CITY OF BENICIA, CALIFORNIA

Eastern Gateway Mixed-Use Districts

INITIAL STUDY &
MITIGATED NEGATIVE DECLARATION

NOVEMBER 2021

Douglas Herring & Associates
Environmental, Policy, and Planning Services

Eastern Gateway Mixed-Use Districts

Initial Study/Mitigated Negative Declaration

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Environmental Checklist Form

1. Project Title: Eastern Gateway Mixed-Use Districts

2. Lead Agency Name and Address:

City of Benicia
Community Development Department, Planning Division
250 East L Street
Benicia, CA 94510

3. Contact Person and Phone Number:

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(707) 746-4324
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4. Project Location:

The proposed project area encompasses approximately 13.5 acres of an existing commercial corridor in the City of Benicia at the intersection of Military East and East Fifth Street. The project area is comprised of 53 parcels Regional access to the project area is by Interstate 780, located immediately adjacent to the northern end of the project area.

5. Project Sponsor's Name and Address:

City of Benicia
Community Development Department, Planning Division
250 East L Street
Benicia, CA 94510

6. Existing General Plan Designations:

General Commercial
Business and Professional Office Commercial
High-Density Residential
Medium-Density Residential
Low-Density Residential
Public/Quasi-Public

7. Existing Zoning:

CG – General Commercial
CO – Office Commercial
RS – Single-Family Residential
RM – Medium-Density Residential
RH – High-Density Residential

8. Introduction

This Initial Study and Mitigated Negative Declaration (IS/MND) has been prepared in compliance with the California Environmental Quality Act (CEQA) (Public Resources Code Section 21000 *et seq.*) in order to evaluate the potential adverse effects to the environment that could result from implementation of the project described below that is proposed by the City of Benicia. Due to the programmatic nature of the proposed zoning and general plan amendments described herein, this document is a program IS/MND, as provided for in Section 15168 of the *CEQA Guidelines*. A program Environmental Impact Report (EIR) or IS/MND may be prepared on a series of actions that can be characterized as one large project and are related either geographically, as logical parts in the chain of contemplated actions, or as individual activities carried out under the same authorizing statutory or regulatory authority and having generally similar environmental effects that can be mitigated in similar ways. In addition, a programmatic CEQA document may be prepared in connection with issuance of rules, regulations, plans, or other general criteria to govern the conduct of a continuing program, which is applicable to the proposed zoning and general plan amendments evaluated in this IS/MND.

While the proposed Eastern Gateway Mixed-Use Districts that is the subject of this document does not include any specific development projects, it is intended to facilitate the streamlining of environmental review and project entitlement of future development projects that are proposed in the Eastern Gateway planning area in accordance with the proposed new general plan policies and programs and zoning regulations. Because no specific project is currently proposed, it is not feasible to provide a final, comprehensive environmental review of specific developments that may be proposed in the future. However, at the programmatic level that is the thrust of this document, certain types of potential impacts can be anticipated, and mitigation measures can be identified and adopted that will apply to future projects in the Eastern Gateway area that conform with the new zoning regulations and are subject to compliance with CEQA. This will allow the City to streamline the environmental review of future projects, when applicable, focusing on potential site-specific and/or project-specific environmental impacts that have not already been addressed in this IS/MND. Future development proposals will be evaluated in light of this Program IS/MND to determine whether an additional environmental document must be prepared.

9. Description of Project:

The City of Benicia is proposing to adopt zoning and general plan amendments to establish mixed-use zoning in an existing downtown commercial district, referred to as the Eastern Gateway. The new mixed-use zoning will accommodate new housing in this area and streamline approval of new housing development. The proposed Eastern Gateway zoning and general plan amendments are funded in part by a State grant program established by Senate Bill 2 (SB2) in 2017 to fund local government planning efforts to streamline housing approvals and accelerate housing production in order to reduce the housing shortage in California. The location of the project is shown in Figure 1.

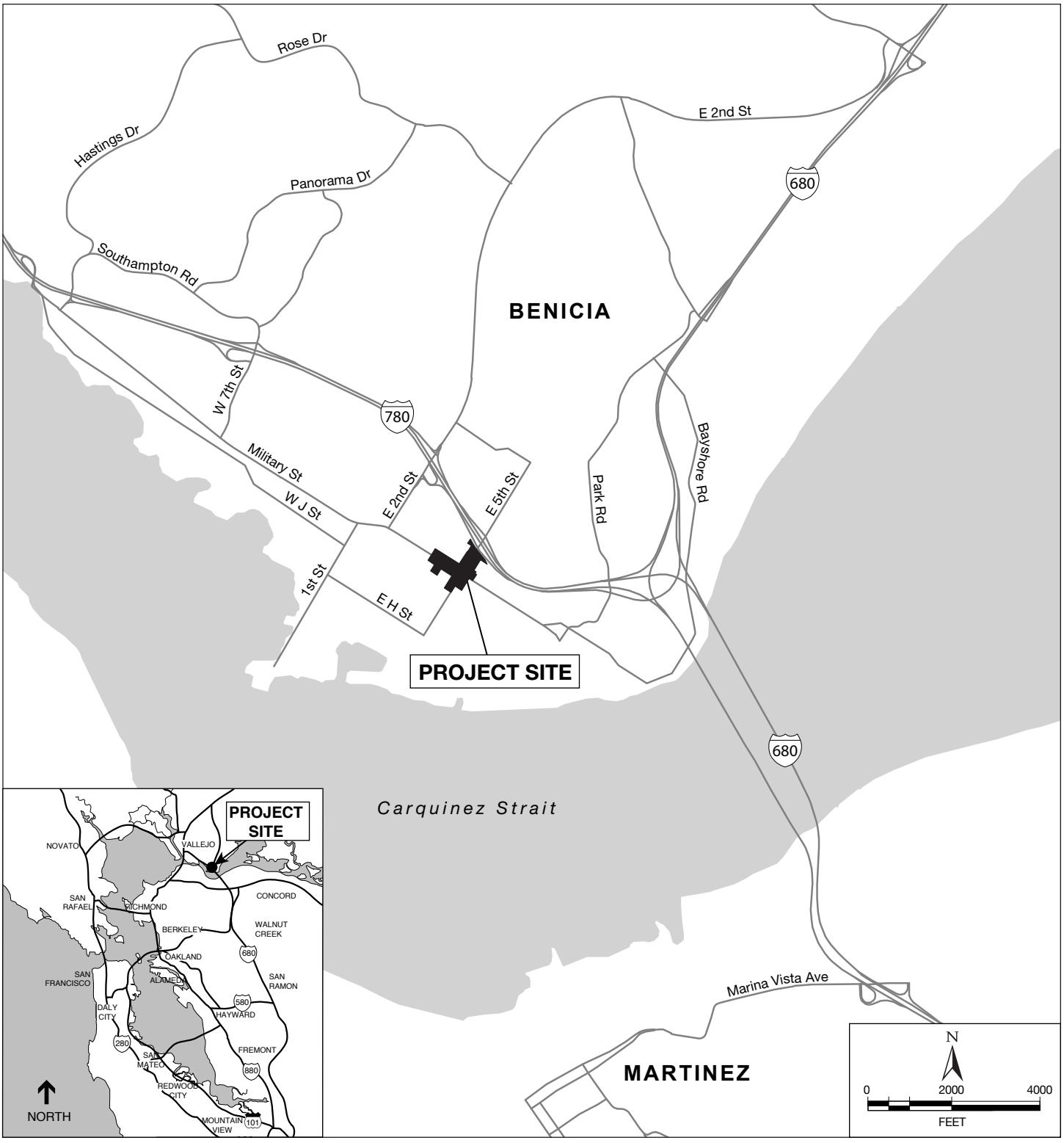

Figure 1

Project Site Location

Source: Douglas Herring & Associates

The project area encompasses portions of approximately eight city blocks; it is focused on the area around the intersection of Military East and East Fifth Street, as shown in Figure 2. It encompasses a primary study area, which is predominantly zoned General Commercial (CG) and is developed with a mix of commercial and residential uses, as well as a secondary study area that contains single-family homes, a church, and several multi-family residential properties.

CEQA requires the City to prepare a buildout projection that estimates the amount of new development that may occur from the proposed zoning and general plan amendments. As shown in Table PD-1, this buildout projection estimates a net increase of 229 new dwelling units in the study area (481 persons) through 2040. The buildout projection also estimates 7,461 square feet of new non-residential floor area during this same time period.

Table PD-1
Eastern Gateway Study Buildout Projection

Residential Uses	
Existing dwelling units in study area (2021)	42 units
Future build-out units in study area (2040)	271 units
Existing to buildout net change in dwelling units	229 units
Net population increase[1]	481 persons
Non-Residential Uses	
Existing non-residential floor area in study area (2021)	100,580 sq. ft.
Future build-out non-residential floor area in study area (2040)	108,041 sq. ft.
Existing to buildout net change in non-residential floor area	7,461 sq. ft.
Net change in jobs[2]	22 jobs

[1] Assumes 2.1 persons per household
[2] Assumes 1 job per 333 sq. ft. of floor area

This buildout projection is the foreseeable maximum development that can reasonably be expected to occur in the Eastern Gateway Study Area through the plan horizon year (2040). The buildout projection takes into consideration existing land uses within the study area and realistic development potential on individual parcels. Based on a site-specific analysis of each parcel in the study area, the buildout analysis estimates that 29 of the 48 parcels in the study area would be redeveloped with residential and mixed-use development. New development would occur on parcels totaling approximately 8 acres within the 13.5-acre study area.

The proposed zoning text and general plan amendments are intended to implement the Eastern Gateway Vision and Zoning District Approach that was developed during the course of a series of virtual community workshops, study sessions before the Planning Commission, and a

Figure 2

Project Area

Source: Bottomley Associates

community open house. The proposed zoning text and general plan amendments would consist of the following:

Summary of General Plan Amendments

The proposed General Plan amendments include:

- Establishment of two new land use categories, Mixed Use Infill and Mixed Use Limited, which would align with the new zoning regulations. The proposed land use designations correspond to the proposed zoning districts shown in Figure 3; and
- A new goal, with corresponding policies and programs, that would establish a mixed-use activity center with new multi-family housing in the Eastern Gateway Study Area.

The proposed General Plan amendments would address key community priorities such as a mix of housing, shops, and services that support the neighborhood; a range of housing types and incomes; compatibility of infill development with regard to height, size, and architectural detail; outdoor amenities; community benefits; pedestrian enhancements; bicycle enhancements; traffic calming; and parking.

Summary of Zoning Ordinance Amendments

The proposed amendments to the Zoning Ordinance would partially implement the Eastern Gateway Vision and the proposed new General Plan goal by establishing new land use regulations that accommodate the type of development and uses that are envisioned. The amendments would include the following:

- Two new mixed-use zoning districts, Mixed Use Infill (MU-I) and Mixed Use Limited (MU-L)—shown in Figure 3—to be added to Chapter 17.26 (Mixed-Use Districts) of the Benicia Municipal Code;
- A new Community Benefits Program, to be added to Chapter 17.70 (General Regulations); and
- Targeted amendments to other chapters in the Zoning Ordinance, notably Off-Street Parking and Loading Regulations (Chapter 17.74) and Design Review (Chapter 17.108).

These regulations will address building design, building placement, allowed uses, site access, sidewalks and street trees. Details of the proposed amendments are provided below.

Details of General Plan Amendments

The City of Benicia established the Eastern Gateway Area as a Priority Development Area (PDA) in 2020. PDAs are places near public transit that are planned for new homes, jobs and community amenities, and are one of the strategies that comprise *Plan Bay Area 2040*, the Regional Transportation Plan (RTP) and Sustainable Communities Strategy (SCS) for the San Francisco Bay Area adopted by the Metropolitan Transportation Commission (MTC) and the Association of Bay Area Governments (ABAG). *Plan Bay Area 2040* was developed in coordination with the Bay

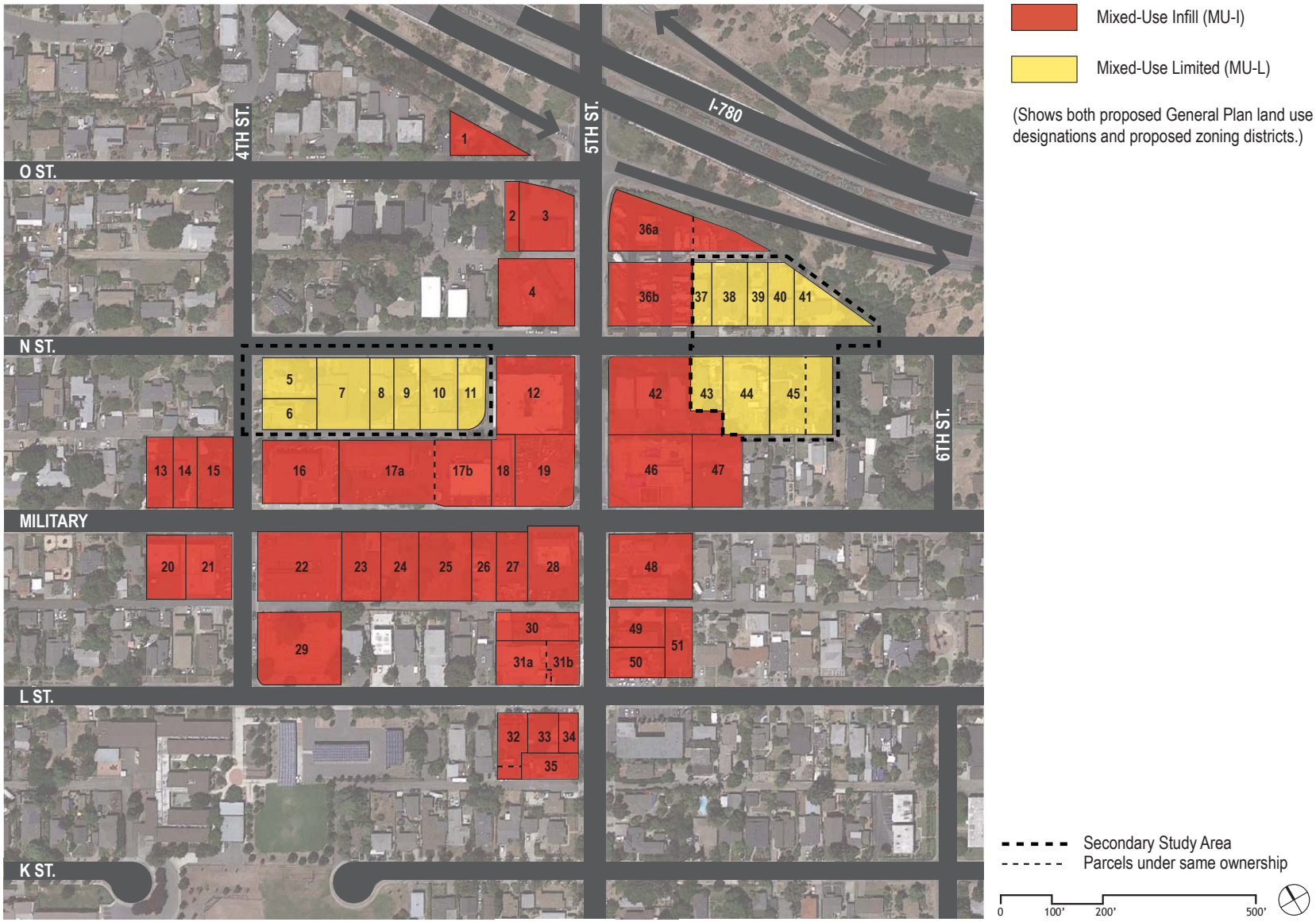

Figure 3

Proposed Mixed-Use Districts

Source: Bottomley Associates

Area's other two regional government agencies, the Bay Area Air Quality Management District (BAAQMD) and the San Francisco Bay Conservation and Development Commission (BCDC).

The proposed General Plan amendments would foster new residential and commercial development within the Eastern Gateway PDA, consistent with the RTP/SCS, which calls for focused housing and job growth around high-quality transit corridors. The amendments would create two new General Plan land use designations: Mixed Use Infill and Mixed Use Limited.

The permitted uses in the Mixed Use Infill land use designation would include residential, retail, office, public, and quasi-public uses. Its purpose is to encourage the production of new multifamily housing; accommodate a diversity of neighborhood-serving businesses; encourage a mixed-use development pattern that supports walking, biking and transit; and ensure that the design of infill development is sensitive to its surrounding context. The Mixed Use Infill category permits a maximum FAR of 2.0 for residential projects (included mixed-use) and 1.2 for non-residential projects. Maximum density is 44 units per gross acre, with additional density allowed for projects providing community benefits.

The Mixed Use Limited category would allow residential, limited neighborhood-serving commercial, public, and quasi-public uses. Its purpose is to provide locations for smaller-scale multifamily housing types and limited commercial uses in close proximity to stores, services, and public transportation. The Mixed Use Limited category permits a maximum FAR of 1.0, with 1.5 allowed for four-story projects as provided for in the Zoning Ordinance amendments. Maximum density is 30 units per acre, with up to four multifamily dwelling units allowed on an existing parcel regardless of the parcel size.

In addition to creating two new General Plan land use designations, the proposed General Plan amendments would add the following new goal and policies to encourage new development within the PDA:

GOAL 2.14: **Establish a mixed-use activity center with new multifamily housing and commercial uses in the Eastern Gateway Area.**

POLICY 2.14.1: Maintain and enhance a mix of housing, shops, and service businesses that support a diverse and thriving community.

Program 2.14.A: On Military East and East Fifth Street, encourage the development of new mixed-use projects with multifamily units above neighborhood-serving ground floor commercial uses.

Program 2.14.B: Monitor land use in the Eastern Gateway Area as existing uses change and properties are developed. Amend the Zoning Ordinance as needed to ensure that the desired mix of commercial and residential uses is maintained.

POLICY 2.14.2: Provide for a variety of housing types, affordable to a range of household incomes, including workforce housing, senior housing, artist housing and a mix of rental and owner-occupied units.

Program 2.14.C: Establish a citywide policy or program to ensure the availability of deed-restricted below-market-rate dwelling units to qualifying households.

POLICY 2.14.3: Ensure that infill development is carefully designed to fit into and complement its surrounding context.

Program 2.14.D: Encourage applicants to incorporate a variety of building heights, sizes, and architectural details into proposed projects to create visual interest and provide a diversity of building forms.

POLICY 2.14.4: Increase outdoor amenities and open space in the Eastern Gateway Area

Program 2.14.E: Identify opportunities to increase access to parks and recreational amenities within the immediate vicinity of the Eastern Gateway Area

Program 2.14.F: Explore options to enhance public access to and enjoyment of the East N. Street Creek.

Program 2.14.G: Encourage applicants to incorporate enhanced landscaping, courtyards, outdoor seating, and green infrastructure features into proposed projects.

POLICY 2.14.5 Allow increased intensity for development projects that incorporate community benefits beyond minimum requirements. Ensure community benefits are provided within or near to the Eastern Gateway Area.

Program 2.14.H: Periodically review the community benefit program in the Zoning Ordinance and assess if revisions are needed to improve program effectiveness.

Program 2.14.I: Consider if the Community Benefit Program should be expanded to other areas and types of projects in the city.

Program 2.14.J: By 2025, adopt an Infrastructure Master Plan with specific with specific infrastructure improvements and funding mechanisms identified to address public realm needs and serve the uses envisioned for the Eastern Gateway Area. Under this Plan, the City will assume a leadership role to provide an integrated and coordinated system of infrastructure improvements. The City will consider ways to optimize available funds, including public and matching fund sources, to provide the needed public infrastructure.

POLICY 2.14.7 Safely accommodate all modes of travel, including private vehicles, bus transit, bicyclists, and pedestrians.

Program 2.14.K: By 2025, adopt an Infrastructure Master Plan with specific facilities, improvements, and funding mechanisms identified for high-quality bicycle and pedestrian infrastructure within the Eastern Gateway Area and connecting it to other areas, such as downtown and the civic center campus.

Program 2.14.L: Explore new funding sources to improve sidewalk conditions, enhance pedestrian safety, install street trees, provide public art, and make other public realm improvement in the study area.

Program 2.14.M: Participate in regional planning to finalize the preferred alignment of the Carquinez Strait Scenic Loop Trail in Benicia and through the Eastern Gateway Area. Ensure that new development and infrastructure improvements in the Eastern Gateway Area are consistent with and do not interfere with this alignment. Construct improvements to connect trails and bikeways in the Eastern Gateway Area with regional trails and other destinations in Benicia.

Program 2.14.N: Consider traffic calming features, as warranted and feasible, to reduce vehicle speeds and enhance public safety.

Program 2.14.O: Encourage creative parking solutions that allow for desired forms of development, support transportation alternatives, and minimize adverse impacts on neighboring properties.

Program 2.14.P: Explore options for establishing a transportation demand management program to reduce vehicle trips and parking demand.

Program 2.14.Q: As part of the Infrastructure Master Plan, study possible new uses for excess right-of-way, including for bicycle and pedestrian facilities, landscaping and open space, and public parking.

Details of Zoning Ordinance Amendments

The proposed zoning districts shown in Figure 3 would correspond to the primary and secondary study area boundaries shown in Figure 2. The MU-I District, which extends along Military East and East Fifth Streets and also includes the "scout property" at East L and East 4th Street, is intended to facilitate walkable, mixed-use development with neighborhood serving commercial uses and new opportunities for housing development. The MU-L District, which is located in the transitional areas between the MU-I District and outlying neighborhoods, would allow residential development of a higher density than is currently permitted, but with an increased focus on compatible design and use characteristics.

General and Specific Purposes of the Mixed-Use Districts

The general purpose of the two proposed mixed use districts is to:

1. Ensure that new development enhances Benicia's unique sense of place and quality of life;
2. Promote sustainable development patterns through infill development and the development of vacant parcels and underutilized properties;
3. Encourage a mix of residential and commercial uses to promote transportation alternatives, including walking, biking, and transit;

4. Encourage the production of new housing, including housing for seniors, affordable housing, and housing for artists;
5. Create a safe, active, and welcoming environment for pedestrians;
6. Accommodate a diversity of neighborhood-serving businesses, including restaurants, retailers, and personal services; and
7. Ensure high-quality development that is carefully designed to fit into and complement its surrounding context.

In addition to the general purpose set forth above, the specific purpose of the MU-I district is to:

a. Encourage mixed use development to accommodate additional housing while maintaining a critical mass of commercial uses within the district;
b. Provide for a mixed use activity center for the use and enjoyment of district residents and surrounding neighborhood;
c. Create a lively, pedestrian-friendly public realm with active ground-floor uses facing the street;
d. Encourage development that provides community benefits, such as public open space, publicly-available parking, infrastructure improvements, and public art; and
e. Minimize negative impacts on neighboring residential uses, including impacts related to building mass and scale, light/shade, and privacy.

In addition to the general purpose set forth above, the specific purpose of the MU-L district is to:

f. Provide locations for new housing in proximity to stores, services, and public transportation;
g. Facilitate production of housing across a range of housing types, including single-family homes, duplexes, townhomes, and smaller multifamily buildings;
h. Allow for small-scale neighborhood-serving commercial uses as part of mixed use residential development; and
i. Ensure that the scale and character of new development is compatible with existing residential uses within and adjacent to the district.

Permitted Uses and Development Standards

Within the MU-I district, a range of uses would be permitted that support a critical mass of commercial businesses, especially retail and services. A use permit would be required for ground-floor office and residential uses along Military East between East Fourth and East Fifth Street and on the west side of East Fifth Street north of Military East. The maximum permitted height would be three stories / 40 feet, unless an increased height is permitted through the provision of community benefits (see further discussion below). The design standards of this district facilitate a street-facing project with enhanced landscaping and street tree features and design elements. The MU-I district establishes residential transition standards, such as increased yards, fencing, and building stepbacks, that are intended to reduce potential visual impacts to adjacent single-family uses.

The MU-L district is primarily oriented to residential uses, with some limited provision for office and neighborhood-oriented services, as part of an overall residential site development and subject to a use permit. This district would allow a maximum permitted height of 3 stories / 35 feet, except that a height of up to 4 stories / 45 feet may be permitted on parcels exceeding 15,000 square feet or located within 150 feet of the I-780 freeway. Objective design standards for the MU-L district are intended to ensure compatibility with the existing neighborhoods with regard to building width, orientation, and privacy. This district would also require enhanced landscaping and street trees along the street frontage.

Community Benefits

The proposed zoning amendments would include the creation of a new Community Benefits Program, to be added to Chapter 17.70 (General Regulations) of the Zoning Ordinance. The proposed Community Benefits regulations would allow streamlined review and increased height and density for projects within the MU-I District in exchange for the provision of a defined benefit or benefits, such as affordable housing, artist housing, infrastructure improvements, neighborhood-serving commercial uses, public art, and/or public open space. The community benefits program would be eligible only to projects providing at least two-thirds of the floor area as residential use and could not be combined with a State Density Bonus. The incentives would be provided in tiers, with Tiers 1 and 2 available to all qualifying projects in the MU-I district, while Tier 3 would only be available for MU-I parcels abutting the I-780 right-of-way. Table 1 identifies the available incentives for each tier, the required community benefit, and the required approvals. This table will be codified as Table 17.70-1 in new Zoning Code Section 17.70.430.

Table PD-2
Community Benefits Program Eligibility Table

	Tier 1	Tier 2	Tier 3
Required Benefit ➔	2 community benefits	3 community benefits	4 community benefits
Incentives ↓			
Site Area per Unit, Min.	No min.	No min.	No min.
Lot Coverage, Max.	75%	80%	85%
Building Height, Max.	40 ft. and 3 stories	45 ft. and 4 stories	60 ft. and 5 stories
Required Approvals			
Approval Type	Design Review	Use Permit	Development Agreement
Approval Authority	Community Development Director	Planning Commission	City Council

Targeted Zoning Text Amendments

Corresponding to the proposed general plan and zoning amendments, and to advance consistency with the vision statement, the City proposes targeted amendments to the Zoning Ordinance that include the addition of cross references and definitions to the Benicia Municipal Code (BMC) Chapters 17.08, 17.12 and 17.70 as well as the following amendments:

- Amendments to the parking regulations (BMC Chapter 17.74) to address collective and off-site parking, on-street parking, transportation demand management (TDM), small car parking, special parking area design (tandem parking, parking lifts, valet parking), electric vehicle charging, alley access, and podium parking. These amendments would maintain the same parking requirements as exist citywide, but would increase options to accommodate vehicle parking to maximize flexibility when appropriate to the project and location.
- Minor amendments to the use permit/variance procedures (Chapter 17.104) that would allow the Community Development Director to refer applications to the Planning Commission.
- Amendments to the design review procedures (Chapter 17.108) to address development and design review in mixed use districts. These amendments include streamlined procedures for administrative review of projects up to two stories in height that are

consistent with the MU-I and MU-L standards and Planning Commission review of such projects utilizing community benefits.

Planning Approvals

General Plan Amendment: Pursuant to Chapter 17.120 of the Benicia Municipal Code, the project would require approval of General Plan Amendments by the City Council to establish two new land use designations, a General Plan land use map amendment to apply the new designations, and a new General Plan goal, with supporting policies and programs.

Zoning Amendments: Pursuant to Chapter 17.120 of the Benicia Municipal Code, the project would require establishment by the City Council of two new zoning districts and rezoning of 53 parcels in the Eastern Gateway area with the newly established districts. The project would also require approval of zoning text amendments to adopt development regulations for the new zoning districts and other targeted Zoning Ordinance amendments.

10. Project Setting

The project area is situated in the southeast quadrant of the City of Benicia, in southern Solano County. The project area is abutted on the north by Interstate 780 (I-780) and is approximately one-half mile north of the Carquinez Strait and 1 mile west of Suisun Bay. The terrain is gently undulating, with gentle hills. The terrain generally slopes downward toward the south, with elevations ranging from approximately 115 feet above mean sea level (msl) to approximately 30 feet msl, depending on location.

Although there are some vacant and under-utilized parcels within the study area, the Eastern Gateway area is largely developed with urban uses. The primary study area is dominated by commercial and office uses, with some residential uses, while the secondary study areas are predominantly occupied by single-family homes and apartment buildings. There is a trailer and RV park in the north end of the primary study area.

Some of the commercial land uses in the project area include a motel, automotive supply business, auto repair shop, tire store, small shopping center, church, sports bar, dance studio, nail salon, two veterinary clinics, martial arts studio, ballet school, exercise studio, barber shops, pet grooming business, gas station with convenience store, medical office building, and two churches, among other uses. There is also a new gasoline station under construction, among other uses.

ENVIRONMENTAL FACTORS POTENTIALLY AFFECTED:

The proposed project could potentially affect the environmental factor(s) checked below. The following pages present a more detailed checklist and discussion of each environmental factor.

[ ] Aesthetics	[ ] Agricultural Resources	[X] Air Quality
[X] Biological Resources	[X] Cultural Resources	[ ] Energy
[X] Geology/Soils	[ ] GHG Emissions	[X] Hazards & Haz. Materials
[ ] Hydrology/Water Quality	[ ] Land Use/Planning	[ ] Mineral Resources
[X] Noise	[ ] Population/Housing	[ ] Public Services
[ ] Recreation	[ ] Transportation/Traffic	[X] Tribal Cultural Resources
[ ] Utilities/Service Systems	[ ] Wildfire	
[X] Mandatory Findings of Significance		

DETERMINATION:

On the basis of the initial evaluation:

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

Signature	Date
Printed name	For

EVALUATION OF ENVIRONMENTAL IMPACTS:

I. AESTHETICS — *Would the project:*

	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Have a substantial adverse effect on a scenic vista?	☐	☐	☐	☒

Explanation: For the most part, any scenic vistas in the project area are obscured by trees and by existing development. From publicly-accessible vantage points, the only scenic vistas in the study area are to be had from streets and adjoining sidewalks. The most prominent scenic vistas are from 4th and 5th Streets, viewing south toward the Carquinez Strait. One of the best views in the study area is visible from 4th Street in the vicinity of N Street, where the view corridor down the street alignment is framed by trees and other vegetation flanking both sides of the street. Approximately one-half mile in the distance, a narrow strip of water in the Carquinez Strait is visible, with a backdrop of the prominent and largely undeveloped hillsides in northern Contra Costa County, on the south side of the Strait. A similar, though more constrained, view is available from 5th Street in the vicinity of L Street. These views of the Straight are generally reflected in the important views and vistas identified in General Plan Figure 3-2 and are therefore the focus of this analysis.

These limited views are pleasant and contribute to the character of Benicia; in addition to the natural features in the distance they also include street pavement and existing urban development in the foreground and middle distance. The distant water comprises a very small percentage of the total viewshed, although the hills in Contra Costa County occupy a larger share of the viewshed. Furthermore, the least constrained views are available from within the roadways running north-south, meaning they are available to vehicle drivers, who can only experience the views momentarily in passing, and whose attention must be focused on their immediate surroundings (i.e., other vehicle traffic). The viewshed available to pedestrians from adjoining sidewalks is generally more limited, and subject to the various constraints cited above.

Future development in the mixed-use districts would have no adverse effect on scenic vistas. CEQA is generally only concerned with potential impacts to scenic vistas as seen from publicly-accessible vantage points; private views are generally not afforded protection, except in extreme, egregious cases affecting a large number of people. The vistas currently available from within the street rights-of-way would not be altered by new development or redevelopment on the private properties flanking the public streets.

Although some future development projects could block a private view from an adjoining property, this would not constitute an impact pursuant to CEQA.

Based on the above considerations, the proposed project would have ***no impact*** on a scenic vista.

	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
b) Substantially damage scenic resources, including but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?	☐	☐	☐	☒

Explanation: California's Scenic Highway Program was created by the Legislature in 1963, with the objective of protecting and enhancing the natural scenic beauty of California highways and adjacent corridors through special conservation treatment. The State laws governing the Scenic Highway Program are found in the Streets and Highways Code, Sections 260 through 263. They regulate land use and the density of adjacent development, restrict grading, govern the design and appearance of proposed development, restrict outdoor advertising, impose limitations on the use of landscaping, and guide site planning.

State scenic highways are so designated by the California Department of Transportation (Caltrans), following review of a request from a local city or county through which the roadway passes. A highway may be designated scenic depending upon how much of the natural landscape can be seen by travelers, the scenic quality of the landscape, and the extent to which development intrudes upon the traveler's enjoyment of the view.

The nearest highways to the project site are Highway 780 and Highway 680. Nearby sections of these roads have not been designated as scenic highways by Caltrans, nor are they considered eligible for designation.[1] Therefore, the project would have ***no impact*** on scenic resources within a State scenic highway.

	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
c) Substantially degrade the existing visual character or quality of the site and its surroundings? (Public views are those that are experienced from publicly accessible vantage points.) If the project is in an urban area, would the project conflict with applicable zoning and other regulations governing scenic quality?	☐	☐	☒	☐

Explanation: The entire project study area is within an urbanized neighborhood developed predominantly with commercial uses in the primary study area and predominantly with residential homes and apartments in the secondary study area. Future new development is expected to be consistent and compatible with adjacent and nearby land uses. The proposed development standards include provisions for maximizing compatibility with existing development and overall visual quality through height and density limits, required setbacks, articulation of massing, streetscape requirements, and landscape requirements. Where new development is proposed adjacent to a parcel

[1] California Department of Transportation, Officially Designated State Scenic Highways, accessed August 4, 2021 at: https://dot.ca.gov/programs/design/lap-landscape-architecture-and-community-livability/lap-liv-i-scenic-highways.

outside of the MU-I district with an existing single-family use, there are requirements for side yard setbacks, privacy fencing, and step-backs on third stories of three-story buildings.

All non-residential projects are subject to the City's design review process, codified in Chapter 17.108 of the Benicia Municipal Code. The stated purposes of the design review process are, in part, to: (1) ensure that the location and configuration of structures are visually harmonious with their sites and with surrounding sites and structures, and do not unnecessarily block scenic views from other buildings or public parks or dominate their surroundings to an extent inappropriate to their use; (2) ensure that the architectural design of structures, their materials, and colors are visually harmonious with surrounding development and with the natural landforms and vegetation of the areas in which they are proposed to be located; (3) ensure that plans for the landscaping of open spaces conform with the requirements of the Zoning Ordinance, and that they provide visually pleasing settings for structures on the site and on adjoining and nearby sites and blend harmoniously with the natural landscape; and prevent excessive and unsightly grading of hillsides, and preserve natural landforms and existing vegetation where feasible.

Multi-family residential, transitional housing, and supportive housing development projects are subject to the City's Objective Planning and Design Standards for Mixed-Use Residential and Multifamily Development. The Objective Planning and Design Standards contain, among other things, requirements for tree preservation; building placement, orientation, and entries; parking; facade and roof design; building materials; other site features; and signs, all of which are intended to preserve architectural quality and consistency. The proposed new Mixed-Use Districts contain objective standards related to building and site design to require context-sensitive development that will visually enhance the project area.

Future new development projects in the project study area would be required to comply with all applicable regulations described above, which would ensure that they would not conflict with applicable zoning and other regulations governing scenic quality. Such development would integrate with surrounding development and would be required to adhere to architectural standards. Consequently, future development would not cause a substantial degradation of the existing visual character or quality of the site and its surroundings, which is the relevant threshold of significance established in the *CEQA Guidelines*. Accordingly, the project would have a ***less-than-significant visual impact***.

	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
d) Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?	☐	☐	☒	☐

Explanation: New residential, commercial, and other uses that would be developed in the proposed Mixed-Use Districts would have interior lighting and exterior security lighting typical of all residential and commercial development. Zoning Ordinance Section 17.70.240.D contains performance standards to minimize light and glare impacts from new development. To minimize light impacts, site lighting must be designed and installed to confine direct light rays to the site, and security lighting must be either indirect, diffused, or shielded or directed away from adjoining properties and public rights-of-way. To minimize glare impacts, mirrored or highly reflective glass may not cover more than 20 percent of a building surface visible from a street unless an applicant submits surface information demonstrating to the satisfaction of the community development director that use of such glass would

not significantly increase glare visible from adjacent streets and property or pose a hazard for moving vehicles.

