the CNWS between nesting and wintering grounds, although there is no suitable habitat for bald eagle nesting, and golden eagles (*Aquila chrysaetos*), which nest periodically at the CNWS along the ridge tops in the inland area.⁶

Another bird of significance is the loggerhead shrike (*Lanius ludovicianus*). A federally designated species of special concern and a California special concern species, the loggerhead shrike is a common resident and winter visitor in lowlands and foothills throughout California. Habitat needs include open areas with scattered shrubs, trees, posts, fences, utility lines, or other perches. Sometimes the species uses edges of denser habitats (Zeiner et al., 1990b). It has been confirmed observed in the grasslands at the CNWS during a 1999 survey (DoN 1999d).⁷

A complete listing of sensitive species occurring in the region encompassing the study area is provided in Appendix D.

Wildlife Corridors

While the habitats found in the City supply resources for local plant and animal populations, on a larger scale open spaces in the area serve the crucial function of providing movement corridors for regional wildlife. Lime Ridge and the annual grasslands on the eastern portion of the Planning Area, including the CNWS, represent the northern extent of continuous natural habitat that extends south through Mt. Diablo, the Black Hills, Briones Valley and beyond. Planning Area open spaces are part of larger systems of regional wildlife movement corridors, as exhibited by the species that are observed in them. Also, creeks and waterways within the Planning Area and area bounded by the ULL may provide rainy season migration routes for California tiger salamanders, California red-legged frogs, and western pond turtle in addition to more common amphibians. Areas of riparian vegetation associated with these waterways may provide cover for migrating or non-migrating birds and mammals.

REGULATORY SETTING

Regulation of Activities in Wetlands

The regulations and policies of various Federal agencies such as the U.S. Army Corps of Engineers (the Corps), the U.S. Environmental Protection Agency (US EPA), U.S. Fish and Wildlife Service (USFWS), mandate that the filling of wetlands be avoided unless it can be demonstrated that no practicable alternatives exist. The Corps has primary Federal responsibility for administering regulations and issuing permits to fill Federal waters and wetlands within the project site. In this regard, the Corps acts under two statutory authorities, the Rivers and Harbors Act (Sections 9

⁶ Eagle information from the *Integrated Natural Resources Management Plan and Environmental Assessment*.

⁷ All loggerhead shrike information from the *Integrated Natural Resources Management Plan and Environmental Assessment*.

and 10), which governs specified activities in “navigable waters,” and the Clean Water Act (Section 404), which governs specified activities in “waters of the United States,” including wetlands and special aquatic sites. US EPA, USFWS and several other agencies provide comment on Corps permit applications. US EPA provides the primary criteria for evaluating the biological impacts of Corps permit actions in wetlands.

The State's authority in regulating activities in wetlands and waters resides primarily with the California Department of Fish and Game (CDFG) and the State Water Resources Control Board (SWRCB). The CDFG provides comment on Corps permit actions under the Fish and Wildlife Coordination Act. CDFG is also authorized under State Fish and Game Code Sections 1600-1607 to develop mitigation measures and enter into a Stream Alteration Agreement (SAA) with applicants that propose a project that would obstruct the flow or alter the bed, channel, or bank of a river or stream in which there is a fish or wildlife resource, including intermittent and ephemeral streams. The SWRCB, acting through the nine Regional Water Quality Control Boards (RWQCB), must certify that a Corps permit action meets State water quality objectives (Section 401, Clean Water Act).

The Bay Conservation and Development Commission (BCDC) is authorized by the *McAteer Petris Act* to analyze, plan and regulate San Francisco Bay and its shoreline. It implements the San Francisco Bay Plan, and regulates filling and dredging in the Bay, its sloughs and marshes, and certain creek and tributaries. BCDC jurisdiction includes the Bay and a shoreline band that extends inland 100 feet from the high tide line. BCDC permits are required for all work within either the Bay or the shoreline band.

Federal Endangered Species Act

Under the Federal Endangered Species Act (FESA), the U.S. Secretary of the Interior and the U.S. Secretary of Commerce jointly have the authority to list a species as threatened or endangered (16 USC 1533(c)). Pursuant to the requirements of FESA, an agency reviewing a proposed project within its jurisdiction must determine whether any designated or proposed federally listed threatened or endangered species, or designated or proposed critical habitat for such species may be present in the project area. The USFWS also publishes a list of candidate species for listing and “Species of Concern.” Species on this list receive special attention from Federal agencies during environmental review, although they are not protected otherwise under the FESA. The candidate species are taxa for which the USFWS has sufficient biological information to support a proposal to list as Endangered or Threatened.

California Endangered Species Act

Under the California Endangered Species Act (CESA), the California Department of Fish and Game (CDFG) has the responsibility for maintaining a list of threatened species and endangered species (California Fish and Game Code 2070). The CDFG also maintains a list of “candidate species,” which are species that the CDFG has formally noticed as being under review for addition to either the list of endangered species or the list of threatened species. The CDFG also maintains lists of “Species of Special Concern” which are roughly analogous to the Federal Species of Concern described above. Pursuant to the requirements of CESA, an agency reviewing a proposed project within its jurisdiction must determine whether any State-listed endangered or threatened

species may be present in the project. In addition, the CDFG encourages informal consultation on any proposed project that may impact a candidate species.

CEQA Guidelines Section 15380

Although threatened and endangered species are protected by specific Federal and State statutes, CEQA Guidelines section 15380(b) provides that a species not listed on the Federal or State list of protected species may be considered rare or endangered if the species can be shown to meet certain specified criteria. These criteria have been modeled after the definition in FESA and the section of the California Fish and Game Code dealing with rare or endangered plants or animals. This section was included in the Guidelines primarily to deal with situations in which a public agency is reviewing a project that may have a significant effect on, for example, a “candidate species” that has not yet been listed by either the USFWS or CDFG. Thus, CEQA provides an agency with the ability to protect a species from a project’s potential impacts until the respective government agencies have an opportunity to designate the species as protected, if warranted.

Other Statutes, Codes, and Policies Affording Limited Species Protection

The Federal Migratory Bird Treaty Act (16 U.S.C., Sec. 703, Supp. I, 1989) prohibits killing, possessing, or trading in migratory birds except in accordance with regulations prescribed by the U.S. Secretary of the Interior. This act encompasses whole birds, parts of birds, and bird nests and eggs. Birds of Prey are protected in California under the State Fish and Game Code (Section 3503.5, 1992). Section 3503.5 State that it is “unlawful to take, possess, or destroy any birds in the order Falconiformes or Strigiformes (birds of prey) or to take, possess, or destroy the nest or eggs of any such bird except as otherwise provided by this code or any regulation adopted pursuant thereto.” Disturbance that causes nest abandonment and/or loss of reproductive effort is considered a “taking” by the CDFG.

The Federal Bald Eagle Protection Act prohibits persons within the United States (or places subject to U.S. jurisdiction) from “possessing, selling, purchasing, offering to sell, transporting, exporting or importing any bald eagle or any golden eagle, alive or dead, or any part, nest, or egg thereof.”

The legal framework and authority for the State’s program to conserve plants are woven from various legislative sources, including CESA, the California Native Plant Protection Act (Fish and Game Code Section 1900 – 1913), the CEQA Guidelines, and the Natural Communities Conservation Planning Act.

Vascular plants listed as rare or endangered by the California Native Plant Society (CNPS; Skinner and Pavlik, 1995), but which may have no designated status or protection under Federal or State endangered species legislation, are defined as follows:

- *List 1A*: Plants Presumed Extinct.
- *List 1B*: Plants Rare, Threatened, or Endangered in California and elsewhere.
- *List 2*: Plants Rare, Threatened, or Endangered in California, but more numerous elsewhere.
- *List 3*: Plants About Which More Information is Needed – A Review List.

- *List 4: Plants of Limited Distribution – A Watch List.*

In general, plants appearing on CNPS List 1A, 1B, or 2 are considered to meet the criteria of Section 15380 of the CEQA Guidelines, which define endangered, rare and threatened species. Additionally, plants listed on CNPS List 1A, 1B or List 2 meet the definition of Section 1901, Chapter 10 (Native Plant Protection Act) and Sections 2062 and 2067 (California Endangered Species Act) of the California Department of Fish and Game Code.

Local Plans and Policies– Contra County General Plan 1995-2010

The Conservation Element of the Contra Costa County General Plan (CCC, 1996) contains a number of goals and policies applicable to unincorporated portions of the Planning Area. Overall goals include the conservation of natural resources through “control of the direction, extent and timing of urban growth.” Policies put forth in the County General Plan aim to protect wetlands, habitat and special status species in addition to “encouraging preservation and restoration of natural characteristics of the San Francisco Bay/Delta estuary and adjacent lands.” Towards these goals, the County General Plan includes the identification and inventory of Significant Ecological Resource Areas that extend to some extent into the Planning Area, including: 1) Shoreline Between Martinez Waterfront and CNWS, 2) Lime Ridge, and 3) Mt. Diablo.

Relevant Regulations – City of Concord Municipal Code

The Concord Municipal Code (CMC) includes a tree protection ordinance for heritage trees, as defined and put forth in Chapter 114, Article II. Trees and Shrubs, Division 2. Heritage trees are defined by size, relationship to historical significance, or by designation by the Planning Commission as a heritage tree. The tree protection ordinance specifies permit requirements, including protective measures for construction work in the vicinity of heritage trees, removal of heritage trees, and replacement requirements.

IMPACT ANALYSIS

SIGNIFICANCE CRITERIA

A significant impact would occur with full implementation of the proposed Urban Area General Plan if it would result in:

- A substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations, or by the CDFG or USFWS (Revised Appendix G Guidelines; CEQA Guidelines 15380);
- A substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations, or by the CDFG or USFWS (Revised Appendix G Guidelines; CEQA Guidelines Section 15206);
- 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 (Revised Appendix G Guidelines);

- The substantial interference of the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or the impediment of use of native wildlife nursery sites (Revised Appendix G Guidelines);
- Causing a fish or wildlife population to drop below self-sustaining levels, a substantial reduction in the habitat of a fish or wildlife species, the threatened elimination of a plant or animal community, or the reduction in number or restriction of range of an endangered, rare or threatened species (CEQA Guidelines [Section 15065]);
- Fundamental conflicts with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance (Revised Appendix G Guidelines); or
- Fundamental conflicts with the provisions of an adopted habitat conservation plan, natural community conservation plan, or other approved local, regional, or State habitat conservation plan (Revised Appendix G Guidelines).

METHODOLOGY & ASSUMPTIONS

The analysis of biological resources is based on review of available data sources for the General Plan area and the surrounding region including the California Natural Diversity Database, the CNPS Electronic Inventory, USFWS County and USGS Quadrangle lists, the National Wetlands Inventory, the California GAP Project, the proposed Urban Area General Plan, and applicable regulations and guidelines. The proposed Urban Area General Plan would facilitate development and growth in Concord. The analysis also includes the proposed Urban Limit Line, which would restrict development to the area within the Boundary. Consideration is given to potential effects of future development within or adjacent to areas supporting sensitive species and habitat, wetlands, or wildlife movement corridors.

SUMMARY OF IMPACTS

Development proposed under the proposed Urban Area General Plan would, for the most part, be situated on infill sites or land contiguous to existing development. Proposed development in the vicinity of creeks and other hydric features also pose a risk of potential significant impacts. Potential impacts on these biological resources are addressed below, along with proposed Urban Area General Plan policies and mitigation measures that would reduce these potential impacts to less than significant levels.

Development proposed in the General Plan would not be anticipated to interfere with any resident or migratory fish or wildlife movement. Proposed Urban Area General Plan Policy POS-3.4.1 ensures conservation of wildlife corridors, including seasonal migration routes.

The proposed Urban Area General Plan would not conflict with the provisions of an adopted habitat conservation plan or other approved conservation plan. The Planning Area is outside of the area covered by the in-progress Eastern Contra Costa County Habitat Conservation Plan.

IMPACTS AND MITIGATION MEASURES

Impact

3.4-1 New development under the proposed Urban Area General Plan could result in substantial adverse effect, either directly or through habitat modifications, on special status species. (Less than Significant)

Impacts on special-status species in the Planning Area and within the proposed ULL could occur through conversion of habitat to other land uses, or through direct mortality or harm resulting during construction-related activities. Areas of particular concern include grassland habitat, including drainages, in the eastern portions of the study area.

Drainages within the central and southern portions of the CNWS support known and potential breeding habitat for California tiger salamander and California red-legged frog. Surrounding grassland, slightly over one mile from breeding areas, provide upland habitat for the salamander. Burrowing owl also potentially occurs in the grasslands of this area, or in ruderal or barren vacant lots with suitable burrowing owl habitat. Although the potential is low, a number of plant species historically found in the region may also occur in this grassland habitat, including roundleaved filaree, Contra Costa goldfields, caper-fruited tropidocarpum, and Congdon's tarplant. Project construction and development of these areas within the Planning Area and the ULL could potentially result in loss of habitat or mortality for these species.

Western pond turtles occur in ponds associated with Galindo Creek in Newhall Park. The species has potential to occur in other areas of Galindo Creek or other drainages in the Planning Area and area within the ULL. Project construction and development in or adjacent to drainages could potentially result in loss of habitat or mortality for this species.

Trees and shrubs throughout the Planning Area and within the area bounded by the ULL may provide potential nesting habitat for a number of protected migratory bird and raptor species. Project construction could potentially result in mortality or disruption of nesting of these species.

Chaparral, grassland, and woodland habitats in the southern portion of the Planning Area, some of which is partially within the area bounded by the ULL, including Lime Ridge and other undeveloped areas, provide habitat for numerous special status plant and animal species. Under the proposed Urban Area General Plan, these areas will remain as Open Space and Rural Conservation. These species and habitats are not anticipated to be affected by proposed plan implementation.

