



BENICIA INDUSTRIAL PARK TRANSPORTATION AND EMPLOYMENT CENTER PLAN

INITIAL STUDY/ MITIGATED NEGATIVE DECLARATION

PREPARED BY:

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MARCH 20, 2017

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INITIAL STUDY - OVERVIEW AND BACKGROUND	
Project Title:	Benicia Industrial Park Transportation and Employment Center Plan
Lead Agency:	City of Benicia 250 East L Street Benicia, CA 94510
Contact Person and Phone Number:	Victor P. Randall, Acting Senior Planner vrandall@ci.benicia.ca.us (707) 746-4280
Project Location:	The TEC Plan Area includes over 1,300 acres of land and is bounded by Lake Herman Road to the north, the Union Pacific Railroad to the east, and East Channel Road to the west in the City of Benicia, California.
Project Sponsor:	City of Benicia
Property Owners:	Various; City of Benicia; Caltrans; Private; Union Pacific
General Plan Land Use Designation:	General Commercial, General Industrial, Limited Industrial, Marsh, Public/Quasi-Public
Zoning:	General Commercial, General Industrial, Limited Industrial, Industrial Park, Public/Semi-Public, Open Space
Description of Project:	The proposed project includes roadway improvements as well as improvements to bicycle, pedestrian, wayfinding, and streetscape facilities.
Surrounding Land Uses and Setting:	The Plan Area is surrounded by open space land uses to the north and east, open space and industrial land uses to the south, and industrial, open space, and residential land uses to the west.
Other Public Agency Approvals:	Caltrans and Public Utilities Commission for any activities within their right of way.

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TABLE OF CONTENTS**Page #**

1 OVERVIEW AND BACKGROUND	5
1.1 PROJECT LOCATION	6
1.2 PROJECT BACKGROUND.....	6
1.3 EXISTING LAND USE AND ZONING	7
1.4 PROJECT DESCRIPTION	7
1.5 TIERING-GENERAL PLAN EIR.....	15
1.6 CONSULTATION	16
1.7 APPROVALS FROM OTHER REGULATORY AGENCIES	16
2 ENVIRONMENTAL FACTORS POTENTIALLY AFFECTED	39
3 DETERMINATION (TO BE COMPLETED BY THE LEAD AGENCY)	39
4 EVALUATION OF ENVIRONMENTAL IMPACTS.....	40
4.1 AESTHETICS.....	41
4.2 AGRICULTURAL AND FORESTRY RESOURCES	45
4.3 AIR QUALITY	47
4.4 BIOLOGICAL RESOURCES	53
4.5 CULTURAL RESOURCES.....	65
4.6 GEOLOGY AND SOILS	72
4.7 GREENHOUSE GAS EMISSIONS	75
4.8 HAZARDS/HAZARDOUS MATERIALS	78
4.9 HYDROLOGY AND WATER QUALITY	84
4.10 LAND USE AND PLANNING	90
4.11 MINERAL RESOURCES.....	93
4.12 NOISE.....	94
4.13 POPULATION AND HOUSING	97
4.14 PUBLIC SERVICES	99
4.15 RECREATION	101
4.16 TRANSPORTATION AND CIRCULATION	103
4.17 UTILITIES AND SERVICE SYSTEMS	114
4.18 MANDATORY FINDINGS OF SIGNIFICANCE (CAL. PUB. RES. CODE § 15065)	119
5 REFERENCE DOCUMENTS.....	122

TABLE OF TABLES

TABLE 1: TEC PLAN PROPOSED ROADWAY IMPROVEMENTS.....	10
TABLE 2: FREEWAY RAMP IMPROVEMENTS.....	12
TABLE 3: AIR QUALITY THRESHOLDS OF SIGNIFICANCE	48
TABLE 4: MAIN ARTERIALS AND LOCAL STREETS IN TEC PLAN AREA	104
TABLE 5: EXISTING AND PROJECTED PEAK HOUR TRAFFIC.....	109

TABLE OF FIGURES

FIGURE 1: REGIONAL LOCATION 17
FIGURE 2: EXISTING LAND USE..... 18
FIGURE 3: CURRENT ZONING..... 20
FIGURE 4: TEC PLAN AREA 22
FIGURE 5: ROADWAY IMPROVEMENTS 24
FIGURE 6: BICYCLE FACILITIES..... 26
FIGURE 7: PEDESTRIAN IMPROVEMENTS..... 28
FIGURE 8: EAST 2ND STREET – BLVD CYCLE TRACK, BUFFERED SIDEWALKS, AND SHARED-USE PATH 30
FIGURE 9: INDUSTRIAL WAY SHARED-USE PATH 32
FIGURE 10: PARK ROAD SHARED-USE PATH..... 34
FIGURE 11: STONE ROAD SIDEWALK 36
FIGURE 12: SENSITIVE BIOLOGICAL RESOURCES 55

APPENDICES

APPENDIX A: Mitigation Monitoring and Reporting Program

1 OVERVIEW AND BACKGROUND

The City of Benicia has prepared the Industrial Park Transportation and Employment Center Plan (TEC Plan) in order to guide improvements for enhancing circulation and travel opportunities for the Industrial Park. The “project,” as defined herein, is implementation of the TEC Plan and provides for roadway modifications and enhancements, and other improvements to accommodate circulation and all modes of access. This Initial Study/ Mitigated Negative Declaration has been prepared in accordance with the California Environmental Quality Act to evaluate the project’s potential to result in environmental impacts.

The TEC Plan Area is located in the northeast portion of the City of Benicia, bordered by Lake Herman Road, East Channel Road, and the City’s eastern boundary. The TEC Plan Area can be broken down into two areas: (1) The vacant land north of East 2nd Street (commonly referred to as the “Northern Gateway Property,” and (2) The developed land south of East 2nd Street, referred to herein as the “Benicia Industrial Park” or “Industrial Park” (see **Figure 4: TEC Plan Area**).

The north area of the TEC Plan area is comprised of a large amount of vacant land located between East 2nd Street and Lake Herman Road, commonly referred to as the “Northern Gateway property.” At over 500 acres, the Northern Gateway property offers the potential for a large scale development opportunity in the future. A 2008 development proposal (which was not approved) assumed the development of 280 acres of Limited Industrial uses (approximately 4.4 million square feet of new building space) and 35 acres of Commercial uses (approximately 857,000 square feet of building space). While the ultimate development mix of this property will most likely differ from these calculations, they provide a good estimate of the amount of new development that can be reasonably supported on the Northern Gateway property.

The southern area of the TEC Plan is the existing Industrial Park, generally located south of East 2nd Street to the border of the TEC Plan Area. This area is largely built out and hosts the majority of industrial, warehousing and distribution activities in the City. The heaviest industrial uses and rail traffic occur in the western portion of the Industrial Park along East Channel Road, Industrial Way, and Bayshore Road, near the Valero Refinery, which is located west of the TEC Plan Area.

East of I-680, Industrial Way takes on a different character with lighter manufacturing and industrial businesses overlooking marsh lands and the Suisun Bay to the east. The heart of the Industrial Park, centered around Park Road and Stone Road, features a mix of manufacturing, warehousing, light industrial, and commercial businesses that receive consistent truck traffic throughout the day.

Gateway Plaza Drive and the northeast corner of the Industrial Park contain a concentration of commercial businesses that are easily accessible from the freeway.

A privately owned and operated deep water port is located just outside the TEC Plan Area boundary to the south.

1.1 PROJECT LOCATION

The proposed project would be located both east and west of Interstate 680 (I-680) in the City of Benicia, California. The City of Benicia is surrounded by unincorporated Solano County to the north, the Carquinez Strait to east and south, and the City of Vallejo to the west. **Figure 1: Regional Location** provides an aerial photographic view of the project site and surrounding land uses. The project site is surrounded by open space land uses to the north and east, open space and industrial land uses to the south, and industrial, open space, and residential land uses to the west.

1.2 PROJECT BACKGROUND

The Benicia Industrial Park is a significant employment center in the City of Benicia and Solano County. Home to over 600 firms employing more than 5,000 workers, the Industrial Park serves as the economic engine for the City of Benicia. The Industrial Park is served by I-680, a private deep water port, the Union Pacific Railroad mainline and spurs, SolTrans local buses, and Fairfield and Suisun Transit (FAST) intercity express buses.

The Benicia Industrial Park has been recognized as a Priority Development Area (PDA) by the Association of Bay Area Governments (ABAG). PDAs are places identified by local jurisdictions as areas for investment, new homes, and job growth. To become a PDA, an area must be: 1) within an existing community; 2) within walking distance of frequent transit service; 3) designated for more housing in a locally adopted plan or identified by a local government for future planning and potential growth; and 4) nominated through a resolution adopted by a City Council or County Board of Supervisors. While the addition of residential uses is not anticipated as part of the Industrial Park's PDA designation, as an employment-based PDA, the Industrial Park has the added goal of advancing employment growth by attracting new business and providing for the renovation of established areas.

The City of Benicia is working with Solano Transportation Authority in preparing a Transportation and Employment Center (TEC) Plan for the Benicia Industrial Park. The TEC Plan is intended to help the City create a more complete business and transportation environment and achieve the following: provide infrastructure improvements that benefit cars, trucks, bicyclists, pedestrians and transit riders; retain existing businesses and attract new businesses; promote sustainability by reducing fuel consumption and air emissions; and increase the potential for grant funding for roadway and streetscape improvements.

The Draft Scenarios Report for the TEC Plan was released for public review in August 2016 and the Draft Benicia Industrial Park TEC Plan was prepared for public review in

January 2017. The City anticipates adoption of the TEC Plan by May 2017. Three plan scenarios are being considered and it is expected that the final TEC Plan will assume one of those scenarios or some combination thereof. For analysis purposes, it is presumed that the most development intense scenario, Scenario 3, is realized. Therefore, this Initial Study/Mitigated Negative Declaration (IS/MND) assumes implementation of Scenario 3, the improvements of which are described below.

1.3 EXISTING LAND USE AND ZONING

As shown in **Figure 2: Existing Land Use**, Industrial is the most prominent land use type in TEC Plan Area. Vacant is the second largest land use type, covering more than one third of the total Plan Area, the majority of which is located on the Northern Gateway property. While land designated as Open Storage is usually associated with adjacent industrial activities, it stands as a separate existing land use category for its high redevelopment potential. Open Storage is defined as land where open storage is the primary intended use (compared to vacant land) and there is no permanent structure. Commercial Services, Utilities, Religious Facilities, and other land uses are also located within the TEC Plan Area. Commercial Services include gas stations, auto service stations, and restaurants. City and state-owned properties, a PG&E electrical substation and the Valero wastewater treatment plant have a Utilities land use designation. The New Harbor Community Church is the only Religious Facility type of land use in the TEC Plan Area.

As shown in **Figure 3: Current Zoning**, the majority of land located north of East 2nd Street is zoned for Limited Industrial use, while land to the south is largely zoned for General Industrial use. Key distinctions between these two districts relate to the allowance of a wider range of industrial uses in the General Industrial district, including the manufacturing, assembly and packaging of goods and products from extracted and raw materials. The Limited Industrial district serves to buffer outlying open space and residential areas from the heavier industrial uses located in the General Industrial district. Commercially zoned land is concentrated around the Lake Herman Road interchange at I-680. Additionally, there are also a few pockets zoned for Public/Semi-Public, Industrial Park, and Open Space uses.

1.4 PROJECT DESCRIPTION

Project Overview

The TEC Plan Area includes over 1,300 acres of land and is comprised of established industrial uses, commercial uses and undeveloped land. The TEC Plan Area is bounded by Lake Herman Road to the north, the Union Pacific Railroad to the east, and East Channel Road to the west (see **Figure 4: TEC Plan Area**). The primary objectives of the TEC Plan include correction of intersection geometric deficiencies, pavement maintenance, and remediation of flooding issues. The plan also includes improvements to bike, pedestrian, wayfinding, and streetscape facilities. For the most

part, roadway improvements would be limited within existing rights of way and immediately contiguous areas that have been previously disturbed. Improvements that would substantially modify roadway alignment, encroach beyond the right of way or into sensitive areas such as wetland, marsh or natural communities would be subject to subsequent environmental review. No changes are proposed to Industrial Park land uses or current development standards.

Existing Roadway Network

The regional roadway network in and around the TEC Plan Area includes Interstates 680 and 780, both four-lane freeway facilities. The main local and arterial streets serving the Industrial Park include:

- **East 2nd Street** is an arterial roadway extending northeast from downtown Benicia to Lake Herman Road. Between Lake Herman Road and Industrial Way, the roadway varies from two lanes to two travel lanes and a center turn lane through much of the TEC Plan Area. West of Industrial Way, the street widens to a four-lane roadway with a median, turn lanes, and bicycle lanes.
- **Lake Herman Road** is a two-lane, east-west roadway that forms the northern boundary of the TEC Plan Area.
- **Reservoir Road** (or Old Lake Herman Road) is a two-lane, north-south roadway that runs in the northwestern portion of the TEC Plan Area, connecting East 2nd Street and Lake Herman Road.
- **Industrial Way** is a two-lane arterial roadway that connects I-680 to East 2nd Street and Lake Herman Road. Between Oregon Street and Noyes Court, Industrial Way is a three-lane street, with two lanes in the southbound direction and one lane in the northbound direction.
- **Park Road** is a two-lane, north-south arterial roadway that runs parallel to I-680 before veering northwest to intersect with East 2nd Street. It serves as the connection between the interchange ramps at Industrial Way and Bayshore Road and the rest of the Industrial Park. It also links the Industrial Park to the Arsenal and serves as a viable route to downtown Benicia.
- **Bayshore Road** is a two-lane arterial roadway located in the southern portion of the TEC Plan Area, that connects the waterfront and the Port with the Industrial Park interior, I-780 interchanges, and the Port surface parking lots fronting Suisun Marsh.
- **Stone Road** is a two-lane roadway serving the interior of the TEC Plan Area that provides a second connection between East 2nd Street and Park Road.
- **Goodyear Road** is a two-lane roadway serving the northeast corner of the TEC Plan Area adjacent to I-680. Its southern terminus intersects with the I-680

northbound ramps and Lake Herman Road.

- **East Channel Road** is a two-lane roadway connecting West Channel Road and Bayshore Road and providing access to properties east of the refinery and west of the rail spur.

Proposed Roadway Improvements

The Benicia Industrial Park TEC Plan proposes a “baseline” level of investment in the roadway infrastructure in order to thrive as a Transportation and Employment Center. Based on traffic volumes collected in September 2014, all the study intersections are meeting the City’s Level of Service (LOS) standards, meaning that capacity is not an issue at this time when considering only roadway traffic flows. However, trains crossing Park Road at-grade can degrade the LOS to E or F at the adjacent intersection of Park Road and Bayshore Road. The proposed roadway improvements to address roadway traffic, intersection geometric deficiencies, poor pavement conditions, and flooding issues are described below:

- Improve five intersections and one roadway segment to address deficiencies in short stopping sight distances, inadequate spacing between intersections, and turning radii that is inadequate to accommodate the California Surface Transportation Assistance Act (STAA) trailer truck. The proposed improvements and roadway segments are listed in **Table 1: Roadway Improvements** and shown on **Figure 5: Roadway Improvements**.
- Pavement maintenance (reconstruct, resurface, or overlay) for roadway segments that have failed or are in poor pavement condition. In general, the pavement type would be suitable for heavy truck traffic. In locations with less truck traffic, and as appropriate to road usage and soil conditions, the use of permeable pavers or porous pavement could be explored as a way to manage stormwater. The proposed improvements and roadway segments are listed in **Table 1: Roadway Improvements** and shown on **Figure 5: Roadway Improvements**.

Table 1: TEC Plan Proposed Roadway Improvements

<i>Roadway Intersection or Segment</i>	<i>Deficiency</i>	<i>Potential Improvements</i>
Geometric Deficiencies		
Industrial Way from E. 2 nd St. to I-680 NB on-ramp.	Number of lanes varies between 2 and 3; lack of center left turn lane	Widen to a three lane road with center left turn lane or pocket where feasible and suitable.
I-680/Lake Herman Road & Gateway Plaza Drive	Inadequate spacing from intersection of Lake Herman Road and I-680 NB ramps (per City's spacing requirement)	Install traffic signals at the Lake Herman Road/Gateway Plaza Drive and Lake Herman Road/I-680 NB off-ramp intersections.
West Channel Road & East Channel Road	Inadequate stopping sight distance for eastbound vehicles.	Install advisory curve speed warning sign. Install a speed feedback sign if necessary.
Industrial Way & SB I-680 off-ramp	Inadequate spacing from intersection of Industrial Way and Park Road. Inadequate stopping sight distance for westbound vehicles due to I-680 overpass structure. Inadequate STAA turning radius for left turn from ramp onto Industrial Way.	Provide a separate sign announcing distance to Park Road intersection. Provide warning sign for westbound vehicles. Pavement widening to accommodate STAA trucks.
Industrial Way & NB I-680 on-ramp	Inadequate STAA turning radius for right turn from Industrial Way onto ramp.	Widen ROW/intersection to accommodate STAA trucks.
Bayshore Road & NB I-680 off-ramp Bayshore Road & SB I-680 on-ramp	Inadequate stopping sight distance for westbound vehicles. Insufficient turning radius for STAA vehicles from freeway turning right.	Warning sign for westbound vehicles. Widen ROW/ intersection to accommodate STAA trucks.
West Channel Road from Industrial Way to Channel Court	Inadequate geometry creates safety concerns	Widen road where feasible
Pavement Maintenance		
Bayshore Road south of East Channel Road to south of Industrial Way	Pavement Condition Index (PCI) ¹ of 11	Reconstruct or resurface to "good" condition
Industrial Way north of Teal Drive to south of Lake Herman Road	PCI of 33	Reconstruct or resurface to "good" condition
Lake Herman Road from Gateway Plaza Court to east of Industrial Way	PCI of 36	Reconstruct or resurface to "good" condition
Park Road north of Bayshore Road to south of Industrial Way	PCI 35	Reconstruct or resurface to "good" condition
Park Road north of Stone Rd. to south of East 2 nd St.	PCI 73	Resurface to maintain "good" condition
Goodyear Road north of Lake Herman Road to 6800 Goodyear Rd.	PCI 42	Reconstruct or resurface to "good" condition

East 2nd Street north of Rose Drive to 800' north of Wanger St.	PCI 55-68	Reconstruct or resurface to "good" condition
East Channel Road	PCI 68	Reconstruct or resurface to "good" condition
Reservoir Road north of East 2nd Street to south of Lake Herman Road	PCI 43	Reconstruct or resurface to "good" condition
Notes: 1. The Pavement Condition Index (PCI) ranges from 0 to 100. A newly constructed street will have a PCI of 100 while a failed street will have a PCI of 25 or less. The pavement condition categories are "good" (PCI greater than 70), "fair" (PCI of 50 – 69), "poor" (PCI of 25 – 49) and "very poor/failed" (PCI less than 25).		

- Provide drainage improvements for roadways to help alleviate flooding issues in the future as sea levels rise and storm intensity increases. Currently only a few facilities provide curbs and gutters to allow proper drainage. Improvements would include the installation of curbs and gutters with storm drains along the following roadways east of I-680: Mallard Drive, Spring Drive, and Teal Drive. Drainage improvements would also be installed along the following roadways west of I-680: Park Road; Industrial Way, Noyes Court, Bayshore Road, Industrial Court, East and West Channel Roads, and East 2nd Street.

Freeway Ramp Improvements

Improvements are needed on four ramp intersections to and from I-680 to improve the safety and efficiency of these gateway locations (see **Table 2: Freeway Ramp Improvements**). In addition, the Solano Transportation Authority Comprehensive Transportation Plan 2025 identifies construction of an intermodal park-and-ride facility in the area of Lake Herman Road and I-680 that might affect the configuration of these ramps.

In the future, by 2040, improvements are needed for the I-780 eastbound and westbound ramps at the intersection of East 2nd Street. Improvements would modify geometry provide additional turn lanes and improve the safety and efficiency of these freeway ramps (see **Table 2: Freeway Ramp Improvements**). Performance at these I-780 ramps will continue to be monitored and in the future should level of service degrade, then improvements will be pursued. The TEC Plan identifies possible design modification to correct LOS at the I-780 ramps.

The locations for the freeway ramp improvements will be studied further to determine how best to improve or reconstruct the ramps. Because there are no details regarding the freeway ramp improvements at this time, this IS/MND, recognizes that future development of the freeway ramp improvements would be required to undergo subsequent environmental review in accordance with CEQA regulations.

Table 2: Freeway Ramp Improvements

<i>Intersection or Segment</i>	<i>Deficiency</i>	<i>Potential Improvements</i>
I-680 NB ramps from Gateway Plaza Drive	Inadequate spacing from intersection of Lake Herman Road and I-680 NB ramps.	Ramp improvements or reconstruction
Industrial Way & SB I-680 off-ramp	Inadequate spacing from intersection of Industrial Way and Park Road. Inadequate stopping sight distance for westbound vehicles due to I-680 overpass structure. Inadequate STAA turning radius for left turn from ramp onto Industrial Way.	Ramp improvements or reconstruction
Industrial Way & NB I-680 on-ramp	Inadequate STAA turning radius for right turn from Industrial Way onto ramp.	Ramp improvements or ramp reconstruction
Bayshore Road & NB I-680 off-ramp Bayshore Road & SB I-680 on-ramp	Inadequate stopping sight distance for westbound vehicles. Insufficient turning radius for STAA vehicles from freeway turning right. Circuitous and confusing routing to get to SB on-ramp and from NB off-ramp.	Ramp improvements or reconstruction, potentially connecting the off ramps and on ramps directly in both directions.
East 2nd Street & I-780 WB ramps	Will likely not meet LOS standard by 2040. Consider improving intersection if/when performance deteriorates.	Restripe northbound approach on E. 2 nd Street for dual left turn lanes onto I-780 westbound. Modify ramp and traffic signal to accommodate new geometry.
East 2nd Street & I-780 EB ramps	Will likely not meet LOS standard by 2040. Consider improving intersection if/when performance deteriorates.	Widen I-780 eastbound off ramp to provide separate right and left turn lanes. Modify traffic signal and island to accommodate new geometry.

Bicycle Improvements

Bicycle improvements would focus on completing the bicycle networks currently identified in the General Plan and the Solano County Bicycle Plan, completing a peripheral bicycle network covering all access points to/from the Industrial Park as well as enabling safer and more direct through travel. The following bicycle improvements would be implemented (see **Figure 6: Bicycle Facilities**):

- Creation of Class II bike lanes along Lake Herman Road, from East 2nd Street to the City limits. It should be noted that the bicycle route improvements extend beyond the limits of the TEC Plan Area and are recommended as part of the Plan in order to provide future connectivity to the City of Vallejo.
- Creation of Class III bicycle routes along the following roadways: Reservoir Road (from Lake Herman Road to East 2nd Street); Lake Herman Road (from East 2nd Street to Industrial Way); and Goodyear Road (from Lake Herman Road to the City Limits).
- Construction of protected bike lanes along East 2nd Street from Lake Herman Road to Reservoir Road. A Class IV cycle track would be constructed on the east/south side of the street that features rolled curbs that separate cyclists from vehicular traffic. The west/north side of the street would feature a Class I shared-use bicycle and pedestrian path. As currently envisioned, bike lanes along East 2nd Street would be constructed as part of the future Northern Gateway Mixed-Use Development Project and may occur outside of the existing limit of pavement for East 2nd Street. Therefore, this IS/MND includes a programmatic analysis for this component of the TEC Plan. Future construction of the bike lanes would be required to undergo environmental review according to CEQA regulations.
- Creation of Class I shared-use bicycle and pedestrian paths along Park Road (from East 2nd Street to Industrial Way) and Industrial Way (from Park Road to Lake Herman Road).
- Extension of Class II bike lanes recently installed along Park Road adjacent to the new bus hub south to I-780.
- Installation of bicycle support facilities, such as lockers or racks to support the additional destination commuters and recreational users.

Pedestrian Improvements

As shown in **Figure 7: Pedestrian Improvements**, pedestrian connections would be provided between the current bus stop, the bus hub (presently under construction), and local businesses. The pedestrian improvements are described below.

East 2nd Street – Buffered Sidewalk, Shared-Use Path, and Pedestrian Crossings

A sidewalk buffered from vehicular traffic by landscaping and a bicycle lane will line the east/south side of East 2nd Street between Industrial Way and Lake Herman Road. As described above, a shared-use bicycle and pedestrian path will line the west/north side of the street (see **Figure 8: East 2nd Street – Boulevard with Cycle Track, Buffered Sidewalks, and Shared-Use Path**). In addition, crosswalks will be created at

existing intersections and across any new roads or major driveways serving the Northern Gateway property.

Pedestrian facilities along East 2nd Street would be constructed as part of the Northern Gateway Mixed-Use Development Project and may occur outside of the existing limit of pavement for East 2nd Street. Therefore, this IS/MND includes a programmatic analysis for this component of the TEC Plan. Future construction of pedestrian facilities may be required to undergo subsequent environmental review according to CEQA regulations.

Industrial Way and Park Road – Shared-Use Path and Pedestrian Crossings

As described above, a shared-use pedestrian and bicycle path will line one side of Industrial Way, between Park Road and Lake Herman Road (see **Figure 9: Industrial Way Shared-Use Path**). Another shared-use pedestrian and bicycle path will line one side of Park Road, between East 2nd Street and Industrial Way (See **Figure 10: Park Road Shared-Use Path**). This will provide safe walking routes to and from the planned bus hub for Industrial Park workers who work along these corridors. The shared-use paths will include crosswalks and clear signage that alerts truck and auto traffic to the presence of pedestrians.

Stone Road – Sidewalk and Pedestrian Crossings

A new buffered sidewalk will be added to Stone Road (See **Figure 11: Stone Road Sidewalk**). The addition of buffered sidewalks will provide a safe way for Industrial Park workers to walk along this street, while still preserving the greatest amount of right-of-way possible to accommodate truck maneuvering.

Additional Pedestrian Amenities

In addition to the pedestrian network improvements discussed above, some additional amenities will be important to create a comfortable and pleasant pedestrian environment. This includes attractive and well-maintained landscaping, street trees that provide shade in the hot summer months, and pedestrian-scaled lighting.

Signage and Wayfinding

To support improved circulation and navigation within the Industrial Park, signage and wayfinding would be included to achieve the following: 1) provide directional information, particularly for first time visitors and prospective tenants, 2) enhance the image of the Industrial Park for business recruitment and retention, and 3) improve visibility and safety for users of all modes of transportation. Three types of wayfinding elements would be erected in the TEC Plan Area, including highway guide signs, gateway/monument signs, and directional and secondary signs.

1.4.1.1 Demolition & Tree Removal

Demolition activities would generate concrete, asphalt, and soil debris. As the TEC Plan improvements will occur incrementally over several years, debris generation would be spread out over 5-7 years or longer. Materials will be collected and hauled to an approved disposal site or reuse site as appropriate.

Construction activities would also include the removal of trees and other vegetation. Primarily, existing ornamental trees and landscaping would be removed. However, mature trees, groundcover and shrubs would be removed. The City's Tree and Street Tree Ordinance, Section 12.24 of the Benicia Municipal Code City code provides protection of trees by requiring a tree removal permit. Any tree removed under a permit would be required to be replaced or mitigated in conformance with Section 12.24.170 of the Benicia Municipal City code.

1.4.1.2 Landscaping and Lighting

The TEC Plan also provides for streetscape improvements including landscaping, medians, street lighting and landscape lighting. Site improvements include new landscaping consisting of trees, shrubs, groundcover, and vines.

Where presently absent or deficient, new or additional standard pole mounted street lighting would be introduced. Outdated street lights may also be retrofitted or replaced. Landscape lighting associated with medians, island and other focal areas may be equipped with low-level lighting.

1.4.1.3 Construction Activities

The project is assumed to be constructed in phases, depending upon funding. Each phase is anticipated to last approximately 8-12 weeks. Construction activities would include the removal of existing asphalt, curbs, concrete, and in some instances trees and vegetation. All construction material and equipment is to be staged within roadway rights of way or on City owned parcels. Construction activity is assumed to include the use of heavy-duty construction equipment including pavers, graders, backhoes, haul trucks, water trucks, and trenchers.

1.5 TIERING – GENERAL PLAN ENVIRONMENTAL IMPACT REPORT

Because CEQA discourages “repetitive discussions of the same issues” (CEQA Guidelines §15152(b)) and allows limiting discussion of a later project that is consistent with a prior plan to impacts which were not examined as significant effects in a prior EIR or to significant effects which could be reduced by revisions in the later project (CEQA Guidelines §15152(d)), no additional benefit to the environment or public purpose would be served by preparing an EIR merely to restate the analysis and the significant and unavoidable effects found to remain after adoption of all General

Plan policies/mitigation measures. All General Plan policies adopted as mitigation apply to the project analyzed herein.

The General Plan EIR reviewed potentially significant environmental effects resulting from plan implementation and developed measures and policies to mitigate impacts. The General Plan EIR identified significant impacts related to community services, transportation and circulation, air quality, and hazardous materials. Implementation of mitigation measures identified in the General Plan EIR reduced impacts to less-than-significant levels.

This environmental document tiers off of the General Plan EIR (SCH NO.: 97122023), which was certified on April 1998, to examine site-specific impacts of the proposed project, as described below. A copy of the City of Benicia's General Plan and EIR are available at the Community Development Department, 250 East L Street, Benicia, CA 94510, during normal business hours and online <http://www.ci.benicia.ca.us/generalplan>.