In addition to these performance standards, light an glare impacts are also addressed in the City's design review process, referenced above. In order to gain design review approval, a project must demonstrate conformance with the design review standards and the Community Development Director or the Historic Preservation Review Commission must make a finding that the project is in conformance with the applicable Municipal Code requirements. In addition, non-residential construction is required by the California Green Building Code (CalGreen) (California Code of Regulations, Title 24, Part 11) to employ downward-directed light fixtures for exterior lighting that includes full cutoff shielding to prevent the propagation of glare at off-site properties. The CalGreen requirements stipulate specifications for maximum uplight brightness and maximum glare ratings.

The lighting for proposed new development would be subject to the controls identified above, which would ensure that future development in the Mixed-Use Districts would not constitute a new source of substantial light or glare, and the lighting would not adversely affect views in the area. Therefore, approval of the proposed General Plan and zoning amendments. would have a ***less-than-significant impact*** related to glare or nighttime lighting.

II. AGRICULTURAL RESOURCES — *In determining whether impacts to agricultural resources are significant environmental effects, lead agencies may refer to the California Land Evaluation and Site Assessment Model (1997) prepared by the California Dept. of Conservation as an optional model to use in assessing impacts on agriculture and farmland. In determining whether impacts to forest resources, including timberland, are significant environmental effects, lead agencies may refer to information compiled by the California Department of Forestry and Fire Protection regarding the State's inventory of forest land, including the Forest and Range Assessment project and the Forestry Legacy Assessment project, and forest carbon measurement methodology provided in Forest Protocols adopted by the California Air Resources Board. Would the project:*

	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
a) *Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?*	☐	☐	☐	☒

Explanation: The project site and all of the neighboring lands to the north, east, and south are designated "Urban and Built-Up Land" on the map of important farmland in Solano County prepared pursuant to the Farmland Mapping and Monitoring Program (FMMP) by the Department of Conservation (DOC), a department of the California Resources Agency.[2] Urban and Built-Up Land is defined as land occupied by structures with a building density of at least one unit to 1.5 acres, or approximately six structures to a 10-acre parcel. Typical development may include residential, commercial, industrial, institutional facilities, cemeteries, airports, golf courses, sanitary landfills,

[2] California Department of Conservation, Division of Land Resource Protection, Farmland Mapping and Monitoring Program, "Solano County Important Farmland 2018" (map), November 2020.

sewage treatment plants, and water control structures. The DOC updates the farmland maps every two years; the most recent map was prepared in 2018 and published in 2020.

By definition, “Urban and Built-Up Land” is not one of the categories of agricultural land defined by the FMMP, such as Prime Farmland, Unique Farmland, or Farmland of Statewide Importance. Therefore, implementation of the project would have ***no impact*** on valuable farmland.

	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
b) Conflict with existing zoning for agricultural use, or a Williamson Act contract?	☐	☐	☐	☒

Explanation: None of the properties in the study area are zoned for agricultural use or are under a Williamson Act contract.

	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
c) Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code Section 12220(g)), timberland (as defined in Public Resources Code Section 4526), or timberland zoned Timberland Production (as defined by Government Code Section 51104(g))?	☐	☐	☐	☒

Explanation: Public Resources Code (PRC) Section 12220(g) defines forest land as land that can support 10-percent native tree cover of any species, including hardwoods, under natural conditions, and that allows for management of one or more forest resources, including timber, aesthetics, fish and wildlife, biodiversity, water quality, recreation, and other public benefits. PRC Section 4526 defines “Timberland” as land, other than land owned by the federal government and land designated by the board as experimental forest land, which is available for, and capable of, growing a crop of trees of a commercial species used to produce lumber and other forest products, including Christmas trees, with commercial species to be determined by the State Board of Forestry and Fire Protection on a district basis. Government Code Section 51104(g) defines “timberland production zone” or “TPZ” as an area that has been zoned as timberland pursuant to Government Code Sections 51112 or 51113 and is devoted to and used for growing and harvesting timber, or for growing and harvesting timber and compatible uses. Neither the project site nor any of the surrounding lands are zoned as forest land, nor are they devoted to timber production. The proposed project would therefore have no impact on forest or timber land.

	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
d) Result in the loss of forest land or conversion of forest land to a non-forest use?	☐	☐	☐	☒

Explanation: As noted in Section II-c, above, there is no forest land in the study area, and implementation of the proposed project would therefore have no potential to convert such lands to other uses.

	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
e) Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland to non-agricultural use or conversion of forest land to non-forest use?	☐	☐	☐	☒

Explanation: As discussed above, the project site does not contain farmland or forest land, and implementation of the proposed project would therefore have no potential to convert such lands to other uses.

III. AIR QUALITY — *Where available, the significance criteria established by the applicable air quality management district or air pollution control district may be relied upon to make the following determinations. Would the project:*

	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Conflict with or obstruct implementation of the applicable air quality plan?	☐	☒	☐	☐

Explanation: The Bay Area Air Quality Management District (BAAQMD) adopted the *2017 Clean Air Plan* in April 2017; it is the most recent applicable air quality plan.[3] The 2017 Clean Air Plan/Regional Climate Protection Strategy (CAP/RCPS) provides a roadmap for BAAQMD's efforts over the next few years to reduce air pollution and protect public health and the global climate. The CAP/RCPS includes the Bay Area's first-ever comprehensive RCPS, which identifies potential rules, control measures, and strategies that BAAQMD can pursue to reduce GHG in the Bay Area. Measures of the 2017 CAP addressing the transportation sector are in direct support of *Plan Bay Area 2040*, which was prepared by the Association of Bay Area Governments (ABAG) and the Metropolitan Transportation

[3] Bay Area Air Quality Management District, *Final 2017 Clean Air Plan*, April 19, 2017. http://www.baaqmd.gov/~/media/files/planning-and-research/plans/2017-clean-air-plan/attachment-a -proposed-final-cap-vol-1-pdf.pdf?la=en.

Commission (MTC) and includes the region's Sustainable Communities Strategy and the 2040 Regional Transportation Plan. Highlights of the *2017 Clean Air Plan* control strategy include:

- **Limit Combustion:** Develop a region-wide strategy to improve fossil fuel combustion efficiency at industrial facilities, beginning with the three largest sources of industrial emissions: oil refineries, power plants, and cement plants.
- **Stop Methane Leaks:** Reduce methane emissions from landfills, and oil and natural gas production and distribution.
- **Reduce Exposure to Toxics:** Reduce emissions of toxic air contaminants by adopting more stringent limits and methods for evaluating toxic risks at existing and new facilities.
- **Put a Price on Driving:** Implement pricing measures to reduce travel demand.
- **Advance Electric Vehicles:** Accelerate the widespread adoption of electric vehicles.
- **Promote Clean Fuels:** Promote the use of clean fuels and low or zero carbon technologies in trucks and heavy-duty vehicles.
- **Accelerate Low-Carbon Buildings:** Expand the production of low-carbon, renewable energy by promoting on-site technologies such as rooftop solar and ground-source heat pumps.
- **Support More Energy Choices:** Support of community choice energy programs throughout the Bay Area.
- **Make Buildings More Efficient:** Promote energy efficiency in both new and existing buildings.
- **Make Space and Water Heating Cleaner:** Promote the switch from natural gas to electricity for space and water heating in Bay Area buildings.

BAAQMD provides guidance in its *CEQA Air Quality Guidelines* for determining whether a proposed general plan or other long-range land use plan is consistent with the *2017 Clean Air Plan*, and the criteria are the same as those that apply to individual development projects. When a public agency contemplates adopting a planning document (other than a regional plan) or approving a project where an air quality plan consistency determination is required, BAAQMD recommends in its *CEQA Air Quality Guidelines* that the lead agency analyze the plan or project with respect to the following questions: (1) Does the project support the primary goals of the *2017 Clean Air Plan*; (2) Does the project include applicable control measures from the *2017 Clean Air Plan*; and (3) Does the project disrupt or hinder implementation of any *2017 Clean Air Plan* control measures? If the first two questions are concluded in the affirmative and the third question concluded in the negative, the BAAQMD considers the plan or project consistent with air quality plans prepared for the Bay Area. Each of these questions is addressed in turn below.

Does the project support the primary goals of the 2017 Clean Air Plan*?*

Any project that would not support the 2017 CAP goals would not be considered consistent with the 2017 CAP. The recommended measure for determining project support of these goals is consistency with BAAQMD CEQA thresholds of significance. As discussed further in the subsequent sections, with incorporation of mitigation measures identified in Sections III-b and III-c, below, the proposed project would not exceed the BAAQMD significance thresholds; therefore, the proposed project would support the primary goals of the 2017 CAP.

Does the project include applicable control measures from the 2017 Clean Air Plan*?*

The *2017 Clean Air Plan* builds upon existing regional, State, and national programs that have successfully reduced air pollution and improved public health over the past several decades, and carries over many of the specific measures from the prior *2017 Clean Air Plan*. The 2017 CAP presents

a total of 40 Stationary Source Measures, 23 Transportation Control Measures, two Energy Control Measures, four Building Control Measures, four Agriculture Control Measures, three Natural and Working Lands Control Measures, four Waste Management Control Measures, two Water Control Measures, and three Super-GHG Control Measures. Additionally, BAAQMD identified a number of potential measures that appear to have merit but need further evaluation before they can be included as formal control measures. These measures have been included as further study measures (FSMs). The CAP identifies 11 FSMs, nine of them pertaining to stationary sources, along with one for buildings and one for agriculture. Some measures focus on reducing a single type of air pollutant. Many of the measures, however, reduce multiple pollutants and serve both to protect public health and to protect the climate. None of the CAP control measures are directly applicable to the types of individual development projects that would be permitted in the Mixed-Use Districts. Therefore, this question can be answered in the affirmative.

Does the project disrupt or hinder implementation of any 2017 Clean Air Plan *control measures?*

Adoption of the proposed Mixed-Use Districts and implementation of infill development that would be permitted in the districts would have no effect on the implementation of the 2017 CAP. Therefore, this question can be answered in the negative.

With implementation of mitigation measures identified in Sections III-b and III-c, the proposed project would not exceed the BAAQMD significance thresholds, and the project would support the primary goals of the 2017 CAP, allowing an affirmative answer to the first consistency question listed above. This answer and the answer to the two other consistency questions demonstrate that the proposed Mixed-Use Districts would be consistent with the *2017 Clean Air Plan*. Therefore, the project would have a ***less-than-significant impact*** due to conflicting with or obstructing implementation of the applicable air quality plan.

	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
b) Result in a cumulatively considerable net increase of any criteria pollutant for which the region is non-attainment under an applicable federal or state ambient air quality standard?	☐	☒	☐	☐

Explanation: Air quality standards for the San Francisco Bay Area are set by the Bay Area Air Quality Management District (BAAQMD). They are based on the National Ambient Air Quality Standards (NAAQS) established by the U.S. Environmental Protection Agency (USEPA) pursuant to the federal Clean Air Act (CAA), as well as the more stringent California Ambient Air Quality Standards (CAAQS) set by the California Air Resources Board (CARB).

BAAQMD's *CEQA Air Quality Guidelines* establish thresholds of significance for construction emissions of 54 pounds per day (lb./day) for reactive organic gases (ROG), fine particulate matter equal to or less than 2.5 microns ($PM_{2.5}$), and nitrogen oxides (NO_x), and 82 lb./day for respirable particulate matter equal to or less than 10 microns (PM_{10}). The same thresholds apply to operational emissions. The construction particulate matter (PM) thresholds apply to exhaust emissions only, not ground disturbance; emissions from grading and other site disturbance, for which there is no adopted threshold of significance, are addressed through best management practices.

BAAQMD has developed both construction-related and operational screening criteria that provide lead agencies a conservative indication of whether a proposed project could potentially exceed any of the

thresholds of significance listed above. Because they were developed with very conservative assumptions, a project that falls below the screening criteria can be assumed to have no potential to exceed the adopted air quality thresholds of significance. For such projects, BAAQMD has determined that a quantified analysis of the project's potential emissions of criteria air pollutants and precursors is not necessary. The construction and operational screening criteria are discussed separately below.

As noted in BAAQMD's *CEQA Air Quality Guidelines*, air pollution is, by its very nature, largely a cumulative impact. No single project is sufficient in size to, by itself, result in nonattainment of ambient air quality standards. Instead, a project's individual emissions contribute to existing cumulatively significant adverse air quality impacts. The BAAQMD CEQA *Air Quality Guidelines* recommend that cumulative air quality effects from criteria air pollutants be addressed by comparison to the project-level daily and annual emission thresholds. These significance thresholds were developed to identify a cumulatively considerable contribution to a significant regional air quality impact. According to the *Air Quality Guidelines*, if a project's contribution to the cumulative impact is considerable, then the project's impact on air quality would be considered significant. The *Air Quality Guidelines* state that a project's emissions would be cumulatively considerable if they would exceed the significance thresholds identified above. Conversely, if a project is determined to have less-than-significant project-level emissions, then it would also have a less-than-significant cumulative air quality impact.

Construction Impacts

Construction operations for any sizeable project have the potential to result in short-term but significant adverse air quality impacts. The BAAQMD recommends implementation of its Basic Construction Mitigation Measures by all projects subject to environmental review under CEQA.

The BAAQMD *CEQA Air Quality Guidelines* contain screening criteria for construction of a variety of land use development projects. Projects that fall below these thresholds are considered by BAAQMD to have less-than-significant construction-phase air pollutant emissions, provided the following additional conditions are met:

- All Basic Construction Mitigation Measures established by BAAQMD in its *CEQA Air Quality Guidelines* would be included in the project design and implemented during construction; and
- Construction-related activities would not include any of the following:
    a. Demolition activities inconsistent with District Regulation 11, Rule 2: Asbestos Demolition, Renovation and Manufacturing, which requires removal of regulated asbestos-containing material (RACM) using specified procedures to prevent visible emissions of asbestos dust, and appropriate disposal of RACM at approved waste disposal sites;
    b. Simultaneous occurrence of more than two construction phases (e.g., paving and building construction occurring simultaneously);
    c. Simultaneous construction of more than one land use type (e.g., project would develop residential and commercial uses on the same site) (Note: this is not generally applicable to high density infill development, as articulated below);
    d. Extensive site preparation (i.e., greater than default assumptions used by the Urban Land Use Emissions Model [URBEMIS] for grading, cut/fill, or earth movement) [Note that URBEMIS has been replaced by CalEEMod, which has greater functionality than URBEMIS, as the current air quality model recommended by BAAQMD. Guidance from BAAQMD states that the default assumption for site preparation in URBEMIS is grading of 25 percent of total project acreage in one day.]; or

e. Extensive material transport (e.g., greater than 10,000 cubic yards of soil import/export) requiring a considerable amount of haul truck activity.

The proposed project is expected to result in future residential development, commercial development, or a mixture thereof that would consist of increased-density in-fill development in an already urbanized area. It is not expected to result in large-scale development that would exceed the BAAQMD's screening criteria for new construction. BAAQMD's project screening thresholds for various types of residential development range from 114 dwelling units for single-family homes to 252 dwelling units for high-rise condominiums or townhomes. Such large developments would not be allowed in the Mixed-Use Districts.

To illustrate this, the largest parcel in the project study area, which is already developed with multi-family housing, is 21,300 square feet (0.49 acre) in size. Although redevelopment of this parcel located at 1322 ½ E 5th Street is not anticipated, for the sake of argument, if it were developed at the maximum allowable density based on the maximum community benefit density bonus, 18,105 square feet of the parcel could be developed, with a maximum building height of five stories. If it is conservatively assumed that the apartments were only 400 square feet in gross floor area, up to 45 apartments could be built on each floor, resulting in up to 225 dwelling units in the five-story building (even this number would not be permitted due to step-back requirements on the upper floors). The (conservative) BAAQMD screening threshold for both mid-rise and high-rise apartments is 240 dwelling units. Thus, even the infeasible hypothetical maximum number of dwelling units that could be constructed in the Mixed-Use Districts would be below BAAQMD's project screening thresholds.

Similarly, there are screening criteria for a wide range of commercial uses that future development facilitated by the proposed project would be extremely unlikely to exceed. The screening threshold for the majority of retail land uses, including all types of restaurants, office buildings, and most types of retail stores, is 277,000 square feet. Given the size of the parcels in the project study area, this scale of development would not be permitted in the Mixed-Use Districts.

Most future development facilitated by the proposed project is expected to be far below the applicable threshold at which BAAQMD recommends quantified modeling of air emissions. As previously noted, the screening criteria are quite conservative. Therefore, future construction of future development in in the Mixed-Use Districts is expected to have no potential to violate air quality standards. Nonetheless, in accordance with BAAQMD's *CEQA Air Quality Guidelines*, absent implementation of BAAQMD's Basic Construction Mitigation Measures, the effects of construction-generated criteria pollutants from future development facilitated by the proposed project are presumed to have a ***potentially significant impact*** on air quality. Implementation of the controls listed in Mitigation Measure AQ-1, which incorporates the Basic Construction Mitigation Measures, would reduce the project's construction-related air quality impacts to a less-than-significant level. In addition, Mitigation Measure AQ-2 is required to ensure that future construction impacts on air quality are less than significant.

Mitigation Measure AQ-1: For all new development projects proposed in the Eastern Gateway Mixed-Use Districts subject to discretionary review, the property owner/applicant shall require the construction contractor to reduce the severity of project construction period dust and equipment exhaust impacts by complying with the following control measures:

- All exposed surfaces (e.g., parking areas, staging areas, soil piles, graded areas, and unpaved access roads) shall be watered two times per day.
- All haul trucks transporting soil, sand, or other loose material off-site shall be covered.

- All visible mud or dirt track-out onto adjacent public roads shall be removed using wet power vacuum street sweepers at least once per day. The use of dry power sweeping is prohibited.
- All vehicle speeds on unpaved roads shall be limited to 15 mph.
- All roadways, driveways, and sidewalks to be paved shall be completed as soon as possible. Building pads shall be laid as soon as possible after grading unless seeding or soil binders are used. [The BAAQMD *CEQA Air Quality Guidelines* do not specify a time frame for "as soon as possible." Project applicants will be encouraged to complete these actions as soon as they deem them feasible.]
- Idling times shall be minimized either by shutting equipment off when not in use or reducing the maximum idling time to 5 minutes (as required by the California airborne toxics control measure Title 13, Section 2485 of California Code of Regulations [CCR]). Clear signage shall be provided for construction workers at all access points.
- All construction equipment shall be maintained and properly tuned in accordance with the manufacturer's specifications. All equipment shall be checked by a certified mechanic and determined to be running in proper condition prior to operation.
- Post a publicly visible sign with the telephone number and person to contact at the Lead Agency regarding dust complaints. This person shall respond and take corrective action within 48 hours. The Air District's phone number shall also be visible to ensure compliance with applicable regulations.

Mitigation Measure AQ-2: If the size of any future development project within one of the Eastern Gateway Mixed-Use Districts would exceed either the construction, operational, or greenhouse gas (GHG) screening thresholds (too numerous to specify here) recommended in the current version (at the time the application is deemed complete by the City) of the Bay Area Air Quality Management District (BAAQMD) *CEQA Air Quality Guidelines*, prior to project approval the City shall require the preparation of a quantified analysis of the project's potential air quality impacts by a qualified professional. If the analysis identifies any potential impacts based on the federal and State significance thresholds for criteria air pollutants or State standards for GHGs, the air quality consultant shall identify appropriate mitigation measures sufficient to reduce construction and/or operational emissions to less-than-significant levels, and the City shall require implementation of these mitigation measures as a condition of project approval. Further review under CEQA would be required if project-specific mitigation could not reduce emissions to a less-than-significant level.

Additionally, any proposed project that would include any of the exceptions to applicability of the BAAQMD screening criteria listed in the BAAQMD *CEQA Air Quality Guidelines* would also require a quantified air quality analysis prior to project approval, and would

potentially be subject to additional mitigation requirements, similar to projects exceeding the BAAQMD screening criteria, addressed above. Specifically, any project whose construction would include any of the following would require quantified analysis:

a. Demolition activities inconsistent with District Regulation 11, Rule 2: Asbestos Demolition, Renovation and Manufacturing;

b. Simultaneous occurrence of more than two construction phases (e.g., paving and building construction would occur simultaneously);

c. Simultaneous construction of more than one land use type (e.g., project would develop residential and commercial uses on the same site) (the BAAQMD *CEQA Air Quality Guidelines* state that this exception does not apply to high-density infill development);

d. Extensive site preparation (i.e., greater than default assumptions used by the Urban Land Use Emissions Model [URBEMIS] for grading, cut/fill, or earth movement, which is grading of more than 25 percent of total project acreage in one day); or

e. Extensive material transport (e.g., greater than 10,000 cubic yards of soil import/export) requiring a considerable amount of haul truck activity.

Projects that are permitted by right and not subject to discretionary review by the City would not have the potential to exceed either any of BAAQMD's screening thresholds, nor would they be of sufficient size to result in a cumulatively considerable contribution to air quality impacts. Additionally, they would be sufficiently small that their construction-related emissions of criteria air pollutants would not have the potential to exceed the applicable thresholds of significance established by BAAQMD. Nonetheless, the City would encourage project sponsors of projects permitted by right to implement the basic construction controls set forth in Mitigation Measure AQ-1.

Operational Impacts

As noted above, BAAQMD's operational thresholds of significance are the same as the construction thresholds. However, the screening criteria for project operations differ. For all of the residential land use categories, the operational thresholds are considerably higher; they range from 325 dwelling units for the single-family residential category to 511 units for high-rise condominiums or townhomes. Again, such large developments would not be allowed in the Mixed-Use Districts, for the same reason explained above under the discussion of construction impacts.

The operational screening criteria for commercial uses vary quite a bit. For a high-quality restaurant, the threshold is 47,000 square feet, while for a fast-food restaurant without a drive-thru, it is 8,000 square feet. The threshold is high for a general office building—346,000 square feet—while it is just 4,000 square feet for a convenience market with gas pumps. Thresholds for other commercial uses that could be developed in the Mixed-Use Districts include 489 rooms for a hotel, 83,000 square feet for a hardware store, 76,000 square feet for a free-standing discount store, 439,000 square feet for a place of worship, 346,000 square feet for a general office building, and 48,000 square feet for a pharmacy. It is expected that most commercial or mixed-use projects proposed in the future in the Mixed-Use Districts would be well below the applicable screening criteria, and would therefore have not potential to result in a significant operational impact to air quality. However, the possibility that a

project exceeding the screening criterion may be proposed in the future cannot be ruled out. Were such a project to be proposed, project operations could potentially emit criteria air pollutants that would exceed BAAQMD's operational thresholds of significance, which would be a ***potentially significant impact*** on air quality. Implementation of Mitigation Measure AQ-2, set forth above, would reduce the impact to a less-than-significant level.

	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
c) *Expose sensitive receptors to substantial pollutant concentrations?*	☐	☒	☐	☐

Explanation: Health risk from exposure to air pollutants is evaluated based on the potential for exposure to $PM_{2.5}$ and toxic air contaminants (TACs), the two emission types that pose the most significant threat to human health. According to BAAQMD, more than 80 percent of the inhalation cancer risk from TACs in the Bay Area is from diesel engine emissions.[4] TACs can cause long-term health effects such as cancer, birth defects, neurological damage, asthma, bronchitis, or genetic damage; or short-term acute affects such as eye watering, respiratory irritation (cough), running nose, throat pain, and headaches.

Both TACs and $PM_{2.5}$ are emitted by trucks, cars, construction equipment, and other mobile sources. They are also emitted by stationary sources. These uses require source control, which is administered through required BAAQMD permitting. TACs are found in ambient air, especially in urban areas, and are caused by industry, agriculture, fuel combustion, and some commercial operations, such as gasoline service stations and dry cleaners. TACs are typically found in low concentrations, even near their source (e.g., diesel particulate matter near a freeway). Because chronic exposure can result in adverse health effects, TACs are regulated at the regional, State, and federal level.

TACs are a set of airborne pollutants that may pose a present or potential hazard to human health, and are separated into carcinogens and non-carcinogens. State and local regulatory programs are intended to limit exposure to TACs and the associated health risk. While TACs can cause increased health risk that can occur either by introducing a new source of TACs with the potential to adversely affect existing sensitive receptors in the vicinity of a proposed project, or by introducing a new sensitive receptor, such as a residential use, in proximity to an existing source of TACs, CEQA no longer treats impacts of the environment on a proposed project to be a significant environmental effect. Therefore, this analysis focuses on TAC impacts that could be *caused by* future development facilitated by the proposed Mixed-Use Districts.

Virtually any land use that attracts and/or generates vehicle trips emits TACs and $PM_{2.5}$. It is only when substantial quantities of TACs are emitted that cancer or health risk can potentially rise to a level of significance. The BAAQMD considers an excess cancer risk of more than 10 in one million or a non-cancer (i.e., chronic or acute) health risk greater than a Hazard Index (HI) of 1.0 to be a significant adverse impact. A project would have a significant cumulative impact if the aggregate total of all past, present, and foreseeable future sources within a 1,000 foot radius from the fence line of a source plus the contribution from the project would exceed an excess cancer risk of more than 100 in one million or a chronic non-cancer health risk greater than a Hazard Index (HI) of 10.0. A significant project-level and cumulative impact can also result if a project does not comply with a qualified risk reduction plan

[4] Bay Area Air Quality Management District (BAAQMD), *California Environmental Quality Act Air Quality Guidelines*, page 5-3, May 2017.

or if a project causes an incremental increase in annual average $PM_{2.5}$ concentrations greater than 0.3 micrograms per cubic meter ($\mu g/m^3$) (project impact) or 0.8 $\mu g/m^3$ (cumulative impact). These thresholds can be considered highly conservative because they are based on continuous exposure of an individual over a 70-year lifetime.

BAAQMD has identified a number of urban or industrialized communities in the Bay Area where the exposure to TACs is relatively high in comparison to others, and in 2004 the agency initiated the Community Air Risk Evaluation (CARE) program to target mitigation programs to reduce the exposure of at-risk sensitive populations. Such communities are encouraged by BAAQMD to create a qualified risk reduction plan. The City of Benicia is not located within one of the impacted communities identified by BAAQMD.[5] Consequently, the proposed Eastern Gateway Mixed-Use Districts would not conflict with a qualified risk reduction plan.

New development facilitated by the proposed Mixed-Use Districts is not expected to include the siting of a new major stationary source of TACs and $PM_{2.5}$. The project is intended to foster mixed-use infill development consisting of multi-family housing and small neighborhood-serving businesses in a pedestrian-oriented environment that is sensitive to its surrounding context, which includes single-family homes. Industrial and light industrial development of the type that might include a new major stationary source of TACs and $PM_{2.5}$ would not be permitted.

Similarly, new development that would attract high numbers of diesel-powered on-road trucks or use off-road diesel equipment on site, such as a distribution center, a quarry, or a manufacturing facility that could potentially expose existing sensitive receptors in the project area to substantial risk levels and/or health hazards would not be permitted in the Mixed-Use Districts. There is no potential for diesel-fueled delivery and service trucks that would be associated with the daily operations of future new residential and commercial development in the Mixed-Use Districts to emit substantial amounts of TACs and $PM_{2.5}$.

While construction activity associated with the development of new land uses in the proposed Mixed-Use Districts would constitute a new emission source of TACs—including diesel particulate matter (DPM)[6] and $PM_{2.5}$—during project construction from operation of heavy-duty construction equipment, only very large and extended construction projects would have the potential to exceed BAAQMD's thresholds of significance. Projects that would not exceed the construction screening criteria discussed in Section III-b, above, would not exceed the cancer or chronic health risk thresholds of significance.

For the reasons set forth above, implementation of the proposed project is not expected to expose sensitive receptors to substantial pollutant concentrations. However, in the unlikely event that a future development project might exceed the construction screening criteria discussed in Section III-b, nearby sensitive receptors could possibly be exposed to substantial concentrations of TACs and $PM_{2.5}$, which would be a ***potentially significant impact***. Implementation of the following mitigation measure would ensure that future construction impacts on human health are less than significant.

Mitigation Measure AQ-3: If the size of any future development project within one of the Eastern Gateway Mixed-Use Districts would exceed the construction screening thresholds recommended in the Bay Area Air Quality Management District (BAAQMD) *CEQA Air Quality Guidelines*, prior to project approval the City shall require the

[5] Bay Area Air Quality Management District (BAAQMD), Community Air Risk Evaluation Program, Impacted Communities, accessed September 6, 2021 at: https://www.baaqmd.gov/community-health/community-health-protection-program/community-air-risk-evaluation-care-program.

[6] In 1998, CARB classified diesel particulate matter as a toxic air contaminant, citing its potential to cause cancer and other health problems. The USEPA concluded that long-term exposure to diesel engine exhaust is likely to pose a lung cancer hazard to humans and can also contribute to other acute and chronic health effects.

preparation of a Health Risk Assessment of the project's potential health risk impacts by a qualified air quality professional. If the analysis identifies any potential impacts based on BAAQMD's thresholds of significance for cancer risk or acute or chronic health risk, the air quality consultant shall identify measures sufficient to reduce construction emissions and/or exposure of sensitive receptors to substantial pollutant concentrations to acceptable levels, and the City shall require implementation of these measures as a condition of project approval.

As previously noted, projects that are permitted by right and not subject to discretionary review by the City would not have the potential to exceed any of BAAQMD's screening thresholds, which re conservative by design. Projects permitted by right would be sufficiently small that their construction-related emissions would not have the potential to create a significant health risk to nearby sensitive receptors.

	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
d) Result in other emissions (such as those leading to odors) adversely affecting a substantial number of people?	☐	☐	☒	☐

Explanation: Though offensive odors from stationary and mobile 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. Generally, odor emissions are highly dispersive, especially in areas with higher average wind speeds. However, odors disperse less quickly during inversions or during calm conditions, which hamper vertical mixing and dispersion.

The BAAQMD's significance criteria for odors are subjective and are based on the number of odor complaints generated by a project. Generally, the BAAQMD considers any project with the potential to frequently expose members of the public to objectionable odors to cause a significant impact. The operational odor threshold of significance adopted in the BAAQMD CEQA guidelines is five confirmed complaints per year averaged over three years; there is no threshold for construction activity.

Odor impacts are typically associated with industrial operations such as wastewater treatment plants, landfills, composting facilities, asphalt batch plants, refineries, chemical plants, food manufacturing plants, or with agricultural uses, such as confined animal facilities. None of these types of uses would be permitted in the Mixed-Use Districts. Cannabis cultivation facilities can also be a substantial source of odors that many people find objectionable; such facilities would also not be permitted in the Mixed-Use Districts.

Residential and neighborhood commercial development is not typically associated with unpleasant odor emissions, so it is assumed there would be no objectionable odors generated during operation of future development in the Mixed-Use Districts. While large amounts of accumulated garbage can be sources of very unpleasant odors, Benicia Municipal Code Section 17.70.200 requires trash storage areas in multi-family residential development to be located within the building or be fully enclosed within 6-foot-high solid wood or masonry walls. Compliance with this regulation would minimize the potential for migration of odors from accumulated garbage. The potential for putrefaction of

accumulated garbage, which is the source of associated odor, would be minimized through compliance with Benicia Municipal Code Chapter 8.24, which requires collection of solid waste in enclosed trucks at a minimum frequency of once a week.

In the highly unlikely event that a future use created an ongoing odor impact, it would be addressed through complaints to BAAQMD. During the short-term construction of new development, diesel-fueled equipment exhaust could generate some odors. However, these emissions typically dissipate quickly and would be unlikely to affect a substantial number of people. Due to the proximity of the project study area to the Carquinez Strait, average wind speeds in the project area are expected to be higher than in more inland areas. The average wind speed reported for the City of Benicia is more than 8.0 miles per hour (mph) for half the year (April 2 to September 9) and 6.6 mph for the other, calmer half of the year.[7] With the project study area exposed to prevailing westerly winds, upward dissipation of construction odors would be expected to occur more rapidly than at more protected locations.

Although found objectionable by many people, odors generated by construction equipment are intermittent and short-term sources of odors that are highly subject to the atmospheric dispersion and dissipation described above. The proposed Mixed-Use Districts project would have ***less-than-significant odor impacts*** during construction of future development. Following completion of project construction, there would be no objectionable odors generated during project operations.

IV. BIOLOGICAL RESOURCES — *Would the project:*

	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
a) *Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service?*	☐	☒	☐	☐

Explanation: The project study area is not expected to contain any sensitive habitat or high quality biological resources, as the area has been largely built out with residential and commercial uses for more than four decades. The only biological habitat in the study area is landscaping, street trees, and trees on private properties. Urban landscaping provides foraging habitat for wildlife species adapted to urban life, including sparrows, crows, and other common bird species. Urban landscaping also provides foraging habitat for mammals adapted to urban life, such as rodents, opossums, and racoons, and coyotes have become increasingly common in Bay Area cities in recent years. None of these wildlife birds or mammals are special-status species, and they would not be adversely affected by future development that could occur in the Mixed-Use Districts. The urban landscape does not provide suitable habitat for special-status wildlife species, with the exception of some bird species, discussed below. When construction disturbance takes place on a specific site, any urban-adapted wildlife that may utilize the site for foraging or roosting would simply relocate to other parcels in the area.

[7] Weather Spark, Climate and Average Weather Year Round in Benicia, California, United States, Accessed September 6, 2021 at: https://weatherspark.com/y/588/Average-Weather-in-Benicia-California-United-States-Year-Round.

Mature trees in the study area may provide roosting and nesting habitat for raptors or other protected birds. Some of the special-status bird species that could potentially occur in the project area include Cooper's hawk (*Accipiter cooperii*), sharp-shinned hawk (*Accipiter striatus*), American kestrel (*Falco sparverius*), grasshopper sparrow (*Ammodramus savannarum*), oak titmouse (*Baeolophus inornatus*), short-eared owl (*Asio flammeus*), red-tailed hawk (*Buteo jamaicensis*), red-shouldered hawk (*Buteo lineatus*), ferruginous hawk (*Buteo regalis*), Suisun song sparrow (*Melospiza melodia maxillaris*), San Pablo song sparrow (*Melospiza melodia samuelis*), rufous hummingbird (*Selasphorus rufus*), yellow warbler (*Setophaga petechia*), and yellow-headed blackbird (*Xanthocephalus xanthocephalus*).

Were special-status birds to be present on a site proposed for future development or redevelopment, they could be disturbed during construction activities, including demolition and/or grading, if applicable. If trees containing nests were removed during nesting season, there could be mortality of eggs and/or chicks. This would be a ***potentially significant impact***, which would be reduced to less than significant with implementation of the following mitigation measure:

Mitigation Measure BR-1: Prior to issuance of a grading permit or building permit for any future development project in the Mixed-Use Districts that would entail construction disturbance on a site containing or adjacent to mature trees, the project applicant shall comply with the following: If any site grading or project construction will occur during the general bird nesting season (February 1 through August 31), a bird nesting survey shall be conducted by a qualified raptor biologist prior to any grading or construction activity. If conducted during the early part of the breeding season (January to April), the survey shall be conducted no more than 14 days prior to initiation of grading/construction activities, due to the higher probability that new nest construction could be initiated during this time. If conducted during the late part of the breeding season (May to August), when the potential for new nest creation is much lower, the survey shall be performed no more than 30 days prior to initiation of these activities. If active nests are identified, a 250-foot fenced buffer (or an appropriate buffer zone determined in consultation with the California Department of Fish and Wildlife) shall be established around the nest tree and the site shall be protected until September 1st or until the young have fledged. A biological monitor shall be present during earth-moving activity near the buffer zone to make sure that grading does not enter the buffer area.

	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
b) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service?	☐	☐	☐	☒

Explanation: There is no riparian habitat or other sensitive natural community in the project study area.

	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
c) Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?	☐	☐	☐	☒

Explanation: There are no wetlands in the project study area.

	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
d) Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with any established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?	☐	☒	☐	☐

Explanation: The project study area does not provide any habitat that could be utilized as a migratory corridor for wildlife. Although, as discussed above, trees in the area may be utilized for roosting or nesting by raptors or other birds, there is no evidence that the area functions as a significant migration corridor. There is no fish habitat in the study area, so there is no potential for the project to interfere with migratory fish. Potential adverse effects on nesting birds would be addressed by implementation of Mitigation Measure BR-1. This would be a ***less-than-significant impact with mitigation***.