Proposed General Plan Policies that Reduce the Impact

The following proposed policies reduce Impact 3.4-1:

Policy POS-3.2.1: Preserve bay marshes, wetlands, and tidal areas adjacent to Suisun Bay and other wetlands and creeks in the Planning Area as open space.

Policy POS-3.4.1: Conserve wildlife habitat and wildlife corridors, including seasonal migration routes.

Policy POS-3.4.2: Protect rare, threatened, or endangered species and their habitats through the use of the environmental review process and in accordance with State and Federal law.

Project-level environmental review will assess the potential impact of proposed development on special-status species and sensitive natural communities and could require adequate mitigation measures and monitoring to ensure protection of sensitive biological resources.

Policy POS-3.4.5: Coordinate with appropriate regulatory and trustee agencies to enhance protection of special status species and sensitive natural communities.

Coordination with regulatory and trustee agencies will include, but is not limited to the California Department of Fish and Game, U.S. Fish and Wildlife Service, and the Regional Water Quality Control Board.

Policy POS-3.4.6: Avoid construction-related activities during breeding and nesting seasons for special status species.

Project-related activities within sensitive habitat of special status species will generally not be allowed during the breeding season or season of greatest effect on their survival. If project activities cannot avoid the breeding season or the season of greatest potential effect, the project applicant will have to arrange for surveys of any special status species within 500 feet of the project area and follow applicable trustee agency protocol for species protection.

Policy POS-3.4.7: Promote habitat restoration in areas of special status species.

The City will coordinate with appropriate agencies and the community to improve habitat restoration efforts, both on and off-site, throughout the Planning Area, and will include special status species habitat restoration requirements in the Zoning Ordinance.

Implementation of the policies listed above, particularly the measures necessary to comply with POS-3.4.2, would reduce potential impacts to special status species to less-than-significant levels.

Mitigation Measures

No mitigation measures are required.

Impact

3.4-2 New development under the proposed Urban Area General Plan could result in substantial and adverse impacts on riparian habitat. (*Less than Significant*)

Patches of riparian habitat associated with creeks, particularly along stretches of Galindo and Mt. Diablo Creeks, occur in the Planning Area and within the area bounded by the proposed ULL. Construction of new development could result in loss or degradation of this habitat. The policies

proposed below as a part of the proposed Urban Area General Plan would ensure that potential impacts of new development on riparian habitat would be less than significant.

Proposed General Plan Policies that Reduce the Impact

The following proposed policies reduce Impact 3.4-2.

Policy POS-3.1.1: Enhance and maintain the natural values of creeks and major drainage ways.

Policy POS-3.1.2: Preserve native riparian vegetation and wildlife, and establish riparian corridors along all creeks.

Policy POS-3.1.3: Require adequate building setbacks for development adjacent to creek banks and major drainage ways to protect neighboring properties from erosion and flooding.

Policy POS-3.2.1: Preserve bay marshes, wetlands, and tidal areas adjacent to Suisun Bay and other wetlands and creeks in the Planning Area as open space.

The General Plan policies provide appropriate programmatic mitigation measures; additional site-specific measures shall be identified during CEQA review of specific development proposals made to the City. Prior to new development in areas with potential riparian habitat, applicants will be required to coordinate with the CDFG, as required by law. Coordination will include evaluation of existing riparian habitat and development of avoidance, minimization, and/or compensatory measures sufficient to procure a Streambed Alteration Agreement with the CDFG.

Mitigation Measures

No mitigation measures are required.

Impact

3.4-3 Implementation of the Urban Area General Plan could result in filling of wetlands and other waters, including open water associated with Suisun Bay, perennial and seasonal wetlands, ponds, creeks, and other drainages. (*Less than Significant*)

Wetlands and other waters protected by Section 404 of the Clean Water Act occur throughout the Planning Area and within the area bounded by the ULL. Walnut, Galindo, Mt. Diablo, and Pine creeks, in addition to their tributaries, receive protection under Section 404. Wetlands associated with these drainage features (i.e. in-stream, stream fringe, and wetlands in proximity of streams) also potentially receive protection under Section 404. Additional minor drainage features and wetlands occur and could potentially receive protection under Section 404.

Potential impacts in the form of temporary or permanent loss due to filling of wetlands or other waters could result from new development within or in the vicinity of these wetlands and other waters. The General Plan policies below provide appropriate programmatic mitigation measures; additional site-specific measures will be identified during CEQA review of specific development proposals made to the City. Prior to new development in areas with potential federally or State

protected wetlands or waters, applicants will be required to coordinate with the Corps, CDFG, RWQCB, and/or BCDC depending on the jurisdiction potentially affected. Coordination will include evaluation of existing wetlands and waters and development of avoidance, minimization, and/or compensatory measures sufficient to procure the necessary permits from the applicable agencies. The combination of proposed policies and existing laws protecting these resources ensures that the impacts would be less than significant.

Proposed General Plan Policies that Reduce the Impact

Policy POS-3.1.1: Enhance and maintain the natural values of creeks and major drainage ways.

Policy POS-3.1.2: Preserve native riparian vegetation and wildlife, and establish riparian corridors along all creeks.

Policy POS-3.1.3: Require adequate building setbacks for development adjacent to creek banks and major drainageways to protect neighboring properties from erosion and flooding.

Policy POS-3.1.7: Improve the quality of underground and surface waters in Concord through coordination with outside agencies.

Policy POS-3.2.1: Preserve bay marshes, wetlands, and tidal areas adjacent to Suisun Bay and other wetlands and creeks in the Planning Area as open space.

This policy is consistent with State and Federal “no net loss” policies for wetlands.

Preservation mechanisms include the following:

- *Avoidance of sensitive habitat areas;*
- *Clustering of development away from wetlands;*
- *Transfer of development rights for preservation of existing lands; and/or*
- *Compensatory in-kind mitigation; such as restoration or creation.*

Mitigation Measures

No mitigation measures are required.

Impact

3.4-4 New development under the proposed Urban Area General Plan could result in harm to or removal of heritage trees. (Less than Significant)

Trees qualifying as Heritage Tree are found throughout the study area. Whether recognized by designation or by size (trees over 24 inches trunk diameter at 4.5 feet above natural grade), trees meeting this definition are found throughout existing urban development in Concord and variously in other habitat types throughout the study area. Although there is potential for them to be removed or damaged as a result of new development under the proposed Urban Area General Plan within the ULL, the City of Concord Tree Ordinance provides protection of these trees. In

addition, a policy in the proposed Urban Area General Plan would help reduce or avoid potential impacts.

Proposed General Plan Policies that Reduce the Impact

Policy POS-3.4.3: Retain significant vegetation, including native vegetation and heritage trees, where feasible, and require replacement plantings as appropriate for mitigation.

Mitigation Measures

No mitigation measures are required.

3.5 Cultural Resources

This section presents the environmental setting and impact assessment for cultural resources in the Concord Planning Area. Cultural resources are defined as prehistoric and historic sites, structures, and districts, or any other physical evidence associated with human activity considered important to a culture, a subculture, or a community for scientific, traditional, religious, or any other reason. For analysis purposes, cultural resources may be categorized into three groups: archaeological resources, historic resources, and contemporary Native American resources.

Archaeological resources are places where human activity has measurably altered the earth or left deposits of physical remains. Archaeological resources may be either prehistoric (before the introduction of writing in a particular area) or historic (after the introduction of writing). The majority of such places in this region are associated with either Native American or Euroamerican occupation of the area. The most frequently encountered prehistoric and early historic Native American archaeological sites are village settlements with residential areas and sometimes cemeteries; temporary camps where food and raw materials were collected; smaller, briefly occupied sites where tools were manufactured or repaired; and special-use areas like caves, rock shelters, and sites of rock art. Historic archaeological sites may include foundations or features such as privies, corrals, and trash dumps.

Historic resources are standing structures of historic or aesthetic significance. Architectural sites dating from the Spanish Period (1529-1822) through the early years of the Depression (1929-1930) are generally considered for protection if they are determined to be historically or architecturally significant. Post-depression sites may also be considered for protection if they could gain significance in the future. Historic resources are often associated with archaeological deposits of the same age.

Contemporary Native American resources, also called ethnographic resources, can include archaeological resources, rock art, and the prominent topographical areas, features, habitats, plants, animals, and minerals that contemporary Native Americans value and consider essential for the preservation of their traditional values.

Additional information, as it relates to the CNWS area, is contained in the *Integrated Natural Resources Management Plan and Environmental Assessment* by the Naval Weapons Station Seal Beach, prepared in March 2002. The following cultural, historic and ethnographic baseline information is extracted from an overview document prepared by the Northwest Information Center at Sonoma State University (Haydu, 2003 and Jones, 2004).

ENVIRONMENTAL SETTING

PHYSICAL SETTING

Prehistoric Context

The land on which Concord is now located was originally occupied by a group of Chipcan inhabitants, members of the Miwok linguistic division of American Indians. From the excavation of archaeological sites, it is known that the Chipcan were present in the area as early as 200 BC and maintained relatively continuous occupation until AD 900. The most extensive site that was found was then abandoned completely until 1700, after which it was used again as a campsite. By the early 1800s, the numbers of Chipcan in the area were so reduced that they offered little resistance to the arriving Spanish settlers. The remaining Chipcan were ultimately assimilated into the new culture.

Prehistoric Resource Sites

A review of the Concord Planning Area conducted by the Northwest Information Center found 12 recorded Native American archaeological resources and 7 historic-period archaeological resources listed with the State Historical Resources Information System. This office has 86 records of an archaeological study within portions of the General Plan area. These sites range from sparse lithic scatters to ethnographic village sites. Additionally, the Planning Area contains many topographical features near which archaeological sites in this portion of Contra Costa County tend to be located, such as ridgelines, midslope terraces, alluvial flats, ecotones, and sources of water. Given the environmental setting and the archaeologically sensitive nature of the general area, the review concluded that there is a high potential for additional Native American sites within the Planning Area.

One prehistoric archaeological site (CA-CCo-680) and one historical corral/holding pen (P-07-000-485) have been recorded in the inland portion of the CNWS. CA-CCo-680 consists of a sparse yet diverse deposit of Native American artifacts (e.g., mortars and pestles, an antler wedge, a stone “chopper,” and other flaked stone tools and debris) and dietary remains (e.g., mammal bone and marine and freshwater shellfish). A possible hearth feature and several pieces of human bone also were identified as the result of a small test excavation. A preliminary assessment concluded that CA-Cco-680 may qualify for listing on the NRHP, although the site was not formally evaluated. A prehistoric isolate also has been located at the CNWS . One prehistoric site (CA-CCo-305) was identified approximately one quarter-mile west of the Willow Pass Road Corridor along Walnut Creek, and one site (CA-CCo-250) was identified within the Monument Boulevard Corridor. CA-CCo-250 was leveled in 1937 for agricultural purposes; however, prior to its demolition a salvage crew from U.C. Berkeley recorded the site, which yielded numerous burials and artifactual remains (Pilling, 1949). The site was capped in the mid-1960s (Ananian, 1994). It is possible that CCo-680 and CCo-250 are components of a single village site that may qualify for the National Register of Historic Places. The depth and exact dimensions of this site are not well known. `Specific archaeological resource locations are considered sensitive information and are restricted from public distribution per the Archaeological Resources Protection Act of 1979, Section 9 (a), which qualifies as an Exemption 3 statute of the Freedom of Information Act of 1974.

Historic Context

The modern history of Concord can be traced back to 1834, when Don Salvio Pacheco successfully petitioned for a land grant of 17,921 acres that covers much of the area of the present day City. Salvio Pacheco and his family quickly settled on the land, known as “Rancho Monte del Diablo,” and were joined by neighboring settlers in the nearby town of Pacheco. The area became prosperous, profiting initially from cattle-based products, and later from the boom of the Gold Rush in the late 1840s and 50s. Its fertile soil and proximity to navigable waterways also greatly contributed to the success of Pacheco and the Rancho Monte del Diablo. However, a series of disastrous floods, compounded by a large earthquake in 1868, severely damaged the town of Pacheco and ruined the homes of many of its inhabitants. In response, Don Salvio Pacheco plotted out 20 acres of land in the center of his Rancho (in modern Downtown) and offered the land to victims of the natural disasters in Pacheco. This generous act created the Town of Todos Santos, which would grow into the City of Concord in a few short years.

The City of Concord grew steadily but modestly in the early 1900s, aided by the extension of railroads throughout Contra Costa County and the entrepreneurship of incoming residents. A devastating fire in 1917 caused damage to a large portion of one downtown block. Development in Concord in the decades following the First World War reflects trends observed throughout the country during that time. The 1920s brought post-war expansion and prosperity, while during the early 1930s residents struggled with the hardships of the Depression. Economic conditions nationwide began to improve mid-decade, and the opening of the San Francisco-Oakland Bay Bridge in 1936 and the Caldecott Tunnel in 1937 provided major boosts to Concord’s economy. These improvements also made Concord easily accessible to San Francisco and the East Bay, and paved the way for an explosive expansion during the following decades.

The outbreak of World War II accelerated Concord’s transition from a rural, agriculture-based economy to a modern market economy. The Naval Magazine at Port Chicago (currently called the Concord Naval Weapons Station) was established in 1942 to provide the Navy with its only war-scale ammunition shipping point on the West Coast and was established as an independent command four years later, in 1946. The Tidal portion of the CNWS, on the south side of the Suisun Bay, provided the safety zone required for explosive shiploading operations, while the Inland Area, adjacent to the City of Concord, contained production and storage facilities.¹ The CNWS served to concentrate industries required for the war effort in the immediate area, and also took thousands of acres of valuable farmland out of agricultural use.