1.6 CONSULTATION WITH AGENCIES AND INTERESTED PARTIES

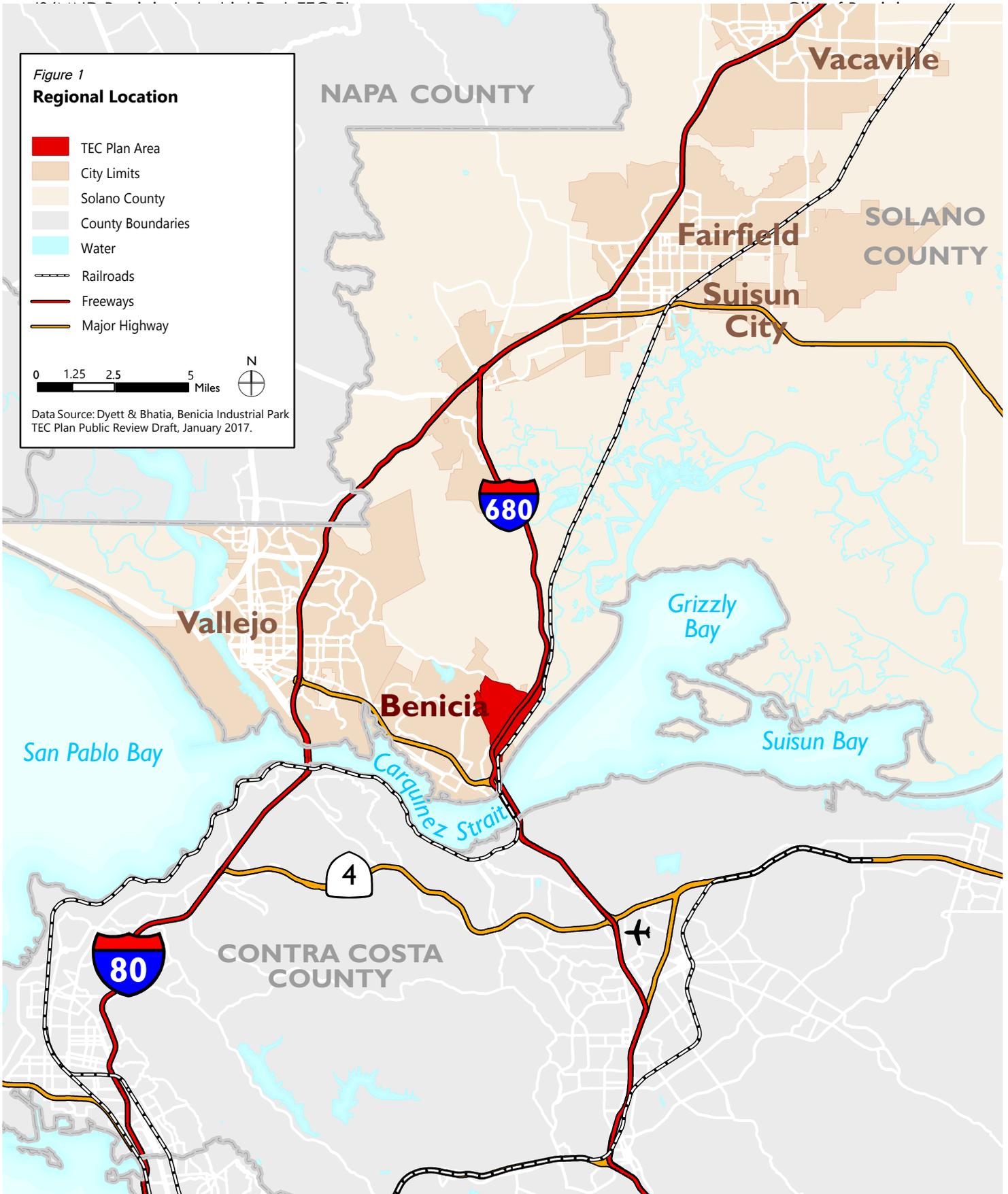
The following agencies and interested parties have been consulted regarding the proposed project:

- Solano Transportation Authority
- Benicia Industrial Park Association
- Lone Band of Miwok Indians
- Yocha Dehe Wintun Nation
- United Auburn Indian Community

1.7 APPROVALS FROM OTHER REGULATORY AGENCIES

The project may require approval from the following agencies:

- Caltrans for any encroachment, temporary or permanent, that may occur from the proposed TEC Plan.
- Public Utilities Commission for any encroachment, temporary or permanent, that may occur from the proposed TEC Plan.
- Regulatory agency approvals (401 certificate from RWQCB, 1600 Streambed Alteration Agreement, and or 404 Dredge and Fill Permit from Army Corps of Engineers) may be required for work within streams or jurisdictional waters.



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SOLANO COUNTY

Lake Herman

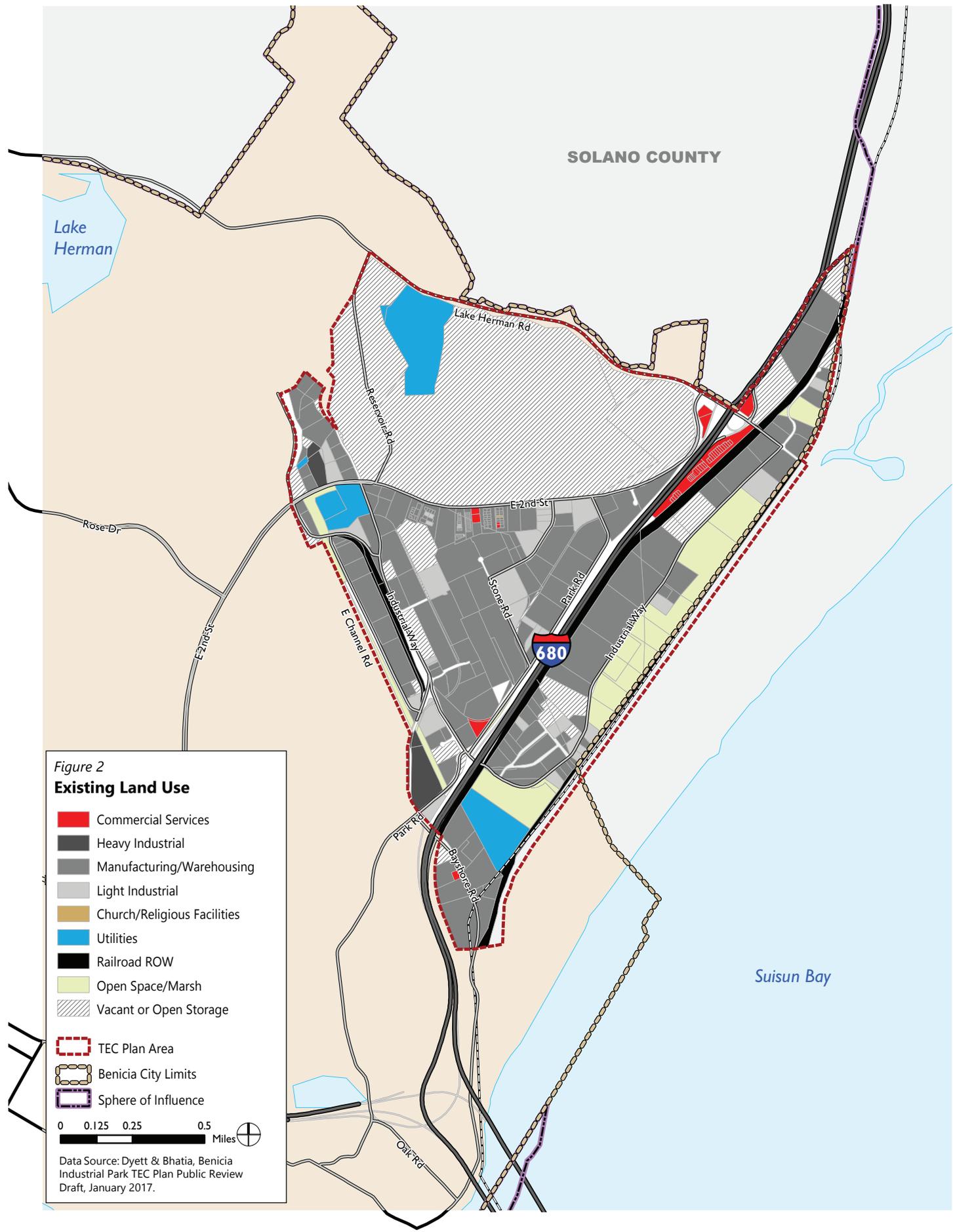
Suisun Bay

Figure 2
Existing Land Use

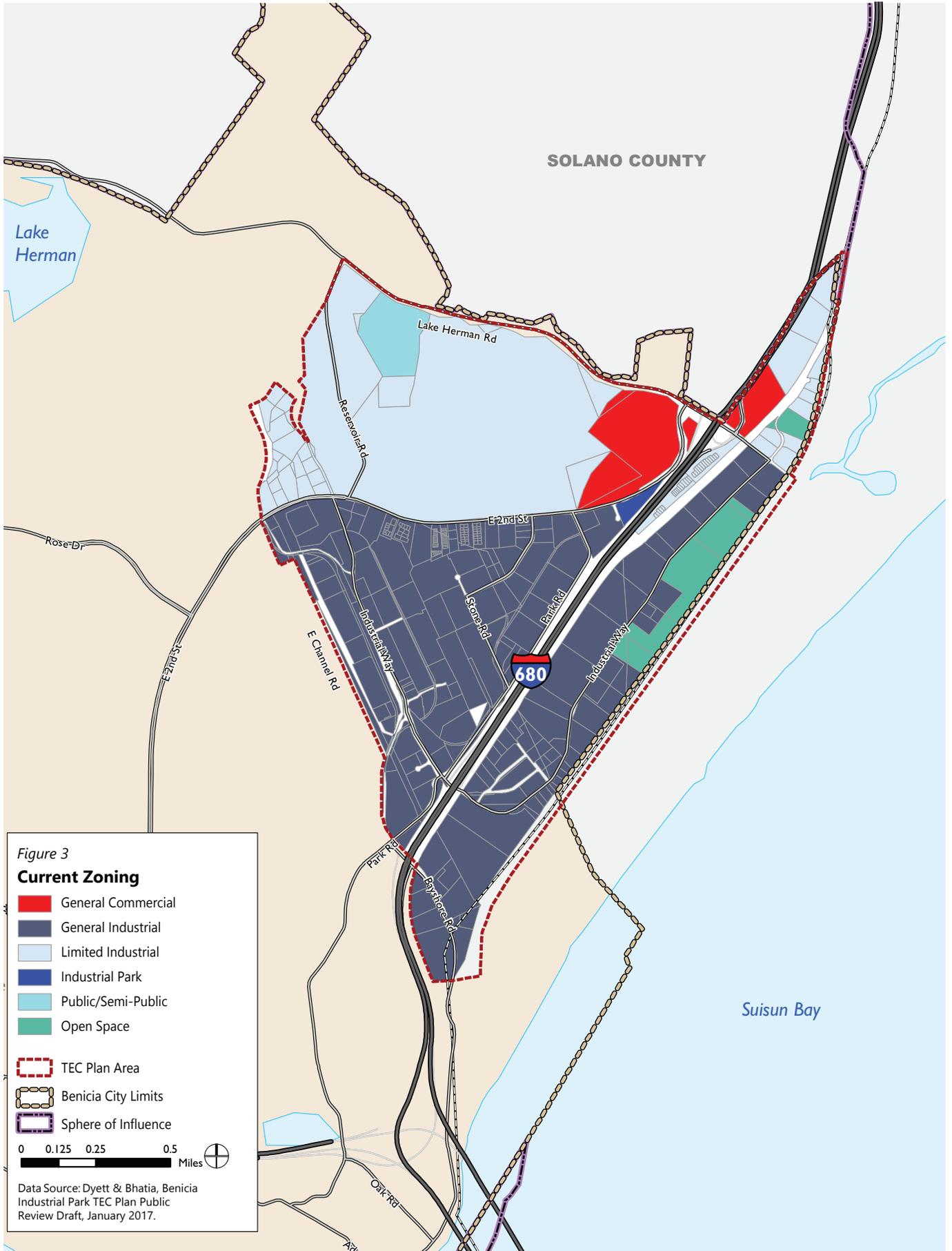
- Commercial Services
- Heavy Industrial
- Manufacturing/Warehousing
- Light Industrial
- Church/Religious Facilities
- Utilities
- Railroad ROW
- Open Space/Marsh
- Vacant or Open Storage
- TEC Plan Area
- Benicia City Limits
- Sphere of Influence

0 0.125 0.25 0.5 Miles

Data Source: Dyett & Bhatia, Benicia Industrial Park TEC Plan Public Review Draft, January 2017.



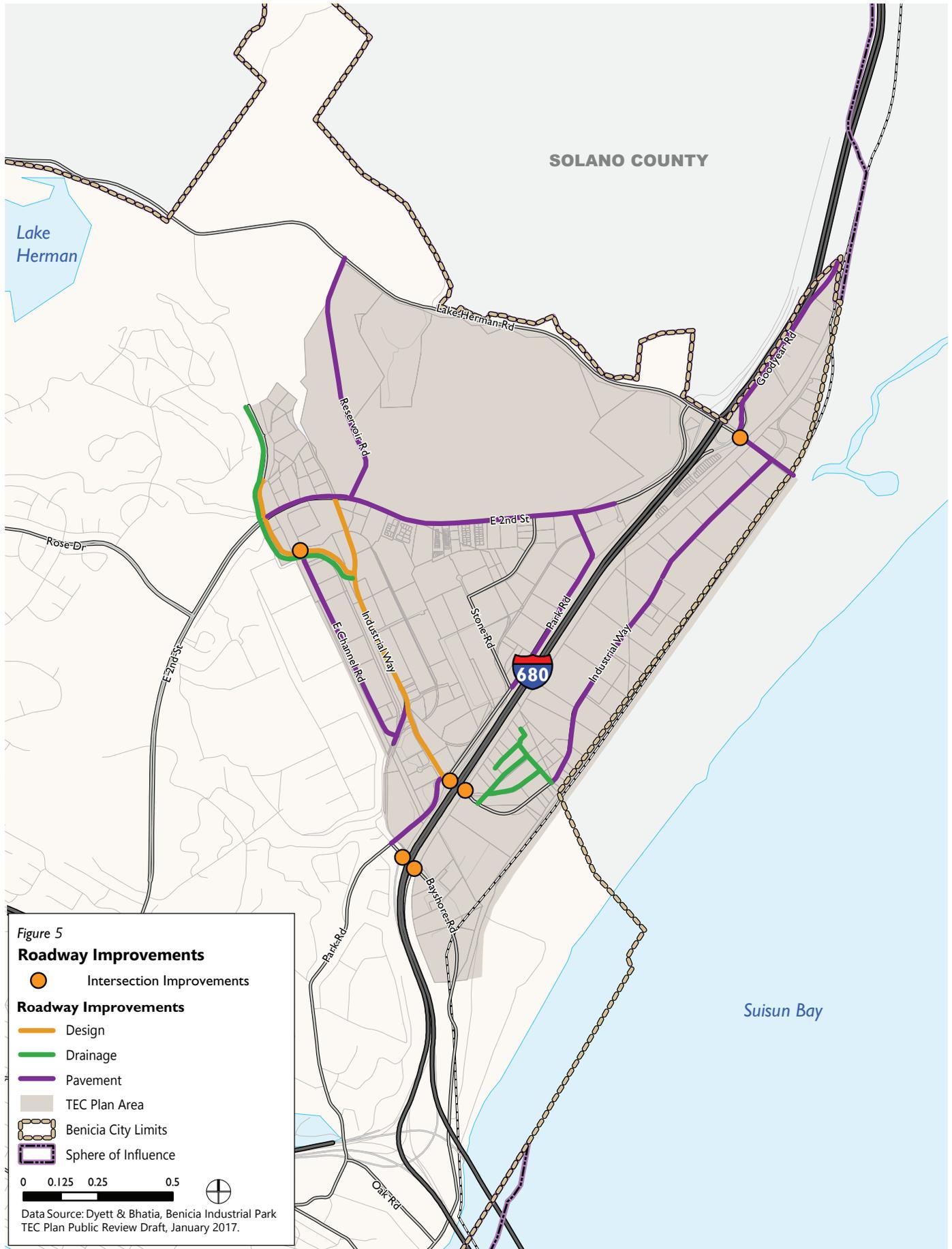
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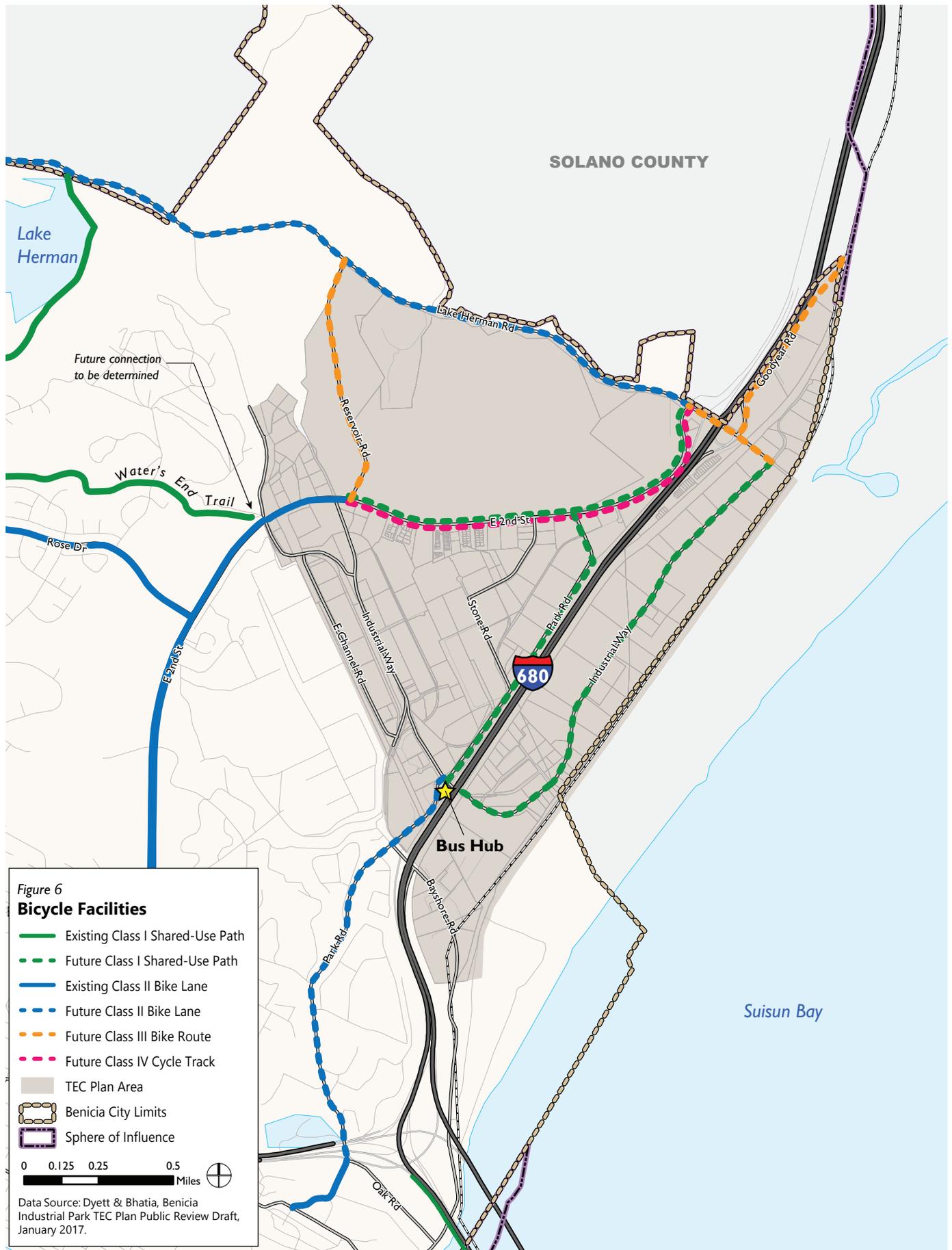
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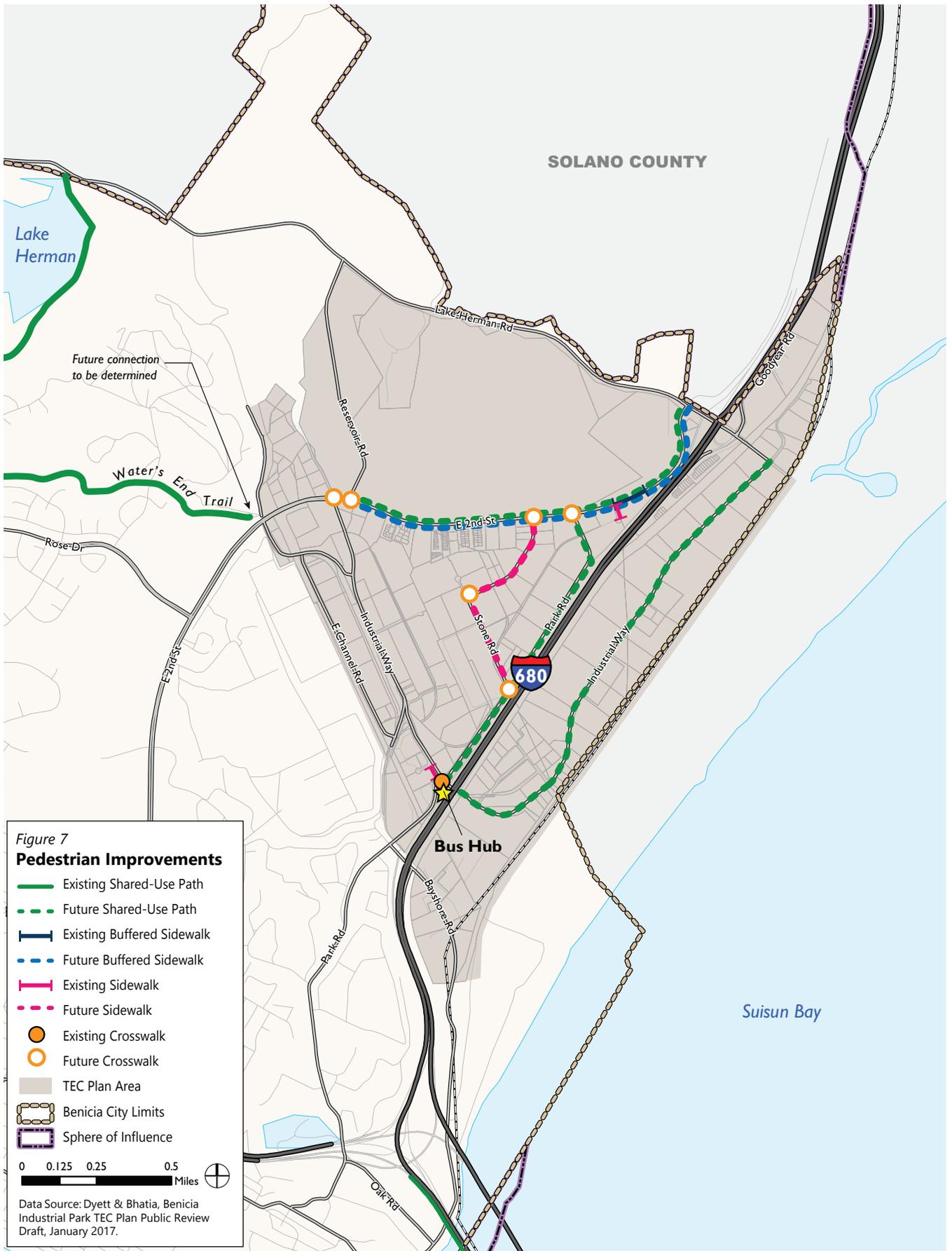
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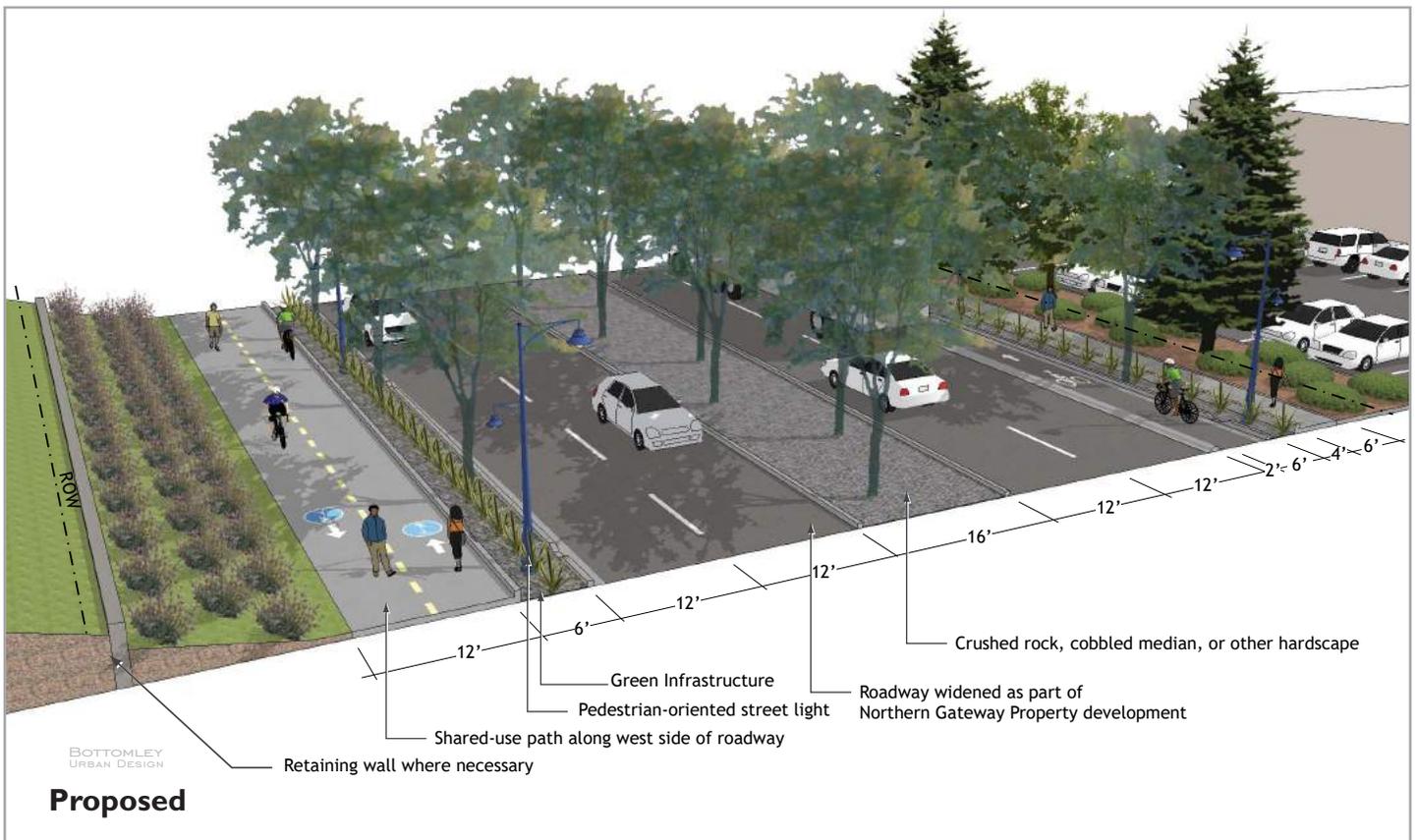
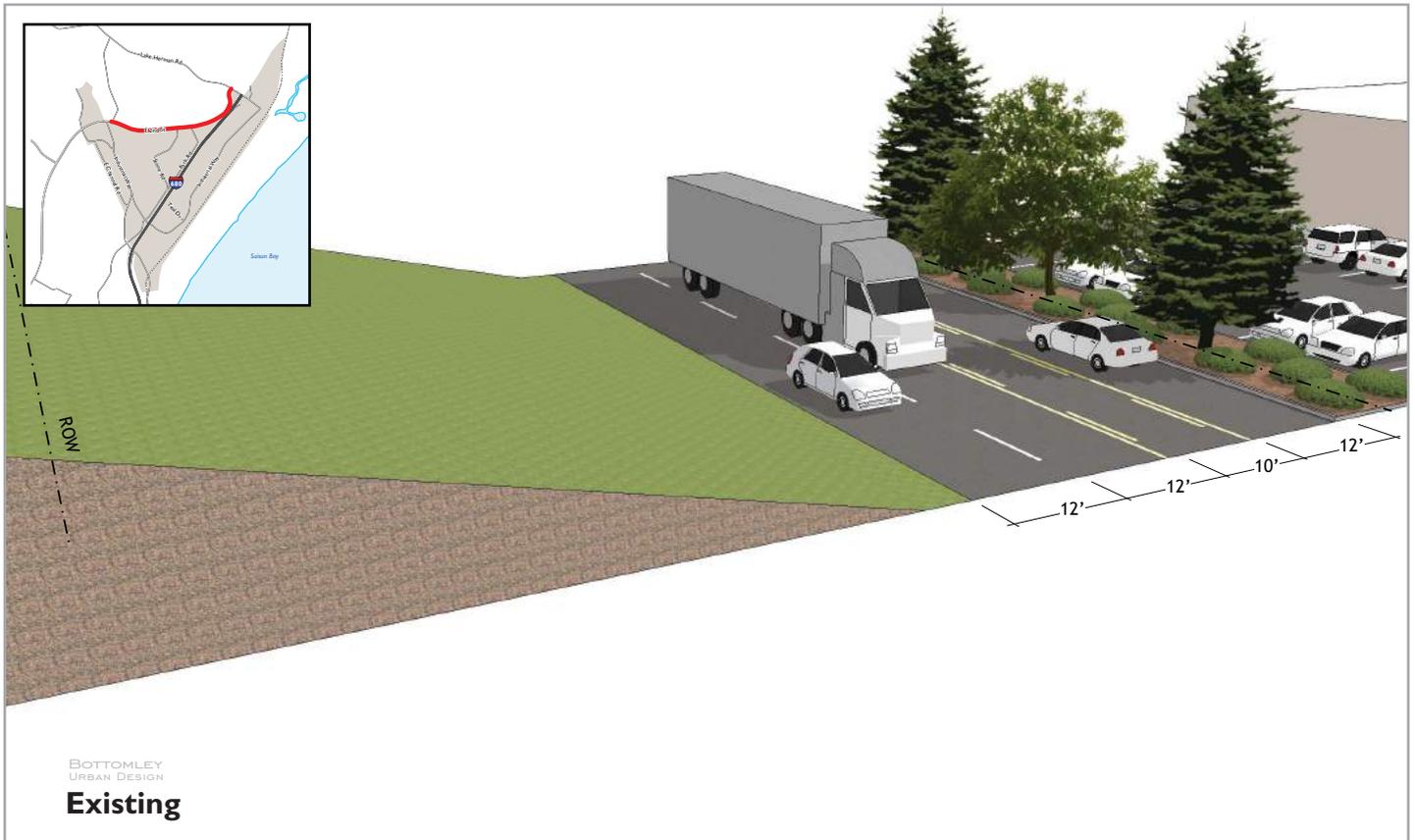
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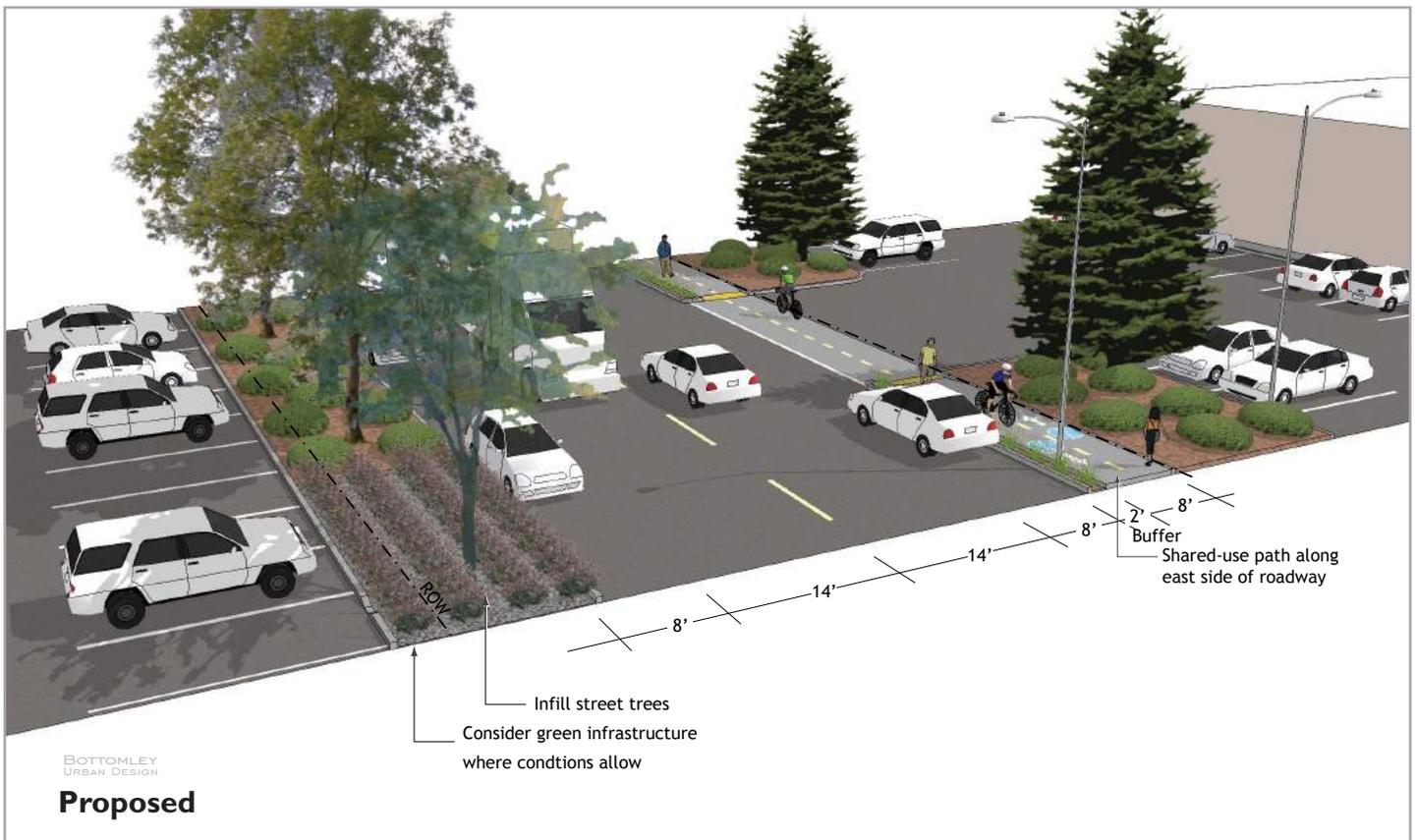
Figure 8:

East 2nd Street - Boulevard with Cycle Track, and Buffered Sidewalks, and Shared-Use Path



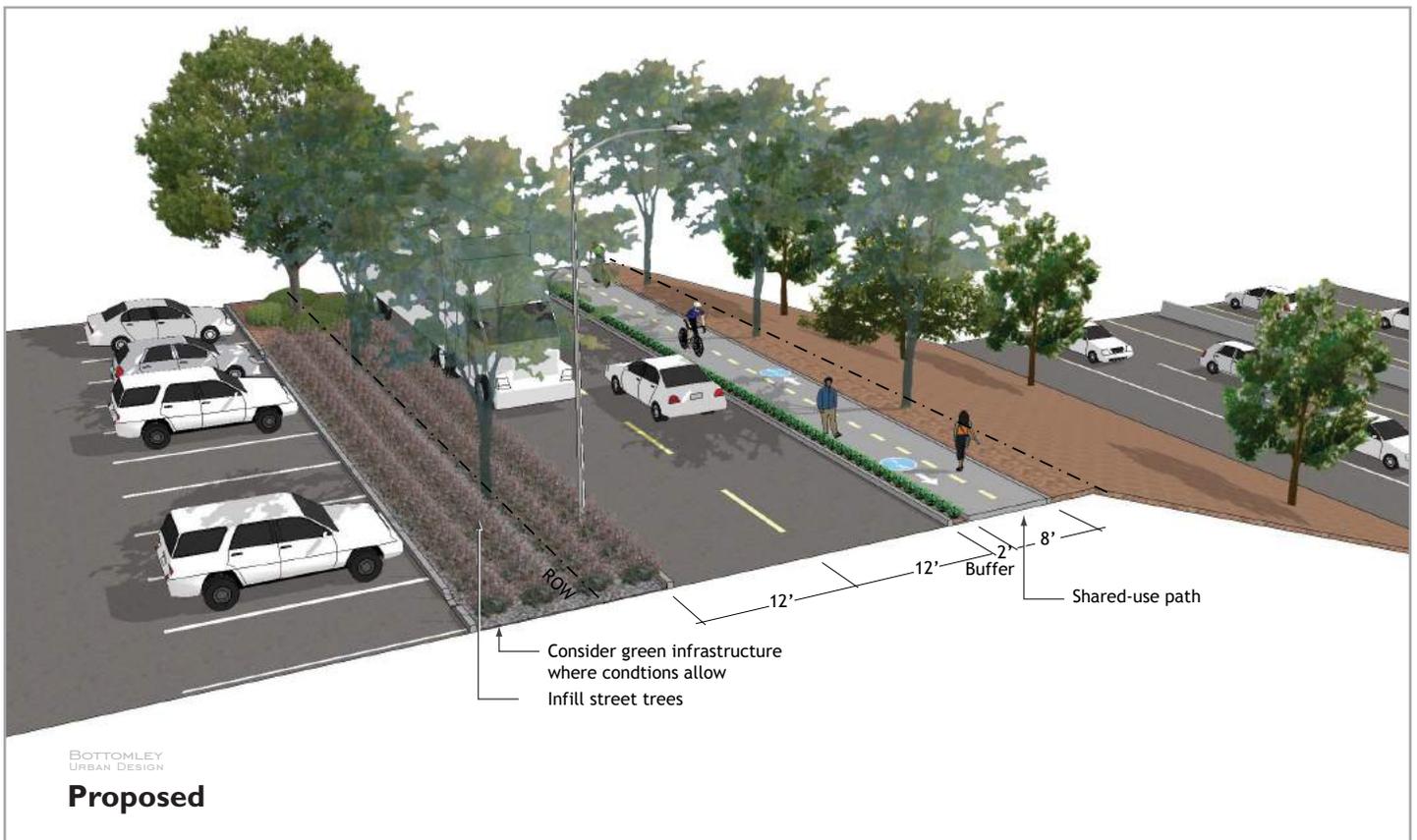
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Figure 9: Industrial Way - Shared-Use Path



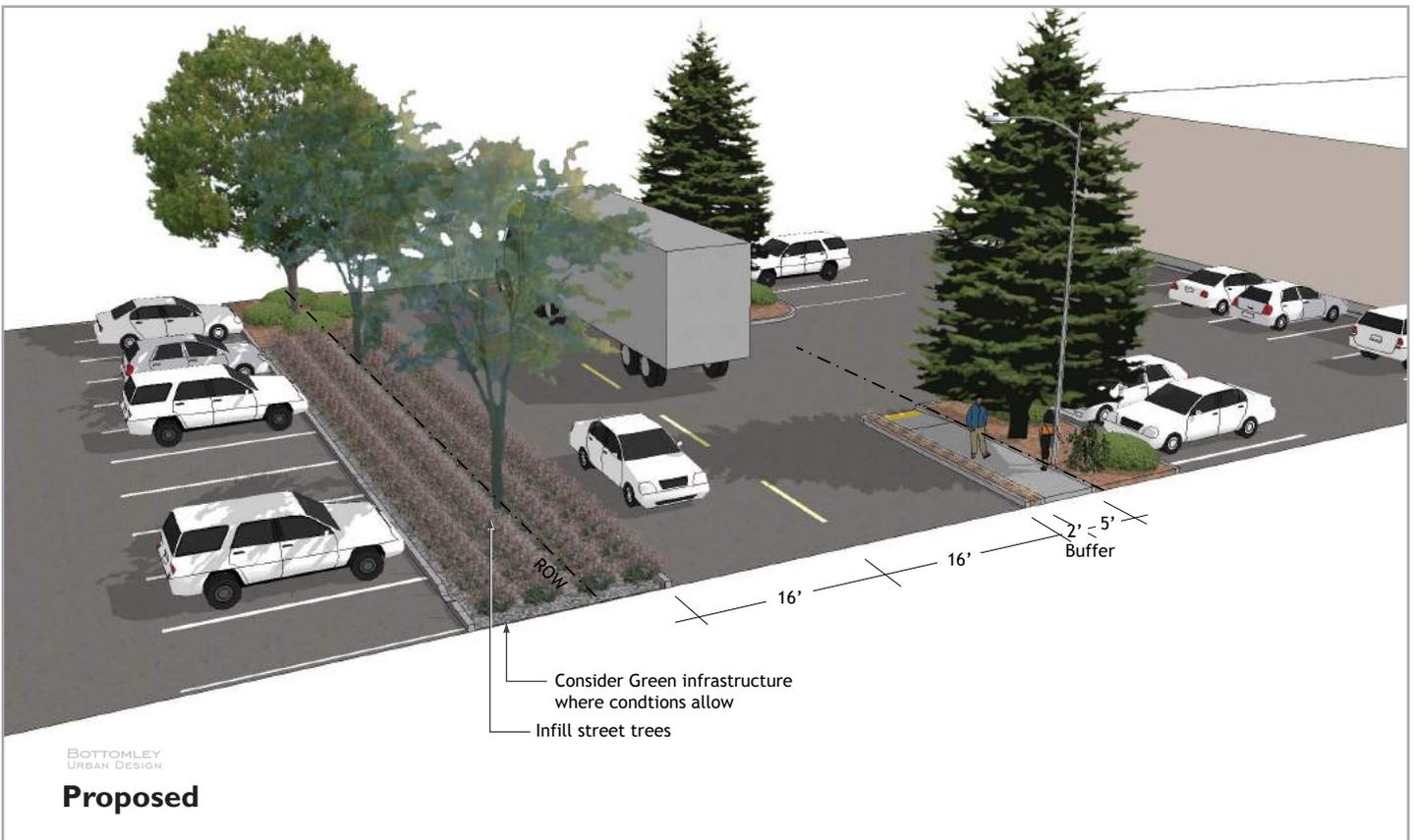
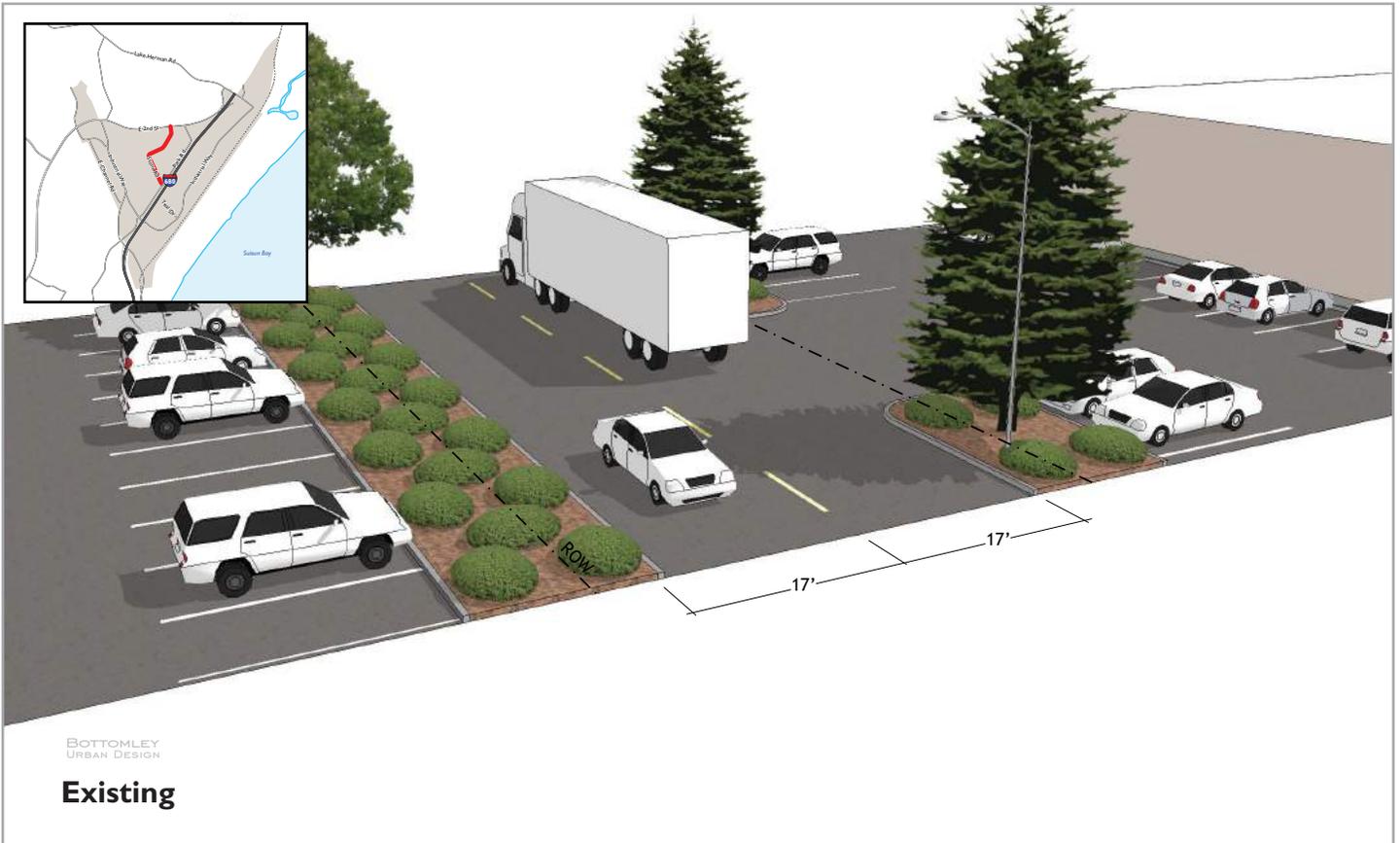
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Figure 10: Park Road - Shared-Use Path



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Figure 11: Stone Road - Sidewalk



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2 ENVIRONMENTAL FACTORS POTENTIALLY AFFECTED

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

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

3 DETERMINATION (TO BE COMPLETED BY THE LEAD AGENCY)

On the basis of this initial evaluation:

I find that the proposed project COULD NOT have a significant effect on the environment. A NEGATIVE DECLARATION will be prepared.	<input type="checkbox"/>
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.	<input checked="" type="checkbox"/>
I find that the proposed project MAY have a significant effect on the environment, and an ENVIRONMENTAL IMPACT REPORT is required.	<input type="checkbox"/>
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 attached sheets. An ENVIRONMENTAL IMPACT REPORT is required, but it must analyze only the effects that remain to be addressed.	<input type="checkbox"/>
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.	<input type="checkbox"/>

Graham Wadsworth
Lead Agency: Graham Wadsworth, Public Works Director

3/15/17
Date

4 EVALUATION OF ENVIRONMENTAL IMPACTS

- 1) A brief explanation is required for all answers except "No Impact" answers that are adequately supported by the information sources a lead agency cites in the parentheses following each question. A "No Impact" answer is adequately supported if the referenced information sources show that the impact simply does not apply to projects like the one involved (e.g., the project falls outside a fault rupture zone). A "No Impact" answer should be explained where it is based on project-specific factors as well as general standards (e.g., the project will not expose sensitive receptors to pollutants, based on a project-specific screening analysis).
- 2) All answers must take account of the whole action involved, including off-site as well as on-site, cumulative as well as project-level, indirect as well as direct, and construction as well as operational impacts.
- 3) Once the lead agency has determined that a particular physical impact may occur, then the checklist answers must indicate whether the impact is potentially significant, less than significant with mitigation, or less than significant. "Potentially Significant Impact" is appropriate if there is substantial evidence that an effect may be significant. If there are one or more "Potentially Significant Impact" entries when the determination is made, an EIR is required.
- 4) "Negative Declaration: Less Than Significant With Mitigation Incorporated" applies where the incorporation of mitigation measures has reduced an effect from "Potentially Significant Impact" to a "Less Than Significant Impact." The lead agency must describe the mitigation measures, and briefly explain how they reduce the effect to a less than significant level (mitigation measures from "Earlier Analyses," as described in (5) below, may be cross-referenced).
- 5) Earlier analyses may be used where, pursuant to the tiering, program EIR, or other CEQA process, an effect has been adequately analyzed in an earlier EIR or negative declaration. Section 15063(c)(3)(D). In this case, a brief discussion should identify the following:
 - a) Earlier Analysis Used. Identify and state where they are available for review.
 - b) Impacts Adequately Addressed. Identify which effects from the above checklist were within the scope of and adequately analyzed in an earlier document pursuant to applicable legal standards, and state whether such effects were addressed by mitigation measures based on the earlier analysis.
 - c) Mitigation Measures. For effects that are "Less than Significant with Mitigation Measures Incorporated," describe the mitigation measures which were incorporated or refined from the earlier document and the extent to which they address site-specific conditions for the project.
- 6) Lead agencies are encouraged to incorporate into the checklist references to information sources for potential impacts (e.g., general plans, zoning ordinances). Reference to a previously prepared or outside document should, where appropriate, include a reference to the page or pages where the statement is substantiated.
- 7) The explanation of each issue should identify:
 - a) the significance criteria or threshold, if any, used to evaluate each question; and
 - b) the mitigation measure identified, if any, to reduce the impact to less than significance.

4.1 AESTHETICS

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

Sources: Dyett & Bhatia, Benicia Industrial Park TEC Plan Public Review Draft, January 2017; City of Benicia General Plan, June 1999; California Scenic Highway Mapping System, accessed February 3, 2017; City of Benicia, Benicia Industrial Design Guidelines, Adopted by the Planning Commission March 10, 1989.

Aesthetics Setting

The City of Benicia is located in southwest Solano County, bordered by the Carquinez Strait to the south, Suisun Bay to the east, the Benicia State Park to the west, and Lake Herman Road to the north. Two major highways – I-780 and I-680, run along the southern and eastern side of the city and connect at the Benicia-Martinez Bridge. The City can be divided into three sections: south of I-780, north of I-780 (Southampton) and the Benicia Industrial Park. The area south of I-780 is the older part of the City, where a mix of residential, commercial, and service activities can be found. Southampton is occupied primarily by single family homes and condominiums. The Benicia Industrial Park hosts the majority of industrial, warehousing and distribution activities in the city.

The TEC Plan Area is located in the northeast portion of the City, bordered by Lake Herman Road, East Channel Road, and the City's eastern boundary. The TEC Plan Area can be broken down into two areas: (1) The vacant land north of East 2nd Street (commonly referred to as the "Northern Gateway Property," and (2) The developed land south of East 2nd Street, referred to herein as the "Industrial Park."

The City of Benicia General Plan identifies important views and vistas that define the City's community character. These include views of the Suisun Bay, surrounding hills, and of the City from various vantage points. Of the important views/vistas acknowledged in the General Plan, two have been identified atop the hills separating the Industrial Park area from the northern portion of the City from the

residential areas of Benicia, and look southeast over the industrial park toward Suisun Bay. Another vista point has been identified atop the hill adjacent to, and northeast of the TEC Plan Area. Lake Herman Road and I-680 (between the Benicia-Martinez Bridge and Morrow Lane) are identified as visual corridors and gateways to scenic resources. Key visual features visible from the identified scenic highways and vistas are identified in the General Plan, none of which reside in, nor are obstructed by any features in the TEC Plan Area. Policy 3.12.1 in the General Plan encourages attractive, quality development in industrial areas.

The TEC Plan includes improvements to roadways, bike, pedestrian, wayfinding, and streetscape facilities. For the most part, roadway improvements would be limited within existing rights of way. Given existing conditions within the TEC Plan area, implementation would serve to improve the visual character by upgrading streetscape striping, paving, pedestrian and bicycle facilities, landscaping and street lighting.

Existing sources of light and glare in the TEC Plan Area include wall-mounted lights on existing industrial and commercial businesses, street lights, headlights of passing vehicles, and headlight and street lights from I-680.

Aesthetics Impact Discussion

4.1 (a) (Scenic Vista) Less Than Significant Impact: The City of Benicia identifies several important views, vistas, and scenic corridors within its city limits. Another vista point has been identified atop the hill adjacent to, and northeast of the TEC Plan Area. Two important viewpoints are located atop the hills separating the Industrial Park from the residential areas of Benicia, and look southeast over the Industrial Park toward the Suisun Bay. While the TEC Plan Area is located over 0.75 miles from the two identified viewpoints and separated by the Valero Refinery, the TEC Plan Area may still be visible from these two viewpoints and from the viewpoint atop the hill adjacent to the northeast portion of the TEC Plan Area.

Lake Herman Road and I-680 (between the Benicia-Martinez Bridge and Morrow Lane) are identified as visual corridors and gateways to scenic resources. The TEC Plan Area is visible from both I-680 and Lake Herman Road.

Construction of the proposed improvements within the TEC Plan Area would result in short-term impacts to scenic resources. Construction activities would require the use of heavy equipment and storage of materials at construction sites. During construction, excavated areas, stockpiled soils, and other materials within the construction, easement and staging areas would be visible. However, these elements would be temporary during project construction and would not significantly impact the visual character of the area.

At buildout, the project would serve to enhance the visual appearance of the TEC Plan Area through the proposed improvements to roadways, bike, pedestrian, wayfinding, and streetscape facilities. Therefore, the project would not have a substantial adverse effect on a scenic vista, and the impact would be less than significant.

Mitigation Measures: None Required

4.1 (b) (Scenic Resources) No Impact: According to the California Scenic Highway Program, the nearby I-680 and I-780 are not designated scenic highways within Solano County, nor are they considered eligible to be officially designated. Development of the proposed project is not expected to substantially damage scenic resources including, but not limited to, trees, rock outcroppings, and historic buildings viewable from a designated (or eligible) State scenic highway. Therefore, no impacts will occur from implementation of the TEC Plan.

Mitigation Measures: None Required

4.1 (c) (Visual Character and Quality) Less Than Significant Impact: As discussed in the project setting, the TEC Plan Area contains industrial and commercial uses concentrated within the Industrial Park and a large amount of vacant land located between East 2nd Street and Lake Herman Road. The TEC Plan Area is surrounded by open space land uses to the north and east, open space and industrial land uses to the south, and industrial, open space, and residential land uses to the west.

The project would improve the visual character of the TEC Plan Area by improving poor pavement conditions on roadways; implementing bicycle improvements to complete the bicycle networks identified in the General Plan and the Solano County Bicycle Plan; providing new sidewalks and shared-use paths; and installing streetscape improvements, including landscaping, medians, street lighting and landscape lighting.

Policy 3.12.1 in the General Plan encourages additional attractive, quality development in industrial areas. The project would serve to improve the TEC Plan Area by repaving roadways and providing additional bike, pedestrian, wayfinding, and streetscape facilities. The project is consistent with policy 3.12.1 in the General Plan and would improve the visual character of the TEC Plan Area.

Adopted in 1989, the Benicia Industrial Design Guidelines establish general objectives and guidelines to create compatibility of future development within the Industrial Park. The TEC Plan Area is subject to these guidelines. Implementation of the TEC Plan is generally consistent with the guidelines in terms of landscape and exterior lighting.

Therefore, the project would not substantially degrade the visual character or quality of the site and its surroundings. No mitigation is required.

Mitigation Measures: None Required

4.1 (d) (Light and Glare) Less Than Significant Impact: The portion of the TEC Plan Area located south of East 2nd Street, referred to as the Industrial Park, is largely built-out and contains ambient light and glare that are typical of an urban environment. Surrounding industrial, commercial, and residential uses all currently feature site and street lighting.

Implementation of the TEC Plan would introduce new standard pole mounted street lighting. Additionally, outdated street lights may be retrofitted or replaced. Landscape lighting associated with medians, island and other focal areas may also be introduced. New lighting shall comply with the City of Benicia Municipal Code 17.74.170, which includes design standards that confine direct light rays to the site and set maximum illumination limits.

Glare may be reflected from the cars, buses, or trucks traveling through the TEC Plan Area. However, implementation of the TEC Plan is not anticipated to generate a substantial increase in traffic through the TEC Plan Area (see **Section 4.16 Transportation and Circulation**). Additionally, no new or expanded parking would be provided from implementation of the TEC Plan.

New lighting will marginally increase artificial light in the vicinity. The resulting glare experienced on I-680 would not substantially increase. Compliance with the City's lighting and glare standards would ensure that implementation of the TEC Plan would not create a new source of substantial light or glare which would adversely affect day or nighttime views in the area. Impacts would be less than significant and no mitigation is required.

Mitigation Measures: None Required

4.2 AGRICULTURAL AND FORESTRY RESOURCES

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

Sources: CA Department of Conservation, Farmland Mapping & Monitoring Program; City of Benicia General Plan, June 1999.

Agricultural and Forestry Resources Setting

Within the City boundaries, land available for agricultural use is limited to those designated as “General Open Space” in the General Plan, and corresponding to the “Open Space” designation in the Zoning Code. The TEC Plan Area does not include any properties under designations that would allow agricultural uses and no properties are being used for agricultural purposes.

According to the California Department of Conservation's Farmland Mapping and Monitoring Program, the TEC Plan Area is designated as Urban and Built-Up Land and Grazing Land. Lands surrounding the TEC Plan Area are designated as Urban and Built-Up Land, Grazing Land, and Other Land. The TEC Plan Area is not zoned for agricultural use, nor is it under a Williamson Act contract.

The area within the TEC Plan does not contain any stands of trees that would be considered forest lands. None of the land within the TEC Plan Area is zoned as forest land, timberland zone, or timberland zoned Timberland Production.

Agricultural and Forestry Resources Impact Discussion

4.2 (a-e) (Farmland Conversion, Williamson Act, Forestland, Timberland) No Impact:

There are no existing forest lands, important farmlands, agricultural resources or agricultural preserves located within the TEC Plan Area. No sites within the TEC Plan Area are classified as Prime Farmland, Unique Farmland, or Farmland of Statewide Importance, and no sites are under Williamson Act contracts. There are no forestlands, timberlands or such zoning in the TEC Plan Area or vicinity. Implementation of the TEC Plan would have no impacts to agricultural resources or forest uses, and would not result in the conversion of such lands. Therefore, implementation of the TEC Plan would have no impact to agricultural and forestry resources.

Mitigation Measures: None Required.

4.3 AIR QUALITY

Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
a) Conflict with or obstruct implementation of the applicable air quality plan	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Violate any air quality standard or contribute substantially to an existing or projected air quality violation?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c) Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is in non-attainment under an applicable federal or state ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors)?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d) Exposure of sensitive receptors to substantial pollutant concentrations?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
e) Create objectionable odors affecting a substantial number of people?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Sources: City of Benicia General Plan, June 1999; Bay Area Air Quality Management District Bay Area 2010 Clean Air Plan; Bay Area Air Quality Management District, CEQA Guidelines, May 2010; Dyett & Bhatia, Benicia Industrial Park TEC Plan Public Review Draft, January 2017.

Air Quality Setting

The City of Benicia is located within the San Francisco Bay Area Air Basin, which is regulated by the Bay Area Air Quality Management District (BAAQMD). Air quality within the Bay Area Air Basin is affected by natural geographical and meteorological conditions as well as human activities such as construction and development, operation of vehicles, industry and manufacturing, and other anthropogenic emission sources. The Federal Clean Air Act and the California Clean Air Act establish national and state ambient air quality standards. The BAAQMD is responsible for planning, implementing, and enforcing air quality standards within the Bay Area Air Basin including the City of Benicia.

The BAAQMD operates several air quality monitoring stations. Located approximately 8 miles from City of Benicia, the Vallejo station records pollutant concentration levels for carbon monoxide (CO), Oxides of Nitrogen (NO_x), Ozone (O₃), Sulfur Dioxide (SO₂), and Particulate Matter (PM_{2.5}).

The Bay Area Air Basin is designated as a non-attainment area for both the one-hour and eight-hour state ozone standards; 0.09 parts per million (ppm) and 0.070 ppm, respectively. The Bay Area Air Basin is also in non-attainment for the PM₁₀ and PM_{2.5} state standards, which require an annual arithmetic mean (AAM) of less than 20

$\mu\text{g}/\text{m}^3$ for PM_{10} and less than $12 \mu\text{g}/\text{m}^3$ for $\text{PM}_{2.5}$. In addition, the Basin is designated as non-attainment for the national 24-hour fine particulate matter ($\text{PM}_{2.5}$) standard and will be required to prepare a State Implementation Plan (SIP) for $\text{PM}_{2.5}$. All other national ambient air quality standards within the Bay Area Air Basin are in attainment.

This Initial Study applies the BAAQMD's California Environmental Quality Act – Air Quality Guidelines, May 2012, including the BAAQMD thresholds of significance adopted in June 2010. In March 2012, the Alameda County Superior Court ordered BAAQMD to set aside use of the significance thresholds within the BAAQMD CEQA Guidelines until they complete an assessment of the environmental effects of the thresholds in accordance with CEQA. The Court found that the thresholds, themselves, constitute a “project” for which environmental review is required.

Lead agencies may continue to rely on the BAAQMD CEQA Guidelines, “for assistance in calculating air pollution emissions, obtaining information regarding the health impacts of air pollutants, and identifying potential mitigation measures.” The BAAQMD CEQA Guidelines include the best available scientific data and most conservative thresholds available for comparison of the Project's emissions against these thresholds provides a conservative assessment as the basis for a determination of significance.

In the absence of other applicable thresholds, the City of Benicia, as lead agency, has chosen to utilize the June 2010 BAAQMD thresholds and May 2011 Guidelines as a means to conservatively assess the potential environmental effects from implementation of the TEC Plan. Thresholds of significance for construction and operation from the BAAQMD CEQA Air Quality Guidelines are provided in **Table 3: Air Quality Thresholds of Significance** below.