	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?	☐	☐	☐	☒

Explanation: The City of Benicia has a tree protection ordinance, codified in Chapter 12.24 of the Municipal Code, which is intended to provide urban wildlife habitat, preserve scenic beauty and aesthetic and privacy characteristics, prevent erosion of topsoil, protect against flood hazards and the risk of landslides, counteract pollutants in the air, maintain climatic balance, decrease wind velocities, calm traffic, and reduce public costs of installing and maintaining storm water drainage systems. The ordinance requires a permit for removal or pruning of a protected tree. The following trees are protected by the city:

1. All City property trees over 8 inches in diameter (as measured 48 inches above soil level);
2. Street trees over 8 inches in diameter;
3. All heritage trees, which have been so designated by the City Council as a protected tree or group of trees that have importance or influence in marking the history and/or event of the City of Benicia;
4. All designated protected trees;
5. All other trees over 12 inches in diameter;
6. The following California native tree species, which have a trunk diameter of 8 inches (25-inch circumference):
    a. Blue oak (*Quercus douglasii*);
    b. Live oak (*Quercus agrifolia*);
    c. Valley/white oak (*Quercus lobata*);
    d. Willow (*Salix*);
    e. Buckeye (*Aesculus californica*);
    f. Box elder (*Acer negundo*);
    g. California Bay (*Umbellularia californica*);
    h. Black walnut (*Juglans hindsi*).

The tree protection ordinance applies Citywide to all residents and property owners, subject to enforcement by the City and the assessment of penalties for violations. Additional scrutiny is brought to bear on proposed development projects. Any application for a proposed project or other action requiring review by the Planning Commission, City Council, or Historic Preservation Review Commission must be accompanied by a signed statement from the property owner or authorized agent that discloses whether any protected trees exist on the property, and which describes each protected tree, identifies its species, size (diameter, canopy, drip line area, height) and location. Alternatively, this information can be depicted on the project plans. Each development application must include a site sketch showing the location, diameter at 48 inches above natural grade, species (if known), and canopy extent of all trees on the subject property where the canopy or drip line is within 20 feet of the area to be occupied, utilized, or disturbed by the project. The community development director may also require submittal of supplemental information, including photographs and/or a supplemental tree survey prepared by a certified or registered consulting arborist. These requirements do not apply if the proposed development does not involve any change in building footprint or any grading, trenching, or paving.

The City's Tree Protection Ordinance also requires the protection of all protected trees during construction activity. Prior to the initiation of construction, protective fencing must be established around the dripline or tree protection zone of each tree using the type of fencing recommended by the City Arborist; three types of possible fencing design are defined in BMC Section 12.24.090. Section 12.24.090 also stipulates protective measures that must be observed throughout construction, including the prohibition of grading, drainage, or other disturbance within the dripline of protected trees and the prevention of oil, gasoline, chemicals or other harmful materials from draining into the drip line of a protected tree.

Issuance of a tree pruning or removal permit by the Parks and Community Services Director, City Arborist, or their designee may be subject to conditions. At a minimum, applicants for tree removal are required to pay a removal fee, set by the City Council, and may also be required to provide a replacement tree for each tree to be removed.

Future development projects consistent with the proposed Mixed-Use Districts would be required to comply with the provisions of the City's Tree Protection Ordinance. This mandatory compliance would also ensure that the projects would not conflict with adopted General Plan policies protecting trees, which include the following:

Program 3.20.B: Limit the loss of native vegetation or require mitigation, or both.

Policy 3.20.3: Encourage preservation of existing trees. Especially preserve and protect mature, healthy trees whenever practicable, particularly where such trees are of significant size or are of significant aesthetic value to the immediate vicinity or to the community as a whole.

Program 3.20.D: Strive to incorporate existing mature, healthy trees into proposed developments.

The City's discretionary review process would ensure that future development projects would not conflict with the City's Municipal Code Chapter 12.24 or the General Plan policies listed above. Project's not requiring discretionary review would be subject to the City's standard enforcement procedures. There are no other local policies or ordinances protecting biological resources that would apply to the project or with which the project could conflict. The project would have ***no impact*** on policies related to protection of biological resources.

	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
f) Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?	☐	☐	☐	☒

Explanation: The City of Benicia is within the planning area for the *Solano Multi-Species Habitat Conservation Plan* (HCP), which is intended to promote the conservation of biological diversity and the preservation of covered species and their habitats within the planning area, which encompasses approximately 585,000 acres. The HCP identifies avoidance and minimization measures and other conditions that must be met for development projects to obtain incidental take coverage for adversely affecting plant and wildlife species covered under the federal Endangered Species Act (ESA). There are 36 covered species, 36 additional special management species, and five broad natural communities/geographic regions in Solano and Yolo Counties addressed by the HCP.

As discussed further in Section IV-a, above, future development in the Mixed-Use Districts is not expected to adversely affect special-status species, with the possible exception of nesting birds. Mitigation has been identified to prevent adverse impacts to nesting birds, which will also avoid the incidental take of protected species. There are no areas of significant habitat in the project area. Therefore, the proposed project would not conflict with the provisions of the Solano Multi-Species HCP. Furthermore, the City of Benicia is not one of the plan participants, and therefore is not subject to the provisions of the HCP. The project area is outside of the planning area for the *Cache Slough Complex Habitat Conservation Plan*, the only other HCP in Solano County. There is no other conservation plan applicable to the project study area. The project would have ***no impact*** due to a conflict with an adopted HCP or other conservation plan.

V. CULTURAL RESOURCES — *Would the project:*

	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Cause a substantial adverse change in the significance of a historical resource pursuant to §15064.5?	☐	☒	☐	☐

Explanation: In order to be considered a significant historical resource as defined in Section 15064.5 of the *CEQA Guidelines*, a building must be at least 50 years old. In addition, Section 15064.5 defines an historical resource as, "… a resource listed in, or determined to be eligible for listing in, the California Register of Historical Resources," properties included in a local register of historical resources, or properties deemed significant pursuant to criteria set forth in *Public Resources Code* Section 5024.1(g). According to *CEQA Guidelines* Section 15064.5(a)(3), a lead agency can determine that a resource is significant in the architectural, engineering, scientific, economic, agricultural, educational, social, political, military, or cultural annals of California, provided that the determination is supported by substantial evidence in light of the whole record.

In order to be eligible for listing in the California Register of Historical Resources (CRHR), a property must meet at least one of the following criteria:

- Criterion 1: Is associated with events that have made a significant contribution to the broad patterns of California's history and cultural heritage;
- Criterion 2: Is associated with the lives of persons important in our past;
- Criterion 3: Embodies the distinctive characteristics of a type, period, region, or method of construction, or represents the work of an important creative individual, or possesses high artistic values; or
- Criterion 4: Has yielded, or may be likely to yield, information important in prehistory or history.[8]

In addition, to being eligible for the California Register, the resource must retain enough of its historic integrity to be recognizable as an historical resource, and typically must be at least 50 years old. Following the National Register of Historic Places integrity criteria, California Register regulations specify that integrity is a quality that applies to historic resources in seven ways: location, design, setting, materials, workmanship, feeling, and association.[9]

Settlement in downtown Benicia began soon after the town was platted in 1847, and many original properties remain. In recognition of the importance of the historic area, the City established the Downtown Historic District in 1990, and expanded it in 1992. One of two historic districts in Benicia (the other being within the boundaries of the former Benicia Arsenal), the district was created to preserve historic buildings and help maintain and enhance the variety of activities that make up the

[8] California Resources Agency, *CEQA Guidelines*, Section 15064.5(a)(3), as amended September 27, 2016.

[9] The definition of integrity under the California Register follows National Register of Historic Places criteria. Detailed definitions of the qualities of historic integrity are in National Register Bulletin 15, *How to Apply National Register Criteria for Evaluation*, published by the National Park Service.

historic quality of the area. The district contains numerous historic sites, including registered historic landmarks. Although General Plan Figure 3-1 lists 40 historical sites, none of them are located in the project study area. The City also maintains a list of over 250 historic properties in downtown Benicia, including landmarks and contributors to the historic district, and none of these properties are located in the project study area.[10]

Nonetheless, there are properties within the study area that are more than 50 years old that could potentially be eligible for listing in the CRHR. Possible examples include the residential structures at 515 East L Street and 524 East N Street. Future development or redevelopment of a property occupied by an historic structure could entail demolition of the structure or modification that would compromise or destroy its historic integrity. Modifications to historic properties can be made while avoiding significant impacts to historic resources, such as by designing and carrying out renovations or reconstructions in a manner that is consistent with the *Secretary of the Interior's Standards for Treatment of Historic Properties with Guidelines for Preserving, Rehabilitating, Restoring, and Reconstructing Historic Buildings*. Damage to or destruction of an historic resource would constitute a ***potentially significant impact***. Implementation of the following mitigation measure would reduce the impact to a less-than-significant level:

Mitigation Measure CUL-1: Prior to approving any proposed development project within the Mixed-Use Districts that would result in the demolition or alteration of any structures that are more than 50 years old (as determined by the City), the structures shall be evaluated in a Historic Resources Evaluation (HRE) by a qualified architectural historian meeting the Secretary of the Interior's Professional Qualification Standard to determine whether or not any of the structures are potentially a significant historical resource pursuant to Section 15064.5 of the *CEQA Guidelines*, documenting the results of the investigation in a professional HRE report to be submitted to the Benicia Planning Division. If the architectural historian determines that no historical resources are present, no further mitigation would be required. If historical resources are identified, the project applicant will be required to either (a) implement all recommendations identified in the Historic Resources Evaluation report to reduce potential impacts to a less-than-significant level, if applicable, or (b) sponsor the preparation of an Environmental Impact Report (EIR) pursuant to CEQA to fully evaluate and disclose the project's potential impacts to historical resources.

[10] City of Benicia, List of Downtown Historic Buildings (Contributors and Landmarks), Accessed September 6, 2021 at: https://www.ci.benicia.ca.us/vertical/Sites/%7BF991A639-AAED-4E1A-9735-86EA195E2C8D%7D/uploads/Downtown_Historic_Properties.pdf.

	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to §15064.5?	☐	☒	☐	☐

Explanation:

Ethnographic Context

Information presented in this discussion is taken from a recent report prepared by archaeologists with Archeo-Tec, Inc.[11]

Humans have been continuously occupying California and the San Francisco Bay region for at least 12,000 years. The earliest sites are in Lake, Sonoma, and Santa Cruz counties. In the Bay Area, a human burial dating to 5490 cal B.C.[12] was recovered from the Los Vaqueros Reservoir, but sites dating to the Early Holocene/Lower Archaic (cal 8000-3500 B.C.) are extremely rare. During that time, people were highly mobile foragers, who used large leaf-shaped projectile points and handheld milling stones.

The Early Period/Middle Archaic (3500-500 cal B.C.) saw a general trend towards increased stone technologies, trade, and sedentism. This period is characterized by further niche specialization, a refinement of various technologies, specialized exploitation of plant and animal species, and increased sedentism. Many of the sites dating to this period in the San Francisco Bay region are shellmounds, which are midden sites containing large quantities of mollusk shells. Shellmounds were used for both habitation and the interment of human burials. In the early 20th century, archaeologist N.C. Nelson recorded over four hundred shellmounds around the edge of the San Francisco Bay.

The Ellis Landing Shellmound (CA-CCO-295), which is located on the southern Richmond shoreline, is estimated to have been occupied as early as 3,000 B.P.[13] (1,000 B.C.) The Ellis Landing Shellmound produced artifacts such as stone net sinkers; an abundance of mortars, pestles, and bone implements; disk-shaped Olivella shell beads; weapon tips and knives, and bipointed bone objects. Other shellmound sites in the San Francisco Bay Area have also yielded elements associated with the Early, Middle and Late archaeological time periods.

The Middle Period/Upper Archaic of the San Francisco Bay Region (500 cal B.C.-1050 A.D.[14]) is marked by major changes in artifacts styles (especially beads). In cal A.D. 430, a "dramatic cultural disruption" associated with the collapse of the shell bead network resulted in changes to both artifact styles and burial practices. What caused these changes is unclear but two general hypotheses have been posited: population pressure and migration.

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[11] Archeo-Tec, *Phase I Cultural Resource Assessment for the Annex Project, City of Richmond, Contra Costa County, California*, May 2021.

[12] The scientific term "cal B.C." is an abbreviation for "calibrated years before Christ," and is a notation that signifies that the raw radiocarbon date cited has been corrected using current methodologies.

[13] "B.P." is an abbreviation for "before present."

[14] "A.D." is an abbreviation for "anno domini," which is Latin for "in the year of the Lord," and refers specifically to the birth of Jesus Christ.

The project study area is situated in what was, prior to the arrival of the first Europeans in the closing decades of the 18th century, part of the territory occupied by the Southern Patwin tribe of Native Americans, who occupied the lands in present-day Colusa, Solano, and Yolo counties, as well as the eastern edges of Lake and Napa counties. They were part of the Penutian language family, and were connected by similar language to the Nomlaki and Wintu tribes, located to the north. Together, the three groups were known as the Wintu, and the Patwin are sometimes called the Southern Wintun.

The Patwin were a hunting and gathering society that depended mostly on acorns and fish for sustenance. Their settlements occurred next to water supplies. The nearest Patwin village sites that archaeologists have located are on the Napa River and near the present-day City of Fairfield. There are mortar sites at the Benicia State Recreation Area. Although early explorers reported seeing "many villages" on the north shore of the Carquinez Strait and mapped a village at the head of Southampton Bay, it remains undocumented whether this region was regularly inhabited, how it was utilized, and who used it.[15]

Due to the proximity to the Carquinez Strait, which provided environmental conditions favored by Native Americans for camps and settlements, it's possible that currently unknown archaeological sites could lie buried in the subsurface of the project study area. Were such resources to be present, excavation or other surface/subsurface disturbance undertaken during future development allowed in the proposed Mixed-Use Districts could damage or destroy the resources, which could result in a ***potentially significant, adverse impact*** on archaeological resources. Implementation of the following mitigation measures, based on Archeo-Tec's recommendations, and consistent with Section 15064.5 of the *CEQA Guidelines*, would reduce the potential impact to a less-than-significant level:

Mitigation Measure CUL-2: Prior to issuance of a grading permit for any future development in the Mixed-Use Districts, an archival search of the project vicinity shall be performed by the Northwest Information Center (NWIC) at Sonoma State University, which is part of the California Historical Resources Information System (CHRIS). If the NWIC determines, based on the results of the archival search, that there is a moderate to high probability for cultural resources to be present within the confines of the site proposed for development, it will make recommendations for further study by a qualified archaeologist, which could include a recommendation for a surface reconnaissance of the site and possibly for subsurface testing. Prior to issuance of the grading permit, the project sponsor shall retain the services of a qualified archaeologist to perform all of the additional investigation recommended by the NWIC. The archaeologist shall document the results of the investigation in a professional report to be submitted to the Benicia Planning Division. Any additional recommendations made by the archaeologist for additional investigation, archaeological monitoring during site disturbance, and/or artifact recovery and documentation shall be implemented by the project sponsor prior to the initiation of project construction (or during construction, in the case of archaeological monitoring).

[15] City of Benicia, *Benicia General Plan Draft Environmental Impact Report,* State Clearinghouse No. 97122023, Section 4.7, Cultural Resources, January 1998.

	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
c) Disturb any human remains, including those interred outside of formal cemeteries?	☐	☒	☐	☐

Explanation: Similar to the potential to encounter cultural artifacts described in the preceding subsection, there is a possibility that human remains associated with the possible prehistoric occupation of all or a portion of the Eastern Gateway study area by Native Americans could be present within the subsurface of a site proposed for development or redevelopment in the future. Such remains are considered sacred by Native American tribal groups, and their disturbance or destruction during site grading or other project construction activities would be a ***potentially significant impact***. Implementation of Mitigation Measure CUL-2 and the following mitigation measure would reduce the potential impact to less than significant with mitigation.

Mitigation Measure CUL-3: In the event that any human remains are encountered during site disturbance, all ground-disturbing work shall cease immediately and a qualified archaeologist shall notify the Solano County Coroner and advise that office as to whether the remains are likely to be of prehistoric or historic period in date. If determined to be prehistoric, the Coroner's Office will notify the Native American Heritage Commission of the find, which, in turn, will then appoint a "Most Likely Descendant" (MLD). The MLD in consultation with the archaeological consultant and the City, will advise and help formulate an appropriate plan for treatment of the remains, which might include recordation, removal, and scientific study of the remains and any associated artifacts. After completion of analysis and preparation of the report of findings, the remains and associated grave goods shall be returned to the MLD for reburial. Compliance with the MLD's treatment plan and final disposition of the remains and any associated grave goods would complete the project sponsor's obligations under this mitigation measure.

This mitigation is consistent with California Health and Safety Code Sections 7000-8030, which sets forth requirements for procedures to be followed in the event human remains are encountered outside of a cemetery. Section 7052 of this chapter makes it a felony subject to imprisonment for any person to disturb or remove human remains from any location other than a dedicated cemetery without authority of law. Projects that are permitted by right in the Mixed-Use Districts would be equally subject to these legal requirements.

VI. ENERGY — *Would the project:*

	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources during project construction or operation?	☐	☐	☒	☐

Explanation: Construction of future development facilitated by the proposed Mixed-Use Districts would require consumption of gasoline and diesel fuel by construction workers travelling to and from individual project sites, by trucks delivering construction materials and supplies to the sites, and by earthmoving, paving, and other construction equipment. Once future development projects are completed and occupied, gasoline and diesel fuel would continue to be consumed by residents, visitors, customers or clients, delivery and repair vehicles, and service providers traveling to and from the sites, as applicable. Electricity would be consumed for space and water heating and landscape maintenance (i.e., electricity to control irrigation equipment), as well as the operation of household appliances and amenities that future homeowners might use, or office equipment and other equipment that businesses might use. In residential projects, electricity would also be consumed for electric vehicle charging, since the proposed zoning text amendments require all new residential projects (both single-family and multi-family) to provide electric vehicle charging facilities. The proposed zoning text amendments do not include prohibitions on natural gas connections, so it is assumed that natural gas would be consumed for space heating, water heating, and cooking.

During construction of future development projects, the building contractors would be required by Mitigation Measure AQ-1 (see Section III-b) to limit idling time of equipment and vehicles to 5 minutes or less and maintain construction equipment and vehicles in optimal working condition. These requirements would benefit air quality and would also prevent wasteful or inefficient consumption of fuel during project construction. Although the City does not have a construction and demolition (C&D) debris recycling ordinance, project applicants in the Mixed-Use Districts will also be required to comply with the 2019 edition of the California Green Building Standards Code (CALGreen Code), codified in Title 24, Part 11 of the California Code of Regulations (CCR), which mandates diversion of at least 65 percent of C&D waste from landfill disposal. Compliance with these regulations would help reduce consumption of energy associated with transport, processing, and disposal of solid waste at landfills.

Once individual development projects are completed and occupied, the City won't have direct control over how new residents and business owners consume energy, but inefficient use of energy would be minimized through compliance with applicable provisions of the CALGreen Code and with general building energy efficiency standards, also part of Title 24, which require energy-efficient ceiling and rafter roof insulation, walls, floors, windows, doors, luminaires, heating and cooling systems, appliances, water heaters, and pool and spa systems.

Part 6 of Title 24 also sets energy and/or water efficiency standards for home appliances, including refrigerators, freezers, dishwashers, clothes washers and dryers, stoves, room and central air conditioners, space heaters, water heaters, pool heaters, plumbing fixtures, incandescent and fluorescent lamps, emergency lighting, luminaires, computers, televisions, audio and video equipment, battery charger systems, and more, with similar requirements for office equipment. There are also federal regulations pertaining to appliance efficiency, and in many cases, the California standards are

the same as the federal standards. It should be noted that water efficiency contributes to energy efficiency by reducing energy requirements for treating and pumping domestic water.

Based on the greenhouse gas emissions modeling of project operations summarized in Section VIII, it was estimated that vehicular travel by new residents in the Mixed-Use Districts, their visitors and guests, and service/delivery vehicles would result in approximately 2,532,121 annual vehicle miles traveled by 2040, consuming approximately 78,651 gallons of gasoline. However, the net reduction in commercial land use in the project study area would offset the increase in residential gasoline consumption, resulting in an annual net increase of just 103 gallons of gasoline per year. Although these numbers would vary in the intervening years, there would still be a substantial offset from commercial uses each year, such that net annual consumption would remain low. Due to a lack of data on future construction projects in the study area, construction-related gasoline and diesel fuel consumption were not modeled. However, there is no reason to expect that construction-related consumption of these fuels would be wasteful, inefficient, or unnecessary, leading to significant environmental impacts.

Electricity consumed by the new residential users would be approximately 819,683 kilowatt-hours per year (kWh/yr). Electricity consumed by commercial uses would decrease by an average of 412,493 kWh/yr, resulting in a net increase of 407,190 kWh/yr for the total project. Natural gas consumption was estimated at 1,776,920 thousand British Thermal Units per year (kBTU/yr) for residential uses, with a reduction of 92,900 kBTU/yr estimated for commercial uses, resulting in a net increase of 1,684,020 kBTU/yr.

Compliance with the energy efficiency regulations cited above would ensure that construction and operation of the proposed townhomes would not result in wasteful, inefficient, or unnecessary consumption of energy resources. The project would have a ***less-than-significant impact*** on energy resources.

	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
b) Conflict with or obstruct a State or local plan for renewable energy or energy efficiency?	☐	☐	☐	☒

Explanation: Statewide, the *Integrated Energy Policy Report* prepared by the California Energy Commission provides a blueprint for continuing to grow the California economy while reducing the environmental footprint of its energy system.[16] The State's energy system includes energy extraction, transport, conversion (such as combusting natural gas in power plants to generate electricity or producing gasoline and diesel from crude oil in refineries), and consumption for services (such as electricity for lighting, natural gas use in homes and buildings for space and water heating, pumping water to communities and crops, and gasoline and diesel to fuel cars and trucks), as well as electricity from out-of-State plants serving California.

California's electricity generation capacity is composed of multiple fuel sources, including coal, hydroelectric, natural gas, nuclear, oil, petroleum coke, waste heat, biomass, geothermal, solar photovoltaic, solar thermal, and wind. In 2019, the State had an installed generation capacity from

[16] California Energy Commission, *2016 Integrated Energy Policy Report Update*, February 28, 2017.

these multiple sources of 200,475 gigawatt hours (GWh).[17] The composition of California's in-State generation capacity has shifted since the 2002 passage of Senate Bill 1078, which required that 20 percent of electric production come from renewable resources by 2017. With the passage of SB X1-2 in 2011, this was increased to 33 percent renewables by 2020; it was raised again to 50 percent renewables by December 31, 2030 by SB 350, passed in 2015.

Because energy consumption is directly tied to the emissions of GHGs, and in fact, is the source of 80 percent of GHG emissions in the State,[18] the City of Benicia's Climate Action Plan (CAP), intended to reduce emissions of GHGs, can be viewed as a local plan for energy efficiency, and in fact it contains GHG reduction measures specifically pertaining to building and energy efficiency as well as measures to divert 90 percent of City-generated solid waste and 75 percent of community-generated solid waste from landfill disposal and measures to conserve water. (As noted above, water conservation has a beneficial effect on energy consumption.) The project would not conflict with the City's CAP, and therefore would not conflict with a local plan for energy efficiency.

Because the CEC's *Integrated Energy Policy Report* is intended to reduce GHG emissions by transitioning the State's energy portfolio to more renewable energy sources, it can also be viewed as a plan for renewable energy and energy efficiency on the Statewide level. As discussed in Section VI-a, above, future development projects in the Mixed-Use Districts would be required to comply with a variety of building and appliance energy efficiency standards, which would maximize its energy efficiency. Therefore, the project would not conflict with a State plan for energy efficiency.

VII. GEOLOGY AND SOILS — *Would the project:*

	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving:				
i) Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42.	☐	☐	☐	☒

Explanation: The nearest active earthquake faults to the project study area are the Green Valley fault, which is located approximately 2.7 miles to the northeast, and the Concord fault, located about 3 miles

[17] California Energy Commission, *California Energy Almanac*, Electric Generation Capacity & Energy, In-State Electric Generation by Fuel Type, Accessed April 24, 2021 at: http://www.energy.ca.gov/almanac/ electricity_data/electric_ generation_capacity.html.

[18] California Energy Commission, *2016 IEPR Update: Integrated Energy Policy Report*, Publication No. CEC-100-2016-003-CMF, Chapter 1: Environmental Performance of the Electricity Generation System, 2016.

to the southeast.[19] Therefore, there are no Alquist-Priolo fault zones in proximity to the project study area, and there is no potential for fault rupture to affect the future proposed development in the Eastern Gateway Mixed-Use Districts. Therefore, the proposed project would have ***no impact*** related to rupture of an active earthquake fault.

	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
ii) Strong seismic ground shaking?	☐	☐	☒	☐

Explanation: The San Francisco Bay Area is recognized by geologists and seismologists as one of the most seismically active region in the United States. Similar to most urban locations throughout the Bay Area, the project site is potentially subject to moderate to high seismic ground shaking during an earthquake on one of the major active earthquake faults that transect the region. Major earthquakes have occurred on the Hayward, Calaveras, and San Andreas faults during the past 200 years, and numerous minor earthquakes occur along these faults every year. At least five known earthquakes of Richter magnitude (RM) 6.5, four of them greater than RM 7.0, have occurred within the San Francisco Bay Area within the last 150 years. This includes the great 1908 San Francisco earthquake (moment magnitude 7.8) and the 1989 Loma Prieta earthquake (RM 6.9).

According to a 2014 analysis by the Working Group on California Earthquake Probabilities (WGCEP), an expert panel co-chaired by U.S. Geological Society (USGS) seismologists, there is a 72 percent probability that an earthquake of magnitude 6.7 or greater will occur in the San Francisco Bay Area in the next 30 years and a 20 percent probability that an RM 7.5 earthquake will occur (starting from 2014).[20] The WGCEP estimates there is a 14.3-percent chance of an RM 6.7 quake occurring on the Hayward fault in the next 30 years. It is therefore likely that a major earthquake will be experienced in the region during the planning horizon for the Mixed-Use Districts that could produce strong seismic ground shaking in the project study area.

In addition to the Green Valley and Concord faults previously mentioned, there are a number of other active Quaternary faults located the project study region, including the Hayward, Calaveras, and San Andreas faults. A large earthquake centered on one of these faults could cause severe ground shaking in the project vicinity. According to the Unified Hazard Tool published by the USGS, the estimated peak ground acceleration (PGA) that could be experienced in the study area during strong seismic shaking would be 0.8997 PGA.[21]

Given the high magnitude of seismic ground shaking and related peak ground acceleration that could be experienced in the study area, there is potential for a strong seismic event to result in severe damage or even structural failure of future development that could be proposed in the Mixed-Use Districts, with potential to severely injure or kill building occupants. However, in accordance with recent CEQA case law (e.g., *California Building Industry Association v. Bay Area Air Quality Management District* (Aug.12, 2016) 2 Cal.App.5th 1057), CEQA generally no longer considers an impact of the

[19] U.S. Geological Survey, U.S. Quaternary Faults National Database [interactive map], Accessed September 9, 2021 at: https://usgs.maps.arcgis.com/apps/webappviewer/index.html?id=5a6038b3a1684561a9b0aadf88412fcf.

[20] Edward H. Field and Members of the 2014 Working Group on California Earthquake Probabilities, U.S. Geological Survey, California Geological Survey, *UCERF3: A New Earthquake Forecast for California's Complex Fault System*, USGS Open File Report 2015-3009, 2015.

[21] U.S. Geological Survey, Earthquake Hazards Program, Unified Hazard Tool, Accessed September 9, 2021 at: https://earthquake.usgs.gov/hazards/interactive/.

environment on a project to be a significant impact. Accordingly, this would be a ***less-than-significant impact***. However, pursuant to Chapter 15.04 of the Benicia Municipal Code, the City of Benicia has adopted the current version of the California Building Code as its building code, and all new construction within the City is required to comply with its provisions.

The California Building Code requires that a site-specific geotechnical investigation report be prepared by a geotechnical engineer or similar licensed professional for proposed developments of one or more buildings greater than 4,000 square feet to evaluate geologic and seismic hazards and provide recommendations for site preparation and foundation design. Buildings less than or equal to 4,000 square feet also are required to prepare a geologic engineering report, except for one-story, wood-frame and light-steel-frame buildings that are located outside of the Alquist-Priolo Earthquake Faults Zones. The purpose of the geotechnical investigation is to identify seismic and geologic conditions that require project mitigation, such as ground shaking, liquefaction, differential settlement, and expansive soils. Based on the conditions of a proposed building site, the building code requires specific design parameters to ensure construction of buildings that will resist collapse during an earthquake. These design parameters do not protect buildings from all earthquake shaking hazards, but are designed to reduce hazards to a manageable level.

Once a specific proposal for new development in the project Mixed-Use Districts is submitted to the City of Benicia, the Building Division will ensure that the proposed design incorporates the recommendations in the required geotechnical report, and ensure that it complies with the 2019 California Building Standards Code, or the most recent version of the Building Standards Code adopted at the time a project application is deemed complete. The Building Standards Code includes detailed structural design requirements intended to provide adequate structural integrity to withstand the maximum credible earthquake and the associated ground motion acceleration. Compliance with the applicable building codes will maximize the structural stability of the future development and minimize the potential for damage and injury during a strong seismic event.

The Benicia Building Division will ensure that the design of future projects incorporates the recommendations in the geotechnical report for the project. In addition, the Building Division will ensure that the project complies with the current California Building Standards Code, which includes detailed structural design requirements intended to provide adequate structural integrity to withstand the maximum credible earthquake and the associated ground motion acceleration. Compliance with the applicable building codes will maximize the structural stability of future proposed buildings and minimize the potential for damage and injury during a strong seismic event. Therefore, the proposed project would have a ***less-than-significant impact*** from exposure to seismic ground shaking.

	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
iii) Seismic-related ground failure, including liquefaction?	☐	☐	☒	☐

Explanation: Liquefaction occurs when clean, loose, saturated, uniformly graded, fine-grained soils are exposed to strong seismic ground shaking. The soils temporarily lose strength and cohesion, resulting in a loss of ground stability that can cause building foundations to fail. Based on mapping of

liquefaction susceptibility in the Bay Area by USGS, the Mixed-Use Districts study area has a Very Low to Low susceptibility to liquefaction.[22]

Lateral spreading, another form of seismic ground failure, is generally associated with liquefaction; since there is low potential for liquefaction at the site, it is assumed the potential for lateral spreading is also low. As noted in Section VII-a-ii, the geotechnical investigation report that will be required for future development projects will include site and building foundation design recommendations that will ensure the structural stability of the proposed buildings and pavements. With mandatory compliance with the requirements of the California Building Standards Code, the potential for liquefaction or lateral spreading would be a ***less-than-significant impact***.

	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
iv) Landslides?	☐	☐	☐	☒

Explanation: A landslide is a slope failure created by down-slope slippage of a mass of earth or rock that typically occurs as a planar or rotational feature along single or multiple surfaces. Landslides can range from slow-moving, deep-seated slumps to rapid, shallow debris flows. The hazard is greatest on steep slopes with gradients of 15 percent or more, but can occur on shallower slopes with unstable soils, particularly when saturated.

Other than along and immediately adjacent to the I-780 right-of-way at the northern edge of the Eastern Gateway study area, slopes in the project study area are gentle, with minor gradients that are not susceptible to landslide. The slopes flanking the freeway are stable, engineered slopes that have been in place since construction of the freeway in the late 1960s. They do not pose a slope stability hazard to the adjacent properties, including those in the proposed Mixed-Use Districts. The existing streets, other pavements, and buildings all serve to further stabilize the project study area. Consequently, the potential for landslides is non-existent. There would be ***no impact*** due to landslides.

	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
b) Result in substantial soil erosion or the loss of topsoil?	☐	☐	☒	☐

Explanation: Any construction project that exposes surface soils creates a potential for erosion from wind and stormwater runoff. The potential for erosion increases on large, steep, or windy sites; it also increases significantly during rainstorms. The potential for erosion varies in the study area, but in general is not unduly high. Once a currently developed site is cleared for redevelopment, its erosion potential would dramatically increase. During storms, rainwater runoff from exposed sites could introduce high sediment loads into downstream receiving waters.

[22] U.S. Geological Survey, Liquefaction Susceptibility, Maps of Quaternary Deposits and Liquefaction Susceptibility in the Central San Francisco Bay Region, California [map], 2006.

Future construction projects could occur during the rainy season, increasing the potential for erosion at the development site. Therefore, the potential for erosion during construction of future development permitted in the Mixed-Use Districts would be fairly high and could result in a potentially significant impact on the environment. However, the implementation of the Erosion Control Plan required by Benicia Municipal Code Section 15.28.070(A)(11) as discussed in more detail in Section X-a, below, would ensure that the project would have a ***less-than-significant impact*** due to erosion.

	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
c) Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction, or collapse?	☐	☐	☒	☐

Explanation: The potential for landslide is discussed in Section VII-a-iv, above. The potential for liquefaction and lateral spreading are addressed in Section VII-a-iii. The site-specific potential for these and other geological hazards such as subsidence would be evaluated by a project-specific geotechnical investigation that would be required for all future development proposals within the Mixed-Use Districts, as discussed in more detail in Section VII-a-ii, above. With mandatory compliance with the requirements of the California Building Standards Code, the potential for adverse effects from unstable soils would be a ***less-than-significant impact***.

	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
d) Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial risks to life or property?	☐	☐	☒	☐

Explanation: Soil conditions can vary from location to location, and the presence of expansive soils will need to be addressed on a site-specific basis when future development is proposed. As previously noted, future development proposals will be required to submit a geotechnical report that will evaluate the soil conditions at the site of proposed development and include design recommendations tailored to the site-specific soil conditions, including expansive soils, if applicable. Because the applicant will be required to implement the recommendations in the geotechnical report and comply with the site preparation, foundation, and structural design requirements of the California Building Code, including provisions for expansive soils, the project would not be subject to structural failure due to expansive soils. This would be a ***less-than-significant impact***.

	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
e) Have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of wastewater?	☐	☐	☐	☒

Explanation: The project study area is served by an existing sanitary sewer system that would be utilized by future development in the Mixed-Use Districts; septic tanks or alternative wastewater disposal systems would not be required. There would be ***no impact*** from septic systems.

	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
f) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?	☐	☒	☐	☐

Explanation: Paleontological resources are the fossilized remains of vertebrate or invertebrate organisms from prehistoric environments found in geologic strata. They can include microfossils of microscopic plants and animals. They are valued for the information they yield about the history of the earth and its past ecological settings. They are most typically embedded in sedimentary rock foundations, and may be encountered in surface rock outcroppings or in the subsurface during site grading. Although CEQA does not define "a unique paleontological resource or site," the Society of Vertebrate Paleontology (SVP) has defined a "significant paleontological resource" in the context of environmental review as follows:

> Fossils and fossiliferous deposits, here defined as consisting of identifiable vertebrate fossils, large or small, uncommon invertebrate, plant, and trace fossils, and other data that provide taphonomic, taxonomic, phylogenetic, paleoecologic, stratigraphic, and/or biochronologic information. Paleontological resources are typically to be older than recorded human history and/or older than middle Holocene (i.e., older than about 5,000 radiocarbon years).[23]

While the potential for paleontological resources is very site-specific and depends on the underlying geological formations, such resources have been encountered in locations throughout the greater San Francisco Bay Area, including in and around Benicia. Absent site-specific geologic information, it must be assumed that a property proposed for future development within the Eastern Gateway study area could contain significant paleontological resources. Were such resources to be present, they could be damaged, destroyed, or lost during subsurface disturbance of the site. This would be a ***potentially significant impact***. Implementation of the following mitigation measures would reduce this potential impact to less than significant:

[23] Society of Vertebrate Paleontology, Impact Mitigation Guidelines Revision Committee, *Standard Procedures for the Assessment and Mitigation of Adverse Impacts to Paleontological Resources*, 2010.