On July 17, 1944, Port Chicago Navy Magazine National Memorial experienced the most severe stateside disaster of World War II. An explosion on destroyed two ships and a loading pier, killing 320 people and injuring 390 people. Among the dead were both military personnel and Port Chicago civilians. The blast occurred while the S.S.E.A. Bryan and the S.S. Quinault Victory were being loaded. The force of the explosion damaged the Port Chicago Navy Magazine and many of the homes and buildings in the area and broke glass in buildings as far away as San Francisco (DoN 1994a). Accordingly, the threat of explosion kept civilian population surrounding Port Chicago to approximately 3,000 residents.

¹ For more background on the history of the CNWS refer to the *Integrated Natural Resources Management Plan and Environmental Assessment* prepared in March, 2002.

After the war, additional land was converted from agriculture to residential development to meet the housing needs of the astronomical influx of new residents to the City, the population of which grew 408 percent between 1940 and 1950. Retailers, industries, and business parks followed the surge of new residents. The first shopping malls in Concord were constructed in the 1950s, followed by the first major business parks in the 1960s and 1970s.

In 1998, Concord Naval Weapons Station became a detachment of Naval Weapons Station Seal Beach (NWSSB). Detachment Concord is an active military base. Current industrial operations are associated primarily with routine munitions transshipment and storage. The facility's current active tenant, the U.S. Army, confines these activities mainly to the Tidal Area. Since 1999, the Inland Area has been on reduced operational status and is mostly inactive, with no immediate plans to resume active operations. Detachment Concord was included on the recommended Base Realignment and Closure (BRAC) list, which was submitted by the Secretary of Defense to the BRAC Commission in May 2005 (Department of Defense, 2005). Once formally closed, reuse of the Inland Portion of the base becomes subject to the BRAC process, which requires that a Reuse Plan be developed prior to disposition and redevelopment of the base. If closed in the future, the Tidal Portion of the base will also be subject to the same Federally mandated reuse planning process.

Historic Resources Sites

Many of the historic resources in Concord date back to the days of its founding, and are located near Todos Santos Plaza. Additionally, the City's historic buildings reflect its changing role through time as a center of agriculture, military activities, and commercial activities. The City contains two National Register Sites, as well as 33 additional sites and structures which are designated local historical landmarks as important local historic resources even though they do not meet criteria for designation as state or federal landmarks or historic sites. It should also be noted however that additional sites may exist, which are not currently designated as federal landmarks or historic sites, yet may be eligible for listing under CEQA. These sites are listed in Table 3.5-1 and mapped in Figure 3.5-1.

In 1992, Congress established the Port Chicago Navy Magazine National Memorial to commemorate the explosion of July 17, 1944. In coordination with the National Park Service, a permanent memorial was erected in 1994, the 50th anniversary of the disaster. The memorial, located near the explosion site, replaced a more simple design installed several years earlier in the tidal area of the CNWS, near the site of the explosion. Due to safety concerns, the memorial is not open to the public on a daily basis. On the anniversary of the explosion, the memorial is open to the public in honor of those who were killed or injured. (*Integrated Natural Resources Management Plan and Environmental Assessment*, Naval Weapons Station Seal Beach, March 2002).

Table 3.5-1: City of Concord Designated Historic Sites and Structure

<i>Label</i>	<i>Name</i>	<i>Address</i>
1	Francisco Galindo House ²	1721 Amador St.
2	Fernando Pacheco Adobe ^{1,2}	3119 Grant St.
3	Rosal Apartment House	2178 Pacheco St.
4	Alves House	2190 Grant St.
5	Barnett House	2080 East St.
6	Beebe House	1921 Concord Ave.
7	Bibber House	2108 Grant St.
8	Bolla House	2289 Bonifacio St.
9	Concord Elementary School	2701 Willow Pass Rd.
10	Concord Fire Hall	1982 Concord Ave.
11	County Fire House	2210 Willow Pass Rd.
12	Eddy House	1800 Clayton Rd.
13	Elworthy House	2118 East St.
14	Elworthy-Keller House	2156 Pacheco St.
15	Foskett & Elworthy Building	2001 Salvio St.
16	Gieselhart House	2885 Concord Blvd.
17	Ginochio-Accinelli House	2459 Pacheco St.
18	Ginochio-DeRosa House	3800 Cowell Rd.
19	Ivey House	1849 Clayton Rd.
20	Keller House	1760 Clayton Rd.
21	Kelly House	1987 Bonifacio St.
22	Live Oak Cemetery	Deer Oak Pl.
23	Maltby Mansion	3033 Bonifacio St.
24	Maltby-McKinnon House	2350 Pacheco St.
25	Mount Diablo High School	2455 Grant St.
26	Neustaedter House	2156 Grant St.
27	Nunez House	2334 Almond Ave.
28	Old Cowell Firehouse	4425 Prairie Willow Ct.
29	Perry House	1990 Concord Ave.
30	Salvio Pacheco Adobe	1870 Adobe St.
31	St. Stephen's Cemetery	2701 Monument Ct.
32	The Cowell Stack	4478 Lawson Ct.
33	Todos Santos Plaza	2175 Willow Pass Rd.
34	Webb-Soto House	2243 Mt Diablo St.
35	North Todos Santos District	Between Pacheco St., East St., Bacon St., Galindo St.

¹ California State Historical Landmark

² National Registered Site

Source: City of Concord General Plan Background, 1994. "History of Concord," Concord Historical Society, 1986 and 2006.

REGULATORY SETTING

In the State of California, the process of reviewing projects and decisions that may impact cultural resources including historic, archaeological, and paleological resources is conducted under several different federal, state, and local laws. At the federal level, the Office of Historic Preservation carries out reviews under Section 106 of the National Historic Preservation Act of 1966, as amended. CEQA requires that public agencies consider the effects of their actions on historical resources eligible for listing on the California Register of Historical Resources. Additionally, California Public Resources Code 5024 requires consultation with OHP when a project may impact historical resources located on State-owned land. California State law (SB 18) requires cities and counties to notify and consult with California Native American Tribes about proposed local land use planning decisions for the purpose of protecting Traditional Tribal Cultural Places ("cultural places").

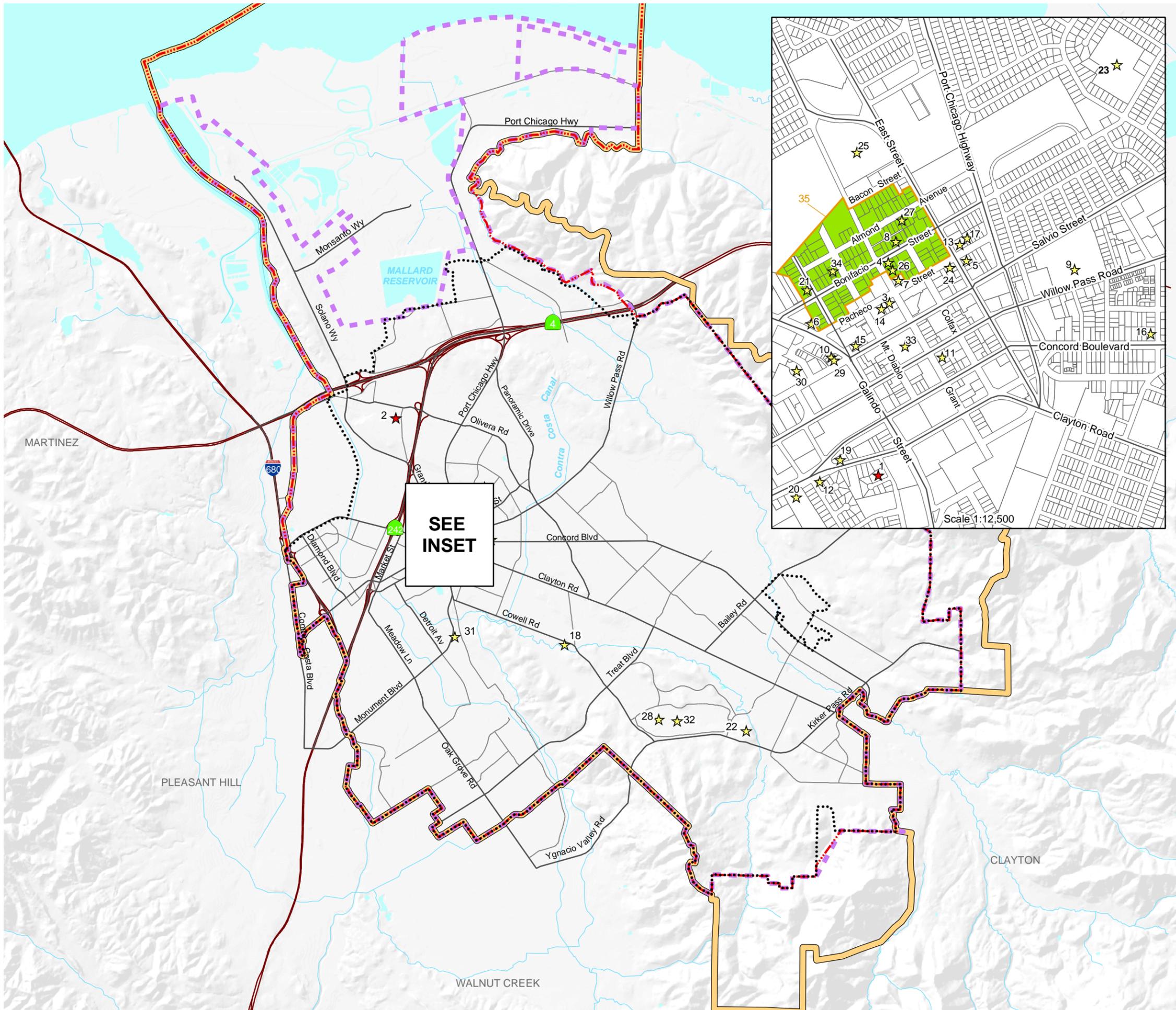
The California Historical Resources Information System (CHRIS) is a statewide system for managing information on the full range of historical resources identified in California. CHRIS is a cooperative partnership between the citizens of California, historic preservation professionals, twelve Information Centers, and various agencies. This system bears the following responsibilities:

- Integrate newly recorded sites and information on known resources into the California Historical Resources Inventory.
- Furnish information on known resources and surveys to governments, institutions, and individuals who have a justifiable need to know; and
- Supply a list of consultants who are qualified to do work within their area.

Typically, the initial step in addressing cultural resources in the project review process involves contacting the appropriate Information Center to conduct a record search. A record search should identify any previously recorded historical resources and previous archaeological studies within the project area, as well as provide recommendations for further work, if necessary. Depending on the nature and location of the project, the project proponent or lead agency may also want to contact appropriate Native American representatives to aid in the identification of traditional cultural properties.

If known cultural resources are present within the proposed project area, or if the area has not been previously investigated for the presence of such resources, the Information Center may recommend an survey for historical, archaeological and paleological sites. Cultural resources which may be adversely affected by an undertaking should be evaluated for significance. For archaeological sites, a significance evaluation typically involves conducting test excavations. For historical sites or standing structures, historical research should be conducted and an architectural evaluation may be warranted. If significant, the resource should be protected from adverse impacts. Data recovery excavations may be warranted in the case of unavoidable damage to archaeological sites. If human burials are present, the appropriate Coroner's office should be contacted. A professional archaeologist and appropriate Native American representatives should also be consulted.

**Figure 3.5-1
Historic Resources**



- ★ National Register Site
- ☆ Historic Site or Structure
- 35 North Todos Santos District
- ⋯ City Limits
- ⋯ Sphere of Influence
- ⋯ Proposed Urban Limit Line (ULL)
- ▭ Planning Area Boundary

Note: See Table 3.5-1 for site address and name by label number.

Sources:
 City of Concord General Plan Background: 1994.
 "History of Concord," Concord Historical Society: 1986.
 "Historical Walking Tour Guide," Concord Historical Society: 2003.



When an initial study identifies the existence, or the probable likelihood, of Native American human remains within the project, a lead agency shall work with the appropriate Native Americans as identified by the Native American Heritage Commission as provided in Public Resources Code SS5097.98. The applicant may develop an agreement for treating or disposing of, with appropriate dignity, the human remains and any items associated with Native American burials with the appropriate Native Americans as identified by the Native American Heritage Commission.

At the local level, historical preservation policies in Concord's Municipal Code declare as a matter of public policy the "...use of areas, places, sites, buildings, and structures of historical, community, or aesthetic interest or value is a public necessity and is required in the interest of the health, prosperity, safety, and welfare of the people" (Code 1965, § 4320; Ord. No. 966). These policies provide a means to delay the sudden, arbitrary, impetuous, and capricious destruction, removal, or remodeling of historical landmarks when such action would have the effect of destroying or changing the historical significance of a historical landmark. They safeguard the heritage of the City by preserving and perpetuating locations, areas, places, sites, buildings, structures, monuments, works of art, and other objects or things which reflect elements of the city's cultural, historical, social, economic, political, agricultural, military, educational, or architectural history. The policies also protect and enhance the city's attractions to residents, tourists, and visitors. The policies provide means to enhance the visual and aesthetic character, diversity, and interest of the city. They foster civic pride in the beauty and notable accomplishments of the past and enrich human life in its educational, patriotic, civic, and cultural dimension. The policies aim to promote the use and preservation of historic locations, places, sites, structures, objects, or things for the education and general welfare of the people of the city. Finally the policies aim to take whatever steps are necessary to safeguard the property rights of the owners whose property is declared to be a "landmark."

IMPACT ANALYSIS

SIGNIFICANCE CRITERIA

A significant impact would occur with full implementation of the proposed Concord General Plan if it would result in one or more of the following:

- Substantial changes to the significance of a historical resource, defined as physical demolition, destruction, relocation, or alteration of the resource or its immediate surroundings such that the significance of a historic resource would be materially impaired (Guidelines § 15064.5);
- Substantial changes to the significance of an archaeological resource;
- Direct or indirect destruction of a unique paleontological resource; or
- Disturbance of any human remains, including those interred outside of formal cemeteries.