Table 3: Air Quality Thresholds of Significance

Pollutant	Construction Thresholds (Lbs. per day)	Operational Threshold (Lbs. per day)
ROG	54	54
NO_x	54	54
PM_{10}	82	82
$\text{PM}_{2.5}$	54	54
CO	Not Applicable	9.0 ppm (8-hour avg.) 20.0 ppm (1-hour avg.)
Fugitive Dust	Construction Dust Ordinance or other Best Management Practices	Not Applicable

Source: BAAQMD's CEQA Guidelines: May 2011

Air Quality Impact Discussion

4.3 (a) (Air Quality Plan Conflict) Less Than Significant Impact: The BAAQMD adopted the Bay Area 2010 Clean Air Plan (CAP) in September 2010 to comply with state air quality planning requirements set forth in the California Health & Safety Code. The 2010 CAP serves to update the 2005 Ozone Strategy and provides control strategies to address air quality pollutants including ozone (O₃), Particulate Matter (PM), toxic air contaminants (TACs), and greenhouse gases (GHGs). Control strategies apply to the topics of land use, energy and climate, and stationary, transportation, mobile sources. Examples of programmatic measures that implement the control strategies include the use of clean and efficient vehicles, Green Fleets, enhanced bicycle and pedestrian access, energy efficiency, and others.

The Bay Area 2010 CAP land use and growth projection assumptions were based on those used in the Benicia General Plan. The TEC Plan does not alter any of the land use and development intensity assumed by the General Plan. Rather, the TEC Plan sets forth a means to provide multi-modal transit opportunities consistent with the Clean Air Plan. Therefore, the Project will not conflict with or obstruct implementation of the Bay Area 2010 Clean Air Plan and impacts would be less than significant.

Mitigation Measures: None Required

4.3 (b-c) (Air Quality Standards and Criteria Pollutants) Less Than Significant Impact with Mitigation:

Construction Emissions

Construction of the proposed roadway, pedestrian, bike, and streetscape facilities will generate air quality emissions through the use of heavy-duty construction equipment, haul truck trips, and vehicle trips generated by construction workers traveling to and from the proposed project site. In addition, fugitive dust or particulate matter emissions would result from excavation and other construction activities. Mobile source emissions would result from the use of construction equipment such as bulldozers, cranes, and excavators. Construction emission concentrations can vary from day to day, depending on the level of activity, the specific type of operation, and the prevailing weather conditions.

The BAAQMD developed screening criteria to help lead agencies determine whether a proposed project could result in potentially significant air quality impacts. If a proposed project is found to fall beneath the applicable screening criteria, then the lead agency would not need to perform a detailed air quality assessment of their

project's air pollutant emissions, as emissions are assumed to be less than significant.

While roadway, pedestrian, bike, and streetscape improvements are not specifically included as land use types in the screening criteria, implementation of the TEC Plan would be far less intensive than the screening examples included in Table 3-1 of the BAAQMD CEQA Guidelines, such as residential developments (up to 325 single family units), office buildings (up to 346,000 square feet in area), and supermarkets (up to 42,000 square feet in area). As construction of the TEC Plan will be limited to linear roadway improvements, repaving, striping and landscaping, air quality emissions will be minimal. As such, implementation of the TEC Plan falls beneath the screening criteria described in the BAAQMD guidelines and daily air quality emissions would be below the BAAQMD significance thresholds.

Nonetheless, some of the construction activities, particularly during site preparation and grading, would temporarily generate fugitive dust in the form of PM10 and PM2.5. Sources of fugitive dust would include disturbed soils and trucks carrying uncovered loads of soils. Vehicles leaving the site could deposit dirt or mud on local streets, which could become an additional source of airborne dust. Since the Basin is already in non-attainment for these pollutants, contributions from the project could result in potentially significant impacts if not properly controlled.

The BAAQMD CEQA Air Quality Guidelines consider contributions of fugitive dust to be less-than-significant if best management practices (BMPs) are implemented to reduce these emissions. **Mitigation Measure AIR-1**, which provides for a variety of dust control measures during construction activities including watering disturbed areas, covering haul loads, and sweeping daily, will reduce the potential air quality impacts from fugitive dust to levels below significance. With the implementation of **Mitigation Measure AIR-1**, (BAAQMD-recommended best management practices) the project will have less than significant impacts to air quality.

Mitigation Measure:

AIR-1. The City shall require the construction contractor(s) to implement a dust abatement program that includes, but is not necessarily limited to, the following BAAQMD-recommended measures as needed to control dust:

- Water all active construction areas at least twice a day.
- Cover all trucks hauling soil, sand, and other loose materials or require all trucks to maintain at least two feet of freeboard.
- Pave, apply water three times daily, or apply (non-toxic) soil stabilizers on all unpaved access roads, parking areas, exposed stockpiles, and staging areas at construction sites.
- Sweep daily (with water or vacuum sweepers) all paved access roads,

parking areas, and staging areas at construction sites.

- Sweep streets daily (with water or vacuum sweepers) if visible soil material is carried onto adjacent public streets.

Operational Emissions

Implementation of the TEC Plan would result in improvements to roadways, pedestrian, bike, and streetscape facilities. Operational emissions specific to implementation of the TEC Plan would be related to automobile, truck, and bus traffic within the TEC Plan Area. Typically, the increase in traffic volumes would have to be in the magnitude of thousands of additional vehicles per hour in order for a substantial increase in criteria air pollutants (specifically, carbon monoxide) to occur. Implementation of the TEC Plan is not anticipated to generate a substantial increase in traffic through the Plan Area (see **Section 4.16 Transportation and Circulation**). Therefore, the vehicle emissions associated with the project are too small to contribute substantially to an existing or projected air quality violation.

Implementation of the TEC Plan would encourage the installation of electric vehicle (EV) charging stations in the Industrial Park. This includes clarifying electric vehicle parking references in the municipal code, requiring a percentage of parking for new development to be allocated for electric vehicle charging, and providing business owners with information on financial assistance for EV charging stations.

The extension of infrastructure for bicycle and pedestrian travel as set forth in the TEC Plan would reduce reliance on automobile travel, thereby reducing long-term vehicle emissions. Therefore, operational impacts from implementation of the TEC Plan would be less than significant and no mitigation is required.

Mitigation Measures: None Required.

4.3 (d) (Sensitive Receptors) Less Than Significant Impact: The TEC Plan Area does not have existing residential uses or other sensitive receptors. The nearest residential uses are located approximately 300 feet west of West Channel Road. The zoning closest to existing residential uses is Limited Industrial, which is intended to provide a buffer between heavy industrial uses and places where people currently live. The TEC Plan does not alter the zoning or land use, and it does not otherwise change exposure levels to sensitive receptors. Therefore impacts to sensitive receptors would be less than significant and no mitigation is required

Mitigation Measures: None required

4.3 (e) (Odors) Less Than Significant Impact: As a roadway, pedestrian, and bike facility improvement project, implementation of the TEC Plan will not create objectionable odors affecting a substantial number of people. Although there may be occasional odors during construction associated with diesel powered equipment, street paving, and striping, these are short term in duration and will cease once construction is complete. Therefore, the project will have less than significant impacts to air quality due to objectionable odors.

Mitigation Measures: None required

4.4 BIOLOGICAL RESOURCES

Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation	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 (Formerly Fish and Game) or U.S. Fish and Wildlife Service?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the California Department of Fish and Wildlife (formerly Fish and Game) or U.S. Fish and Wildlife Service?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c) Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d) Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
f) Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Sources: City of Benicia General Plan, June 1999; Dyett & Bhatia, Benicia Industrial Park TEC Plan Public Review Draft, January 2017; LSA Associates, Inc., Benicia Business Park EIR, December 2007; U.S. Fish and Wildlife Service National Wetlands Inventory, <https://www.fws.gov/wetlands/data/Mapper.html>, Accessed February 9, 2017.

Biological Resources Setting

Biological resources are protected by statute including the Federal Endangered Species Act (FESA), the California Endangered Species Act (CESA), and the Clean Water Act (CWA). The Migratory Bird Treaty Act (MBTA) affords protection to

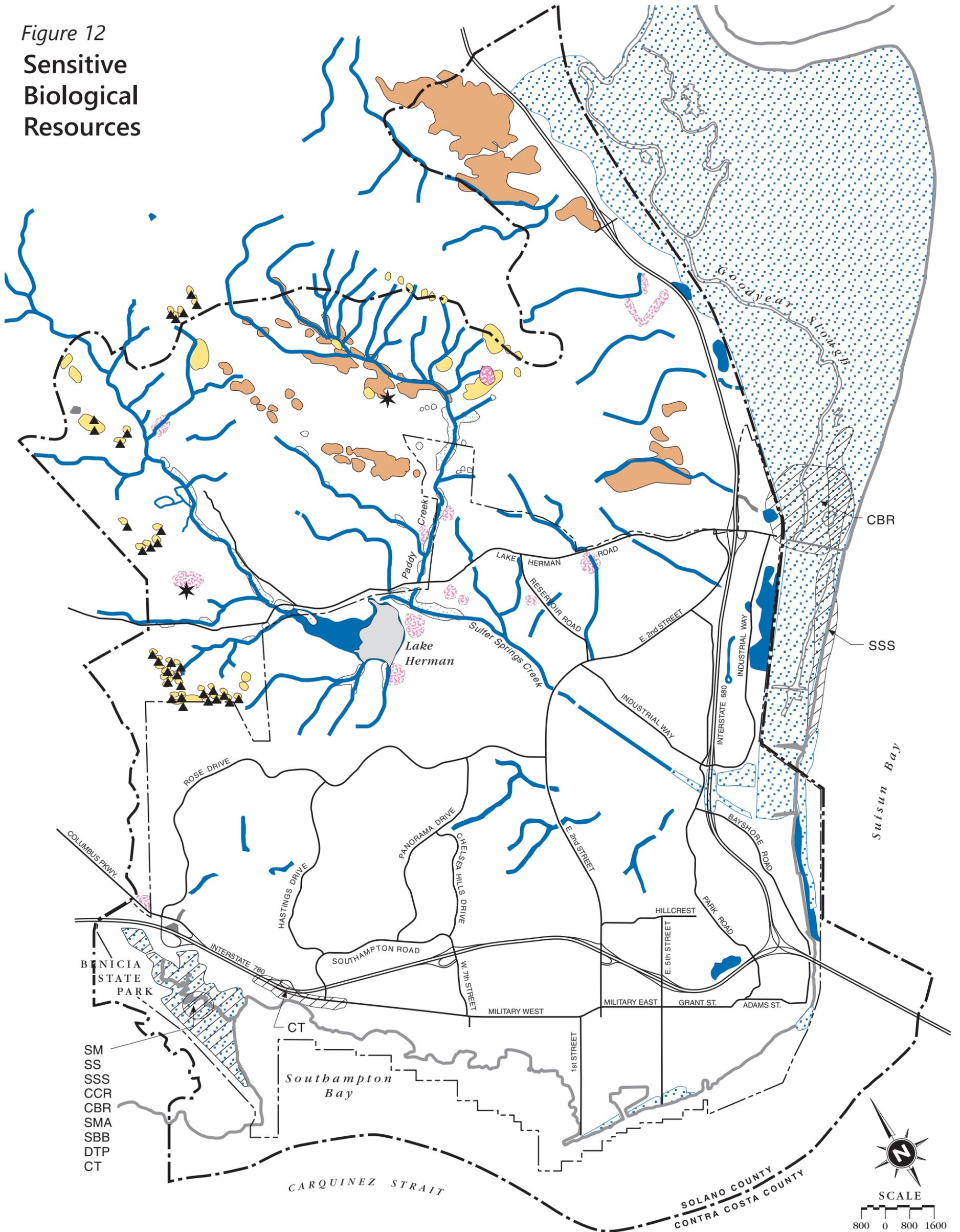
migratory bird species including birds of prey. These regulations provide the legal protection for plant and animal species of concern and their habitat.

As reported in the General Plan, biotic resources within the Benicia Planning Area include plant life, wildlife, special status species, and water bodies. As shown on **Figure 12: Sensitive Biological Resources** (Figure 3-3 of the General Plan), the sensitive biological resources found within the TEC Plan Area include the following: Palustrine/Riverine (Streams, Channels, Ponds, Lakes); Estuarine (Tidal Marshland, Mudflats); and Eucalyptus Grove. The General Plan has policies that call for preservation of habitat for special-status species, protection of native vegetation and habitats, and protection/enhancement of wetlands.

Based on a review of the California Natural Diversity Database (CNDDDB), the following plant species and habitats could be present in the TEC Plan Area:

- Carquinez goldenbush (*Isocoma arguta*) is not listed as rare, threatened, or endangered. It is located on both sides of the Carquinez straits, within Solano and Contra Costa counties. The plant's occurrence is based on a site name mentioned in Munz's 1968 "A California Flora and Supplement."
- Coastal brackish marsh is not listed as rare, threatened, or endangered. This habitat was last observed in 1986 along the east edge Morrow Island, the west edge of southern part of Joice Island, and along Suisun bay. According to the General Plan, coastal brackish marsh is mapped as being located adjacent to, and also within the TEC Plan Area in the vicinity of I-680, Sulphur Springs Creek, and Industrial Way (see **Figure 12: Sensitive Biological Resources**).
- Saline clover (*Trifolium hydrophilum*) is not listed as rare, threatened, or endangered. It was last observed in 1928 along the I-680 corridor and unlikely to be present today.
- Suisun marsh aster (*Symphotrichum lentum*) is not listed as rare, threatened, or endangered. As shown in **Figure 12: Sensitive Biological Resources**, the Suisun marsh aster is mapped as being located within Benicia State Park, which is over 2.5 miles southwest of the TEC Plan Area. However, based on a review of the CNDDDB, the Suisun marsh aster was last observed in a 2006 survey along Goodyear Slough, approximately 1.2 miles south of Bahia, and along both sides of Southern Pacific railroad tracks. According to the CNDDDB map, the Suisun marsh aster could occur within Goodyear Slough, approximately 250 feet southeast of the intersection of Lake Herman Road and the Southern Pacific railroad tracks (which is also the boundary line of the TEC Plan).

Figure 12
Sensitive
Biological
Resources



LEGEND	
Planning Area Boundary	
City Limits	
Sensitive Natural Communities/Unique Vegetation	
	Marshland/Northern Coastal Salt Marsh/Coastal Brackish Marsh
	Coast Live Oak Woodland
	Valley Needlegrass Grassland
	Riparian (Willow Riparian Forest/Willow Scrub)
	Golden Violet Population (Callipe Silverspot Host Plant)
	Eucalyptus Grove (Raptor Roosting & Nesting Substrate)
Wetlands/Other Waters	
	Palustrine/Riverine (Streams, Channels, Ponds, Lakes)
	Estuarine (Tidal Marshland, Mudflats)
Special Status Species Occurrences	
	Callipe Silverspot Butterfly Sighting
	Golden Eagle Nest Location
	General Occurrence Records in Suitable Habitat - Generalized areas where the indicated species have been recorded as occurring
SM	Salt Marsh Harvest Mouse
SS	Suisun Shrew
SSS	Suisun Song Sparrow
CCR	California Clapper Rail
CBR	California Black Rail
SMA	Suisun Marsh Aster
SBB	Soft Bird's-Beak
DTP	Delta Tule Pea
CT	Congdon's Tar Plant (Note: There is a strong likelihood that this area has been mapped by the CNDDB in an inaccurate location.)

Data Source: City of Benicia
General Plan, June 1999

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- Delta tule pea (*Lathyrus jepsonii* var. *jepsonii*) is not listed as rare, threatened, or endangered. As shown in **Figure 12: Sensitive Biological Resources**, the Delta tule pea is mapped as being located within Benicia State Park, which is over 2.5 miles southwest of the TEC Plan Area. However, based on a review of the CNDDDB, the Delta tule pea was last observed in a 1992 survey at the south end of Goodyear Slough, between I-680 and Suisun Bay. According to the CNDDDB map, the Delta tule pea could occur within Goodyear Slough, approximately 250 feet southeast of the intersection of Lake Herman Road and the Southern Pacific railroad tracks (which is also the boundary line of the TEC Plan).

Based on a review of the CNDDDB, the following wildlife species could be present in the TEC Plan Area:

- Callippe silverspot butterfly (*Speyeria callippe callippe*) is federally listed as endangered. It is found in the Cordelia hills between Vallejo and Cordelia, and is considered one of two existing populations that the U.S. Fish & Wildlife Service recognizes. Populations were found near St. John Mine (northeast of the City of Vallejo) and King Ranch in 1980, were observed during a 2006 survey, and were observed at the King and Swett Ranch area (southwestern corner of Solano County, north of the City of Benicia) in 2009. As shown in **Figure 12: Sensitive Biological Resources**, the nearest Callippe silverspot butterfly spotting is mapped as being located almost two miles west of the TEC Plan Area.
- California clapper rail (*Rallus longirostris obsoletus*) is federally listed and state-listed as endangered. As shown in **Figure 12: Sensitive Biological Resources**, the nearest California clapper rail is mapped as being located within Benicia State Park, which is over 2.5 miles southwest of the TEC Plan Area. However, based on a review of the CNDDDB, the California clapper rail was located in 1991-1994 at the south end of Goodyear Slough and its habitat consists of marsh. According to the CNDDDB map, the California clapper rail could occur within Goodyear Slough, approximately 250 feet southeast of the intersection of Lake Herman Road and the Southern Pacific railroad tracks (which is also the boundary line of the TEC Plan).
- California black rail (*Laterallus jamaicensis coturniculus*) is state-listed as threatened. It was observed in 2004 within Goodyear Slough. The California black rail is mapped as being located adjacent to, and within the TEC Plan Area, near the intersection of Lake Herman Road and Industrial Way (see **Figure 12: Sensitive Biological Resources**). According to the CNDDDB map, the California black rail could occur within Goodyear Slough, approximately 250 feet southeast of the intersection of Lake Herman Road and the Southern Pacific railroad tracks (which is also the boundary line of the TEC Plan).
- Saltmarsh common yellowthroat (*Geothlypis trichas sinuosa*) is not listed as

rare, threatened, or endangered. It was observed in 2004 within Goodyear Slough and Bahia. Its habitat consists of coastal salt marsh. According to the CNDDDB map, the Saltmarsh common yellowthroat could occur within Goodyear Slough, approximately 250 feet southeast of the intersection of Lake Herman Road and the Southern Pacific railroad tracks (which is also the boundary line of the TEC Plan).

- Alameda whipsnake (*Masticophis lateralis euryxanthus*) is federally listed and state-listed as threatened. It is found in northeast facing slopes with scrub community dominated by coyote brush. It was last observed in 2002.
- American peregrine falcon (*Falco peregrinus anatum*) is not listed as rare, threatened, or endangered; it was delisted.
- Suisun song sparrow (*Melospiza melodia maxillaris*) is not listed as rare, threatened, or endangered. It was last observed in 1986 at Morrow Island, the southern part of Joice Island, and the mouth of Sulphur Springs Valley. As shown in **Figure 12: Sensitive Biological Resources**, the Suisun song sparrow is mapped as being located approximately 1,200 feet east of the TEC Plan Area, adjacent to Suisun Bay.
- Salt marsh harvest mouse (*Reithrodontomys raviventris*) is federally listed and state-listed as endangered. As shown in **Figure 12: Sensitive Biological Resources**, the nearest Salt marsh harvest mouse is mapped as being located within Benicia State Park, which is over 2.5 miles southwest of the TEC Plan Area. However, based on a review of the CNDDDB, the Salt marsh harvest mouse was last observed in 2007 on either side of the Southern Pacific railroad, just southeast of I-680 at Lake Herman Road. It is threatened by invasive species originating from the industrial area to west. According to the CNDDDB map, the Salt marsh harvest mouse could occur within the coastal brackish marsh adjacent to the TEC Plan Area.
- Longfin smelt (*Spirinchus thaleichthys*) is federally listed as a candidate species and state-listed as threatened. It was last observed in 2008 in lower Suisun Slough (south of Roos cut) and within Goodyear Slough. The Suisun Marsh provides breeding and rearing habitat. According to the CNDDDB map, the Longfin smelt could occur within Goodyear Slough, approximately 250 feet southeast of the intersection of Lake Herman Road and the Southern Pacific railroad tracks (which is also the boundary line of the TEC Plan)
- Sacramento splittail (*Pogonichthys macrolepidotus*) is not listed as rare, threatened, or endangered. It was last observed within Goodyear Slough, just east of the Southern Pacific railroad tracks, along the western boundary of Morrow Island, and within Suisun Marsh. According to the CNDDDB map, the Sacramento splittail could occur within Goodyear Slough, approximately 250 feet southeast of the intersection of Lake Herman Road and the Southern

Pacific railroad tracks (which is also the boundary line of the TEC Plan).

The City of Benicia has adopted a Tree Ordinance (Ordinance No. 08-03) that regulates the removal, alteration, and planting of certain trees. The ordinance requires a Tree Removal Permit from the Parks and Community Services Director for removing, trimming, or altering all trees with a diameter of 12 inches or more at 48 inches above the ground. The Director of Parks and Community Service shall authorize the planting, maintenance and removal of trees in any planting strip, planting easement, public way or place in the city. When considering tree removals, the Parks and Community Services Director will consider General Plan open space or other City open space plans and policies. The Community Development Director or designee shall review all tree protection conditions related to actions requiring City Planning Commission, Historic Preservation Review Commission or Council approval, in consultation with a City arborist, and make recommendations to the decision-making bodies.

The City of Benicia has adopted a Stream Setback Ordinance. The City's Zoning Ordinance, Section 17.70.340 requires that all development be set back at least 25 feet from the top of the bank of seasonal and perennial streams and ravines.

The Solano Multi-Species Habitat Conservation Plan (HCP) covers portions of Solano County. The City of Benicia is not a participant in the HCP and the TEC Plan Area is not within an area covered by the HCP.

The TEC Plan Area is located in the northeast portion of the City, bordered by Lake Herman Road, East Channel Road, and the City's eastern boundary. The TEC Plan Area can be broken down into two areas: (1) The vacant land north of East 2nd Street (commonly referred to as the "Northern Gateway Property," and (2) The developed land south of East 2nd Street, referred to herein as the "Benicia Industrial Park" or "Industrial Park" (see **Figure 4: TEC Plan Area**).

The north area of the TEC Plan area is comprised of a large amount of vacant land located between East 2nd Street and Lake Herman Road, commonly referred to as the "Northern Gateway property." The majority of the vacant land is dominated by non-native grassland. Wetland features consist of coastal/valley freshwater marsh and coastal riparian scrub that are located primarily along several intermittent streams and swales. Some reaches of these streams are not vegetated (non-wetland waters of the United States). Water from these streams flows into Suisun Bay. Woody vegetation is limited and consists of individuals and small stands of introduced and native trees and native shrubs.

The southern area of the TEC Plan is the existing Industrial Park, generally located south of East 2nd Street to the border of the TEC Plan Area. This area is largely built out and hosts the majority of industrial, warehousing and distribution activities in the City.

Biological Resources Impact Discussion

4.4 (a) (Special Status Species) Less Than Significant Impact with Mitigation: As described above, the TEC Plan Area may support 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 (CDFW) or U.S. Fish and Wildlife Service (USFWS). As stated in the Project Description, implementation of the TEC Plan would include improvements to roadways, bike, pedestrian, wayfinding, and streetscape facilities. For the most part, roadway improvements would be limited within existing rights of way.

Of the plant species identified from a review of the CNDDDB, the Suisun marsh aster (*Symphyotrichum lentum*) and Delta tule pea (*Lathyrus jepsonii* var. *jepsonii*) have the potential to occur in the vicinity of the TEC Plan Area. Both plant species were observed along Goodyear Slough, approximately 250 feet southeast of the intersection of Lake Herman Road and the Southern Pacific railroad tracks (which is also the boundary line of the TEC Plan). Neither plant is listed as rare, threatened, or endangered. Improvements along Lake Herman Road in the vicinity of Goodyear Slough would be limited to pavement maintenance within existing rights of way. Therefore, the potential to impact the Suisun marsh aster and Delta tule pea from implementation of the TEC Plan would be less than significant.

Of the wildlife species identified from a review of the CNDDDB, the following have the potential to occur in the vicinity of the TEC Plan Area: California clapper rail (*Rallus longirostris obsoletus*), California black rail (*Laterallus jamaicensis coturniculus*), Saltmarsh common yellowthroat (*Geothlypis trichas sinuosa*), Suisun song sparrow (*Melospiza melodia maxillaris*), Salt marsh harvest mouse (*Reithrodontomys raviventris*), Longfin smelt (*Spirinchus thaleichthys*), and Sacramento splittail (*Pogonichthys macrolepidotus*).

The Salt marsh harvest mouse was observed in the coastal brackish marsh adjacent to the TEC Plan Area. The Longfin smelt and Sacramento splittail were observed within Goodyear Slough, approximately 250 feet southeast of the intersection of Lake Herman Road and the Southern Pacific railroad tracks (which is also the boundary line of the TEC Plan). Improvements along Lake Herman Road in the vicinity of the coastal brackish marsh and Goodyear Slough would be limited to pavement maintenance within existing rights of way. Therefore, impacts to the Salt marsh harvest mouse, the Longfin smelt, or the Sacramento splittail from implementation of the TEC Plan are not anticipated. However, to ensure that construction activities avoid direct impacts to riparian, wetland, or coastal brackish marsh habitats, which provide habitat for sensitive species, **Mitigation Measure BIO-1**, as described below, shall be implemented. With measure BIO-1 exclusion fencing would clearly delineate the limits of construction activities and provide a buffer to ensure that sensitive habitats are protected.

Construction activities have the potential to impact protected bird species, including the California clapper rail, the California black rail, the Suisun song sparrow, the Saltmarsh common yellowthroat, and birds protected under the MBTA. Trees and shrubs in the TEC Plan Area have the potential to support protected nesting birds. If protected bird species are nesting within the TEC Plan Area or nearby vicinity, construction activities could result in short-term impacts such as failure to breed, nest abandonment, reduced fecundity, and decreased survivorship from noise and movement of personnel and construction equipment. To avoid impacts to nesting protected birds, construction-related activities should occur during the non-nesting season (September 1 – January 31) to the extent practicable. However, if construction activities must occur during the nesting season, the removal of vegetation during the breeding season is considered a potentially significant impact. Implementation of **Mitigation Measure BIO-2** would reduce potential impacts to nesting protected birds to a less-than-significant level.

Mitigation Measures:

- BIO-1. Temporary orange exclusion fencing shall be installed between the construction site and any riparian, wetland, or coastal brackish marsh habitat for the duration of site preparation and construction activities in order to prevent inadvertent disturbance during project related activities. Following completion of construction activities, the exclusionary fencing shall be removed.
- BIO-2. If tree removal, pruning, or grubbing activities are necessary, such activities should be conducted during the non-nesting season (September 1- January 31) to avoid impacts to nesting birds. If work is conducted at this time, pre-construction surveys will not be necessary.

If project construction begins during the breeding season (February 1 – August 31), preconstruction surveys shall be conducted for the proposed project area and adjacent habitats up to 300 feet from the proposed project boundary (survey area). Surveys shall be conducted by a qualified biologist no more than 72 hours prior to equipment or material staging, pruning/grubbing or surface-disturbing activities. The surveys shall entail a variety of search techniques, including incidental flushing of an adult from the nest, watching parental behavior (e.g., carrying nest material or food), systematically searching nesting substrates, and use of call-broadcasts. If work is conducted in stages, additional nesting bird surveys shall be conducted within 72 hours prior to work in the new areas. Therefore, if 72 hours has passed since the original survey and additional pruning/grubbing, staging, or surface-disturbing activities will occur, another survey must be conducted. If no active nests are found within the survey area, no further mitigation is necessary.

If active nests (i.e. nests with eggs or young present) are found within the survey area, non-disturbance buffers shall be established at a distance sufficient to minimize disturbance based on the nest location, topography, cover, the nesting pair's tolerance to disturbance, and the type/duration of potential disturbance. No work shall occur within the non-disturbance buffers until the young have fledged as determined by a qualified biologist. Buffer size shall be determined in cooperation with CDFW and USFWS Migratory Bird Permit Office. If buffers are established and it is determined that project activities are resulting in nest disturbance, work shall cease immediately and CDFW and USFWS Migratory Bird Permit Office shall be contacted for further guidance.

4.4 (b,c) (Riparian, Sensitive Natural Community, Wetlands) Less Than Significant Impact: According to the USFWS National Wetlands Inventory, wetland areas exist alongside the Suisun Bay, along Sulphur Springs Creek, adjacent to Industrial Way, and along other drainages, which are primarily located within the undeveloped land between East 2nd Street and Lake Herman Road. As stated above, coastal brackish marsh is mapped as being located adjacent to, and also within the TEC Plan Area in the vicinity of I-680, Sulphur Springs Creek, and Industrial Way.

Construction activities would primarily be limited within existing roadways and would not involve the removal, filling, or other direct disturbances of riparian, wetland, or coastal brackish marsh habitats. However, there is the potential for construction activities to indirectly impact riparian, wetland, or coastal brackish marsh habitats. As discussed in **Section 4.9 Hydrology and Water Quality**, compliance with the required elements of the National Pollutant Discharge Elimination System (NPDES) permit and Storm Water Pollution Prevention Plan (SWPPP) would ensure that the physical and biological integrity of the riparian, wetland, and coastal brackish marsh habitats are sustained. To ensure that construction activities avoid direct impacts to riparian, wetland, or coastal brackish marsh habitats, **Mitigation Measure BIO-1**, as described above, shall be implemented. With measure BIO-1, exclusion fencing would clearly delineate the limits of construction activities and provide a buffer to ensure that sensitive habitats are protected.

The TEC Plan identifies roadway widening for the following roadway segments: Industrial Way (from East 2nd Street to the I-680 northbound on-ramp), West Channel Road (from Industrial Way to Channel Court), and I-780 at East 2nd Street. Depending on the ultimate design and extent of roadway widening these improvements could result in a direct impact to nearby sensitive habitat including potential wetland features. In the future when roadway alignment is proposed, the design will be reviewed for consistency with the General Plan and TEC Plan policies to ensure that sensitive biological resources are avoided. In the event that such features cannot be avoided, then improvements that require widening beyond limits of existing rights of way and outside of areas of previous disturbance, will be

subject to subsequent environmental review including survey of biological resources and wetland delineation as warranted.