Mitigation Measure GS-1: Prior to issuance of a grading permit to any future development project in the Mixed-Use Districts that would require ground disturbance, a Worker's Environmental Awareness Program (WEAP) shall be prepared and used to train all construction personnel prior to the start of work. The WEAP training shall include at a minimum the following information:

- Review of local and State laws and regulations pertaining to paleontological resources.
- Types of fossils that could be encountered during ground disturbing activity.
- Photos of example fossils that could occur on site for reference.
- Instructions on the procedures to be implemented should unanticipated fossils be encountered during construction, including stopping work in the vicinity of the find and contacting a qualified professional paleontologist.

Mitigation Measure GS-2: Prior to issuance of a grading for construction work in the Mixed-Use Districts, City staff shall inform the permitee of the requirements of this mitigation measure, and shall provide the permitee a printed copy of an advisory that sets forth the following requirements: If any paleontological resources—such as fossilized bone, teeth, shell, tracks, trails, casts, molds, or impressions—are encountered during site grading or other construction activities, all ground disturbance within 100 feet of the find shall be halted until the services of a qualified paleontologist can be retained to identify and evaluate the scientific value of the resource(s) and, if necessary, recommend mitigation measures to document and prevent any significant adverse effects on the resource(s). Any further mitigation measures recommended by the paleontologist shall be implemented and construction shall not resume in the vicinity of the find until the paleontologist has authorized the resumption of work. Significant paleontological resources shall be salvaged and deposited in an accredited and permanent scientific institution, such as the University of California Museum of Paleontology (UCMP).

VIII. GREENHOUSE GAS EMISSIONS — *Would the project:*

	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
a) *Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?*	☐	☐	☒	☐

Explanation: Greenhouse gases (GHGs) refer to gases that trap heat in the atmosphere and contribute to global warming. The primary GHGs are carbon dioxide (CO_2), methane (CH_4), nitrous oxide (N_2O), sulfur hexafluoride (SF_6), perfluorocarbons (PFCs), hydrofluorocarbons (HFCs), and water vapor (H_2O). The majority of GHG emissions in the Bay Area come from transportation (39.7 percent), followed by industrial/commercial sources (35.7 percent) and electricity generation (14.0 percent). Construction equipment and other off-road equipment contribute 1.5 percent of the total GHG emissions.[24]

"Global warming" and "global climate change" are the terms used to describe the increase in the average temperature of the earth's near-surface air and oceans since the mid-20th century and its projected continuation. Warming of the climate system is now considered to be unequivocal, with global surface temperature increasing approximately 1.33 degrees Fahrenheit (°F) over the last 100 years. Continued warming is projected to increase global average temperature between 2 and 11°F over the next 100 years.

Natural processes and human actions have been identified as the causes of this warming. The International Panel on Climate Change (IPCC) concludes that variations in natural phenomena such as solar radiation and volcanoes produced most of the warming from pre-industrial times to 1950 and had a small cooling effect afterward.[25] After 1950, however, increasing GHG concentrations resulting from human activity such as fossil fuel burning and deforestation have been responsible for most of the observed temperature increase. These basic conclusions have been endorsed by more than 45 scientific societies and academies of science, including all of the national academies of science of the major industrialized countries. Since 2007, no scientific body of national or international standing has maintained a dissenting opinion.

Increases in GHG concentrations in the earth's atmosphere are thought to be the main cause of human-induced climate change. The IPCC is now 95 percent certain that humans are the main cause of current global warming.[26] GHGs naturally trap heat by impeding the exit of solar radiation that has hit the earth and is reflected back into space. Some GHGs occur naturally and are necessary for keeping the earth's surface inhabitable. However, increases in the concentrations of these gases in

[24] Bay Area Air Quality Management District, *Bay Area Emissions Inventory, Summary Report: Greenhouse Gases, Base Year 2011*, Table F: 2011 Bay Area GHG Emissions by Sector, updated January 2015.

[25] IPCC, 2014: Climate Change 2014: Synthesis Report. Contribution of Working Groups I, II and III to the Fifth Assessment Report of the Intergovernmental Panel on Climate Change, Accessed March 23, 2021 at: https://www.ipcc.ch/site/assets/uploads/2018/05/SYR_AR5_FINAL_full_wcover.pdf.

[26] IPCC, 2014: Climate Change 2014: Synthesis Report. Contribution of Working Groups I, II and III to the Fifth Assessment Report of the Intergovernmental Panel on Climate Change, Accessed March 23, 2021 at: https://www.ipcc.ch/site/assets/uploads/2018/05/SYR_AR5_FINAL_full_wcover.pdf.

the atmosphere during the last 100 years have decreased the amount of solar radiation that is reflected back into space, intensifying the natural greenhouse effect and resulting in the increase of global average temperature.

Potential global warming impacts in California may include, but are not limited to, loss in snow pack, sea level rise, more extreme heat days per year, more high ozone days, more large forest fires, and more drought years. Secondary effects are likely to include a global rise in sea level, impacts to agriculture, changes in disease vectors, and changes in habitat and biodiversity.[27]

Gases that trap heat in the atmosphere are referred to as GHGs because they capture heat radiated from the sun as it is reflected back into the atmosphere, much like a greenhouse does. The accumulation of GHGs has been implicated as the driving force for global climate change. While the presence of the primary GHGs in the atmosphere are naturally occurring, CO_2, CH_4, and N_2O are also emitted from human activities, accelerating the rate at which these compounds occur within earth's atmosphere. Emissions of CO_2 are largely by-products of fossil fuel combustion, whereas methane results from off-gassing associated with agricultural practices, coal mines, and landfills.

CO_2 is the reference gas for climate change because it is the predominant GHG emitted. The effect that each of the aforementioned gases can have on global warming is a combination of the mass of their emissions and their global warming potential (GWP). GWP indicates, on a pound-for-pound basis, how much a gas is predicted to contribute to global warming relative to how much warming would be predicted to be caused by the same mass of CO_2. CH_4 and N_2O are substantially more potent GHGs than CO_2, with GWP of 28 and 265 times that of CO_2, respectively.[28]

In emissions inventories, GHG emissions are typically reported in terms of pounds or metric tons of CO_2 equivalents (CO_2e). CO_2e are calculated as the product of the mass emitted of a given GHG and its specific GWP. While CH_4 and N_2O have much higher GWP than CO_2, CO_2 is emitted in such vastly higher quantities that it accounts for the majority of GHG emissions in CO_2e.

Fossil fuel combustion, especially for the generation of electricity and powering of motor vehicles, has led to substantial increases in CO_2 emissions (and thus substantial increases in atmospheric concentrations of CO_2). In pre-industrial times (c. 1860), concentrations of atmospheric CO_2 were approximately 280 parts per million (ppm). By February 2021, atmospheric CO_2 concentrations had increased to 417 ppm, 49 percent above pre-industrial concentrations.[29]

In 2017 BAAQMD established separate thresholds of significance for operational GHG emissions from stationary sources (such as generators, furnaces, and boilers) and non-stationary sources (such as on-road vehicles). The threshold for stationary sources is 10,000 metric tons of CO_2e per year (i.e., emissions above this level may be considered significant). For non-stationary sources, three separate thresholds were established:

1. Compliance with a Qualified Greenhouse Gas Reduction Strategy (i.e., if a project is found to be out of compliance with a Qualified Greenhouse Gas Reduction Strategy, its GHG emissions may be considered significant); or

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[27] California Environmental Protection Agency, Final Climate Action Team Report to the Governor and Legislature, March 2006, Accessed March 23, 2021 at: http://documents.cityofdavis.org/Media/CityCouncil/Documents/PDF/CDD/Planning/Subdivisions/West-Davis-Active-Adult-Community/Reference-Documents/CalEPA_2006_Climate_Action_Team_Report_to_Gov-and_Leg.PDF.

[28] IPCC, 2014: Climate Change 2014: Synthesis Report. Contribution of Working Groups I, II and III to the Fifth Assessment Report of the Intergovernmental Panel on Climate Change, Accessed March 23, 2021 at: https://www.ipcc.ch/site/assets/uploads/2018/05/SYR_AR5_FINAL_full_wcover.pdf.

[29] National Oceanographic and Atmospheric Administration - Earth System Research Laboratory, Recent Monthly Mean CO2 at Mauna Loa, Accessed March 23, 2021 at: http://www.esrl.noaa.gov/gmd/ccgg/trends/.

2. 1,100 metric tons of CO_2e per year (i.e., emissions above this level may be considered significant), representing a bright line threshold; or
3. 4.6 metric tons of CO_2e per service population per year (i.e., emissions above this level may be considered significant), representing an efficiency threshold. Service population is the sum of residents/students/employees expected for a development project.

The City of Benicia Climate Action Plan only addresses development through 2020 so it cannot be used as a Qualified Greenhouse Gas Reduction Strategy. The BAAQMD GHG significance thresholds were established to meet the State's GHG reduction goals through 2020.[30] At this time, BAAQMD does not have a recommended post-2020 GHG significance threshold.

Although BAAQMD has not yet published quantified thresholds for post-2020, this assessment uses a "Substantial Progress" bright line threshold of 440 metric tons of CO_2e per year based on the GHG reduction goals of Executive Order (EO) S-3-05, EO B-30-15, and Senate Bill (SB) 32, which established a California GHG reduction target of 40 percent below 1990 levels by 2030 and 80 percent below the 1990 levels by 2050. The 2040 bright line threshold is a 60-percent reduction of the 2020 1,100 metric tons of CO_2e/year threshold or 440 metric tons of CO_2e per year.

The amount of new development that would be facilitated by the proposed project is based on a buildout analysis of the Mixed-Use Districts performed by the City. Under current zoning, up to 59 new multi-family dwelling units could be developed in the project study area, while the proposed zoning changes would allow up to 271 new dwelling units. Therefore, the net increase in housing units that could occur under the proposed project would be 212 new multi-family dwelling units. Regarding commercial development, existing zoning would allow up to 147,742 square feet of new development in the study area, which would be reduced to 108,041 square feet under the proposed project. Thus, the net change in commercial development that could result from implementation of the project would be a reduction of 39,701 square feet of commercial development. These numbers form the basis of the analysis of GHG impacts as well as the traffic analysis presented in Section XVII of this IS/MND.

CalEEMod Version 2020.4.0 was used to quantify GHG emissions associated with long-term operational emissions produced by motor vehicles; electricity and natural gas use, water and wastewater conveyance, solid waste disposal, and landscape maintenance equipment. The increase of 212 Multi-Family dwelling units was modeled as "mid-rise apartments" and the decrease of 39,071 square feet of Commercial space was modeled as "strip mall" in CalEEMod with default settings.

The model results presented in Table GHG-1 indicate that estimated net GHG emissions for 2040 would be 197 metric tons of CO_2e per year, which is below the 2040 bright line GHG significance threshold of 440 metric tons per year. Therefore, the proposed project would have a ***less-than-significant impact*** from its emissions of GHGs.

[30] AB 32 required that Statewide GHG emissions be reduced to 1990 levels by 2020.

Table GHG-1

Estimated Net GHG Emissions for 2040 (Project Minus No Project)

Source	Annual CO_2e Metric Tons
Increase of 212 Multi-Family Housing Units	966
Decrease of 39,071 Square Feet of Commercial	(769)
Project Net Emissions (Project minus No Project)	**197**
2040 Bright Line Significance Threshold	440
Potentially Significant (Yes or No)?	No

SOURCE: CARB CalEEMod Version 2020.4.0.

	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
b) Conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of greenhouse gases?	☐	☐	☐	☒

Explanation: There are a variety of Statewide plans, policies, and regulations that have been adopted since 2002 for the purpose or reducing GHG emissions, as well as the City's *Climate Action Plan* (CAP) adopted in 2009.[31] Most notably, California passed landmark climate change legislation with Assembly Bill (AB) 32, the California Global Warming Solutions Act of 2006, which requires Statewide GHG emissions to be reduced to 1990 levels by 2020, a reduction of approximately 15 percent below emissions expected under a "business as usual" scenario. This goal was initially established by former Governor Arnold Schwarzenegger's issuance in 2005 of EO S-3-05, which also set a target of reducing GHG emissions to 80 percent below 1990 levels by 2050.

The State's GHG reduction goals were further focused by EO B-30-15, issued on April 29, 2015 by then-Governor Edmund G. Brown. This order established a mid-term GHG Statewide reduction goal of 40 percent below 1990 levels by 2030. This requirement was codified by the Legislature with the 2016 passage of SB 32. The California Air Resources Board (CARB) has developed a Scoping Plan that describes the approach California will take to reduce GHGs to achieve the reduction goals established by these executive orders and legislative acts. The third update to the Scoping Plan, adopted by CARB in late 2017, notes that local governments are essential partners in achieving California's GHG reduction goals.[32]

[31] City of Benicia, *Climate Action Plan*, Adopted September 15, 2009.

[32] California Air Resources Board, *California's 2017 Climate Change Scoping Plan*, November 2017.

Since the proposed project will be operational post 2020, the principal State plans and policies adopted for the purpose of reducing GHG emissions are EO S-3-05, EO B-30-15, and SB 32. The quantitative goal of EO B-30-15 and SB 32 is to reduce GHG emissions to 40 percent below 1990 levels by 2030. The quantitative goal of EO S-3-05 is to reduce GHG emissions to 80 percent below 1990 levels by 2050. Statewide plans and regulations such as GHG emissions standards for vehicles, the low-carbon fuel standard (LCFS), and the Renewables Portfolio Standard (RPS) are being implemented at the statewide level, and compliance at the specific plan or project level is not addressed.

The assumption is that these State regulations will be successful in reducing GHG emissions and reducing the cumulative GHG emissions statewide. The State has taken these measures, because no project individually could have a major impact (either positively or negatively) on the global concentration of GHGs. Therefore, the proposed project would result in a significant impact if it would conflict with State regulations such as EO S-3-05, EO B-30-15, and SB 32.

As noted in the discussion for impact a), the GHG emissions generated by the proposed project would be below the 2040 bright line threshold based on the GHG reduction goals of EO S-3-05, EO B-30-15, and SB 32. Therefore, the proposed project would have a ***less-than-significant impact*** related to a conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of GHG.

IX. HAZARDS AND HAZARDOUS MATERIALS — *Would the project:*

	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?	☐	☐	☒	☐

Explanation: Although most future development projects in the proposed Mixed-Use Districts are not expected to involve the routine transport, use, or disposal of hazardous materials, it is possible that some commercial uses may be proposed that would entail such uses, such as a laboratory, which would be allowed in the MU-I district. For the vast majority of future development facilitated by the project, there would be no potential for significant release of hazardous materials to the environment during the course of normal operations.

Businesses that may use and/or dispose of hazardous materials would be subject to regulation under Chapter 6.95, Article 1 of the California Health and Safety Code (Sections 25500 through 25520), which requires the owner of any facility using or storing a hazardous material, or a mixture containing a hazardous material, at or above statutory reporting thresholds to prepare and submit to the local administering agency (which in Benicia is the Solano County Department of Resource Management, Environmental Health Services Division) a Hazardous Materials Business Plan (HMBP). For liquid materials, such as diesel fuel, the reporting threshold established by California Health and Safety Code Section 25503.5 is 55 gallons stored at any time during the reporting year. For solid or gaseous hazardous materials, the reporting thresholds are 500 pounds and 200 cubic feet, respectively. The requirements apply equally to storage of hazardous materials in underground storage tanks (USTs) and above-ground storage tanks (ASTs). Additional thresholds and requirements apply to extremely hazardous materials and radioactive materials. It should be noted that, given the permitted uses in the

Mixed-Use Districts, including conditional uses, it is highly unlikely that any future businesses in the project study area would be subject to the requirements for a HMBP.

The purpose of the HMBP is to foster the prevention of release of hazardous materials into the workplace or environment, and to facilitate the mitigation of damage to the health and safety of persons and the environment in the event an accidental release occurs. The HMBP provides information on the location, type, quantity, and the health risks of hazardous materials handled, used, stored, or disposed of on a site. It must include both an Emergency Response/Contingency Plan and an Employee Training Plan, among other requirements. The information is intended for use by firefighters and other emergency responders, health officials, planners, public safety officers, health care providers, and regulatory agencies, as well as interested members of the public. The HMBP must be revised within 30 days of introducing a new hazardous material to a facility, increasing the quantity of an existing material by 100 percent or more, or otherwise making a substantial change in operations.

Most development that would be allowed in the proposed Mixed-Use Districts would not involve the transport, use, or disposal of hazardous materials. In the event that a new business was proposed that did involve hazardous materials, the applicant would be required to comply with the applicable Health and Safety Code sections cited above. Compliance with the provisions of the HMBP would minimize the potential for an accidental release of hazardous materials into the environment.

While construction of most future projects could entail transport and use of hazardous materials for equipment operation and maintenance, such as motor oil, transmission fluid, or solvents, such use would not be in quantities large enough to pose an environmental hazard, nor would it constitute routine, ongoing use. Such use is typical of most construction projects and does not represent a significant hazard. Once construction is complete and a residential development project is occupied, new residents might store and use small containerized quantities of hazardous household, outdoor landscape care, and/or automotive products of a wide variety. This type of usage is typical of all residential development, and would not constitute a significant hazard to the public or the environment. Similarly, most office developments and commercial businesses store and use small containerized quantities of cleaning and maintenance products that do not pose a significant environmental hazard. Therefore, future development that would be allowed in the proposed Mixed-Use Districts would have a ***less-than-significant impact*** from the transport, use, or disposal of hazardous materials.

	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
b) Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?	☐	☒	☐	☐

Explanation: As discussed in Section IX-a above, implementation of the proposed project is not expected to introduce hazardous materials beyond those generally found within residential, office, and commercial uses, including containerized household, yard care, and automotive products. To evaluate the possible presence of hazardous materials within the soil or groundwater underlying the Eastern Gateway study area that could potentially be released to the environment by construction activities associated with future development in the study area, queries were submitted to the environmental databases maintained by the State Water Resources Control Board (SWRCB) and California Department of Toxic Substances Control (DTSC).

A search of the GeoTracker database maintained by the SWRCB, which lists active permitted underground storage tank (UST) facilities, leaking underground storage tank (LUST) cleanup sites, or other hazardous materials release sites, identified two sites within or near the study area.[33] One site is the 7 Eleven gasoline station and convenience store at 500 Military East, which was previously a LUST cleanup site. The site was issued a Case Closed letter on February 5, 1999, and this site does not pose an environmental threat to future development in the Eastern Gateway study area.

The other site is also a gas station, the Benicia 76 station at 505 Military East, across the street from the 7 Eleven. This is also a LUST cleanup site that is listed as currently open with a site assessment, as of October 23, 2017. Potential contaminants of concern include diesel, gasoline, methyl tert-butyl ether (MTBE)/TBA / other fuel oxygenates, polynuclear aromatic hydrocarbons (PAHs). A status report from the SWRCB dated August 25, 2021 states that an unauthorized release was reported in August 2017 during the removal of four USTs (three gasoline, one diesel). Contaminated soil was excavated to a depth of 12 to 17 feet below the ground surface (bgs). Initial site investigation activities indicated petroleum hydrocarbon impacts to soil and groundwater. Potential contaminants of concern include diesel, gasoline, methyl tert-butyl ether (MTBE)/TBA / other fuel oxygenates, polynuclear aromatic hydrocarbons (PAHs). The status report states that additional soil excavation, monitoring well, and remedial system pre-planning were conducted recently as part of an upgrade to the site that included installation of new USTs. Since 2019, one groundwater monitoring well has been installed and later was destroyed in October 2020 during the new UST system installation. Additional groundwater assessment is planned. The petroleum release is limited to the soil and shallow groundwater. The affected groundwater is not currently being used as a source of drinking water and the SWRCB noted that it is highly unlikely that the contaminated groundwater will be used as a source of drinking water in the foreseeable future. A remediation plan for the site has been approved by the San Francisco Bay Regional Water Quality Control Board (RWQCB) and the SWRCB concurs with the approved work for remediation. There is no evidence or reason to believe that future development in the Eastern Gateway would cause a release of hazardous materials associated with this LUST site into the environment.

The EnviroStor database maintained by DTSC was also queried, which identified just one site in the project vicinity, at Liberty High School, located at 350 East K Street.[34] Identified as an inactive site that needs evaluation as of July 8, 2019, the database indicates the potential for soil contamination, with chromium IV, copper and compounds, hydrogen sulfide, lead, and total petroleum hydrocarbons (TPH) as motor oil as the potential contaminants of concern. DTSC states that contamination remains in subsurface soils due to historical fill but does not pose an imminent threat to the public health or the environment. Contamination is located beneath a soil cover and there are no drinking water wells in the vicinity. This site is not expected to affect or be affected by future development in the Mixed-Use Districts.

Although there is no known contamination in the Eastern Gateway study area that could result in the release of hazardous materials into the environment during the construction of future development permitted in the Mixed-Use Districts, the potential for such contamination cannot be ruled out. Therefore, it must be concluded that implementation of the proposed project could have a ***potentially significant impact*** due to the release of hazardous materials into the environment. Implementation of the following mitigation measures would reduce the impact to a less-than-significant level:

Mitigation Measure HAZ-1: Prior to the issuance of a grading permit for future development in the Mixed-Use Districts, the applicant shall submit to the Benicia Community Development Department a Phase I Environmental Site

[33] State Water Resources Control Board, GeoTracker Database, Accessed September 12, 2021 at: https://geotracker.waterboards.ca.gov/map/?CMD=runreport&myaddress=1850+Military+East,+Benicia,+CA.

[34] California Department of Toxic Substances Control, EnviroStor Database, Sites and Facilities, Accessed September 12, 2021 at: https://www.envirostor.dtsc.ca.gov/public/map/?myaddress=1850+Military+East,+Benicia,+CA.

Assessment (ESA) prepared by a qualified environmental professional, as defined by American Society of Testing and Materials (ASTM) Standard 1527-13 (or latest edition). If the results of the Phase I ESA indicate the potential presence of site contamination, the project sponsor shall hire a qualified environmental professional to conduct a Phase II ESA, including subsurface soil and/or groundwater testing, in accordance with the recommendations in the Phase I ESA and applicable ASTM standards. If the Phase I ESA identifies any open site assessment regulatory cases on or adjacent to the property proposed for development or redevelopment, the applicant shall obtain a Case Closure/No Further Action letter from the oversight regulatory agency identified in the ESA and shall provide a copy of the letter to the City prior to issuance of a grading permit.

In the event that the Phase II ESA identifies contamination of the soil and/or groundwater at the site above applicable regulatory limits, a remediation plan, subject to the approval of the applicable regulatory agency (assumed to be the San Francisco Bay Regional Water Quality Control Board (RWQCB) in the case of groundwater contamination or the California Department of Toxic Substances Control (DTSC) in the case of soil contamination), shall be prepared and implemented. The City shall not approve a grading permit until adequate evidence is provided to demonstrate that the proposed work would not expose construction workers to hazardous levels of soil and/or groundwater contaminants and would not pose an environmental threat or a health risk to future site occupants or neighbors. Such evidence may include a Case Closure or No Further Action letter from the appropriate regulatory agency or laboratory testing results demonstrating that no contaminant levels exceed the applicable screening criteria established by the RWQCB or DTSC, as applicable.

If the Phase II ESA identifies contamination of the soil and/or groundwater at the site above applicable regulatory limits, the project sponsor shall also implement Mitigation Measures HAZ-2 and HAZ-3.

Mitigation Measure HM-2: If a Phase II Environmental Site Assessment (ESA) has been prepared for a proposed development project in the Mixed-Use Districts in accordance with Mitigation Measure HM-1 and the Phase II ESA identifies contamination of the soil and/or groundwater at the site above applicable regulatory limits, then prior to the issuance of a grading permit, the project sponsor shall retain the services of a qualified environmental professional to prepare a Site Management Plan (SMP) to govern construction work at the project site. The SMP shall establish management practices for handling contaminated groundwater, soil vapor, soil, and other materials during project construction, including proper offsite disposal. A copy of the SMP shall be provided to all construction contractors prior to the initiation of work at the site and construction contracts shall require all contractors to adhere to the provisions of the SMP. Prior to its implementation, the SMP shall be reviewed and approved by the California Department of Toxic Substances Control (DTSC), San Francisco Bay Regional Water Quality Control Board (RWQCB), and/or the Solano County

Department of Resource Management, Environmental Health Services Division (the Certified Unified Program Agency (CUPA) for hazardous materials in Solano County), whichever of these agencies claims jurisdiction.

The SMP shall include the following provisions, if applicable, as well as any other requirements deemed appropriate by the regulatory agencies:

- Establish procedures for dewatering of construction excavations and excavated soils, consistent with applicable federal, State, and local regulations, specifying methods of sampling and testing, water collection, handling, transport, on-site or offsite treatment, discharge, and disposal for all water produced by dewatering activities.
- Establish procedures for sampling and testing site soils to ensure construction workers are not exposed to hazardous levels of residual petroleum hydrocarbons and/or volatile organic compounds (VOCs).
- Establish contingency measures to be followed if soils with contaminant levels in excess of the applicable Environmental Screening Levels (ESLs) for residential use established by the RWQCB are encountered. These measures shall include procedures for excavation, containment, and/or treatment of the contaminated soils to achieve contaminant levels below their ESLs. Any soils requiring offsite disposal shall be submitted to laboratory analysis for hazardous materials by a State-certified laboratory. If contaminant levels do not exceed established limits for non-hazardous waste, the soil may be disposed of at a Class II or III solid waste landfill. If the soil is classified as a hazardous waste, it shall be handled and hauled in accordance with State and federal regulations for hazardous waste and disposed of at a licensed Class I hazardous waste disposal facility.
- Identify measures to protect future occupants of the site from exposure to groundwater contaminants at the site, including intrusion of soil-gas vapors emitted from the groundwater plume. Such measures may include vapor intrusion barriers or vapor extraction systems.

Mitigation Measure HAZ-3: If a Phase II Environmental Site Assessment (ESA) has been prepared for a proposed development project in the Mixed-Use Districts in accordance with Mitigation Measure HM-1 and the Phase II ESA identifies contamination of the soil and/or groundwater at the site above applicable regulatory limits, then prior to the issuance of a grading permit, the project sponsor shall prepare and implement during site preparation and grading activities a Health and Safety Plan (HASP). The HASP shall identify the measures necessary to protect workers and to prevent their exposure to petroleum hydrocarbons and volatile organic compounds (VOCs) that may occur in soils at the site. The HASP shall be prepared in accordance with the Occupational Safety and Health Administration's (OSHA) Hazardous Waste

Operations and Emergency Response (HAZWOPER) Standard promulgated at 29 CFR 1910.120. It shall be prepared and implemented in accordance with all other applicable State and federal occupational safety and health standards.

	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
c) *Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?*	☐	☐	☐	☒

Explanation: Although there are three schools within one-quarter mile of the Eastern Gateway study area, including Liberty High School, Community Day School, and St. Dominic's School, no businesses would be permitted in the Mixed-Use Districts that emit hazardous emissions, handle hazardous materials, or generate hazardous waste, including gasoline stations and automotive repair facilities (which were previously allowed in the General Commercial district but would not be allowed in the proposed Mixed-Use Districts, except for existing grandfathered uses). There would be ***no impact*** on schools related to hazardous materials as a result of project implementation.

	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
d) *Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?*	☐	☐	☐	☒

Explanation: The list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 actually consists of several lists, including:

- A list of hazardous waste sites compiled by the California Department of Toxic Substances Control (DTSC);
- A list of contaminated water wells compiled by the California Department of Health Services (DHS) (subsequently reorganized into the California Department of Health Care Services and the California Department of Public Health);
- A list of leaking underground storage tank sites and solid waste disposal facilities from which there is a migration of hazardous waste, compiled by the State Water Resources Control Board (SWRCB); and
- A list of solid waste disposal facilities from which there is a migration of hazardous waste, compiled by the Local Enforcement Agency (LEA). These lists are consolidated by the Department of Resources Recycling and Recovery (CalRecycle).

Each of these lists must be updated at least annually, and must be submitted to the Secretary for Environmental Protection, the head of the California Environmental Protection Agency (CalEPA). DTSC maintains the EnviroStor database for purposes of complying with Section 65962.5, while the SWRCB maintains the GeoTracker database. Both of these databases were queried during this environmental review, and the results are discussed in Section IX-b, above. Although there is ongoing remediation of a leaking underground storage tank site in the project study area (the Benicia 76 station at 505 Military East), there is no evidence or reason to believe that future development in the Eastern Gateway would cause a release of hazardous materials associated with this LUST site into the environment or create a significant hazard to the public. Were the Benicia 76 station site to be proposed for future redevelopment with residential or other uses, the applicant would be required to comply with Mitigation Measure HAZ-1 and, if applicable, Mitigation Measures HAZ-2 and HAZ-3. The oversight agency—most likely the RWQCB, possibly in conjunction with the Solano County CUPA. Department of Resource Management, Environmental Health Services Division (the Certified Unified Program Agency [CUPA] for Solano County)—would not sign off on redevelopment of the site if residual contaminant levels exceeded the applicable Environmental Screening Levels (ESLs) for the proposed use. No other hazardous materials sites were identified in the study area. There would be ***no impact*** related to hazardous materials sites compiled pursuant to Government Code Section 65962.5.

	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
e) For a project within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard for people residing or working in the project area?	☐	☐	☐	☒

Explanation: There are no airports near the project study area; the nearest public airport is Buchanan Field Airport, located about 6.4 miles southeast of the study area. Although the study area is within the Airport Influence Area (AIA) of Travis Air Force Base in Fairfield, and is therefore within the jurisdictional boundary of the *Travis Air Force Base Airport Land Use Compatibility Plan*, the project area is designated Zone E in the plan, which lists no limits on new land use development, other than to say that large stadiums and similar uses should be avoided.[35] The Air Force Base is located more than 17 miles (to the northeast) from the project study area and would not pose a significant safety hazard to future development in the Mixed-Use Districts. There would be ***no impact*** from a safety hazard from a public airport.

[35] Solano County Airport Land Use Commission, *Travis Air Force Base Airport Land Use Compatibility Plan,* Figure 1: Land Use Compatibility Zones, and Table 1: Land Use Compatibility Criteria, adopted October 8, 2018.

	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
f) For a project within the vicinity of a private airstrip, would the project result in a safety hazard for people residing or working in the project area?	☐	☐	☐	☒

Explanation: There are no private airstrips in the vicinity of the project site. The nearest private airstrip is JSX, which utilizes the runways at Buchanan Field Airport, located about 6.4 miles southeast of the study area. There would be ***no impact*** from a safety hazard from a private airstrip.

	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
g) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?	☐	☐	☐	☒

Explanation: Future infill development in the Mixed-Use Districts would not block or impede access to emergency evacuation routes. Although Military East and 5th Street are both identified as Zone 2 evacuation routes in the City's Emergency Operations Plan, the type of infill development that would be permitted in the Mixed-Use Districts would not alter the existing street network in the study area. The projected 1.8 percent increase in the City's population (relative to the current population) over the course of the 19-year project planning horizon would not appreciably impede evacuation of the area in the event of an emergency.

In the event of a large-scale disaster, emergency response to the study area would be coordinated by City responders. The study area already provides adequate emergency access and egress via the existing gridded street network and freeway proximity. There is therefore no potential for the project to impair implementation of emergency evacuation or emergency response plans. There would be ***no impact*** due to interference with an adopted emergency response/evacuation plan.

	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
h) Expose people or structures to significant risk of loss, injury, or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands?	☐	☐	☐	☒

Explanation: Government Code Section 51178 directs the California Department of Forestry and Fire Protection (CAL FIRE) to identify areas of high fire hazard within Local Responsibility Areas (LRAs) that are not under the direct jurisdiction of CAL FIRE, where local fire-fighting agencies have primary responsibility for fire response. CAL FIRE's mapping of Very High Fire Hazard Severity Zones

(VHFHSZs) is based on data and models of potential fuels over a 30- to 50-year time horizon and their expected fire behavior and burn probabilities. The entire City of Benicia is designated as an LRA, and it is not within a VHFHSZ.[36] The CAL FIRE website states that there are no VHFHSZs in the LRAs in Solano County, and therefore, the agency has not produced a map of VHFHSZs in the County's LRAs, as it has done for most counties.[37] Furthermore, the project site is located in the midst of a large area of urban development, with no wildlands in proximity to the site. Although there are undeveloped grass-covered hillsides located as close as one-half to the north of the project study area, the intervening area is built out with urban uses and is crossed by Interstate 780, which would function as an effective fire break in the event of a grass fire. Therefore, there is little to no potential for wildfire at the project site. There would be ***no impact*** related to a wildfire hazard.

X. HYDROLOGY AND WATER QUALITY — *Would the project:*

	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or groundwater quality?	☐	☐	☒	☐

Explanation:

Construction Impacts

Construction activities associated with future development in the Mixed-Use Districts could potentially affect water quality as a result of erosion of sediment. In addition, leaks from construction equipment; accidental spills of fuel, oil, or hazardous liquids used for equipment maintenance; and accidental spills of construction materials are all potential sources of pollutants that could degrade water quality during construction. Stormwater runoff from the study area is ultimately discharged, without treatment, to the Carquinez Strait, which is hydrologically connected to San Francisco Bay; both of these water bodies are on the list of impaired water bodies compiled by the San Francisco Bay Regional Water Quality Control Board (RWQCB) pursuant to the federal Clean Water Act. Because the State is required to develop action plans and establish Total Maximum Daily Loads (TMDLs) to improve water quality within these water bodies, uncontrolled discharge of pollutants into them is considered particularly detrimental.

Generally, new development that entails "land disturbance" of 1 acre or more requires the project sponsor to obtain coverage under Construction General Permit (CGP) Order 2009-0009-DWQ, administered by the RWQCB. There are no parcels this large in the Eastern Gateway study area; the largest parcel is less than one-half acre in size, and most parcels are less than one-quarter acre. Although future development projects in the Eastern Gateway study area would not be required to obtain coverage under the CGP, which requires project sponsors to implement construction Best Management Practices (BMPs) at the project site to control both stormwater and non-stormwater

[36] California Department of Forestry and Fire Protection (CAL FIRE), Solano County Fire Hazard Severity Zones in SRA [map], Adopted by CAL FIRE November 7, 2007.

[37] California Department of Forestry and Fire Protection (CAL FIRE), Fire Hazard Severity Zones Maps, Accessed September 3, 2021 at: https://osfm.fire.ca.gov/divisions/wildfire-planning-engineering/wildland-hazards-building-codes/fire-hazard-severity-zones-maps/.

discharges, all development projects in Benicia are required by Municipal Code Section 15.64.090 to prepare and implement an Erosion and Sediment Control Plan (ESCP), which must be approved by the authorized enforcement official prior to issuance of a grading permit, building permit, or other discretionary permit issued by the City.

The ESCP must also implement appropriate erosion and sedimentation BMPs, consistent with the California Stormwater Quality Association's recommendations. Measures to control non-stormwater discharges such as spills, leakage, and dumping must be addressed through structural as well as non-structural BMPs. The City is authorized by Municipal Code Section 15.64.120 to conduct routine inspections of construction sites to verify that the BMPs are being properly implemented. Section 15.64.090 lists the following construction BMPs that may be required (but are not limited to):

a. Erosion control BMPs:

i. Scheduling and timing of grading activities;

ii. Preservation of existing vegetation;

iii. Timely revegetation of graded areas;

iv. The use of hydroseed and hydraulic mulches;

v. Soil binders;

vi. Earth dike and drainage swales;

vii. Velocity dissipation devices;

viii. Slope drains;

ix. Installation of erosion control blankets;

x. Soil preparation – roughening;

xi. Wind erosion control.

b. Sediment control BMPs:

i. Properly sized detention basins, dams, or filters to reduce entry of suspended sediment into the storm drain system and watercourses;

ii. Installation of construction entrances to prevent tracking of sediment onto adjacent streets;

iii. Biofilter bags;

iv. Sandbag barrier;

v. Storm drain inlet protection;

vi. Entrance outlet tire wash;

vii. Street sweeping to remove tracked sediment.

c. Pollution prevention practices:

i. Designated concrete washout areas or facilities;

ii. Control of trash and recycled materials;

iii. Tarping of materials stored on site;

iv. Proper location of and maintenance of temporary sanitary facilities.