Section 15064.5 of the CEQA Guidelines further defines criteria for determining the significance of impacts on archaeological and historic resources. Section 15064.5 provides that, in general, a resource not listed on state or local registers of historical resources shall be considered by an

agency to be historically significant if the resource meets the criteria for listing on the California Register of Historical Resources. The section also provides standards for determining what constitutes a "substantial adverse change" that must be considered a significant impact on a historic resource. The section further states that its provisions apply to those archaeological resources that also qualify as historic resources.

METHODOLOGY & ASSUMPTIONS

A complete records search was conducted by the Northwest Information Center at Sonoma State University, which reviewed the State of California Office of Historic Preservation records, base maps, historic maps, and literature for Contra Costa County on file. Because this EIR is a Program EIR on a general plan, site-specific analysis of potential impacts on cultural and historical resources is not appropriate. Instead, this analysis identifies the type and magnitude of impacts that may result from the proposed General Plan as a whole.

SUMMARY OF IMPACTS

The primary impact that could occur would be disturbance of cultural resources during development of property, subsequent to adoption of the General Plan. Specific projects implied through General Plan policy will require supplemental environmental analysis prior to implementation to comply with CEQA requirements.

According to the Northwest Information Center at Sonoma State University, there is a high possibility of uncovering and identifying additional archaeological deposits in the General Plan area and of impacting existing historic buildings. Existing national, state and local laws as well as policies in the proposed General Plan reduce these potential impacts on historic and archaeological resources to less than significant levels. No known significant paleontological resources exist in the study area.

IMPACTS AND MITIGATION MEASURES

Impact

- 3.5-1 New development designated for Urban Area, located outside of previously developed areas, has the potential to disrupt undiscovered archaeological resources. (*Less than Significant*)

A complete records search revealed that 12 recorded Native American archaeological sites and 7 historic archaeological sites are currently located within the Urban Area General Plan area. According to the Northwest Information Center at Sonoma State University, there is a high possibility of uncovering and identifying additional historic-period archaeological deposits on sloped undeveloped land in the Planning Area, however, these lands are almost entirely outside of the ULL and are not planned for development. New development that occurs outside of existing urban areas and within these likely archaeological deposit sites may adversely affect these archaeological resources either during construction or once inhabited.

While project-specific studies will be necessary to determine the actual potential for significant impacts on archaeological resources resulting from the implementation of the proposed Urban Area General Plan and ULL, some general impacts can be identified based on the probable locations of new development in the Planning Area and known geographic features near which prehistoric resources are most likely to be located. Projects in the vicinity of ridgelines, midslope terraces, alluvial flats, ecotones, and sources of water have the greatest possibility of encountering a prehistoric archaeological resource.

If potentially significant cultural resources are discovered during ground-disturbing activities associated with project preparation, construction, or completion, work shall halt in that area until a qualified archaeologist can assess the significance of the find, and, if necessary, develop appropriate treatment measures in consultation with Contra Costa County and other appropriate agencies and interested parties. For example, a qualified archaeologist shall follow accepted professional standards in recording any find including submittal of the standard Department of Parks and Recreation (DPR) Primary Record forms (Form DPR 523) and locational information to the California Historical Resources Information Center office (Northwestern Information Center). The consulting archaeologist shall also evaluate such resources for significance per California Register of Historical Resources eligibility criteria (Public Resources Code Section 5024.1; Title 14 CCR Section 4852). If the archaeologist determines that the find does not meet the CEQA standards of significance, construction shall proceed. On the other hand, if the archaeologist determines that further information is needed to evaluate significance, the Planning Department staff shall be notified and a data recovery plan shall be prepared.

All future development in the Planning Area will be accordance with State Laws Pertaining to the Discovery of Human Remains. Accordingly, if human remains of Native American origin are discovered during project construction, the developer and/or the Planning Department would be required to comply with state laws relating to the disposition of Native American burials, which fall within the jurisdiction of the Native American Heritage Commission (Pub. Res. Code Sec. 5097). If any human remains are discovered or recognized in any location on the project site, there shall be no further excavation or disturbance of the site or any nearby area reasonably suspected to overlie adjacent human remains until:

- a. The Contra Costa County Coroner/Sheriff has been informed and has determined that no investigation of the cause of death is required; and
- b. If the remains are of Native American origin,
 - The descendants of the deceased Native Americans have made a recommendation to the landowner or the person responsible for the excavation work, for means of treating or disposing of, with appropriate dignity, the human remains and any associated grave goods as provided in Public Resources Code Section 5097.98, or
 - The Native American Heritage Commission was unable to identify a descendant or the descendant failed to make a recommendation within 24 hours after being notified by the commission.

Proposed General Plan Policies that Reduce the Impact

Overall, current federal, state and local laws as well as the following policies in the proposed General Plan would reduce these impacts on archaeological resources to less than significant levels.

Policy POS-4.1.2: Consult with the State Office of Historic Preservation with respect to managing impacts of development and land use on historic and archaeological resources.

Policy POS-4.1.3: Preserve important historic and archaeological sites during new development, reuse, and intensification.

Policy POS-4.1.4: In identified sensitive areas, require archaeological studies as part of the development review process.

Mitigation Measures

No additional mitigation measures are required.

Impact

3.5-2 New infill development within previously built up areas within the City has the potential to impact sites of local historic importance and the overall historic setting of downtown.
(Less than Significant)

A majority of the city's historic resources, including 35 historic sites or structures and one National Register Site, are located in close proximity to the downtown Concord area, which reflects this historical character. While registered historic sites are protected by State law, this downtown intensification could potentially threaten additional historical structures not yet registered or deemed eligible for the National Register of Historic Places, but which are sites of local historical importance. Furthermore, new development has the potential to impact the overall character of the historical setting.

Proposed General Plan Policies that Reduce the Impact

In addition to the proposed policies mentioned above, the following proposed General Plan policies would ensure protection of these sites of local historical importance and overall character by requiring new development downtown to be compatible with existing historic character, avoiding any potentially significant adverse impacts.

Policy LU-1.1.10: Ensure that new development in historic neighborhoods is compatible in scale and style to the character of that neighborhood, and encourage retention of historic buildings through flexible reuse provisions.

The North Todos Santos Specific Plan, as adopted by the City in 1985, is intended to protect the character of this historic neighborhood, with its prevailing

pattern of pre-World War II homes. This specific plan will continue to be the guiding policy document, and zoning regulations will ensure that new land uses, including offices and multi-family residences in this neighborhood, are compatible with existing uses. A portion of the North Todos Santos Area, not to exceed 10 percent or two acres, whichever is less, may be zoned for medium density residential uses if such housing would be compatible with the adjacent neighborhood and with the Specific Plan.

- Policy LU-4.2.4: Encourage new and redevelopment projects to include amenities for public benefit, such as affordable housing, pedestrian-oriented facilities, and historic preservation.
- Policy LU-4.2.8: Encourage preservation of historic buildings to the maximum extent feasible.
- Policy POS-4.1.1: Preserve all City, state, and federally designated historic sites and structures to the maximum extent feasible.

Mitigation Measures

No additional mitigation measures are required.

Impact

3.5-3 Implementation of the Urban Area General Plan could adversely affect unidentified paleontological resources. (*Less than Significant with Mitigation*)

Adverse impacts to paleontological resources could occur when earthwork activities such as mass excavation cut into geological formations where fossils are buried. These impacts are in the form of physical destruction of fossil remains. While no known significant paleontological resources occur within the Planning Area, fossils are considered to be nonrenewable resources and due to the infrequency of fossil preservation, such impacts would be considered significant. Relatively few undeveloped parcels remain in the ULL and mass excavation cuts into fossil-bearing bedrock formations are not expected. To further insure that no such impacts to paleontological resources occur, Mitigation Measure 3.5-3 is recommended, which requires on-site evaluation and possible fossil recovery in the event fossils are discovered.

The City's General Plan Policies do not specifically address paleontological resources. However, CEQA Guidelines 15064.5[a][3] states that adverse effects to significant scientific resources are considered a significant effect on the environment. The following mitigation is provided to make provisions for the accidental discovery of paleontological resources.

Mitigation Measure

- 3.5-3 All grading plans for development projects involving ground displacement shall include a requirement that in the event fossils are encountered, construction shall be temporarily halted, the Planning Division shall be notified immediately, a qualified paleontologist shall evaluate the fossils, and steps needed to photo-document or to recover the fossils shall be taken. If fossils are found during construction activities, grading in the vicinity

shall be temporarily suspended while the fossils are evaluated for scientific significance and fossil recovery, if warranted.

Significance after Mitigation

Less than Significant.

3.6 Energy and Utilities

This section describes the current energy and electrical utilities needs of the City of Concord as well as potential impacts associated with the adoption of the proposed General Plan and ULL. Other public services, including water, wastewater, and solid waste disposal, are addressed in Section 3.11, *Public Services & Safety*.

ENVIRONMENTAL SETTING

PHYSICAL SETTING

Utility Energy

Pacific Gas & Electric (PG&E) currently provides gas and electric services to Concord homes and businesses and is regulated by the California Public Utilities Commission (CPUC). PG&E's service area extends from Eureka to Bakersfield (north to south) and from the Sierra Nevada to the Pacific Ocean (east to west).

PG&E obtains its energy supplies from power plants and natural gas fields in northern California and from energy purchased outside its service area and delivered through high voltage transmission lines. PG&E purchases both gas and electrical power from a variety of sources, including utility companies in other western states and Mexico (CEC, 2003). To promote the safe and reliable maintenance and operation of utility facilities, the CPUC has mandated specific clearance requirements between utility facilities and surrounding objects or construction activities.

Electrical power is provided to the City of Concord from various distribution feeders located throughout the city; natural gas is provided to the city from several gas lines stretching from Milpitas to San Francisco. Gas is delivered from basins in Canada and/or Texas by transmission mains and deposited at PG&E's Milpitas Gas Terminal.

Over the past several years, demand for electricity in the City of Concord has paralleled the general demand patterns of California, fluctuating between approximately 663 million and 773 million kilowatts per year, with a peak in 2000. The demand for natural gas has followed a similar trend, peaking in 2000 and otherwise fluctuating between 2.9 and 3.2 million Deca Therms (Sheiber, 2005).

Transportation Energy

California's demand for gasoline and diesel has nearly doubled over the last twenty years. In 2004, the State consumed almost 15.4 billion gallons of gasoline and 2.8 billion gallons of diesel fuel, which comprised almost half of all fossil fuel energy that the State consumed (CEC, 2005).

The City of Concord depends on transportation energy to move people and goods along its transportation corridors. An estimated 2.43 million vehicle miles are traveled annually within Concord city limits (Dowling, 2006). Using an average fuel economy rate of 22 miles per gallon of gasoline, this figure translates to roughly 110,460 gallons of gasoline consumption per year, or 13.79 billion British thermal units (btu) of energy consumed. Petroleum products are delivered to the City of Concord through tanker trucks and are sold through private retailers throughout the city.

REGULATORY SETTING

National Energy Policy

The National Energy Policy, developed in May 2001, proposes recommendations on energy use and on the repair and expansion of the nation's energy infrastructure. The policy is based on the finding that growth in U.S. energy consumption is outpacing the current rate of production. Over the next 20 years, the growth in the consumption of oil is predicted to increase by 33 percent, natural gas by over 50 percent, and electricity by 45 percent. While federal policy promotes further improvements in energy use through conservation, it focuses on increased development of domestic oil, gas, and coal and the use of hydroelectric and nuclear power resources. To address the over-reliance on natural gas for new electric power plants, the federal policy proposes research in clean coal technology and expanding the generation of energy to include energy derived from landfill gas, wind, and biomass sources.

State Energy Policy

The California Constitution vests in the CPUC, the exclusive power and sole authority to regulate privately-owned or investor-owned public utilities such as PG&E. This exclusive power extends to all aspects of the location, design, construction, maintenance, and operation of public utility facilities. Nevertheless, the CPUC has provisions for regulated utilities to work closely with local governments and give due consideration to their concerns.

The State of California regulates energy consumption under Title 24 of the California Code of Regulations. The Title 24 Building Energy Efficiency Standards were developed by the California Energy Commission (CEC) and apply to energy consumed for heating, cooling, ventilation, water heating, and lighting in new residential and non-residential buildings. The CEC updates these standards periodically and adopted the latest standards in 2005. Under Assembly Bill 970, signed September 2000, the CEC will update and implement its appliance and building efficient standards to make "maximum feasible" reduction in unnecessary energy consumption.

IMPACT ANALYSIS

SIGNIFICANCE CRITERIA

Implementation of the proposed General Plan and adoption of the proposed Urban Limit Line would have a potentially significant impact if it would result in:

- Wasteful, inefficient, or unnecessary consumption of energy by residential, commercial, industrial, or public uses;
- The construction of additional energy infrastructure facilities, the construction of which could cause significant environmental effects; or
- A substantial increase in transportation energy consumption due to the projected increases in peak hour trips associated with future population and employment growth.

METHODOLOGY AND ASSUMPTIONS

The analysis of energy is based on information provided by PG&E, the CEC, project plans, the proposed General Plan, and applicable regulations and guidelines. Future vehicle miles traveled (VMT) presented in Section 3.3, Transportation, were used to calculate future transportation energy demand.

SUMMARY OF IMPACTS

Population and employment growth envisioned by the proposed General Plan may increase energy demand required by new housing and additional motor vehicles. Compliance with energy-saving building codes and an effective use of alternative modes of transportation, combined with mitigation measures outlined below, would reduce wasteful energy consumption to a less than significant level.

IMPACTS AND MITIGATION MEASURES

Impact

3.6-1 New development may result in wasteful, inefficient, or unnecessary consumption of energy by residential, commercial, industrial, or public uses. (*Less than Significant*)

Development considered under the proposed General Plan could potentially increase demand for gas and electrical services. A project sponsor could be required to expand existing service or construct new infrastructure to provide gas and electrical service for new businesses and homes. Improved site planning and building design as well as energy conservation measures, as outlined in California's Energy Efficiency Standards for Residential and Nonresidential Buildings (Title 24, Part 6), would minimize the potential for wasteful, inefficient, or unnecessary consumption of energy. The building design review process, for example, would provide an opportunity for assisting developers in the selection of appropriate energy conservation measures and programs.