At this time, TEC Plan roadway widening limits can not be reasonably determined and for the purposes of this analysis it is presumed that all improvements will occur within existing rights of way and immediately contiguous areas that have been previously disturbed. As such, the TEC Plan would have less than significant impacts to riparian, sensitive natural communities and wetlands. Implementation of BIO-1 and BIO-2 as set forth above will ensure that potential impacts to sensitive habitat and communities will be avoided. Therefore potential impacts due to implementation of the TEC Plan will be less than significant levels.

Mitigation Measures: None required.

4.4 (d) (Wildlife/Fish Movement & Nursery) Less Than Significant Impact: The nearest fish populations are located within Goodyear Slough, approximately 250 feet southeast of the TEC Plan Area. The majority of the TEC Plan Area is developed with roadways, industrial uses, and commercial uses. There is no evidence of migratory wildlife corridors or nursery sites on or near the developed portion of the TEC Plan Area. The large amount of vacant land located between East 2nd Street and Lake Herman Road could serve as a wildlife movement corridor, as it contains creeks and is bordered by undeveloped land to the north.

Implementation of the TEC Plan, which would include roadway, pedestrian, bike, wayfinding, and streetscape improvements that would mostly be limited within existing rights of way, will not substantially interfere with the movement of fish or other wildlife species including migrating species. Therefore, the project will have less than significant impacts to wildlife corridors and species movements.

Mitigation Measures: None required.

4.4 (e) (Tree Preservation) Less Than Significant Impact with Mitigation: The City of Benicia regulates the removal, alteration, and planting of protected trees through its Tree Ordinance (Ordinance No. 08-03). Protected trees include the following:

- All city property trees over 8 inches in diameter
- Street trees over 8 inches in diameter
- All heritage trees
- All designated protected trees
- All other trees over 12 inches in diameter
- California native trees that have a trunk diameter of 8 inches. Trees in this category include: blue oak, live oak, valley/white oak, willow, buckeye, box

elder, California bay, and black walnut.

In accordance with the City of Benicia's Tree Ordinance, the pruning, cutting, girdling, poisoning, or any other action causing or aiding in the death or disfigurement of a protected tree is prohibited without a tree removal or pruning permit. Removal of or damage to protected trees would be considered a significant impact.

Although the proposed TEC Plan improvements would mostly be located within existing rights of way, it is possible that the trees could be pruned or removed as a result of implementation of the TEC Plan. In order to ensure that potential impacts to protected trees are avoided, minimized or offset, the City shall adhere to requirements of the Tree Preservation Ordinance. **Mitigation Measure BIO-3** shall be implemented and requires a pre-construction assessment for protected trees, an evaluation for avoidance/minimization, and/or preparation of a tree replacement plan, if applicable. Measure BIO-3 would ensure that potential impacts to protected trees are reduced to less-than-significant levels by minimizing direct impacts, and offsetting losses through replanting.

Mitigation Measure:

BIO-3. Prior to the commencement of construction activities, an arborist or botanist shall assess trees within the proposed project area and immediately adjacent area to determine whether or not they qualify as protected trees per the City of Benicia's Tree Ordinance. If the trees are determined not to be subject to the ordinance, no further mitigation is necessary.

Prior to the commencement of construction activities, an arborist or botanist shall assess potential impacts to identified protected trees within and adjacent to the proposed project area, including staging areas and access routes. If feasible, the proposed project footprint shall be modified to avoid the root zone and identify the boundary of tree protection zone of protected trees and a Tree Protection Plan shall be prepared. In the event that a protected tree cannot be avoided, then prior to the commencement of construction activities, the City shall prepare a tree replacement plan that fulfills requirements of the City of Benicia's Tree Ordinance.

During construction, the contractor shall implement work per the terms of the Tree Protection Plan and/or Tree Replanting Plan, and shall coordinate with the Parks and Community Services Director or designee, as needed, to ensure that all provisions of the City's Tree Ordinance are implemented.

4.4 (f) (Habitat Conservation Plan) No Impact: The Solano Multi-Species Habitat Conservation Plan (HCP) covers portions of Solano County. The City of Benicia is not a participant in the HCP and the TEC Plan Area is not within an area covered by the HCP. No impact would result under this criterion.

Mitigation Measures: None required.

4.5 CULTURAL RESOURCES

Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
a) Cause a substantial adverse change in the significance of a historical resource as defined in § 15064.5?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to § 15064.5?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d) Disturb any human remains, including those interred outside of formal cemeteries?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Sources: University of California Museum of Paleontology, Miocene Mammal Mapping Project (MioMap), <http://www.ucmp.berkeley.edu/miomap/>, Accessed January 18, 2017; LSA Associates, Inc., Benicia Business Park EIR, December 2007; LSA Associates, Inc., Benicia Business Park EIR Addendum, April 2008; Circlepoint, Benicia Industrial Bus Hub Project, December 2013; Environmental Science Associates, Valero Benicia Crude by Rail Project, June 2014; RMC, Benicia Water Reuse Project, September 2016.

Cultural Resources Setting

The TEC Plan Area is located on the northern bank of the Carquinez Strait. The strait represents the entry point for the Sacramento and San Joaquin Rivers into the San Francisco Bay. The City of Benicia lies within both the San Francisco Bay and the west end of the Central Valley archaeological regions, and both contain a rich array of prehistoric and historic-period cultural resources. In particular, the areas surrounding the Carquinez Strait and Suisun Bay have been occupied for millennia given its abundant combination of littoral and oak woodland resources.

The TEC Plan Area is comprised of established industrial uses, commercial uses and undeveloped land. The portions of the project site adjacent to I-680 are located on flat land that was within marshland until the late 1950s. At that time, the marshland area was artificially filled with between five and twenty feet of bay mud to increase the amount of buildable land in Benicia. The portion of the TEC Plan area between I-680 and East 2nd Street is mostly developed with industrial and commercial uses. The portion of the project site between East 2nd Street and Lake Herman Road is an undeveloped upland area underlain by four geologic units: the Panoche Formation; Domengine Sandstone; Older Alluvium; and Younger Alluvium.

A paleontological resources search performed using the University of California Museum of Paleontology's (UCMP) Miocene Mammal Mapping Project (MioMap) indicated no previous finds of paleontological resources on or in the immediate vicinity of the TEC Plan Area. According to the MioMap database, the closest paleontological find is located approximately 6 miles southeast of the TEC Plan Area between Concord and Suisun Bay.

A number of records searches and field surveys have been conducted for projects in the vicinity of the TEC Plan Area. As described below, one site is located within the TEC Plan Area and is considered eligible for listing in the California Register of Historical Resources (CRHR) and meets the definition of an historical resource under PRC §21084.1.

Benicia Business Park Project

The Benicia Business Park Project is located within the TEC Plan Area. LSA Associates, Inc. conducted a records search in 2005 and Ric Windmiller conducted a records search in 2006. No recorded cultural resources were identified in the project area by either records search.

LSA archaeologists and Ric Windmiller conducted field surveys of the project area in 2005 and 2006. The field surveys identified a total of 14 cultural resources in the project area, consisting of abandoned ranch buildings, former ranch building locations, debris scatters, numerous depressions, a sand mine pit, rock alignments, several dams, a eucalyptus grove, and a dairy ranch district.

Based on evaluation of the resources, one of the cultural resources identified in the project area qualifies as a historical resource under CEQA. The resource consists of two depressions, a scatter of historical archaeological materials, and corresponds to the location of a house depicted on the 1898 Karquines United States Geological Survey (USGS) quadrangle. Based on archival map research and field observations, the site appears to represent the remnants of a single household occupation rather than several households over time. Historical land ownership maps suggest that the house shown on the 1898 Karquines USGS quadrangle was on land owned by a William Johns. Because the site appears to represent a "single phase" of occupation, it has the potential to contain archaeological deposits associated with Johns' occupancy. The site is considered eligible for listing in the CRHR and meets the definition of a historical resource as defined by CEQA (PRC §21084.1).

None of the archaeological or architectural elements of the other 13 cultural resources identified possess the significance or integrity necessary for listing in the CRHR and are not considered historical or archaeological resources under CEQA.

Benicia Industrial Bus Hub Project

A records search was conducted in 2013 for the Benicia Industrial Bus Hub Project, which is located within the TEC Plan Area. No recorded historic-period archaeological resources or buildings or structures 45 years or older were identified within the project area. The project area was identified as having a low potential to encounter unrecorded Native American resources because the cultural resources in this part of Solano County have been found on the banks and mid-slope terraces above seasonal and perennial waterways, along trending ridgelines and generally within Holocene-age landforms.

Valero Benicia Crude by Rail Project

Environmental Science Associates conducted a records search in 2013 for the Valero Benicia Crude by Rail Project, which is located adjacent to and west of the TEC Plan Area. The records search indicated that no previously recorded archaeological resources had been identified within the Valero Benicia Crude by Rail project site or within the half-mile records search radius. The nearest known recorded architectural resource was the Benicia Arsenal Igloo Bunker #C-425 (designated as P-48-000516). The structure was previously recommended not eligible for listing in the CRHR or the National Register of Historical Places (NRHP).

Benicia Water Reuse Project

Basin Research Associates conducted a records search and field survey in 2016 for the Benicia Water Reuse Project, which is located west of the TEC Plan Area. In addition to the Benicia Arsenal Igloo Bunker #C-425 identified for the Valero Benicia Crude by Rail Project, one NRHP-listed property and two California Historical Landmarks (CHL) were identified as being located within 0.5 mile of the water reuse project site (approximately 0.5 mile west of the TEC Plan Area):

- A portion of the NRHP-listed “Benicia Arsenal, Benicia Barracks” is within 0.5 mile of the project site.
- The Benicia Arsenal is also California Historic Landmark No. 176 with the marker located at the main gate of the Port of Benicia at the intersection of Adams and Jefferson streets.
- The Benicia Arsenal District (P-48-001572) consists of four discontinuous districts that are located east of the project site in the vicinity of Pine Lake.
- The site of the Former Benicia Barracks (P-48-001573) is CHL No. 177, and the marker for the site is located at 711 Hillcrest Avenue.

Consultation Under AB 52

In accordance with AB 52 (PRC Section 21084.2), lead agencies are required to consider Tribal Cultural Resources (TCR) including a site feature, place, cultural landscape, sacred place or object, of cultural value to the tribe and is listed on the CRHR or a local register, or the Lead agency, at its discretion, chooses to treat resources as such. AB 52 mandates that a lead agency initiate consultation with a tribe with traditional and/or cultural affiliations in the geographic area where a subject project is located. Should the tribe respond requesting formal consultation, the lead agency must work with the tribe or representative thereof to determine the level of environmental review warranted, identify impacts, and recommend avoidance or mitigation measures to reduce any potential impacts.

In accordance with AB 52 (PRC Section 21084.2), memos were mailed to the following local tribes between January 9 and 13, 2017: Lone Band of Miwok Indians, Yocha Dehe Wintun Nation, and United Auburn Indian Community. The City received a letter from the Yocha Dehe tribe on January 30, 2017, requesting a cultural resource study for the project. In response, the City provided the Yocha Dehe Tribe with information and incorporated input received through the consultation process into this document. No other AB 52 consultation requests were received.

Cultural Resources Impact Analysis

4.5 (a) (Historical Resource) No Impact: CEQA Guidelines Section 15064.5 requires the lead agency to consider the effects of a project on historical resources. A historical resource is defined as any building, structure, site, or object listed in or determined to be eligible for listing in the CRHR, or determined by a lead agency to be significant in the architectural, engineering, scientific, economic, agricultural, educational, social, political, or cultural annals of California. The following discussion focuses on architectural and structural resources. Archaeological resources, including archaeological resources that are historical resources according to Section 15064.5, are addressed below under criteria 4.5(b) below.

The TEC Plan will not directly or indirectly affect any designated historic districts or historic-period buildings. As discussed above, the nearest known recorded resources are the Benicia Arsenal and Barracks. These structures are located approximately 0.5 mile west of the TEC Plan Area and would be unaffected by the project. The TEC Plan is limited to roadway improvements within and immediately contiguous to existing right of way and precludes modifications to buildings or structures. Therefore, the proposed project would have no impact on previously recorded historic-period buildings or eligible structures and no mitigation is required.

Mitigation Measures: None Required.

4.5 (b) (Archaeological Resources) Less Than Significant Impact: The field survey for the Benicia Business Park Project identified one historical archaeological site within

the TEC Plan area. The resource consists of two depressions and a scatter of historical archaeological materials. It appears to represent the remnants of a single household occupation rather than several households over time. The site is considered eligible for listing in the CRHR and meets the definition of an historical resource as defined by CEQA (PRC §21084.1). No other archaeological resources were identified through prior records searches and field surveys in the vicinity of the TEC Plan Area. In order to ensure that potential impacts to known resources are avoided, the City shall implement **Mitigation Measures CUL-1**, which requires avoidance of known resources. With measure CUL-1 potential impacts to the known archeological site within the TEC Plan area will be reduced the levels below significance.

As stated in the Project Description, most of the improvements would be limited within existing rights of way. However, there is the potential for archaeological resources to be uncovered during construction activities. In the event that cultural resources are encountered during project construction, implementation of **Mitigation Measure CUL-2** would ensure that any resources encountered during construction are properly managed. With implementation of **Mitigation Measure CUL-2**, impacts on archaeological resources would be reduced to less than significant levels.

Mitigation Measures:

- CUL-1. During roadway improvements in areas proximate to known archeological resources, the City shall retain an onsite archeological monitor to observe construction activities where ground disturbance will occur. The monitor shall establish a buffer area to preclude intrusion into areas of known resources and shall have authorization to halt work in the event that resources are uncovered.
- CUL-2. If deposits of prehistoric or historical archaeological materials are encountered during project activities, all work within 100 feet of the discovery shall be redirected and a qualified archaeologist contacted to assess the find, record the find on Department of Parks and Recreation (DPR) Form 523 (at the discretion of the archaeologist), and make recommendations for the find's treatment. No resources shall be extracted, moved or relocated until a qualified archeologist evaluates the resources and provides treatment recommendations. If feasible, such deposits shall be avoided by project activities. If avoidance is not feasible, the find shall be evaluated for its California Register eligibility. If the find is not eligible, avoidance is not necessary and work may continue in the area of the find. If the find is eligible, impacts to the find shall be mitigated. Mitigation may include, but is not limited to, data recovery excavation, artifact curation, report preparation, and information dissemination to the public.

Upon completion of the assessment and/or evaluation, the archaeologist shall prepare a report documenting the methods and results of the archaeological assessment/evaluation, and provide recommendations for the treatment of the find. The report should be submitted to the project sponsor, appropriate City agencies, and the Northwest Information Center.

4.5 (c) (Unique Paleontological Resource) Less Than Significant Impact with

Mitigation: Paleontological resources include, but are not limited to, fossil and material remains. Certain strata of soils and bedrock are associated with having an increased likelihood of containing fossils or other paleontological resources. Although the MioMap database does not identify unique paleontological resources, sites, or geological features within the TEC Plan Area, the potential to encounter unknown paleontological resources on the project site during grading and construction still exists. **Mitigation Measure CUL-3** would reduce potential impacts to unknown paleontological resources to less than significant levels.

Mitigation Measure:

CUL-3. If paleontological resources are discovered during project activities, all work within 100 feet of the discovery shall be redirected until a paleontological monitor has assessed the situation and made recommendations for their treatment. No resources shall be extracted, moved or relocated until a qualified paleontologist evaluates the resource and provides treatment recommendations. If feasible, the find shall be avoided by project activities. If avoidance is not feasible, the paleontological find shall be evaluated for its significance. If the find is not significant, avoidance is not necessary and work may continue in the area of the find. If the find is significant, impacts to the find shall be mitigated. Paleontological mitigation may include, but is not limited to, data recovery, fossil curation, and information dissemination to the public.

Upon completion of evaluation, as well as mitigation (if necessary), a report shall be prepared documenting the methods and results of the paleontological investigation. The report shall be submitted to the project sponsor and appropriate City agencies.

4.5 (d) (Human Remains) Less Than Significant Impact with Mitigation: Based on prior records searches and field surveys, no evidence suggests that human remains have been interred within the boundaries of the TEC Plan Area. However, in the event that during ground disturbing activities human remains are discovered to be present, **Mitigation Measure CUL-4** would be implemented. Additionally, all construction crews will undergo a cultural resources training session as described in **Mitigation Measure CUL-5**. With implementation of **Mitigation Measures CUL-4** and **CUL-5**, impacts would be reduced to less than significant levels.

Mitigation Measures:

CUL-4. If human remains are encountered during ground-disturbing activities within the project area, all work within 100 feet of the discovery shall stop and the project contractor shall immediately notify the County of Solano Coroner's Office. At the same time, a qualified archaeologist meeting federal criteria under 36 CFR 61 shall be contacted by the project applicants and project contractor to assess the find and consult with the appropriate agencies. If the human remains are of Native American origin, the Coroner shall notify the Native American Heritage Commission within 24 hours of this identification. The Native American Heritage Commission will identify a Most Likely Descendant (MLD) to inspect the site and provide recommendations for the proper treatment of the remains and any associated grave goods. All work in proximity to the find, as determined by a qualified archeologist shall be temporarily suspended until the instructions recommended by the qualified archaeologist and/ or Native American Heritage Commission are implemented.

Upon completion of the assessment, the qualified archaeologist shall prepare a report documenting the background to the find, and provide recommendations for the treatment of the human remains and any associated cultural materials, as appropriate and in coordination with the recommendations of the MLD. The report shall be submitted to the City, the County, and the Northwest Information Center. Once the report is reviewed and any appropriate treatment completed, project construction activity within the area of the find may resume.

CUL-5. The City of Benicia shall require that contractors provide documentation that all construction crews that will work on the TEC Plan improvement that extend beyond the limits of the existing right of way, have undergone a training session to inform them of the presence and nature of federal or state-eligible cultural resources and the potential for previously undiscovered archaeological resources and human remains within the project area, of the laws protecting these resources and associated penalties, and of the procedures to follow should they encounter tribal, cultural, or archeological resources during project-related work.

4.6 GEOLOGY AND SOILS

Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation	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 Publication 42.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
ii. Strong Seismic ground shaking?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
iii. Seismic-related ground failure, including liquefaction?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
iv. Landslides?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Result in substantial soil erosion or the loss of topsoil?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c) Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on or off-site landslide, lateral spreading, subsidence, liquefaction or collapse?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
e) Have soils incapable of adequately supporting the use of septic tanks or alternative waste water disposal systems where sewers are not available for the disposal of waste water?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Sources: City of Benicia General Plan, June 1999; Design, Community, and Environment, City of Benicia General Plan EIR, April 1998; Dyett & Bhatia, Benicia Industrial Park TEC Plan Public Review Draft, January 2017;

Geology and Soils Setting

The northeast most portion of the TEC Plan Area overlaps with the Green Valley Fault Zone, as provided in the Alquist-Priolo Earthquake Fault Zoning Act. The Bay Area is a seismically active region and active faults may cause severe ground shaking within the TEC Plan Area. The closest faults to the TEC Plan Area include Green Valley, Concord, Rodgers Creek, Hayward, West Napa, Cordelia, Greenville, and Calaveras; the closest of which is the Green Valley Fault.

The City of Benicia General Plan Community Health and Safety Element shows that

portions of the TEC Plan Area are located in areas identified as vulnerable to liquefaction and landslides triggered by earthquakes. Areas within the City that are susceptible to liquefaction are underlain by expansive soils such as Bay Mud or alluvium, such as the areas near Industrial Way and I-680 within the TEC Plan. The potential for landslide hazards is most likely in unstable hillsides and hilly undeveloped land, such as the area between East 2nd Street and Lake Herman Road within the TEC Plan.

Geology and Soils Impact Discussion

4.6 (a.i.) (Faults) Less Than Significant Impact: The TEC Plan Area overlaps with the Green Valley Alquist-Priolo Earthquake Fault Zone. No other known active faults directly traverse the TEC Plan Area. As proposed there are no improvements that would be directly affected by the Green Valley Fault. Therefore, the risk of fault-related ground rupture during earthquakes within the limits of the TEC Plan Area due to a known Alquist-Priolo Earthquake Fault zone are considered to be less than significant.

Mitigation Measures: None Required.

4.6 (a.ii) (Ground-Shaking) and (a.iii) (Ground Failure) Less Than Significant Impact: As described above, the TEC Plan Area is within a region of high seismic activity and other related geologic hazards. In addition, the TEC Plan Area is underlain by soft alluvial lands that are susceptible to strong to severe ground shaking. The General Plan EIR shows the Modified Mercalli (MM) Intensity Scale, resulting from a 7.1 magnitude or greater earthquake, as IX (Heavy) and X (Extreme) in some areas. MM intensity values are qualitative, based on observed rather than measured effects, and measured on a scale of I (earthquake not felt) through XII (total damage). A value of X indicates potentially significant damage, although damage to buildings may differ due to factors in design and construction that may vary.

Seismic events could result in secondary seismic impacts associated with unstable soils such as lateral spreading, liquefaction, and subsidence. If not designed correctly, a seismic event could result in structural failure of a roadway, sidewalk, multi-use path, street signs, or streetscape improvements within the TEC Plan Area. The structural failure of these facilities could thus result in increased risk to safety. However, roadway improvements for new streets would incorporate appropriate standard engineering practices and specifications in the design of the proposed improvements that minimize risk of failure in a seismic event, and would reduce secondary impacts that may occur as a result. TEC Plan improvements such as street striping, new pavement and sidewalks would not result in the exposure of people to a substantial new risk of loss injury or death. Therefore, impacts due to ground shaking and failure from implementation of the TEC Plan would be less than significant.

Mitigation Measure: None Required.

4.6 (a.iv) (Landslide) Less Than Significant Impact: The landslide risk potential is dictated by several factors including precipitation conditions, soil types, steepness of slope, vegetation, seismic conditions and level of human disturbance. When certain conditions are present, landslides can be triggered as a result of seismic activity. The General Plan Community Health and Safety Element identifies the undeveloped land within East 2nd Street and Lake Herman Road to be within an area of potential landslide and debris flow hazards. However, implementation of the TEC Plan would mostly be limited within existing rights of way and does not propose any construction activity that would be a risk for causing landslides. Therefore, impacts related to landslides would be less than significant.

Mitigation Measures: None Required.

4.6 (b) (Erosion) Less Than Significant Impact: The primary objectives of the TEC Plan include correction of intersection geometric deficiencies, pavement maintenance, and remediation of flooding issues. The plan also includes improvements to bike, pedestrian, wayfinding, and streetscape facilities. For the most part, roadway improvements would be limited within existing rights of way, which are predominately paved with asphalt. The project would involve some excavation associated with the paving for multi-use paths and some roadway infrastructure improvements, which could result in the potential loss of topsoil. Improvements under the TEC Plan would take place in areas with existing development, and excavation activities would be minimal. In addition, all earthwork, grading, trenching, backfilling and compaction activities are subject to the City of Benicia Grading and Erosion Control Ordinance. Similarly, these activities are also covered by the mandatory requirements of the National Pollution Discharge Elimination System (NPDES) General Permit, which is implemented through a Storm Water Pollution Prevention Plan (SWPPP). Compliance with these mandatory requirements would prevent substantial soil erosion. Therefore, impacts related to induced erosion from the TEC Plan will be less than significant.

Mitigation Measures: None Required.

4.6 (c) (Unstable Geologic Unit) Less Than Significant Impact: As previously discussed under item (a), implementation of the TEC Plan would not pose potential risks from seismically induced liquefaction and would not pose potential risks from landslides on or offsite. Impacts would be less than significant.

Mitigation Measures: None Required.

4.6 (d) (Expansive Soils) Less Than Significant Impact: Expansive soils in Benicia can be found where there is alluvial and residual soils and where moderately expansive clay is present. The cyclic wetting and drying of fine-grained-clay soils create a shrinking/swelling effect that can damage foundations, roads and concrete slabs, including cracking, sinking, and uplift. If not designed correctly, structural failure of a roadway, sidewalk, multi-use path, street signs, or streetscape improvements

within the TEC Plan Area could occur from expansive soils. The structural failure of these facilities could result in increased risk to safety. However, adherence to standard engineering provisions and best practices in the design and construction of the proposed improvements is sufficient to ensure that impacts would be less than significant.

Mitigation Measures: None Required.

4.6 (e) (Septic Tanks) No Impact: There are no septic tanks or alternative wastewater disposal systems proposed as part of implementation of the TEC Plan. Therefore, there will be no impact resulting from the adequacy of soils to support septic tanks or other wastewater disposal system.

Mitigation Measures: None Required.

4.7 GREENHOUSE GAS EMISSIONS

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

Sources: City of Benicia General Plan, June 1999; Dyett & Bhatia, Benicia Industrial Park TEC Plan Public Review Draft, January 2017; Sonoma State University Center for Sustainable Communities, City of Benicia 2010 GHG Emissions Inventory Update, March 2014; Benicia Climate Action Plan, September 2009.

Greenhouse Gas Emissions Setting

Greenhouse gases (GHG) trap heat in the atmosphere, which in turn heats up the surface of the Earth. GHGs are generated both from natural geological and biological processes and through human activities including the combustion of fossil fuels and industrial and agricultural processes. Other than water vapor, the GHGs contributing to global climate change include carbon dioxide, nitrous oxide, methane, chlorofluorocarbons, hydrofluorocarbons and perfluorocarbons. In the U.S., carbon dioxide emissions account for about 85 percent of the GHG emissions.

To address GHG's at the State level, the California legislature passed Assembly Bill 32 in 2006, which requires that statewide GHG emissions be reduced to 1990 levels by 2020. Senate Bill 375 has also been adopted, which seeks to curb GHGs by reducing urban sprawl and vehicle miles traveled.

On September 15, 2009, the Benicia City Council adopted the Benicia Climate Action Plan (CAP), which identifies specific measures on how the City can achieve GHG reduction targets. The Climate Action Plan established targets for City government operations and community-wide activities. The City government goal is to reduce GHG emission 25% below 2000 levels by 2010 and 33% below 2000 by 2020. According to the City's 2010 GHG emissions update, the City reduced GHG emissions 21% below 2000 levels in 2010, missing its reduction target by 4%. The community-wide emission reduction goal is to maintain 2005 emission levels by 2010 and reduce emissions to 10% below 2000 levels by 2020. In 2010, communitywide emissions with large industrial emitters had increased from 2005 by 24% while communitywide emissions without large industrial emitters increased by 41%.

In June 2010, the BAAQMD adopted revised CEQA Guidelines, which included thresholds of significance for GHGs. The Guidelines were subsequently updated in May 2011. The BAAQMD was the first regional air district to adopt numeric thresholds for GHGs. The guidelines identified 1,100 metric tons (MT) of CO₂ equivalent per year (CO₂e/yr) or 4.6 MT/year per service population (residents/employees) as a numeric emissions level, below which a project's contribution to global climate change would be considered less than significant.

The BAAQMD Guidelines use a three-tiered approach for setting a significance threshold for the project-level contributions to cumulative GHG impacts. Based on the BAAQMD Guidelines, a project is considered less-than-significant if it either:

- a) Complies with a legislatively adopted GHG Reduction Strategy which meets or exceeds one of the following three options:
 - i. Reduces emissions to 1990 levels by 2020,
 - ii. Reduces emissions 15% below baseline (2008 or earlier) emission level by 2020, or
 - iii. Meets the plan efficiency threshold of 6.6 MT CO₂e/service population/year;
- b) Emits a total of less than 1,100 metric tons (MT) CO₂e per year; or
- c) Emits less than 4.6 MT/service population/year. Metric tons per capita for the service population per year (service population includes residents and any employees).

Greenhouse Gas Emissions Impact Analysis

4.7 (a) (Significant GHG Emissions) Less Than Significant Impact: Both construction period and operational period project activities have the potential to generate greenhouse gas (GHG) emissions. GHG emissions from implementation of the TEC Plan would result from construction activities, and emissions from vehicles, buses, and trucks traveling through the TEC Plan Area. However, implementation of the TEC Plan is not anticipated to generate a substantial increase in traffic through the

TEC Plan Area (see **Section 4.16 Transportation and Circulation**). Rather, the TEC Plan aims to accommodate multi-model transit through implementing expanded public transit, bicycle and pedestrian facilities.

The primary objectives of the TEC Plan include correction of intersection geometric deficiencies, pavement maintenance, and remediation of flooding issues. The plan also includes improvements to bike, pedestrian, wayfinding, and streetscape facilities. The TEC Plan is assumed to be implemented in phases. Based on the identified TEC Plan improvements such as striping, repaving, and installation of sidewalk, it is estimated that each phase would last approximately 8-12 weeks.

GHG emissions from the construction of the project would be minimal given the limited area of disturbance and expected construction equipment. Although the BAAQMD has not set forth a threshold for construction-period GHG emissions, it is noteworthy that the expected construction-period emissions would be limited to off gassing from new pavement, emissions from construction equipment and worker trips. Relative to the City's annual GHG emissions, emissions from construction of the TEC Plan would be negligible. Therefore, GHG emissions from the TEC Plan will have less than significant impacts. No mitigation is required.

Mitigation Measures: None Required.

4.7 (b) (GHG Plan Conflict) Less Than Significant Impact: The City of Benicia has adopted a CAP, containing objectives and strategies to achieve greenhouse gas reduction targets. Implementation of the TEC Plan does not conflict with the CAP, but rather contains planning objectives that complement those in the CAP, including the following:

Objective T-3: Increase Bicycle and Pedestrian Mode Share by 2020

Strategy T-3.2. Bicycle Infrastructure for New Development

Strategy T-3.3. Implement Bicycle and Pedestrian Safety Measures

Strategy T-3.5. Revise Streetscape Design Standards

Objective T-4: Increase Public Transit Ridership 10% by 2020

Strategy T-4.1. Transit Passes

Objective T-8: Reduce Reliance on Conventional Automobile Travel

Strategy T-8.2. Create Local Car Share Program

Implementation of the TEC Plan is not expected to conflict or otherwise inhibit an adopted plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases. Therefore, potential impacts are considered less than significant.

Mitigation Measures: None Required.

4.8 HAZARDS/HAZARDOUS MATERIALS

Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d) Be located on a site that is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would create a significant hazard to the public or the environment?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport of public use airport, would the project result in a safety hazard for people residing or working in the project area?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
f) For a project within the vicinity of a private airstrip, would the project result in a safety hazard for people residing or working in the project area?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
g) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
h) Expose people or structures to a significant risk of loss, injury or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Sources: Dyett & Bhatia, Benicia Industrial Park TEC Plan Public Review Draft, January 2017; City of Benicia General Plan, June 1999; Circlepoint, Benicia Industrial Bus Hub Project, December 2013; City of Benicia Emergency Operations Plan, January 2007; Association of Bay Area Governments (ABAG), Wildfire Hazards Map, <http://gis.abag.ca.gov/website/Hazards/>, Accessed February 10, 2016; California Department of Forestry and Fire Protection, State Responsibility Areas for Fire Protection, http://frap.fire.ca.gov/data/frapgismaps/sra11_2/sramap.48.pdf, August 2012.