Although project construction effects on surface water quality could result in a potentially significant impact on water quality, preparation and implementation of the required ESCP would ensure that construction impacts on water quality remain ***less than significant***.

Operational Impacts

The primary source of water pollutants from residential and commercial development is from automotive vehicles traveling to and from the properties on local roadways. Moving vehicles deposit oil and grease, fuel residues, heavy metals (e.g. lead, copper, cadmium, and zinc), tire particles, and other pollutants. They emit polycyclic aromatic hydrocarbons (PAHs) from their exhaust, resulting from incomplete combustion of gasoline, which settles to the ground. Even parked vehicles can deposit oil and other pollutants. All of the pollutants described above collect on the impervious pavements, where they can be washed by stormwater into downstream surface waters, thereby degrading water quality. Pesticides that may be used on landscaping or around buildings can potentially contribute to the depletion of dissolved oxygen and/or toxic concentrations of dissolved ammonia in downstream receiving waters, creating acute toxicity for aquatic wildlife.

Buildings and equipment enclosures also provide potential sources of water pollutants because weathered paint and eroded metals from painted and unpainted surfaces can be washed away by stormwater. In addition, mercury and polychlorinated biphenyls (PCBs) that get deposited on roofs and other impervious surfaces as airborne pollutants can be washed into surface waters during storm events. Microbial pathogens are yet another pollutant that can be entrained in stormwater coming in contact with poorly protected trash collection areas, although the proposed project would not include centralized waste collection areas. Municipal waste collection would occur at the individual townhomes and residents would store garbage and recyclables in their garages.

Operational stormwater discharges from new development are regulated under the National Pollutant Discharge Elimination System (NPDES), administered by the RWQCB under authority of the U.S. Environmental Protection Agency. In accordance with the NPDES, the RWQCB regulates stormwater discharges via municipal stormwater permits issued to the cities, counties, water districts, and flood control districts under its jurisdiction in the San Francisco Bay Area. The City of Benicia is a permitee under the Phase II Small Municipal Separate Storm Sewer System (MS4) permit reissued by the State Water Resources Control Board (SWRCB) in 2013 as part of the NPDES permit (Water Quality Order No. 2013-0001-DWQ, General Permit No. CAS000004).

Chapter 15.64 of the Benicia Municipal Code mandates compliance with the Phase II Municipal Stormwater Permit provisions. Pursuant to Municipal Code Section 15.64.070, stormwater discharges in violation of the Phase II Municipal Stormwater Permit will be held liable by the City.

Provision E.12 of the permit requires the jurisdictions covered by the permit to regulate development projects to control pollutants in runoff from newly created or replaced impervious surfaces. The requirements depend on the amount of new or replacement impervious surfaces that would be created by a given project. Small projects that create or replace between 2,500 and 5,000 square feet of impervious area, excluding linear underground/overhead utility projects, must implement at least one measure to reduce stormwater runoff, for example, by dispersing runoff to landscaped areas or using pervious pavements. These projects are also required to:

- Limit clearing, grading, and soil compaction;
- Minimize impervious surfaces;
- Conserve natural areas of the site as much as possible consistent with local General Plan policies;

- Comply with stream setback ordinances/requirements; and
- Protect slopes and channels against erosion.

Projects other than individual single-family homes that create or replace 5,000 square feet or more of impervious surfaces are subject to all of the measures listed above for small projects. Additionally, they must include the following features:

- All excess stormwater runoff (i.e., that which does not percolate into the site's pervious surfaces) must be discharged into on-site bioretention or other facilities sized and designed according to the criteria set forth in the Bay Area Stormwater Management Agencies Association's (BASMAA) *Design Guidance for Stormwater Treatment and Control for Projects in Marin, Sonoma, Napa, and Solano Counties* (January 2019). The facilities must be designed and sized to provide short-term storage during peak storm events as well as on-site biofiltration treatment of the captured stormwater.
- Source control measures designed to prevent discharge of pollutants from pollution sources that are applicable to a site and/or project. Examples of potential sources of pollutants include accidental spills or leaks; interior floor drains; elevator shaft sump pumps; interior parking garages; pesticide and herbicides applied to landscaping; pools, spas, ponds, and decorative fountains; commercial food service areas; refuse areas and dumpsters; industrial processes; outdoor equipment storage; vehicle and equipment cleaning, maintenance, and repair; fuel-dispensing areas; loading docks; fire sprinkler test water; roofing, gutters, and rooftop equipment; and plazas, sidewalks, and parking lots.
- Preparation and implementation of an Operation and Maintenance (O&M) Plan that provides for ongoing maintenance of the bioretention facilities in perpetuity. The O&M Plan must identify the individual(s) responsible for maintaining the stormwater controls and self-inspection records and a schedule for implementing the plan, among other requirements. The City has the right to conduct inspections to ensure proper implementation of the O&M Plan.

Projects that create or replace 1 acre or more of impervious surfaces are also subject to hydromodification management (HM) requirements. However, since all parcels in the Eastern Gateway are less than one-half acre in size, these requirements are not expected to apply to the proposed project, and the details of the HM requirements are not discussed here. They can, however, be relied upon to conclude a less-than-significant impact should there be parcel assembly in the study area and should a project be proposed that exceeds this threshold.

In addition to the requirements enumerated above, Benicia Municipal Code Section 15.64.090 also requires the applicant for each new development and redevelopment project subject to the post-construction stormwater control measures described above (including small projects), or where required by the nature and extent of a proposed project and where deemed appropriate by the City, to submit a Stormwater Control Plan (SCP) that meets the criteria in the most recent version of the BASMAA Post Construction Manual. The SCP is separate and distinct from the ESCP required for construction activity, described above. The SCP must follow the appropriate SCP template in the BASMAA Post Construction Manual, based on the project type. The SCP must be approved by the City prior to issuance of a grading, or building, or other City-issued permit.

The Municipal Code includes provisions for verification and enforcement of the requirements described above, and may require financial security (cash deposit, performance bond, etc.) to ensure the stormwater management facilities operate and are maintained following construction for a period determined by the City.

Although new development facilitated by the proposed Mixed-Use Districts could introduce new sources of stormwater pollutants to the study area that could adversely affect downstream water quality, mandatory compliance with all of the construction and post-construction stormwater controls described above would minimize the potential for adverse effects on water quality. Therefore, construction and operation of new development in the Mixed-Use Districts would have a ***less-than-significant impact*** on water quality.

	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
b) Substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin?	☐	☐	☒	☐

Explanation: Benicia is not located within a designated groundwater basin, and the California Department of Water Resources has no groundwater level monitoring locations in the vicinity of the project study area, indicating that important regional groundwater supplies are not reasonably exploitable in this area.[38] The project study area is outside of the nearest monitored groundwater basin, the Suisun-Fairfield Valley Basin. While groundwater does occur in the geologic units underlying the City, it does not occur in quantities and/or yields that would allow for economically feasible extraction, and none of the City's water supply is derived from groundwater.

The majority of the Eastern Gateway study area is already built out with residential and commercial uses and a substantial amount of impervious surfaces that currently prevent percolation of stormwater into the underlying groundwater. While future development and redevelopment in the study area with new residential and commercial uses will likely increase the amount of impervious surfaces in the area, it is not expected that this incremental increase would substantially reduce the amount of percolation that currently occurs, and therefore it is not expected that this would substantially reduce groundwater recharge. Since the underlying groundwater basin is not currently used or planned for use as a potable water supply, the negligible effect that implementation of the project would have on groundwater supplies would be a ***less-than-significant impact***.

[38] California Department of Water Resources, California Statewide Groundwater Elevation Monitoring (CASGEM) Program, CASGEM Monitoring Entities [interactive map], Accessed September 13, 2021 at: https://water.ca.gov/Programs/Groundwater-Management/Groundwater-Elevation-Monitoring--CASGEM.

	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
c) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river of through the addition of impervious surfaces, in a manner which would:				
i) Result in substantial erosion or siltation on- or off-site?	☐	☐	☒	☐

Explanation: Construction-related impacts relating to erosion or siltation both on and off-site are discussed in Section X-a, and additional discussion is provided in the next subsection. As discussed in Section X-a, the ESCP and SCP that future development projects in the Mixed-Use Districts would be required to implement would include measures to minimize erosion effects that could occur both during and after completion of construction. No new development in the Eastern Gateway area would alter the course of a stream or river. Although there is a small unnamed creek that flows adjacent to the eastern boundary of the project study area, no new development in the Mixed-Use Districts would encroach on this creek. Within the project study area, the potential adverse effects of the fairly minor changes to existing surface drainage patterns that could be caused by the creation of new impervious surfaces would be minimized through the required construction and post-construction stormwater controls and measures for minimizing erosion. With implementation of these required measures, the project would not result in substantial erosion or siltation on- or off-site. This would be a ***less-than-significant impact***.

	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
ii) Substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site?	☐	☐	☒	☐

Explanation: As discussed in Section X-a, the amount of new and replacement impervious surfaces that would be created by new development allowed in the Mixed-Use Districts is currently unknown. Absent appropriate controls, this would result in increased discharge of stormwater from the project site during storm events. As noted in Section X-a, projects creating or replacing 5,000 square feet or more of impervious surfaces will be required to provide onsite stormwater treatment facilities with retention capacity designed to prevent an increase in the peak rate and volume of stormwater discharged from the site during storm conditions. Compliance with these requirements would ensure that the project would not substantially increase the rate or amount of surface runoff in a manner that would result in flooding on- or off-site. This would result in a ***less-than-significant impact***.

	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
iii) Create or contribute runoff water that would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff?	☐	☐	☒	☐

Explanation: As discussed in the preceding subsections, for projects that qualify as regulated projects, stormwater runoff from future development sites in the Mixed-Use Districts would be captured and treated onsite and the required bioretention facilities would serve to minimize stormwater discharge. Unregulated projects, which would also be required to implement at least one stormwater control, would have less potential to increase stormwater discharge, due to their small size. Given the City's established requirements for stormwater controls, approval of the Mixed-Use Districts is not expected to appreciably increase storm runoff above existing conditions, including under cumulative conditions. The incremental contribution to stormwater runoff from small projects creating between 2,500 and 5,000 square feet of impervious area would not be cumulatively considerable, and would be reduced even further through compliance with Benicia Municipal Code Chapter 15.64, which requires small projects to implement at least one measure to reduce stormwater runoff, for example, by dispersing runoff to landscaped areas or using pervious pavements. Larger projects (under 1 acre) would be required to implement all applicable source control measures listed in Provision E.12 of the Phase II Municipal Stormwater Permit, which would ensure that the incremental contribution to stormwater runoff from such projects would not be cumulatively considerable. Although projects larger than 1 acre are not anticipated in the Mixed-Use Districts because the largest parcel is under one-half acre, in the event that parcels were consolidated for a larger project, it would be subject to hydromodification management requirements, such that there would be no increase in stormwater runoff in comparison with existing conditions. Thus, both project-specific and cumulative impacts on stormwater drainage capacity would not be significant. Further, the required on-site stormwater treatment facilities would ensure that future development projects would not be a substantial source of polluted runoff. This would be a ***less-than-significant impact***.

	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
iv) Impede or redirect flood flows?	☐	☐	☒	☐

Explanation: Because the project study area is already substantially built out with existing buildings, streets, and other pavements, implementation of the project would not appreciably alter the flow of floodwaters in comparison with current conditions. Due to the gently hilly terrain, the area is not subject to flooding, and new development would not alter this condition. Future development projects that would create 5,000 square feet or more of impervious surfaces would be required to include stormwater collection facilities that would capture, detain, and treat stormwater prior to discharge into underlying soils and/or into the existing offsite storm drainage system. In the event of flooding of the site, these facilities would absorb flood water and discharge it as the storm drainage system emptied out. While there would be minor redirection of floodwaters caused by new buildings where such structures don't already exist, the onsite stormwater collection, detention, and treatment facilities

would serve to incrementally reduce flood waters encroaching on a given site. As discussed in the following subsection, the Eastern Gateway study area is located outside of the 100-year flood plain, so there is low potential for flooding of the area. This would be a ***less-than-significant impact***.

	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
d) In flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation?	☐	☐	☒	☐

Explanation:

Flood Hazard

The Eastern Gateway study area site does not lie within a 100-year flood plain.[39] There is little to no risk of flooding in the study area and implementation of the project would not create a new flood hazard or exacerbate an existing hazard.

Tsunami Inundation

There are two sources for tsunamis in coastal California, based on distance and warning time: local sources and distant sources. Local tsunami sources, like large offshore faults and massive submarine landslides, can put adjacent coastal communities at the greatest risk of a tsunami because the public must respond quickly with little or no official guidance. The Cascadia Subduction Zone is an example of a local tsunami source that could threaten northern California. Stretching from Cape Mendocino, California to Vancouver Island, British Columbia, this 700-mile long submarine fault system forms the crustal plate boundary where the offshore Gorda and Juan de Fuca plates dive, or subduct, beneath the North American plate. Distant tsunami sources are tsunamis that may be caused by a very large earthquake elsewhere on the Pacific Rim that could reach the California coast many hours after the earthquake. The Alaska-Aleutians Subduction Zone is an example of a distant source that has caused destructive tsunamis in California.

In the San Francisco Bay Area, any potential tsunami would originate in the Pacific Ocean, and to reach the City of Benicia, would need to pass through the relatively narrow Golden Gate Channel and into San Francisco Bay, where it would lose much of its energy. The project site is hydrologically more than 28 miles from the Golden Gate Channel.

Because very large tsunamis are infrequent and the likelihood that the largest potential tsunamis have not yet occurred in the Bay Area, the State tsunami program developed a suite of maximum credible tsunami scenarios as part of their tsunami inundation mapping project for local evacuation planning. The Association of Bay Area Governments (ABAG) maintains an Interactive Hazard Viewer Map that maps hazard levels throughout the Bay Area for different types of natural disaster hazards, including inundation by tsunami.[40] Local agencies, organizations, and other stakeholders assisted the State in the development of the hazard mapping, so that it can be used for evacuation planning at the community level. The data underlying the hazard mapping does not represent inundation from a single scenario event, but is rather an ensemble of potential source events that may affect the region. The

[39] Federal Emergency Management Agency, Flood Insurance Rate Map, Community Panel Number 06013C0237G, September 15, 2015.

[40] Association of Bay Area Governments, Resilience Program, MTC/ABAG Hazard Viewer Map, Accessed September 14, 2021 at: https://mtc.maps.arcgis.com/apps/webappviewer/index.html?id=4a6f3f1259df42eab29b35dfcd086fc8.

data used to produce this mapping tool is based on tsunami modeling performed in 2009 by the University of Southern California Tsunami Research Center, funded through the California Emergency Management Agency by the National Tsunami Hazard Mitigation Program. The tsunami modeling was performed utilizing the MOST (Method of Splitting Tsunamis) computational program, which allows for wave evolution over variable bathymetry and topography in order to determine the inundation mapping. The bathymetric/topographic data that were used in the tsunami models consist of a series of nested grids that were adjusted to "Mean High Water" sea-level conditions, representing a conservative sea level for purposes of the tsunami modeling and mapping. The Tsunami Hazard areas are developed for all populated areas at risk to tsunamis in California and represent a combination of the maximum considered tsunamis for each area.

The tsunami model was collectively updated in March 2014 by tsunami modelers, geologic hazard mapping scientists, and emergency planning specialists from the California Geological Survey, the California Governor's Office of Emergency Services, the Tsunami Research Center at the University of Southern California, and AECOM Technical Services. In March 2021 the model was updated again for Alameda, Mendocino, Monterey, and San Mateo counties.

Within Benicia, only a small sliver of shoreline at the eastern edge of the City is mapped as being within a potential tsunami runup zone, and the Eastern Gateway study area is not located within or in proximity to the tsunami inundation zone. Given the elevations in the study area, there is not potential for tsunami runup in the event of a tsunami encroaching into San Francisco Bay.

Seiche

A seiche is a free or standing wave oscillation(s) of the surface of water in an enclosed or semi-enclosed basin that may be initiated by an earthquake. Given the size and configuration of San Francisco Bay and the geographic location of the project study area, the potential for a seiche to affect the Eastern Gateway study area is even lower than the inundation risk from tsunami, addressed above.

With minimal potential for inundation by flood and no potential for inundation by tsunami or seiche, there would be little to no potential for the project to release pollutants into waters resulting from inundation. The project would have a ***less-than-significant impact*** due to releasing pollutants during inundation of the project site.

	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
e) Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?	☐	☐	☒	☐

Water Quality Control Plan

The *Water Quality Control Plan for the San Francisco Bay Basin* (Basin Plan) is the master water quality control planning document adopted by the San Francisco Bay Regional Water Quality Control Board (RWQCB) in accordance with the Porter-Cologne Water Quality Control Act of 1969.[41] It designates beneficial uses and water quality objectives for waters of the State, including surface waters and groundwater. It also includes programs of implementation to achieve water quality

[41] California Regional Water Quality Control Board, San Francisco Bay Region, *San Francisco Bay Basin (Region 2) Water Quality Control Plan (Basin Plan)*, May 4, 2017.

objectives. The Basin Plan has been adopted and approved by the State Water Resources Control Board, U.S. Environmental Protection Agency (USEPA), and the Office of Administrative Law, where required.

Among other provisions, the Basin Plan establishes conditions (discharge prohibitions) that must be met at all times. These include restrictions on discharge of wastewater, wastewater sludge, biocides (i.e., pesticides, herbicides, copper, etc.), oils, and a wide range of solid materials, including silt, sand, and clay. Point source discharges must be made in accordance with waste discharge requirements (WDRs) established by the RWQCB in accordance with the NPDES program described in Section X-a.

The Basin Plan is a large and complex document with many specific provisions, policies, and implementation plans all with the overarching goal of protecting water quality for beneficial uses, such as:

- agricultural, municipal, domestic, and industrial supply;
- marine, estuarine, and warm and cold freshwater wildlife habitats;
- commercial and sport fishing;
- navigation;
- preservation of rare and endangered species;
- contact and non-contact water recreation;
- shellfish harvesting;
- fish spawning.

Many of the programs and other provisions described in the Basin Plan are not applicable to the proposed project. However, future development projects in the Mixed-Use Districts would be required to comply with the NPDES regulations pertaining to construction and operation of new development sites, described in detail in Section X-a, above. By complying with the applicable provisions of these regulations, potential water pollutants generated by construction and operation of the project would be minimized and would not adversely affect surface or groundwater quality. Therefore, the proposed project would not conflict with or obstruct implementation of the applicable water quality control plan. This would be a ***less-than-significant*** impact.

Sustainable Groundwater Management Plan

Despite California's heavy reliance on groundwater, the extraction of groundwater was never regulated until the 2014 passage of a package of bills that collectively formed the Sustainable Groundwater Management Act (SGMA). Senate Bill (SB) 1168, Assembly Bill (AB) 1739, and SB 1319 (which amended AB 1739) established a comprehensive Statewide groundwater management program with the primary goal of achieving sustainable groundwater basins over the next 20 years. Improved groundwater management is intended to provide a water supply buffer during periods of drought.

Rather than regulating groundwater at the State level, the SGMA allocates responsibility for local management of groundwater basins. The basins are to be managed by Groundwater Sustainability Agencies (GSAs), which can be formed by any local agency or coordinated group of agencies for purpose of complying with the SGMA. If no agency is formed, the county is presumed to be the local GSA unless the county explicitly opts out. In some cases, the legislation lists new special districts, which have exclusive authority for managing groundwater within their jurisdictional boundaries.

GSAs have authority to acquire land and water for purposes of recharging the groundwater basin and storing and transporting water. The GSAs must submit annual reports to the California Department of Water Resources (DWR), listing groundwater elevation data, amount of groundwater storage, use of

surface water for groundwater recharge (or as water supply), and total use of water within the GSA's boundaries.

The DWR was required by prior legislation to rank the priority of each of the State's 515 groundwater basins and subbasins as either high, medium, low, or very low priority by January 31, 2015. These rankings were made in accordance with the California Statewide Groundwater Elevation Monitoring (CASGEM) program. The CASGEM program considers such factors as the number of public wells in the basin, population served, acreage of land above the basin, reliance on groundwater, history of overdrafting, occurrence of subsidence, degradation in water quality, and other factors.

The SGMA requires Groundwater Sustainability Agencies (GSAs) to form in the State's high- and medium-priority basins and subbasins by June 30, 2017. For groundwater basins designed as medium or high priority, the SGMA requires the responsible GSA to prepare and adopt a Groundwater Sustainability Plan (GSP). Under certain conditions, including where a GSA has performed an analysis that demonstrates the groundwater basin under its purview has been operated within its sustainable yield over a period of at least 10 years, the GSA may prepare an Alternative to a GSP. The GSPs or Alternative GSPs must encompass an entire basin or subbasin and must demonstrate that the basin can achieve sustainable groundwater management within 20 years of adoption of the plan.

The City of Benicia is located in a Very Low priority basin, and there is no designated GSA for the Suisun-Fairfield Valley that underlies the City.[42,43] Since there is no adopted GSP covering the groundwater basin underlying the project study area, there is no potential for the proposed project to obstruct the implementation of an applicable GSP. Furthermore, as discussed in Section X-b, no groundwater would be pumped by future development in the Mixed-Use Districts, and new development in the study area would have a negligible effect on groundwater recharge in the area. Consequently, there is no potential for the project to substantially interfere with the management of groundwater supplies. This would be a ***less-than-significant*** impact.

XI. LAND USE AND PLANNING — *Would the project:*

	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Physically divide an established community?	☐	☐	☐	☒

Explanation: Future development facilitated by the proposed project would occur within existing parcels located in the Mixed-Use Districts. The entire project area has been developed for decades and is already well served by a network of city streets. No new streets would be needed to provide access to future development within the project study area, nor would existing streets be blocked off or vacated. Future development is not expected to include other potential barriers that could physically divide the existing neighborhood or create barriers to existing circulation within the community. In the event that a future project proposed consolidation of multiple parcels and development of an entire city block, this would not alter the existing street network and would not create barriers to access within

[42] California Department of Water Resources, SGMA Portal, All Posted GSA Notices, Accessed September 14, 2021 at: https://sgma.water.ca.gov/portal/gsa/all.

[43] California Department of Water Resources, *Sustainable Groundwater Management Act, 2019 Basin Prioritization Process and* Results, Table A-1: Statewide SGMA 2019 Basin Prioritization Results, Phase 1 Final, April 2019.

the community. Were any existing right-of-way proposed for vacation to accommodate a large development, such an action would require separate environmental review pursuant to CEQA. Therefore, implementation of the proposed project would not physically divide an established community. There would be ***no impact***.

	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
b) Conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to, the general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purposed of avoiding or mitigating an environmental effect?	☐	☐	☐	☒

Explanation: The primary land use plan governing development of the project site is the *Benicia General Plan*; there are no area plans or specific plans applicable to the project area. The project study area is located more than 100 feet from the shoreline, and is therefore not within the jurisdiction of the San Francisco Bay Conservation and Development Commission (BCDC). The General Plan was reviewed to evaluate the proposed project's consistency with applicable policies.

General Plan

The majority of parcels within the primary project study area have a General Plan land use designation of General Commercial, while most of the parcels in the secondary study area are designated Low-Density Residential. Some parcels in the project study area have a land use classification of High-Density Residential and one parcel on Military East has a Business and Professional Office land use designation. There is one parcel on N Street designated Public/Quasi-Public and another parcel on N Street has a Medium-Density Residential designation.

Under the proposed project, the General Plan land use designation of all of the parcels in the primary study area would be changed to Mixed Use Infill, while all of the parcels in the secondary study area would be re-designated as Mixed Use Limited. These land use designations would correspond to the proposed new zoning districts shown in Figure 3. Because the proposed project includes a General Plan amendment that will change the existing land use designations of all of the parcels in the primary study area, evaluating the project's consistency with the existing land use designations is unnecessary.

The proposed project is inherently consistent with the General Plan because it includes amendments to the General Plan to create two new land use categories that mirror the proposed new zoning districts, along with new policies to guide development in the Eastern Gateway Area that encompasses the new districts. All by-right uses in the MU districts would be consistent with the corresponding General Plan land use designations, and the City would review any project requiring a discretionary Use Permit for General Plan consistency.

At the programmatic level that is the scope of this IS/MND, all of the goals, policies, and programs promulgated in the *Benicia General Plan* were reviewed, and no conflicts were identified. The proposed project would help the City meet General Plan Goal 2.5, which reads: "Facilitate and encourage new uses and development which [*sic*] provide substantial and sustainable fiscal and economic benefits to the City and the community while maintaining health, safety, and quality of life." The project would also further Goal 2.13: "Support the economic viability of existing commercial

centers." The project would support and be consistent with a variety of other General Plan goals, policies, and programs.

Zoning Ordinance

Similar to the land use designations discussed above, the existing zoning of the primary study area is predominantly CG – General Commercial and the existing zoning of the secondary study area is predominantly RS – Single Family Residential. Other zoning districts in the project study area include CO – Office Commercial, RM – Medium-Density Residential, and RH – High-Density Residential. As with the land use designations, evaluating the project's consistency with the existing zoning districts is unnecessary because the proposed project includes rezoning all of the parcels in the primary study area to a new Mixed Use Infill (MU-I) district and all of the parcels in the secondary study area to a new Mixed Use Limited (MU-L) district, as shown in Figure 3. Future development proposals would be required to conform with the allowed uses and density, or would require separate discretionary review of a zoning amendment, including the appropriate CEQA review.

The proposed zoning text amendments would expand Chapter 17.26 of the Benicia Municipal Code to define the new mixed-use districts and establish development standards for the permitted and conditional (i.e., requiring a Use Permit) uses in the districts. The proposed regulations also establish Limited uses for the districts, which are subject to certain restrictions.

An evaluation of consistency with the Zoning Ordinance and applicable development regulations will occur on a project-by-project basis as individual development projects are proposed in the Mixed-Use Districts. The City will conduct a full evaluation of each application as it comes in for review. For proposed projects allowed by right, evaluation will be limited to project conformance with applicable objective standards. For projects subject to discretionary action, evaluation will also consider conformance with subjective requirements, such as design review and use permit requirements. For discretionary actions, City decisions must also comply with State housing laws (e.g., the Housing Accountability Act) that limit the City's ability to deny or reduce the density of a project consistent with objective standards.

At the programmatic level, the proposed project is inherently consistent with the Zoning Ordinance because the project will establish new mixed-use districts in the project study area and will establish new development regulations applicable to projects proposed in the new zoning districts. For purposes of this analysis, it is assumed that future development will be consistent with the Zoning Ordinance, including all applicable development regulations. This will be subject to confirmation for each development proposal received by the City in the future for the Eastern Gateway area.

Based on the analysis summarized above, the proposed project would not conflict with the General Plan, zoning regulations, or any other local plans or policies adopted for the purposes of avoiding or mitigating an environmental effect. There would be ***no impact***.

	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
c) Conflict with any applicable habitat conservation plan or natural community conservation plan?	☐	☐	☐	☒

Explanation: This issue is addressed in Section IV-f.

XII. MINERAL RESOURCES — *Would the project:*

	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the State?	☐	☐	☐	☒

Explanation: No regionally significant mineral deposits have been mapped on or in the vicinity of the project study area. The project area is within a larger area classified as Mineral Resource Zone (MRZ) category MRZ-1 by the California Department of Conservation's Division of Mines and Geology (DMG).[44] The MRZ-1 designation is assigned to areas where sufficient data exists for a determination that no significant mineral deposits exist, or where it is judged that there is little likelihood for their presence. Furthermore, the site is surrounded on all sides by existing urban development. In this context, large-scale mineral extraction would not be practical even if mineral resources were present in the area. Finally, the State Geologist would not consider these deposits to be regionally significant. As stated in the DMG report published with the MRZ maps for the Bay Area, mineral lands located within areas that have already been urbanized are not considered viable for extraction, and are deemed incompatible.[45] Therefore, the project would have **no impact** on the availability of mineral resources.

	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
b) Result in the loss of availability of a locally-important mineral resource recovery site delineated on a local general plan, specific plan, or other land use plan?	☐	☐	☐	☒

Explanation: The *Benicia General Plan* identifies a Mineral Resource Area in the northwest portion of the City's planning area.[46] This area—Syar Industries, inc. Lake Herman Quarry—is also designated as MRZ-2 by the State Geologist. MRZ-2 denotes areas underlain by mineral deposits that geologic data indicate to be significant and are known to contain economically valuable mineral deposits. This quarry is located more than 4 miles northwest of the project area, and would be unaffected by new development in the Mixed-Use Districts. There are no other mineral resources in the project vicinity

[44] California Department of Conservation, California Geological Survey, Updated Mineral Land Classification Map for Class II Base-Grade Aggregate in the North San Francisco Bay Production-Consumption Region, Marin, Napa, Sonoma, and Southwestern Solano Counties, California [map], 2013.

[45] California Department of Conservation, Division of Mines and Geology, *Update of Mineral Land Classification: Aggregate Materials in the South San Francisco Bay Production-Consumption Region*, Concepts Used in Identifying Available Aggregate Resources (page 7), 1996.

[46] City of Benicia, *Benicia General Plan*, Figure 3-4: Hydrology and Mineral Resources, adopted June 15, 1999.

identified in the General Plan. There is no potential for the project to have an adverse effect on the availability of significant mineral resources; there would be ***no impact***.

XIII. NOISE — *Would the project result in:*

	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?	☐	☒	☐	☐

Explanation: The City of Benicia regulates noise both through the Community Health and Safety Element of the General Plan and through noise regulations promulgated in Chapter 8.20 of the Benicia Municipal Code. In both cases, the regulation of noise is based on commonly-employed noise parameters that are based on the fundamental metric of a decibel (dB), which is a unit of sound energy intensity caused by rapid fluctuation of air pressure as sound waves travel outward from a source. Decibels are logarithmic units that compare the wide range of sound intensities to which the human ear is sensitive, with 0 dB corresponding roughly to the threshold of hearing.

A frequency weighting measure, which simulates human perception, is commonly used to describe noise environments and to assess impacts on noise-sensitive areas. A-weighting of sound levels best reflects the human ear's reduced sensitivity to low and extremely high frequencies, and correlates well with human perceptions of the annoying aspects of noise. An A-weighted decibel (dBA) is a decibel corrected for the variation in frequency response to the typical human ear at commonly encountered noise levels. The A-weighted decibel scale (dBA) is cited in most noise criteria, including Benicia's General Plan and Municipal Code standards.

Several time-averaged scales represent noise environments and consequences of human activities. The most commonly used noise descriptors are equivalent A-weighted sound level over a given time period (L_{eq});[47] average day-night 24-hour average sound level (L_{dn})[48] with a nighttime increase of 10 dBA to account for sensitivity to noise during the nighttime; and community noise equivalent level (CNEL),[49] also a 24-hour average that includes both an evening and a nighttime weighting. Peak noise levels, such as train pass-bys or operation of heavy-duty construction equipment, are often described as the highest instantaneous noise measurement during any measurement period (L_{max}).

Noise levels are generally considered low when ambient levels are below 45 dBA, moderate in the 45-60 dBA range, and high above 60 dBA. Outdoor day/night sound levels (L_{dn}) vary over 50 dBA, depending on the specific type of land use. The L_{dn} noise levels average approximately 35 dBA in

[47] The Equivalent Sound Level (L_{eq}) is a single value of a constant sound level for the same measurement period duration, which has sound energy equal to the time-varying sound energy in the measurement period.

[48] L_{dn} is the day-night average sound level that is equal to the 24-hour A-weighted equivalent sound level with a ten-decibel penalty applied to night between 10:00 p.m. and 7:00 a.m.

[49] CNEL is the average A-weighted noise level during a 24-hour day, obtained by addition of 5 decibels in the evening from 7:00 to 10:00 p.m., and an addition of a 10-decibel penalty in the night between 10:00 p.m. and 7:00 a.m.

wilderness areas, 40 to 50 dBA in small towns or wooded residential areas, 75 dBA in major metropolis downtown areas, and 85 dBA near major freeways and airports. Although people often accept the higher levels associated with very noisy urban residential and residential-commercial zones, they nevertheless are considered to be adverse levels of noise with respect to public health.

Applicable Noise Regulations

Residential development, such as that which could be facilitated by the proposed Mixed-Use Districts, is typically considered a noise-sensitive land use. The General Plan identifies residential land uses as well as the following land uses as noise-sensitive: transient lodging, hospitals, nursing homes, theaters, auditoriums, music halls, churches, meeting halls, office buildings, schools, libraries, museums, playgrounds, and neighborhood parks.

As noted in the General Plan, people are most sensitive to noise levels that disturb their comfort at home. The General Plan establishes a maximum allowable exterior ambient noise exposure limit of 60 dBA CNEL for residential land uses; the same limit also applies to hospitals, nursing homes, churches, meeting halls, schools, libraries, and museums. The General Plan notes that where it is not possible to reduce the exterior noise exposure at these land uses using a practical application of the best available exterior noise reduction measures, an exterior noise level up to 65 dBA may be allowed, provided that the interior noise standard of 45 dBA L_{dn} can be met. The General Plan establishes a maximum allowable exterior ambient noise exposure limit of 65 dBA CNEL for transient lodging, playgrounds, and neighborhood parks. The principal source of ambient noise in Benicia is vehicular traffic, particularly from traffic on the I-680 and I-780 freeways, and the noise standards cited above apply to noise from transportation sources.

The General Plan also establishes more restrictive noise standards for noise from stationary noise sources, such as industrial operations, outdoor recreation facilities, HVAC units, loading docks, etc. For all sensitive-receptor land uses, General Plan Table 4-4 establishes a daytime (7:00 a.m. to 10:00 p.m.) exterior noise limit of 55 dBA L_{eq} and a nighttime (10:00 p.m. to 7:00 a.m.) exterior noise limit of 50 dBA L_{eq}. For most uses, the daytime interior noise limit is 40 dBA L_{eq}, but is 35 dBA for theaters and auditoriums and 45 dBA for schools and libraries. For most uses, the nighttime interior noise limit is 35 dBA L_{eq}, but is 40 dBA for churches and 45 dBA for schools and libraries.

There are a number of General Plan policies pertaining to noise impacts that would apply to future development proposed in the Mixed-Use Districts. Policy 4.23.1 requires evaluation of the compatibility of proposed projects with respect to their compliance with the exterior noise standards listed above, and Policy 4.23.4 requires projects to conform to the standards, employing effective mitigation measures to meet both the interior and exterior standards, which are set forth in Tables 4-3 and 4-4 of the Community Health and Safety Element. Policy 4.23.2 calls for the use of noise-dampening building standards, site design, landscaping, and setbacks instead of sound walls, whenever possible. Policy 4.23.3 calls for using available techniques such as building insulation, berms, building design and orientation, buffer yards, and staggered operating hours to minimize noise at the source. Although this policy is more applicable to noise-generating land uses, which are not typically residential or commercial uses, the techniques can be applied to noise-sensitive land uses to reduce their exposure to offsite noise.

Benicia also regulates noise with its Noise Regulations, promulgated at Municipal Code Chapter 8.20. The ordinance declares it to be the policy of the City “to prohibit unnecessary, excessive and annoying noises from all sources subject to its police power. At certain levels noises are detrimental to the health and welfare of the citizenry and in the public interests shall be systematically proscribed.” In addition to regulating the use of sound-amplifying equipment and establishing other provisions not relevant to this analysis, Section 8.20.120 of the ordinance establishes the noise level performance standards for noise-sensitive uses listed in Table NOI-1. These standards apply both to the encroachment of new noise sources on existing noise-sensitive land uses and to the design of new noise-sensitive land uses

so that they will meet the standards. Where Municipal Code standards and General Plan standards diverge, the more restrictive standards govern.

Table NOI-1

Noise Level Performance Standards (BMC 8.20.120)

Land Use	Exterior (L_{eq} dBA)		Interior (L_{eq} dBA)	
	7 a.m. – 10 p.m.	10 p.m. – 7 a.m.	7 a.m. – 10 p.m.	10 p.m. – 7 a.m.
Residential	55	50	40	35
Transient Lodging	55	50	40	35
Hospitals	–	–	40	35
Nursing Homes	55	50	40	35
Theaters, Auditoriums	–	–	35	35
Churches	55	50	40	40
Schools	55	50	45	45
Libraries	55	50	45	45

SOURCE: Benicia Municipal Code, Section 8.20.120

Section 8.20.190 of the Noise Regulations also establishes the maximum allowable noise levels by zone listed in Table NOI-2.