Proposed General Plan Policies that Reduce the Impact

The following policies of the proposed General Plan would help reduce wasteful or inefficient energy use by encouraging compact and pedestrian-friendly development:

- Policy E-3.1.2: Promote and support an urban, pedestrian-oriented environment that builds upon the proximity of Todos Santos Plaza, and high density resident and street retail uses.

- Policy E.-3.1.5: Promote transit-oriented development and activities that take advantage of nearby transit services, such as BART, bus services, and Buchanan Field Airport.
- Policy LU-1.1.7: Upgrade the quality of new and existing multi-family housing by requiring high-quality design.
- Policy LU-1.2.4: Encourage neighborhood retail and service uses within convenient walking distance of all residential neighborhoods, where feasible.
- Policy LU-1.3.3: Support higher density and mixed use development in Downtown and near transit centers and corridors.
- Policy LU-3.1.5: Identify new areas for region-serving commercial uses at locations that take advantage of major major transportation routes.
- Policy LU-3.1.6: Ensure the timely implementation of necessary infrastructure to support existing and new region-serving development.
- Policy LU-4.2.3: Promote pedestrian-oriented urban design.
- Policy LU-4.2.4: Encourage new and redevelopment projects to include amenities for public benefit, such as affordable housing, pedestrian-oriented facilities, and historic preservation.
- Policy LU-4.2.5: Provide incentives for the development of multiple anchor uses and mixed use development surrounding Todos Santos Plaza to attract retail clientele and encourage pedestrian activity.
- Policy LU-4.2.9: Designate land around the Downtown BART Station as identified in the Downtown Strategic Plan as an “infill opportunity zone” and offer incentives for regional office uses, residential, and mixed uses such as reduced parking, to support use of mass-transit, especially within walking distance of the Downtown BART station.
- Policy LU-10.1.2: On any land to be annexed to the City, require new development to be clustered to reduce both environmental and visual impacts of hillside development.
- Policy GM-3.1.1: Evaluate the impact of proposed General Plan amendments on the availability of job and housing opportunities and the potential for reducing commute trips and average commute length.
- Policy GM-3.1.2: Support Concord’s economic development programs and seek to attract high quality employment opportunities for local residents and other residing near local job centers.

- Policy GM-3.1.3: Consistent with Housing Element policies, give priority in the City's housing programs to providing opportunities for persons employed in local and nearby jobs.
- Policy GM-3.1.4: Accommodate home business uses that do not create residential neighborhood disruptions due to excessive traffic, parking, noise, pollution, odors, or unsightly storage or activities nor consistent with residential surroundings.
- Policy GM-3.3.1: Manage a Transportation Demand Management Program.
- Policy T-1.1.1: Maintain streets at optimal levels to provide safe and efficient travel.
- Policy T-1.1.2: Continue to promote a wide variety of transportation alternatives and modes to serve all residents and businesses to enhance the quality of life.
- Policy T-1.1.3: Maintain and upgrade transportation systems to provide smooth flow of traffic, minimize vehicle emissions, and save energy.
- Policy T-1.1.9: Establish efficient linkages to the regional transportation system for all modes of travel.
- Policy T-1.3.4: Coordinate with Caltrans and transit providers to identify and implement Park and Ride sites.
- Policy T-1.4.1: Coordinate with public transportation agencies to facilitate safe, efficient, and convenient access to transit.
- Policy T-1.4.2: Work with public transportation agencies to ensure adequate transit service.
- Policy T-1.5.1: Plan linkages to minimize walking distance and enhance the pedestrian environment.
- Policy T-1.5.2: Use innovative and effective walkway features to enhance the pedestrian environment.
- Policy T-1.5.3: Facilitate pedestrian circulation near high activity centers.
- Policy T-1.5.4: Encourage new development to provide pedestrian connections to adjacent open spaces, and trails.
- Policy T-1.6.1: Implement strategies and actions for enhanced bicycle circulation throughout the City.
- Policy T-1.6.2: Require provision of bicycle facilities in new developments, where appropriate.

- Policy T-1.6.3: Encourage transit operators to provide adequate bicycle accommodations.
- Policy T-1.6.4: Encourage new development to provide bicycle access to parks, schools, and transit stops in the design of new residential neighborhoods.
- Policy S-1.2.1: Promote pedestrian, bicycle and transit modes of travel to reduce air pollutant emissions from automobiles.
- Policy S-1.2.2: Encourage establishment of Transportation Demand Management (TDM) programs at major employment sites and shopping centers, including provision of preferential carpool parking and car share programs, bicycle lockers, BART shuttles, and jitney service.
- Policy S-1.2.3: Support the expansion and improvement of local and regional transit systems and ridesharing programs.
- Policy S-1.3.1: Encourage provisions for compatible live/work arrangements and telecommuting in residential areas.
- Policy S-1.3.2: Promote infill development to reduce automobile travel.
- Policy S-1.3.3: Support transit-oriented development to reduce automobile travel.
- Policy PF-1.4.1: Require new development to coordinate with all utility providers to assure quality services to all residents and businesses throughout the community.
- Policy PF-1.5.2: Promote the importance of recycling industrial and construction wastes.
- Policy POS-3.6.1: Encourage sustainable building practices for new development and the remodeling of existing buildings.

Implementation of these policies would ensure that this impact is less than significant.

Impact

3.6-2 Future development may require the construction of additional energy infrastructure facilities, the construction of which could cause significant environmental effects. (*Less than Significant*)

To meet potential energy demand for build out under the proposed General Plan, PG&E would be required to upgrade its existing infrastructure and construct new electrical substations in Concord as necessary. The company would also upgrade local gas lines to accommodate growth and increase supply and service reliability. Specific information regarding proposed improvements is proprietary to PG&E and cannot, therefore, be disclosed in this EIR (Scheiber, 2005).

Proposed General Plan Policies that Reduce the Impact

Implementation of the following policies would reduce potential impacts of construction on energy use facilities on the environment:

- PF-1.5.2: Promote the importance of recycling industrial and construction wastes.
- POS-3.6.1: Encourage sustainable building practices for new development and the remodeling of existing buildings.
- Policy LU-1.1.7: Upgrade the quality of new and existing multi-family housing by requiring high-quality design.

Implementation of these policies in the proposed General Plan would reduce the potential construction impacts related to new and/or expanded energy infrastructure facilities to a less than significant impact.

Impact

3.6-3 Future development may result in a substantial increase in transportation energy consumption due to the projected increases in peak hour trips associated with future population and employment growth. (*Less than Significant*)

Adding 17,770 new residents and 27,910 new jobs over the next 23 years would likely require additional energy for transportation uses within the City of Concord. Dowling Associates has estimated that at buildout under the proposed General Plan, the vehicle miles traveled (VMT) would increase from 2.4 million to 3.16 million per year, an increase of 32 percent.

Proposed General Plan Policies that Reduce the Impact

Implementation of the following proposed policies would result in impacts that are less than significant.

- Policy E-3.1.5: Promote transit-oriented development and activities that take advantage of nearby transit services, such as BART, bus services, and Buchanan Field Airport.
- Policy LU-1.2.4: Encourage neighborhood retail and service uses within convenient walking distance of all residential neighborhoods, where feasible.
- Policy LU-1.3.3: Support higher density and mixed use development in Downtown and near transit centers and corridors.
- Policy LU-3.1.5: Identify new areas for region-serving commercial uses at locations that take advantage of major transportation routes.
- Policy LU-4.2.3: Promote pedestrian-oriented urban design.

- Policy LU-4.2.9: Designate land around the Downtown BART Station as identified in the Downtown Strategic Plan as an “infill opportunity zone” and offer incentives for regional office uses, residential, and mixed uses such as reduced parking, to support use of mass-transit, especially within walking distance of the Downtown BART station.
- Policy GM-3.1.1: Evaluate the impact of proposed General Plan amendments on the availability of job and housing opportunities and the potential for reducing commute trips and average commute length.
- Policy GM-3.1.4: Accommodate home business uses that do not create residential neighborhood disruptions due to excessive traffic, parking, noise, pollution, odors, or unsightly storage or activities nor consistent with residential surroundings.
- Policy GM-3.3.1: Manage a Transportation Demand Management Program.
- Policy T-1.1.1: Maintain streets at optimal levels to provide safe and efficient travel.
- Policy T-1.1.2: Continue to promote a wide variety of transportation alternatives and modes to serve all residents and businesses to enhance the quality of life.
- Policy T-1.1.3: Maintain and upgrade transportation systems to provide smooth flow of traffic, minimize vehicle emissions, and save energy.
- Policy T-1.1.9: Establish efficient linkages to the regional transportation system for all modes of travel.
- Policy T-1.4.1: Coordinate with public transportation agencies to facilitate safe, efficient, and convenient access to transit.
- Policy T-1.4.2: Work with public transportation agencies to ensure adequate transit service.
- Policy T-1.6.1: Implement strategies and actions for enhanced bicycle circulation throughout the City.
- Policy T-1.6.2: Require provision of bicycle facilities in new developments, where appropriate.
- Policy T-1.6.3: Encourage transit operators to provide adequate bicycle accommodations.
- Policy T-1.6.4: Encourage new development to provide bicycle access to parks, schools, and transit stops in the design of new residential neighborhoods.
- Policy S-1.2.1: Promote pedestrian, bicycle and transit modes of travel to reduce air pollutant emissions from automobiles.

- Policy S-1.2.2: Encourage establishment of Transportation Demand Management (TDM) programs at major employment sites and shopping centers, including provision of preferential carpool parking and car share programs, bicycle lockers, BART shuttles, and jitney service.
- Policy S-1.2.3: Support the expansion and improvement of local and regional transit systems and ridesharing programs.
- Policy S-1.3.1: Encourage provisions for compatible live/work arrangements and telecommuting in residential areas.
- Policy S-1.3.2: Promote infill development to reduce automobile travel.
- Policy S-1.3.3: Support transit-oriented development to reduce automobile travel.

Impact

3.6-4 The delineation of the ULL may result in adverse impacts on energy use. (*Less than Significant*)

The City of Concord is planning to establish a voter-approved ULL that complies with the provisions of Measure J (2004), Contra Costa’s Transportation Sales Tax Expenditure Plan. Since the voter-approved ULL would limit the areas that could be developed through the year 2034, the impacts on energy use would be less than under development without the ULL because of the potential for General Plan amendments that could add area for development without voter approval.

Proposed General Plan Policies that Reduce the Impact

The following policy of the proposed General Plan addresses the ULL as it relates to municipal service providers:

- Policy GM-4.1.1: Delineate an ULL in the General Plan Land Use Diagram that is an area within which urban development will occur. For purposes of this policy, “urban development” means development requiring one of more basic municipal services, including, but not limited to, water service, sewer service, improved storm drainage facilities, fire hydrants and other physical public facilities and services.

Implementation of the policy listed above would ensure that this potential impact is less than significant.

This page intentionally left blank.

3.7 Geology, Soils, and Seismicity

This section discusses geologic and seismic issues related to the implementation of the proposed General Plan. The City's geologic setting and location relative to Bay Area faults are described, as well as how underlying materials could contribute to seismic hazards such as ground shaking, liquefaction, and landslides. The study area includes the proposed Urban Area General Plan planning area and all of the land encompassed by the proposed Urban Limit Line. Additional information is contained in the *Concord General Plan Update Map Atlas* (2004), the proposed General Plan, and the *Integrated Natural Resources Management Plan and Environmental Assessment* by the Naval Weapons Station Seal Beach (2002).

ENVIRONMENTAL SETTING

PHYSICAL SETTING

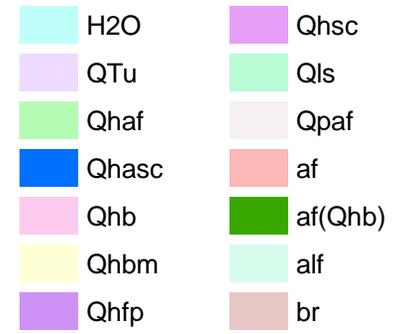
Geologic Setting

Concord lies within the physiographic region of California which is referred to as the Coast Ranges geomorphic province, much of which is composed of marine sedimentary and volcanic rocks that form the Franciscan Assemblage. Bordered by the Carquinez Strait to the north, and Mt. Diablo to the east, Concord and its vicinity are characterized by northwestern trending mountain ranges, ridges, and valleys. Elevations range from sea level along Suisun Bay to over 800 feet above mean sea level along the slopes of Mt. Diablo. Concord itself is largely underlain by Quaternary-age (1.6 million years old to the present) alluvial fan deposits originating from the Diablo Range and estuarine deposits from Suisun Bay, as depicted in **Figure 3.7-1**. Upland areas of Concord located along the foothills of Mt. Diablo are underlain by bedrock deposits consisting mainly of sandstone, shale, and mudstone.