Hazards/Hazardous Materials Setting

Regulatory Setting

Hazardous materials and waste management is implemented by a number of governmental agencies that have established regulations regarding the proper transportation, handling, management, use, storage, and disposal of hazardous materials for specific operations and activities. Pursuant to the Planning and Zoning Law, the Department of Toxic Substances Control (DTSC) maintains a hazardous waste and substances sites list (e.g., Cortese List).

Regulations governing the use, management, handling, transportation and disposal of hazardous materials and waste are administered by federal, state and local governmental agencies. Federal regulations governing hazardous materials and waste include the Resource Conservation and Recovery Act of 1976 (RCRA); the Comprehensive Environmental Response, Compensation and Liability Act of 1980 (CERCLA); and the Superfund Amendments and Re-authorization Act of 1986 (SARA).

In California the Secretary for Environmental Protection established the Unified Hazardous Materials and Hazardous Waste Management Program, also known as "Unified." The Unified program is intended to consolidate and ensure consistency in the administration of requirements, permits and inspections for six programs, including the Underground Storage Tank (UST) program. The six programs established by the Unified Program are administered and implemented locally through "Certified Unified Program Agencies" (CUPA). Solano County Department of Environmental Management is the CUPA for all cities in Solano County, including the City of Benicia.

Existing Conditions

Households and businesses within the City of Benicia can drop off hazardous materials at the City of Benicia Corporation Yard located at 2400 East 2nd Street. In addition, the City offers household hazardous waste curbside pickup. Allied Waste Services picks up household hazardous waste by appointment and with the use of special packaging.

The City of Benicia General Plan contains goals and policies relating to hazardous materials in the community.

Goal 4.7: Ensure that existing and future neighborhoods are safe from risks to public health that could result from exposure to hazardous materials.

Goal 4.8: Protect sensitive receptors from hazards.

Goal 4.16: Require hazardous materials and hazardous waste management handling and disposal procedures that are protective of human health and the environment.

Goal 4.17: Minimize hazardous waste generation

Goal 4.20: Reduce health and safety hazards associated with hazardous materials user, hazardous waste generators, and hazardous waste disposal sites and toxic air contaminant.

Existing industrial users within the TEC Plan area may utilize a variety of potential hazardous materials. Each business that uses such material or generates hazard waste is authorized through CUPA permitting for onsite use and disposal. Storage, handling, and manufacturing of hazardous materials requires a Use Permit pursuant to Section 17.70.260. The Fire Department issues hazardous materials permits when required with business license approval.

Hazards/Hazardous Materials Impact Analysis

4.8 (a) (Routine Transport) Less Than Significant Impact: As stated in the Project Description, implementation of the TEC Plan would include improvements to roadways, bike, pedestrian, wayfinding, and streetscape facilities. For the most part, roadway improvements would be limited within existing rights of way. The TEC Plan does not authorize the use of any new or different land uses relative to what is currently authorized by the General Plan. As such, implementation of the TEC Plan would not result in any changes in the routine use, transport, or disposal of hazardous materials during operation.

Construction activities associated with installing new roadway improvements may result in the temporary presence of potentially hazardous materials including, but not limited to fuels and lubricants, paints, solvents, insulation, electrical wiring, and other construction related materials onsite. Although there may be potentially hazardous materials onsite during construction, the construction contractor will comply with all existing federal, state and local safety regulations, as overseen by the City of Benicia's CUPA, governing the transportation, use, handling, storage and disposal of potentially hazardous materials. In the event that construction activities involve the on-site storage of potentially hazardous materials, a declaration form shall be filed with the Fire Marshall's office and a hazardous materials storage permit must be obtained. While construction activities are expected to house potentially hazardous materials on a temporary basis, strict adherence to Best Management Practices (BMPs) in accordance with the NPDES Permit requirements and compliance with all applicable regulations will ensure that potential impacts remain at levels below significance.

Mitigation Measures: None Required.

4.8 (b,d) (Upset and Accident Involving Release; Government Code §65962.5 Site) Less Than Significant Impact with Mitigation: Construction activity involving the disturbance of soil may lead to uncovering of contaminated soil that may affect construction workers. The recent Benicia Industrial Bus Hub Initial Study identified potential contamination from the Valero Refinery and Benicia Arsenal, where groundwater and soil monitoring in its proximity show soil and water contamination levels above reportable thresholds at shallow depths (four to seven feet below existing grade). The TEC Plan Area may also contain undocumented spills or fill that may be a source of contamination if brought from contaminated areas.

The California Environmental Protection Agency (CAL-EPA) annually updates the California Hazardous Waste and Substances Site List (also known as the Cortese List"). The Department of Toxic Substances Control (DTSC) compiles a record of sites to be included on the list, which is then submitted to the CAL-EPA). A search of EnviroStor, performed on January 13, 2017, showed no cleanup sites within the TEC Plan Area. A search of Geotracker, performed on January 13, 2017, showed two open "Cleanup Program Sites": Wilson Industries Storage Yard (620 Indiana Street) and Benicia Industrial Park (4186 Park Road). Geotracker also showed one "LUST Cleanup Program Site": Bay Area Diablo Petroleum.

In the event contaminated soil or groundwater is encountered during excavation activities, implementation of **Mitigation Measure HAZ-1** would reduce the impact to a less-than-significant level.

Mitigation Measure:

HAZ-1. The City of Benicia shall coordinate construction adjacent to the Refinery site with Valero to ensure that construction activities are consistent with any ongoing site remediation. The City shall require its construction contractors to follow the procedures below in the event contaminated soil or groundwater is encountered (either visually or through odor detection) during excavation activities:

- Stop work in areas of contamination;
- Notify the San Francisco Bay Regional Water Quality Control Board and the California Department of Toxic Substances Control;
- Contain the areas of contamination;
- Perform appropriate clean up procedures; and
- Segregate, profile, and dispose of all contaminated soil. Required disposal method shall depend on the type and concentration of contamination identified. Any site investigation or remediation shall be performed in accordance with applicable regulations.

4.8 (c) (Emit or Handle Within ¼ Mile of School) No Impact: There are no schools located within a quarter-mile of the TEC Plan Area. Matthew Turner Elementary School is approximately one mile west of the TEC Plan Area and Robert Semple Elementary School is approximately one mile southwest of the TEC Plan Area. Therefore, no impacts related to the emission or handling of hazardous, or acutely hazardous materials, within one-quarter mile of an existing or proposed school are expected.

Mitigation Measures: None required.

4.8 (e-f) (Public and Private Airport Land Use Plan) No Impact: The TEC Plan Area is not located within the boundaries of an airport land use plan or the vicinity of a private airstrip. The nearest airport, Buchanan Field Airport, is located approximately 7 miles southeast. Therefore, no impacts associated with airport-related hazards are expected.

Mitigation Measures: None Required.

4.8 (g) (Impair Emergency Response Plan) Less Than Significant: During construction, roadways may require temporary lane or road closures that could impede emergency response. The City's Emergency Operations Plan identifies major arterial roadways as principal routes for emergency evacuation. These arterials would also serve as the principal routes for moving emergency equipment and supplies. Roadways designated as major arterial roadways within the TEC Plan Area include: East 2nd Street, Industrial Way, Park Road, and Bayshore Road. Although there is a potential for temporary lane and road closures along emergency evacuation routes, closures would be coordinated to ensure that emergency routes are remain viable.

Specifically, police, fire, and other emergency service providers would be notified of the timing, location, and duration of the construction activities and the location of detours and lane closures. Therefore, potential impacts during construction are considered to be less than significant. Operation of the TEC Plan would not impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan. Therefore, impacts would be less than significant.

Mitigation Measures: None Required.

4.8 (h) (Wildland Fire) Less Than Significant Impact with Mitigation: Fires have the potential to cause significant losses to life, property, and the environment. The

California Department of Forestry and Fire Protection (Cal Fire) designates the City of Benicia as a Local Responsibility Area for fire protection. According to the California Department of Forestry and Fire Protection's Fire Hazard Severity Zone and ABAG Fire Hazard maps, the majority of the City is located in a Local Responsibility Area Unzoned Fire Hazard Severity Zone. Portions of the TEC Plan Area are located within a Wildland-Urban Interface Fire Threatened Community. Although the TEC Plan Area is an Unzoned Fire Hazard Severity Zone, the City acknowledges that the undeveloped open space/grassland areas in conjunction with dry conditions and winds can create hazardous situations (Benicia Municipal Code, Chapter 8.28 Fire Prevention and Life Safety Code). Portions of the proposed improvements would be located adjacent to grassland areas (i.e., East 2nd Street and Lake Herman Road) and the use of spark producing construction machinery could potentially create hazardous fire conditions and expose people to wildfire risks. Implementation of **Mitigation Measure HAZ-2** requiring fire safety practices during construction would reduce impacts associated with wildland fires to a less-than-significant level.

Mitigation Measure

HAZ-2. The City shall require the construction contractor to implement fire safety construction practices, including but not limited to:

- Clearing dried vegetation or other material that could ignite during construction from staging areas, welding areas, or other areas slated for construction.
- Construction equipment that includes a spark arrestor shall be equipped in good working order.
- Construction crews shall have a spotter during welding activities to look out for potentially dangerous situations, such as accidental sparks.
- Construction equipment, including those with hot vehicle catalytic converters, shall be kept in good working order and used only within cleared construction zones.
- During construction, the construction contractors shall require vehicles and crews working at the project site to have access to functional fire extinguishers.

4.9 HYDROLOGY AND WATER QUALITY

Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
a) Violate any water quality standards or waste discharge requirements?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b) Substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g., the production rate of pre-existing nearby wells would drop to a level which would not support existing land uses or planned uses for which permits have been granted)?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Substantially alter the existing drainage pattern on the site or area, including through the alteration of the course of a stream or river, in a manner that would result in substantial erosion or siltation on- or off-site?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d) Substantially alter the existing drainage pattern on the site or area, including through the alteration of the course of a stream or substantially increase the rate or amount of surface runoff in a manner, which would result in flooding on- or off-site?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
e) Create or contribute runoff water that would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
f) Otherwise substantially degrade water quality?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
g) Place housing within a 100-year flood hazard area as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
h) Place within a 100-year flood hazard area structures that would impede or redirect flood flows?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
i) Expose people or structures to a significant risk of loss, injury or death involving flooding, including flooding as a result of the failure of a levee or dam?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
j) Inundation by seiche, tsunami, or mudflow?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Sources: Dyett & Bhatia, Benicia Industrial Park TEC Plan Public Review Draft, January 2017; City of Benicia General Plan, June 1999; Federal Emergency Management Agency's Flood Insurance Rate Map; City of Benicia Climate Change Vulnerability Report Summary.

Hydrology and Water Quality Setting

The TEC Plan Area is located less than a half-mile west of Suisun Bay. Certain portions of the Industrial Park close to the bay are at low elevations. Areas adjacent to Sulfur Springs Creek, including Park Road and Bayshore Road, are also at low elevations. These low-lying areas subject to flooding risk are documented in the FEMA Flood Insurance Rate Maps (FIRM). Special Flood Hazard Areas (SFHA) shown by the FIRM include portions of the TEC Plan Area in Zone AE (areas adjacent to Sulfur Springs Creek and some areas between I-680 and Suisun Bay). These correspond to a one percent annual chance flood hazard, or the 100-year floodplain. Additionally, portions of the TEC Plan Area are subject to 0.2 percent annual chance of a flood hazard, or 500-year flood.

The City's Adaptation Plan identifies the issue of flooding as a result of sea level rise and storm intensity due to climate change and proposes strategies to mitigate the impacts. The City's planned Stormwater Management and Flood Mitigation Plan, included in the Measure C Expenditure Plan for fiscal years 2017-2019, may also address these conditions.

Some streets in the Industrial Park currently lack adequate drainage infrastructure. West Channel Road, Mallard Drive, Sprig Drive and Teal Drive are deficient in drainage infrastructure. As stated in the Project Description, implementation of the TEC Plan would provide drainage improvements for roadways to help alleviate flooding issues in the future as sea levels rise and storm intensity increases.

The TEC Plan proposes the installation of curbs and gutters with storm drains along the following roadways east of I-680: Mallard Drive, Spring Drive, and Teal Drive. Drainage improvements would also be installed along the following roadways west of I-680: Park Road; Industrial Way, Noyes Court, Bayshore Road, Industrial Court, East and West Channel Roads, and East 2nd Street.

Section 402 of the Clean Water Act regulates the discharge of pollutants to waters of the U.S. Locally, this is implemented through the National Pollution Discharge Elimination System (NPDES) General Permit. Requirements apply to construction activities (e.g. grading, grubbing, and other site disturbance). Construction activities on more than one acre are subject to NPDES permitting requirements including, the preparation of a Storm Water Pollution Prevention Plan (SWPPP).

The SWPPP identifies stormwater collection and discharge points, drainage patterns across the site, and best management practices that dischargers will use to reduce the pollutants in stormwater runoff. The NPDES General Permit requirements also address post-construction conditions resulting from development including, but not limited to, through Low Impact Development (LID) requirements. Under LID requirements, new development, including the Project, is required to mimic pre-developed conditions, protect water quality, and retain runoff from impervious surfaces onsite.

The City's MS4 Permit requires the City and permit applicants to address stormwater pollution issues in development of public and private projects. The requirements include implementation of Best Management Practices (BMPs) during construction and the use of post-construction controls to reduce pollutants discharged from the project site. All improvements made as part of implementation of this plan will comply with this permit.

Hydrology and Water Quality Impact Analysis

4.9 (a,f) (Water Quality Standards, Stormwater Drainage System Capacity, Otherwise Degrade Water Quality) Less Than Significant Impact with Mitigation:

Construction of TEC Plan improvements would involve activities such as excavation, grading, and backfilling. Construction activities could violate water quality standards by exposing and disturbing soils, potentially resulting in increased erosion and siltation in and downstream of the TEC Plan Area. Construction would involve use of chemicals and solvents such as fuel and lubricants for motorized heavy equipment. Inadvertent spills of such chemicals into nearby ditches or waterways could cause an adverse water quality impact if not stored or handled properly.

Construction activities of one acre or more are subject to the permitting requirements of the National Pollutant Discharge Elimination System (NPDES) General Permit for Stormwater Discharges associated with Construction and Land Disturbance Activities (Construction General Permit) Order No. 2009-0009-DWQ).

The City or its contractor would be required to submit a Notice of Intent to the San Francisco RWQCB prior to construction. The Construction General Permit requires the preparation and implementation of a formal SWPPP which must be completed before construction begins. The SWPPP includes specifications for BMPs implemented during project construction to control sedimentation and other pollutants in stormwater runoff, and defines conditions for complying with the NPDES permit requirements. Implementation of the SWPPP starts with the commencement of construction and continues through project completion. Upon completion of the project, the sponsor must submit a Notice of Termination to the RWQCB to indicate that construction is complete.

Construction activities will also be subject to the City's Grading and Erosion Control Ordinance (Chapter 15.28 of the Municipal Code). This section of the municipal code includes requirements for grading, excavation, and filling to reduce runoff and erosion, and to avoid creation of nuisances as well as provisions to enforce safety measures. Compliance with the Construction General Permit for all improvements within the TEC Plan, development and implementation of a SWPPP (**Mitigation Measure HYD-1**), compliance with the City's Grading and Erosion Control Ordinance, and implementation of **Mitigation Measure HAZ-1** in the event that contaminated soil or groundwater is encountered, would reduce potential water quality impacts to a less-than-significant level.

Mitigation Measure

HYD-1. The City and/or its contractor shall prepare the SWPPP and submit a notice of intent (NOI) to the San Francisco Bay Regional Water Quality Control Board (RWQCB) prior to construction activities, as required by the RWQCB. Implementation of the SWPPP shall start with the commencement of construction and continue through the completion of the project. The objectives of the SWPPP are to identify pollutant sources (such as sediment) that may affect the quality of stormwater discharge and to implement best management practices (BMPs) to reduce pollutants in stormwater. A notice of termination (NOT) application shall be filed at the end of construction.

The City or the construction contractor shall install erosion and stormwater control measures on the construction site such as silt fences, fiber rolls and other BMPs, particularly at locations close to storm drains and water bodies. Erosion control materials shall be selected to use material that do not entangle or trap wildlife (i.e. tightly woven, non-monofilament netting). Disturbed areas shall be repaved or revegetated with an appropriate mixture of native seeds. The BMPs shall also include practices for proper handling of chemicals such as avoiding fueling at the construction site and overtopping during fueling and installing containment pans. Equipment shall be properly maintained and free of leaks and servicing and maintenance areas shall be contained to prevent spills.

4.9 (b) (Groundwater Supply and Recharge) Less Than Significant Impact: As stated in the Project Description, implementation of the TEC Plan would include improvements to roadways, bike, pedestrian, wayfinding, drainage, and streetscape facilities. As such, implementation of the TEC Plan would not impact aquifer volumes or groundwater table levels. The installation of streetscape facilities would create new opportunities for water to be retained in pervious ground through the introduction of bioswales, storm drain and LID medians, island and drains. Therefore, implementation of the TEC Plan would have no adverse impacts on groundwater supply or groundwater recharge.

Mitigation Measures: None required.

4.9 (c-e) (Drainage Pattern or Runoff, Stormwater Drainage System Capacity) Less Than Significant Impact: Implementation of the TEC Plan would include improvements to roadways, bike, pedestrian, wayfinding, and streetscape facilities. For the most part, roadway improvements would be limited within existing rights of way, and would not alter the existing drainage pattern or result in an increase in runoff. Some roadways would be widened and could result in an increase in impervious surface area, resulting in an increase in the storm water runoff; however, new localized drainage facilities would be constructed such that runoff would be collected by the existing on-site storm drains.

Implementation of the TEC Plan would include drainage improvements to key areas currently lacking in drainage infrastructure. Improvements would include the installation of curbs and gutters with storm drains along the following roadways east of I-680: Mallard Drive, Spring Drive, and Teal Drive. Drainage improvements would also be installed along the following roadways west of I-680: Park Road; Industrial Way, Noyes Court, Bayshore Road, Industrial Court, East and West Channel Roads, and East 2nd Street.

The TEC Plan proposes greater inclusion of design features that reduce hardscape. These features will reduce runoff by allowing for water retention and filtration in pervious surfaces. For example, Policy 6.A.6 in the TEC Plan proposes to incorporate green infrastructure into streetscape design to capture stormwater flow and increase groundwater recharge. This may be accomplished through landscaped swales along the road, tree box filters for on-street filtration, and medians with permeable hardscape.

Implementation of the TEC Plan would not alter existing drainage patterns such that it increases the rate or amount of surface runoff resulting in on- or off-site flooding, results in an exceedance of the capacity of the existing stormwater drainage systems, or creates additional sources of polluted runoff. Therefore, this impact is considered less than significant.

Mitigation Measures: None required.

4.9 (g-i) (Flood Hazard) Less Than Significant Impact: Parts of the TEC Plan Area are within the 100-year flood hazard area. Areas west of Suisun Bay and adjacent to Sulfur Springs Creek are within the 100-year floodplain, or Zone AE. However, no structures developed as part of the TEC Plan would impede or redirect flows within a 100-year flood hazard area and implementation of the TEC Plan does not include housing.

The site's proximity to Suisun Bay creates inherent risk from sea level rise. Sea level rise is not uniform and is largely dependent on factors such as atmospheric and oceanic circulation, tectonics, and gravitational/ deformational effects generated by land mass changes. Sea level rise will most directly affect areas that are on the coast. While the magnitude of sea level rise ranges widely, the San Francisco Bay Conservation and Development Commission (BCDC) has developed Sea Level Rise projections based on 16 inches of sea level rise by mid-century (year 2050) and 55 inches of sea level rise at the end of the century (year 2100). BCDC generally suggests that the anticipated sea level rise projections largely correspond with today's 100-year flood zone. Meaning that under a reasonably foreseeable expectation of sea level rise, the 100-year flood zone would be subject to flooding not just during a 100-year flood event, but also during high tide. The City of Benicia's Climate Change Vulnerability Report Summary projected sea level rise scenarios to be 12 inches (low, mid-century), 24 inches (high, mid-century and low, end-century), and 60 inches (high, end-century).

However, implementation of the TEC Plan would be limited to roadway, pedestrian, bike, wayfinding, and streetscape facilities, and would not expose people or structures to a significant risk of loss injury or death involving flooding.

In the event of catastrophic failure of Lake Herman Dam, the area around Sulphur Springs Creek is subject to inundation. However, dam safety is overseen by the Bureau of Reclamation Division of Dam Safety and dams are designed to withstand major earthquakes. Therefore, the likelihood of failure is very low. Nonetheless, should the Lake Herman Dam fail, impacts related to dam failure from implementation of the TEC Plan would not be any more severe than they would be under existing conditions. Therefore, impacts from implementation of the TEC Plan would be less than significant.

As stated above, implementation of the TEC Plan would not expose people to risks of flooding, dam, or levee failure and impacts would be less than significant.

Mitigation Measures: None Required.

4.9 (j) (Seiche, Tsunami, Mudflow) Less than Significant: The TEC Plan Area is not expected to be affected by inundation from a seiche or tsunami due to the distance from the ocean and intervening landforms. The vacant land north of East 2nd Street may be subject to impacts from mudflow due the location around largely undeveloped hills along Lake Herman Road. However, implementation of the TEC Plan would be limited to improvements within existing roadways, primarily within existing rights of ways. Therefore, impacts related to seiches, tsunamis, and mudflow would be less than significant.

Mitigation Measures: None Required.

4.10 LAND USE AND PLANNING

Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
a) Physically divide an established community?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to the general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c) Conflict with any applicable habitat conservation plan or natural community conservation plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Sources: Dyett & Bhatia, Benicia Industrial Park TEC Plan Public Review Draft, January 2017; City of Benicia General Plan, June 1999; Benicia Climate Action Plan, September 2009.

Land Use and Planning Setting

Industrial is the most prominent land use type in the TEC Plan Area (see **Figure 2: Existing Land Use**). Vacant is the second largest land use type, covering more than one third of the total Plan Area, the majority of which is located on the Northern Gateway property. While land designated as Open Storage is usually associated with adjacent industrial activities, it stands as a separate existing land use category for its high redevelopment potential. Open Storage is defined as land where open storage is the primary intended use (compared to vacant land) and there is no permanent structure. Commercial Services, Utilities, Religious Facilities, and other land uses are also located within the TEC Plan Area. Commercial Services include gas stations, auto service stations, and restaurants. City and state-owned properties, a PG&E electrical substation and the Valero wastewater treatment plant have a Utilities land use designation. The New Harbor Community Church is the only Religious Facility type of land use in the TEC Plan Area.

The majority of land located north of East 2nd Street is zoned for Limited Industrial use, while land to the south is largely zoned for General Industrial use (see **Figure 3: Current Zoning**). Key distinctions between these two districts relate to the allowance of a wider range of industrial uses in the General Industrial district, including the manufacturing, assembly and packaging of goods and products from extracted and raw materials. The Limited Industrial district serves to buffer outlying open space and residential areas from the heavier industrial uses located in the General Industrial district. Commercially zoned land is concentrated around the Lake Herman Road interchange at I-680. Additionally, there are also a few pockets zoned for Public/Semi-Public, Industrial Park, and Open Space uses.

The TEC Plan Area is surrounded by open space land uses to the north and east, open space and industrial land uses to the south, and industrial, open space, and residential land uses to the west.

On September 15, 2009, the Benicia City Council adopted the Benicia Climate Action Plan (CAP), which identifies specific measures on how the City can achieve GHG reduction targets. The Climate Action Plan established targets for City government operations and community-wide activities.

Land Use and Planning Impact Analysis

4.10 (a) (Divide An Established Community) Less Than Significant Impact:

Implementation of the TEC Plan would include improvements to roadways, bike, pedestrian, wayfinding, and streetscape facilities. For the most part, roadway improvements would be limited within existing rights of way. Division of an established community typically occurs when a new physical feature, in the form of an interstate or railroad, physically transects an area, thereby removing mobility and access within an established community. The division of an established community can also occur through the removal of an existing road or pathway, which would reduce or remove access between a community and outlying areas. The proposed TEC Plan improvements would not divide the Industrial area nor alter the surrounding established uses.

Construction activities would temporarily affect adjacent land uses (through increased dust, noise, and traffic). The presence of construction-related equipment and workers would temporarily change the existing character of the vicinity to that of a construction zone. However, construction activities would not physically divide the existing community because construction activities are anticipated to be limited to within existing rights of way and access would be maintained along each roadway throughout construction.

Temporary impacts to adjacent land uses would cease upon completion of construction and would not permanently impact the existing surrounding land uses or neighborhoods. The proposed improvements would not result in changes to land uses in the TEC Plan Area. The proposed improvements would enhance pedestrian, bicycle, and vehicle circulation throughout the TEC Plan Area. Therefore, impacts due to physically dividing an established community would be less than significant.

Mitigation Measures: None Required.

4.10 (b) (Land Use Plan, Policy, Regulation Conflict) Less Than Significant Impact:

The proposed TEC Plan improvements would be constructed immediately adjacent to areas designated as Industrial, Vacant, Open Storage, Commercial Services, Utilities, Religious Facilities, and Open Space/Marsh.

Implementation of the TEC Plan would not conflict with the policies of the City of Benicia and would not result in substantial alterations to the built character of the TEC Plan Area. There would not be any significant, long-term, land use and planning impacts associated with implementation of the TEC Plan. Because the improvements would be largely constructed within public rights of way, the proposed project would not conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project adopted for the purpose of avoiding or mitigating an environmental effect.

The project is consistent with the Climate Action Plan, which contains objectives and strategies to achieve greenhouse gas reduction targets. Implementation of the TEC Plan does not conflict with the CAP, but rather contains planning objectives that complement those in the CAP, including the following:

Objective T-3: Increase Bicycle and Pedestrian Mode Share by 2020

Strategy T-3.2. Bicycle Infrastructure for New Development

Strategy T-3.3. Implement Bicycle and Pedestrian Safety Measures

Strategy T-3.5. Revise Streetscape Design Standards

Objective T-4: Increase Public Transit Ridership 10% by 2020

Strategy T-4.1. Transit Passes

Objective T-8: Reduce Reliance on Conventional Automobile Travel

Strategy T-8.2. Create Local Car Share Program

Therefore, the implementation of the TEC Plan would result in less than significant impacts due to conflicts with the City's general plan, zoning regulations, and the Climate Action Plan.

Mitigation Measures: None Required.

4.10 (c) (Habitat Conservation Plan) No Impact: The Solano Multi-Species Habitat Conservation Plan (HCP) covers portions of Solano County. The City of Benicia is not a participant in the HCP and the TEC Plan Area is not within an area covered by the HCP. Therefore the TEC Plan would have no impacts associated with the Solano HCP.

Mitigation Measures: None Required.

4.11 MINERAL RESOURCES

Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
a) Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Result in the loss of availability of a locally-important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Sources: Dyett & Bhatia, Benicia Industrial Park TEC Plan Public Review Draft, January 2017; City of Benicia General Plan, June 1999.

Mineral Resources Setting

According to the Benicia General Plan, a deposit of igneous rock is the only regionally significant mineral resource within the City's Planning Area. The aggregate is used in the manufacture of asphaltic concrete, Portland cement concrete, rip-rap, drain rock and road base.

The Sulfur Springs Mountain Deposit was identified by the State of California as a Mineral Resource of Regional Significance pursuant to the Surface Mining and Reclamation Act (SMARA). The Sulfur Springs Mountain Deposit is located approximately two miles to the northwest of the TEC Plan Area. An active quarry within the deposit exists along Lake Herman Road west of Lake Herman in the boundary hills between Benicia and Vallejo, outside of the Planning Area. Quarrying there has resulted in a cut face, which is visible from the Lake Herman area. To the extent possible given the requirements of the Surface Mining and Reclamation Act (SMARA), City policy discourages further expansion of the visible cut in an eastern direction.

Several abandoned mercury mines exist in the Sulphur Springs Mountain area. These mines have not been in production since the mid-1940s.

Mineral Resources Impact Discussion

4.11 (a-b) (Mineral Resources or Plan) No Impact: There are no known mineral resources within the TEC Plan Area. The TEC Plan Area has not been delineated as a locally important resource recovery site. Implementation of the TEC Plan will not result in the loss of availability of a known mineral resources, including those designated as "locally important." Therefore, implementation of the TEC Plan will have no impact that results in the loss of availability of mineral resources.

Mitigation Measures: None Required.

4.12 NOISE

Would the project result in:	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
a) Exposure of persons to or generation of noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c) A substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d) A substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
f) For a project within the vicinity of a private airstrip, would the project expose people residing or working in the project area to excessive noise levels?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Sources: Dyett & Bhatia, Benicia Industrial Park TEC Plan Public Review Draft, January 2017; City of Benicia General Plan, June 1999.

Noise Setting

The primary sources of noise in the TEC Plan Area are from traffic along I-680, I-780, and traffic along local roadways, trains along the Southern Pacific Railroad line, and industrial operations. The effects of noise can include hearing loss, communication interference, physiological responses, and annoyance.

A decibel is a unit of measurement that indicates the relative amplitude of a sound. Sound levels in decibels are calculated on a logarithmic basis, with each 10 decibel the intensity is ten times greater (i.e. an increase in 10 decibels is a ten-fold increase, while 20 decibels is 100 times more intense and 30 decibels is 1,000 times more intense). In terms of perception, each 10 decibel increase is experienced approximately as a doubling of loudness.

The City of Benicia Municipal Code Chapter 8.20, Noise Regulations, and the General Plan Community Health and Safety Element, Chapter 4 Section D, establish community wide noise standards. The General Plan indicates that typical noise levels in sensitive areas (e.g., nursing homes, churches, theaters, residential uses, parks, libraries, and schools) range from 51 dB to 63 dB Ldn. Traffic on local roadways, industrial activities, and neighborhood activities are contributing factors for background noise levels in the majority of the City.

The General Plan establishes performance standards for noise-sensitive land uses that may be affected by transportation or stationary noise sources. Stationary noise sources include industrial operations, outdoor recreation facilities, HVAC units, and loading docks. These standards apply to long-term operational noise from a stationary source.