Table NOI-2

Maximum Allowed Sound Levels (dB)
by Time of Day, Geographic Area, and Land Use (BMC 8.20.190)

Noise Zone	7 a.m. – 8 p.m.	8 p.m. – 10 p.m.	10 p.m. – 7 a.m.
Residential Neighborhoods	60	55	50
Areas Within One Block of First Street	60	55	55
Commercial (all) and First Street	65	60	60
Industrial	75	75	75

SOURCE: Benicia Municipal Code, Section 8.20.190

Chapter 8.20 also regulates construction noise, prohibiting the operation of heavy equipment or performing outside construction work prior to 7:00 a.m. or after 7:00 p.m. on Monday through Friday, or prior to 8:00 a.m. or after 7:00 p.m. on Saturdays, or anytime on Sundays, in such a manner that a reasonable person of normal sensitiveness residing in the area is caused discomfort or annoyance without a permit from the City. These restrictions apply to work in a residential zone, in a district within the Downtown Mixed-Use Master Plan, or within 500 feet of either of these districts.

Existing Noise Sources and Levels

Noise measurements were not conducted for this programmatic environmental review. However, based on noise measurement data reported in the General Plan EIR—which included projected 2015 ambient noise levels at different locations throughout the City—portions of the project study area are already exposed to noise levels that exceed the exterior noise standards for noise-sensitive land uses established in the General Plan and Municipal Code, as was acknowledged in the General Plan EIR. The EIR concluded that application of the General Plan policies cited above would prevent the development of noise-sensitive land uses in areas exposed to significant noise, and therefore, no significant impacts related to traffic noise would occur.

Construction Noise Impacts on Noise-Sensitive Uses

Future development in the Eastern Gateway Mixed-Use Districts would include construction activities, and demolition activities in some cases, that would include short-term, noise-intensive operation of heavy-duty construction equipment that would temporarily increase ambient noise levels in the vicinity of the development projects. Depending on the location of a project site, the noise generated by some of these construction projects could adversely affect nearby residential receptors or other noise-sensitive land uses, such as hotel guests. Construction and demolition activities would require the use of numerous pieces of noise-generating equipment, such as excavating machinery (e.g., backhoes, excavators, front loaders, etc.) and other construction equipment (e.g., compactors, pavers, concrete mixers, trucks, etc.). The noise levels generated by construction equipment would vary greatly depending upon factors such as the type and specific model of the equipment, the operation being performed, the condition of the equipment and the prevailing wind direction. The maximum noise levels at 50 feet for various types of construction equipment that typically could be used during construction are provided in Table NOI-3.[50]

Demolition and construction activities would be required to comply with the City's permitted construction hours set forth in the Noise Regulations (Municipal Code Chapter 8.20) or obtain a permit from the City to deviate from the permitted construction hours. The regulations exempt noise from construction activities that takes place between the hours of 7:00 a.m. to 7:00 p.m. on weekdays and between the hours of 8:00 a.m. and 7:00 p.m. on Saturdays. Excessive construction noise is not permitted on Sundays.

[50] Federal Highway Administration (FHWA), *Roadway Construction Noise Model User's Guide*, 2006.

Table NOI-3
Representative Noise Levels for Construction Equipment

Construction Equipment	Noise Level at 50 feet (dBA L_{max})
Dump Truck	76
Air Compressor	78
Backhoe	78
Bulldozer	82
Compactor (ground)	83
Crane	81
Jackhammer	81
Excavator	74
Flat Bed Truck	77
Paver	85
Grader	81
Generator	80
Roller	80
Vibratory Concrete Mixer	79
Concrete Mixer Truck	79
Front End Loader	76

SOURCE: Federal Highway Administration, 2006

While the operation of heavy-duty mobile construction equipment can generate excessive noise levels in proximity to a construction site, as demonstrated in the noise levels shown in Table NOI-3 for different types of equipment, the peak noise levels fall off reasonably quickly with distance. Since noise from point sources attenuates at a rate of 6 dBA for every doubling of distance over hard surfaces and level ground with no obstructions, a dump truck that emits 76 dBA L_{max} of noise at 50 feet has a much more reasonable noise level of 64 dBA at 200 feet from the truck.[51] In the case of a noisier bulldozer, it would require 400 feet of separation to achieve the 64-dBA L_{max} noise level. It should be noted that this is an instantaneous L_{max} sound level, not an average L_{dn} or CNEL sound level. While loud construction noise is a disturbance and annoyance to most people, it is an unavoidable and widely accepted by-product of constructing new homes and businesses that benefit society. Construction noise is temporary, short-term, and sporadic in nature, all of which serve to reduce the overall impact. It is also limited in geographic extent, as evidenced by the attenuation characteristics discussed above. It is assumed that future demolition and construction activity in the Eastern Gateway Mixed-Use

[51] California Department of Transportation (Caltrans), *Technical Noise Supplement to the Traffic Noise Analysis Protocol*, Section 2.1.1.1: Geometric Spreading from Point and Line Sources, September 2013.

Districts would be required to comply with the applicable Noise Regulations, which require investigation in the event of a complaint, with abatement and even issuance of a restraining order or injunction required in the event of a violation. Given these codified protections, construction of future development in the Eastern Gateway Mixed-Use Districts would have a ***less-than-significant noise impact***.

Potential Operational Noise Impacts on Nearby Noise-Sensitive Receptors

Operation of new residential and commercial development facilitated by the proposed Mixed-Use Districts would generate a negligible amount of noise, primarily by passenger vehicles of the residents and their visitors, delivery trucks, and maintenance/service vehicles arriving to and departing from the new residences, and by customers, employees, and delivery/service vehicles associated with new commercial development. Periodic maintenance of landscaping could generate short-term elevated noise levels, such as during operation of a lawn mower or leaf blower. New residents playing sports or engaging in other recreational activities would be another periodic source of noise. These noise sources are common to residential and commercial development, and are not considered noise disturbances subject to regulation. The incremental increase in ambient noise that would be generated by a new development project would not be perceptible or have the potential to result in an exceedance of the maximum allowable sound level established in Section 8.20.190 of the Benicia Municipal Code. This is because it takes a doubling of existing traffic volumes to produce a just-perceptible 3-dBA increase in ambient noise levels.[52] There is no potential for a single project to cause a doubling of traffic volumes in the project area. With respect to potential cumulative impacts, noise impacts are by nature localized, so cumulative noise impacts are confined to a limited geographic area. Given the modest net increase in residential units and commercial development that would be facilitated by the proposed project, and the largely built-out urban area surrounding the study area, there is no potential for cumulative development in/adjacent to the Mixed-Use Districts to cause a doubling of traffic or generate a cumulatively considerable level of noise. Therefore, potential noise impacts on nearby residences from operations of future projects in the Mixed-Use Districts would be a ***less-than-significant impact.***

Although the potential noise exposure of future new residents to existing elevated sound levels is no longer treated as a significant environmental effect under CEQA, these new residents would be protected by the City's enforcement of General Plan Policy 4.23.4, discussed above. Residents of multi-family dwellings would have the additional protection afforded by Title 24 of the California Code of Regulations, which mandates that new multi-family residential buildings, hotels, and motels be designed to reduce outdoor noise to an interior level of no more than 45 dBA L_{dn}.

	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
b) Generation of excessive groundborne vibration or groundborne noise levels?	☐	☒	☐	☐

Explanation: Construction and demolition activities have the potential to result in varying degrees of temporary ground vibration, depending on the specific construction equipment used and operations involved. Operation of typical construction equipment that would be employed during development of future projects allowed in the Mixed-Use Districts is not associated with excessive levels of groundborne vibration or noise. While vibration from mining operations is a critical concern, in most

[52] California Department of Transportation (Caltrans), *Technical Noise Supplement to the Traffic Noise Analysis Protocol*, Section 2.1.3.5: Adding, Subtracting, and Averaging Sound Pressure Levels, September 2013.

cases, vibration induced by typical construction equipment does not result in adverse effects on people or structures.[53] Vibrational effects from typical construction activities are only a concern within 25 feet of existing structures.[54] Because vibration results in excited movement of the particles that compose an elastic system such as the ground or a structure, vibration effects are often described by a measurement of peak particle velocity (PPV), measured in inches per second (in/sec). PPV is generally accepted as the most appropriate descriptor for evaluating the potential for damage to buildings, while the human body is more responsive to average vibration amplitude, which is calculated as the average of amplitude squared over time, typically a 1-second period. Average vibration amplitude (AVA) is always less than PPV, typically about 70 percent of the PPV value for a single-frequency condition. As discussed below, Caltrans' *Transportation and Construction Vibration Guidance Manual* provides PPV thresholds for both human exposure and structural exposure to groundborne vibration.[55]

The Caltrans Vibration Manual cites studies on human response to continuous vibration such as that generated by construction equipment (as opposed to transient vibration caused by impact pile drivers or blasting). Based on a synthesis of these studies, Caltrans recommends criteria for evaluating human annoyance due to the effects of vibration. These criteria are listed in Table NOI-4, which categorizes the range of human response to different levels of steady-state vibration. The potential for vibration impacts related construction of new development in the Mixed-Use Districts is compared to these thresholds, which are lower (i.e., more sensitive) than human response to transient vibration or continuous vibration from traffic sources.

The criteria recommended by Caltrans for evaluating potential structural damage from continuous vibration sources or frequent intermittent vibration sources (e.g., from a jackhammer) are presented in Table NOI-5; these criteria are used as thresholds of significance for this evaluation of the proposed project's potential construction-related vibration impacts on nearby buildings. The Federal Transit Administration also recommends a threshold of 0.5 PPV for residential and commercial structures to avoid architectural damage.[56]

[53] California Department of Transportation (Caltrans), *Transportation and Construction Vibration Guidance Manual*, April 2020.

[54] California Department of Transportation (Caltrans), *Transportation Related Earthborne Vibrations, February,* 2002.

[55] Caltrans, 2020, *op cit*.

[56] Federal Transit Administration (FTA), *Transit Noise and Vibration Impact Assessment* (FTA-VA- 90-1003-06), 2006.

Table NOI-4
Human Response to Steady-State Vibration

Peak Particle Velocity (PPV) (inches/second)	Human Response
3.6–0.4	Very Disturbing/Severe
0.7–0.17	Disturbing
0.10	Strongly Perceptible
0.035	Distinctly Perceptible
0.012	Barely Perceptible

Source: Caltrans, *Transportation and Construction Vibration Guidance Manual*, April 2020

Table NOI-5
Vibration Thresholds for Potential Damage to Buildings (for Continuous or Frequent Intermittent Sources)

Peak Particle Velocity (PPV) (inches/second)	Structure and Condition
0.08	Extremely fragile historic buildings
0.1	Fragile buildings
0.25	Historic and some old buildings
0.3	Older residential structures
0.5	New residential structures
0.5	Modern commercial buildings

Source: Caltrans, *Transportation and Construction Vibration Guidance Manual,* April 2020

Most future development facilitated by the proposed project would not include pile drivers or blasting because it would consist of redevelopment of previously developed sites and would not include development of high-rise buildings with large loads on their foundations. However, in the event that either of these activities were proposed, a vibration impact analysis by a qualified acoustical consultant would be required (see Mitigation Measure NOI-1, below). In cases where demolition of existing pavement would be required to accommodate new development, the work would be done using conventional demolition techniques with bulldozers, jackhammers, and other typical construction

equipment that would also be used for new construction. The ground vibration levels associated with various types of construction equipment expected to be used for construction and demolition activities are listed in Table NOI-6.

Table NOI-6
Representative Vibration Source Levels for Construction Equipment

Construction Equipment	Peak Particle Velocity (PPV) at 25 feet (inches/second)
Small Bulldozer	0.003
Jackhammer	0.035
Rock Breaker	0.059
Loaded Trucks	0.076
Auger Drill Rig	0.089
Large Bulldozer	0.089
Caisson Drilling	0.089
Vibratory Roller	0.21
Crack-and-Seat Operations	2.4

SOURCE: Federal Transit Administration, 2006

At the highest levels of vibration, construction/demolition damage to structures is primarily aesthetic (e.g., loosening and cracking of plaster or stucco coatings) and rarely results in structural damage. For most structures, a peak particle velocity (PPV) threshold of 0.5 inch per second or less is sufficient to avoid structural damage.

As shown in Table NOI-6, the predicted vibration levels from typical construction equipment at 25 feet would be less than the 0.5-PPV threshold for potential architectural or structural damage to residential and commercial structures. While the vast majority of future development and redevelopment anticipate in the proposed Mixed-Use Districts would not have the potential to generate vibration levels above 0.5 PPV at adjacent properties, it is possible that a proposed project could involve excessive vibration sufficient to adversely affect a neighboring property. This would be a ***potentially significant impact***. Implementation of the following mitigation measure would ensure that vibration impacts would be less than significant.

Mitigation Measure NOI-1: Prior to issuance of a grading, building, or demolition permit for any future development in the Mixed-Use Districts, City staff shall evaluate each development application for new uses in the Mixed-Use Districts to determine whether project construction would entail any of the following: (1) demolition of an existing building; (2) pile driving; (3) caisson drilling; (4) crack-and-seat operations; or (5) operation of heavy equipment within 50 feet of an historic building with an age of 50 years or more, or within less than 25 feet of any existing building. If any of these activities would be required, the City shall retain the

services of a qualified acoustical consultant, to be paid for by the project applicant, to conduct a construction vibration impact assessment that evaluates the potential for structural or architectural damage to adjacent properties that could result from the proposed construction, and identifies appropriate measures to effectively avoid or mitigate the potential impacts. Such measures could include pre-construction measures to protect vulnerable structures, measures implemented during construction to minimize vibration, and/or post-construction measures to repair damage inflicted during construction. In the case of historic structures, repairs would likely be required to be performed in accordance with the Secretary of the Interior's Standards for the Treatment of Historic Properties. The City shall verify that any necessary mitigation will be implemented prior to issuance of a grading, building, or demolition permit. If none of the activities listed above would be required, no mitigation would be required.

	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
c) *For a project located within the vicinity of a private airstrip or an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?*	☐	☐	☐	☒

Explanation: The project study area is not within the vicinity of a private airstrip or an airport land use plan, or within 2 miles of a public use airport. The nearest airport to the project area is Buchanan Field Airport, located approximately 6 miles to the southeast. There is no potential for operations at these airports to expose people residing or working in the project area to excessive aircraft noise. There would be ***no impact*** from airport noise.

XIV. POPULATION AND HOUSING — *Would the project:*

	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
a) *Induce substantial unplanned population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?*	☐	☐	☒	☐

Explanation: Based on the maximum foreseeable development projected to reasonably be expected to occur in the Eastern Gateway Study Area and General Plan buildout numbers, there could be 247 new dwelling units constructed and 18 existing dwelling units redeveloped, resulting in a net increase

of 229 dwelling units. The City has conducted an analysis of average household size, based on the unit type and the number of projected studio apartments and one-, two-, three-, and four-bedroom units, and calculated an average household size for the Eastern Gateway Study Area of 2.1 persons per household. Applying this factor, buildout of the study area could increase Benicia's population by 481 people by 2040. The California Department of Finance reports that as of January 1, 2021 Benicia had a population of 27,111 people.[57] Project-generated growth would therefore increase the City's population by approximately 1.8 percent relative to the current population.

The City also estimated the amount of growth in commercial development that could occur in the Eastern Gateway Study Area by buildout, based on the lot size of each parcel in the study area and the allowable density in the Mixed-Use Districts. This growth would create new jobs that could lead to further increases in the City's population. The City's analysis projected that 108,041 square feet of new and redeveloped commercial development could be constructed over the plan horizon year of 2040. Because the majority of this growth would consist of the redevelopment of existing commercial space, the net increase over the 19-year planning horizon would be 7,461 square feet. The City assumes that one job is created for every 333 square feet of new commercial floor area. This means that approximately 22 net new jobs could be generated in the Eastern Gateway Study Area during the planning horizon, which would not cause an appreciable increase in the City's population in addition to the projected population increase as a result of new housing development.

The proposed project would not induce substantial unplanned population growth in Benicia, either directly or indirectly. First, a population increase of 1.8 percent spread out over a 19-year period would represent a negligible increase. Second, the increase would not be unplanned; to the contrary, the proposed Mixed-Use Districts are explicitly intended to foster smart, planned growth in the study area. There would be no indirect inducement to population growth because the project would not result in the extension of roads or other infrastructure to areas not currently served, which could facilitate additional new development.

Among other objectives, the proposed project is intended to streamline housing development that is consistent with the City's objective zoning and design standards, and assist the City in meeting its Regional Housing Needs Allocation (RHNA) share assigned by the Association of Bay Area Governments (ABAG) under authority from the California Department of Housing and Community Development (HCD), in accordance with Government Code Section 65584. Thus, the City is intending for residential development to occur at a higher density in the Eastern Gateway Study Area than currently exists, and the potential population growth from this development is planned and intended by the City of Benicia. Therefore, while the project would induce incremental population growth, spread out of the course of the 19-year planning horizon, it would not be unplanned growth. Implementation of the project would have a ***less-than-significant impact*** on population growth.

[57] California Department of Finance, Demographic Research Unit, Report E-1 City/County Population Estimates with Annual Percent Change, January 1, 2020 and 2021, May 7, 2021.

	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
b) *Displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere?*	☐	☐	☒	☐

Explanation: It is not expected that existing housing would be displaced as a result of the project. Some existing housing units could be demolished or redeveloped to accommodate new, higher-density residential development. Thus, in cases where some dwelling units could be temporarily removed, they would be replaced by a greater number of dwelling units. Because the net number of housing units would be increased by the project, implementation of the Mixed-Use Districts would not have the potential to displace substantial numbers of people. Therefore, this would be a ***less-than-significant impact***.

XV. PUBLIC SERVICES

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

	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
a) *Fire protection?*	☐	☐	☒	☐

Explanation: Fire protection services in the City of Benicia are provided by the Benicia Fire Department (BFD), which operates two stations that service Benicia's geographical area of 15.7 square miles and population of over 28,000 people. The Department currently has an authorized staff of 35 sworn personnel, including 12 Firefighter Paramedics, 6 Engineers, and 13 Officers and Chiefs.[58] Fire suppression response is provided by three companies of fire fighters operating out of the two stations. Other services performed by the BFS include fire prevention, advanced emergency medical services, technical rescue, and hazardous materials incident response. In 2020, the Department responded to 2,669 calls for service, including 1,542 medical emergencies and 113 fires. The average response time for all emergency calls was 4 minutes and 43 seconds.[59]

The Eastern Gateway Study Area is served by Fire Station No. 11, located at 150 Military West, less than one-half mile west of the study area. Given this distance, response time to the Eastern Gateway

[58] City of Benicia, *City of Benicia 2021-2023 Biennial Budget*, Fire Department Summary, June 15, 2021. https://www.ci.benicia.ca.us/vertical/sites/%7BF991A639-AAED-4E1A-9735-86EA195E2C8D%7D/uploads/City_of_Benicia_2021-23_Adopted_Budget.pdf.

[59] Benicia Fire Department, *2020 Annual Report*, [undated]. https://www.canva.com/design/DAEZCdtxKPk/GR9df-y1EuWkOy9tkIol5A/view?utm_content=DAEZCdtxKPk&utm_campaign=designshare&utm_medium=link&utm_source=sharebutton - 2

Study Area in the event of an emergency would normally be well under 5 minutes. Although the Benicia General Plan does not establish a target response time goal for responding to emergency calls, most Bay Area jurisdictions have adopted target response times ranging from 5 to 10 minutes.

The future growth that would be facilitated by the adoption of the Mixed-Use Districts would result in an incremental increase in calls for fire protection and emergency medical response services. As discussed in Section XIV-a, above, buildout of the Eastern Gateway Study Area could increase the City's population by 481 people. This would represent an approximately 1.8-percent increase in the City's population by 2040. This incremental increase would not require the construction of new facilities to accommodate additional demand for fire protection and emergency medical response services. The BFD is expected to increase staffing and equipment as needed to meet growth in demand for fire protection services resulting from new development.

The First District Court of Appeal ruled in 2015 that the need for additional fire protection services is not an environmental impact under CEQA (*City of Hayward v. Board of Trustees of the California State University* (242 Cal.App.4th 833, 843, 2015)). The Court stated that "the obligation to provide adequate fire and emergency medical services is the responsibility of the city. (Cal. Const., art. XIII, §35, subd. (a)(2) ['The protection of the public safety is the first responsibility of local government and local officials have an obligation to give priority to the provision of adequate public safety services.'].) The need for additional fire protection services is not an environmental impact that CEQA requires a project proponent to mitigate." Accordingly, the proposed project's potential impact on fire protection services would be ***less than significant***.

	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
b) Police protection?	☐	☐	☒	☐

Explanation: Police protection would be provided to the project by the Benicia Police Department (BPD), which operates out of a central station at 200 East L Street and has a force of 32 sworn officers, 20 non-sworn personnel, and 35 citizen volunteers.[60] In 2020, the BPD responded to 5,570 emergency calls for service and 32,175 non-emergency calls, resulting in 300 arrests.[61]

Similar to the preceding discussion on fire protection services, the BFD is expected to increase staffing and equipment over time, as needed to meet growth in demand for police protection services resulting from new development. The anticipated increase in the intensity of development that would be facilitated by the project and the addition of approximately 481 new residents over the next 19 years would not cause a significant increase in response times for various calls to the BPD and would not require construction of new police facilities. The additional demand for police protection services that could result from project approval would constitute a minor incremental increase in demand. Therefore, the project's potential impact on police protection services would be ***less than significant***.

[60] Benicia Police Department, About Use, Accessed August 27, 2021 at: https://www.ci.benicia.ca.us/index.asp?SEC=4015C1E5-87BC-4F15-BBDB-49FDED7BC70D&Type=B_BASIC.

[61] Benicia Police Department, 2020 Annual Report, [undated].

	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
c) Schools?	☐	☐	☒	☐

Explanation: Public school services in the City of Benicia are provided by the Benicia Unified School District (BUSD), which serves the entire City, operating four elementary schools, one middle school, and two high schools. The District-wide enrollment for the 2020/2021 school year was 4,526, exceeding the official District-wide capacity of 4,377.[62]

The project could result in the development of an estimated 229 net new housing units, potentially increasing the population of the City of Benicia by approximately 481 people, as discussed in Section XIV-a. This new population would include school-age children who would incrementally increase demand for school services in the City of Benicia.

Schools that would serve new development in the Eastern Gateway study area include the following:

- Robert Semple Elementary School, at 2015 East 3rd Street
- Benicia Middle School, at 1100 Southampton Road
- Benicia High School, at 1101 Military West

The elementary and middle schools are currently over capacity. The elementary school has a capacity of 325 students, with current enrollment of 431 students. The middle school has a capacity of 918 students, with current enrollment of 1,035 students. Only the high school has excess capacity, with 1,515 students enrolled and a capacity of 1,884 students.[63]

The BUSD currently utilizes the following student generation rates for new residential development to determine the impact of new development on schools:[64]

Grade Group	Students Per Household
K–5	0.176
6–8	0.101
9–12	0.151
Total	**0.428**

With a total student generation rate of 0.428 students per dwelling unit, the addition of 229 new housing units could result in 98 new K-12 students in the BUSD. This growth is expected to occur over the 19-year planning horizon, so the impact on a given school year would be substantially less. If 98 new students are averaged over 19 years, the average annual increase in students in the District would be approximately five students who would be distributed among the elementary, middle, and high schools. The actual number could be lower because this assumes that all occupants of the new dwelling units

[62] Jared Anderson, School Facility Consultants, personal communication, September 9, 2021.

[63] *Ibid.*

[64] Benicia Unified School District, *School Facility Fee Justification Report for the Residential, Commercial & Industrial Development Projects*, March 2021.

would be new residents to the City of Benicia and the BUSD, whereas some residents would likely be existing Benicia residents.

With the potential to generate roughly 98 new students during the 19-year planning horizon, the proposed project would incrementally add to the currently over-enrolled BUSD. While an average of five new students per year would not in and of themselves require the construction of new school facilities, they would exacerbate the District's need for new facilities. However, pursuant to Senate Bill 50, which became effective in 1998, payment of the School Facilities Mitigation Fee has been deemed by the State legislature to be full and complete mitigation for the impacts of a development project on the provision of adequate school facilities. Future proposed development in the Eastern Gateway would be required to pay the applicable School Facilities Mitigation Fee, which is based on the square footage of new residential and commercial/industrial development. In 2021 the fee for new residential development within the BUSD is $4.08 per square foot and for new commercial/industrial development it is $0.66 per square foot.[65] Proposed development in the Mixed-Use Districts would be required to pay the current fees, which are typically increased incrementally each year. In accordance with SB 50, payment of the fees would ensure that the project would have a ***less-than-significant impact*** on schools.

	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
d) Parks?	☐	☐	☒	☐

Explanation: The City of Benicia owns and operates 28 public parks, along with other recreational facilities. Parks range from small neighborhood parks to large community parks, and include a variety of facilities on the Benicia shoreline. The park network provides a wide array of recreation facilities, including playgrounds, picnic and barbeque areas, ball fields, basketball courts, turf areas, tennis courts, fishing piers, boat launches, and more.

The following City parks or recreation facilities are located within 2,000 feet of the project study area:

- **Benicia Community Center**, at 370 East L Street
- **Liberty High School**, at 350 East K Street, which provides a playground and ball fields
- **Ethelree Saraiva Park**, at East 6th Street at East L Street
- **Little League Fields**, at East 3rd Street at East H Street
- **Fitzgerald Field**, at 2nd Street at East H Street
- **City Gym**, at 180 East L Street
- **Civic Center Park**, across from 150 East K Street
- **City Park**, at First Street at Military West
- **Robert Semple Elementary School**, at 2015 East 3rd Street
- **Family Resource Center**, at 150 East K Street
- **James Lemos Swim Center**, at 181 East J Street

[65] *Ibid*.

Approval of the proposed Mixed-Use Districts would lead to growth in Benicia's population over time. As discussed in Section XIV-a, it is expected that approval of the project could result in 481 new Benicia residents by 2040. While some of these new residents would utilize some of the parks listed above, as well as other Benicia parks located further from the study area, the incremental demand from 481 residents would not be significant. Usage of parks by new residents would be dispersed, sporadic, and only encompass a fraction of the total new residents, and an even smaller portion of the City's total population. This incremental increase in park usage would not require the provision of new or physically altered park facilities, and therefore would not lead to construction that could cause significant environmental impacts.

The minor impact that incremental project-generated demand would have on the City's park facilities would be further reduced by the City's Parkland Improvement Impact Fee, which is assessed on new residential development. (A separate park impact fee is assessed on residential subdivisions, pursuant to the Quimby Act, but no residential subdivisions are anticipated in the Mixed-Use Districts.) New residential development would therefore be required to pay the City's Parkland Improvement Impact Fee, pursuant to Municipal Code Chapter 5.39, which states that the fee is established by the City Council in accordance with a nexus study that demonstrates the reasonable relationship between the fee's use and the type of development project on which the fee will be imposed. The most recent nexus study was conducted in 2020 by Economic & Planning Systems, Inc. on behalf of the City.[66] The study recommended that the Parkland Improvement Impact Fee be set at $8,034 per single-family dwelling unit and at $6,235 per multi-family dwelling unit. The current adopted fees, valid through June 30, 2022, are $7,091 per single-family dwelling unit and at $5,773 per multi-family dwelling unit.[67] There are also variable fees for accessory dwelling units and for affordable housing units. The fees in effect at the time a development application is deemed complete by the City are the applicable fees for the project and must be paid at the time the City issues a building permit unless the developer enters into a development agreement with the City to pay the fees at the time a certificate of occupancy is issued. The fees can only be used to fund new projects, improvements, or acquisitions; they cannot be used for maintenance work.

The City's Parkland Improvement Impact Fee is intended to mitigate the impacts of new residential development on the City's park system. Future residential development facilitated by the proposed Mixed-Use Districts would be required to pay this impact fee in accordance with the current adopted schedule. Therefore, the proposed project would have a ***less-than-significant impact*** on parks.

	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
e) Other public facilities?	☐	☐	☒	☐

Explanation: The only other public facilities anticipated to be affected by the proposed project would be library facilities. The Benicia Public Library is located at 150 East L Street. The library provides a wide range of materials in all formats, including books, movies, music, audiobooks, and a wide range of electronic books and research resources. Patrons can access the online library catalog 24 hours a day. The library is a full-service facility, with 20 public-access computers, a community bulletin board,

[66] Economic & Planning Systems, Inc. for City of Benicia Economic Development Board, *Development Impact Fee Update: Maximum and Recommended Fees & Feasibility Analysis,* November 18, 2020.

[67] City of Benicia, Development Fees Schedule, effective March 8, 2021, Accessed August 27, 2021 at: https://www.ci.benicia.ca.us/vertical/sites/%7BF991A639-AAED-4E1A-9735-86EA195E2C8D%7D/uploads/Development_Fees_Schedule_Effective_20210308v2.pdf.

photocopying and printing self-service, fax and scanning services, proctoring for online and distance learners, a public art gallery, a children's area with over 25,000 curated items for children, a variety of programs and regular and special events for kids and teens, book clubs, tutoring, free Wi-Fi service, and much more.

The increased population in Benicia that would result from adoption of the proposed Mixed-Use Districts would generate an incremental increase in demand for library services. Similar to the preceding discussion on parks, the City has adopted a Library Impact Fee to offset the impacts of new residential development on the availability and adequacy of library facilities. Benicia Municipal Code Chapter 5.37 establishes the City's right to collect the fees from new residential development. Replacement of existing dwelling units, with no net increase in the number of dwelling units, is exempt from the fees. As with the park fees, the library fee must be paid at the time the City issues a building permit unless the developer enters into a development agreement with the City to pay the fees at the time a certificate of occupancy is issued. The current adopted fees, valid through June 30, 2022, are $291 per single-family dwelling unit and at $253 per multi-family dwelling unit.[68]

The incremental increase in demand for library services that would be generated by 481 new Benicia residents over a 19-year period would not be substantial and would not require the construction of new facilities to accommodate the demand. Payment of the City's Library Impact Fee by future residential development in the Mixed-Use Districts would help offset the impacts of the development on the availability and adequacy of library facilities. Therefore, the proposed project would have a ***less-than-significant impact*** on other public facilities.

XVI. RECREATION —

	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
a) *Would the project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?*	☐	☐	☒	☐

Explanation: Similar to the discussion on impacts on parks in Section XV-d, above, the anticipated project-generated increase in Benicia's population of 481 people over the next 19 years could generate a small increase in demand for parks and recreational facilities, which would incrementally contribute to the wear and tear of such facilities. Ongoing maintenance and repair is part of the operational budgets for parks and recreation facilities. The incremental use of parks and recreational facilities by 481 people spread out over multiple facilities would not have the potential to cause substantial physical deterioration of the facilities. The project would have a ***less-than-significant impact*** on recreation facilities.

[68] City of Benicia, Development Fees Schedule, effective March 8, 2021, Accessed August 27, 2021 at: https://www.ci.benicia.ca.us/vertical/sites/%7BF991A639-AAED-4E1A-9735-86EA195E2C8D%7D/uploads/Development_Fees_Schedule_Effective_20210308v2.pdf.

	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
b) *Does the project include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment?*	☐	☒	☐	☐

Explanation: Future development allowed in the proposed Mixed-Use Districts could include the construction of new recreational facilities that could be part of proposed residential development, or they could comprise commercial development of recreational facilities, such as a gym or Pilates studio. There are no currently proposed recreational facilities, and the nature and extent of new recreational facilities that may be proposed in the future cannot be predicted at this time, but future discretionary projects in the Mixed-Use Districts would be required to implement applicable mitigation measures identified in this IS/MND that would reduce potential environmental impacts that could result from the construction of new recreational facilities, such as dust control measures set forth in Section III, Air Quality, and water quality protections identified in Section X, Hydrology and Water Quality. Future projects that do not conform with the regulations and permitted uses in the Mixed-Use Districts would require separate environmental review pursuant to CEQA, as would any proposed public recreational facilities. Projects that would have a significant adverse impact on the environment could be required to prepare an environmental impact report. However, for purposes of this discussion, it is assumed that mitigation measures identified herein and/or project-specific mitigation measures that may be imposed on future projects would be sufficient to reduce construction-related impacts associated with new recreational facilities development to a less-than-significant level. Accordingly, the proposed Mixed-Use Districts would have a ***less-than-significant impact with mitigation***.

XVII. TRANSPORTATION/TRAFFIC — *Would the project:*

	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
a) *Conflict with an applicable plan, ordinance, or policy addressing the circulation system, including transit, roadway, bicycle, and pedestrian facilities?*	☐	☐	☐	☒

Explanation: For the purposes of this evaluation, a significant impact would result if the proposed project would cause a City General Plan program or policy to be unachievable or infeasible. The project would not conflict with a program, plan, ordinance or policy addressing the circulation system, including transit, roadway, bicycle, and pedestrian facilities, as discussed in more detail below.

Transit Facilities

Soltrans provides transit service in Benicia, and operates three routes directly serving the project area. The new development that would be allowed by the project—as defined in the project's zoning code updates and supporting General Plan goal, policies and programs—would not obstruct future changes to Soltrans bus service. General Plan Policy 2.14.6 states the City's intent to "Safely accommodate all modes of travel, including private vehicles, bus transit, bicyclists, and pedestrians. "

Roadway Facilities

The project does not propose infrastructure changes that would substantially alter the configuration or capacity of the local roadway network, and contains no zoning code elements nor General Plan policies and programs that would obstruct the City's ability to make improvements to the roadway network.

Bicycle and Pedestrian Facilities

The project does not propose zoning code changes nor General Plan policies and programs that would obstruct the City's ability to make improvements to bicycle and pedestrian facilities. The project includes new General Plan Policy 2.14.6 and programs 2.14.J, 2.14.L, and 2.14.M, which together promote improvements to the bicycle and pedestrian facilities within and connecting to the project area.

Based on the above evaluation, the impact of the project would have ***no impact*** due to a conflict with a program, plan, ordinance or policy addressing the circulation system.

	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
b) Conflict or be inconsistent with CEQA Guidelines Section 15064.3?	☐	☐	☒	☐

Explanation: Section 15064.3 of the *CEQA Guidelines*, added to the Guidelines on December 28, 2018, establishes *vehicle miles traveled* (VMT) as the most appropriate measure of potential transportation impacts, replacing vehicle delay as the long-established metric for evaluating traffic impacts. Although there was an 18-month grace period following the adoption of this guideline, as of July 1, 2020, lead agencies are required by law to employ a VMT methodology when assessing a project's transportation impacts, and vehicle delay is no longer considered an environmental effect pursuant to CEQA. In accordance with the new metric, a VMT analysis of the proposed Mixed-Use Districts was performed by the transportation consulting firm Fehr & Peers, the results of which are summarized herein.[69]

Revised *CEQA Guidelines* Section 15064.3 establishes the following significance criteria for VMT impacts from land use development projects:

- Projects within one-half mile of either an existing major transit stop or a stop along an existing high-quality transit corridor should generally be presumed to cause a less-than-significant transportation impact.

- Projects that decrease vehicle miles traveled in the project area compared to existing conditions should be presumed to have a less-than-significant transportation impact."

To guide public agencies in evaluating projects under the new VMT metric, the Governor's Office of Planning and Research (OPR) prepared a guidance document, *Technical Advisory on Evaluating Transportation Impacts in CEQA* (December 2018) (Technical Advisory). This document presents options for VMT analysis methodology, metrics, and thresholds of significance. The Technical

[69] Fehr & Peers, *Transportation Impact Evaluation for the Benicia Eastern Gateway Mixed Use Districts*, October 7, 2021.

Advisory describes potential screening criteria that may be used to screen certain projects out from a full VMT impact analysis, including small projects, projects located in a Transit Priority Area (TPA) (subject to certain limitations), and local-serving retail projects. The document suggests that home-based VMT per resident generated by residential projects that is no more than 85 percent of the regional average, and home-work VMT per employee generated by employment projects that is no more than 85 percent of the regional average, may be considered to have a less-than-significant impact with respect to VMT. The regional average has most recently been interpreted by OPR to be the Metropolitan Planning Organization region, which for Benicia, is the nine-county San Francisco Bay Area region. The Technical Advisory also suggests that retail uses of 50,000 square feet or less may be assumed to be local-serving and thus have a less than significant impact on VMT.