Mineral Resources

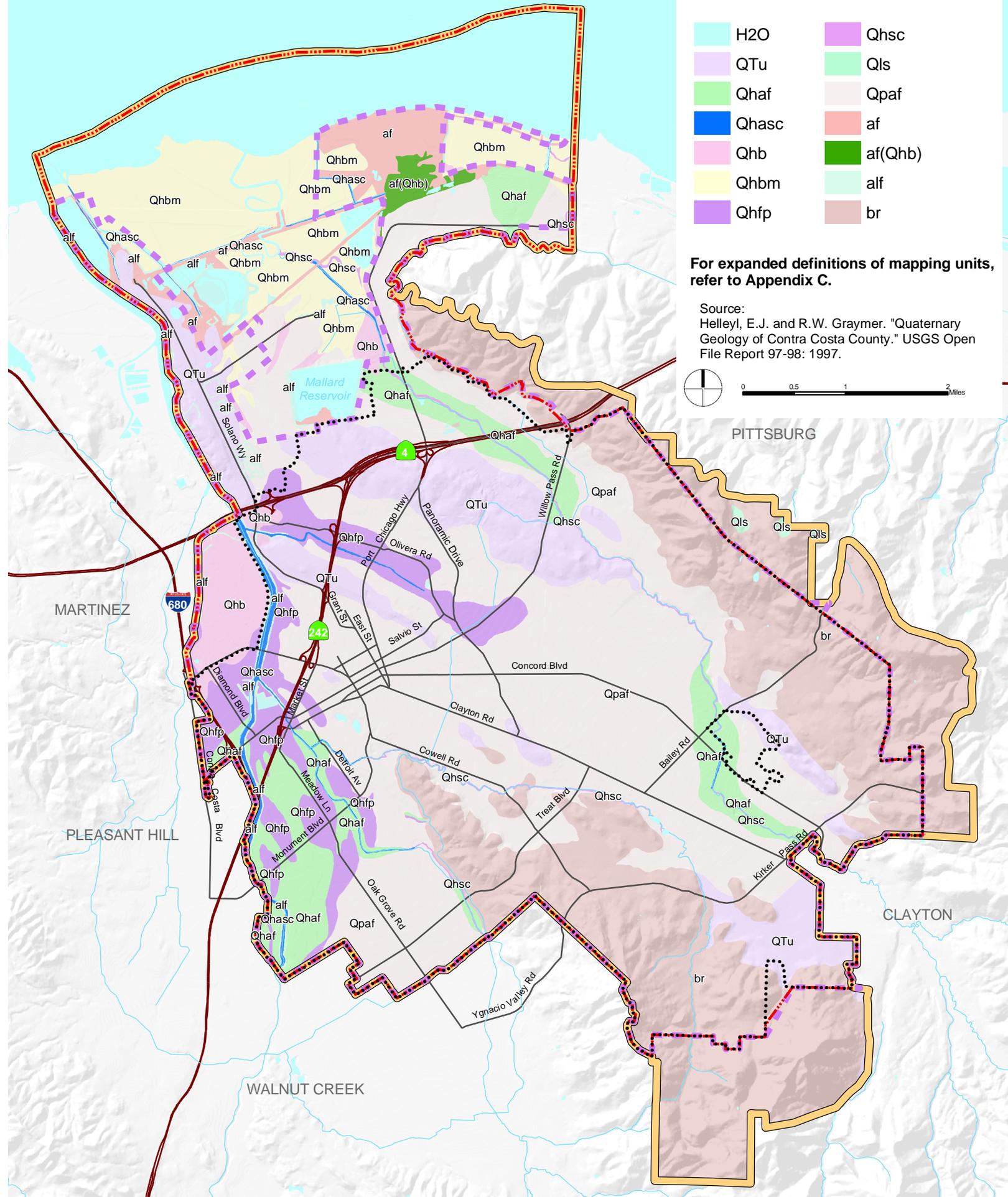
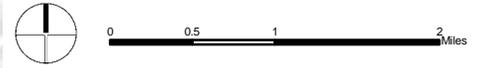
The California Department of Conservation, Geological Survey (CGS, formerly Division of Mines and Geology) has established Aggregate and Mineral Resource Zones (MRZs) in the San Francisco–Monterey Bay Region based on guidelines adopted by the California State Mining and Geology Board, as mandated by the Surface Mining and Reclamation Act of 1974 (Stinson, et al., 1983). Existing mineral and aggregate resources in Concord include alluvial sand and gravel deposits located throughout the City. Areas in which significant mineral deposits are present, or where a high likelihood for their presence exists include developed residential areas east of Clayton Road between Bailey and Kirker Pass (zoned low density residential), and along the southern city limits (zoned rural residential, parks, rural conservation). The Concord Naval Weapons Station (CNWS) has not been evaluated for potential mineral resources by the CGS, although mineral exploration and development at the CNWS included the development of a natural gas production well by Chevron in 1980. Concerns regarding security, sensitive biological resources, and subsidence have historically limited the potential development of mineral resources at the CNWS.

**Figure 3.7-1
Quaternary Geologic Materials**



For expanded definitions of mapping units, refer to Appendix C.

Source:
Helleyl, E.J. and R.W. Graymer. "Quaternary Geology of Contra Costa County." USGS Open File Report 97-98: 1997.

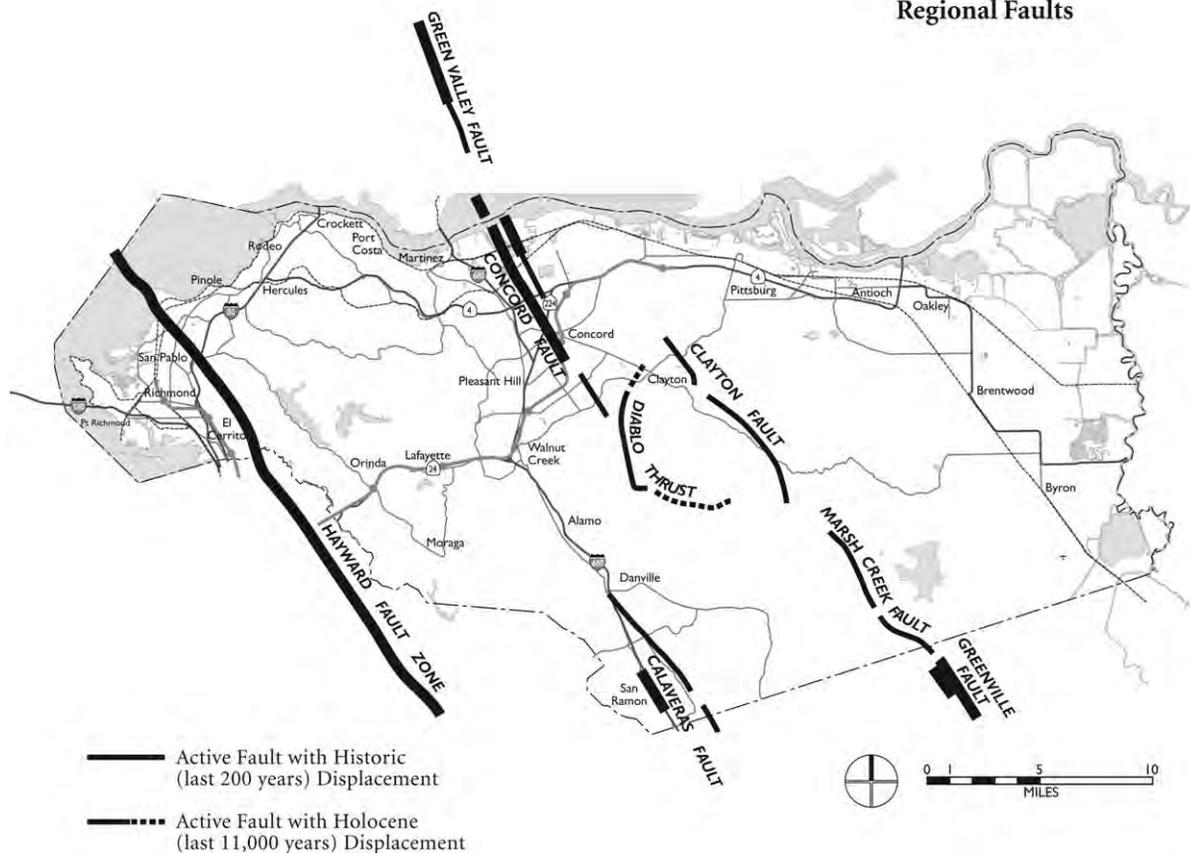


Seismicity

The San Francisco Bay Area contains both active and potentially active faults; the Hayward and San Andreas faults are the two principal active faults in the Bay Area. Earthquakes pose especially high risks in Concord because of the City’s close proximity to active faults. The Concord Fault is located within the city limits, and the Hayward fault is located approximately 15 miles west. The San Andreas Fault, located approximately 32 miles west of Concord, is a major structural feature in the region and forms a boundary between the North American and Pacific Tectonic plates. Other active faults in the region include the Rodger’s Creek, Calaveras, Diablo, and Marsh Creek-Greenville faults, as noted in **Figure 3.7-2**.

The seismic hazards discussed below include those hazards that could reasonably be expected to occur within Concord during a major earthquake on any of the Bay Area fault zones, especially the Concord fault. Depending on the location, underlying materials, and level of ground shaking, some hazards could be more severe than others.

Figure 3.7-2
Regional Faults



Source: Jennings, C.W., *Fault Activity Map of California and Adjacent Areas*, California Geological Survey (formerly California Division of Mines and Geology) Data Map No. 6, 1:750,000, 1994.

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 and nature of fault rupture can vary for different faults or even along different strands of the same fault. Surface rupture can damage or collapse buildings, cause severe damage to roads and other paved areas, and cause failure of overhead as well as underground utilities. Future faulting is generally expected along different strands of the same fault (CGS, 1997b). Ground rupture is considered more likely along active faults, which are referenced in **Table 3.7-1**.

Table 3.7-1: Active Faults near City of Concord

<i>Fault</i>	<i>Distance and Direction from Concord</i>	<i>Recency of Movement</i>	<i>Fault Classification</i>	<i>Historical Seismicity*</i>	<i>Maximum Moment Magnitude Earthquake (Mw)**</i>
Concord-Green Valley	Bisects City of Concord	Historic (1955) Holocene	Active	Historic active creep	6.9
San Andreas	30 miles west	Historic (1906; 1989 ruptures)	Active	M7.1, 1989 M7.9, 1906 M7.0, 1838 Many <M6	7.9
Hayward	14 miles west	Historic (1836; 1868 ruptures)	Active	M6.8, 1868 Many <M4.5	7.1
West Napa	13 miles northwest	Historic	Active	M5.2 2000	6.5
Calaveras	14 miles south	Historic (1861 rupture) Holocene	Active	M5.6–M6.4, 1861 M4–M4.5 swarms 1970, 1990	6.8
Rodgers Creek	20 miles northwest	Historic	Active	M6.7, 1898 M5.6, 5.7, 1969	7.0
Marsh Creek–Greenville	12 miles southeast	Historic (1980 rupture)	Active	M5.6 1980	6.9
Diablo	9 miles south	Historic	Active	Slip rate 3mm/yr	6.6

* Richter magnitude (M) and year for recent and/or large events. The Richter magnitude scale reflects the maximum amplitude of a particular type of seismic wave.

** Moment magnitude is related to the physical size of a fault rupture and movement across a fault. Moment magnitude provides a physically meaningful measure of the size of a faulting event (CGS, 1997b). The Maximum Moment Magnitude Earthquake (Mw), derived from the joint CGS/USGS Probabilistic Seismic Hazard Assessment for the State of California, 1996. (CGS OFR 96-08 and USGS OFR 96-706).

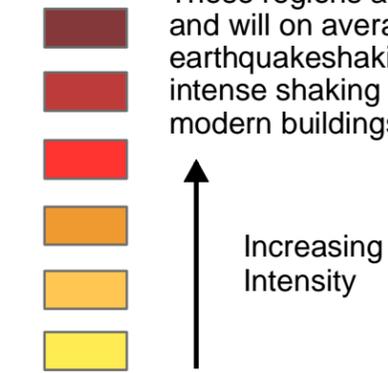
Source: Hart, 1997; Jennings, 1994; Peterson, 1996.

Fault rupture is displacement at the earth’s surface resulting from fault movement associated with an earthquake. Surface fault rupture is typically observed close to or on the trace of an active fault. The City of Concord is bisected by the active Concord fault. Areas within Concord, which are most likely to experience fault rupture from movement on the Concord Fault are located within an Alquist-Priolo Earthquake Fault Zone, as depicted on **Figure 3.7-3**. Extending approximately