The City does not implement limitations specific to construction noise, but instead limits hours of construction activities to less sensitive daytime hours. Within 500 feet of a residential or downtown mixed use district, noise from construction equipment may not be operated "...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 and Sundays, in such a manner that a reasonable person of normal sensitiveness residing in the area is caused discomfort or annoyance unless beforehand a permit therefor has been duly obtained from the city manager or his designee."

Noise-sensitive land uses are facilities of which serenity and quiet are of extraordinary significance and serve an important public need and where the preservation of those qualities is essential if the area is to continue to serve its intended purpose. Hospitals, schools, cemeteries, parks, and residential areas are examples of sensitive noise receptors. The TEC Plan Area does not have existing residential uses or other sensitive receptors. The nearest residential uses are located approximately 300 feet west of West Channel Road.

Noise Impact Analysis

4.12 (a,c,d) (Noise Standards, Ambient Noise Levels, Temporary or Periodic Noise Increase) Less Than Significant Impact: The majority of the TEC Plan Area is located away from noise-sensitive land uses. The nearest residential uses are located approximately 300 feet west of West Channel Road. The existing residences and West Channel Road are separated by open space and Limited Industrial uses.

Land uses within the TEC Plan Area include Industrial, Vacant, Open Storage, Commercial Services, Utilities, Religious Facilities, and Open Space/Marsh. Implementation of the TEC Plan would include improvements to roadways, bike, pedestrian, wayfinding, and streetscape facilities. For the most part, roadway improvements would be limited within existing rights of way.

The TEC Plan would not result in any changes to General Plan land use and zoning designations. Additionally, the TEC Plan would not introduce any new elements to the existing environment that would result in long-term noise impacts.

Construction activities associated with implementation of the TEC Plan would result in temporary and intermittent noise increases in the vicinity from the use of heavy equipment and truck traffic for material delivery and off-haul of materials. Construction activities would generally be limited to weekdays from 7:00 a.m. to 7:00 p.m. and nighttime construction is not expected to be necessary. The proposed improvements would therefore comply with Municipal Code Section 8.20.150 requirements, as construction would not occur during the restricted times. Construction-related noise impacts would be temporary and cease once construction is complete. Therefore, impacts would be less than significant.

Mitigation Measure: None Required.

4.12 (b) (Groundborne Vibration and Noise) Less Than Significant Impact:

Implementation of the TEC Plan would not result in any vibration impacts during operation. Construction activities that have the potential to generate groundborne vibration or groundborne noise within the TEC Plan Area would be limited and localized, since the improvements include paving, striping, and the installation of signs, street lights, curbs, gutters, and streetscape. Construction activities for roadway widening and the creation of multi-use paths would not require extensive earthmoving or pile driving activities that are typically associated with construction-related vibration and noise. In addition, any minor increases in noise and vibration associated with the construction of the project would be short-term and temporary.

Section 8.20.150 of the City of Benicia Municipal Code limits operation of equipment or construction work within set timeframes as to minimize the impacts of construction. The regulations are applicable to any use with a 500 foot radius of a residential zone. Residential uses are located approximately 300 feet from the TEC Plan Area; therefore, this regulation would be applicable and would effectively preclude noise impacts during construction. Therefore, impacts would be less than significant in regards to groundborne vibration and noise.

Mitigation Measure: None Required.

4.12 (e-f) (Airport Noise) No Impact: The TEC Plan Area is not located within a private airstrip, an airport land use plan or within two miles of a public airport or public use airport and would therefore not expose people residing or working in the TEC Plan Area to excessive noise levels. The nearest airport, Buchanan Field Airport, is located approximately 7 miles southeast. Therefore, noise from airport activity will have no impact to people residing or working in the TEC Plan Area.

Mitigation Measure: None Required.

4.13 POPULATION AND HOUSING

Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
a) Induce substantial 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)?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Displace substantial numbers of people, necessitating the construction of replacement housing elsewhere?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Sources: Dyett & Bhatia, Benicia Industrial Park TEC Plan Public Review Draft, January 2017; City of Benicia General Plan, June 1999. City of Benicia Housing Element,

Population and Housing Setting

The Association of Bay Area Governments (ABAG) provides growth projections and a Regional Housing Needs Allocation (RHNA) to determine housing need projections for the Bay Area region, including Solano County and the City of Benicia. The City’s Housing Element sets the policies to accommodate population growth and housing need provided in the RHNA. The TEC Plan Area is within a predominantly industrial area and the Housing Element does not plan for housing in this area.

Population and Housing Impact Analysis

4.13 (a) (Substantial Growth) Less Than Significant Impact: The proposed improvements would not result in changes to land uses in the TEC Plan Area. The proposed improvements would enhance pedestrian, bicycle, and vehicle circulation throughout the TEC Plan Area. While some roadways are proposed for widening, these improvements address deficiencies in short stopping sight distances, inadequate spacing between intersections, and turning radii that is inadequate to accommodate the California Surface Transportation Assistance Act (STAA) trailer truck. Therefore, implementation of the TEC Plan would not change development density or intensity, nor does it propose new housing units that would induce population growth. Therefore, the proposed improvements would have no substantial impact, either directly or indirectly, on population growth in the area.

Mitigation Measures: None Required

4.13 (b-c) (Housing or Person Displacement) No Impact: There are no residential units in the TEC Plan Area. Implementation of the TEC Plan would include improvements to roadways, bike, pedestrian, wayfinding, and streetscape facilities and will not displace any existing housing units or people, necessitating the construction of replacement housing elsewhere. Therefore, implementation of the TEC Plan will have no impacts that displace people or existing housing.

Mitigation Measures: None Required.

4.14 PUBLIC SERVICES

Would the Project:	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
<p>Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the public services:</p> <p>a) Fire protection?</p> <p>b) Police protection?</p> <p>c) Schools?</p> <p>d) Parks?</p> <p>e) Other public facilities?</p>	<p><input type="checkbox"/></p> <p><input type="checkbox"/></p> <p><input type="checkbox"/></p> <p><input type="checkbox"/></p> <p><input type="checkbox"/></p>	<p><input type="checkbox"/></p> <p><input type="checkbox"/></p> <p><input type="checkbox"/></p> <p><input type="checkbox"/></p> <p><input type="checkbox"/></p>	<p><input checked="" type="checkbox"/></p> <p><input checked="" type="checkbox"/></p> <p><input type="checkbox"/></p> <p><input checked="" type="checkbox"/></p> <p><input checked="" type="checkbox"/></p>	<p><input type="checkbox"/></p> <p><input type="checkbox"/></p> <p><input checked="" type="checkbox"/></p> <p><input type="checkbox"/></p> <p><input type="checkbox"/></p>

Sources: Dyett & Bhatia, Benicia Industrial Park TEC Plan Public Review Draft, January 2017; City of Benicia General Plan, June 1999.

Public Services Setting

The Benicia Fire Department provides services in the areas of fire prevention and suppression, emergency medical services, technical rescue, and hazardous materials incidental response. These services are provided by staff operating out of two fire stations. The primary responder to the TEC Plan Area is provided by the main facility located at 150 Military West, which is located approximately 2 miles southwest of the TEC Plan Area.

The City maintains mutual aid agreements with all other fire departments in Solano County as well as a contract with the State Office of Emergency Services. The City also maintains specific agreements with the Napa County Hazardous Materials Team, the Contra Costa Fire Protection District, and the Cordelia Fire Protection District to address special hazard situations, as stated in the Benicia General Plan Community Health and Safety Element.

Police services in the area are provided by the City of Benicia Police Department. The police department is located approximately two miles southwest of the TEC Plan Area at 200 East L Street. The police department currently has 34 sworn officers, 20 non-sworn employees, and 35 citizen volunteers. The department is led by the Chief of Police and is organized into two divisions, Operations and Services. A lieutenant provides general management direction and control for each division.

The TEC Plan Area is located within the Benicia Unified School District, which operates four elementary schools, one middle school, one high school, one continuation high school, and a pre-school. For the 2016-2017 school year, the Benicia Unified School District served about 4,900 students.

Public Services Analysis

4.14 (a) (Fire Protection) Less Than Significant Impact: Implementation of the TEC Plan would not change existing demand for fire protection services because population growth would not result from construction of the proposed improvements (see **Section 4.13 Population and Housing**).

Portions of the proposed improvements would be located adjacent to grassland areas (i.e., East 2nd Street and Lake Herman Road) and the use of spark producing construction machinery could potentially create hazardous fire conditions and create a temporary increase in demand for fire protection services. However, implementation of **Mitigation Measure HAZ-2** requiring fire safety practices during construction would reduce the chances of wildland fires to occur. Therefore, implementation of the TEC Plan would not result in a significant impact to fire protections services and no additional mitigation is required.

Mitigation Measures: None Required.

4.14 (b-e) (Fire Protection, Schools, Parks, Other Public Facilities) Less Than Significant Impact: Implementation of the TEC Plan would not change existing demand for public services (e.g., police protection, schools, parks, or libraries) because population growth would not result from construction of the proposed improvements (see **Section 4.13 Population and Housing**). The use of parks and public facilities generated by construction workers is expected to be minimal. Therefore, implementation of the TEC Plan would have a less than significant impact on public services, and no mitigation is required.

Mitigation Measures: None Required

4.15 RECREATION

Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
a) Would the project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Does the project include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Sources: Dyett & Bhatia, Benicia Industrial Park TEC Plan Public Review Draft, January 2017; City of Benicia General Plan, June 1999.

Recreation Setting

Benicia has more than 2,000 acres of open space, over 700 acres of existing parks, and several recreation centers. The State Department of Parks and Recreation maintains and operates the Benicia Capitol State Historic Park and the Benicia State Recreation Area, which provide over 400 acres of additional parkland in Benicia. The closest parks to the TEC Plan Area include Lake Herman Regional Park, Francesca Terrace Park, Waters End Park, and Benicia Community Park; however, they are located approximately 1-3 miles from the TEC Plan Area.

The TEC Plan proposes the development of pedestrian and bicycle networks, which provides an opportunity to serve recreational bicyclists and pedestrians. No specific recreational facilities are identified in the plan other than bicycle and pedestrian improvements that may promote active transportation.

Recreation Impact Discussion

4.15 (a) (Park Deterioration) Less than Significant Impact: Implementation of the TEC Plan would include improvements to roadways, bike, pedestrian, wayfinding, and streetscape facilities. For the most part, roadway improvements would be limited within existing rights of way and would not result in any changes to General Plan land use and zoning designations. Therefore, implementation of the TEC Plan would not result in any new land uses that could increase park or recreational facility usage, such as residential uses. Construction workers may use existing parks and recreational facilities; however, their use is not expected to result in a deterioration of these existing facilities. Therefore, impacts would be less than significant.

Mitigation Measures: None Required.

4.15 (b) (Recreation Facilities) Less than Significant Impact: Implementation of the TEC Plan would include multimodal roads to enhance recreational options through bicycle and pedestrian infrastructure. This Initial Study addresses the potential environmental effects of the proposed new multi-use paths, pedestrian, and bike facilities. Therefore, implementation of the TEC Plan is not expected to result in any adverse impacts related to the construction or expansion of recreational facilities.

Mitigation Measures: None Required.

4.16 TRANSPORTATION AND CIRCULATION

Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
a) Conflict with an applicable plan, ordinance or policy establishing measures of effectiveness for the performance of the circulation system, taking into account all modes of transportation including mass transit and non-motorized travel and relevant components of the circulation system, including but not limited to intersections, streets, highways and freeways, pedestrian and bicycle paths, and mass transit?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Conflict with an applicable congestion management program, including, but not limited to level of service standards and travel demand measures, or other standards established by the county congestion management agency for designated roads or highways?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c) Result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d) Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
e) Result in inadequate emergency access?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
f) Conflict with adopted policies, plans, or programs regarding public transit, bicycle, or pedestrian facilities, or otherwise decrease the performance or safety of such facilities?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Sources: Dyett & Bhatia, Benicia Industrial Park TEC Plan Public Review Draft, January 2017; City of Benicia General Plan, June 1999; Benicia Industrial Bus Hub Project Initial Study; Solano Countywide Bicycle Transportation Plan; Solano County Congestion Management Program, 2013; Draft Transportation Impact Analysis Report, Valero Benicia Crude by Rail Project, prepared by Fehr and Peers, May 2013; and Solano Napa Activity Based Travel Model, 2016

Transportation and Circulation Setting

The City of Benicia is located within the southwestern portion of Solano County and is served by two regional highways, I-780, which provides east-west connectivity between I-680 to the east and I-80 to the west, and I-680, which provides north-south connectivity.

I-680 is a four-lane freeway running in the north-south direction through Benicia, serving as a regional travel corridor and a facilitator of local intra-city travel.

I-680 provides regional access to the Benicia Industrial Park TEC Plan area via ramps at 3 local roadways including Bayshore Road, Industrial Way, and Lake Herman Road. The TEC Plan area is well served by several main arterials and local streets. The following provides a summary of existing roadways within the TEC Plan area.

The existing street network within the Industrial Park TEC Plan area contains arterials and local roadways, which serve to facilitate through-travel and provide direct access to established industrial uses. The main arterial and local streets in the TEC Plan area are described below in **Table 4**:

Table 4: Main Arterials and Local Streets in TEC Plan area

Street	Description	Right-of-Way Width
East 2nd Street	Arterial roadway extending northeast from downtown Benicia to Lake Herman Road. Between Industrial Way and Lake Herman Road, the roadway varies from two lanes to two travel lanes and a center turn lane through much of the Plan Area. West of Industrial Way, the street widens to a four-lane roadway with a median, turn lanes, and bicycle lanes.	40-120 feet
Lake Herman Road	Two-lane east-west roadway that forms the northern boundary of the Plan Area.	50-150 feet
Reservoir Road	Two-lane, north-south roadway that runs in the northwestern portion of the Plan Area, connecting East 2nd Street and Lake Herman Road.	60 feet
Industrial Way	Two-lane arterial roadway that connects I-680 to East 2nd Street and Lake Herman Road. Between Oregon Street and Noyes Court, Industrial Way is a three-lane street, with two lanes in the southbound direction and one lane in the northbound direction.	44-75 feet
Park Road	Two-lane, north-south arterial roadway that runs parallel to I-680 before veering northwest to intersect with East 2nd Street. It serves as the connection between the interchange ramps at Industrial Way and Bayshore Road and the rest of the Industrial Park. It also links the Industrial Park to the Arsenal and serves as a viable route to downtown Benicia.	40 feet
Bayshore Road	Two-lane arterial roadway located in the southern portion of the Plan Area, that connects	25-44 feet

	the waterfront and the Port with the Industrial Park interior, I-780 interchanges, and the Port surface parking lots fronting Suisun Marsh.	
Stone Road	Two-lane roadway serving the interior of the Plan Area that provides a second connection between East 2 nd Street and Park Road.	35-40 feet
Goodyear Road	Two-lane roadway serving the northeast corner of the Plan Area adjacent to I-680. Its southern terminus intersects with the I-680 northbound ramps and Lake Herman Road.	60 feet
East Channel Road	Two-lane roadway connecting West Channel Road and Bayshore Road and providing access to properties east of the refinery and west of the rail spur.	40 feet
Sources: City of Benicia Industrial Park TEC Plan Draft, January 2017.		

The TEC Plan proposed to correct geometric and design deficiencies, carry out intersection improvement, upgrade pavement conditions and improve drainage as follows:

Geometric and Design Deficiencies

- Industrial Way west of I-680
- I-680/Lake Herman Road
- W Channel Road and E Channel Road
- Industrial Way/SB and NB I-680
- Bayshore Road/ SB NB I-680
- W Channel Road west of Industrial Way

Pavement Improvements

- E. Channel Road
- East 2nd Street
- Park Road between Bayshore Road and Industrial Way and north of Stone Road
- Industrial Way east of I-680
- Goodyear Road
- Lake Herman Road east of I-680

Drainage Improvements

- W. Channel Road
- Sprig Drive, Teal Drive, and Mallard Drive

Roadway Capacity

Study area intersections within the TEC Plan area were evaluated for existing conditions in September 2014, including delays resulting from train traffic at crossing

of Park Road and Bayshore Road. Roadway capacity is currently at acceptable level of service D or greater when considering only roadway traffic. However, with trains crossing at-grade (Park Road and Bayshore Road), intersection level of service degrades to unacceptable LOS E or F.

Future traffic conditions were considered for horizon year 2040 based on best available information from regional growth projections. In the future when the currently vacant area of the TEC Plan, known as the Northern Gateway property, undergoes development there will be significant change to the traffic volumes and resulting impacts on local and regional intersections. However, until a project is proposed it is speculative to make assumptions about potential future effects to the roadway system. For purposes of this analysis, it is understood that future development of the vacant area known as the Northern Gateway project will be subject to separate environmental review including a project specific assessment of potential impacts to roadways within the TEC Plan area.

Projected traffic demands in 2040 are expected to generate a need for improvements at 2nd Street and the I-780 ramps, which is located outside of the TEC Plan area, in order to meet LOS standards for the afternoon peak hour as established by the City. All other study area intersections are projected to operate at acceptable LOS D or greater for both the am and pm peak traffic periods.

Public Transit

The TEC Plan area is served by the Fairfield and Suisun Transit (FAST) express intercity route (Route 40), Solano County Transit (SolTrans) and a new bus hub is currently under development at the intersection of Park Road and Industrial Way.

The bus hub will serve as the transit gateway to the TEC Plan area with up to 50 parking spaces, bicycle storage and a passenger drop off area. Improvements associated with development of the bus hub include upgrades to designated bus pull out areas, new sidewalks, covered benches, and minor realignment of Park Road.

Prior to the merger of the Benicia and Vallejo transit providers to create SolTrans, the City was served by Benicia Breeze. In 2011 SolTrans was formed and is overseen by the SolTrans Joint Powers Authority Board. SolTrans provides local routes within the City of Benicia and intercity routes to nearby communities including connections to Fairfield, the Vallejo Ferry Terminal and 3 Bart Stations (El Cerrito del Norte, Pleasant Hill and Walnut Creek).

Pedestrian Network

The TEC Plan area presently lacks adequate pedestrian infrastructure to create a safe, cohesive environment that encourages walking. As of 2016, the only marked

crosswalk was located at the intersection of Industrial Way and Park Road. Roadway segments that provide sidewalks with the TEC Plan area include 1) at the intersection of East 2nd Street and Wanger Street, surrounding Bio-Rad Laboratories, 2) Industrial Way between Noyes Court and Park Road, and 3) East 2nd Street bridge over West Channel Road.

The TEC Plan proposes the development of an interconnected pedestrian network that includes the following improvements:

- Sidewalks and pedestrian crossings on Stone Road
- Buffered sidewalk for the east/south side of East 2nd Street
- Shared-use path (Class I) and pedestrian crossings for west/north side of East 2nd Street
- Shared-use path (Class I) and pedestrian crossings for Park Road
- Shared-use path (Class I) for Industrial Way
- Pedestrian facilities within the Northern Gateway property when development is proposed
- Connection to Water's End Trail

In addition to specific pedestrian sidewalk and street crossing improvements, the TEC Plan provides for additional pedestrian amenities including well maintained landscaping, street trees that provide shade, and pedestrian-scaled lighting.

Bicycle Network

As of 2016, the only existing bicycle route is a short section of Class II bike lanes along East 2nd Street, west of Industrial Way.

The TEC Plan proposes developing a bicycling network that includes the following improvements:

Class I Shared-Use Path (separated from vehicle traffic)

- West/north side of East 2nd Street
- Industrial Way between Park Road and Lake Herman Road
- Park Road between Industrial Way and East 2nd Street

Class II Bike Lane (on road striping/stenciled bike lane)

- Lake Herman Road
- Park Road south of Industrial Way to I-780

Class III Bike Routes (shared roadways with signage)

- Reservoir Road
- Goodyear Road
- Lake Herman Road east of East 2nd Street

Class IV Facilities (cycle tracks require separation from vehicle traffic)

- East/south side of East 2nd Street

In addition to specific bicycle pathway improvements, the TEC Plan also provides for bicycle support facilities including secure bicycle parking, lockers, shower facilities and a shared bike program.

Transportation and Circulation Impact Analysis

4.16 (a) (Plan, Policy, Ordinance: Circulation System) Less Than Significant Impact:

General Plan Policy 2.20.1 calls for maintaining “at least Level of Service D on all city roads, street segments, and intersections.” The TEC Plan sets forth Policy 2.A.3 which strives to maintain LOS D on roadway segments and intersections, consistent with the General Plan.

Roadway capacity for arterials and local connectors within the TEC Plan area are presently acceptable with the exception of decreases in LOS for the at-grade train crossing at Park Road. Existing conditions meet the LOS standard established by the General Plan and TEC Plan.

LOS could potentially degrade to levels below the LOS standards in the future. The TEC Plan has identified the need to make improvements to intersections at the East 2nd Street and I-780 ramps by 2040 in order to meet the City LOS standard during the afternoon peak traffic period. **Table 5: Existing and Projected Peak Hour Traffic,** below shows intersections that would exhibit deficient LOS standard without improvements proposed by this project.

Table 5: Existing and Projected Peak Hour Traffic

Intersection	Existing Conditions				Without Project, 2040 Projection			
	AM Peak		PM Peak		AM Peak		PM Peak	
	Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS
East 2 nd Street & I-780 Westbound Ramps	10.7	B	13.2	B	44.6	D	>50	F
East 2 nd Street & I-780 Eastbound Ramps	15.2	B	21.8	C	41.3	D	>50	F

Source: DKS Associates 2016 via Benicia Industrial Pak Transportation & Employment Center Plan, Public Review Draft January 2017.

Notes: Delay is measured in seconds per vehicle and is based on average stopped delay; LOS = Level of Service

To correct this LOS deficiency the TEC Plan proposes restriping on the northbound approach on East 2nd Street for dual left turn lanes onto westbound I-780 and modify ramp and signal to accommodate new geometry. Additionally, improvements to eastbound I-780 would provide for separate right and left turn lanes and modification to signal and median island to accommodate new geometry. The TEC Plan in and of itself does not create the identified LOS deficiency, rather it sets forth a possible means to bring the LOS in to compliance. The design modifications at I-780 ramps are unknown at this time and cannot be fully evaluated for environmental impacts. At the time that an I-780 improvement project is proposed it will be evaluated for potential impacts under CEQA as warranted.

There is potential for future development to degrade LOS beyond what can be projected with the best available information at this time. Without specific development proposals for sites within the TEC Plan, it would be premature to make definitive judgments on LOS impacts of a built-out Project area. Individual and cumulative impacts on level of services and roadway capacity will be assessed on an individual project basis when site specific development proposals are submitted to the City of Benicia.

The TEC Plan provides goals and policies to resolve design deficiencies and address safety. Roadway improvements will occur incrementally as the TEC Plan is implemented and is not expected to induce traffic beyond what has been anticipated by the City and regional transportation models. The TEC Plan establishes guidelines to realize a comprehensive multi-modal network and is consistent with other local and regional plans. Therefore, the TEC Plan would have less than significant impacts due to a conflict with established plans policies and programs

Mitigation Measures: None Required.

4.16 (b) (Congestion Management Plan) Less than Significant: The TEC Plan contains policies related to creating a multimodal transportation network that supports congestion management consistent with the Solano County Congestion Management Program (2013). The proposed TEC Plan improvements complete bicycle and pedestrian networks, support transit access improvements, and establish the framework for viable alternatives for some trips that would otherwise be made by automobile travel.

Implementation of Complete Streets improvements as set forth in the TEC Plan is consistent with General Plan Program 2.20.H, which proposes to “reserve right-of-way for new alternative transportation facilities that contribute to street and roadway congestion relief.” The TEC Plan recommends a number of transportation demand management measures, including bicycle and pedestrian network integration with transit, subsidized transit passes, ride-share, bike-share, car share, and financial incentives for using alternative modes of transit.

The purpose of the TEC Plan is to provide a complete transportation network that supports multi-modal transportation opportunities through the development of public transit, bicycle and pedestrian facilities in addition to the mobile street system. The TEC Plan accommodates the Bus Hub as identified in the County’s CMP (RTP ID 22985). The TEC Plan identifies the Bus Hub as the transit gateway to the City’s Industrial Park. As set forth in the TEC Plan, the Bus Hub serves as the primary facility where transit, pedestrian and bicycle improvements all interconnect. There are no aspects of the TEC Plan that would conflict with implementation of the County’s CMP. Rather the TEC Plan serves to build off of the Bus Hub development by treating this facility as the transit gateway for the Industrial Park area.

Therefore the TEC Plan would have a less than significant impact due to a conflict with a congestion management plan.

Mitigation Measures: None Required.

4.16 (c) (Air Traffic Patterns) No Impact: The TEC Plan will have no impact on air traffic patterns, given that there are no public or private air transportation facilities in the planning area. The closest airport, Buchanan Airport, is located over six miles southeast of the Project area. Therefore, the TEC Plan would no direct or indirect impacts to air traffic patterns and no mitigation is required.

Mitigation Measures: None Required.

4.16 (d) (Design Feature Hazard) Less Than Significant Impact: The TEC Plan proposes modifications to the geometric design of several roadways and intersections to accommodate vehicles and trucks including turning radii, stopping site distance, and spacing requirements on local arterials and freeway ramp intersections.

The Caltrans Highway Design Manual, City of Benicia Engineering Design Standards, and recommendations for STAA truck tractors were used to guide recommendations for roadway improvements as set forth in the TEC Plan.

In addition to geometric improvements to safely accommodate truck movements, the TEC Plan proposes facilities to serve a variety of modes. New bicycle and pedestrian networks provide connectivity within the TEC Plan Area and to surrounding areas. The proposed improvements along East 2nd Street, Industrial Way, and Park Road introduce Class I Shared-Use Paths and a Class IV Cycle Track on one side of East 2nd Street. The extension of a Class II Bike Lane is proposed for Lake Herman Road as well.

The proposed multi-modal transportation network set forth through the TEC Plan aims to safely accommodate a variety of different users. The TEC Plan minimizes design feature hazards by improving overall street design, bringing roadway surface conditions up to standard, designating specific travel routes for pedestrians, bicycles and vehicles, as well as opportunities for shared use. Where shared use is proposed by the TEC Plan, conflicts are minimized by providing signage, integrating networks, and coordinating with Solano Transit Authority. There are no aspects of the TEC Plan that would introduce design feature hazards that would result in a significant impact. Rather, the TEC Plan identifies existing hazards and constraints and sets forth development improvements to reconcile conflict. Therefore, the TEC Plan would have a less than significant impact due to the introduction of design hazard or incompatible use.

Mitigation Measures: None Required.

4.16 (e) (Emergency Access) Less than Significant Impact: The TEC Plan improvements would be implemented to standards that conform to regulations for emergency vehicle access. The TEC Plan proposes improvements to locations where there are existing geometric design deficiencies that are inadequate for accommodating trucks. The proposed improvements to intersection spacing requirements, stopping sight distances, and turning radii would also benefit emergency vehicles. During construction work along roadway segments, there may be partial or full lane closures, which could temporarily affect emergency vehicle access. However, the City will provide notice to the police and fire departments in advance of roadway or lane closure and the City will coordinate to ensure that emergency access is not temporarily impacted during construction activities (see **Section 4.8 Hazards and Hazardous Materials**). There are no other aspects of the TEC Plan that would interfere or otherwise impede emergency vehicle access. Therefore, impacts to emergency access from implementation of the TEC Plan would be less than significant.

Mitigation Measures: None Required.

4.16 (f) (Transit, Bicycle, Pedestrian Facilities) Less Than Significant Impact: The TEC Plan proposes improvements to pedestrian, bicycle, and public transit facilities. As proposed, the TEC Plan establishes a cohesive network that supports multi-modal transportation including bicycle and pedestrian amenities.

Creating a comprehensive and integrated pedestrian network is the principle behind the Benicia Industrial Park TEC Plan Goal 5.A. The TEC Plan requires that a new development within the Plan area create safe pedestrian networks onsite (Policy 5.A.2). Sidewalks are proposed for the reconfiguration of Stone Road and Shared-Use Paths (Class I) are proposed for East 2nd Street, Industrial Way, and Park Road. Other improvements include well-maintained landscaping, street trees, and pedestrian-scaled lighting. Policy 5.A.4 calls for utilizing grants and impact fees to fund installation of sidewalks and pedestrian amenities. Proposed pedestrian improvements as set forth in the TEC Plan would correct the currently insufficient pedestrian facilities.

Improvements to support bicycling include a complete bicycle network, safe and direct bicycle routes, and connectivity with the regional bicycle network. Improvements that are consistent with the General Plan and/or Solano County Bicycle Plan include: 1) continuation of Class II bike lanes along East 2nd Street (from Lake Herman Road to Industrial Way), 2) New Class II bike lanes along Lake Herman Road (west of East 2nd Street), and 3) Class III bike routes along Reservoir Road and Goodyear Road. Proposed bicycle improvements as set forth in the TEC Plan would correct the currently insufficient bicycle facilities.

FAST and SolTrans currently provide transit service to the Industrial Park area. Transportation Demand Management (TDM) programs set forth in the TEC Plan are intended to promote greater transit use by employees. The TEC Plan also sets forth incentives to increase ridership including pre-tax commuter benefits and subsidized transit passes. Additionally, improvements in the bicycle and pedestrian network encourage transit use through improved transit access without dependence on vehicles. Expansion of service may improve attractiveness of transit use. Policy 3.A.2 of the TEC Plan calls for collaboration with transit providers to expand or provide more frequent service over time.

The complete streets approach in the Benicia Industrial Park Transportation & Employment Center Plan is consistent with the City of Benicia's General Plan programs including the following:

Program 2.14.G: Evaluate the feasibility of finishing sidewalks along streets where they are currently lacking.

Program 2.14.H: Identify areas where sight distance for vehicle drivers and pedestrian safety can be improved with signs, tree placement, landscaping, parking policy, building design, and streetscape. Prepare a program and schedule for implementing these improvements.

Program 2.15.A: Construct public improvements that accommodate and enhance pedestrian and bicycle access.

Program 2.20.I: Identify areas of the city that are pedestrian-unfriendly and develop corrective plans.

Policy 2.21.1: Provide and promote a range of travel alternatives to the use of the private automobile.

Policy 2.21.2: Encourage new development patterns that facilitate bicycling, walking, and transit for commute, shopping, recreation, and school trips.

One of the primary objectives of the TEC Plan is to expand opportunities for multi-modal transportation. As proposed, the TEC Plan would introduce an interconnected network for pedestrians, transit and bicycle users. The TEC Plan would not conflict with established pedestrian or bicycle plans or otherwise interfere with implementation of an adopted multi-modal plan. Rather, the TEC Plan sets forth goal and policies for development within the TEC Plan area to realize complete streets with multi-modal transportation opportunities. Therefore, the TEC Plan would have less than significant impacts due to a conflict with adopted plans.