Specific to residential projects, the Technical Advisory contains the following recommendations related to assessing VMT impacts.

- Small projects: projects consistent with a Sustainable Communities Strategy (SCS) and local general plan that generate or attract fewer than 110 vehicle trips per day may be presumed to have a less-than-significant impact.
- Projects in low-VMT areas: residential projects that incorporate similar features (i.e., density, mix of uses, transit accessibility) as existing development in areas with low VMT (i.e., already below the VMT impact significance threshold) will tend to exhibit similarly low VMT and may be presumed to have a less-than-significant impact.

Lead agencies conducting CEQA analyses are not required to use the suggested metrics and thresholds in the Technical Advisory, and retain the authority to select VMT analysis methodologies, metrics, and thresholds that align with their priorities related to land development, sustainability, CEQA document defensibility, and other goals.

The City of Benicia has not yet adopted a VMT evaluation methodology and thresholds of significance. For this reason, as well as the limitations of the available travel demand models which could be used to estimate the VMT impacts of the project, a qualitative evaluation methodology for the project was determined to be appropriate.[70] The potential VMT impact of the Mixed-Use Districts was assessed with regard to the consistency of the project with the SB 743 statute language regarding significance criteria, which states that the "criteria shall promote the *reduction of greenhouse gas emissions, the development of multimodal transportation networks, and a diversity of land uses*." [Emphasis added.] The project's consistency with each of these criteria is discussed below. The analysis also considered whether the project would interfere with the State's ability to achieve its desired GHG reduction goals.

The proposed project would increase the potential number of new housing units in the area covered by the two new mixed-use districts by 212 units, and reduce the potential for new commercial development in the area covered by the two new districts by 39,701 square feet. There would still be the potential for an estimated 7,461 new square feet of commercial development with the project, just fewer square feet than would be allowed without the proposed zoning changes. As discussed below, the characteristics of the proposed project are consistent with the relevant objectives of the SB 743 statute: "[promotion of] the reduction of greenhouse gas emissions, the development of multimodal transportation networks, and a diversity of land uses."

[70] The two travel demand models which could be used to evaluate quantitative VMT metrics – the Solano-Napa Activity Based Model and MTC Travel Model 1.5 – have not been calibrated and validated for the City of Benicia. This means that either model would require additional testing and potential refinement to ensure that the model is appropriately sensitive and reliable for producing VMT forecasts within the Benicia area for the types of land use projects requiring evaluation. Use of a model that has not been adequately calibrated and validated for the study area and type of project under analysis would not comply with the CEQA expectations for adequate analysis to inform the environmental review process. It may also lead to an incorrect VMT impact conclusion.

Land Use Diversity

The project would encourage mixed-use developments, as stated in the proposed new General Plan Goal 2.14, Policies 2.14.1 and 2.14.2, and Programs 2.14.A and 2.14.B. As shown in Table TRA-1, the project has the potential to increase housing units within the greater Benicia downtown area, in relatively close proximity to much of the City's commercial, cultural, and civic uses, while also allowing for some additional commercial development within the project study area. The project would increase density by allowing for more housing within the same area as compared to the No Project case, which would encourage walking and bicycling within the project area. The project's expected reduction in new commercial development would be relatively small, and would be balanced by the close proximity of the project area to the downtown commercial area.

Table TRA-1

Residential VMT Rates: Project Area, Citywide, and Countywide

Geographic Area	Total VMT/Household	Home-Based VMT/Household
VMT Rates		
Project Vicinity[1]	44.65	25.82
City of Benicia	58.79	49.57
Solano County	51.54	37.14
Percent Differences		
Project Vicinity/Citywide	(24%)	(38%)
Citywide/Countywide	(14%)	12%
Project Vicinity/Countywide	(13%)	(30%)

SOURCE: 2010 – 2012 California Household Travel Survey, Caltrans

Notes:

[1] Project vicinity defines as census tracts 2520 and 2521.02.

The project would result in the potential to build 212 additional multi-family housing units within the project area, relative to the No Project case. The current RTP/SCS, *Plan Bay Area 2040*, calls for Benicia to build 1,085 new housing units between 2015 and 2040. Thus, the project would be consistent with the RTP/SCS in that it does not propose more housing than envisioned in the RTP/SCS, and it would help Benicia achieve the housing target in the RTP/SCS.

As shown in Figure TRA-1, the project study area is located within relatively short driving and walking distances of the downtown shopping district, the civic center, Robert Semple Elementary School, and Liberty High School. The proximities to the downtown shopping areas, civic center, and local elementary school are superior to what could be provided by new housing in Benicia neighborhoods north of I-780 and in the southwest portion of the City.

Multimodal Transportation Network

The Project area has sidewalks and bicycle facilities in some locations, but significant gaps exist, as shown in Figure TRA-2. Sidewalk gaps exist on every street within the project study area; most

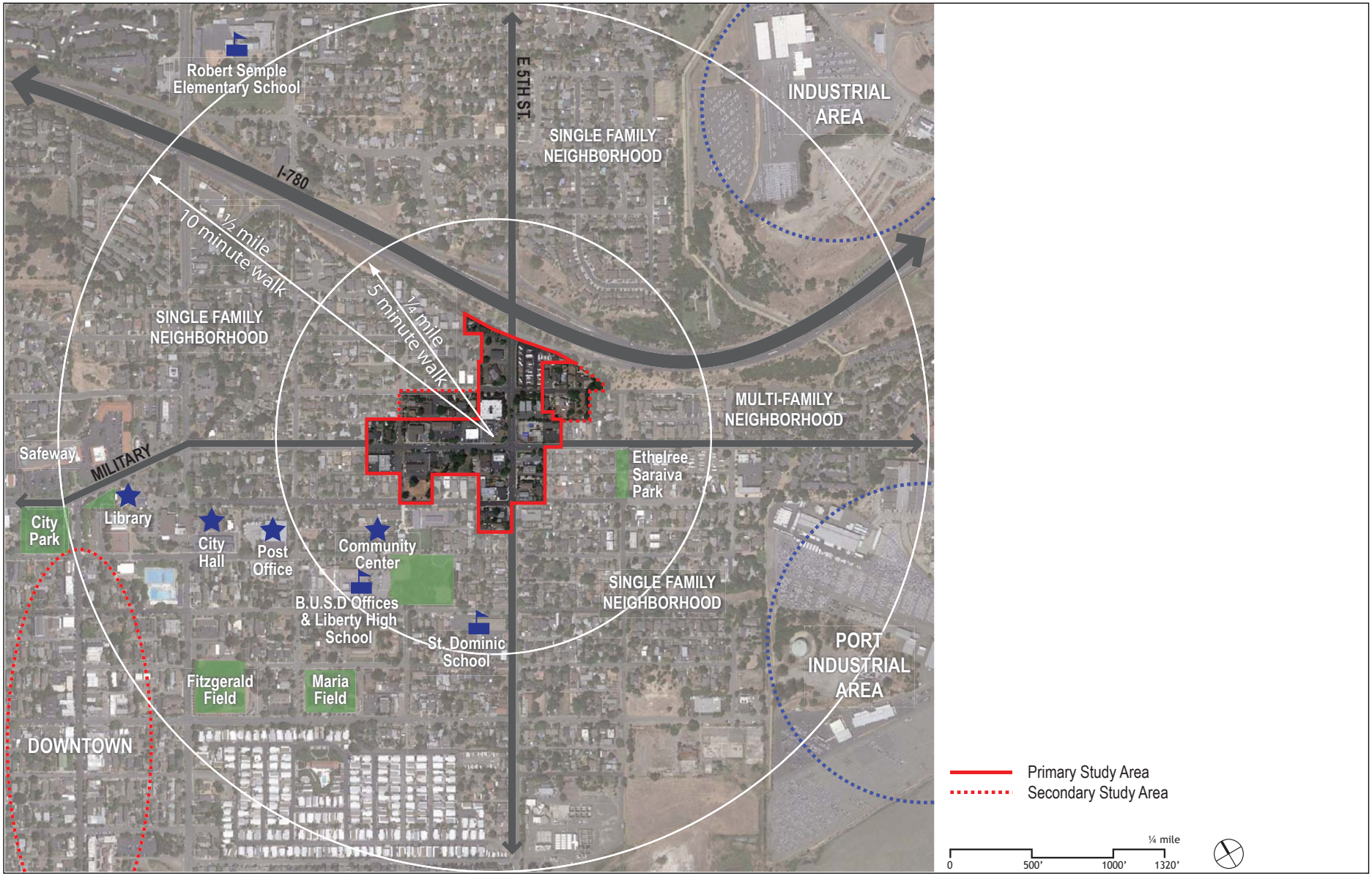

Figure TRA-1

Moderate Walking Distances from the Project Study Area

Source: Bottomley Associates

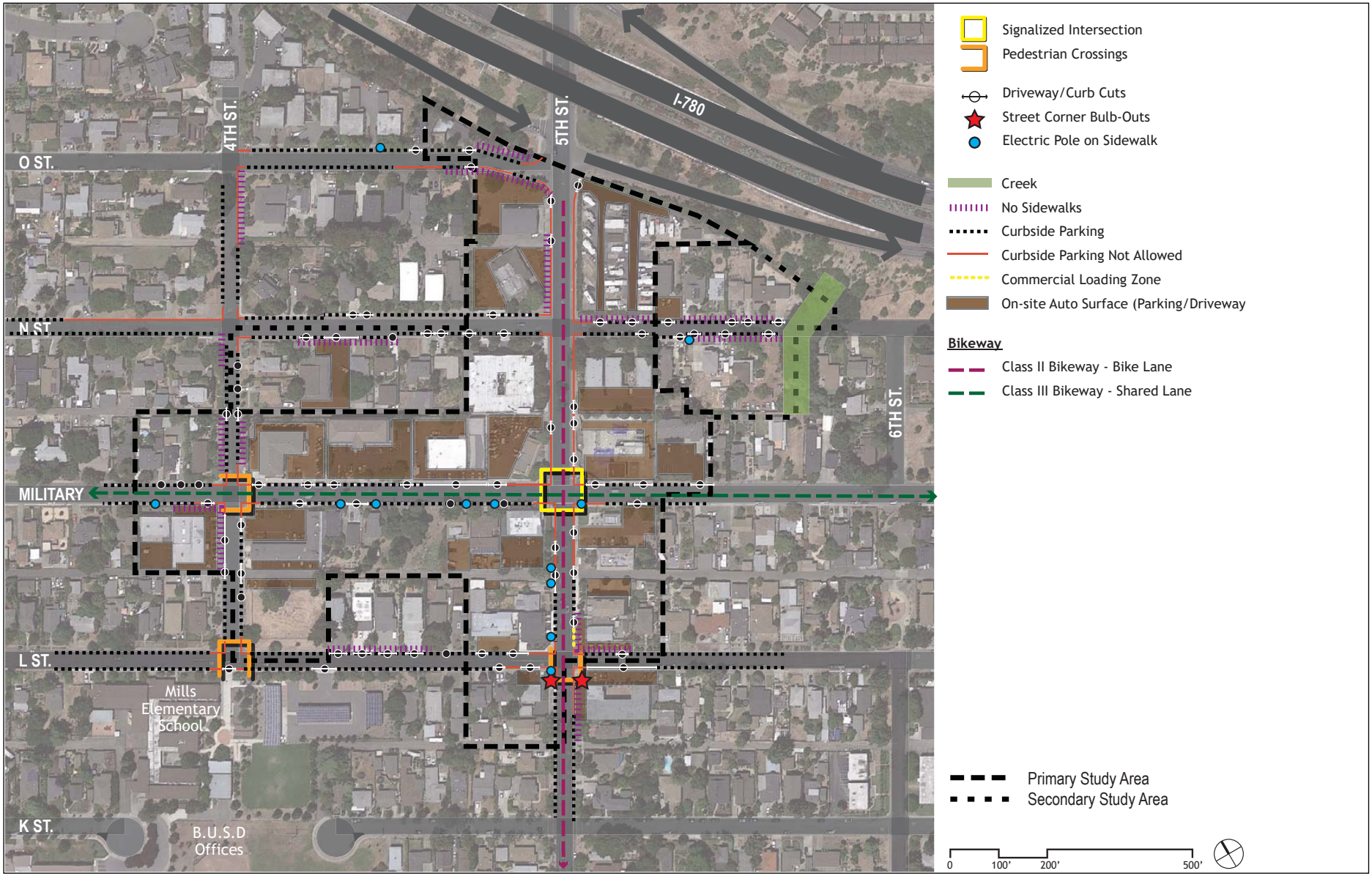

Figure TRA-2

Existing Bicycle and Pedestrian Facilities in the Project Study Area

Source: Bottomley Associates

intersections lack striped crosswalks; and Class II bicycle lanes are provided only on East 5th Street. Military East is a signed Class III bicycle route. The City has plans underway to prepare a citywide Bicycle and Pedestrian Plan, which would identify and address bicycle and pedestrian facility planning throughout the city.

The project includes proposed new General Plan Policy 2.14.6, and Programs 2.14.J, 2.14.L and 2.14.M, which together require the City to plan for, fund, and construct improvements within the project area that connect to nearby facilities. In particular, Program 2.14.J requires the City to "adopt a Bicycle and Pedestrian Plan with specific facilities, improvements, and funding mechanisms identified for high-quality bicycle and pedestrian infrastructure within the Eastern Gateway Area and connecting it to other areas, such as downtown and the civic center campus." As shown in Figure TRA-3, the project area is also served by the only Soltrans general bus route serving Benicia, the Yellow Route, and both Soltrans-provided school bus routes, the 15 and 17. As such, the project area has better access to transit than most other City neighborhoods.

Greenhouse Gas Emissions Reduction

The project's location within the smaller-block, grid roadway network south of I-780; close proximity to the freeway system via the East Fifth Street ramps; proximity to downtown shopping and civic uses (see Figure TRA-4); potential for increased density and land use diversity within the greater project area (including the downtown shopping district); and access to the three transit routes serving the City would all contribute to lower per-capita VMT rates than development in areas of Benicia without these characteristics. Thus, while development with the project study area would generate new VMT, the overall future VMT per capita generated by the City would be lower with the project than without the project. Because the City is required by the California Department of Housing and Community Development to plan for new housing, the project represents a reasonable balance of the goals to plan for and build new housing and to reduce future VMT generation rates.

VMT Estimates Using CHTS Survey Data

California Household Travel Survey (CHTS) data collected by Caltrans was used to estimate the effect of the proposed project on residential total VMT generated within the project vicinity, citywide, and countywide. Table TRA-1, above, shows the total VMT and home-based VMT rates for the two census tracts that together include the project area, as well as for the entire City of Benicia and Solano County. The total VMT generation rate for the project vicinity is 24 percent lower than the Citywide rate and 13 percent lower than the Countywide rate. The project vicinity home-based VMT rate, which many communities have chosen as the appropriate VMT metric for residential projects, is 38 percent lower than the Citywide rate and 30 percent lower than the Countywide rate.

Table TRA-2 presents total residential VMT estimates comparing the No Project case to the With Project case, for the City of Benicia and Solano County. This comparison reflects the effect of building the additional units within the project area versus anywhere in the City, or anywhere in the County. As shown in the table, Citywide VMT and Countywide VMT would decrease with the project, because the construction of the additional units in the project area would generate less VMT than an average new residential project in the City or County.

Note that because the project would reduce the potential for new commercial development in the project area, and because the potential for new commercial development is less than 50,000 square feet in either case (No Project or With Project), the VMT impacts of the commercial component of the project would be considered less than significant, based on the OPR Technical Advisory, which suggests that commercial projects of 50,000 square feet or less may be considered to have a less-than-significant effect on VMT. The basis for this suggestion is that smaller commercial spaces typically serve a local market area and are therefore likely to reduce trip lengths.

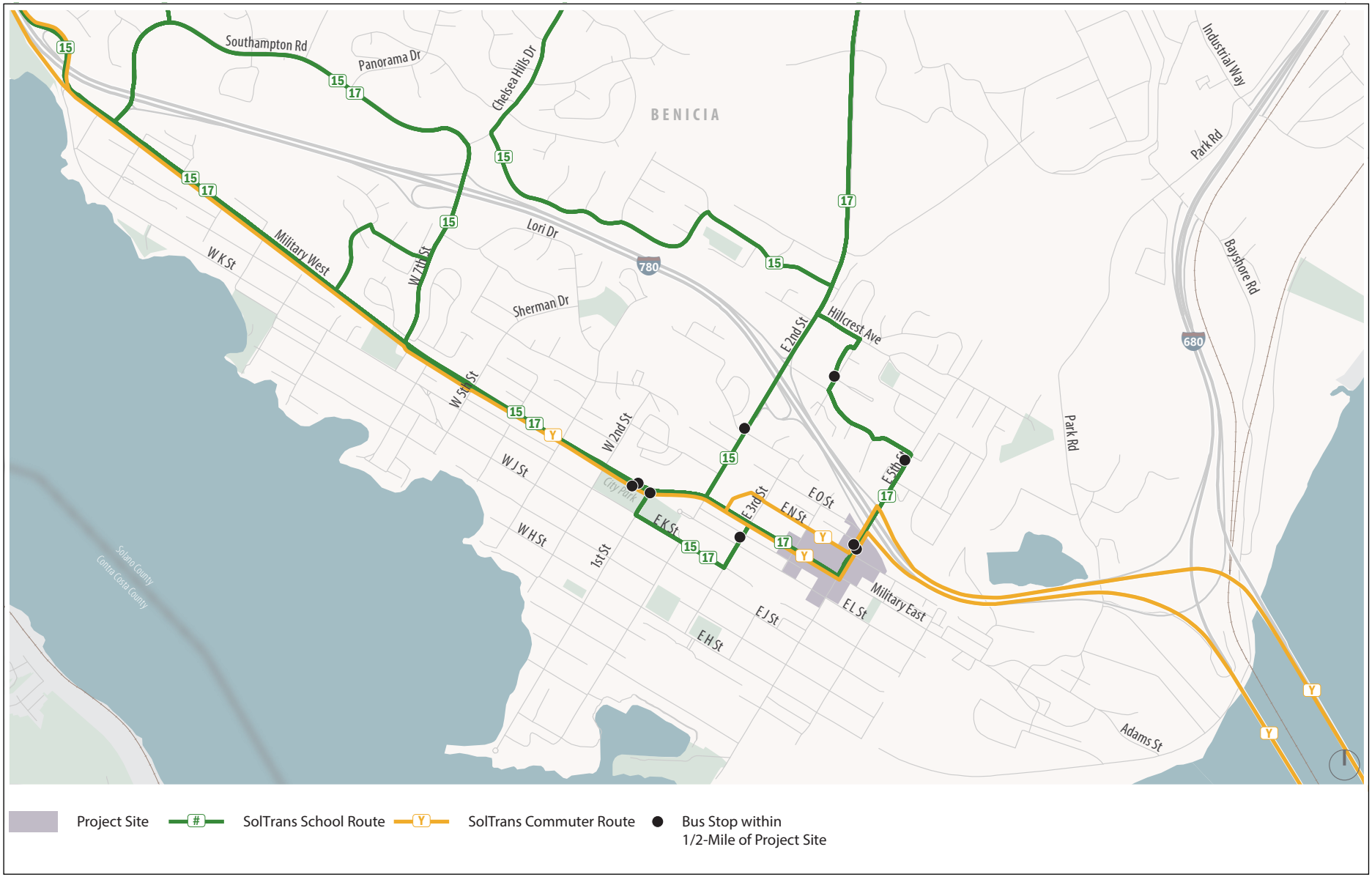

Figure TRA-3

Existing Transit Service in Benicia

Source: Fehr & Peers

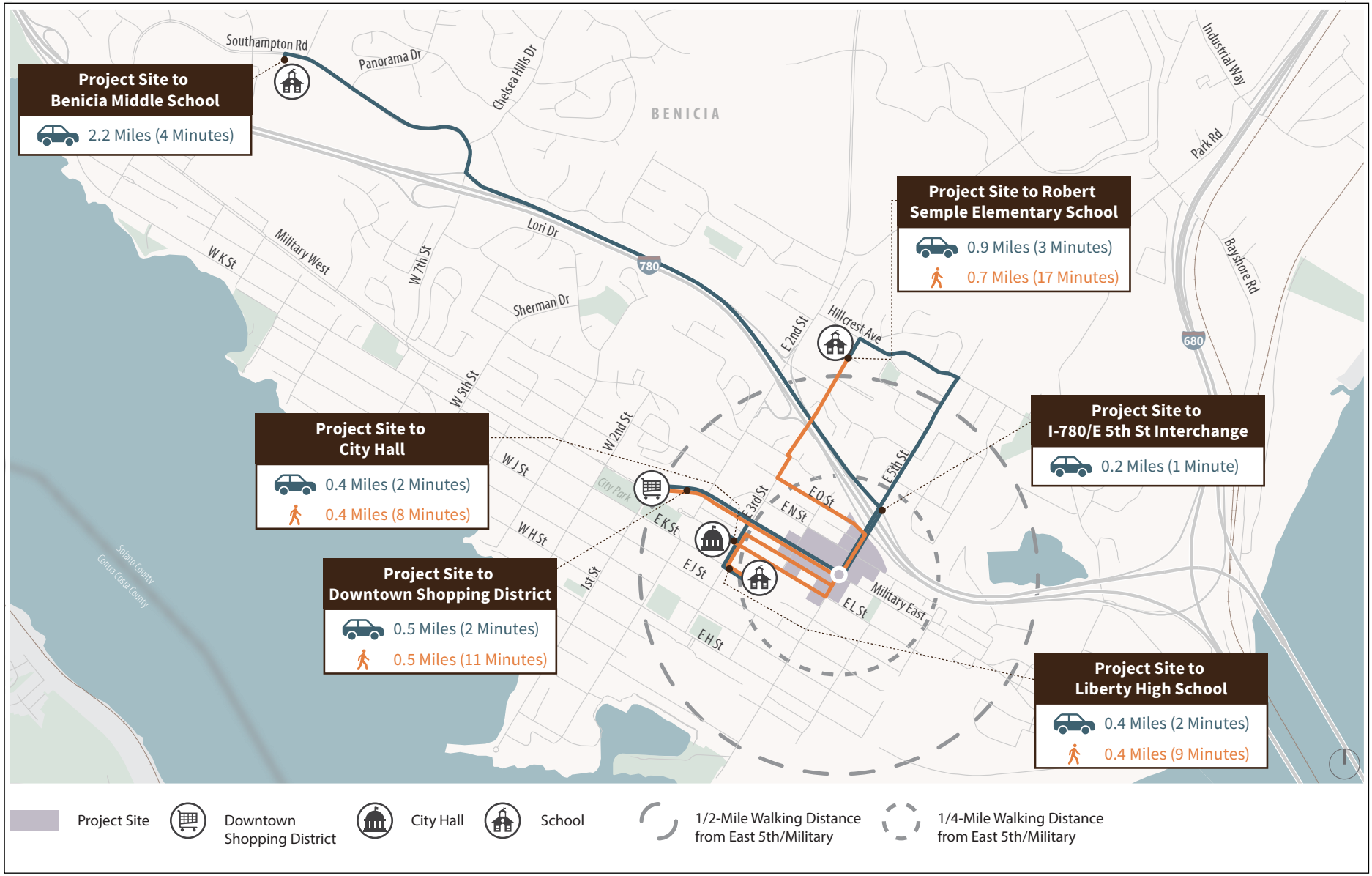

Figure TRA-4

Distances and Travel Times to Key Destinations

Source: Fehr & Peers

Based on the preceding analysis, the proposed Mixed-Use Districts would have a ***less-than-significant impact*** transportation impact.

Table TRA-2
Residential Total VMT

Scenario	Land Use	City of Benicia			Solano County		
		New Units	VMT Rate	Total VMT	New Units	VMT Rate	Total VMT
No Project	MF Res.	212	59.82	12,682	212	52.25	11,077
With Project	MF Res.	212	41.67	8,834	212	41.67	8,834
Net Change With Project				(3,848)			(2,243)

SOURCE: Fehr & Peers

	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
c) Substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?	☐	☐	☐	☒

Explanation: Development designed and constructed within the two new mixed-use districts proposed by the project would be required to conform to all applicable City of Benicia design standards and zoning code requirements. All development would occur within existing city blocks, and no changes to the existing street pattern are proposed or anticipate. Therefore, new development would not create new hazards due to non-conforming design elements. The proposed project would have ***no impact*** related to traffic hazards.

	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
d) Result in inadequate emergency access?	☐	☐	☐	☒

Explanation: Development designed and constructed within the two new mixed-use districts would be required to undergo City of Benicia plan review, which includes review for adequate fire and emergency responder access. Therefore, new development would not create inadequate emergency access due to non-conforming design elements. As noted in Section IX-g, Military East and 5th Street are both identified as Zone 2 evacuation routes in the City's Emergency Operations Plan, and these

routes provide quick access to evacuation of the project area via I-780 in the event of a large-scale disaster. Parcels in the project study area have a depth of 150 feet or less, so the existing street network would provide adequate emergency access for fire-fighting purposes. This distance is consistent with the National Fire Protection Association's recommended maximum distance from an access road to all points of a building.[71] There would be ***no impact*** due to inadequate emergency access.

XVIII. TRIBAL CULTURAL RESOURCES — *Would the project:*

	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
Cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code Section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is:				
a) Listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code Section 5020.1(k)?	☐	☒	☐	☐

Explanation: Pursuant to Assembly Bill (AB) 52, passed by the California Legislature in September 2014, the City sent a Tribal Consultation List Request to the Native American Heritage Commission (NAHC) on September 10, 2021 in order to identify Native American tribal groups who may be traditionally and culturally affiliated with the geographic area of the Eastern Gateway study area. At the time of publication of this IS/MND, no response had been received from the NAHC. However, the NAHC previously identified two tribal groups culturally affiliated with the project region, the Confederated Villages of Lisjan Tribe and the Yocha Dehe Wintun Nation. On September 13, 2021 the City proactively sent letters to the identified representatives of these tribes, inviting them to provide input to the City regarding the protection of cultural resources that could be present in the subsurface of the project study area. As of the time of publication of this Initial Study, the City had not received any consultation requests from the tribal groups affiliated with the project area.

As discussed further in Section V, the possible presence of buried prehistoric cultural materials at the project site, including tribal cultural resources, cannot be ruled out, and any disturbance to such resources, were they to exist, could result in a significant, adverse impact on tribal cultural resources. Implementation of Mitigation Measures CR-1 through CR-3, set forth in Section V, would reduce the potential impact to a ***less-than-significant-with-mitigation*** level.

[71] National Fire Protection Association, Fire Apparatus Access Roads, Accessed October 21, 2021 at: https://www.nfpa.org/News-and-Research/Publications-and-media/Blogs-Landing-Page/NFPA-Today/Blog-Posts/2021/01/08/Fire-Apparatus-Access-Roads.

	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
b) A resource determined by the Lead Agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code Section 5024.1? In applying the criteria set forth in subdivision (c) of Public Resources Code Section 5024.1, the Lead Agency shall consider the significance of the resource to a California Native American tribe.	☐	☒	☐	☐

Explanation: Public Resources Code Section 5024.1 establishes the California Register of Historical Resources and defines the criteria for inclusion on the California Register. These criteria are discussed in Section V-c of this document and can include both historic resources and prehistoric resources that may have significance, such as lithic scatter. No historic or prehistoric resources identified in adopted City documents, such as the General Plan and conservation plans, are located in the project area. However, resources of this nature may still be present. Were such resources to be present, disturbance of the subsurface during construction could damage or destroy the resource(s), which would be a potentially significant impact on historic resources. Implementation of Mitigation Measures CR-1 through CR-3 (see Section V) would reduce the impact to ***less than significant with mitigation***.

XIX. UTILITIES AND SERVICE SYSTEMS — *Would the project:*

	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Require or result in the relocation or construction of new or expanded water, wastewater treatment, stormwater drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects?	☐	☐	☒	☐

Explanation:

Water Treatment Facilities

The City of Benicia operates its own water treatment plant and water distribution system. The Water Treatment Plant (WTP), located at 100 Water Way at the northeast edge of the City, was constructed in 1971 with a design capacity of 6 million gallons per day (mgd). In 1989, the plant was expanded to 12 mgd, with additional reliability and redundancy improvements completed in 2006. The distribution system consists of three pump stations, eight pressure-reducing stations, and approximately 150 miles of pipelines. The storage system consists of five treated water reservoirs and Lake Herman. which can contain up to 1,800 acre-feet (AF) of untreated water. Raw water is delivered to the City via the

raw water transmission system, which consists of two pump stations and approximately 18 miles of pipeline. The City's water supply is addressed separately in Section XIX-b, below.

The WTP's daily treatment capacity translates to an annual capacity of 13,442 acre-feet per year (AFY).[72] According to an April 21, 2020 presentation by the Benicia Public Works Director to the City Council, the WTP currently treats and distributes approximately 4,000 AFY.[73] Therefore, there is considerable excess treatment capacity at the plant, and no potential for the modest amount of growth of 481 new residents and 7,461 square feet of net new commercial development that would occur during the 19-year planning horizon for the project to generate water demand that would exceed available treatment capacity. While the construction of new or expanded individual water supply pipes could be required to provide water service to new development in the Mixed-Use Districts, these site-specific improvements would be part of standard construction of new development, the impacts of which are addressed in this IS/MND, but would not require the construction of new water mains. Therefore, the proposed project would have a ***less-than-significant impact*** on water treatment capacity.

Wastewater Treatment Facilities

The Benicia Wastewater Treatment Plant (WWTP), operated by the City at 614 East 5th Street, adjacent to the Carquinez Strait, provides secondary treatment (removal of biodegradable organic matter) of the City's wastewater. It has a permitted dry-weather capacity of 4.5 mgd. Treated wastewater is discharged through a 1,150-foot outfall in the Carquinez Strait. The City's wastewater collection system includes over 153 miles of sanitary sewer pipelines and 23 lift stations. There have been no cited water quality violations at the plant in the last decade.[74] Current demand at the treatment plant is approximately 1.96 mgd, well below the permitted capacity.[75] Increased demand that could result from approximately 481 new residents and a net increase in commercial development of 7,461 square feet (see Section XIV for details) over the next 19 years would not have the potential to generate wastewater that could exceed the existing treatment capacity at the WWTP or require construction of new facilities. While the construction of new or expanded individual sewer lines could be required to provide sanitary sewer service to new development in the Mixed-Use Districts, these site-specific improvements would be part of standard construction of new development, the impacts of which are addressed in this IS/MND, but are not expected to require the construction of new sewer mains. Therefore, the proposed project would have a ***less-than-significant impact*** on wastewater treatment capacity.

Stormwater Drainage Facilities

Stormwater in the Eastern Gateway project area is collected via storm inlets in City streets, conveyed in a network of stormwater drainage pipes, and discharged into the Carquinez Strait. The City of Benicia is a permitee under the Phase II Small Municipal Separate Storm Sewer System (MS4) System administered by the San Francisco Regional Water Resource Control Board (RWQCB). As discussed in more detail in Section X-a, future development projects in the Mixed-Use Districts would be required, unless they are excluded due to their small size, to provide onsite bioretention facilities that would retain storm runoff on site, thereby minimizing peak discharge. Small development projects

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[72] An acre-foot is the amount of water necessary to cover 1 acre of land to a depth of 1 foot, and is equivalent to 325,851.43 gallons, or 43,560 cubic feet.

[73] William Tarbox, Public Works Director, City of Benicia, 2020 Water and Wastewater Utilities Update [presentation to City Council], April 21, 2020.

[74] Kyle Ochenduszko, Deputy Public Works Director, City of Benicia, "Introduction to the Benicia Wastewater Utility," [presentation to City Council], May 4, 2021. https://www.ci.benicia.ca.us/vertical/sites/%7BF991A639-AAED-4E1A-9735-86EA195E2C8D%7D/uploads/20210504_Intro_to_Benicia_Wastewater_Utility_Presentation.pdf

[75] *Ibid.*

creating between 2,500 square feet and 5,000 square feet of new or replacement impervious surfaces would be required to implement at least one measure that would reduce stormwater runoff, while projects creating over 5,000 square feet of new or replacement impervious surfaces would be required to implement multiple measures and include bioretention facilities that would further minimize stormwater runoff from their sites. Projects creating 1 acre of more of new or replacement impervious surfaces (not anticipated in the Mixed-Use Districts) would be required to comply with hydromodification management requirements to prevent any increase in stormwater discharge from the site. Compliance with these requirements would ensure that stormwater discharged from new development in the Eastern Gateway would not exceed the capacity of the City's stormwater drainage facilities. The stormwater discharge from this development would not be cumulatively considerable, so it would not create a significant cumulative impact. Therefore, the proposed project would have a ***less-than-significant impact*** on stormwater drainage facilities.

Electric Power, Natural Gas, and Telecommunications Facilities

Electric power and natural gas are provided to the City of Benicia by Pacific Gas & Electric Company (PG&E), which provides service throughout central and northern California in a service area encompassing approximately 70,000 square miles. The company services 5.4 million electric customer accounts and 4.3 million gas customer accounts, delivering energy across 106,681 circuit miles of electric distribution lines, 18,466 circuit miles of interconnected transmission lines, 42,141 miles of natural gas distribution pipelines, and 6,438 miles of gas transmission pipelines.[76] PG&E provides 970 billion cubic feet of natural gas to its customers each year, representing 27 percent of the company's power mix.[77]

PG&E's electric power is generated by a diverse mix of sources, including hydropower, gas-fired steam, and nuclear energy. The utility purchases electricity from over 400 plants owned by independent power producers in California as well as from generators in other states.[78] The total available electricity capacity at any given time varies due to outages, congestion, and emergencies. In 2019, California had in-State electric generation from these multiple sources of 190,922 gigawatt-hours (GWh).[79] According to the California Independent System Operator (ISO), which oversees the operation of California's power grid and wholesale energy market, as of September 2021, the statewide electric generation capacity was 49,291 megawatts (MW), while statewide demand was 31, 251 MW.[80]

The proposed project could result in 481 persons added to the City's population over the course of the 19-year planning horizon. There could be a net increase in commercial uses of 7,461 square feet over this same planning period. There is no potential for this modest increase in development to generate electrical demand that would exceed PG&E's considerable electric generation capacity or require PG&E to construct new generation or transmission facilities.

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[76] Pacific Gas & Electric Company, Company Profile, Accessed September 2, 2021 at: https://www.pge.com/en_US/about-pge/company-information/profile/profile.page.

[77] Pacific Gas & Electric Company, Discover the Basics of Our System by the Numbers, Accessed September 2, 2021 at: https://www.pge.com/en_US/safety/how-the-system-works/natural-gas-system-overview/natural-gas-system-overview.page.

[78] Pacific Gas & Electric Company, PG&E's Electric System, Accessed September 2, 2021 at: https://www.pge.com/includes/docs/pdfs/shared/edusafety/systemworks/electric/pge_electric_system.pdf.

[79] California Energy Commission, *California Energy Almanac*, Electric Generation Capacity & Energy, In-State Electric Generation by Fuel Type, Accessed September 2, 2021 at: https://www.energy.ca.gov/data-reports/energy-almanac/california-electricity-data/electric-generation-capacity-and-energy.

[80] California Independent Systems Operator, Current and Forecasted Demand, Accessed September 2, 2021 at: http://www.caiso.com/TodaysOutlook/Pages/default.aspx.