Figure 3.7-3
Local Geologic and Seismic Hazards

Earthquake Shaking Potential

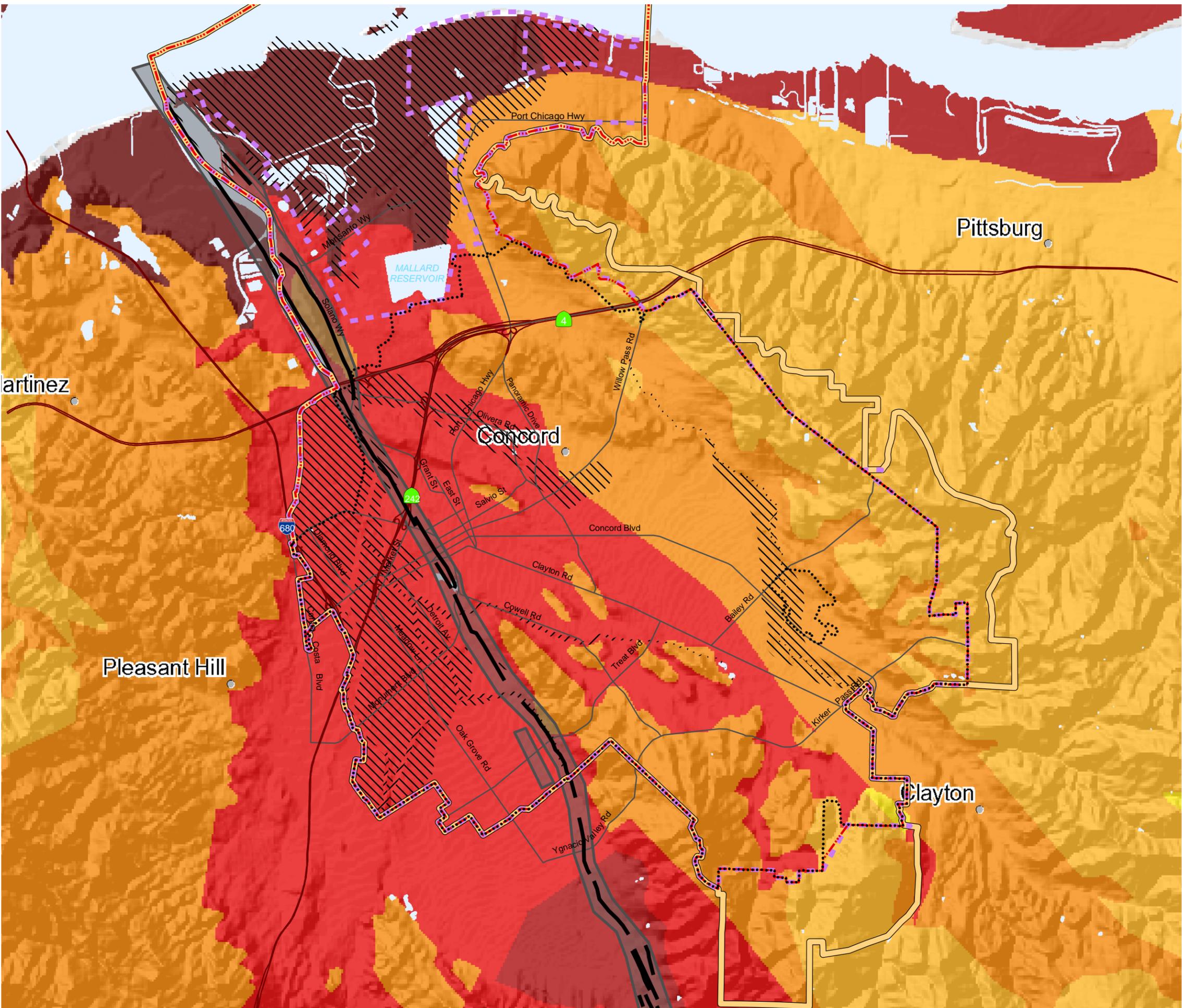
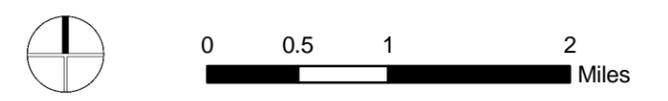
These regions are near major, active faults and will on average experience stronger earthquakeshaking more frequently. This intense shaking can damage even strong, modern buildings.



Liquefaction Potential

- Very High
- High
- Alquist-Priolo Fault Zone
- Concord Fault
- City Limits
- Sphere of Influence
- Proposed Urban Limit Line (ULL)
- Planning Area Boundary

Source:
 Estimated regions based on underlying geologic material, based on data from the California Association of Bay Area Governments, November 2004. Alquist-Priolo fault zone from the State of California, Department of Conservation, 1993.



1,000 to 2,500 feet wide, the Alquist-Priolo Earthquake Fault Zone was established by the California Geological Survey under the Alquist-Priolo Special Studies Zones Act of 1972. Development within this zone is strictly regulated, and detailed geologic and seismic evaluations are required to assess the potential for fault rupture hazard before a construction permit can be issued for most projects. Fault rupture hazards could severely limit potential future development within this zone.

Ground Shaking

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. Areas that are underlain by bedrock tend to experience less ground shaking than those underlain by unconsolidated sediments such as artificial fill or unconsolidated alluvial fill. The strongest ground shaking is anticipated to occur as a result of an earthquake on the Concord fault, due to its immediate proximity. However, ground shaking could affect areas hundreds of miles from an earthquake's epicenter. Earthquakes on the active faults (listed in **Table 3.7-1**) are expected to produce a range of ground shaking intensities throughout the Concord area. A major seismic event on any of these active faults could cause significant ground shaking in Concord, as experienced during earthquakes in recent history, namely the 1989 Loma Prieta earthquake (ABAG, 2005).

According to CGS probabilistic seismic hazard maps, peak ground acceleration within Concord could reach or exceed 0.7 g (Peterson et al., 2003). A probabilistic seismic hazard map represents the severity of ground shaking from earthquakes that has a 90 percent chance of not exceeding in 50 years (an annual probability exceedance of 1 in 475). It is "probabilistic" in the sense that the analysis takes into consideration the uncertainties in the size and location of earthquakes and the resulting ground motions that can affect a particular site, and expresses the probability of exceeding a certain ground motion. The CGS probabilistic seismic hazard map for 10 percent probability of exceedance in 50 years represents ground motions that geologists and seismologists do not think will be exceeded in the next 50 years. This probability level of ground shaking is used for formulating building codes and designing buildings in highly active seismic areas (Peterson et al., 1999).

The Modified Mercalli (MM) intensity scale is commonly used to measure earthquake effects due to ground shaking. The MM values for intensity range from I (earthquake not felt) to XII (damage nearly total); intensities ranging from IV to X could cause moderate to significant structural damage (see **Table 3.7-2**). Maximum anticipated ground shaking intensities in the City of Concord are depicted in **Figure 3.7-3**.

Table 3.7-2: Modified Mercalli Intensity Scale

<i>Intensity Value</i>	<i>Intensity Description</i>	<i>Average Peak Acceleration</i>
I	Not felt except by a very few persons under especially favorable circumstances.	0.0017 g*
II	Felt only by a few persons at rest, especially on upper floors on buildings. Delicately suspended objects may swing.	< 0.014 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.	< 0.014 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.	0.014–0.039 g
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.	0.039–0.092 g
VI	Felt by all, many frightened and run outdoors. Some heavy furniture moved; and fallen plaster or damaged chimneys. Damage slight	0.092–0.18 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.	0.18–0.34 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	0.34–0.65 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.	0.65–1.24 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.	> 1.24 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

* 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: Bolt, 1988; California Geological Survey, 2003.

Liquefaction

Liquefaction is a phenomenon whereby unconsolidated and/or near-saturated soils lose cohesion and are converted to a fluid state as a result of severe vibratory motion. The relatively rapid loss of soil shear strength during strong earthquake shaking results in temporary, fluid-like behavior of the soil. Soil liquefaction causes ground failure that can damage roads, pipelines, underground cables, and buildings with shallow foundations. Liquefaction more commonly occurs in looser, saturated materials. Areas susceptible to liquefaction are typically underlain by water-saturated, unconsolidated, loose, granular materials, and in unconsolidated or artificial fill sediments located in reclaimed areas along the margin of San Francisco Bay.

Regions within Concord that have high to very high levels of liquefaction susceptibility include Clayton Valley and areas along Suisun Bay, Pacheco Creek, Hastings and Belloma Slough, as depicted on **Figure 3.7-3**.

Earthquake-Induced Settlement

Settlement of the ground surface can be accelerated and accentuated by earthquakes. Hazards associated with earthquake-induced settlement would be present for projects involving cut-and-fill activities. During an earthquake, settlement can occur as a result of the relatively rapid rearrangement, compaction, and settling of subsurface materials (particularly loose, noncompacted, and variable sandy sediments). Settlement can occur both uniformly and differentially (i.e., where adjoining areas settle at different rates). Areas are susceptible to differential settlement if underlain by compressible sediments, such as poorly engineered artificial fill or Bay Mud. Areas susceptible to earthquake-induced settlement would include those underlain by thick layers of colluvial material or unengineered fill. Regions within Concord which may be susceptible to settlement include Clayton Valley and areas along Suisun Bay, Pacheco Creek, Hastings and Belloma Slough.

Tsunami

Tsunamis (seismic sea waves) are long period waves that are typically caused by underwater disturbances (landslides), volcanic eruptions, or seismic events. Areas that are highly susceptible to tsunami inundation tend to be located in low-lying coastal areas such as tidal flats, marshlands, and former bay margins that have been artificially filled but are still at or near sea level.

Tsunamis have been recorded in San Francisco Bay by the National Oceanographic and Atmospheric Administration (formerly U.S. Coast and Geodetic Survey). The highest wave that has been recorded for the Bay occurred in March 1964 as a result of the Alaskan earthquake. This wave reached a height of 7.5 feet just beyond the Golden Gate Bridge at Fort Point. A tsunami originating in the Pacific Ocean would lose much of its energy passing through San Francisco Bay, and available data indicates wave height would diminish as the tsunami traveled through the Golden Gate, Carquinez Strait, and Suisun Bay. Inundation by tsunami waves would therefore largely be restricted to open space areas along the shoreline of Suisun Bay, although waves could travel up Pacheco Creek and other sloughs, exposing areas along the immediate shoreline to inundation.

Geologic Hazards

Slope Failure

A landslide is a mass of rock, soil and debris displaced down slope by sliding, flowing, or falling. Ground failure is dependent on topography and underlying geologic materials, as well as factors such as rainfall, excavation, or seismic activities which can precipitate slope instability. Steep slopes and downslope creep of surface materials characterize areas most susceptible to landsliding. Landslides are least likely in topographically low alluvial fans and at the margin of the San Francisco Bay.

The highest susceptibility to landsliding in Concord exists in the upland areas along the flanks of Mt. Diablo, as shown on **Figure 3.7-4**. Landslide mapping of the Concord region has been limited however, and areas of undeveloped, steeply sloping terrain, such as within the Concord Naval Weapons Station, may also be prone to landslide hazards.

Erosion

Soil erosion is a process whereby soil materials are worn away and transported to another area, either by wind or water. Rates of erosion can vary depending on the soil material and structure, placement, and human activity. Soil containing high amounts of silt can be easily eroded, while sandy soils are less susceptible. Excessive soil erosion can eventually damage building foundations and roadways. Erosion is most likely to occur on sloped areas with exposed soil, especially where unnatural slopes are created by cut-and-fill activities. Soil erosion rates can be higher during the construction phase. Typically, the soil erosion potential is reduced once the soil is graded and covered with concrete, structures, or asphalt. Soils in Concord that are highly susceptible to erosion include areas of steeply sloping topography, particularly when vegetation and superficial material is stripped for construction purposes.

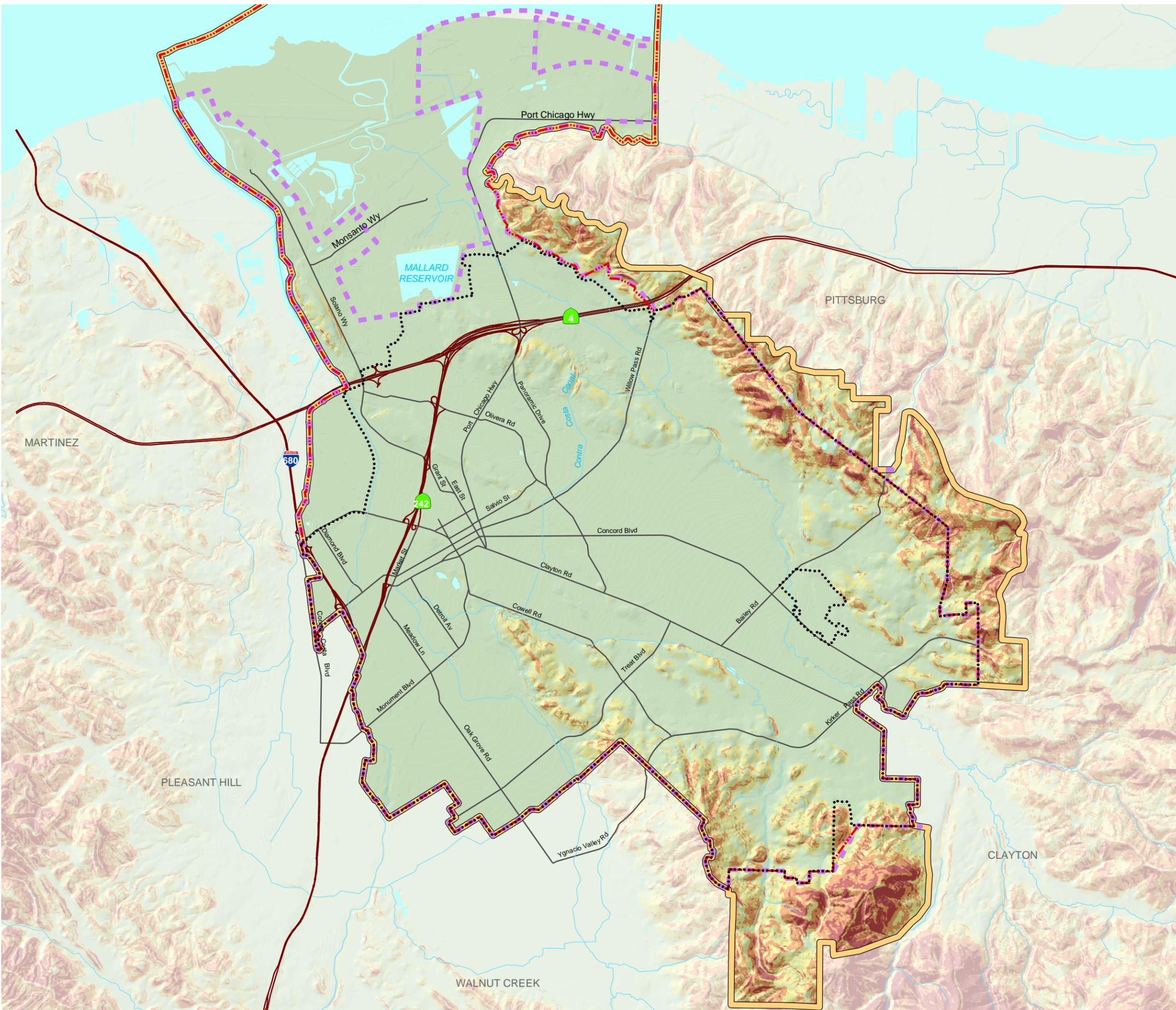
Settlement

Settlement is the depression of the bearing soil when a load, such as that of a building or new fill material, is placed upon it. Soils tend to settle at different rates and by varying amounts depending on the load weight, which is referred to as differential settlement. Areas are susceptible to differential settlement if underlain by compressible sediments, such as poorly engineered artificial fill or the Bay Mud present in the marshland on the San Francisco Bay margin. Areas of Concord most susceptible to settlement include Clayton Valley and areas along Suisun Bay, Pacheco Creek, Hastings and Belloma Slough.