Mitigation Measures: None Required.

4.17 UTILITIES AND SERVICE SYSTEMS

Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
a) Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Require or result in the construction of new storm water drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d) Have sufficient water supplies available to serve the project from existing entitlements and resources, or are new or expanded entitlements needed?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
e) Result in a determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
f) Be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
g) Comply with federal, state, and local statutes and regulations related to solid waste?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Sources: Dyett & Bhatia, Benicia Industrial Park TEC Plan Public Review Draft, January 2017; City of Benicia General Plan, June 1999. City of Benicia 2015 Urban Water Management Plan, adopted June 21, 2016.

Utilities and Service Systems Setting

Water Supply

According to the 2015 Urban Water Management Plan (UWMP), Benicia will have adequate water supply under normal hydrological conditions, during single-dry year, and multiple-dry year conditions through 2040. The City has created a Water Shortage Contingency Plan to outline a strategy to meet water needs during times of water shortage.

The primary water sources serving Benicia come from the Sacramento-San Joaquin River Delta, Lake Berryessa through the Solano Project, and the Lake Herman reservoir. The raw water transmission system comprises two pump stations and approximately 75,000 feet of pipe. Water from the Sacramento-San Joaquin River Delta is provided through the State Water Project (SWP) and Settlement Agreement with the California Department of Water Resources. Water is conveyed through the North Bay Aqueduct. In a normal, non-drought year, this source supplies approximately 80 percent of the City's demand. The Solano Project supplies the remaining 20 percent, primarily drawn from Lake Berryessa, and transported through the Putah South Canal. Lake Herman serves as storage for diversions from the Sulphur Springs Creek watershed and additional water delivered through the Solano Project and North Bay Aqueduct. It serves as a back-up supply for the Valero Refinery, an emergency water supply, and a means to regulate raw water supplies coming into the City's system from alternative sources.

The City's water delivery system consists of a water treatment plant and six reservoirs for potable water storage throughout the city. The reservoirs are capable of storing up to 12.8 million gallons during peak demand periods. The City's current Water Treatment Plant, located near Lake Herman Road, is designed for a capacity of 12 million gallons per day (mgd). From 2002 to 2015, the average day demands ranged from 4.89 mgd to 5.96 mgd.

The City's proposed Water Reuse Project, if implemented, would expand treatment and delivery capabilities to create additional water resources from recycled water. The improvements in the project would upgrade the existing water treatment plant, install 16,300 linear feet of pipeline, and add 2 million gallons in storage tank capacity. The project would deliver 2.0 million gallons per day (mgd) for use as Valero Refinery cooling tower water and other non-potable uses for city customers.

Wastewater Treatment

The City operates a wastewater collection, treatment, and disposal system to provide services to customers within its service area. Collection is conveyed through gravity flow from 150 miles of pipelines with 24 lift stations to overcome terrain restrictions. The Benicia Waste Water Treatment Plant (WWTP), located towards the south end of East 5th Street, has a permitted dry weather capacity of 4.5 million gallons per day (mgd) and a short-term hydraulic capacity of 24 mgd. The WWTP operates under a NPDES permit for treatment of collected water and discharge of secondary treated water into the Carquinez Strait. The plant currently does not produce tertiary treated recycled water. A review of tertiary treatment is being conducted through the Benicia Water Reuse project. The improvements in treatment capability can produce up to 2.0 mgd of recycled water for refinery cooling and non-potable uses. Wastewater flows in excess of the recycled water demand would continue to be discharged to the Carquinez Strait under the City's NPDES Permit.

Solid Waste

Solid waste and recycling services in Benicia are provided by Republic Services. Collected waste is transported to the Contra Costa Transfer & Recovery Station, a transfer and processing facility in Martinez, then taken to Keller Canyon Landfill in the city of Pittsburg. The landfill has a maximum capacity 75 million cubic yard capacity. As of November 2004, approximately 12 million cubic yards (16 percent of total capacity) had been filled. The Keller Canyon Landfill is expected to reach its capacity by December 2030.

Utilities and Service Systems Impact Analysis

4.17 (a,e) (Exceed Wastewater Treatment Requirements; Wastewater Treatment Capacity) Less Than Significant Impact: Implementation of the TEC Plan would include improvements to roadways, bike, pedestrian, wayfinding, and streetscape facilities. For the most part improvements would not result in an increase in runoff that could affect wastewater treatment capacity. Some roadways would be widened and could result in an increase in impervious surface area, resulting in an increase in the storm water runoff; however, new localized drainage facilities would be constructed such that runoff would be collected by the existing on-site storm drains, bioswales and medians.

The TEC Plan proposes greater inclusion of design features that reduce hardscape. These features will reduce runoff by allowing for water retention and filtration in pervious surfaces. For example, Policy 6.A.6 in the TEC Plan proposes to incorporate green infrastructure into streetscape design to capture stormwater flow and increase groundwater recharge. This may be accomplished through landscaped swales along the road, tree box filters for on-street filtration, and medians with permeable hardscape.

Implementation of the TEC Plan would not alter existing drainage patterns such that it increases the rate or amount of surface runoff resulting in an exceedance of the capacity of the existing wastewater treatment plant. As such, implementation of the TEC Plan is not expected to exceed wastewater treatment requirements set forth by the Regional Water Quality Control Board, nor necessitate the expansion or construction of wastewater treatment facilities. Therefore, impacts to wastewater treatment from the TEC Plan would be less than significant.

Mitigation Measures: None Required.

4.17 (b) (New On-Site Water or Wastewater Treatment Facilities) No Impact: Implementation of the TEC Plan would include improvements to roadways, bike, pedestrian, wayfinding, and streetscape facilities. Implementation of the TEC Plan would not result in any new land uses that generate water or wastewater demands, such as residential, industrial, or commercial uses. There would be no

new construction or expansion of domestic water or wastewater facilities from implementation of the TEC Plan. Therefore, no impacts would occur.

Mitigation Measures: None Required.

4.17 (c) (Require New Stormwater Facilities) Less Than Significant Impact:

Implementation of the TEC Plan would include drainage improvements to key areas currently lacking in drainage infrastructure. Improvements would include the installation of curbs and gutters with storm drains along the following roadways east of I-680: Mallard Drive, Sprig Drive, and Teal Drive. Drainage improvements would also be installed along the following roadways west of I-680: Park Road; Industrial Way, Noyes Court, Bayshore Road, Industrial Court, East and West Channel Roads, and East 2nd Street. Drainage facilities would be installed along existing roadways, and would improve drainage facilities relative to existing conditions. Therefore, the TEC Plan would have less than significant impacts due to the requirement for new stormwater facilities.

Mitigation Measures: None Required.

4.17 (d) (Sufficient Water Supplies) Less Than Significant Impact: Implementation of the TEC Plan would include improvements to roadways, bike, pedestrian, wayfinding, and streetscape facilities. As such, implementation of the TEC Plan would not result in any new land uses that could permanently increase water demand, such as residential, industrial, or commercial uses. The water supply is sufficient to accommodate construction activities. Therefore, impacts to water supplies would be less than significant.

Mitigation Measures: None Required.

4.17 (f) (Landfill Capacity) Less Than Significant Impact: Demolition activities would generate concrete, asphalt, vegetation and soil debris. As the TEC Plan improvements will occur incrementally over several years, debris generation would be spread over approximately 5-7 years. The Keller Canyon Landfill has capacity to accommodate waste generated by construction activities. Approximately 12 million cubic yards of the maximum 75 million cubic yard capacity (16 percent of total capacity) had been filled, as of November 2004. Maximum capacity of the landfill is not expected until 2030. Therefore, impacts related to landfill capacity would be considered less than significant.

Mitigation Measures: None Required.

4.17 (g) (Solid Waste Statutes) Less Than Significant Impact: Solid waste generation would be limited to construction-related activities. As stated in **Section 4.8 Hazards and Hazardous Materials**, construction activity involving the disturbance of soil may lead to uncovering of contaminated soil that may affect construction workers. In the event contaminated soil is encountered during excavation activities, implementation of **Mitigation Measure HAZ-1** would reduce the impact to a less-than-significant level.

The TEC Plan would not be an ongoing source of solid waste generation. Construction waste generated by implementation of the TEC Plan would comply with all federal, state, and local regulations related to solid waste. Therefore, impacts would be less than significant.

Mitigation Measures: None Required.

4.18 MANDATORY FINDINGS OF SIGNIFICANCE (CAL. PUB. RES. CODE §15065)

A focused or full environmental impact report for a project may be required where the project has a significant effect on the environment in any of the following conditions:

Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
a) Does the project have the potential to degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Does the project have impacts that are individually limited, but cumulatively considerable? ("Cumulatively considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects)?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Does the project have environmental effects, which will cause substantial adverse effects on human beings, either directly or indirectly?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Mandatory Findings Discussion

4.18 (a) Less Than Significant Impact: As described in this Initial Study, implementation of the TEC Plan could potentially impact special-status plants and wildlife, nesting birds, protected trees, and previously undiscovered cultural resources. With implementation of the mitigation measures identified in this document, the proposed project would not have the potential to adversely affect the environmental resources in the vicinity of the TEC Plan Area. Thus, the proposed project would not degrade the quality of the environment, or affect any habitat, wildlife population or plant communities, and would not eliminate important examples of major periods of California's history or prehistory. Implementation of mitigation measures included herein would reduce the potential biological and cultural resources impacts to less-than-significant levels.

4.18 (b) Less Than Significant Impact: The CEQA Guidelines defines cumulative impacts as "two or more individual effects which, when considered together, are considerable or which compound or increase other environmental impacts. The individual effects may be changes resulting from a single project or increase in environmental impacts. The cumulative impact from several projects is the change in

the environment which results from the incremental impact of the proposed project when added to other closely related past, present, and reasonably foreseeable probable future projects. Cumulative impacts can result from individually minor but collectively significant projects taking place over a period of time” (Guidelines, Section 15355(a)(b)).

There are projects currently under environmental review in the City, however the majority are outside the vicinity of the TEC Plan Area and consist of use permits, sign permits, and design review. The following cumulative projects are located within or near the TEC Plan Area:

- **Valero Crude by Rail Project.** The Valero Benicia Refinery (Refinery) proposed to install, operate, and maintain new equipment, pipelines, and associated infrastructure as well as new and realigned segments of existing railroad track within the Refinery boundary to allow the Refinery to receive a portion of its crude oil feedstock deliveries by tank car. An EIR was prepared for this project, however the Planning Commission declined to certify the Final EIR and denied the use permit application in February 2016. Valero appealed the Planning Commission's decision, and the City Council continued the hearing to September 2016. On October 4, 2016 the City Council declined to certify the Final EIR and denied the Use Permit. (Resolution No. 16-150).
- **Benicia Water Reuse Project.** The proposed project consists of producing and delivering approximately 2.0 million gallons per day (2,240 acre-feet-per-year) of recycled water to the Valero Benicia Refinery and other City customers for non-potable uses. The proposed project would consist of upgrades at the City of Benicia's existing wastewater treatment plant (WWTP), approximately 16,300 linear feet of pipeline, and a storage tank with a capacity of up to 2 million gallons. An IS/MND was prepared for this project and certified by City Council on November 15, 2016. This project is not currently funded or scheduled.
- **Benicia Industrial Bus Hub Project.** The project includes the construction of a hub for public transit buses on a 1-acre site at the southeast corner of Park Road and Industrial Way. The IS/MND for this project was certified by the City Council on January 21, 2014. Construction is presently underway.

Cumulative projects would result in a variety of construction-related impacts, including increase in dust, noise, traffic, potential for erosion and hazardous material contamination, and degradation of nearby waterways. The geographical context of these environmental resource issues is localized, but would expand to the region if appropriate mitigation measures are not implemented to contain site-specific impacts (e.g., localized erosion could cause downstream water quality degradation).

As described in **Sections 4.1 – 4.17** of this document, implementation of the proposed project could potentially result in significant impacts; however, those impacts would be reduced to less-than-significant levels with implementation of mitigation measures. The implementation of mitigation measures identified throughout this Initial Study would ensure that the proposed project's contribution to cumulative impacts would not be cumulatively considerable.

4.18 (c) Less Than Significant Impact: The project has the potential to result in adverse impacts to humans due to air quality, biological resources, cultural resources, geology and soils, hazards and hazardous materials, hydrology and water quality, noise, and circulation/transportation. With the mitigation measures set forth above, the project will have less than significant environmental effect that would directly or indirectly impact human beings onsite or in the project vicinity. Therefore, the project will have less than significant impacts due to substantial adverse environmental effects.

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5 REFERENCE DOCUMENTS

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2. *2015 Urban Water Management Plan*, prepared by Solano County Water Agency, adopted August, 2016.
3. *Benicia Business Park EIR*, prepared by LSA Associates, Inc., December 2007.
4. *Benicia Business Park EIR Addendum*, prepared by LSA Associates, Inc., April 2008.
5. *Benicia Climate Action Plan*, September 2009.
6. *Benicia Industrial Bus Hub Project Initial Study*, prepared by Circlepoint, December 2013.
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8. *Benicia Water Reuse Project Initial Study and Draft MND*, prepared by RMC, September 2016.
9. *California Natural Diversity Database*, accessed February 8, 2017.
10. *California Scenic Highway Mapping System*, accessed February 3, 2017.
11. *CEQA Guidelines*, prepared by the Bay Area Air Quality Management District, May 2010.
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13. *City of Benicia Emergency Operations Plan*, maintained by the City of Benicia Fire Department, January 2007.
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16. *City of Benicia 2010 GHG Emissions Inventory Update*, prepared by Sonoma State University Center for Sustainable Communities, March 2014.

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18. *Envirostor Database*, prepared by Department of Toxic Substances Control, accessed January 13, 2017.
19. *Farmland Mapping & Monitoring Program*, prepared by the California Department of Conversation.
20. *Flood Insurance Rate Map* prepared by Federal Emergency Management Agency.
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26. *U.S. Fish and Wildlife Service National Wetlands Inventory*,
<https://www.fws.gov/wetlands/data/Mapper.html>, accessed February 9, 2017.
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28. *Valero Benicia Crude by Rail Project*, prepared by Environmental Science Associates, June 2014.
29. *Valero Benicia Crude by Rail Project Draft Transportation Impact Analysis Report*, prepared by Fehr and Peers, May 2013.
30. *Wildfire Hazards Map*, prepared by Association of Bay Area Governments (ABAG), <http://gis.abag.ca.gov/website/Hazards/>, accessed February 10, 2016.



**BENICIA INDUSTRIAL PARK
TRANSPORTATION AND EMPLOYMENT CENTER PLAN
MITIGATION MONITORING AND REPORTING PROGRAM**

PREPARED BY:

METROPOLITAN PLANNING GROUP (M-GROUP)
1303 JEFFERSON STREET STE. 100-B
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MARCH 20, 2017

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City of Benicia, California

250 East L Street
Benicia, CA 94510

Project Name: BENICIA INDUSTRIAL PARK TRANSPORTATION AND EMPLOYMENT CENTER PLAN

Address/Location: The TEC Plan Area includes over 1,300 acres of land and is bounded by Lake Herman Road to the north, the Union Pacific Railroad to the east, and East Channel Road to the west in the City of Benicia, California.

MITIGATION MONITORING AND REPORTING PROGRAM

This Mitigation Monitoring and Reporting Program (MMRP) has been prepared in conformance with Section 21081.6 of the California Environmental Quality Act (CEQA) and Section 15097 of the CEQA Guidelines. This document has been developed to ensure implementation of mitigation measures and proper and adequate monitoring/reporting of such implementation. CEQA requires that this MMRP be adopted in conjunction with project approval, which relies upon a Mitigated Negative Declaration.

The purpose of this MMRP is to: (1) document implementation of required mitigation; (2) identify monitoring/reporting responsibility, be it the lead agency (City of Benicia), other agency (responsible or trustee agency), or a private entity (applicant, contractor, or project manager); (3) establish the frequency and duration of monitoring/reporting; (4) provide a record of the monitoring/reporting; and (5) ensure compliance.

Roles and Responsibilities

As the lead agency under CEQA, the City will be responsible for ensuring full compliance with the provisions of this MMRP and has primary responsibility for implementation of the monitoring program. The City has the authority to halt any activity associated with the construction and operation of the Benicia Industrial Park Transportation Employment Center Project if the activity is determined to be a deviation from the approved project or the adopted mitigation measures. The City will act as the mitigation monitor.

Monitoring and Reporting

As the lead agency, the City will be responsible for ensuring compliance with the provisions of the MMRP as well as implementation of the monitoring program.

MMRP Checklist

The following table lists each of the mitigation measures adopted by the City in connection with project, the timeframe to which the measure applies, the person/agency/permit responsible for implementing the measure, and the status of compliance with the mitigation measure.

Environmental Factors Potentially Affected

The environmental factors checked below would be potentially affected by the project, as outlined in the following table:

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

**BENICIA INDUSTRIAL PARK TRANSPORTATION AND EMPLOYMENT CENTER PLAN
MITIGATION MONITORING AND REPORTING PROGRAM**

MITIGATION MEASURE	IMPLEMENTATION	RESPONSIBLE PARTY	COMPLETION OF IMPLEMENTATION	
			ACTIVITY	DATE COMPLETED
AIR QUALITY				
AIR-1.	<p>The City shall require the construction contractor(s) to implement a dust abatement program that includes, but is not necessarily limited to, the following BAAQMD-recommended measures as needed to control dust:</p> <ul style="list-style-type: none"> • Water all active construction areas at least twice a day. • Cover all trucks hauling soil, sand, and other loose materials or require all trucks to maintain at least two feet of freeboard. • Pave, apply water three times daily, or apply (non-toxic) soil stabilizers on all unpaved access roads, parking areas, exposed stockpiles, and staging areas at construction sites. • Sweep daily (with water or vacuum sweepers) all paved access roads, parking areas, and staging areas at construction sites. • Sweep streets daily (with water or vacuum sweepers) if visible soil material is carried onto adjacent public streets. 	<ul style="list-style-type: none"> • Project Contractor in coordination with the City of Benicia 		
BIOLOGICAL RESOURCES				
BIO-1.	<p>Temporary orange exclusion fencing shall be installed between the construction site and any riparian, wetland, or coastal brackish marsh habitat for the duration of site preparation and construction activities in order to prevent inadvertent disturbance during project related activities. Following completion of construction activities, the exclusionary fencing shall be removed.</p>	<ul style="list-style-type: none"> • Project Contractor in coordination with the City of Benicia 		
BIO-2.	<p>If tree removal, pruning, or grubbing activities are necessary, such activities should be conducted during the non-nesting season (September 1-January 31) to avoid impacts to nesting birds. If work is conducted at this time, pre-construction surveys will not be necessary.</p>	<ul style="list-style-type: none"> • City of Benicia, Community Development Dept. 		

**BENICIA INDUSTRIAL PARK TRANSPORTATION AND EMPLOYMENT CENTER PLAN
MITIGATION MONITORING AND REPORTING PROGRAM**

MITIGATION MEASURE	IMPLEMENTATION	RESPONSIBLE PARTY	COMPLETION OF IMPLEMENTATION	
			ACTIVITY	DATE COMPLETED
	<p>If project construction begins during the breeding season (February 1 – August 31), preconstruction surveys shall be conducted for the proposed project area and adjacent habitats up to 300 feet from the proposed project boundary (survey area). Surveys shall be conducted by a qualified biologist no more than 72 hours prior to equipment or material staging, pruning/grubbing or surface-disturbing activities. The surveys shall entail a variety of search techniques, including incidental flushing of an adult from the nest, watching parental behavior (e.g., carrying nest material or food), systematically searching nesting substrates, and use of call-broadcasts. If work is conducted in stages, additional nesting bird surveys shall be conducted within 72 hours prior to work in the new areas. Therefore, if 72 hours has passed since the original survey and additional pruning/grubbing, staging, or surface-disturbing activities will occur, another survey must be conducted. If no active nests are found within the survey area, no further mitigation is necessary.</p> <p>If active nests (i.e. nests with eggs or young present) are found within the survey area, non-disturbance buffers shall be established at a distance sufficient to minimize disturbance based on the nest location, topography, cover, the nesting pair's tolerance to disturbance, and the type/duration of potential disturbance. No work shall occur within the non-disturbance buffers until the young have fledged as determined by a qualified biologist. Buffer size shall be determined in cooperation with CDFW and USFWS Migratory Bird Permit Office. If buffers are established and it is determined that project activities are resulting in nest disturbance, work shall cease immediately and CDFW and USFWS Migratory Bird Permit Office shall be contacted for further guidance.</p>	<ul style="list-style-type: none"> • Qualified Biologist • CDFW • USFWS 		

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MITIGATION MEASURE	IMPLEMENTATION	RESPONSIBLE PARTY	COMPLETION OF IMPLEMENTATION	
			ACTIVITY	DATE COMPLETED
BIO-3.	<p>Prior to the commencement of construction activities, an arborist or botanist shall assess trees within the proposed project area and immediately adjacent area to determine whether or not they qualify as protected trees per the City of Benicia's Tree Ordinance. If the trees are determined not to be subject to the ordinance, no further mitigation is necessary.</p> <p>Prior to the commencement of construction activities, an arborist or botanist shall assess potential impacts to identified protected trees within and adjacent to the proposed project area, including staging areas and access routes. If feasible, the proposed project footprint shall be modified to avoid the root zone and identify the boundary of tree protection zone of protected trees and a Tree Protection Plan shall be prepared. In the event that a protected tree cannot be avoided, then prior to the commencement of construction activities, the City shall prepare a tree replacement plan that fulfills requirements of the City of Benicia's Tree Ordinance.</p> <p>During construction, the contractor shall implement work per the terms of the Tree Protection Plan and/or Tree Replanting Plan, and shall coordinate with the Parks and Community Services Director or designee, as needed, to ensure that all provisions of the City's Tree Ordinance are implemented.</p>	<ul style="list-style-type: none"> • City of Benicia, Community Development Dept. • Qualified arborist or botanist 		
CULTURAL RESOURCES				
CUL-1.	<p>During roadway improvements in areas proximate to known archeological resources, the City shall retain an onsite archeological monitor to observe construction activities where ground disturbance will occur. The monitor shall establish a buffer area to preclude intrusion into areas of known resources and shall have authorization to halt work in the event that resources are uncovered.</p>	<ul style="list-style-type: none"> • City of Benicia, Community Development Dept. • Qualified Archaeologist 		

**BENICIA INDUSTRIAL PARK TRANSPORTATION AND EMPLOYMENT CENTER PLAN
MITIGATION MONITORING AND REPORTING PROGRAM**

MITIGATION MEASURE	IMPLEMENTATION	RESPONSIBLE PARTY	COMPLETION OF IMPLEMENTATION	
			ACTIVITY	DATE COMPLETED
CUL-2.	<p>If deposits of prehistoric or historical archaeological materials are encountered during project activities, all work within 100 feet of the discovery shall be redirected and a qualified archaeologist contacted to assess the find, record the find on Department of Parks and Recreation (DPR) Form 523 (at the discretion of the archaeologist), and make recommendations for the find's treatment. No resources shall be extracted, moved or relocated until a qualified archeologist evaluates the resources and provides treatment recommendations. If feasible, such deposits shall be avoided by project activities. If avoidance is not feasible, the find shall be evaluated for its California Register eligibility. If the find is not eligible, avoidance is not necessary and work may continue in the area of the find. If the find is eligible, impacts to the find shall be mitigated. Mitigation may include, but is not limited to, data recovery excavation, artifact curation, report preparation, and information dissemination to the public.</p> <p>Upon completion of the assessment and/or evaluation, the archaeologist shall prepare a report documenting the methods and results of the archaeological assessment/evaluation, and provide recommendations for the treatment of the find. The report should be submitted to the project sponsor, appropriate City agencies, and the Northwest Information Center.</p>	<ul style="list-style-type: none"> • City of Benicia, Community Development Dept. • Qualified Archaeologist 		
CUL-3.	<p>If paleontological resources are discovered during project activities, all work within 100 feet of the discovery shall be redirected until a paleontological monitor has assessed the situation and made recommendations for their treatment. No resources shall be extracted, moved or relocated until a qualified paleontologist evaluates the resource and provides treatment recommendations. If feasible, the find shall be avoided by project activities. If avoidance is not feasible, the paleontological find shall be evaluated for its significance. If the find is not significant, avoidance is not necessary and work may continue in the area of the find. If the find is significant, impacts to the find shall be</p>	<ul style="list-style-type: none"> • City of Benicia, Community Development Dept. • Qualified Paleontologist 		

**BENICIA INDUSTRIAL PARK TRANSPORTATION AND EMPLOYMENT CENTER PLAN
MITIGATION MONITORING AND REPORTING PROGRAM**

MITIGATION MEASURE	IMPLEMENTATION	RESPONSIBLE PARTY	COMPLETION OF IMPLEMENTATION	
			ACTIVITY	DATE COMPLETED
	<p>mitigated. Paleontological mitigation may include, but is not limited to, data recovery, fossil curation, and information dissemination to the public.</p> <p>Upon completion of evaluation, as well as mitigation (if necessary), a report shall be prepared documenting the methods and results of the paleontological investigation. The report shall be submitted to the project sponsor and appropriate City agencies.</p>			
CUL-4.	<p>If human remains are encountered during ground-disturbing activities within the project area, all work within 100 feet of the discovery shall stop and the project contractor shall immediately notify the County of Solano Coroner's Office. At the same time, a qualified archaeologist meeting federal criteria under 36 CFR 61 shall be contacted by the project applicants and project contractor to assess the find and consult with the appropriate agencies. If the human remains are of Native American origin, the Coroner shall notify the Native American Heritage Commission within 24 hours of this identification. The Native American Heritage Commission will identify a Most Likely Descendant (MLD) to inspect the site and provide recommendations for the proper treatment of the remains and any associated grave goods. All work in proximity to the find, as determined by a qualified archeologist shall be temporarily suspended until the instructions recommended by the qualified archaeologist and/or Native American Heritage Commission are implemented.</p> <p>Upon completion of the assessment, the qualified archaeologist shall prepare a report documenting the background to the find, and provide recommendations for the treatment of the human remains and any associated cultural materials, as appropriate and in coordination with the recommendations of the MLD. The report shall be submitted to the City, the County, and the Northwest Information Center. Once the report is reviewed and any appropriate treatment completed, project construction activity within the area of the find may resume.</p>	<ul style="list-style-type: none"> • City of Benicia, Community Development Dept. • Qualified Archaeologist • County of Solano Coroner's Office • Native American Heritage Commission 		

**BENICIA INDUSTRIAL PARK TRANSPORTATION AND EMPLOYMENT CENTER PLAN
MITIGATION MONITORING AND REPORTING PROGRAM**

MITIGATION MEASURE	IMPLEMENTATION	RESPONSIBLE PARTY	COMPLETION OF IMPLEMENTATION	
			ACTIVITY	DATE COMPLETED
CUL-5.	The City of Benicia shall require that contractors provide documentation that all construction crews that will work on the TEC Plan improvement that extend beyond the limits of the existing right of way, have undergone a training session to inform them of the presence and nature of federal or state-eligible cultural resources and the potential for previously undiscovered archaeological resources and human remains within the project area, of the laws protecting these resources and associated penalties, and of the procedures to follow should they encounter tribal, cultural, or archeological resources during project-related work.	<ul style="list-style-type: none"> • City of Benicia, Community Development Dept. • Contractor • Qualified Archeologist 		
HAZARDS/HAZARDOUS MATERIALS				
HAZ-1	The City of Benicia shall coordinate construction adjacent to the Refinery site with Valero to ensure that construction activities are consistent with any ongoing site remediation. The City shall require its construction contractors to follow the procedures below in the event contaminated soil or groundwater is encountered (either visually or through odor detection) during excavation activities: <ul style="list-style-type: none"> • Stop work in areas of contamination; • Notify the San Francisco Bay Regional Water Quality Control Board and the California Department of Toxic Substances Control; • Contain the areas of contamination; • Perform appropriate clean up procedures; and • Segregate, profile, and dispose of all contaminated soil. Required disposal method shall depend on the type and concentration of contamination identified. Any site investigation or remediation shall be performed in accordance with applicable regulations. 	<ul style="list-style-type: none"> • City of Benicia Public Works Department • San Francisco Bay Regional Water Quality Control Board • California Department of Toxic Substances Control 		

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HAZ-2.	<p>The City shall require the construction contractor to implement fire safety construction practices, including but not limited to:</p> <ul style="list-style-type: none"> • Clearing dried vegetation or other material that could ignite during construction from staging areas, welding areas, or other areas slated for construction. • Construction equipment that includes a spark arrestor shall be equipped in good working order. • Construction crews shall have a spotter during welding activities to look out for potentially dangerous situations, such as accidental sparks. • Construction equipment, including those with hot vehicle catalytic converters, shall be kept in good working order and used only within cleared construction zones. • During construction, the construction contractors shall require vehicles and crews working at the project site to have access to functional fire extinguishers. 	<ul style="list-style-type: none"> • City of Benicia, Community Development Dept. • Contractor 		
HYDROLOGY AND WATER QUALITY				
HYD-1.	<p>The City and/or its contractor shall prepare the SWPPP and submit a notice of intent (NOI) to the San Francisco Bay Regional Water Quality Control Board (RWQCB) prior to construction activities, as required by the RWQCB. Implementation of the SWPPP shall start with the commencement of construction and continue through the completion of the project. The objectives of the SWPPP are to identify pollutant sources (such as sediment) that may affect the quality of stormwater discharge and to implement best management practices (BMPs) to reduce pollutants in stormwater. A notice of termination (NOT) application shall be filed at the end of construction.</p>	<ul style="list-style-type: none"> • City of Benicia, Community Development and Public Works. • Contractor • San Francisco Bay Regional Water Quality Control Board 		

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	<p>The City or the construction contractor shall install erosion and stormwater control measures on the construction site such as silt fences, fiber rolls and other BMPs, particularly at locations close to storm drains and water bodies. Erosion control materials shall be selected to use material that do not entangle or trap wildlife (i.e. tightly woven, non-monofilament netting) Disturbed areas shall be repaved or revegetated with an appropriate mixture of native seeds. The BMPs shall also include practices for proper handling of chemicals such as avoiding fueling at the construction site and overtopping during fueling and installing containment pans. Equipment shall be properly maintained and free of leaks and servicing and maintenance areas shall be contained to prevent spills.</p>			