With respect to telecommunications facilities, most telecommunications companies expand their cable networks and equipment in response to growth in demand. There is a multiplicity of different telecommunications companies serving the residents and businesses in Benicia. To meet growing future demand, some of these companies may expand their infrastructure, but this infrastructure primarily consists of computer servers, wires, cables, optical fiber, switching equipment, transformers, microwaves, satellites, towers, poles, networking hardware, and other similar equipment, and installation of these types of equipment would not have significant impacts on the environment. Infrastructure such as towers for mounting cellular and other equipment is typically shared among telecommunications companies, minimizing the need for duplicative construction. Expansion of telecommunications facilities to accommodate future growth in Benicia consistent with the proposed Mixed-Use Districts, if any is needed at all, is likely to be limited to new equipment in existing buildings, on existing towers and poles, and within existing utility trenches, due to the project's location in an existing urban environment. In the event a company decides to more substantially expand its facilities, such as by erecting a new cellular tower or constructing a new building, such a project would be subject to separate environmental review. The telecommunications needs of new development in the Mixed-Use Districts is expected to be readily accommodated by existing infrastructure and would not require substantial new construction that could create adverse effects on the environment.

Based on the foregoing considerations, the proposed project would have a ***less-than-significant impact*** on electric power, natural gas, and telecommunications facilities.

	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
b) Have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry, and multiple dry years?	☐	☐	☒	☐

Explanation: Construction of new development within the Mixed-Use Districts would temporarily consume water for suppression of dust during site grading activities. Water would also be used during project construction for production of concrete, washing equipment, and for other miscellaneous purposes. Following project construction, domestic water would be consumed by new commercial businesses and residents, including water used for irrigating new landscaping.

Water Supply and Demand

With over 9,800 retail, industrial, and residential water customers, the City of Benicia operates a Public Water System, defined in California Health and Safety Code Section 116275, and functions as a Retail Urban Water Supplier, as defined in Water Code Section 10617, providing water for municipal purposes to more than 3,000 customers or supplying more than 3,000 acre/feet of water per year. The California Water Code requires Retail Urban Water Suppliers to prepare an Urban Water Management plan every five years that describes existing and future water supply reliability, forecasts future water uses, presents demand management progress, and identifies local and regional cooperative efforts to meet projected water use.

The City's *2020 Urban Water Management Plan* (UWMP), prepared in compliance with the California Urban Water Management Planning Act of 1983, documents the City's planning activities to ensure adequate water supplies to meet existing and future demands for water.[81] The Urban Water

[81] City of Benicia, *2020 Urban Water Management Plan*, adopted May 18, 2021.

Management Planning Act directs urban water purveyors to analyze water supply reliability in a normal, single dry, and five consecutive dry years over a 20-year planning horizon. The Benicia UWMP is based on a 25-year planning horizon, in accordance with the recommended planning horizon in the UWMP Guidebook published by the Department of Water Resources (DWR).

Benicia's water supplies are derived from three general surface water sources: the Sacramento River watershed (State Water Project), Lake Berryessa (Solano Project), and Sulphur Springs Creek watershed through Lake Herman. All water supplies derived from these sources are collectively managed in order to best meet the City's demands in different year types, reduce delivery costs, manage water quality issues, and handle emergency situations. Solano County Water Agency (SCWA) has historically managed the Sacramento River and Solano Project supplies on behalf of the City. Close coordination with SCWA will be necessary during extended drought conditions in order to prevent water supply deficits.

The water from the Sacramento River watershed, which serves the majority of the City's needs in normal years, is derived from a variety of water rights and contracts. The water is diverted from the Sacramento River into the North Bay Aqueduct, a State Water Project (SWP) facility located in Barker Slough.

The primary supply source for the Solano Project is Lake Berryessa, located in the Vaca Mountains in Napa County and formed by Monticello Dam. Lake Berryessa is a multi-purpose lake that, combined with the Putah Diversion Dam and other associated infrastructure, makes up the Solano Project, which is a federal water project operated by the United States Bureau of Reclamation. Solano Project water is transported to Benicia through the Putah South Canal. It provides a varying percentage of the City's total consumption depending on the hydrological and regulatory conditions.

The Sulphur Springs Creek Watershed feeds into Lake Herman, an artificial reservoir on the northern edge of the City originally built at the time of the City's founding. The City diverts water to storage from the Sulphur Springs Creek Watershed and stores additional water in Lake Herman delivered through the Solano Project and North Bay Aqueduct as needed. Lake Herman is primarily used as a backup or peaking supply for Valero, an emergency water supply source, and as a means to regulate raw water supplies coming into the City's system from alternative sources.

During a normal rainfall year, the City has substantial excess supply relative to demand. Based on historical trends in water usage in non-drought conditions, the City has an annual water demand of 9,979 acre-feet (AF), with a supply of 28,645 AF, leaving a surplus of 18,666 AF.[82]

For the single dry year analysis, Benicia defines a single dry year condition as one that constrains the City from obtaining some of its water supplies in its water supply portfolio due to hydrological, regulatory, and institutional constraints. These conditions include more restrictive regulatory constraints on its water rights and significantly constrained conditions for its numerous water supply contracts. Although the constraints vary on a monthly basis, the projected annual supply would be 21,208 AF. With projected demand at 10,188 AF, there would be a surplus of 11,020 AF projected under single dry year conditions, factoring in a reduced allocation from one of the City's water purveyors.

Five consecutive dry years were also modeled for the 25-year planning period in the UWMP. The City defines a drought lasting five consecutive years as one that constrains Benicia from obtaining some of the water supplies in its water supply portfolio, due to hydrological, regulatory, and/or institutional constraints. Demand under the extended drought scenario was based on the historical trends in water

[82] City of Benicia, *2020 Urban Water Management Plan*, Table 5-4: Normal Year Water Supply and Demand in Benicia (acre-feet), adopted May 18, 2021.

usage in Benicia during historic drought conditions. While demand is expected to decrease during an extended drought, the analysis presented in the UWMP conservatively assumes demand will not drop. Demand is expected to increase modestly during the 25-year planning horizon, factoring in improved efficiencies in indoor fixtures, improved management of outdoor landscape irrigation, and a general awareness of the value of long-term water conservation at the consumer level.

The UWMP projects systemwide supply and demand for each successive year of a five-year drought in five-year increments, from 2025 to 2045.[83] Under all of the modeled scenarios, there would be a comfortable surplus water supply to serve the City. Through the first two years of drought in every year modeled there would be a surplus of over 10,000 AF. During the first drought year, the surplus would be over 17,000 AF during the entire 25-year planning period. The lowest surplus years are projected for the fourth year of a five-year drought, when the smallest surplus of 4,412 AF would occur in 2045. Paradoxically, the surplus in the fifth year of drought would be substantially greater, ranging from 8,403 AF in 2025 to 7,852 in 2045.

The City will conduct an annual water supply and demand assessment, pursuant to Water Code Section 10632.1 to evaluate actual conditions at the time of the assessment in order to verify its supply and demand projections, making adjustments as warranted. The City will continue to actively manage its water supply portfolio in light of potentially changing conditions to ensure the City has a reliable water supply under all rainfall conditions through 2045. As required by Water Code Section 10632 and Chapter 13.35 of the Benicia Municipal Code, the City has also prepared a Water Shortage Contingency Plan (WSCP) that identifies strategies for the City to take to address water supply shortages of 10, 20, 30, 40, and 50 percent as well as a scenario with a shortage greater than 50 percent of normal supply. The WSCP identifies demand reduction measures that will be progressively triggered by each successive degree of water shortage. The shortage response actions provide the City with some flexibility to address dynamic water shortage conditions while protecting the City against extreme conditions where supplies are drastically reduced beyond 50 percent. The City will also update its UWMP every five years, as required by State law.

The 2020 UWMP projects future demand based on the City's projected population growth, utilizing data from two studies, including one conducted for the City during a recent development impact fee study by Economic & Planning Systems, Inc. (EPS), completed in November 2020. Projected population growth will be driven by a combination of new development in the northeastern area of the City and infill development within the largely built-out central city. The proposed Mixed-Use Districts would result in very modest growth consisting of the type of infill development projected in the UWMP. As discussed in Section XIV, above, the project is expected to result in a net increase in commercial development over the next 19 years of just 7,461 square feet. Residential growth may increase the City's population by 481 people over the same time frame. According to the Public Policy Institute of California, per-capita water consumption in California is 146 gallons per day.[84] Applying this rate to the number of new Benicia residents that could result from project implementation would generate increased water demand of 70,226 gallons per day, or 25,632,490 gallons per year. This is equivalent to less than 79 acre-feet per year, or less than 1 percent of the City's annual allotment/entitlement of water resources. Given that even under extended drought conditions, the UWMP projects a water surplus ranging from approximately 4,400 AF to 17,800 AF per year, there is no potential for the proposed project to generate water demand that would exceed available supply, and the project would not result in the need for new water supplies or infrastructure that was not already planned. Therefore, the project's impact on water supply would be ***less than significant***.

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[83] City of Benicia, *2020 Urban Water Management Plan*, Table 5-3: Five Consecutive Dry Years Water Supply and Demand through 2045 (acre-feet), adopted May 18, 2021.

[84] Public Policy Institute of California, Water Use in California, Accessed September 2, 2021 at: https://www.ppic.org/publication/water-use-in-california/.

	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
c) *Result in a determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?*	☐	☐	☒	☐

Explanation: See Section XIX-a, above.

	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
d) *Generate solid waste in excess of State or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals?*	☐	☐	☒	☐

Explanation: Solid waste in Benicia is collected by Republic Services, which is the City's exclusive local franchise collector for residential recyclables, yard waste, garbage and commercial refuse. Republic also provides recycling services to businesses. The City's Collection Services Agreement indicates that Republic may dispose of non-recycled waste at Keller Canyon Landfill in Contra Costa County, or another appropriate facility designated for disposal.

Keller Canyon Landfill, which is owned by Republic Services (formerly Allied Waste Industries, Inc.), has a daily permitted throughput of 3,500 tons/day and a total permitted capacity of 75.018 million cubic yards. As of November 16, 2004, the landfill had 63,408,410 cubic yards of remaining capacity.[85] This is anticipated to provide disposal capacity until the end of 2050.

Another potential landfill for the City's waste, Potrero Hills Landfill, is located in Solano County, near Suisun City. This landfill has a daily permitted throughput of 4,330 tons/day and a total permitted capacity of 83.1 million cubic yards. As of January 1, 2006, the landfill had 13,872,000 cubic yards of remaining capacity.[86] This is anticipated to provide disposal capacity until February 2048.

There are also at least 13 other regional landfills that provide additional solid waste disposal capacity to the region. The incremental increase in solid waste that could be generated by 481 new residents and 7,461 square feet of new commercial development would have a miniscule effect on the region's waste disposal capacity, and there is no potential for this waste to exceed existing available disposal

[85] CalRecycle (formerly California Integrated Waste Management Board), Solid Waste Information System Facility/Site Database, Keller Canyon Landfill (07-AA-0032), Accessed September 3, 2021 at: https://www2.calrecycle.ca.gov/SolidWaste/SiteActivity/Details/4407?siteID=228.

[86] CalRecycle (formerly California Integrated Waste Management Board), Solid Waste Information System Facility/Site Database, Potrero Hills Landfill (48-AA-0075), Accessed September 3, 2021 at: https://www2.calrecycle.ca.gov/SolidWaste/SiteActivity/Details/1194?siteID=3591.

capacity. The project would have a ***less-than-significant impact*** on solid waste disposal capacity and compliance with solid waste regulations.

	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
e) Comply with federal, State, and local management and reduction statutes and regulations related to solid waste?	☐	☐	☒	☐

Explanation: See Section XIX-d, above.

XX. WILDFIRE — *If located in or near a State Responsibility Area or lands classified as a Very High Fire Hazard Severity Zone, would the project:*

	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Substantially impair an adopted emergency response plan or emergency evacuation plan?	☐	☐	☐	☒

Explanation: Benicia has an Emergency Evacuation Plan that designates five main exit routes for residents to take in the event of a large-scale emergency or utility failure. The Eastern Gateway project area is located in Evacuation Zone 2, which directs traffic to Military East and East 5th Street. From there, traffic is directed to East 2nd Street northward out of the City to Interstate 680.[87] New development facilitated by the Eastern Gateway Mixed-Use Districts would consist entirely of infill development on existing parcels. It would not entail or allow the closure or blocking of existing streets and sidewalks in the project study area. Out of a current population of over 27,000 residents, there would be no potential for the 481 new residents that could be added to the City over the next 19 years to overwhelm evacuation routes. Therefore, the proposed project would not substantially impair implementation of an emergency evacuation plan.

The City has also adopted an Emergency Operations Plan, which establishes an emergency management organization and assigns functions and tasks to different City personnel and departments, consistent with California's Standardized Emergency Management System (SEMS) and the National Incident Management System (NIMS).[88] It includes coordination with the California Office of Emergency Services and Solano County, as well as with the six other incorporated cities in the County. The EOP sets guidelines as to how the City will respond to major incidents, including major earthquake, fire, hazardous materials incidents, flood, sea level rise, drought, extreme heat, hazardous air quality, drought, utility failure, terrorist attacks, and war. The EOP describes and establishes procedures for a coordinated response to these hazards by the different City responders,

[87] City of Benicia, Evacuation Plan, Accessed September 3, 2021 at: https://www.ci.benicia.ca.us/index.asp?SEC=04273A68-D081-4C4D-AA06-08F5B0BFF01B&DE=46E40902-5659-43E2-A15C-CBF516E9675D.

[88] City of Benicia, *Emergency Operations Plan (EOP), Volume 1 – Base Plan*, adopted April 16, 2019.

while detailed annexes provide more detailed procedures for responding to the specific types of incidents or hazards listed above. The small incremental growth in Benicia's population that could occur over nearly two decades as a result of project implementation would not interfere with the ability of the Police, Fire, Public Works, Human Resources, and other City departments to carry out their duties in implementing the EOP during a natural disaster or other emergency. The project would have ***no impact*** related to impairing implementation of an adopted emergency response plan or emergency evacuation plan.

	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
b) Due to slope, prevailing winds, and other factors, exacerbate wildfire risks, and thereby expose project occupants to pollutant concentrations from a wildfire of the uncontrolled spread of a wildfire?	☐	☐	☒	☐

Explanation: There are no slopes or wildlands on or in the vicinity of the project site. As discussed in Section IX-h, the site is not within a High Fire Hazard Severity Zone or Very High Fire Hazard Severity Zones, as mapped by CAL FIRE. The project site is located in close proximity to San Francisco Bay, in an extensive area of urban development, with no wildlands within a mile of the site. Therefore, there is little to no potential for wildfire at the project site

Current building codes and standards reduce the risk of burning embers igniting buildings. These codes place standards on roofing construction and attic venting. They also require building siding materials, exterior doors, decking, windows, eaves wall vents, and enclosed overhanging decks to meet fire test standards. Construction of the new townhomes in accordance with these standards would minimize their susceptibility to fire.

Finally, the site is situated close to urban services, including access roads and water supply. Benicia Fire Department Station No. 11, at 150 Military West, is located less than one-half mile to the northwest, allowing for a rapid emergency response in the event of fire. Based on all of the foregoing considerations, the project would have a ***less-than-significant impact*** due to increased risk of wildfire.

	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
c) Require the installation or maintenance of associated infrastructure (such as roads, fuel breaks, emergency water sources, power lines, or other utilities) that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment?	☐	☐	☒	☐

Explanation: The project study area is already well served by existing roads and fire-fighting services, and fire-fighting water supply will be readily available to new development and redevelopment facilitated by the proposed Mixed-Use Districts. The only new infrastructure that could be required would be the extension of utilities onto a currently undeveloped site from the existing infrastructure

located within surrounding streets, though there are very few such parcels in the Eastern Gateway study area. The new infrastructure that would be developed on an individual development site would not have the potential to exacerbate fire risk in the existing urbanized area. While there could be potential environmental impacts that would result from the construction of utilities and other site infrastructure—such as potential impacts to air quality, water quality, and noise—those impacts are addressed in the applicable sections of this Initial Study. This would be a ***less-than-significant impact***.

	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
d) Expose people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes?	☐	☐	☒	☐

Explanation: The potential for flooding is addressed in Section X-g and the potential for landslide is addressed in Section VII-a.iv. As discussed in Section XX-b, above, there is not a significant risk of wildfire at or near the project study area and there are no significant slopes in the vicinity, so there is no potential for secondary effects such as post-fire slope instability. This would be a ***less-than-significant impact***.

XXI. MANDATORY FINDINGS OF SIGNIFICANCE —

	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
a) *Does the project have the potential to degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory?*	☐	☒	☐	☐

Explanation: There is no potential for the project to substantially degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self–sustaining levels, threaten to eliminate a plant or animal community, or reduce the number or restrict the range of a rare or endangered plant or animal. Mitigation has been identified to protect nesting birds during construction of future projects. There is a remote possibility for encountering buried historic/prehistoric cultural resources within the study area, but mitigation measures have been identified to minimize potential impacts in the event such resources are encountered during construction of future development projects.

	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
b) *Does the project have impacts that are individually limited but cumulatively considerable? ("Cumulatively considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects.)*	☐	☐	☒	☐

Explanation: No significant cumulative impacts were identified for the proposed project. Where relevant, the potential for cumulative impacts is discussed in the topical sections of this IS/MND devoted to individual environmental resource issues, such as air quality, water quality, and noise.

Future development in the Eastern Gateway Mixed-Use Districts would occur in the context of a largely built out downtown area and project study area, currently proposed or planned development projects, and continued future buildout of Benicia in accordance with the General Plan. Current potential development projects include development of a 7.9-acre site located in the vicinity of Park Road, Adams Street, and Jefferson Street with 149 housing units, including approximately 120 units with ground-floor workspace (no formal application submitted yet), and development of a 14-unit residential

apartment complex on a 0.56-acre vacant site located at the northwest corner of Jefferson Street and Park Road.

The General Plan amended the prior land use designations of numerous parcels in the City; the changes had the effect of reducing the potential for land use development. Among the changes, 220 acres of low- and medium-density residential parcels were re-designated for open space, 63.7 acres of industrial and Business/Professional Office parcels were re-designated for open space, and future expansion of the City was limited by the establishment of an urban growth boundary.

Buildout of the Mixed-Use Districts is expected to add 229 net new housing units to the project study area by 2040 and increase commercial development by 7,461 square feet in comparison with existing conditions. The increase in commercial space would be negligible relative to the amount of existing commercial development in the City, which includes 100,580 square feet in the project study area alone. The impacts of the new development would be mitigated by the mitigation measures included in this IS/MND, which would ensure that the new commercial development would not make a cumulatively considerable contribution to the impacts of such development, which typically include traffic, air quality/GHG, water quality, public services/utilities, and noise impacts. Geology and soils impacts are site- and project-specific and are addressed through compliance with building codes and project-specific mitigation measures. Similarly, hazardous materials impacts tend to be site-specific and addressed through site-specific mitigation requirements. While industrial development could generate significant cumulative impacts in conjunction with other industrial development, no industrial development would be allowed in the Mixed-Use Districts.

With respect to the creation of 229 net new housing units over the next 19 years, the various impacts from construction of the new housing would be mitigated by compliance with applicable regulatory requirements described in this document and through implementation of the construction-related mitigation measures identified herein. From an operational standpoint, the proposed Mixed-Use Districts are specifically and explicitly intended to reduce the environmental effects of such development by fostering infill development in an established area and redevelopment of the area with higher-density residential uses in proximity to neighborhood-serving businesses and public transit. This will promote walking, biking, and use of public transit, while reducing reliance on the automobile. As discussed in more detail in Section XVII, implementation of the project would reduce Citywide VMT and Countywide VMT in comparison with existing conditions. This would also have the effect of reducing emissions of criteria air pollutants and GHGs in comparison with existing conditions. For these reasons, the development of 229 net new housing units would not have cumulatively considerable environmental effects.

	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
c) *Does the project have environmental effects that will cause substantial adverse effects on human beings, either directly or indirectly?*	☐	☒	☐	☐

Explanation: Mitigation has been identified to reduce potential impacts from the generation of dust during project construction, which could potentially have adverse effects on human receptors. Mitigation has also been identified to protect human health and the environment from the possible release of hazardous materials from the soil or groundwater underlying future development sites in the study area. No other potentially significant impacts on human beings were identified.

REPORT PREPARATION

This Initial Study and Mitigated Negative Declaration was prepared under the direction of Douglas Herring & Associates (DHA), with support from the City of Benicia Planning Division.

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City of Benicia:	Danielle Crider, Associate Planner City of Benicia Community Development Department, Planning Division 250 East L Street Benicia, CA 94510

MITIGATION MEASURES

Air Quality

Mitigation Measure AQ-1: For all new development projects proposed in the Eastern Gateway Mixed-Use Districts subject to discretionary review, the property owner/applicant shall require the construction contractor to reduce the severity of project construction period dust and equipment exhaust impacts by complying with the following control measures:

- All exposed surfaces (e.g., parking areas, staging areas, soil piles, graded areas, and unpaved access roads) shall be watered two times per day.
- All haul trucks transporting soil, sand, or other loose material off-site shall be covered.
- All visible mud or dirt track-out onto adjacent public roads shall be removed using wet power vacuum street sweepers at least once per day. The use of dry power sweeping is prohibited.
- All vehicle speeds on unpaved roads shall be limited to 15 mph.
- All roadways, driveways, and sidewalks to be paved shall be completed as soon as possible. Building pads shall be laid as soon as possible after grading unless seeding or soil binders are used. [The BAAQMD *CEQA Air Quality Guidelines* do not specify a time frame for "as soon as possible." Project applicants will be encouraged to complete these actions as soon as they deem them feasible.]
- Idling times shall be minimized either by shutting equipment off when not in use or reducing the maximum idling time to 5 minutes (as required by the California airborne toxics control measure Title 13, Section 2485 of California Code of Regulations [CCR]). Clear signage shall be provided for construction workers at all access points.
- All construction equipment shall be maintained and properly tuned in accordance with the manufacturer's specifications. All equipment shall be checked by a certified mechanic and determined to be running in proper condition prior to operation.
- Post a publicly visible sign with the telephone number and person to contact at the Lead Agency regarding dust complaints. This person shall respond and take corrective action within 48 hours. The Air District's phone number shall also be visible to ensure compliance with applicable regulations.

Mitigation Measure AQ-2: If the size of any future development project within one of the Eastern Gateway Mixed-Use Districts would exceed either the construction, operational, or greenhouse gas (GHG) screening thresholds (too numerous to specify here) recommended in the current version (at the time the application is deemed complete by the City) of the Bay Area Air Quality Management District (BAAQMD) *CEQA Air Quality Guidelines*, prior to project approval

the City shall require the preparation of a quantified analysis of the project's potential air quality impacts by a qualified professional. If the analysis identifies any potential impacts based on the federal and State significance thresholds for criteria air pollutants or State standards for GHGs, the air quality consultant shall identify appropriate mitigation measures sufficient to reduce construction and/or operational emissions to less-than-significant levels, and the City shall require implementation of these mitigation measures as a condition of project approval. Further review under CEQA would be required if project-specific mitigation could not reduce emissions to a less-than-significant level.

Additionally, any proposed project that would include any of the exceptions to applicability of the BAAQMD screening criteria listed in the BAAQMD *CEQA Air Quality Guidelines* would also require a quantified air quality analysis prior to project approval, and would potentially be subject to additional mitigation requirements, similar to projects exceeding the BAAQMD screening criteria, addressed above. Specifically, any project whose construction would include any of the following would require quantified analysis:

a. Demolition activities inconsistent with District Regulation 11, Rule 2: Asbestos Demolition, Renovation and Manufacturing;

b. Simultaneous occurrence of more than two construction phases (e.g., paving and building construction would occur simultaneously);

c. Simultaneous construction of more than one land use type (e.g., project would develop residential and commercial uses on the same site) (the BAAQMD *CEQA Air Quality Guidelines* state that this exception does not apply to high density infill development);

d. Extensive site preparation (i.e., greater than default assumptions used by the Urban Land Use Emissions Model [URBEMIS] for grading, cut/fill, or earth movement, which is grading of more than 25 percent of total project acreage in one day); or

e. Extensive material transport (e.g., greater than 10,000 cubic yards of soil import/export) requiring a considerable amount of haul truck activity.

Mitigation Measure AQ-3: If the size of any future development project within one of the Eastern Gateway Mixed-Use Districts would exceed the construction screening thresholds recommended in the Bay Area Air Quality Management District (BAAQMD) *CEQA Air Quality Guidelines*, prior to project approval the City shall require the preparation of a Health Risk Assessment of the project's potential health risk impacts by a qualified air quality professional. If the analysis identifies any potential impacts based on BAAQMD's thresholds of significance for cancer risk or acute or chronic health risk, the air quality consultant shall identify appropriate mitigation measures sufficient to reduce construction emissions and/or

exposure of sensitive receptors to substantial pollutant concentrations to acceptable levels, and the City shall require implementation of these mitigation measures as a condition of project approval.

Biological Resources

Mitigation Measure BR-1: Prior to issuance of a grading permit or building permit for any future development project in the Mixed-Use District that would entail construction disturbance on a site containing or adjacent to mature trees, the project applicant shall comply with the following: If any site grading or project construction will occur during the general bird nesting season (February 1 through August 31), a bird nesting survey shall be conducted by a qualified raptor biologist prior to any grading or construction activity. If conducted during the early part of the breeding season (January to April), the survey shall be conducted no more than 14 days prior to initiation of grading/construction activities, due to the higher probability that new nest construction could be initiated during this time. If conducted during the late part of the breeding season (May to August), when the potential for new nest creation is much lower, the survey shall be performed no more than 30 days prior to initiation of these activities. If active nests are identified, a 250-foot fenced buffer (or an appropriate buffer zone determined in consultation with the California Department of Fish and Wildlife) shall be established around the nest tree and the site shall be protected until September 1st or until the young have fledged. A biological monitor shall be present during earth-moving activity near the buffer zone to make sure that grading does not enter the buffer area.

Cultural Resources

Mitigation Measure CUL-1: Prior to approving any proposed development project within the Mixed-Use Districts that would result in the demolition or alteration of any structures that are more than 50 years old (as determined by the City), the structures shall be evaluated in a Historic Resources Evaluation (HRE) by a qualified architectural historian meeting the Secretary of the Interior's Professional Qualification Standard to determine whether or not any of the structures are potentially a significant historical resource pursuant to Section 15064.5 of the *CEQA Guidelines*, documenting the results of the investigation in a professional HRE report to be submitted to the Benicia Planning Division. If the architectural historian determines that no historical resources are present, no further mitigation would be required. If historical resources are identified, the project applicant will be required to either (a) implement all recommendations identified in the Historic Resources Evaluation report to reduce potential impacts to a less-than-significant level, if applicable, or (b) sponsor the preparation of an Environmental Impact Report (EIR) pursuant to CEQA to fully evaluate and disclose the project's potential impacts to historical resources.

Mitigation Measure CUL-2: Prior to issuance of a grading permit for any future development in the Mixed-Use Districts, an archival search of the project vicinity shall be performed by the Northwest Information Center (NWIC) at Sonoma State University, which is part of the California Historical Resources Information System (CHRIS). If the NWIC determines, based on the results of the archival search, that there is a moderate to high probability for cultural resources to be present within the confines of the site proposed for development, it will make recommendations for further study by a qualified archaeologist, which could include a recommendation for a surface reconnaissance of the site and possibly for subsurface testing. Prior to issuance of the grading permit, the project sponsor shall retain the services of a qualified archaeologist to perform all of the additional investigation recommended by the NWIC. The archaeologist shall document the results of the investigation in a professional report to be submitted to the Benicia Planning Division. Any additional recommendations made by the archaeologist for additional investigation, archaeological monitoring during site disturbance, and/or artifact recovery and documentation shall be implemented by the project sponsor prior to the initiation of project construction (or during construction, in the case of archaeological monitoring).

Mitigation Measure CUL-3: In the event that any human remains are encountered during site disturbance, all ground-disturbing work shall cease immediately and a qualified archaeologist shall notify the Solano County Coroner and advise that office as to whether the remains are likely to be of prehistoric or historic period in date. If determined to be prehistoric, the Coroner's Office will notify the Native American Heritage Commission of the find, which, in turn, will then appoint a "Most Likely Descendant" (MLD). The MLD in consultation with the archaeological consultant and the City, will advise and help formulate an appropriate plan for treatment of the remains, which might include recordation, removal, and scientific study of the remains and any associated artifacts. After completion of analysis and preparation of the report of findings, the remains and associated grave goods shall be returned to the MLD for reburial. Compliance with the MLD's treatment plan and final disposition of the remains and any associated grave goods would complete the project sponsor's obligations under this mitigation measure.

<u>Geology and Soils</u>

Mitigation Measure GS-1: Prior to issuance of a grading permit to any future development project in the Mixed-Use Districts that would require ground disturbance, a Worker's Environmental Awareness Program (WEAP) shall be prepared and used to train all construction personnel prior to the start of work. The WEAP training shall include at a minimum the following information:

- Review of local and State laws and regulations pertaining to paleontological resources.
- Types of fossils that could be encountered during ground disturbing activity.

- Photos of example fossils that could occur on site for reference.
- Instructions on the procedures to be implemented should unanticipated fossils be encountered during construction, including stopping work in the vicinity of the find and contacting a qualified professional paleontologist.

Mitigation Measure GS-2: Prior to issuance of a grading for construction work in the Mixed-Use Districts, City staff shall inform the permitee of the requirements of this mitigation measure, and shall provide the permitee a printed copy of an advisory that sets forth the following requirements: If any paleontological resources—such as fossilized bone, teeth, shell, tracks, trails, casts, molds, or impressions—are encountered during site grading or other construction activities, all ground disturbance within 100 feet of the find shall be halted until the services of a qualified paleontologist can be retained to identify and evaluate the scientific value of the resource(s) and, if necessary, recommend mitigation measures to document and prevent any significant adverse effects on the resource(s). Any further mitigation measures recommended by the paleontologist shall be implemented and construction shall not resume in the vicinity of the find until the paleontologist has authorized the resumption of work. Significant paleontological resources shall be salvaged and deposited in an accredited and permanent scientific institution, such as the University of California Museum of Paleontology (UCMP).

Hazards and Hazardous Materials

Mitigation Measure HAZ-1: Prior to the issuance of a grading permit for future development in the Mixed-Use Districts, the applicant shall submit to the Benicia Community Development Department a Phase I Environmental Site Assessment (ESA) prepared by a qualified environmental professional, as defined by American Society of Testing and Materials (ASTM) Standard 1527-13 (or latest edition). If the results of the Phase I ESA indicate the potential presence of site contamination, the project sponsor shall hire a qualified environmental professional to conduct a Phase II ESA, including subsurface soil and/or groundwater testing, in accordance with the recommendations in the Phase I ESA and applicable ASTM standards. If the Phase I ESA identifies any open site assessment regulatory cases on or adjacent to the property proposed for development or redevelopment, the applicant shall obtain a Case Closure/No Further Action letter from the oversight regulatory agency identified in the ESA and shall provide a copy of the letter to the City prior to issuance of a grading permit.

In the event that the Phase II ESA identifies contamination of the soil and/or groundwater at the site above applicable regulatory limits, a remediation plan, subject to the approval of the applicable regulatory agency (assumed to be the San Francisco Bay Regional Water Quality Control Board (RWQCB) in the case of groundwater

contamination or the California Department of Toxic Substances Control (DTSC) in the case of soil contamination), shall be prepared and implemented. The City shall not approve a grading permit until adequate evidence is provided to demonstrate that the proposed work would not expose construction workers to hazardous levels of soil and/or groundwater contaminants and would not pose an environmental threat or a health risk to future site occupants or neighbors. Such evidence may include a Case Closure or No Further Action letter from the appropriate regulatory agency or laboratory testing results demonstrating that no contaminant levels exceed the applicable screening criteria established by the RWQCB or DTSC, as applicable.

If the Phase II ESA identifies contamination of the soil and/or groundwater at the site above applicable regulatory limits, the project sponsor shall also implement Mitigation Measures HAZ-2 and HAZ-3.

Mitigation Measure HAZ-2: If a Phase II Environmental Site Assessment (ESA) has been prepared for a proposed development project in the Mixed-Use Districts in accordance with Mitigation Measure HM-1 and the Phase II ESA identifies contamination of the soil and/or groundwater at the site above applicable regulatory limits, then prior to the issuance of a grading permit, the project sponsor shall retain the services of a qualified environmental professional to prepare a Site Management Plan (SMP) to govern construction work at the project site. The SMP shall establish management practices for handling contaminated groundwater, soil vapor, soil, and other materials during project construction, including proper offsite disposal. A copy of the SMP shall be provided to all construction contractors prior to the initiation of work at the site and construction contracts shall require all contractors to adhere to the provisions of the SMP. Prior to its implementation, the SMP shall be reviewed and approved by the California Department of Toxic Substances Control (DTSC), San Francisco Bay Regional Water Quality Control Board (RWQCB), and/or the Solano County Department of Resource Management, Environmental Health Services Division (the Certified Unified Program Agency (CUPA) for hazardous materials in Solano County), whichever of these agencies claims jurisdiction.

The SMP shall include the following provisions, if applicable, as well as any other requirements deemed appropriate by the regulatory agencies:

- Establish procedures for dewatering of construction excavations and excavated soils, consistent with applicable federal, State, and local regulations, specifying methods of sampling and testing, water collection, handling, transport, on-site or offsite treatment, discharge, and disposal for all water produced by dewatering activities.
- Establish procedures for sampling and testing site soils to ensure construction workers are not exposed to hazardous levels of residual petroleum hydrocarbons and/or volatile organic compounds (VOCs).

- Establish contingency measures to be followed if soils with contaminant levels in excess of the applicable Environmental Screening Levels (ESLs) for residential use established by the RWQCB are encountered. These measures shall include procedures for excavation, containment, and/or treatment of the contaminated soils to achieve contaminant levels below their ESLs. Any soils requiring offsite disposal shall be submitted to laboratory analysis for hazardous materials by a State-certified laboratory. If contaminant levels do not exceed established limits for non-hazardous waste, the soil may be disposed of at a Class II or III solid waste landfill. If the soil is classified as a hazardous waste, it shall be handled and hauled in accordance with State and federal regulations for hazardous waste and disposed of at a licensed Class I hazardous waste disposal facility.
- Identify measures to protect future occupants of the site from exposure to groundwater contaminants at the site, including intrusion of soil-gas vapors emitted from the groundwater plume. Such measures may include vapor intrusion barriers or vapor extraction systems.

Mitigation Measure HAZ-3: If a Phase II Environmental Site Assessment (ESA) has been prepared for a proposed development project in the Mixed-Use Districts in accordance with Mitigation Measure HM-1 and the Phase II ESA identifies contamination of the soil and/or groundwater at the site above applicable regulatory limits, then prior to the issuance of a grading permit, the project sponsor shall prepare and implement during site preparation and grading activities a Health and Safety Plan (HASP). The HASP shall identify the measures necessary to protect workers and to prevent their exposure to petroleum hydrocarbons and volatile organic compounds (VOCs) that may occur in soils at the site. The HASP shall be prepared in accordance with the Occupational Safety and Health Administration's (OSHA) Hazardous Waste Operations and Emergency Response (HAZWOPER) Standard promulgated at 29 CFR 1910.120. It shall be prepared and implemented in accordance with all other applicable State and federal occupational safety and health standards.

Noise

Mitigation Measure NOI-1: Prior to issuance of a grading, building, or demolition permit for any future development in the Mixed-Use Districts, City staff shall evaluate each development application for new uses in the Mixed-Use Districts to determine whether project construction would entail any of the following: (1) demolition of an existing building; (2) pile driving; (3) caisson drilling; (4) crack-and-seat operations; or (5) operation of heavy equipment within 50 feet of an historic building with an age of 50 years or more, or within less than 25 feet of any existing building. If any of these activities would be required, the City shall retain the services of a qualified acoustical consultant, to be paid for by the project applicant, to conduct a construction vibration impact

assessment that evaluates the potential for structural or architectural damage to adjacent properties that could result from the proposed construction, and identifies appropriate mitigation measures to effectively avoid or mitigate the potential impacts. Such measures could include pre-construction measures to protect vulnerable structures, measures implemented during construction to minimize vibration, and/or post-construction measures to repair damage inflicted during construction. In the case of historic structures, repairs would likely be required to be performed in accordance with the Secretary of the Interior's Standards for the Treatment of Historic Properties. The City shall verify that any necessary mitigation will be implemented prior to issuance of a grading, building, or demolition permit. If none of the activities listed above would be required, no mitigation would be required.

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