Expansive Soils

Expansive soils possess a “shrink-swell” characteristic. 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. Areas of Concord most susceptible to settlement include Clayton Valley and areas along Suisun Bay, Pacheco Creek, Hastings and Belloma Slough, or other areas underlain by Bay Muds and soils containing a high percentage of clays.

Figure 3.7-4
Slopes



-  0 - 15%
-  >15 - 30%
-  >30 - 50%
-  + 50%
-  City Limits
-  Sphere of Influence
-  Proposed Urban Limit Line (ULL)
-  Planning Area Boundary

Source:
Percent slope derived from United States Geological Survey
(USGS) 10-meter digital elevation models, 1997.



REGULATORY SETTING

Alquist-Priolo Earthquake Fault Zoning Act

The Alquist-Priolo Earthquake Fault Zoning Act (formerly the Alquist-Priolo Special Studies Zones Act), signed into law in December 1972, requires the delineation of zones along active faults in California. The purpose of the Alquist-Priolo Act is to regulate development on or near fault traces to reduce the hazard of fault rupture and to prohibit the location of most structures for human occupancy across these traces. Cities and counties must regulate certain development projects within the zones by, for example, withholding permits until geologic investigations demonstrate that development sites are not threatened by future surface displacement (Hart, 1997). Surface fault rupture is not necessarily restricted to the area within a Fault Rupture Hazard Zone, as designated under the Alquist-Priolo Act. As noted, the Concord fault bisects central Concord and portions of this areas are located within an Alquist-Priolo Earthquake Fault Zone (see **Figure 3.7-3**).

Hospital Facilities Seismic Safety Act of 1973

To ensure that hospitals in California conform to high construction standards, the Alfred E. Alquist Hospital Facilities Seismic Safety Act (HSSA) was passed in 1973. The intent of the HSSA is to assure that hospitals are reasonably capable of providing services to the public after a disaster. The HSSA requires the establishment of rigorous seismic design regulations for hospital buildings and requires that new hospitals and additions to hospitals have the capacity, as far as is practical, to remain functional after a major earthquake.

Seismic Evaluation and Retrofit Regulations (Senate bill 1953)

Senate Bill (SB) 1953, passed in 1994, requires that all existing hospital buildings providing general acute care as licensed under provisions of Section 1250 of the California Health and Safety Code, be in compliance with the intent of the HSSA by the year 2030.

Seismic Hazards Mapping Act

The Seismic Hazards Mapping Act 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 is 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. Geotechnical investigations conducted within Seismic Hazard Zones must incorporate standards specified by CGS Special Publication 117, Guidelines for Evaluating and Mitigating Seismic Hazards (CGS, 1997c). The City of Concord has not been evaluated by the CGS for potential designation as a Seismic Hazard Zone for earthquake-induced landslides or liquefaction.

California Building Code

The California Building Code is another name for the body of regulations known as the California Code of Regulations (CCR), Title 24, Part 2, which is a portion of the California

Building Standards Code (CBSC, 1995). Title 24 is assigned to the California Building Standards Commission, which, by law, is responsible for coordinating all building standards. Under state law, all building standards must be centralized in Title 24 or they are not enforceable (Bolt, 1988).

Published by the International Conference of Building Officials, the Uniform Building Code (UBC) is a widely adopted model building code in the United States. The California Building Code incorporates the UBC by reference and includes necessary California amendments. These amendments include criteria for seismic design. Concord and the greater San Francisco Bay Area are located within Zone 4 which, of the four seismic zones designated in the United States, is expected to experience the greatest effects from earthquake ground shaking and therefore has the most stringent requirements for seismic design.

Local Plans and Policies – City of Concord

The City of Concord undertook a policy initiative to adopt and implement a Local Hazard Mitigation Plan (LHMP), which was adopted by the City Council in July 2005. The LHMP was prepared in order to ensure that emergency service providers are adequately prepared to respond to a major seismic event on the Concord or other Bay area fault. This first part of the City of Concord's two-part LHMP is a Multi-jurisdictional Regional Hazard Mitigation Plan entitled, "Taming Natural Disasters," which was developed in cooperation with other local agencies and the Association of Bay Area Governments. The second part is a Local Annex to the regional plan, with priorities and strategies specific to the City of Concord. The Annex also describes the City's efforts during the development of the LHMP, including participation in workshops, staff training and public input; the Hazard and Risk assessment process and the result of the hazard assessment; the process for identifying mitigation activities and setting priorities; as well as the process for maintaining and updating the Plan.

IMPACT ANALYSIS

SIGNIFICANCE CRITERIA

Implementation of the proposed Urban Area General Plan and approval of the proposed Urban Growth Boundary would have a potentially significant impact if it increased exposure of people or structures to the risk of property loss, injury, or death involving:

- Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault (risk or exposure to fault rupture may result if structures intended for human occupancy are constructed over, or within 50 feet of an active fault trace);
- Strong seismic ground shaking;
- Seismic-related ground failure, including liquefaction;
- Landslides or mudflows;
- Substantial erosion or unstable soil conditions from excavation, grading or fill; or

- Risk from settlement and/or subsidence of the land, or expansive soils.

METHODOLOGY & ASSUMPTIONS

The analysis considered proposed General Plan policies and goals, geologic and seismic conditions within the City, and applicable regulations and guidelines. The proposed General Plan would facilitate development and growth within Concord's Urban Area. Consideration is given to erosion associated with future development, related construction activities, as well as potential geologic hazards posed by slopes and underlying geologic materials. The potential for seismic activity to affect people and structures within the City of Concord, the protection from seismic hazards provided by proposed General Plan policies, and the ability of emergency service providers to respond during a seismic event are assessed.

SUMMARY OF IMPACTS

Potential seismic impacts associated with implementation of the proposed General Plan include surface fault rupture, ground shaking, liquefaction, tsunamis, and differential settlement, while potential geologic impacts include erosion, slope instability, and settlement. Subsidence of the land surface, frequently associated with groundwater overdraft, mining, or removal of oil and natural gas, has not historically impacted the City of Concord and the probability of subsidence would not be anticipated to increase under the proposed Urban Area General Plan.

IMPACTS AND MITIGATION MEASURES

Impact

- 3.7-1 In the event of a major earthquake in the region of Concord, surface fault rupture and seismic ground shaking could potentially injure people and cause collapse or structural damage to existing and proposed structures. Fault-rupture and ground shaking could potentially expose people and property to seismic-related hazards, including localized liquefaction and related ground failure. (Less than Significant with Mitigation)**

The City of Concord will likely experience at least one major earthquake (greater than moment magnitude 7) within the next 30 years. The intensity of such an event will depend on the causative fault and the distance to the epicenter, the magnitude, and the duration of shaking. In comparison to areas underlain by bedrock in the Diablo Range foothills, ground shaking intensity could be higher in the areas where development overlies Bay Mud, artificial fill, and alluvial deposits. Based on the MM intensity scale, damage in areas immediately bordering the fault and those underlain by estuarine deposits near the mouth of Pacheco Creek and along the shoreline of Suisun Bay could be significant. Ground shaking within the Concord Fault Zone, especially in areas where loose alluvial materials underlie the site, could cause significant damage as noted on **Figure 3.7-3**.

Surface fault rupture could occur along the active trace of the Concord fault, affecting a large section of Concord with greatest impact on Buchanan Air Field and the office and commercial

district near Highway 242. The amount and location of surface displacement would depend on the magnitude and nature of the seismic event. In some cases, surface fault rupture could damage buildings beyond repair, heavily damage roadways, and severely disrupt underground utility service.

Liquefaction could occur in lowland areas underlain by young and old alluvial materials, especially those saturated by shallow groundwater or surface water. Unreinforced masonry buildings and those constructed prior to the 1930s would be expected to incur the greatest structural damage. Damage from earthquake-induced ground failure could be high in buildings constructed on improperly engineered fills or saturated alluvial sediments. Earthquake-induced landslides could occur in unstable upland areas where landslide stabilization measures have not been employed. Developed areas along the Suisun Bay Shoreline, including the Port-related areas of the Concord Naval Weapons Station, may also be subject to tsunami inundation.

A large earthquake on the Concord or another active Bay Area fault would also place serious demands on emergency service providers in the City. In the immediate aftermath, ruptured gas lines, downed power lines, collapsed buildings, damaged or impassable roadways, and injured citizens would tax the resources of the fire department, police department, and area hospitals.

Proposed General Plan Policies that Reduce the Impact

The following proposed General Plan policies would minimize potential seismic hazards:

- Policy S-3.1.1: Require as part of the development review process a thorough evaluation of geologic-seismic and soils conditions and risks.
- Policy S-3.1.2: Require all new development to design structures and buildings pursuant to applicable state and local standards and codes.
- Policy S-3.1.3: Require geologic studies to be conducted on all structures, including those not for human occupancy, located above and below ground whenever a project is located within an Earthquake Fault Zone as identified by the California Geologic Service.
- Policy S-3.1.4: Ensure that the design of roads, pipelines and other public facilities and utilities that cross the Concord Fault accommodate the effects of tectonic creep.
- Policy S-3.1.5: Cooperate with appropriate government agencies and public and private organizations to address seismic hazards.
- Policy S-3.2.3: Require soils and geologic hazards analysis and mitigation as part of development project review.
- Policy S-3.2.4: Regulate all development, including remodeling or structural rehabilitation, to assure adequate mitigation of safety hazards on sites having a history or

threat of slope instability, erosion, subsidence, ground failure, ground rupture, and/or liquefaction.

- Policy S-7.1.3: Establish public and private partnerships and cooperate with other emergency providers to deliver safe and effective emergency response.
- Policy S-8.1.1: Maintain an ongoing program for disaster response, including participation in all aspects of emerging, new high-technology solutions.
- Policy S-8.1.2: Coordinate disaster response planning with surrounding cities, agencies, and Contra Costa County.
- Policy S-8.1.3: Work with critical use facilities (i.e., hospitals, schools, public assembly facilities, transportation services) to assure that they can provide alternative sources of electricity, water, and sewerage in the event that regular utilities are interrupted in a disaster.
- Policy S-8.1.4: Implement the City's Local Hazards Mitigation Plan, consistent with the guidelines of the Federal Emergency Management Agency (FEMA) and the Disaster Act of 2000, and seek funding under FEMA's Hazard Mitigation Grant Program.

Mitigation Measure

In addition to the above proposed policies, in order to address hazards specifically posed by development in tsunami-prone areas, the following mitigation should be incorporated into the General Plan.

3.7(a) General Plan Policy S-3.2.4, which requires regulation of development to assure adequate mitigation of safety hazards on sites subject to seismic hazards, shall be amended to incorporate the potential threat of a tsunami.

Implementation of Mitigation Measure 3.7(a) and the policies listed above would reduce potential Impact 3.7-1 to less-than-significant levels.

Impact

3.7-2 **Development under the proposed General Plan could be subjected to geologic hazards, including expansive soils, landslides, differential settlement and erosion.**
(Less than Significant)

Typically, soils that exhibit expansive characteristics comprise the upper five feet of the surface. The effects of expansive soils could damage foundations of above-ground structures, paved roads and streets, and concrete slabs. Expansion and contraction of soils, depending on the season and the amount of surface water infiltration, could exert enough pressure on structures to result in cracking, settlement, and uplift. Expansive soils would be expected in low-lying alluvial valleys and along the shoreline of Suisun Bay.

Landsliding due to static forces (not seismically induced) could occur in developed and non-developed upland areas along the outskirts of Concord (See **Figure 3.7-4**). Landslide potential increases in areas where construction activity, such as road building or grading for building sites, reduces slope support or in areas where residential development has led to ground saturation or removal of adequate lateral support. Over-steepened slopes, slope saturation in areas of heavy rainfall, and removal of slope vegetation can also increase landslide potential. Instability of existing slopes could expose people to rockfall hazards and property damage. Failure in cut slopes produced during grading could cause damage and disrupt construction projects. Landslides can damage a building beyond repair by dislodging the structure from the foundation or causing collapse as the slope beneath fails and moves downslope. Landslides in slopes above buildings can generate gradual or sudden downslope deposition of rock and debris that can bury or dislodge structures, resulting in injury and sometimes death.

Settlement could include Clayton Valley and areas along Suisun Bay, Pacheco Creek, Hastings and Belloma Slough, depending on the underlying soil materials. Settlement could also occur in soils in poorly engineered construction fills. Differential settlement could damage building foundations, affect underground utilities, and cause settlement in streets and roads. Settlement would be a concern in redevelopment areas that have not previously supported structures and where new structures would place loads heavier than the soils could tolerate.

Erosion could occur in sloped upland areas undergoing development, at construction sites, and in previously developed areas with earthen slopes. In Concord, areas most susceptible to erosion of soil include those areas where new development is planned in upland or hilly areas and which would require extensive grading.

Proposed General Plan Policies that Reduce the Impact

The following proposed policies would minimize potential geologic hazards:

Policy LU-1.1.1: Encourage the County and adjacent cities to prohibit new development on designated ridgelines and in protected viewsheds, but allow appropriate beneficial and reasonable open space uses in these areas, subject to standards for viewshed protection that will preserve the open space character of areas that are visible from Concord's neighborhoods and commercial districts.

Policy LU-10.1.3: Work with the County and adjacent jurisdictions to ensure that zoning and subdivision regulations applicable to all development visible from within the City's planning area reflect General Plan Policy direction.

Actions the City will request of the County and adjacent jurisdictions include:

- *Designating protected ridgelines, creeks, and other significant resource areas, along with daylight plane or setback standards;*
- *Defining protected viewsheds; and*